Book Awards

Let's End Our Literacy Crisis was one of six finalists out of 49 entrants in the Education/Academic category of the USABookNews.com Best Books Award competition with 1000 to 1100 total entrants and one of eight finalists in the Education category of the *Foreword* magazine Book-of-the-Year Award competition with 1540 total entrants. See http://www.usabooknews.com/bestbooks2005awards.html and scroll to the Education/Academics category. For the *Foreword* magazine award go to http://www.forewordmagzine.net/botya/print2k5.aspx and scroll to the Education category.

Unsolicited Testimonials

From Amazon.com
1 of 1 people found the following review helpful:
5.0 out of 5 stars **Let's End Our Literacy Crisis**, June 3, 2010
By **Harold Shipley "Literacy Chair**" (Sacramento, CA USA) - **See all my reviews**
(REAL NAME)
This review is from: **Lets End Our Literacy Crisis: The Desperately Needed Idea Whose Time Has Come (Paperback)**
I have spent the last 12 years as the Chairman of a Literacy Committee and have not found a more authorative reference than this one. Mr. Cleckler has made many outstanding observations and has done a great job in researching his subject. I highly recommend reading his book.

Hal Shipley

2 of 2 people found the following review helpful:
5.0 out of 5 stars **A Strategy for Ending the Literacy Crisis in this Generation**, May 12, 2010
By **Richard R. Blake** (Bridgman, Michigan) - **See all my reviews**
(VINE VOICE) (TOP 500 REVIEWER)
This review is from: Let's End Our Literacy Crisis: The Desperately Needed Idea Whose Time Has Come (Paperback)
Award winning author, Bob C. Cleckler, dedicated this edition of "Let's End Our Literacy Crisis" ...to the hundreds of millions of students around the world who tried - and failed.

Part One discusses the impact of illiteracy on employment, crime, standard of living, consumer rights, citizen's rights, education, lifestyle choices, and health risks. Cleckler talks about the size of the problem and

the reasons this is not acknowledged. He provides facts and figures on the monetary cost of illiteracy and its causes worldwide.

In Part Two Cleckler offers a blueprint for a solution to our illiteracy, the logic, and how to implement the proposal. He challenges the reader to join in a proposal for a grass roots campaign concerned with putting into motion proactive steps to solve the literary crisis

Cleckler has invested 22 years in a program of phenomenal personal research. The book is filled with helpful charts, graphs, figures, and tables which re-enforce the narrative. He has also devoted over 100 pages to a number of comprehensive appendixes, bibliography, a full index, and other valuable tools such as a list of pertinent websites.

"Let's End Our Literacy Crisis" is made up of convincing evidence of the crisis we are facing worldwide with illiteracy. Cleckler's writing is clear, relevant and is a wakeup call to educators, anyone in public office, and to all who are impacted directly and indirectly by this alarming crisis.

2 of 2 people found the following review helpful:

5.0 out of 5 stars **A must read for everyone as it affects everyone!!!,** August 11, 2005
By Christine Jones Author of the Mariard Volumes... (Australia) - **See all my reviews**
This review is from: Lets End Our Literacy Crisis: The Desperately Needed Idea Whose Time Has Come (Paperback)

As one who has been on a 30 year journey from illiterate to author, I was stunned by this book. Bob hits the nail on the head and it is an incredible read full of facts and solutions, which blow your mind to the problems of illiteracy and how it affects everyone.

This is not just a problem for the U.S.A but any English speaking country and for those learning our language. It is a book you have to read from cover to cover and as you question, Bob gives you solution leaving you wondering why governments will not implement ideas that would benefit us all.

Bob also reveals the feelings of those affected by illiteracy, things we would not dare confess, yet we should, if we are to get support and change to this epidemic. I would highly recommend this book to everyone, as it affects everyone. I would especially recommend this book as a must read to authors of any genre, as it will answer why there is a decrease in readers, which we can do something about.

Hope this book gets on Oprah!!! And in the hands of those who have the power to implement change!!!

Other Endorsements

(One Editorial Review by Dr. Robert S. Laubach, President Emeritus of Laubach Literacy International and ten customer reviews are currently posted on Amazon.com about *Let's End Our Literacy Crisis*. See http://www.amazon.com/dp/1589824970. Nine are five star reviews—out of a possible five star maximum—and one is a four star review.)

"I have read the book, from the local public library and I agree with you 100 percent!"

Friday, November 11, 2005 6:25 PM Email from Dr. Michael Shaughnessy, Professor of Special Education at Eastern New Mexico University, Michael.Shaughnessy@enmu.edu, to Bob C. Cleckler, author of *Let's End Our Literacy Crisis*. This email came in answer to my email asking where he had read *Let's End Our Literacy Crisis*. He had sent me an email asking for an email interview to be posted on the EducationNews.org website. He is one of their senior part-time writers.

To see Dr. Shaughnessy's very impressive credentials go to http://education.enmu.edu/advisors/michael-shaughnessy.shtml.

"Bob Cleckler's *Let's End Our Literacy Crisis* book and workbook are massively researched and eminently practical. They are our last, best chance for social harmony and prosperity."

Gary Sprunk, English and ESL teacher, master's degree in English Linguistics

Gary was so impressed with the seriousness of the problem of English illiteracy and so convinced of the potential of the proposed solution that he decided (the author of this book neither requested nor even suggested that he do so) to form a company to help make it happen. He has hired a marketing director, an Internet web designer and an "as needed" graphic designer. The author of this book is serving as an unpaid Vice President of Research & Development. Gary has developed a program called Respeller which will very quickly convert about 25 pages of English

into NuEnglish and he has written the *Beginners' NuEnglish Workbook* based upon his master's degree in English linguistics and his experience in teaching English to young children in South Korea and university students in Thailand.

Pertinent Websites

http://LearnToReadNow.org (This website gives a very good introduction to the humanitarian project described in this book.)
http://NuEnglish.org
http://literacy-research.com
http://NuEnglish.net
http://www.EnglishLiteracyInfo.com
http://EveryoneCanReadNow.com
http://HowToReadSoon.com
http://bccleckler.wordpress.com
http://www.spellingsociety.org
http://americanliteracy.com

A Few Publicity Events

The author of *Let's End Our Literacy Crisis* was the only guest on a "morning drive-time" radio show in late 2005. This was a thirty minute telephone interview on live radio. The interview was conducted by Robin Raymer, host of Radio Talk Show-WOAM from Canton, Illinois. Robin had seen *Let's End Our Literacy Crisis* at the American Booksellers Association's BookExpo America in New York City on Memorial Day weekend a few months earlier.

As a result of having been awarded a finalist award in *Forward* magazine's 2005 Book of the Year Education category, *Let's End Our Literacy Crisis* was also displayed in the world's largest book fair: the Beijing Book Fair in China in 2006 in *Foreword* magazine's booth.

Author's Corporate Affiliations

Founding Chairman of Literacy Research Associates, Inc., a non-profit educational corporation licensed each year in the state of Utah. Trustees of the corporation are the author and his wife and Jack Mleynek, a board

member of the American Literacy Council. It consists of the following associates: four research associates, a marketing research associate, two industrial literacy associates, and four teaching research associates, all of whom are presently in an inactive role.

Vice President of Research & Development of NuEnglish, Inc., a non-profit, 501(c)(3) tax-exempt educational corporation licensed each year in the state of Arizona. It consists of Gary Sprunk, President, a vice president of marketing, a vice president of information technologies, a vice president of research & development, and an "as needed" graphic designer.

Website Award

The http://LearnToReadNow.org website won a bronze award from the Global Ebook Awards competition of Para Publishing LLC, the largest or certainly one of the largest promoters of ebooks in the U.S. This was the only website which won an award for website design in 2014.

Let's End Our Literacy Crisis

The Desperately Needed Idea
Whose Time Has Come

Second Revision

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Second Revision

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Let's End Our Literacy Crisis

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Bob C. Cleckler, B.S.Ch.E.
Literacy Research Associates, Inc.
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Literacy Research Press
Salt Lake City, Utah

A 198-page companion volume, Let's End Our Literacy Crisis Teachers' Guide, is available for only $14.95. This is a teacher's guide and student's manual which will be helpful for older students and any beginners needing additional teaching materials. It also contains additional details about the English language. See back of book for ordering information.

See About the Author at the end of the book.

Other books by the author,

Bob C. Cleckler, B.S.Ch.E.:

Instant Literacy for Everyone
Published 1993 by Northwest Publishing Inc.

Let's End Our Literacy Crisis
and
Let's End Our Literacy Crisis, Revised Edition
Published in 2005 and 2009 by American University & Colleges Press
An imprint of American Book Publishing

Dedication

This book is dedicated to hundreds of millions of students around the world who tried—and failed—to become proficient readers in English. Now they can learn. The problem has been solved, and it was not due to any inadequacies in the students.

Every day I became more convinced that nothing could do this world more good than to teach everybody to read and speak English, not because it is English but because it is the world's chief language of communication. Perhaps the research I have been doing...is about to come into its own. **Nothing is so powerful as an idea when its time has arrived** (emphasis added).

Frank C. Laubach
Forty Years With the Silent Billion, p. 386

Foreword

Dr. Robert S. Laubach
Laubach Literacy International

Once in a while one learns of an undaunted person trying to climb the highest mountain, or working towards the impossible dream. Such a person is Bob Cleckler, who is boldly proposing a [solution to our literacy crisis], and laying out a blueprint for its accomplishment.

Cleckler, armed with facts and figures, illustrates the cost to the national economy of the appallingly low rate of literacy in the United States. It's high time, he maintains, that we stop merely treating the symptoms of the disease of illiteracy.... Let's get to work, he calls out, on the root causes of the disease....

I have been working for half a century helping organize bands of volunteers to reach out with literacy help to thousands in our nation....

My father, Frank C. Laubach (1884-1970), founder of the world-wide "Each One Teach One" literacy movement, spent almost every spare moment of his last 15 years promoting [a similar solution to our literacy crisis]. He may have been a little ahead of his time....

The "impossibility" of the dream in the first paragraph doesn't refer to the problem of developing a [solution to our literacy crisis]. Others, my father included, have proposed specific new systems. There is great agreement among them, as a common thread runs through them all....

What to do and how to do it are the simplest parts of the problem. The difficulty comes when the [new system] comes face to face with the vested interests in maintaining "traditional" [systems]....

But as Cleckler points out, only in the past decade has our nation become aware of the vast cost of illiteracy. This continually rising cost may soon deem essential changes in the way we [teach students to read]. So Cleckler sounds the call once again to make order out of chaos. He not only sounds the call. He has developed an orderly [solution to our literacy crisis], and shows how to [implement] it.

Even the skeptic should take heed to his counsel. Those already favoring [similar solutions] should rally around. This is the time for concerted action on the part of all. [His proposed solution] may well become the Reformation of the 21st Century.

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PART 1
THE PROBLEM

At this point, I would beg the reader to forget the numbers game. Whatever the precise calibrations, it is obvious that the statistics represent an enormous, an unconscionable amount of human suffering. They should be read with a sense of outrage.[1]

Michael Harrington
The Other America

Chapter 1
Illiteracy Hurts

Research for this book encompassed areas that few educators involved in beginning reading venture into. As the evidence mounted, it became very clear that merely tweaking the existing system will never solve our literacy problems because of dramatically changed conditions in the last ninety years. The writings of numerous linguists and educators over the last two hundred years, however, built an increasingly convincing case that there ***IS*** a solution to our literacy crisis. The extreme importance of—at long last—***permanently*** solving our literacy crisis, instead of merely attacking one or more of its symptoms (as virtually 100 percent of all solutions proposed in the last thirty-five years have done), demands an urgent appeal to every reader to honestly and open-mindedly consider all the evidence presented in this book.

Several centuries of history clearly demonstrate that governmental leaders in English-speaking nations seldom initiate the revolutionary teaching method that has been proven effective in hundreds of other countries (but never tried in English) to solve our literacy problems. Governmental leaders almost never institute revolutionary changes unless pushed into them by the public. We, as concerned citizens, must initiate the changes needed to solve our literacy crisis.

The data presented in Chapters 1 through 5 from numerous expert observers of our culture will convince any open-minded reader that our illiteracy rate has now reached crisis proportions. Several linguistic and educational experts say that with the present system of teaching reading in U.S. schools, some students—even some of our brightest students—will never become good readers. As linguistic expert Sir James Pitman states, "the [reading student] is expected to take on a task that is formidable for all and for some impossible." (See the section titled "Why It Is Difficult for All, Impossible for Some" in Chapter 6 for the full quote.) No one knows how many people will be unable to learn to read English without extensive one-on-one tutoring, but with more than 1.3 billion English-speaking people in the world, it is at least hundreds of thousands too many—especially if it includes one of **your** loved ones.

How to Get the Most Benefit from This Book

There are basically two ways in which a non-fiction book such as this can be read. As a result of real or perceived time pressures, readers can scan through a book to see what it is about in order to decide if they want to read it or not. As a result of scanning here and there they may choose to read a few sections a little more carefully. The other method of reading a book is to begin at the first and read consecutively to the end in an honest attempt to determine the important ideas to be learned.

Although what this book proposes is very simple, the reasons for the proposals are so complicated and the importance of at long last solving our literacy crisis is so great that it deserves a diligent effort to gain a complete understanding of both the problem and the solution—which can best be obtained by reading it consecutively.

Although this may seem to be a very long book, the text is fairly short (only 170 five in. by eight in. pages in the print version). The appendixes are included primarily for linguists and persons wanting additional information about the English language—and to thoroughly inform any skeptics who may happen in. More than thirty years of research has gone into the preparation of this book. Numerous linguistic and educational scholars for more than 250 years have recommended the solution to English illiteracy proposed in this book and have thoroughly refuted their skeptics. One of the most convincing rebuttals of the skeptics was by Thomas Lounsbury, LL.D., L.H.D., and English professor emeritus of Yale University, published in 1909. You can read his archived book for no cost at http://nuenglish.net/pdf/english_spelling_and_spelling_reform.pdf.

Frank Laubach, perhaps the best teacher of adult illiterates of all times, taught adult illiterates around the world in more than 300 languages, many of which were not written languages until he devised a written language for them. He prepared reading primers for 313 different languages. He found that in almost every language, except English—in 98 percent of the 300 languages (295 of them)—he could teach them to read fluently in less than three months. In 95 percent of the languages, adult illiterates could be taught to read fluently in from one to twenty days! In some of the simpler languages, such as some dialects in the Philippines, he could teach them to read fluently in as little as one hour!

Dr. Laubach was able quickly to teach his students to become fluent readers because the languages in which he taught were—unlike English—almost phonemically perfect. Chapter 5 will convincingly demonstrate the phonemic problems in English.

The shorter learning time in other languages is **NOT** a result of English being a difficult language to learn, as Chapter 4 will prove. The grammar and syntax of English is neither the easiest nor the most difficult to learn. It is easier, for example, than many European languages, nearly all students of which learn to read in less than three months. More than 1.3 billion people around the world speak English, either as a native- or a second-language, but a conservatively estimated 400 million of them cannot read English very well or at all. There are more than 93 million adults in the U.S. alone who are very poor readers, as Chapter 2 will document.

Ending the Pain and Suffering of Illiteracy: A Preview

The purpose of the book is contained in the title. Yes, it **IS** possible to end our literacy crisis if the method proposed in this book is used—regardless of what the naysayers may claim and regardless of whether or not the method goes against conventional wisdom.

Conventional wisdom may be defined as ideas or beliefs that a large number of people—perhaps the majority—agree upon. The fact that a large number of people believe something does not make it true, however—even if almost everyone believes it. At one time almost everyone believed the earth was flat. When people do not want to be bothered with too much change in their lives they may say, "We've already tried that—it doesn't work" often merely ***assuming*** that it must have been tried at some time in the past.

There are many responses to the statement "we've tried that; it doesn't work" as applied to this book. Two will suffice. First, there are those who will be unable to resist the temptation to scan through later sections only long enough to decide quickly what they think is being proposed. Even if what is proposed here were exactly what the scanners think (and it will not be unless they know the details), the conditions have changed in the last ninety years or so and the need is much greater now. Second, the method proposed has never been tried in English. In at least thirty-two other languages it has not only been tried, but it has been *successful* in improving literacy—in nations both larger and smaller than the U.S. and in both advanced and in Third-World nations. See http://www.valerieyule.com.au/wrintref.htm.

As this book explains, English-speaking nations can reduce the money they spend teaching their students to read English by doing so in less than three months (instead of the present two or more

years) and by replacing students' reading books only when they physically wear out—rather than every three to five years, when the "reading experts" come up with their latest theories of how to improve the teaching of reading. All that is required is an understanding of the seriousness of the problem and the method proposed to solve it. When that understanding is achieved, the readers will want to join others who understand and begin a grass-roots campaign concerned with solving our literacy crisis.

The Pain and Suffering of English Illiteracy

Tom and Cindy were proud of their apartment. It wasn't much, but it was the best they had ever been able to afford. Their two young sons finally had a place to live and thrive. They had moved in during the summer two years ago. Emily, the new joy of their life, was a happy, healthy three-month old. Now it was winter and bitterly cold outside and they have been evicted—not for nonpayment of their rent but, according to the manager, because Emily's crying had disturbed the neighbors. The manager told them their rental contract allowed tenants to be evicted if neighbors complained about another tenant's noise. His real reason was that he planned to renovate the apartment and raise the rent to an amount he knew Tom would never be able to afford. But Tom and Cindy didn't know. They couldn't read the contract—or much of anything else. They suspected that the manager was lying, but they so dreaded being exposed as illiterate that they would not protest and have their illiteracy made known to a few friends they had made in the nearby apartments. Instead, they meekly sought shelter in the downtown rescue mission again until they could find another, very scarce, low-rent apartment.

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George was their best janitor. He had worked for the cleaning company for four years and was so willing to do any job that the common expression, "Let George do it," definitely applied to him. Even though he hated working the night shift, he was a hard worker because this was the first job he had been able to find to support his family in over two years. But now, George has just been fired. His boss left him a note giving him special clean-up instructions. George can read a few words but could not read enough of the words in the note to do the job he was so eager to do.

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The three children sitting around the table are crying. Jane, their mother, is so exasperated, she feels like crying too. After opening the large can of Crisco she just brought home and excitedly placed upon the table, she had to explain to her hungry children that it does not contain the fried chicken pictured on the front. Jane cannot read. Like many in her condition, when she returned from the grocery store, the meager wages she earned at her low-paying sewing job were gone. There is nothing left to go back and buy something to cook in her year's supply of Crisco.

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Frank and Jenny usually didn't stray very far from home. They could not read the street signs and highway markers very well and often feared getting lost, but this was a special occasion. Their only child was celebrating his seventh birthday. His adoring parents agreed to take him to the county fair in a nearby town a few miles from their home on the Great Plains. There were very few towns in this rural area, but friends had told them how to get to their destination. After driving for what seemed like a very long time, they realized that the directions they had been given were inadequate. They were running very low on gasoline and their son began having another of his frequent attacks of asthma. To their horror, his medicine did not help the situation. There were no houses or businesses in sight. They had brought their cell phone and knew how to dial 911, but they did not know how to read the street signs and highway markers well enough to explain their location to the emergency operator.

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These and hundreds of similar stories occur around us every day, but we usually do not see them. There are several reasons this is true. The most frequent reason is that, as a result of shame and embarrassment, those who are very poor readers are extremely good at hiding their

condition. In fact, in the most extensive study of illiteracy ever commissioned by the U.S. government, almost all of the adults in the two lowest of five literacy levels claimed, when asked, that they were good readers or very good readers and had little need for help with tasks requiring reading.

If you have any doubts about how well illiterates can "hide in plain sight," two fairly recent books should dispel that doubt forever. The 1998 book by Tom Harken, *The Millionaire's Secret* tells how he became a millionaire even though he could hardly read at all. Even more amazing is John Corcoran's 1994 book, *The Teacher Who Couldn't Read*. See the section "The Hidden Illiterates Among Us" in the next chapter.

Another reason we do not see more evidence of illiteracy is that the zoning laws in most cities keep the homes segregated according to price level. Although adults who are functionally illiterate occasionally manage to advance to a high-paying position, unless another adult in the household can add enough to the family income to enable them to afford a more expensive home, adults who read very poorly live in a different neighborhood than those whose residents are mostly fluent readers.

Millions of nonreaders and poor readers continually endure a multitude of problems and life-threatening dangers besides those shown above. Jonathan Kozol, in his book, *Illiterate America*, gives a fuller explanation than is presented in this chapter. A thoughtful, sensitive person cannot read this book or Kozol's book without feeling compassion for illiterates over their physical, mental, emotional, medical, and financial problems resulting from their illiteracy. Kozol gives actual examples of people he knows and loves who have experienced the problems he describes.

The method of presenting the data in this chapter requires special consideration. It is important that you consider what effects the problems described in this chapter would have upon *you* instead of upon some name-less, face-less person you are not sure exists. It is always easier to ignore serious problems if they aren't happening to us or our loved ones.

Unlike the above examples, the following will be a brief, matter-of-fact explanation to avoid overstating the importance of any one problem illiterates must constantly endure and to avoid charges of demagoguery. Keep in mind, however, that many simple tasks we take for granted are beyond the ability of many illiterates.

Employment

1. **Jobs lost upon discovering illiteracy**. Today, even the most menial jobs require the ability to read.[2]

2. **Low pay for low reading ability**. This will be explained in Chapter 2.

3. **Pay tied to reading ability, not social class**. Researchers Carmen Hunter and David Harman state, "Those who have completed high school have incomes about double those who have not completed grade school, and half again higher than those with an eighth grade education. This situation prevails among all sectors of the population: men and women, white and black, and all age groups." [3]

4. **Unemployment versus reading ability**. See Chapter 2.

5. **Unemployment versus retraining**. Of the eight million unemployed, the U.S. Department of Labor estimates that 75 percent lack the skills necessary to be retrained for high-tech jobs.[4]

Crime

The inability to read well enough to hold a job providing an adequate income is an obvious contributing factor to crime.

6. **The Percentage of functionally illiterate juvenile delinquents**. Among juveniles appearing before the court, 85 percent are functionally illiterate.[5]

7. **Percentage of non-reading first-time offenders**. Florida Judge Charles Phillips stated, "Eighty percent of the new criminals who pass my desk would not be here if they had graduated from high school and could read and write."

8. **Non-reading prison inmates**. Up to 80 percent of prison inmates are nonreaders.[6]

9. **Education level among prison inmates**. From a recent census of prisoners more than twenty-five years of age, 75 percent are not high school graduates and 35-42 percent of them had not completed ninth grade, as compared to 38 percent of the total adult population not high school grads.[7]

Standard of Living

10. **Income level versus education level**. In 2000 the median annual earnings were, for men: bachelor degree or more, $48,000; some college, $33,000; high school graduate, $29,000; high school dropout, $20,500 and for women: bachelor degree or more, $34,500; some college, $25,000; high school graduate, $20,000; high-school dropout, $14,500.[8]

11. **Education level versus percentage of families on welfare**. There are twice as many on welfare with less than a sixth-grade education than there are with six to eight years of schooling. There are almost four times as many on welfare who have less than a sixth-grade education than have completed nine to eleven years of school.[9]

An often unrecognized cause of homelessness: unemployment due to illiteracy

Consumer Rights

12. **Victimization of nonreaders by their landlords**. Even the most basic needs are more uncertain for nonreaders and poor readers. An apartment to live in and fuel to keep it warm in winter are uncertain if the one signing the lease or receiving past due bill notices can't read. Even loss of a place to live in winter is not as dreaded as the loss of dignity and self-respect.

13. **Lack of understanding of insurance coverage**. Insurance policies cannot be used for insuring against losses, the way they should be, for illiterate policyholders. This is true if the policyholders do not remember (or more likely were not told) all the details of the insurance coverage and cannot read the policy for themselves.

14. **Lack of checking account equals loss of interest payments**. Those who cannot read and write seldom keep their money in checking or savings accounts. Therefore they do not have the advantage of drawing any interest on the money they use for the daily necessities of life.[10]

Citizens' Rights

15. **Democracy is denied to nonvoters and uninformed voters**. One of a citizen's most basic rights is the right to vote. Most illiterates either do not vote or cast uninformed votes. Their knowledge of candidates is usually limited to paid political radio and television announcements and to events newsworthy enough to deserve air time. They usually have no other way of learning the facts about a candidate on issues that are most likely to affect them. They can't vote on issues that are in their best interests. Democracy, for them, is an unreachable ideal.

16. **Loss of citizens' rights through lack of knowledge of them**. Illiterates often do not know and exercise their rights as citizens. They can't read notices they receive from the Internal Revenue Service or from the welfare office. They must learn of their rights, deadlines they face, and things they must do by word of mouth or from the radio or television. They seldom know all their options. They must depend on people they often have reason to distrust to keep them informed. The rights that are written somewhere as theirs are just a hollow mockery if they don't know about them.

Education

17. **Denial of the right to an education**. A common present-day expectation of almost every U.S. citizen is that they will receive a public school education. This, more than any other "right," is of great importance to illiterates. It is understandable if school officials, after reviewing the records, decide that certain students are wasting a teacher's time and the school's budget for school materials. Believing that these students are not worthy of a teacher's time and are taking up space that more deserving students could use can be devastating to a teenager's self-respect. Such students drop out of school instead of insisting upon their right to an education. It is easier for all concerned to believe the student has failed than that the educational system didn't do what it should for the student. In addition, parents, whether they can read or not, often are embarrassed and frustrated over difficulties their children have in school.

18. **Children of the functionally illiterate lose educational rights**. Children do not receive all the benefits that are due them from the school system if their parents can't read. Illiterate parents do not read letters

from their children's teachers. Illiterate parents cannot study materials designed to help their children prepare for college, nor can they help their children with homework. They can't show their children the importance of an education by going to the classroom or by meeting the teacher. They fear they will embarrass themselves or their children with their inability to read or understand basic school subjects.

19. **Embarrassment over the inability to read to children who request it**. Illiterates must often suffer the embarrassment of having young children know their parent(s) can't read. For example, parents may try to help their first grader with their schoolwork by buying children's storybooks. When the children insist that their mother read the book, she may try to "fake it" by making up a story from the pictures. It then hurts to be told, "Mommy, that's not right." Even young children often know their parents can't read.[11]

20. **The cost of truancy**. Truancy is now such a serious problem that ordinances have been enacted allowing police in many U.S. cities to impose a $500 fine or thirty days in jail for the parents and suspension of drivers licenses of the students. Truancy costs include the cost of imposing curfews in many cities and, for example, the costs of over-time pay for police in New Orleans. Enforcement of truancy laws in San Jose, California, increased police payroll costs by $1 million. Most truancy occurs because the truants have failed to learn to read. Better education significantly reduces both truancy and other forms of juvenile delinquency. When the students are better able to instruct and entertain themselves with reading, they do not require such vast costs for social programs designed to keep them out of trouble.[12]

Basic Lifestyle Choices

21. **Restaurant roulette: stick to basics or eat detested food**. Illiterates can't always order what they want when they go to a restaurant. They may have to choose by pointing to something on the menu. If there are no pictures, they may not know what they have ordered until it arrives—and it may be something they do not like. They can't tell from a menu in the window what the price of items will be before they go inside. They must either order something basic they are sure the restaurant will have or depend upon the person they are with to order for them. Their choice is another hamburger and cola or something ordered for them that they hate.

22. **Supermarket roulette: what is in this can?** Illiterates are denied the choice of less expensive generic or unadvertised brands of food when grocery shopping. They have to buy products based on pictures on the package or buy labels they recognize from TV commercials. Even many nationally advertised brands are beyond their purchase. For example, how could they buy Campbell's soup and get what they want when every can looks the same? Most illiterates so dread prejudice—a dread that is all too often justified—that they will not ask for help in the supermarket. They therefore waste money on household items they can't use or on foods they detest.

23. **Expense, time, and stress of traveling to pay bills**. Illiterates cannot manage checking accounts, so they seldom pay bills by mail. This means they must spend several hours each month in time-consuming and often expensive travel, an added cost for every payment they make.

24. **The dangers of travel**. Travel is often difficult for illiterates. They endure risks that most of us could never imagine. Although they may learn to decipher many traffic signs and symbols, street signs they have never seen before are a complete mystery to them. Bus stop and subway station names are equally meaningless. Imagine your frustration at being lost in a foreign country with a language you know nothing about. A similar frustration or fear usually keeps most illiterates close to home.

25. **Lack of choice of TV programs**. Illiterates do not even have the luxury of deciding in advance what TV shows they will watch. They stick with weekly programs they know come on at a certain time. Alternatively, they find what they can by flipping through the channels, frequently missing programs that would be of more interest to them.

26. **Inability to follow food preparation instructions**. Illiterates can't follow the food preparation instructions on the items they purchase. They may want to avoid the monotony of always having the same food or the criticism of being a lazy, unimaginative cook. There is a danger, however, in purchasing some new food item or in trying a new recipe by following a friend's oral instructions. They run a high risk of wasting food for which replacement would be difficult or impossible because of limited finances. Even government food handouts become a mockery. If the recipients cannot read instructions, they cannot make a tasty meal from the surplus cheese, noodles, and powdered milk, for example.

27. **The dilemma of having to trust someone who is untrustworthy**. There is an obvious outcome of the examples in this chapter. Illiterates do not have even the most basic lifestyle choices that the rest of us have. They must rely upon others to choose for them. Because of their disability, illiterates can cite many times when wrong choices were made for them or

times when they were cheated. They find themselves in the dilemma of having to trust people that they are not sure can be trusted. They are often paralyzed by not knowing the right word for the right thing at the right time. It is often a terrifying feeling.

Dangers and Health Risks

28. **Medicine bottle precautions**. Illiterates can't read precautions on a medicine bottle. The expiration date for safe usage, possible allergic reactions, sedative effects, who should not take it, possible side-effects, and dosages, thus may be a mystery to them.

29. **Inability to read health pamphlets**. Illiterates can't read health pamphlets and bulletins, and thus often do not know about the preventive health measures they describe. They often do not know, for example, the seven warning signs of cancer.

30. **Inability to read product warnings**. Illiterates can't read, for example, the warning sign on a pack of cigarettes. They may know that smoking is bad for them, but they can't read the details that could give them the determination to quit.

31. **Unintended surgery through lack of understanding**. Illiterates can't read waivers that they must sign before undergoing surgery, so they don't know their rights. They often do not understand the medical jargon and fear the unfamiliar atmosphere found in hospitals. They sometimes find, too late, that they've agreed to something that in the confusion was not adequately explained to them. Some women, for example, have found that by undergoing an unintended hysterectomy, they have forever been denied the basic privilege of motherhood.

An often unrecognized cause of accidents: inability to read warning signs

32. **Workplace injuries**. Working with toxic chemicals can be a frightening job for anyone. It is especially so for someone who can't read package labels or the warning signs on the walls. The same is true regarding warning signs about

machinery and other dangers. U.S. workers are more likely to be killed on the job than workers in other major industrialized countries (for example, thirty-six times more likely than in Sweden). One out of eleven U.S. workers will be killed or seriously injured at work.

33. **Inability to use telephone directories**. This example involves a simple task we often take for granted: looking up telephone numbers in the telephone book. Although some can find the name of a friend, far fewer have the sorting skills to use the yellow pages. Even the emergency numbers on the first page are beyond recognition for many of them. Even if illiterates can remember an emergency number they can call, they may still be in trouble. If they are away from home, the inability to read street signs may keep them from explaining their location well enough to get timely help, for example, for a child who is choking.[13]

34. **Death Rate of Children Tied to Mother's Education**. A 1999 study by the World Bank showed that the average death rate for children under five years old whose mothers had no education was 144 per 1000 live births. This dropped to 106 per 1000 for mothers with a primary education only and to 68 per 1000 when the mothers had some secondary education also. When the infant's care giver cannot read the directions on baby formula or medications, a wrong guess can lead to injury or death of the child. We have a moral obligation to prevent such tragedies, and making the directions on baby formula and medications easier to read. Those who protest that it would be too costly should be reminded that this improvement to our educational system would pay for itself by increased national productivity and by avoidance of all the problems associated with illiteracy.[14]

Chapter 2
How Widespread Is U.S. Illiteracy?

This chapter is included for compassionate readers who are upset by what they read in Chapter 1 and who, as a result, want to comfort themselves in the belief that, although the problems and suffering of functional illiterates is real, it does not affect very many people

As long ago as 1961, a body called the Council for Basic Education, in a report called *Tomorrow's Illiterates,* estimated that more than a third of all American students were 'seriously retarded in reading.'" [1] Perhaps the earliest and most notable was the April 1983 "A Nation at Risk" report which resulted in numerous educational changes in the U.S. But the most comprehensive study of U.S. literacy ever commissioned by the U.S. government was the five-year, $14 million study involving lengthy interviews of 26,049 adults which was released on September 8, 1993. The 2002 version of this "Adult Literacy in America" report is available for free download on the Internet.[2]

Dr. Diane McGuinness, in her book, *Why Our Children Can't Read*, lists some of the characteristics of the study:

1. It used a careful statistical sampling to achieve a true representation of the population regarding gender, racial and ethnic groups, and geographical location (including inner city, suburban, and rural areas). [Sampling was also done to be representative of the age of people in the entire U.S. population.]

2. It included development of an accurate objective means of judging reading ability based upon predetermined absolute standards. These standards measured "functional literacy," the test subjects' ability to read and correctly act upon what they read by finding information and performing certain operations upon that information. See Appendix 9, What Is Functional Illiteracy?

3. Educational Testing Service (ETS) personnel used an accurate means of ensuring that test information was (1) gathered under strict guidelines prepared for evaluating test responses, (2) verified by independent outside testers, and (3) protected from being changed by anyone who might have any reason to want the data to show different results than they appeared to show (for example, no school was given access to the data until the study was complete).[3]

On September 9, 1993, reports about the study appeared on the front pages of a number of newspapers. An article of 1148 words appeared on the *New York Times* front page,[4] and a report of 304 words by a *Washington Post* writer appeared on the front page of a number of other newspapers.[5] Considering the seriousness of these reports, one would expect changes to have been made to improve U.S. adult literacy, but a follow-up study by the same group which conducted the 1993 study, in a report issued in 2006, showed little or no statistical improvement in U.S. adult literacy.[6]

Reasons For Lack of Literacy Improvement

There are several obvious reasons for any lack of improvement in literacy in the decade following 1993. As you know, political and educational authorities seldom initiate revolutionary changes unless pushed into them by an angry electorate, and merely tweaking existing programs for the last eighty years has definitely not solved the problem. The general public has responded to illiteracy by saying, in effect:

"Improving the literacy rate is not my job." (Busy Americans usually expect "experts" to solve all of their problems.) or

"I can read, my children can read, my friends and associates can read, so I do not see any need to improve the literacy rate." (Because of illiterates' ability to hide embarrassing facts about themselves, you might be surprised that some of the people you believe are fully literate are, in fact, very poor readers.) or

"My top priorities are my family, my job, my entertainment and hobbies, my relationship to God, and my possessions (not necessarily in that order). I seldom pay any attention to things that are not top priority because that would prevent my being able to devote the needed attention to my top priorities." (Quite obviously there are

many worthwhile humanitarian tasks that we could spend five or ten minutes on each day and still meet all our top priorities, if we allocate our time properly) or

"I have not seen (or at least do not remember seeing) any reports of low literacy rates in the U.S. I *have* seen U.S. Census Bureau or other reports that the U.S. literacy rate is 99% or more. Pride in our educational system makes me believe our literacy rate is so high that we need not be concerned about it." (People who say this do not realize that there are valid reasons why the U.S. Census Bureau has so greatly overestimated our literacy rate, as will be explained later, or that "[T]he U.S. now ranks 51st in literacy among all United Nations members, down 20 places since 1950." [7])

"I have seen reports of problems with U.S. literacy, but I do not believe them. As a result of the mainstream media's normal news reporting practice: bad events are news, good events are no news, and people are just trying to invent news by finding fault with our schools."

If compassion for the serious physical, mental, emotional, medical, and financial problems of illiterates and the problems their illiteracy causes those of us who are fluent readers (which will be covered in a later chapter) do not motivate us, there is little that can be done about the first three excuses for inaction. This chapter, therefore, deals only with the last two excuses for inaction above.

How the Media Helps Hide the Problem

Anne C. Lewis, a freelance writer on education concerns, says there are "two big problems" the press makes in its coverage of illiteracy. The first mistake is confusing adult illiteracy problems with problems in the public schools. It is typical to blame the adult literacy problems on the schools and then go no further—as if fixing the blame will somehow result in solving the problem. Blaming the schools accomplishes nothing because, she pointed out, roughly 70 percent of the workforce in the year 2000 was already in the workforce and therefore permanently out of public schools. Furthermore, she says, thirty million or more Americans read so poorly they could "bring the whole economy crashing down." With the rapidly accelerating technology in the workplace and its demands, for example, for reading the operating manuals and for retraining, previous levels of illiteracy are no longer acceptable. She says the press rarely makes this known.

The second mistake in illiteracy coverage in the press is that—far too often— it is only concerned with boring stories of an occasional adult illiterate who can now read thanks to the efforts of some selfless volunteer. This type of coverage too often lulls the public into believing that is all there is to the problem of adult illiteracy.[8]

Business, media, and governmental leaders who are most aware of the problem, however, know there is more to it. They do not devalue the seriousness of illiteracy in the U.S. For example:

> An ill-educated citizenry threatens the United States' ability to remain competitive in world markets more than any of the other more frequently cited causes of unproductive work places.
>
> That, according to Geneva Steel President Joseph A. Cannon, was one of the main themes of the prestigious Eighth American Enterprise Institute World Forum he recently attended in Beaver Creek, Colo....
>
> The forum's discussion about the sad state of U.S. education particularly interested Mr. Cannon.... [I]n the one session about education which stands out in his mind, "they didn't talk about worker productivity. They didn't talk about new inventions. They didn't talk about government-industrial policy. They just talked about education. That was everyone's concern."
>
> U.S. children rated about 14th out of 15 nations on mathematic skills....
>
> Mr. Cannon said the average IQ of Japanese student is increasing while that of their counterparts in the U.S. is declining.
>
> "This is a crisis and people have said it is a crisis for years," said Mr. Cannon. "But it's only getting worse. We spend more on education per capita than almost any nation in the world. People say, 'Well, spend some more money.' That does not appear to be the answer." [9]

A big part of the reason people do not realize the seriousness of the literacy problem is the way the media handles the reporting of scientific or statistical studies. Since reporters are journalists, not statisticians or mathematicians, and since the reporters are almost always under time pressures to get their report out (before someone else reports it and it is no longer "news"), reporters often read only the Executive Summary of lengthy reports. In any case, journalists seldom do a careful study of the entire report, much less a serious mathematical analysis of data in a study. The 1993 study mentioned above was a 150 page report. The April 2002 version of the report was even longer: 199 pages. In the case of *this* study,

a simple mathematical analysis of the data was required to understand the true seriousness of the findings of the study.

The *New York Times* article about the 1993 study gave an explanation of why increasing our literacy rate is important: "The overall education level of Americans has increased in terms of schooling and even in fundamental literacy. But the demands of the workplace simultaneously have vastly increased. We simply are not keeping pace with the kinds of skills required in today's economy." The article also gave an explanation of why literacy is a problem for so many people: "Insufficient education and a growing number of adults whose first language is not English were important reasons that the scores were so low." They failed to mention, however, that the interviewees were carefully chosen to be an accurate representation of the entire U.S. population at the time of the study. The article also misquoted the study as saying it indicated that there were 40 to 44 million adults in Level 1 literacy (the lowest literacy level), "an 40 million" [sic] in Level 2, 61 million in Level 3, 11 million in Level 4, and "up to 40 million" in Level 5. Page 17 of the 2002 version of the study shows the true figures to be, Level 1: 42.0 million (22.0% of the 191 million U.S. adults in 1993), Level 2: 50.9 million (26.7%), Level 3: 60.5 million (31.7%), Level 4: 31.2 million (16.3%), and Level 5: 6.4 million (3.3%). The most serious failing of the article is that it did not quantify the seriousness of the literacy problem. It merely began the article by stating: "Nearly half of the nation's 191 million adult citizens are not proficient enough in English to write a letter about a billing error or to calculate the length of a bus trip from a published schedule."

The article by the *Washington Post* writer began the article by stating: "Nearly half of all adult Americans read and write so poorly that it is difficult for them to hold a decent job, according to the most comprehensive literacy study ever done by the U.S. government." This raised questions of what constitutes a "decent job," exactly how many people are affected, how accurate was the study, and what were the statistical procedures to ensure accuracy, leading to the author's "engineering study" of the report. This engineering study found that although the *Washington Post* writer's statement was true, in effect it *minimized* the seriousness of the problem.

The Bottom Line: How Bad Is It?

By using a simple ratio-multiplication procedure on the data on pages 17, 63, 65, and 66 of the 2002 version of the 1993 report (see Appendix 7 for the calculations), it is possible to prove that **average annual earnings** were:

22.0%* (42.0 million) of U.S. adults who were in Literacy Level 1: **$2105**
26.7%* (50.9 million) of U.S. adults who were in Literacy Level 2: **$5225**
The Threshold Poverty Level for every individual U.S. adult was **$7363**
in 1993, according to the U.S. Census Bureau.[10]

* Percent of the 191 million U.S. adults in 1993. There was no overall statistically significant difference in these employment figures in a report issued in 2006 by the same group of researchers as performed the 1993 study.

This means that 48.7 percent (22.0 plus 26.7) of all U.S. adults earned *significantly less* than poverty-level-wages because of illiteracy, which is certainly more shocking than saying "nearly half of U.S. adults cannot hold a decent job because of illiteracy." Bill Bryson states on page 242 (see Bibliography) that illiterate adults account for three-fourths of the American unemployed.

Almost every U.S. adult can read at least one or two thousand simple words that they learned in the first three grades in school. If that is all they can read, however, they cannot read and write well enough to hold an above-poverty-level-wage job, which is the most accurate definition of functional illiteracy. There are other ways of deciding that someone is functionally illiterate, of course, but they do not have the financial incentive for being accurate that employers have when hiring someone who will be able to read and write well enough to be a profitable employee. The 48.7 percent of U.S. adults in Literacy Levels 1 and 2 were functionally illiterate. See Appendix 10 for worldwide literacy data.

The percentages of U.S. adults shown as "in poverty" on page 61 of the 2002 report were: Level 1: 42.7 percent and Level 2: 21.7 percent. Although ***all*** of the average yearly earnings of Level 1 and Level 2 interviewees were below the poverty threshold, they were not all in poverty because of the earnings of another person or persons in the family and, in most cases, because financial assistance from the government, family, friends, and charities brought many of them above the poverty threshold line.

Page 61 of the 2002 report shows that the percentages of Levels 3 through 5 adults who were in poverty were 12, 7.67, and 4.67, respectively (averaging the prose, document and quantitative literacy data). When these percentages are multiplied by the number of adults in each level, it shows the number of adults in each level who were in poverty. Adding the total number of adults in poverty in Levels 1 and 2 and Levels 3 through 5 and dividing by the total number of adults in those two groupings of levels shows that 31.2% of Levels 1 and 2 were in poverty, but only 10.1% of Levels 3 through 5 were in poverty. Although there are many reasons for poverty, since the report statistically balanced the interviewees by age,

gender, ethnicity, location, etc. and since there is no obvious provable differences other than literacy level, if 10.1 percent is taken as being the poverty not resulting from illiteracy and is deducted from the 31.2 percent, the resulting 21.1 percent due to illiteracy, when compared to 10.1 percent, provides strong evidence that illiteracy causes more than twice as many adults to be in poverty as all other causes combined.

"Statistics Canada, which carried out the same kind of testing in the United States, Canada, and five non-English-speaking European countries, replicated these findings for the United States [in 1994]. The study also showed that U.S. high school students and young adults (16 to 25 years old) were six times more likely to be functionally illiterate (Level 1) than those in Sweden.... Only 13 percent of today's 16- to 25-year-olds [in the U.S.] scored at Levels 4 and 5." [11]

If you think that the above does not apply to college graduates and graduate students, on December 26, 2005 the *Washington Post* stated,

> Literacy experts and educators say they are stunned by the results of a recent adult literacy assessment, which shows that the reading proficiency of college graduates has declined in the past decade, with no obvious explanation....
>
> The test measures how well adults comprehend basic instructions and tasks through reading—such as computing costs per ounce of food items, comparing viewpoints on two editorials and reading prescription labels. Only 41 percent of graduate students tested in 2003 could be classified as "proficient" in prose-reading and understanding information in short texts—down 10 percentage points since 1992. Of college graduates, only 31 percent were classified as proficient—compared with 40 percent in 1992.[12]

What It All Means

Although there are many definitions of what constitutes functional illiteracy, very few people can afford to accept a job that pays less than they are capable of earning. And although a few people are so insistent upon holding a cherished but low-paying job that they are willing to live in poverty, their numbers are almost certain to be negligible. Very few U.S. adults cannot read at all. Most U.S. adults can read *at least* one or two thousand simple sight words they learned in the first four grades in school, but if this is all they can read, they cannot read and write well enough to hold an above-poverty-level-wage job and they are functionally illiterate.

As the 1993 study amply demonstrates, almost half of U.S. adults are functionally illiterate and, as a result, they must constantly endure the pain and suffering described in Chapter 1. It is no stretch of the imagination to call this situation a literacy crisis. Although there are several books in print defending present methods of teaching students to read, Appendix 6 is a point-by-point refutation of the only known book published since the 1993 "Adult Literacy in America" report which claims there is no literacy crisis. Appendix 6 is included for those who may have encountered and believed information claiming there is not a literacy crisis.

Although the previous section only shows statistics on U.S. functional illiteracy, the same problem exists wherever there is English written material. There are more than 1.3 billion English-speaking people around the world, many of whom have a native language other than English. Even if only 20 percent of them, which is highly unlikely—rather than about 48.7 percent, as in the U.S.—are functionally illiterate in English, that number still adds up to a shocking "hundreds of millions" of people who speak English but are *functionally illiterate* in English. ***IF*** their native language is a written language ***AND IF*** these people are fluent readers in their native language ***AND IF*** their nation has the financial resources to print an adequate supply of written material in their native language, English functional illiteracy—for them—may not be a crippling problem. Unfortunately there are multiplied millions of people who are on the wrong side of these three *IFs*.

Why the Size of the Problem Is Unrecognized

Many readers may have difficulty believing the extent of the problem of illiteracy. Although these readers may not be able directly to dispute the figures, they can quote the clichés, "There are lies, damned lies, and statistics" and "Figures don't lie, but liars figure." More charitably they may simply say, "You can prove almost anything if you quote only part of the figures and quote them in a certain way. There is probably some sort of trick to the figures."

There is one "trick" to the figures, if you can call it that, which has already been mentioned: the figures refer to functional illiteracy. If, however, people read so poorly that they cannot get by in life as well as they should, their reading ability is of little value. Besides this explanation of functional literacy, there are six more major reasons why the extent of illiteracy is not widely known.

The Hidden Illiterates Among Us

Today there are many who pass as literate, although they aren't. These people are known as "passers." We might be surprised, for example, at how many businessmen and others carry a newspaper only to make people believe they can read. Illiterates seldom look any different. Also, you can't identify an illiterate person by talking with one. Many illiterates are knowledgeable and eloquent speakers. They just didn't gain their knowledge or eloquence through reading.

Passers are significantly helped by real estate zoning laws which essentially keep lower income illiterates separated from higher paid literate workers and by the natural economic and cultural separation that occurs in any group of people. Those who can read are more likely to be close associates with others who can read and vice versa.

Passing can even occur within closely knit families. Many parents can conceal their inability to read from their children, especially if their spouse can read and will cover for them. Spouses often help their nonreading mates with reading tasks necessary for employment, beginning with the employment application form. If something occurs in the workplace which threatens to expose them as nonreaders, they often simply disappear. They dread the embarrassment of being "found out."

John Corcoran, the high school teacher who could not read, is a testimony to the ability of illiterates to hide -- and the emotional trumoil of doing so.

Anyone who has doubts about these conclusions should read John Corcoran's book, *The Teacher Who Couldn't Read*. Mr. Corcoran graduated from Texas Western College in 1961 with a degree in education. He admits that he cheated on tests in college—although he states in his book, "I am not advocating cheating." He had gotten into college without taking entrance exams because he had an athletic scholarship.

Amazingly, he became a teacher of tenth, eleventh, and twelfth grades in California, where he taught for eighteen years, without being

able to read! He taught social studies, typing, history, physical education, and one year he even taught English. Although his wife thought for twenty-five years that he could read, even if he couldn't read well, she didn't know that he could hardly read at all until she overheard him trying to read a simple child's story to their three-year-old. It was not until then that she came to understand the emotional pain he had been living with all those years. He suffered emotional pain caused by feeling there was something wrong with him which prevented him from learning, by having to develop so many coping methods to hide his illiteracy, and by feeling alienated from his associates who could read.

Mr. Corcoran told of how all through grade school and high school his teachers never once heard him read or spell a word correctly, and yet they continued to call on him to read and spell as if they hadn't noticed. Throughout his public school years, not one teacher ever offered the one-on-one help that he so desperately needed, perhaps out of fear that, like so many of his previous teachers, they would be unable to help him, or because they were busy with other tasks. He explained that the U.S. is in denial—the public in general and teachers in particular are too embarrassed to admit the scope of our illiteracy problem.

Mr. Corcoran said that, to hide his embarrassment over being unable to read in elementary school and high school, he became the class clown "having too much fun to waste time on learning to read." He said that other nonreaders he knew were just as disruptive. As testimonial letters for i.t.a. (Initial Teaching Alphabet) in Sir James Pitman's book, *Alphabets and Reading*, point out, the frustration of feeling stupid or inferior usually results in discipline problems. Students would rather be considered a tough troublemaker not interested in reading than be seen as trying and failing to learn. Mr. Corcoran explained that being unable to read causes very low self-esteem, and the only way to build up the nonreaders' self-esteem is to teach them to read! As he stated it, "A crying child begs, 'Tell them not to hurt us anymore—teach us to read!'" Mr. Corcoran said he feels strongly that every American who can read—in particular, every teacher—has a moral obligation to help their fellow citizens learn to read.

When Mr. Corcoran was forty-eight years old he finally decided to try, once more, to learn to read. It took a little over one year of one-on-one tutoring to bring him to the equivalent of an eighth grade education. He then went through four years of self-study and then another hundred hours of intensive training to bring him to a college level of skill.

The Grade-Level Completion Deception

Many people assume that if someone has completed high school, or even grade school, they must have learned to read and learned other things they were taught. Teachers and education experts know that this is not always true. Having sat it out for twelve years of schooling does not guarantee that students learn even a small portion of what they are exposed to. A January 9, 1998 report in *The Salt Lake Tribune* verifies this:

> Grammar and spelling problems top the list of complaints that employers and college professors have about recent high school graduates.
>
> Next on the gripe list, according to a poll released Thursday by Public Agenda, is the grads' inability to write clearly....
>
> Seventy-six percent of professors and 63 percent of employers say a diploma is no guarantee a student has learned the basics....
>
> Said Deborah Wadsworth of Public Agenda: "...If parents, teachers, and students don't grasp what the outside world expects of them, we are witnessing a communications gap of enormous and potentially devastating consequences."

Percent of employers and professors who rated recent high school graduates as 'poor' or 'fair' on the following:

[13]

The Silent Minority

Illiterates are a silent minority. They do not write to their legislators. They can't. Out of embarrassment they do not lobby in their behalf. They don't want to be known as a part of the illiterate minority. Community and cultural

leaders of groups with large proportions of non-readers do not like to call attention to these members' illiteracy. They fear this will give their "enemies" (racists, the "elitist" wealthy, or other class-conscious persons) ammunition to use against them. Since they are silent, they (like the reading majority) do not realize that millions of others are in the same condition. If they knew, they might be less embarrassed to stand up for what is best for them.

Self-Esteem Teaching in Public Schools

Perhaps the most successful teaching imparted to present-day students concerns self-esteem. Despite the true performance, U.S. adults and children tend to overestimate their scholastic abilities. The 1993 U.S. Department of Education "Adult Literacy in America" report stated that among the forty to forty-four million adults with the most limited skills, roughly fourteen million admitted they could not read or write well, and only about six million admitted to needing help with any tasks requiring literacy. In short, they felt good about what is actually very poor performance.[14]

An earlier report by the U.S. Department of Education quoted students who were asked to rate their abilities in math and science; 68 percent said they were "good at math." [15] These were students who had just ranked near the bottom in international scholastic testing in science and math.

The U.S. Census Reports

Many believe that the U.S. is a highly literate society because of the official U.S. Census Bureau reports. The 1970 and 1980 census reports showed America to be 99 percent and 99.5 percent literate, respectively. In the interest of national pride, our governmental leaders like to present us as highly literate. Also, it is in the short-term interest of teachers and education officials to believe and promote belief in these figures. Conscious deception may not be taking place, but let's look at exactly how the Census Bureau obtained these figures.

The Census Bureau included questions about literacy in each census from 1840 to 1930. Many of those most knowledgeable about U.S. literacy believe that literacy began to drop in 1963 and has been declining ever since. The Census Bureau reintroduced questions about literacy in 1970 at the insistence of the military.

In the 1970 census the only question asked about literacy was on grade completion. The Census Bureau considered those with fifth-grade completion

or higher to be literate. A little more than 5 percent reported less than a fifth-grade education. For some reason, the Census Bureau decided that 80 percent of these could read, so they reported 99 percent literacy.

In 1980 the Census Bureau mailed out forms and based most of their calculations upon written responses to questions about grade completion. In addition they used a small sample of home visits and telephone interviews. They asked people what grade they had completed. If the answer was "Less than fifth grade," they asked if the person could read and write. They then added the unsubstantiated answer to their record as a fact. This technique of determining literacy is quite certain to underestimate illiteracy for the following reasons:

1. Illiterates would not respond to written forms, and their family members—likely also to be illiterate—would not either.
2. Because of unemployment or low-paying jobs, fewer illiterates have telephones.
3. The underprivileged poor, and especially illiterates, may feel they are being singled out like criminals. They therefore have cause to distrust salespersons, bill collectors, or strangers knocking on their door seeking information—especially if the answers to the questions would be embarrassing. Home visits by Census Bureau officials who are not known by the person answering the door cannot be expected to yield accurate information under such circumstances.
4. Grade-level completion does ***not*** equal grade-level competence.
5. Those who have no permanent address, no phone number, no post office box, or no regular job—a condition shared by almost six million people, most of whom are functionally illiterate—often are not counted. They can't be found by the Census Bureau in time for the census.[16]

Sensory Overload

Finally, this is an age in which we see one kind of crisis or another on TV nearly every day. As a result, we have a tendency to suffer from sensory overload. We learn to ignore or disbelieve much of the bad news because the world goes on with little visible effect. Also, far too often a radio or TV report we hear will dispute the seriousness or the truth of the previous day's report.

However, the extreme seriousness of our illiteracy problem should prevent us from letting other crises dull our senses to this one. We can't afford to ignore the facts. We need to ask ourselves, "Can we, as a nation, keep ignoring a problem affecting our competitiveness in world markets and the health and well-being of over one-third of our people?"

Ten Reasons Why You Didn't Know the Shocking Extent of English Illiteracy

1. The news media badly under-report educational problems regarding learning to read. See pages 17 to 19. Many of the negative findings about education are not reported unless they are sensational enough to get media attention. The media will report the rare, sensational scandal of a school shooting where several children are killed but they give little or no attention to the very common, widespread scandal of two million or more students leaving school every year unable to read well enough to hold an above-poverty-level-wage job. See Chapter 3, Note 27. The news media very seldom re-visit "old news" even if it is a scandalous problem seriously affecting hundreds of millions of people.

2. Illiterates are very good at hiding their illiteracy. They develop numerous coping methods for hiding their illiteracy and for overcoming some of the problems it causes. See pages 23-24.

3. There is a certain amount of natural separation between readers and non-readers. Zoning laws for housing separate the lower income workers from those who are more literate and can afford more expensive housing. There is a certain amount of separation in most occupations depending upon the job descriptions. Some recreational activities result in separation of literate and functionally illiterate participants.

4. Most families have more than one employed adult. If one of the employed adults is literate, that person can pull the family above the threshold poverty line.

5. Most low-income families receive assistance from government agencies, relatives in other families, friends, and charities.

6. Most people think that if a student has completed fifth grade they are literate. School teachers know, however, that having "sat it out" for five years of schooling does not guarantee that the student has learned even a small portion of what they have been "exposed to."

7. Illiterates and community leaders in areas where a large number of illiterates live do not want their illiteracy known. They are a silent minority.

8. Most present-day schools are very good at teaching self-esteem. As a result most students consider themselves to be good students despite their poor performance in scholastic competitions with foreign language students.

9. The methods used in determining literacy ratings by the U.S. Census Bureau result in badly over-estimating U.S. literacy rates. See p. 26-27.

10. We see so much depressing news on TV that we have a tendency to ignore much of it. Our surroundings seem to go unchanged despite the bad news, or a later report disputes most of the previous bad news.

Chapter 3
The Monetary Costs of Illiteracy

Five types of monetary costs are associated with the mistakes and inabilities of illiterates. It is difficult or impossible to assign an exact dollar value to many of these costs, since records that would associate these costs with illiteracy are rarely kept.

Five Types of Monetary Costs of Illiteracy

1. Cost to taxpayers for government programs that provide services that are primarily used by illiterates.
2. Increased labor costs for government and private businesses.
3. Reduction in sales by businesses, since illiterates are not customers.
4. Cost of paying for (or preventing) injury or damage to people, property, or the environment.
5. Cost to national welfare because of the lost potential of the illiterates.

No attempt will be made to quantify the fifth monetary cost. Although it is one of the largest costs, it is the one to which it would be the most difficult to assign a dollar value. As Chapter 6 will show, some very bright people, many with above-average intelligence, never learn to read. Although they can get by better than other illiterates (because they *are* of above-average intelligence), their lack of reading ability severely limits their potential. It not only prevents their making a good living for themselves, but it also limits the contribution they could otherwise make in helping our nation compete successfully in world markets.

President Obama has proposed that the 2012 budget allocate $77.4 billion, or 2.77 percent of the budget to all of education, with only $509 million allocated to states for adults reading at or below the 5th grade level. With at least 50 million people in the U.S. falling below this line, it means a paltry $10.18 to educate one illiterate American adult in 2012. Organizations such as Literacy Partners

believe they can educate one adult illiterate for $1,000—more than one hundred times as much as government funding alone will provide.

Table 3-1 shows the cost of several government programs used by illiterates (monetary cost number 1). The data dates shown are the actual dates, but the dollar amounts shown in this chapter (except for the table after this paragraph) are updated to show what they would be in late 2007. The amounts are higher than when first reported, of course, but even if the up-dated amounts are not exactly right this is a valid procedure for two important reasons: (1) the data show that there are many ways in which illiteracy costs all of us, and (2) the cost is *unacceptably large*.[1] Item 1 of Table 3-1 was not included because it costs a significant amount but because it is the only program that is for the benefit only of illiterates. (Note that the federal funding was for a limited time and may be much less now.) The table below summarizes the money spent in the early 1980s on literacy training (based upon table 3-1, item 1) versus what is needed and the results to be expected. Since these expenditures may no longer exist, it is not updated to a 2012 equivalent.

Federal tax money spent on ***adult literacy training***	$2.34 per year per taxpayer
Federal, state, & local taxes for ***adult literacy training****	$3.19 per year per taxpayer
Federal taxes spent on each adult illiterate for ***adult literacy training***	$4.58 per year
Federal, state, & local tax spent, each adult illiterate, ***literacy training****	$6.25 per year
Annual amount spent on literacy training: federal	$0.28 Billion
Federal, state, local*	$0.38 Billion
Annual minimum needed to significantly reduce illiteracy (1982 est. by the Executive Director of the National Advisory Council on Adult Education—a now defunct commission)	$5 Billion
Amount spent on each adult illiterate if $5 Billion is spent each year on literacy programs	$83 per year
Percentage of illiterate adults in all govt. and private literacy programs[2]	4 % max.
Percentage of illiterate adults involved in literacy programs who complete eighth grade	15 %
Percentage of total adult illiterates completing eighth grade:[3] 0.04 x 0.15 =	0.6 %

* Comparable 2012 figures, not readily available, may be even less.

Table 3-2 shows several increased labor costs because of illiterate or marginally literate employees or because of being unable to find qualified employees (monetary cost number two). Many items are "competition sensitive" or "company proprietary"—the type of information most companies do not want known for competitive or legal reasons. Such costs as these can become very large for many American companies.

Table 3-1
The Monetary Costs of Illiteracy
Type 1: Cost to Taxpayers for Government Programs
Providing Services That Many Illiterates Use

Item	Data Source*	Data Date	Cost
1. Adult literacy training (a) Federal (Creates National Inst. for Literacy, funds business, prison programs, Adult Basic Ed.)	*The Deseret News,* Salt Lake City, July 26, 1991, page A3, col. 1	July 26, 1991	$468 million per year
(b) Federal, state, and local combined	Hunter and Harman, page 100	1978	approx. $938 million per year
2. Child welfare costs and unemployment compensation due to illiterate adults unable to meet the employment standards	Senator George McGovern, *Proceedings and Debates,95th Congress, Second Session*	Sep. 1978	$14 billion per year, estimated
3. Prison maintenance of approx. 60%of the approx. 440,000 inmates of state and federal prisons** directly linked to illiteracy	U.S. Department of Justice Dr. Patricia Gold, John Hopkins University	Oct. 1978 Sep. 1984	$13.8 billion per year, estimated minimum
4. Court costs, law enforcement costs, and crime victim's costs in urban areas where 40% are unemployable for lack of literacy	*Illiterate America* by Jonathan Kozol, p. 14	1985	unknown but must be many times the cost of prison maintenance
5. Industry and taxpayer costs of: (a) industrial equipment damage (b) workmen's compensation (c) industrial insurance for on-site accidents due directly to worker inability to read warning signs, chemical labels, machine operation manuals, etc.	*Illiterate America* by Jonathan Kozol, p. 14	1985	$40 billion per year, minimum
6. Health costs due to illiterate adults' inability to read material explaining preventative health measures, both physical and mental health	*Illiterate America* by Jonathan Kozol, p. 14	1985	unknown but obviously very large

* Sources 2 and 3 are quoted from *Illiterate America* by Jonathan Kozol, page 13.

** The 1986 population of *local jails* is up 23% in the last three years to 274,400 inmates.[4] Expenditures on these inmates would be similar. According to U.S. Department of Justice figures, total adults in custody (state and federal prisons and local jails) on June 30, 2002, was 2,021,223[5] or 4.59 times the 440,000 shown; 4.59 times the $13.8 billion shown is $63.3 billion. An April 23, 1996, report[6] shows the cost of prisons, jails, *and the parole and probation systems* is $60 billion, 60% of which is $36 billion.

No businessman or government official should ignore the magnitude of the items in table 3-2, particularly the last two items. The head-line of the article from which item seven came was, "Illiteracy 'Crisis' Scares U.S. Executives" and ends by stating,

> Executives across America are learning literacy isn't something that can be taken for granted. An estimated 40 million adults in the United States—or about 1 in 5 workers—barely can read and write, according

Table 3-2
The Monetary Costs of Illiteracy
Type 2: Increased Labor Costs for Government and Business

1. Hundreds of thousands of entry-level and middle-level jobs remain unfilled for lack of applicants who can meet job requirements	*Wall Street Journal*	Oct. 16, 1978 Jan. 22, 1981	Cost of paying overtime to cover jobs for unfilled jobs
2. Approx. 70% of the dictated correspondence must be re-typed at least once due to secretaries' inability to spell and punctuate correctly.	American Council of Life Insurance, Washington, D.C.	1983	(This cost is now minimal due to computer spell-check)
3. Cost of correcting errors of illiterate employees, such as mailing a refund of $2,200 instead of the intended $22.00.	*Illiterate America*, by Jonathan Kozol, p. 14	1985	
4. The cost of useless or misleading answers to market research, polls, etc. by those who do not understand the written questionnaire	*Illiterate America*, by Jonathan Kozol, p. 15	1985	Marketing firms spend millions of dollars to locate customers for planned products and services
5. Bill collection costs, public disclosure information, and customer rights information as a result of mailings that are not understood	*Illiterate America*, by Jonathan Kozol, p. 15	1985	
6. Legal costs due to the legal principle held in the U.S. in 1930 that "a deed executed by an illiterate person does not bind him" if its terms have not been read to him correctly	"Illiterate Americans and Nineteenth-Century Courts" By Edward Stevens, in *Literacy in Historical Perspective,* Daniel Resnick, editor	1983	This principle is not strictly enforced due to lack of legal help for illiterates. If it were strictly enforced, it would throw the legal system into chaos.
7. Annual costs of illiteracy on lost productivity	*The Salt Lake Tribune*, Salt Lake City, October 8, 1995, page F8, col. 1-2	Oct. 8, 1995	$336 billion per year
8. About 35 percent of employees require training to upgrade their skills	"Press Misses Scary Story in Failing to Cover literacy Adequately" *The Salt Lake Tribune,* Sep. 14, 1989, p. A17	Sep. 14, 1989	$54 billion, est. mostly for retraining high-level employees

* Sources 1, 2, and 6 are quoted from *Illiterate America* by Jonathan Kozol, pages 14 and 17.

to a [1995] national study. Often the problem isn't immediately apparent in the workplace, because many people...are adept at concealing it.

But the problem is showing up on the bottom line. According to a recent survey, about 90 percent of Fortune 1,000 executives say illiteracy

> is hurting productivity and profitability. It costs the U.S. economy about [$336 billion] a year in lost productivity, say experts.
>
> "It's a very serious economic problem," said Peter Coors, chief executive of the Colorado-based Coors Brewing Co. "I'd call it a crisis." [8]

Part of a company's literacy crisis stems from the need to recruit a workforce that has an acceptable literacy rate. A May 8, 1996, report in *The Salt Lake Tribune* shows that "One in three job applicants who were tested by major U.S. companies in 1995 lacked the reading or math skills to perform the jobs they sought." [9] This is from an annual survey by the American Management Association, a not-for-profit management training association based in New York. Only 3 percent of the almost one thousand companies responding to the survey said they hire anyone who is deficient in basic reading and math skills.

The third monetary cost, reduction in sales by businesses since illiterates are not customers, is also difficult to quantify. Three common examples are:

1. Illiterates spend almost no money attending public or private colleges, universities, or advanced-level training.
2. Most illiterates are excluded from the market for expensive homes, cars, and luxury items.
3. Illiterates buy few newspapers, magazines, or books.

In 1997 the U.S. ranked only twenty-ninth in the world in per capita newspaper circulation (down from eighteenth in 1986).[10] About 45 percent of all adults, and 60 percent of adults in their twenties, do not read newspapers. About 35 percent of them *cannot* read newspapers. The less-distinguished newspapers are written at a tenth-grade level, but most are written at a higher grade level. Most news magazines are written at a twelfth-grade level or higher. The only new, major newspaper to succeed in the last few years (*USA TODAY*) relies upon more color, more graphics, and a simpler text for its success. Several newspapers have gone out of business lately due in large part to decreasing readership.[11]

Book publishers and booksellers are also feeling the effects of mass illiteracy. The U.S. published more different book titles than any other nation in 1986; by April 1997 four other nations published more books than the U.S.[12] Although the literacy rate was not the only factor, illiteracy played a major part in the declining sales of hardback books throughout the 1970s.[13] As another example, Americans bought thirty million fewer books in 1998 than in 1997; the sharpest decline was in the eighteen to

twenty-five age group: down 20 percent.[14] On a typical day (in 1985, the latest date of readily available data) only 25 percent of U.S. adults read a book.[15] Among adults less than twenty-one years of age, 37 percent do not read books at all. The U.S. ranks twenty-fourth per capita (in 1985—it is undoubtedly lower now) in books produced among the nations of the world.[16]

As Maureen Corrigan reports on page xiv of her book, *Leave Me Alone—I'm Reading*, published in 2005, "[A]ccording to a *Wall Street Journal* article of a few years ago, some 59 percent of Americans don't own a single book. Not a cookbook or even a Bible."

It might be tempting to devalue the individual importance of the second and third monetary costs. However, companies do not absorb all the costs of increased labor and reduced sales. Instead, businesses pass on most of these costs to the customers in the form of higher prices. This not only reduces our standard of living, but it also makes it more difficult for U.S. firms to compete successfully with companies in other countries.

U.S. companies spend millions of dollars each year on monetary cost number 4, because of accidents and mistakes made by illiterate workers. Huge sums are spent for workmen's compensation, insurance, and lawsuits. In addition, a portion of each product, process, and manufacturing engineer's job is to design foolproof (illiterate- and literate-worker proof) tooling and processes to prevent accidents. Also, most larger companies have engineering groups whose sole functions are ensuring employee safety and preventing product loss. They work with all the other groups in preventing injury or damage and in investigating the cause of any accidents that do occur. They also recommend corrective actions to prevent similar events in the future. The author's last two positions in his 29 year engineering career were in the Product Loss Prevention and the Safety departments of a large solid-propellant rocket motor manufacturing facility.

Workplace Illiteracy: True Horror Stories

Monetary costs are just a small part of the picture concerning bodily injury. No amount of money can adequately compensate the family and friends of those killed or crippled in accidents. Money cannot compensate society for the contributions to humanity that some of those killed could have made. It may be tempting to dismiss monetary cost number four by

saying, "It will never happen to me!" However, before doing so, consider the following examples:

1. In the Proceedings and Debates of the Second Session of the 95th Congress, September 1978, Senator George McGovern told of a young naval recruit who could not read the repair manuals for naval equipment. This recruit had caused $600,000 in damage to delicate naval equipment. The recruit had been trying to do repairs by using common sense and by following the pictures in the manual.

These Proceedings and Debates revealed that 30 percent of navy recruits are "a danger to themselves and to costly naval equipment." *The Boston Globe* on May 1, 1983, stated that 25 percent "of naval recruits read below 'the minimum level [required] to understand safety instructions.'" Serious safety concerns arise, for example, if personnel who cannot read repair manuals do the maintenance on the nuclear reactors on atomic submarines.[17]

2. A herd of prime beef cattle was killed in 1975 when an illiterate feed lot worker fed poison to the cattle. He thought he was adding a nutritional supplement to their feed.[18] What illiterate food-processing employee will, in the future, confuse a pesticide with a nutritional supplement in some mass-produced *human* food?

3. Reservation clerks, ticket agents, and other persons who deal directly with the public are usually highly literate and efficient. Airline employees directly concerned with airline safety are often much less literate. As an example, on May 5, 1983, three of the engines on an Eastern Airlines jumbo jet en route from Nassau to Miami went dead. The plane dropped three miles before the pilots averted disaster by getting one engine restarted! This occurred because two maintenance workers "hadn't read" the instruction manual. It was not reported whether they neglected to read them or whether they had been unable to read and understand them.[19]

4. A major reason for the near-catastrophe in March 1979 at the Three Mile Island nuclear power plant was open valves that were left unsecured. A worker did not follow maintenance instructions.[20] Those who say, "A full-scale nuclear plant disaster is very unlikely," need only look a few years later at the Chernobyl incident. The Three Mile Island event could have affected millions of people in Pennsylvania, New York, and New Jersey.

Admittedly the events in the third and fourth examples cannot be identified with any *evidence* of inability to read. Remember however that, as Chapter 2 shows, there are at least forty-two million functionally illiterate adults. When the unemployed are deducted, there are still well over thirty million functional illiterates in the workplace. The fact that there are

millions of people in the work force that we do not know are illiterate makes hundreds of mistakes each day inevitable. The source and result of many of these mistakes may never be known.[21]

The Cost of Crime

The cost of crime is another cost of illiteracy, but it is difficult to evaluate. It affects all five costs listed at the start of this chapter. An April 23, 1996, Associated Press report in *The Salt Lake Tribune* on a survey done by the Justice Department and sponsored by the National Institute of Justice shows that "[c]rime costs Americans at least [$675 billion] according to the most comprehensive survey ever done." [22] This was the first survey that tried to measure the cost of child abuse, domestic violence, mental health care costs, reduced quality of life for victims, legal fees, lost work time, the cost of police work, and intangibles such as the affection lost for a murder victim's family, along with all the more commonly reported crime costs. The study did not include the cost of running prisons, jails, and the parole and probation systems, which would have added another $60 billion, bringing the total to almost $740 billion each year. Conservatively estimating that 30 percent of the $675 billion is directly linked to illiteracy, with 152.8 million taxpayers (as of July 2007, the latest readily available data), crime costs each taxpayer in the U.S. at least $1,325 a year in addition to all the other costs shown in this chapter.

Spending to Solve Illiteracy vs. Spending on Crime

Perhaps your first concern when you started reading this book was, "Sure, we need to solve our literacy problems, but the voters will never agree to such expenditures." Solving problems can cost money, but the cost savings from reducing the effects of the problem can often counterbalance the preventive costs.

> [Harold L.] Hodgkinson [of the Institute for Educational Leadership in Washington] notes that it costs the taxpayers about $5,950 a year [it was projected at $10,630 for each public elementary and high school student for the 2002-2003 school year[23]] to educate a child or a college student. It costs them about $34,000 a year to house a prisoner.... [Data from an April 4, 1996, article in *The Salt Lake Tribune*[24]

shows it costs California an estimated $60,000 per year for food, guards, and capital costs to house a prisoner.]

To those who argue that there's no proven relationship between dropout rates and prison populations, Hodgkinson replies: Perhaps a direct relationship can't be proved. But consider this: Minnesota, with the best graduation rate in the country (90.6 percent), ranks 49th among the states in prisoners per 100,000 population, and there is an uncanny inverse relationship between dropout rates and prisoner population in all 50 states....

A Department of Justice study last April showed that 63 percent of the inmates released from prisons are rearrested for a serious crime within three years.... Hodgkinson argues that given the high recidivism rate in prisons, the most cost-effective strategy is to keep people out of jail in the first place. And since there is very little return on investment in prisons, the best way to reduce criminal expenditures is to invest in education.[25]

The $34,000 per year, per prisoner mentioned earlier is just a small portion of the money spent on crime. (In the first place, the cell to hold a prisoner costs a minimum of $120,000 to construct.)[26] Also, the cost of crime is only a small part of the monetary costs of illiteracy.

People and organizations have been issuing warnings about the process of learning to read English for decades. A significant warning found May 1, 2004, on The Simplified Spelling Society's Web site (www.spellingsociety.org) stated, "English speaking adults always come near the bottom in international studies on literacy." Although improvements have been made, nothing approaching the level of changes needed has ever been seriously suggested. What is more important, even if the American public would be willing to have their taxes raised enough to ensure that most school children learn to read, this would not help the millions of adult nonreaders and poor-readers.

Many people will claim that, with time, the teaching of adult illiterates will improve. Many people personally involved in adult literacy programs can justifiably take pride in the dozens of people they have personally helped and the thousands of people, collectively, that have been helped. It is often difficult, however, for these people—as it is for all of us—to see the complete situation or the "big picture." Let's be brutally honest: there are fifty to ninety million functionally illiterate adults in the U.S. (depending on whose definition you use), and the number of adult illiterates is growing by more than two million each year.[27]

Today, less than 1 percent of adult illiterates are learning to read and then going on to complete the equivalent of eighth grade. See the first section of this chapter. The 1982 estimate of the minimum annual amount needed to significantly reduce illiteracy (see the first section of this chapter) would be $10.5 billion in late 2007. If the number of illiterates is very conservatively estimated to be the same now as in 1982 and only the consumer price index correction is applied to the $83 per year per illiterate (see the first section of this chapter), this would only amount to about $174 per adult illiterate per year. Even an extreme optimist would not believe that a $174 per person per year expenditure would be enough if the optimist is at all familiar with present-day adult literacy courses. Most adult illiterates do not have or (for reasons this book covers) will not devote long periods for learning to read English. In truth, the number of illiterates is growing and will continue to grow until an easily mastered system such as described in this book is adopted.

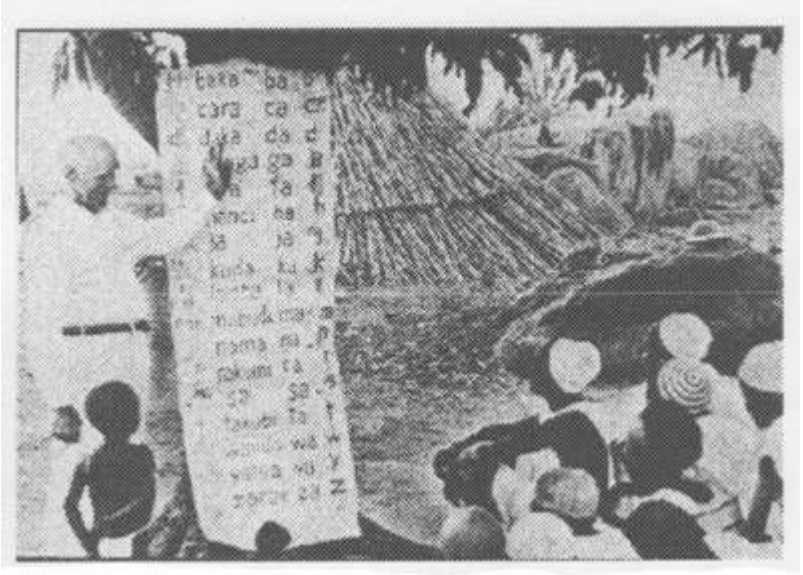
The main reason that even a $10.5 billion expenditure on adult literacy each year would be inadequate is that even after adult illiterates learn to read, they often still cannot get a good job. Most desirable jobs require at least a high school diploma. Because of job or family responsibilities, many illiterates who learn to read cannot or will not devote the many months or years of effort needed to get a high school (or equivalent) diploma. Usually, if students do not, as young children, spend the large amount of time required to learn what is necessary to gain a high school diploma, they never will. This is why it is so important that learning these subjects in the normal school curriculum must not be hindered by poor reading skills brought on by our present system of learning to read. Adopting the system of learning to read described in this book will solve the problem—anything else is just fighting the symptoms.

What Is the Total Monetary Cost of Illiteracy?

If items 4 and 6 in table 3-1 (monetary cost number 1) are conservatively estimated at $20 billion and $10 billion, respectively, the total for the six items is $92.2 billion. The total of the number 2 monetary costs (table 3-2), other than the last two items, and the number 3 through 5 monetary costs (see the first section of this chapter) is at least in the tens of billions of dollars. Jonathan Kozol's book, *Illiterate America*, shows the 1985 estimated total cost of illiteracy in the U.S. was more than $200 billion per year.[28] This $200 billion would be higher twenty-two years later—even if conditions had not worsened—but the last two items in table 3-2, totaling

$390 billion, are recent findings that far exceed Kozol's estimates and must be added to the originally estimated $200 billion, giving a total of at least $590 billion. This is assuming that most of the cost of decreased productivity will be passed on to the consumer in the form of higher prices. These higher prices also make U.S. products less competitive in world markets, of course. The latest figures show that in July 2007 there were 152.8 million workers over age sixteen in the U.S. labor force.[29] Using this number of taxpayers and the minimum total cost of $590 billion plus $1,325 per year additional crime costs, what is the total cost in late 2007 of illiteracy, per taxpayer in the labor force? (This would obviously be much higher in 2012. Using these figures, however, shows a *very* conservative estimate of the present cost of illiteracy.)

The minimum cost of illiteracy of $590 billion per year along with additional crime costs linked to illiteracy totals at least $5,186 per taxpayer each year!



Frank Laubach created alphabets for over 220 languages. Because the letters were used consistently, natives could often learn to read in a few hours, and then could teach others.

Chapter 4
Worldwide Literacy

Advantages Illiterates Gain by Becoming Literate

Perhaps the best description of the advantages of literacy is that given by Frank C. Laubach.

> We will repeatedly show in this book that if illiterates are taught in the proper manner, it is a delightful process for both student and teacher; it begets new faith and new vision in the learner; it destroys his sense of inferiority and frustration; it stirs him to new self-reliance; it destroys his defeatist complex; it makes him feel that he belongs to the class of society that triumphs over difficulties and does not live forever in despair. It has the same value for the illiterate that cultural education has for educated people in general. It gives him a new sense of mastery over his fate.
>
> Besides, locked up in books are all the greatest secrets that the human race has discovered in the course of the last ten thousand years of civilization. Writers are constantly unearthing and presenting these secrets in new, fresh ways. Making a man literate pulls him from the edges of society, where he has lain stagnant mentally, into the current where he will be swept onward as a part of the great, moving course of human history. Some illiterates will never go far, but others may develop genius. Adults differ more widely than children do. There is many an Abraham Lincoln who awaits only the opportunity that Lincoln found in his log cabin, as he read a few books before the fire. Even if the new literate does not go far himself, the door has been unlocked for his children, and for his children's children.
>
> The theory is often expressed that the masses will stop work with their hands if they become literate. That this is all nonsense is proved by the fact that the most literate countries in the world accomplish the most work.

...If...they are given information about their work, so that they can dignify their trades with new skill and catch the spirit of progress, then they will become far more efficient workers and they will enjoy what they are doing infinitely more.

...The right kind of reading matter constantly contributes new ideas for use in a man's own business and gives him the zest of discovery and the feeling of getting ahead. So reading delivers him from bondage to his toil and transforms it into fun. We say that a reading doctor is "up on his profession," while a doctor who does not read allows himself to fall behind the times. For, after all, reading is far and away the greatest means in the world by which people exchange their discoveries. Men pour onto the pages of books the finest results of their experiences, and other men may read these pages at their leisure. It is safe to say, therefore, that a thousand times as many progressive ideas are disseminated through the printed page as are spread in any other way. If this is true, learning to read multiplies a man's power to progress.[1]

Why Worldwide Literacy Is Desperately Needed

It is obvious that any attack on poverty and its associated problems must also include an all-out war on illiteracy, for this is the major root cause. Illiteracy exacts a tremendous toll in human terms. For the young adult it is a barrier and a burden that last a life-time. It commits him to a future marked by personal deprivation, unemployment, social dependence, alienation and, in many cases, crime. There is no future for a person who does not possess the basic skills he needs to change his situation. He is held in place by forces that he has no capacity to change.

Society also pays a price, but it is not so personal. Our welfare rolls are filled with those who can do nothing but the most menial labor. When an illiterate is hired, it is because no one else can be found to do the work. When there is an economic slowdown, he is the first fired. Our jails and prisons are filled because the illiterate often turns to crime out of desperation. Illiteracy is a basic and just complaint coming out of our racial conflict. Conscience dictates that we do all in our power to make a change.

...There is a vast and ever-widening imbalance in our world. Dr. Barbara Ward, the famous economist, described this in her great

books, *The Lopsided World*, and *The Rich Nations and the Poor Nations*. She says that we rich nations have the whip hand and have controlled the money and the tariffs so that the wealth of the world flows our way and saps from the poor nations all they have. Thus the rich get richer and the poor get poorer, and the end—perhaps nearer than we suspect—will be a world revolt more bloody than the French Revolution or the Russian Revolution or the Chinese Revolution.

Half the world goes to bed hungry every night. Because they are hungry, they are angry; and they are rising here, there, everywhere in revolt. Wherever hunger and wealth exist together the underprivileged are shouting and rebellious and often violent. Robbery and crime are on the increase in America until we are afraid to walk the streets at night in nearly every American city. We cry for more police, but neither police nor soldiers can hold back the breaking dikes if we allow hunger to continue to increase while we grow rich.

President Eisenhower's greatest statement was that all our military is merely negative—holding the line until we do the positive things.

That *positive* thing is to remove the terrible poverty and anguish that drive people to crime and irrational fury and war.

How shall we end poverty? Our first impulse is to distribute our surplus food and clothing. But we have tried that and it was never enough. Besides, the poor do not want to be paupers needing our charity. They want to come up to our level.

This is what the illiterate pauper says: *"Not charity but a chance. Not a coin in my hat, but a tool in my hand. If you give me a fish, you have fed me only one meal; if you teach me to fish, you have fed me a lifetime."*

That is what they want—to learn to fish and farm and make what they need—and they want to own what they make. They want to be independent. They want to know what we know. They want to be educated. Illiterates are nearly always hungry. Educated people nearly always have enough. So the hungry illiterate masses want education as the only door out of their desperate plight.[2]

It is true that [illiterates] have been in this state of destitution for thousands of years. But there are new factors in modern living that make these people more rebellious at their condition than ever before. The airplane, the radio, the cinema, and television have ushered us into the electronic age where illiterates can see for themselves the enormous economic superiority of literate countries. Every

> motion picture whips them into an ever rising determination not to tolerate this difference.[3]

Because of raised expectations, those excluded from jobs in this century may be much less docile about their unemployment than previously. As you may know, social revolutions usually begin with those who feel unfairly excluded from "the good life." We must not ignore this potentially dangerous situation. It could wreak havoc in many areas in the U.S. We like to think that our nation is strong and stable, but throughout history, several "great nations" have crumbled. Some of these nations were "great" much longer than the U.S. has been. Those who do not learn from history are doomed to repeat it. Part of the violence in the streets now is directly attributable to anger over unemployment, part of which results from illiteracy. With more than two million illiterates being added to the population each year, how long do you think the illiterate unemployed will continue to meekly accept their situation?

English as a Worldwide Language

Scholars have stated that English is the ideal choice for a worldwide language. Dr. Mont Follick, a linguistics expert and Member of Parliament in England in the 1950s, states emphatically, "The English language itself is the most simple and the most unflexioned language that has ever been on earth. The only obstacle to the spread of English is the spelling." [4]

Frank C. Laubach's book, *Teaching the World to Read*, has a section that deals with proposed universal languages; Umskript is one of them. This section states,

> The literature promoting Umskript says, "Though English is the simplest in its grammar and syntax of any European language (with Danish a close second) the movement to make Basic English a world business language has little chance of success, so long as English spelling remains such a stumbling block...."
>
> English is the most irregularly spelled phonetic language on earth. Anybody therefore who could help bring system out of chaos in our spelling could meet a world demand....
>
> [Dr. Woodford Dulaney Anderson] gives numerous quotations from present day leaders who endorse English as the universal language.... He concludes that the weight of world scholarship

favors English, reformed in spelling and grammar, rather than any other language.[5]

The remainder of this chapter is a list of the useful characteristics of English. It is based upon a lecture by Axel Wijk, a Swedish linguistics expert, at Manchester University on January 28, 1965, and data from Sir James Pitman's book, *Alphabets and Reading*.

Easy Grammar and Syntax

The need for a common auxiliary language for the whole world has become more urgent every year in the course of the present century.... For a number of reasons English is undoubtedly the living language that is most suitable to fill this important role. For one thing, English is, though native speakers may perhaps find it hard to believe, a comparatively easy language to learn for foreigners at least as far as the everyday spoken and written forms of it are concerned. This is mainly due to its grammatical structure, which is far simpler than those of most other important languages, particularly so in comparison with French, German, Russian, or Spanish. We need only mention such advantages as:

1. The absence of inflection for gender, case and number in the articles....
2. simple ways of forming the plural,
3. the absence of inflection in the adjective,
4. the simple formation of tenses and other verbal forms, etc.[6]

Pitman states, "No other major language possesses such a simple grammar and syntax or combines the following advantages:

1. ...[T]here are no arbitrary genders (except in such rare instances as referring to a ship or a machine as 'she')
2. Agreement between adjectives and nouns is unnecessary;
3. nouns have no cases except for the possessive ‘’s’ for the genitive.
4. The definite article has only one written form;
5. verbs have very few inflexions and these tend to be regular.
6. Very few verbs are irregular.
7. Most words in common use have less than four syllables....
8. Few modern languages are capable of such precision, flexibility, and subtlety, allied with brevity." [7]

Widespread Use

"No other language is more widely diffused throughout the five continents." [8] Laubach states, "No other language is used by [more people than English] unless it is Mandarin, which is spoken only by Chinese." [9]

"In many parts of the world a knowledge of English is essential if one is not to be debarred from communication with everyone except those who speak one's own very restricted, possibly tribal, tongue; without English or, dependent on the area, some other widely spoken and printed language, one's education is also likely to be gravely restricted because it is not economically feasible to write or translate many textbooks in a host of minor languages." [10] Because of the "influential position of the English-speaking peoples and their widespread distribution, English is vigorously taught in secondary schools all over the world and is by far the most important language studied in foreign countries." [11]

> It is the main language of books, newspapers, airports and air-traffic control [157 of the 168 nations in the world in 1990[12]], international business and academic conferences, science, technology, medicine, diplomacy, sports, international competitions, pop music, and advertising. Over two-thirds of the world's scientists write in English. Three-quarters of the world's mail is written in English. Of all the information in the world's electronic retrieval systems, 80% is stored in English.[13]
>
> English is the most widely spoken language in the history of our planet, used in some way by at least one out of every seven human beings around the globe. Half of the world's books are written in English, and the majority of international telephone calls are made in English. English is the language of over sixty percent of the world's radio programs.[14]

An October 16, 1997 report in *The Salt Lake Tribune* states, ‘‘English has become the first and only ‘global language,’’’ and,

> [E]ight languages account for fully half the world's people. (In order of size they are: Chinese, English, Hindi, Spanish, Russian, Bengali, Arabic and Portuguese.) The hundred biggest languages account for 95 percent of the world's people, and in some of the longest civilized places—the Middle East, Europe, East Asia—the surviving minority languages are counted only in the dozens. But in most places, many more "little languages" have survived: The United States and

> Brazil are home to hundreds, India and Indonesia to over a thousand each....
>
> The native speakers of English number around 450 million: more than any other language except Chinese but less than 7 percent of the world's population. Count those who have learned English as a second language, however, and the total soars to 1.3-1.5 billion, far surpassing any potential rival.[15]

One visitor, returning to China in 1979, after a gap of 20 years, wrote: "...[T]oday, everyone is carrying a book of elementary English." Even if only 10% of these learners become fluent, the effect on totals is dramatic: the number of foreign learners is immediately doubled.[16]

There are more than 10,000 living languages in the world (as of 1997).[17] Since there are 191 nations in the world[18] (as of July 1999), this means that each nation uses an average of more than fifty languages. From a list of 166 nations there are 220 *official* languages, an average of 1.33 each. There are eighty-six different official languages. Among these eighty-six, only fifteen are used as official languages of more than one nation. Only four of these fifteen are used as the official language of more than six nations (English: 47, French: 31, Arabic: 21, Spanish: 20). English is an official or semiofficial language in over sixty-five nations, with a prominent place in another twenty nations.[19]

For the first time, in the year 2000, UN countries were asked to choose English, French, or Spanish as the language for their correspondence. The other three official languages of the UN, Russian, Chinese, and Arabic, cannot be read by most of the UN's word-processing programs. One hundred and eighty-five nations responded. One hundred thirty chose English, thirty-six chose French, and nineteen chose Spanish.

English is now, in effect, the international language of medicine. There are many foreign medical doctors in the U.S. Sensible spelling would help these doctors learn English and therefore avoid mistakes in reading medical information and communicating with their patients.[20]

Future language usage: By 2050 the three largest economies will be China, the U.S., and India. India now uses English as the common language for its multiplicity of language speakers, so two of the three will effectively be English-speaking for international purposes. China and Russia, however, already require all students to learn to speak English. English is already the working language of the European Union.[21]

Despite the widespread use of English, speakers of other languages need have no concern that English—or any global language—will ever cause the "language death" that was feared previously. Recent studies

have shown that this almost never happens. Instead, people merely become bilingual (or multilingual) as necessary for their own benefit.[22]

Easy Adoption of New Words

English has an "extraordinary capacity for absorbing and developing new linguistic material." [23] "English has acquired the largest vocabulary of all the world's languages, and has generated one of the noblest bodies of literature in the annals of the human race." [24] This is largely because non-English words (and usually their non-English spelling) are so often absorbed into the English vocabulary.

"*Webster's Third New International Dictionary* lists 450,000 words, and the revised *Oxford English Dictionaryt* has 615,000, but that is only part of the total. Technical and scientific terms would add millions more. Altogether, about 200,000 English words are in common use, more than German (184,000) and far more than in French (a mere 100,000). The richness of the English vocabulary, and the wealth of available synonyms, means that English speakers can often draw shades of distinction unavailable to non-English speakers.[25]

This large vocabulary makes English especially valuable for commerce and for technical usage of all kinds. Dr. Godfrey Dewey states in his book, *English spelling: Roadblock to reading*, "English is already the official language of international aviation." [26] David Crystal, a Professor of Linguistic Science and author of several books including his book, *The Cambridge Encyclopedia of Language*, points out, "English is already recognized as the international language of the sea." [27] Despite these advantages, Wijk states,

> To all intents and purposes [English] must even now be regarded as the principal auxiliary language of the world. But for the great majority of foreigners the language is far too difficult to learn in its present written form. In order to make it more generally acceptable and serviceable as an international auxiliary language it is an indispensable requirement to subject its spelling to a radical and systematic reform.[28]

Figure 5-1
A Dreadful Language?

I take it you already know
of tough and bough and cough and dough.
Others may stumble, but not you,
on hiccough, thorough, lough and through.
Well done! And now you wish perhaps,
to learn of less familiar traps?

Beware of heard, a dreadful word
that looks like beard and sounds like bird,
and dead: it's said like bed, not bead
for goodness' sake don't call it "deed"!
Watch out for meat and great and threat
(they rhyme with suite and straight and debt.)

A moth is not a moth in mother
nor both in bother, broth in brother,
and here is not a match for there
nor dear and fear for bear and pear,
and then there's dose and rose and lose
just look them up and goose and choose,
and cork and work and card and ward,
and font and front and word and sword,
and do and go and thwart and cart.

Come, come, I've hardly made a start!
A dreadful language? Man alive.
I'd mastered it when I was five.

T. S. Watt[1]

Notes:

First, this note is for those who do not promptly see the above poem as "tongue-in-cheek." T. S. Watt is gently poking fun at the perversity of English spelling hoping that we will briefly be "taken in" by his last verse. The humor comes from feeling foolish for briefly believing that he is serious. If Watt had an inborn talent for learning languages and was given the opportunity, he may have mastered spoken English by age five. Unless he was also a near-genius with a photographic memory who spent a year or two before age five reading English writings of all types, the spelling was not mastered by that age.

Second, as a mirror image of the first note, Chapter 5 is included for those who do not see the proposals in this book as both serious and necessary. The perversity of English spelling is the logical, foundational cause of most English reading and spelling problems. This perversity of spelling is the driving force that demands correction of the problem.

Chapter 5
The Causes of Illiteracy

There are many reasons why a particular nonreader cannot read English. Arranged in no particular order, some of these reasons may be:

1. the nonreader or his or her parents or friends place little importance on learning to read;
2. the nonreader is far more involved in numerous activities than in spending the time needed to learn to read, as explained below;
3. the nonreader goes to school *hungry, frightened* (over gang violence, increased levels of school bullying, or classmates who bring weapons to school, for example), *worried* over schoolwork or problems at home (such as increased levels of divorce due to "no fault divorce" laws), or *embarrassed* (about failing to read aloud properly in class or about his or her old, ragged clothing, for example);
4. the nonreader uses new, readily-available, addictive drugs;
5. the nonreader has poor eyesight, poor hearing, or learning problems;
6. the nonreader doesn't like the teacher, or the teacher is not effective at teaching; or
7. the teaching methods or textbooks used are not effective in teaching students to read.

In today's world, besides all the school and societal problems which hinder learning, there are many fun but time-consuming activities interfering with learning, which did not exist in simpler times—before the twentieth century. Some of these pleasurable activities include radio; television; movies in theaters and on DVDs and electronic devices; musical concerts or recordings; computer games, social networking, and internet browsing and searching; newly developed sports; profitable full- and part-time jobs; and gang and other youth activities.

Like the items in Pandora's Box, once these time-consuming or distracting activities have been loosed upon society, they cannot be taken back. It will be extremely difficult to get students to spend the long hours learning to read that were spent in more simple times. This is especially true if—due to teaching methods inferior to the memorization and dull drill used in prior centuries—the student is having difficulty learning. In this case, it will be very difficult, perhaps impossible, to persuade the student to spend time on an unpleasant and difficult activity rather than a multitude of readily available *pleasant* activities.

One or more of the reasons in the first two paragraphs will apply to ***almost every*** student. There is only one hindrance to learning that affects ***EVERY*** student: the spelling of words. This is also true in other languages, but only in English is the spelling such a hindrance to learning. If students of other languages encounter problems that various experts are blaming for U.S. illiteracy, it may slow their learning. They will still learn much faster than English-speaking students because they do not have the added burden of overcoming the inconsistencies, lack of logic, and undependable sound-to-symbol and symbol-to-sound correspondences that are a part of English spelling. Note that symbol-to-sound and sound-to-symbol correspondences are mirror images in languages other than English, as will be explained in this chapter.

The Foundational Cause of English Illiteracy

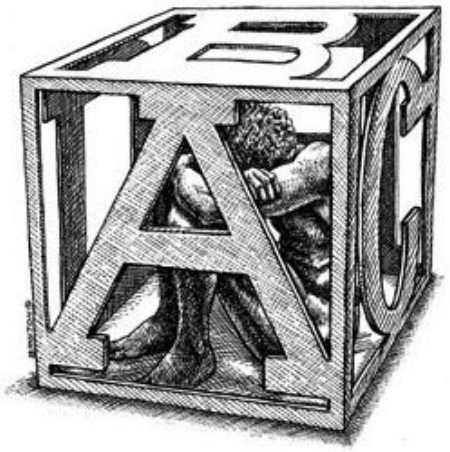
Our confusing spelling system is the foundational cause of illiteracy. Whatever corrections are made to the educational system—even if it could be made perfect—there will still be students who cannot become fluent readers without extensive tutoring unless spelling is made logical and consistent. Any other corrections made to our reading instruction will not correct the cause of the difficulty of learning to read English. Most of us learned to read as children and have forgotten any difficulties we had—our eyes glide easily over a multitude of traps for new learners.

Why Our Children Can't Read by Dr. Diane McGuinness gives a thorough, scientific explanation of the logic behind written languages. It explains the extreme difficulty of learning the English spelling system because of its adoption of so many words (and usually their spellings) from 350 other languages.[2] Although the ideal spelling system uses symbols for syllables, this is completely unworkable with English. With its many consonant clusters, there are tens of thousands of different syllables. Few people can effectively use more than 2,000 language symbols. Languages that cannot use symbols for each syllable must therefore use symbols for every sound and students must be able to recognize and separate these

sounds to learn to read. Since English does not use each symbol for only one sound and one sound may be represented by more than one symbol, learning to read English requires the sight-memory of every word added to the reading vocabulary—and re-learning of the seldom-used words over the years that are forgotten.

Why Learning to Read English Is So Difficult

A phoneme is the smallest sound in a language or dialect that is used to distinguish between syllables and words. A grapheme is a letter, letter combination**,** or symbol **used to represent phonemes, syllables, or words.** If a language does not hold strictly to a one-sound/one-symbol (phoneme/grapheme) correspondence, numerous problems occur. For example, a student may see a letter or letter combination when trying to read a word and—if the letter or letter combination represents more than one phoneme—not be able to recognize (read) the word, unless the word can be recognized by the context. The mirror image of this is that students may want to write a word they hear the teacher pronounce. If there is more than one letter or letter combination to represent a phoneme in the word, they do not know which to use, unless they have learned which one is "correct."



If there is not a strict phoneme/grapheme correspondence in a spelling system, there is no guarantee that if a certain grapheme represents a certain phoneme in a word (when reading), this phoneme will be represented (spelled) by this grapheme in a different word.

There are far more ways of spelling a phoneme in English than there are ways to pronounce a letter or letter combination. There are ***at least*** 367 graphemes (single letters or two-, three-, four-, or five-letter combinations to represent a phoneme), and the worst of these (OUGH) has twelve different pronunciations, six of which are phonemes. (See Table 5-1.) The worst of the phonemes in English can be spelled in ***at least*** sixty different ways. It is "at least" because these figures are based upon 736 spellings of 38 phonemes

which were found after several years of research from numerous sources, but Professor Julius Nyikos of Washington and Jefferson College found ***1,768 ways of spelling 40 phonemes*** from an exhaustive study of six standard, desk-size dictionaries. More would undoubtedly be found in unabridged dictionaries. As a result, there are almost certainly more than 367 English graphemes and some phonemes probably have even more than sixty spellings. Various phoneticists say there are between 40 and 46 English phonemes. It has been proven that students can easily learn to read English fluently by learning 38 phonemes in a spelling system with a one grapheme to one phoneme correspondence. This will be explained more fully later.

The number of phonemes in a language or dialect ranges from eleven in Rotokas (Indo-Pacific) and Mura (Chibchan) to 141 in !Xu (Khoisan). In a study of 317 languages, the number of vowel phonemes ranged from three to forty-six; the number of consonant phonemes ranged from six to ninety-five. The number of phonemes in English varies depending upon which phonemes are considered both unique and essential. Some linguists may include as many as forty-six in their listing. This book demonstrates that only thirty-eight phonemes (14 vowels and 24 consonants) must be learned for efficient, comprehensive communication. The average number of phonemes for the known languages of the world is about forty-five (with a mean of 8.7 vowels and 22.8 consonants).[3]

Appendix 3 gives a brief history of how the spelling of our English words evolved (prior to 1755) as an amalgamation of the words—and spelling—of the original Celtic language and seven other languages: Icelandic, Norse, Latin, Anglo-Saxon, German, Danish, and Norman French—the language of every nation that occupied the British Isles between the first and the eleventh centuries. An important part of the history is omitted. Prior to the mid-1700s, English people spelled words as they sounded. However, no one had settled upon a standard way of spelling the phonemes. The common people, and even such authors as Shakespeare, might spell a word two different ways in the same paragraph. It was an awkward but easily readable system.

Publishers wanted to standardize the spelling as a way to improve the quality of published work and to simplify the task of typesetters. Dr. Samuel Johnson was a scholar chosen by the publishers to standardize the spelling. According to Dr. Thomas Lounsbury, in his book *English Spelling and Spelling Reform*, Dr. Johnson knew little about the pronunciation of words as related to their spelling and even less about the derivation of words. His dictionary was published in 1755. Although it was not the only dictionary at the time, it was well received by Johnson's peers, who

also knew little about the relation of pronunciation to spelling. It was also accepted by the publishers because it met their need for standardization.

Johnson's dictionary came to be accepted by later dictionary publishers as the authoritative work on the subject of the correct spelling of words, based not so much upon its technical merit as upon its acceptance by his peers and the publishers. But instead of standardizing the spelling of the ***phonemes***, as in other languages and ***as logic demands***, Johnson froze the spelling of the ***words***; he listed a specific order of letters to represent each word. In many—if not most—cases, the letter order chosen was that used in the language of origin.

So the spelling Dr. Johnson devised was difficult to learn from the start. As you know, the pronunciation of words changes with time. So what was bad in the mid-1700s is much worse now. If a one phoneme to one grapheme correspondence is chosen, present English spelling is about 20 percent phonemic—the problem is that there is absolutely no way of knowing which words are phonemic and which are not. Each word in a person's reading vocabulary must be learned one-at-a-time by rote memory or by repeated use. As stated previously, since 1755 we have added words to English from about 350 other languages.[2]

The rest of this chapter is, in effect, attacking our spelling. There may be an unconscious urge to become defensive when someone attacks our mother tongue, but here is the most important point to remember: you or I did not invent our ridiculous spelling, so we should not feel the need to defend it. Instead of being defensive, relax and enjoy the following. Our spelling is fully deserving of all the scorn we can heap upon it.

Sounds per Symbol: Effect upon Reading

There are twenty-six letters in the English alphabet. Three letters—C, Q, and X—represent phonemes or phoneme blends more often represented by other letters. Since we need symbols for thirty-eight phonemes and have only twenty-three letters representing unique phonemes, we need fifteen more graphemes. Ideally, (to avoid a cost of billions of dollars to replace the present hardware and software which has twenty-six letters) we would use fifteen two-letter graphemes. Since the data in this chapter only includes words found in a standard desk dictionary (otherwise there would be more), in addition to the 26 single letters, English uses ***at least*** 184 two-letter graphemes, 131 three-letter graphemes, 22 four-letter graphemes, and 4 five-letter graphemes, for a total of ***at least*** 367 graphemes.

In addition, all twenty-six letters are silent in some words. The letter *E* is silent in many words, particularly at the end of words. An example of at

least one word with a silent letter for each of the twenty-six letters (most letters have many others) is as follows: reAd, deBt, sCent, velDt, havE, halFpenny, siGn, rHyme, busIness, mariJuana, Knot, taLk, Mnemonic, autumN, sophOmore, rasPberry, lacQuer, suRprise, aiSle, depoT, bUilt, savVy, Write, fauX pas, maYor, and rendeZvous.

Comparing English to Chinese Writing

People often think that learning to read written Chinese would be very difficult. They may say, "Maybe English is bad, but we only [!] need to learn 367 graphemes. In Chinese, you have to learn thousands! You have to learn a different grapheme for every word!" In actuality, knowledge of only about 2,000 characters is required for basic literacy in modern Chinese.[4] Only a little more than half of Chinese words have more than one syllable. Only two types of sequences are used for most Chinese syllables, CV (consonant-vowel) and CVC (consonant-vowel-consonant). Most of the CVC syllables end in one of two sounds, *N* or *NG*. There are very few consonant clusters in Chinese, and there are a grand total of about 1,280 "tonal" syllables. The meaning of a word can change with the tone or pitch of the syllable in tonal languages. As a result, Chinese has a very large number of homonyms—words with different meanings but with the same sound. This necessitates the use of about 200 "classifiers." A syllable sign and a classifier sign are therefore written together as compound signs for 90 percent of Chinese words.[5]

To Read English: Only Learn 367 Graphemes?

In addition to learning the 367 graphemes, you also must know which one of the phonemes each grapheme represents ***in each word***. Although English is considered an alphabetic language, it is not that different from written Chinese since it uses *a specific group of letters in a specific order* as a symbol for an entire word in the same way that Chinese writing uses certain strokes in a certain position to represent a Chinese word or part of a word. The letter order for each English word is unchanging (frozen), but the phonemes in many words have changed because the pronunciation of words changes with time. It is therefore necessary to memorize (or learn by repeated use) each grapheme in each word, *in proper order!* Unlike Chinese writing, learned by memory alone, the human mind recognizes similar graphemes in similar words and assumes the pronunciation is similar, but it often isn't. English spelling thus interferes with our logic and reasoning in learning to read because of its inconsistencies.

Table A1 in Appendix 1 shows why reading English is so difficult. Each example word in the table represents other words—from only a few to many—in which the graphemes represents the same phonemes. There are 742 example words in Table A1 plus each single letter is silent in some words, for a total of 768 (742 plus 26).

Summary of Table A-1 (in Appendix 1)
There is an average of at least*

Single Letters	**Blends**
4.0 pronunciations per consonant	1.4 pronunciations per consonant
9.2 pronunciations per vowel	2.2 pronunciations per vowel
5.0 pronunciations per letter	1.9 pronunciations per blend

Single Letters and Blends
367 total graphemes: 26 single letters and 341 blends to be learned,** a total avg. of 2.1 (768/367) pronunciations each (includes 26 silent letters)

* It is "at least" because capitalized words and many of the less-common pronunciations are not included in the tables. Some readers may feel that the tables contain some rare words and too many variations of pronunciations to strengthen the case against English spelling. The words you may consider rare have, in truth, been used by large numbers of people for many years (for example, studdingsail has been familiar to sailors for many years). Although many of the pronunciations may be unfamiliar to you, they are common enough to be included in dictionaries such as *The Shorter Oxford English Dictionary* and *Webster's New Collegiate Dictionary*. Three or four of the words in the tables may only be familiar to the relatively substantial number of linguists, lexicographers, and Scrabble or other word game enthusiasts. Many more pronunciation variations could have been included, but in nearly all cases only those common enough to be included in standard desk dictionaries are included. Also, some may object that many of the variations in spelling are merely different combinations using silent letters. Organizing the silent letters as part of a specific grapheme, however, causes far fewer difficulties than considering the thousands of uses of silent letters in an unorganized individual manner.

Also note that in the next section Professor Julius Nyikos found far more spellings than are used in the calculations in this chapter. Professor

Nyikos used six desk-size dictionaries, so there are undoubtedly more than the 367 graphemes listed in this book.

** It is possible to learn meanings of words without learning how to pronounce them correctly. Most non-English-speaking readers and most avid readers do this at least occasionally.

Symbols per Sound: Effect upon Spelling

As usually used in English-speaking countries, the word *spelling* refers to a specific, unvarying sequence of letters to represent a word. In other languages, spelling is simply the matching of phonemes and graphemes.

If you think learning to read English is difficult consider *spelling* English words! Two phonemes (*H* as in *hat* and *TH* as in *then*) have only (!) four spellings, but most of them have many. The *U* as in *nut* is spelled *at least sixty different ways!*

Roughly 20 percent of English words are spelled phonemically—if you use one consistent spelling of each phoneme in the 10,161 most common words. This is based upon Dr. Godfrey Dewey's study as reported in his book *Relativ Frequency of English Speech Sounds*. Claims that English is more than 20 percent phonemic are true only if more than one spelling of the phonemes is allowed. The problem is that you must learn which words are phonemic, the same as you must learn the spelling of unphonemic words. There is no dependable way of knowing which words are spelled phonemically.

Also, hundreds of words have alternate pronunciations and alternate spellings. The alternate spellings have no necessary relationship to the pronunciation either. To be intellectually honest with themselves, anyone objecting to spelling reform by defending the frozen spelling we now use would also have to defend a far more extensive reason for confusion in word meaning as related to spelling: using the same spelling for thousands of words with the same sound and spelling with more than one meaning! The word *set*, for example, has 115 different meanings. As Appendix 8 shows, the 500 most-used words in the *Oxford English Dictionary* have 14,070 separate and different meanings, an average of 28 each!

How Can Anyone Defend English Spelling?

English spelling is so inconsistent, illogical, and confusing that it should not be defended. Much of what is considered a defense of English spelling is, in truth, a counterattack against the ideas that attack it. Or we assume it can't (or won't) be changed. Since most of us do not want to be bothered with too much change in our lives, we simply dismiss it from our minds. Also, if we learned it as a child, we assume other people

can, too. So we give it little thought other than when we have to look up a spelling in a dictionary. Speakers of most other languages do not have to use a dictionary—they know the spelling if they know the pronunciation. If you couldn't read, and if you discovered these facts about our spelling, you probably would be upset to say the least. You would be upset to find that you had needlessly blamed yourself for your present state, as most illiterates do. Are you upset to find that roughly 93 million people—almost one-half of the adult population of the U.S.—are affected? You probably are if you have given thoughtful attention to Chapters 1 and 2.

Professor Julius Nyikos of Washington and Jefferson College in Washington, Pennsylvania, did a very extensive study of all the different ways of spelling forty English phonemes. He reported his findings on pages 146-163 of *The Fourteenth LACUS* [Linguistic Association of Canada and the United States] *Forum 1987* in an article titled "A Linguistic Perspective of Functional Illiteracy."

His LACUS article is a very scholarly and persuasive defense of his belief that functional illiteracy in English is primarily due to the spelling. (Functional illiteracy is defined as being unable to read and write well enough to hold an above-poverty-level-wage job. See the "The Bottom Line: How Bad Is It" section of Chapter 2.) As a result of our spelling "non-system," as he calls it, no method of teaching can be completely successful. He quotes the National Academy of Education's Commission on Reading (Anderson, et al., 1985) as saying, "It is unrealistic to anticipate that some one critical feature of instruction will be discovered which, if in place, will assure rapid progress in reading (4)." This is because, like the Bullock report (see "The Need for Logic in Learning" Section of Chapter 6) they did not consider spelling reform.

His study showed that if "practically all dictionary words" from six desk dictionaries (not unabridged) are included, there are ***1,768 ways of spelling forty English phonemes*** (this is an average of 44.2 spellings per phoneme: 1,768 divided by 40)—and 1,120 ways if only "words classified as common" are included. *This many additional spellings would include graphemes over and above the 367 shown in the previous section.*

Tables A2-1 and A2-2, in the Appendix, shows the number of different spellings of each of the 38 phonemes used in NuEnglish. These tables show 736 spellings of 38 phonemes which were collected from several sources over a number of years. These 736 spellings are all found in a standard desk dictionary and dramatically show why spelling English words is even more difficult than learning to read. This is especially true since a person can recognize (read) a word without

being able to remember its spelling later. These 736 spellings include 433 spellings of the fourteen vowel phonemes and 303 spellings of twenty-four consonant phonemes. Remember, however, that there are many words with the same type of spelling as the example words in the tables—or the 1,768 spellings of 40 phonemes that Professor Nyikos found. Writers must know every spelling variation ***and its application to each individual word*** in order to correctly spell every word they want to write.

How Bad Is the Cause of Our Problems?

How We Must Learn English Spelling

As Kenneth Ives states in his book *Written Dialects N Spelling Reforms: History N Alternatives*,

> A book giving a system of rules for pronouncing English runs to 128 pages of rules with many exceptions. (Wijk, 1966) It is so involved that one writer complains it "would require a linguistic Ph.D. with an encyclopedic memory" to use it for writing. A computerized attempt to use a set of 203 spelling rules was able to spell correctly only 49% of a list of 17,000 common words (Hanna et al, 1966).... English is the only language whose dictionaries routinely supply pronunciation for all root words. (Wijk, 1960: 7)[6]

Most Americans are surprised to learn that pronunciations are usually omitted from foreign language dictionaries. They are not needed because the spelling adequately represents the pronunciation. They are even more surprised to learn that students of other languages do not have spelling classes throughout most of grade school, as our students do. "As explained by a Spanish student: 'In Spain the teacher tells us the sounds of the letters and then we can write or read anything we can say.'" [7]

Page four of M. M. Dougherty's *Instant Spelling Dictionary* states that comprehensive spelling rules are included. Then page 258 states, "Since English is a mixture of words from many languages, there is no set of rules that will cover the spelling of all English words." [8]

Edward Rondthaler of the American Literacy Council points out, "A 1986 round table of British linguists called by eminent scholars to discuss the underlying pattern of English spelling concluded, not surprisingly, that only one rule in our spelling is not watered down with exceptions: No word in English ends with the letter V." [9] Since *Webster's Ninth New*

Collegiate Dictionary lists the words *rev* and *spiv*, there are therefore ***NO*** invariable English spelling rules. If you cannot learn to spell by rules, then you must learn by memorization and repetition. Many inconsistencies could be highlighted, such as the different sounds of the double Cs in occasional and accident (pronounced like K and like KS, respectively) or the double Gs in egg, exaggerate, and suggest (pronounced like G, J, or GJ, respectively).

Table 5-1, at the end of this chapter, lists twelve pronunciations of OUGH. How many different ways could we pronounce the eight remaining if we remove Numbers 2, 6, 11, and 12? (Numbers 2, 6, and 11 each have more than one pronunciation. Number 12 is common only in Scotland.) According to the laws of statistics, when there are eight pronunciations, any one of which can be used in eight different words, there are eight to the eighth power (in other words, 8 x 8 x 8 x 8 x 8 x 8 x 8 x 8) or 16,777,216 ways of pronouncing the eight words. This is assuming we haven't learned the one "correct" pronunciation of each of these eight words. As Ives states,

> Even if we compare only [the] common words a second grade pupil would meet: "though, through, ought," a sentence with these three words could be pronounced 27 different ways, from its own examples. With "rough, cough" [the] possibilities reach 3,125!
>
> No wonder Johnny cannot read what he sees, nor spell what he hears, with accuracy [and] confidence! When we ask him to do so, he feels we are asking him a multiple choice question to which there is no ***reasonable*** answer. [And] he is right. Each word must be learned separately, by memory, [and] in two forms, written [and] spoken, with no necessary, systematic correspondence between them. He must, in effect, become bilingual in his native tongue! [10]

Comparative Difficulty of English vs. Other Alphabets

Noah Webster argued against the effort to freeze spelling in the introduction to his 1806 English dictionary. On page vi he states,

> Every man of common reading knows that a living language must necessarily suffer gradual changes in its current words, in the significations of many words, and in pronunciation. The unavoidable consequence then of fixing the orthography [spelling] of a living language,

> is to destroy the use of the alphabet. This effect has, in a degree, already taken place in our language; and letters, the most useful invention that ever blessed mankind, have lost and continue to lose a part of their value, by no longer being the representatives of the sounds originally annexed to them. Strange as it may seem, the fact is undeniable, that the present doctrine that no change must be made in writing words, is destroying the benefits of an alphabet, and reducing our language to the barbarism of Chinese characters instead of letters.[11]

Some linguists may consider this an overstatement, but English is by far the most inconsistent and illogical of the alphabetic spelling systems and therefore the hardest to learn.

Noah Webster's advice on spelling was ignored, and destruction of the benefits of an alphabet has continued. After 159 years of the type of changes Webster warned of, linguistics scholar Samuel Noory stated:

> Any way these irregularities are added up, however, the net result, I believe, would repeat a truth already inferred—to wit, that English spelling is the most confusing alphabetic writing in use.... Even Chinese writing, the only system exceeding English spelling for complexity, is being changed to a phonetic alphabet of thirty letters.[12]

English may be less complex than Chinese writing, but it is more confusing, at least for some students. The reason is that Chinese students learn strictly by memory, but English students occasionally see some logic in English spelling and therefore look for similar logic elsewhere. Failure to find logic in English spelling is confusing and frustrating. Ives tells of a significant study by Rozin in this regard:

> The most unusual effort of this medium centered approach was probably "American children with reading problems can easily learn to read English represented by Chinese characters." (Rozin, 1971)[13]

Note, however, that this was a short-term test probably using less than the 2000 symbols (Chinese characters) which Dr. McGuinness, has proven is the usual practical limit of symbols that can be learned. See "The Foundational Cause of English Illiteracy" at the start of this chapter.

The Complex Logic Our Spelling System Requires

This section gives a brief explanation of why learning to read English is so difficult. A more complete explanation can be found in Chapters 1-7 of *Why Our Children Can't Read* by Dr. Diane McGuinness. These chapters refer to numerous studies in the last ten to fifteen years proving the difficulty of learning to read English. Chapter 7 explains the types of logic involved in understanding English spelling. All students must learn to read English by learning every individual word by rote memorization or by repetition, but learning is especially confusing for those children who are too young to understand the complex logic involved.

As stated previously, there are tens of thousands of different syllables in English. Unlike other languages, which have few syllable patterns, according to Dr. McGuinness, English has sixteen different syllable patterns (C = consonant phoneme, V = vowel phoneme): CV, CCV, CCCV, CVC, CCVC, CCCVC, CVCC, CVCCC, CCVCC, CCVCCC, CCCVCCC, CCCVCC, VCCC, VCC, VC, and V. This is complicated by the fact that individual consonant phonemes can be spelled with as many as ***twenty-six*** spellings using from ***one to four letters each,*** and individual vowel phonemes can be spelled with as many as ***sixty*** spellings using from ***one to five letters each***, as shown in Tables A2-1 and A2-2.

There are two or more syllables in most English words.[14] Each syllable can have any of the sixteen patterns. If each vowel and each consonant in these syllables always represented the same sound (one-to-one mapping, an "equivalence" relationship), there would be nothing in the logic of these syllables that would be beyond the abilities of most four- or five-year-olds, but they do not.

English spelling also has one-to-one mapping where one phoneme is represented by one digraph (two letters)—since there are not enough letters to represent all the phonemes. Almost half of English sounds are represented by digraphs.[15] But the real confusion comes since there is also one-to-many and many-to-one mapping, i.e., one phoneme is represented by many different graphemes (for spelling), and one grapheme represents many phonemes (for reading). This requires a type of logic that most children do not develop until they are eleven or twelve years old.

> As a result, to learn English spelling, children in kindergarten and grades one through four must be taught to read in carefully controlled steps, building types of logic they do not understand upon a logic they do understand. Until they are eleven or twelve years old, it is usually a waste of time to try to get them to understand the logic—they just have to be helped to memorize (or learn by repetition) the spelling of new words.

> The types of logic required for one-to-many and many-to-one mapping are (1) the logic of "classes" (categories where objects or events that are similar are grouped together) and "relations" (where objects share some features but not all features, e.g., all poodles are dogs, but all dogs are not poodles) and (2) "propositional logic," which involves combining both the classes and relations types of logic. This requires the ability to think of the same item in more than one combination at the same time. These combinations require the use of relational terms such as "and," "or," "not," "if-then," and "if and only if" in formal statements of propositional logic. The problem of digraphs can be stated as:
>
> ***If*** an h follows the letter t, ***then*** say /th/ (thin) or /th/ (then); but ***if*** any other letter or no letter follows the letter t, ***then*** say /t/ (top, ant).[16]

What Does All This Mean to Us, Today?

Perhaps Sir James Pitman sums it up best:

> It would be simple to fill many pages with the iniquities of English spelling, to draw attention to the mute characters in words like knot, scene, lamb, gnaw, hymn, and build or to list words with alternate spellings, but I hope I have included enough to convince anyone who may not previously have thought much about the subject that the pages over which their eyes skim so effortlessly and efficiently are in fact fraught with inconsistency and illogic, that there is a sizeable divergence between hearing and reading, between the language of the ear and the language of the eye; that *no Englishman can tell how to pronounce a word in his mother tongue if he has only seen that word written and not heard and memorized it; that no Englishman can tell how to spell a word that he has only heard spoken and never seen written.*(emphasis added).[17]

The final aspect of English spelling to be examined is: **With our constantly changing language, why do we allow ourselves to be saddled with a frozen spelling that was not even consistent when frozen?** We can always put up the feeble excuse, "That's the way we've always spelled it." As we consider the great diversity of ways of spelling English sounds shown in Appendix 1 and 2 tables, however, being honest with ourselves demands the admission that, as the next chapter proves,

there is no logical, DEFENSIBLE *reason* for it!

A Summary of Phonemic Problems With Present English Spelling

• **For Reading:** there are ***at least*** 26 single letters, 184 two-letter graphemes, 131 three-letter graphemes, 22 four-letter graphemes, and 4 five-letter graphemes, for a total of ***at least*** 367 graphemes ***when only 38 graphemes are needed.*** Only five single letters (*B, K, P, R,* and *V*) and 212 of the multiple letter graphemes represent only one phoneme. The other 150 graphemes (367 minus 217) each represent from two to eight phonemes each. When all of the different phonemes that these 367 graphemes represent are totaled, these 367 graphemes represent an average of 2.1 phonemes each. Note that even *B, K, P, R,* and *V* have two pronunciations if you consider being silent a pronunciation.

• **For Spelling:** There are ***at least*** 1680 spellings of the 38 phonemes, for an average of ***at least*** 44 spellings each (1680 divided by 38). (It is at least this amount because the study by Professor Julius Nyikos found even more.)

• **Silent Letters:** All 26 letters of the alphabet are silent in some words (see top of page 56) with no reliable way of knowing whether a letter is silent or not in a word.

• **Doubled Letters:** All but *H, Q, U, W, X*, and *Y* are doubled in some words and not in others, with no reliable way of knowing whether a letter is doubled or not.

• **Unrepresented Phonemes:** Some phonemes are not spelled in some words. For example, you cannot be sure you are pronouncing the word "spasm" correctly without know which vowel should be between the *S* and the *M*.

• **Graphemes Not in Order of Pronunciation:** The phonemes are not spelled in the correct order in some words. For example, if the *E* in the word "little" is properly to represent the phoneme *U* (as in the word *nut*), it should be between the *T* and the *L*.

• **No Reliable Spelling Rules:** No one can realistically be expected to learn to read by using English spelling rules. Every spelling rule has exceptions, and some of the exceptions even have exceptions! A computer programmed with 203 English spelling rules was able correctly to spell only 49% of a list of 17,000 common English words. Few, if any, humans can do better.

• **Lack of Logic in Spelling:** Page 78 of Dr. Diane McGuinness' book, "Why Our Children Can't Read," lists the sixteen syllable patterns of vowel and consonant phonemes that each syllable can have. This is greatly complicated by the fact that each vowel or consonant phoneme can be represented by graphemes of as many as five letters. On pages 156 to 159 of Dr. McGuinness' book, she explains that the lack of logic in English spelling is a serious problem for students. (See pages 63 and 64 of this book.)

• **The TH digraph has two pronunciations:** Although apologists for English spelling will downplay this problem, "it makes all the difference between *mouth* as a noun and *mouth* as a verb, and the noun *thigh* and the adjective *thy*" [18] — and many other uses of the *TH* digraph.

• **Increasing Your Reading Vocabulary:** It does not take a rocket scientist to know that it is ***much*** easier to learn the spelling of 38 phonemes with only ***ONE*** spelling and how to blend them into words than it is to remember the spelling of at least the 20,000 or more words required to become fluent readers. Although many people have speaking vocabularies of more than 70,000 words, very few people have reading vocabularies that large. With a perfectly phonemic language, if you know how to pronounce a word you also know how to spell it, and your reading and speaking vocabularies are identical. With a perfectly phonemic language, you do not waste the space in your brain with ridiculous spellings that could be used for much more valuable information. Also, with a perfectly phonemic language, you do not have the problem that people frequently have at present: forgetting the spelling of a word that you have not used for a long time -- which often happens when you need the word the most.

• **The *ONLY* Way to Learn Present Spelling:** The ***most devastating*** fact about present English reading: The ***only*** way to learn to read English is to add each new word to your reading vocabulary one-at-a-time by rote memory or repeated use. In this way, English is more like Chinese writing than alphabetic languages. In the same way that certain strokes in certain positions represent a Chinese word, certain letters in a certain order represent words in English.

• **Resisting Change:** Because of the great difficulty in learning to read imposed upon all but the most brilliant students, and *especially* upon the many immigrants in our midst, ***no one*** should proudly resist an attack upon the written version of "our mother tongue." Although it is not common knowledge, all reasonable objections to spelling reform have been ***thoroughly*** disproven. (See the last chapter of *English Spelling and Spelling Reform,* by Thomas Lounsbury, LL.D., L.H.D., which is available for free download at http://NuEnglish.net/books.htm.) See pages 123 to 129. Although spelling reform has never been attempted in English, more than 32 nations larger and smaller than the U.S. and both advanced and developing nations ***have*** successfully implemented spelling reform. See http://www.valerieyule.com.au/writsys.htm

• **Child Abuse and Brain Damage:** Present English spelling is so bad, in fact, that at least two educational psychologists claim that teaching children to read present English spelling damages the brain and amounts to child abuse! See http://NuEnglish.net/articles.htm.

Table 5-1
The Dirty Dozen: The Twelve Sounds of OUGH

The plan, though thoroughly thought through, was all for nought when the rough trough full of cough and hiccough medicine made from a hemlock tree bough floated down the shough into a Scottish lough and sank to the bottom.

The sound of OUGH in the first column is the same as the under-lined letters in the common words to the right of them. (Note that except for the first column, common pronunciations are in the same column.)

1. tOUGH	cUFF			
2. trough	clOTH	sO		AWFul
3. though		sO		
4. thOUGHt			bALL	
5. thrOUGH	sUE			
6. thorOUGH	nUt	sO		
7. bOUGH	nOW			
8. cOUGH				AWFul
9. hiccOUGH	UP			
10. lOUGH	lOCK			
11. nOUGHt	nOt		bALL	
12. shOUGH	LUKE			

The sound of *OUGH* in *troughs* rhymes with the capitalized sounds, as follows

1.lAWS
2. cOUGHS
3. frOZE
4. trAUVZ (*AU* as in *haul*)
5. clOTHS (*TH* as in *thin, S* as in *sat*)
6. clOTHS (*TH* as in *then, S* as in *has*)

A second Form of Dirty Dozen
Words With a Consonant Before OUGH

In addition to the word *ought,* by adding a *T* after the OUGH, there are a dozen words (thirteen, if you include the Manx word *jough — Manx is the form of Gaelic used on the Isle of Man) with a single consonant before OUGH.

bough
cough
dough
*fough (pronounced fu, U as in nut)
hough (rhymes with lock)
lough (rhymes with lock)
*mough (rhymes with bough)
*pough (rhymes with dough)
rough
sough (rhymes with bough or rough)
tough
wough (rhymes with dough)

*These words are found only in the *Oxford English Dictionary.* Mough and pough are obsolete words.

Table 5-2
Using Logic to Spell English Will Confuse

Human beings try to learn things by association: comparing new unknown things with old familiar things. The following words have two or more pronunciations of a letter *in the same word,* with no way of knowing (other than just *remembering)* which is which.

Vowels	consonants	
mAndAted	SugarS	tenSionS
sEsamE	treaSureS	SeaS
InvIted	GorGe	GaraGe
cOmbO	THiTHer	CyCle
UnrUly	bouiLLon	coLoneL
indEpEndEncE	negoTiaTe	maNaNa
fOOtstOOl	piZZicato	meZZo

The word grouping below is from *Fonetic English Spelling* by Traugott Rohner. Although most of the words in the list below have several words pronounced the same as the words on both sides of the period, you never know if a new word is like the one on the left or right side of the period—or different than both of them—such as gone, done, and bone!

Why should the changing of a single consonant change the pronunciation of a word, as in:

bead . dead	fury . bury	plow . blow
beard . heard	gone . done	quit . suit
comb . tomb	hear. pear	rough . dough
bowl . fowl	horse . worse	soul . foul
breath . wreath	keen . been	toll . doll
caste . paste	laughter . daughter	were . mere
dew . sew	lose . hose	what . chat
do . no	love . move	worm . form
does . toes	maid . said	your . pour
four . hour	mind . wind (air)	pour . sour
treat . tread	sour . soup	pour . pout
worn . worm	peak . pear	finger . ginger

Furthermore, why should the addition of a single consonant change the basic pronunciation of the word? For instance:

bus . bush	gown . grown	now . snow
eight . height	have . haven	road . broad
even . seven	lose . close	face . facet [19]

Figure 5-2
Why English is So Hard

We'll begin with a box, and the plural is boxes.
But the plural of ox should be oxen, not oxes.

Then one fowl is goose, but two are called geese.
Yet the plural of moose should never be meese.

You may find a lone mouse or a whole lot of mice,
but the plural of house is houses, not hise.

If the plural of man is always called men,
why shouldn't the plural of pan be called pen?

The cow in the plural may be cows or kine.
But the plural of vow is vows, not vine.

And I speak of foot and you show me your feet,
but I give you a boot—would a pair be called beet?

If one is a tooth and a whole set are teeth,
why shouldn't the plural of booth be called beeth?

If the singular is this and the plural is these,
should the plural of kiss be nicknamed kese?

Then one may be that, and three may be those,
yet the plural of hat would never be hose.

We speak of a brother, and also of brethren,
but though we say mother, we never say methren.

The masculine pronouns are he, his, and him.
But imagine the feminine she, shis, and shim!

So our English, I think you will all agree,
is the trickiest language you ever did see!

Anonymous[20]

Note: Although this poem focuses on the formation of plurals instead of spelling, and although, in general, the ways of forming English plurals are somewhat simpler than many other languages (see second item in the Easy Grammar and Syntax subsection of Chapter 4), the last line of the poem is still true (because of the spelling), and the poem can still be enjoyed.

Figure 5-3
Homophones

Wood yew believe that eye didn't no
about homophones until too daze ago?
That day inn hour class inn groups of fore,
we had two come up with won ore moor.

Mary new sicks; enough too pass,
butt my ate homophones lead thee class.
Then a thought ran threw my head,
"Urn a living from homophones," it said.

Aye guess eye joust sat and staired into space.
My hole life seamed two fall into plaice.
Hour school's principle happened too come buy,
and asked about the look inn my aye.

"Sur," said eye as bowled as could bee,
"My future rode aye clearly sea."
"Sun," said he, "move write ahead,
set sell on you're coarse. Don't bee misled."

Aye herd that gnus with grate delight.
Eye will study homophones both day and knight.
Fore weeks and months, threw thick ore thin,
Aisle pursue my ghole. Aye no isle wynn.

modification of a poem by
George E. Coon
source unknown

Note: This poem is a good example of the fact that readers can easily determine meaning from context. If the communication is long enough to establish the context, almost no one will be confused by words that sound alike being spelled differently than the reader is accustomed to seeing (the traditional spelling).

PART 2
THE SOLUTION

Important Note

Reading portions of this section before reading all of Part 1 is similar to having a vague health problem that you've been treating with expensive home remedies. You go to a doctor who finds that you have a life-threatening but easily curable illness. Instead of listening to the doctor explain your complicated illness and simple treatment, you insist only that the doctor tell you the cost of treatment. Although the treatment is less expensive than several more months of your home remedies, you decide to continue with what you know rather than learn what you need.

Wanting to know the proposed solution to illiteracy without first knowing how badly the solution is needed is analogous to wanting to know the cost of something (what ***you*** have to do) without first learning the benefits of your action.

There is no question that English spelling reform is long overdue. The present practice of attempting to teach all American youth to read and spell English is the foremost example of conspicuous consumption of a nation's resources since the building of the pyramids. Unfortunately for many children, the belief is still widely held that our economy can still afford this cruel waste....

It would be unbecoming of educators not to attempt hundreds of new and devious approaches to the problem rather than advocating the one logical (and eventually inevitable) solution.[1]

Arthur W. Heilman, Ph.D.
Phonics in Proper Perspective

Chapter 6
The Only Proven Solution to Illiteracy

By far the most exciting news for parents and friends of people who are having trouble learning to read is the recently proven fact that all children and adults—except the most mentally disabled—*can be* taught to read. Some parents who are embarrassed by their child's inability as well as teachers who have not yet learned the revolutionary teaching concepts presented here, may initially cling to the belief that their child or student has some type of brain dysfunction. Samuel Blumenfeld and other researchers have been disputing the validity of these diagnoses for years. *Why Our Children Can't Read* by Diane McGuinness, Ph.D., published in 1997, correlates the findings of dozens of reading studies—most of them in the last ten years. The studies prove that when the methods Dr. McGuinness and other researchers have perfected are used, all but the most mentally disabled *can* learn to read. This is true whether or not the diagnoses of dyslexia, attention deficit disorder, learning disabilities, brain anomalies, and similar labels applied to nonreaders and poor readers are correct. In fact, many of these diagnoses are not correct. Many students who have been given one of these labels *have* learned to read using methods described in Dr. McGuinness's book.

The reason the words *can be* are emphasized in the previous paragraph is that we live in an age of skepticism. Almost everyone has heard the statement, "If it sounds too good to be true, it probably isn't true." Although what is presented in this book as the solution to illiteracy may sound too good to be true, it is in fact quite true. It has been proven in more than 300 language groups with an alphabetic language other than English. The reason the first paragraph says *can be* instead of *will be*, however, is that many of us believe that it's probably not true if it sounds too good. As a result, we may be tempted to skip ahead, scanning here and there to find something that—without knowing the details—seems to be untrue. Without realizing we are doing so, we often look for a catch—an error or misrepresentation that makes an argument false. We want to quickly decide if we should spend more time on something that seems too good to be true. There is a danger in the procedure of scanning here and

there in this book, however. Although we can easily understand the details of the illiteracy problem, we must consider many relevant facts before we can reach an accurate conclusion about the solution to the problem.

Your first question might be, "If the solution proposed in this book is so simple and so well established in every alphabetic language other than English, why is the solution so little known?" We often believe that if a problem is serious enough, scholars and governmental leaders will research thoroughly enough to consider all practical solutions to the problem, and books will be written discussing the findings. This is not always true, however. *Books in Print*, which lists all the books presently available in U.S. bookstores, lists more than a hundred thousand different books in print. A recent version of *Books in Print* lists only two books under the subject of the proposal in this book. Neither of the two books proposes the solution mentioned earlier. As a result, answering the question of why the solution to illiteracy is so little known before helping you understand how complicated problems are solved could call forth some of the skepticism mentioned earlier. Many examples throughout history have disproved the belief that if a problem is serious enough, scholars will consider all the possibilities. In fact, there is truth to the adage, "The only thing that we learn from history is that we don't learn from history."

Psychologists and others who study human nature find that when we attempt to solve problems, we usually do not consider all the possibilities. More often than not, as soon as we find what we consider a workable solution to an urgent problem, we implement it. In attempting to solve problems, we often try to do so within assumed but non-existent limits. Many published reports on creative thinking and problem solving have documented this. Books of mental puzzles and games contain problems many readers cannot solve—not because of a lack of intelligence but because the solution lies in an approach never considered. The reader incorrectly assumes that such an approach is outside of the allowable limits. The bibliography lists a magazine article and a book by Eugene Raudsepp on creative thinking that demonstrates this by having the readers exercise their abilities on games and mental problems.

Trying to solve problems only within well-established—but often nonexistent—limits is especially true within a profession such as education or the sciences, where, as a result of teacher training, certain methods and beliefs are accepted by almost all members of the profession and others are not. Those who disagree with the currently accepted teaching methods or beliefs often do not remain in the profession. They fail to advance in their profession because they disagree with their superiors

and are fired or choose to leave. The longer we try to solve problems within assumed but nonexistent limits, the more likely we are to think the limits cannot be exceeded.

We are not solving our illiteracy problems, and the resulting monetary and human-suffering costs are increasing. It is bad enough that we tolerate these costs for ourselves. It is much less excusable that we tolerate these increasing costs for those most affected—the illiterates who cannot act effectively on their behalf to solve the illiteracy problem. There have been many proposed solutions to our very serious illiteracy problems in the last few years, but our illiteracy problems cannot be completely solved within the assumed limits. Extensive quotes from several authorities in this book give conclusive evidence that, because of changed conditions within the last ninety years, we cannot completely and permanently solve our illiteracy crisis without spelling reform.

Spelling reform is seldom mentioned in books and reports concerning illiteracy and, presumably, is not even considered as a solution to illiteracy by most people. This is true even though scholars have been recommending it for more than two centuries. In other words, spelling reform is outside assumed but nonexistent limits on the solutions we can consider. Our spelling is considered unchangeable. As Edward Rondthaler and Edward Lias explain in their book *Dictionary of simplified American spelling*, "we refuse to challenge our spelling. We accept it as a 'given.' We struggle along blindly, desperately using what is no more than remedial measures; never attacking the underlying source of the trouble." [2] This book will show why spelling reform is the only complete, permanent, and proven solution to illiteracy.

Three Common Objections

Chances are, when you first saw the words spelling reform, you thought, (1) "I learned to read without 'tampering with our mother tongue,' and I'm no genius, so other people can, too!" (2) "I think there will be difficulties involved in implementing spelling reform;" or (3) "I dread the difficulty of learning to read again." Let's carefully, honestly examine these three concerns.

1. Can everyone learn to read using the system that we did? The belief that others can learn to read without spelling reform because we did misses the point for two important reasons. First, *our* reading ability is irrelevant to the abilities of millions who did not or cannot learn to read. Students of human nature know that as we grow older we have a strong tendency to forget unpleasant events from our past and remember only

good events—that's why the phrase "the good old days" is so common. If you learned to read several years ago, you have undoubtedly forgotten how difficult it was. Perhaps you were above average and had little difficulty in learning to read. That is certainly no proof that the average student today should be able to do what you did. In either case, the second reason is even more important: conditions have changed in the last forty-five years.

In our increasingly complex technological and competitive world, learning to read is not only more necessary, but it is also more difficult. In our faster-paced nation (where problems in televised drama programs are solved in thirty to sixty minutes) few students or teachers will accept the rote memorization and dull drill needed to learn to read used in the eighteenth and nineteenth centuries. As a result, teachers use inferior methods, which not only fail to teach nearly half of their students to read, but also requires two or more years to teach those who *do* learn to read, as opposed to less than three months for most students of other alphabetic languages.

2. Will there be serious difficulties in implementing a new system? When spelling reform was mentioned, you may have thought of one or more difficulties of implementing spelling reform. The remainder of this book will quite adequately demonstrate that not only can all objections be answered, but implementing spelling reform will save money rather than costing, as all presently attempted solutions do.

Almost everyone occasionally complains about English spelling but then assumes nothing can be done. Paradoxically, some who complain most bitterly about our ridiculous spelling and schools that cannot teach our children to read or to spell correctly will object to spelling reform.

Some will object by saying that English is a beautiful language. You will note, however, that most of the people making such claims are those who have become fairly proficient at English spelling. This has come as a result of hundreds of hours of study, which they have forgotten or proudly downplay the difficulty of. Can we honestly believe that more than ninety million functional illiterates in the U.S. and hundreds of millions in other nations having difficulty learning to read English would call it "a beautiful language?"

In a few short years, millions of English-speaking people will call Nu-English (New English), the spelling system proposed in this book, a beautiful language—not because it has an interesting variety of ways of spelling the sounds in our language, but because of its invariability and simplicity. More importantly, it will be called a beautiful language because at long

last it will enable easy communication among English-speaking people throughout the world. Enabling communication—rather than admiring the beauty of the words—is and should be the real purpose of a language. No one will prevent those who so greatly admire the "beauty" of English spelling from continuing to read it in the books they own and from using it in their writings. NuEnglish, however, will enable hundreds of millions of people who cannot now read or write English—among the 1.3 billion or more who speak English—to communicate by mail, e-mail, and all types of published material, which is less expensive, less intrusive, and more convenient than voice communication.

People would far too often rather continue to endure the disadvantages of the known than to implement changes that would bring the advantages of the unknown. Almost anyone can think of reasons why spelling reform *will not* work, but if they were to thoroughly investigate the validity of the objections in today's conditions, they would find that every objection can be answered. Few have carefully compared the illogical and inconsistent spelling of English words with the spelling of words in other alphabetic languages. Even fewer have researched the ease of learning, reduced educational costs, and reduction of all the disadvantages of illiteracy that would come from reforming our spelling as at least thirty-two other nations have done. The Wikipedia article on Spelling Reform lists four languages (Armenian, Bosnian, Catalan, and Latvian) in addition to the thirty-three languages listed on the ozideas website mentioned on page 3 in which the spelling has been simplified successfully. The ozideas website also lists the date when the spelling reform took place in each of the languages.

3**. Will learning a new spelling system be too difficult for me?** In truth, there is only one significant objection to spelling reform: "I don't want to expend the effort to learn it." Fortunately, this is the easiest of all objections to meet. The spelling system proposed here is so simple, logical, and easy to learn that anyone who can presently read English can learn the new spelling system in five minutes—so simple that everyone who has tried has been able to read NuEnglish with only an occasional four or six second stumble over the words, knowing ***nothing*** about the NuEnglish spelling system.

When presented with the details of an issue, it becomes increasingly difficult to criticize but stay involved in the issue. Critics often fear they would need to get involved; instead they prefer to criticize from a distance. Although they may vehemently claim they want to reduce the monetary and human-suffering costs of illiteracy, two groups may be surprisingly resistant to the changes proposed in this book. The first group is

educators. Like people in most other professions, educators often want to maintain the status quo in their profession. The second group is parents who are embarrassed by and seeking an easy explanation for their child's apparent inability to learn to read. These parents often accept without question the explanation of the "experts" that their child is dyslexic or has attention deficit disorder or some type of minimal brain dysfunction.

Fighting Symptoms vs. Curing the Root Cause

Any proposed solution to illiteracy other than spelling reform attacks only the symptoms of illiteracy rather than the cause—equivalent to taking cough medicine for a cough rather than taking medicine to cure the disease causing the symptoms (the cough). As long as a disease is left uncured, new—and often more dangerous—symptoms will continue to appear.

Changing the spelling of our words will obviously not solve all the problems that prevent students from learning. There is, however, one indisputable, overriding fact which is true for all but the most mentally disabled. Using a perfectly phonemic spelling system—spelling every word as it sounds—will make learning to read so easy that children will learn to read in the first half of first grade (or in kindergarten), and literate adults will learn in five or ten minutes and be able to return to present reading speeds in two or three months—as they do in other nations! They will learn to read long before the frustration of failing in the spot-light of their reading class causes the discipline problems and damaged self-esteem that stop the students from believing they *can* learn to read.

As you read this book, keep this in mind: in order to be conservative, the estimates of how long it will take to teach students to read using the methods in this book are based upon the *maximum* learning time that was required in 98 percent of the languages in which Frank Laubach taught. But please note how long Frank Laubach thought it would take in this quote from page 48 of his book *Forty Years With the Silent Billion:*

> **"If we spelled English phonetically, American children could be taught to read in a week."**

This may be optimistic, but it would be a serious mistake to overlook the experience and advice of *the person who perhaps taught more illiterates—in more languages—to read than anyone else in history*. Using the methods in this book, all but the most seriously mentally disabled will be able to learn to read in less than three months—perhaps *much* less—compared to just over half who presently learn to read, most of whom require at least two years to do so.

The educational history of practically every alphabetic language nation on earth—especially when compared to our own educational history—has proven that a perfectly phonemic spelling will greatly improve our literacy rate. This is because, unlike any other improvement we can make to our educational system—which would merely combat some symptoms of the problem—phonemic spelling will cure the root cause of the problem: the inconsistent, illogical, and confusing spelling system.

Although we may not learn as much as we should from history, we usually learn even less from educational history—especially that of language groups other than English. How many people would even think to compare our educational history with that of non-English-speaking nations? It is largely a matter of national pride.

Desperately Needed: A Simple Illiteracy Solution

As our nation becomes more technologically advanced and more communication oriented, fewer and fewer jobs are available that do not require reading skills. And, of course, world trade is becoming increasingly competitive. Instead of improving, however, our national functional literacy (the ability to read well enough to get by in an increasingly complex society) has been dropping. As one of many possible indicators, Scholastic Aptitude Test (SAT) scores dropped for more than thirty years at the end of the twentieth century. Furthermore, absolutely nothing done within the school system—other than spelling reform—will affect the tens of millions of adult illiterates who have left school. Adult illiterates are increasing in number by more than two million per year, and it is currently estimated that less than 1 percent of them ever become good readers after leaving school (see the first section of Chapter 3). Unfortunately, it is more difficult to solve the problem of adult illiteracy than of students' not learning to read before they leave school, and adult illiteracy receives only a small fraction of the attention the schools receive.

Charles Leadbeater, in his book *The Weightless Society*, says what many students, teachers, and parents know by experience, "too much schooling kills off the desire to learn." He is referring to schooling that is boring and confusing rather than enlightening and exciting. He is referring, more than anything else, to learning to read and spell English, which is so difficult and time-consuming that our nation actually offers prizes to the very few who manage to get the spelling right—a program known as the National Spelling Bee, a program virtually unknown in other languages.

We often learn best by analogy. Two instructive analogies to our spelling system are sports and the traffic system on our roads. Would anyone really be interested in watching a basketball game in which a basket sometimes was worth two points and other times was worth 200 points and there were over 300 rules for how much the basket was worth and almost every rule had exceptions—and some of the exceptions had exceptions? Furthermore, imagine the chaos if traffic signs were illogical and inconsistent. If the stop sign only *sometimes* meant stop or if the yield sign did not always mean that you must yield, disaster could result. If you were doomed to a life of near-poverty because of your poor reading ability, would it be a disaster to you?

Unfortunately, our students have no choice but to follow the rules of "the game of spelling." They have no choice but to learn to adapt to the chaos caused by our spelling. Although tone-deaf students are not forced to become musicians, every student *must* learn to read and to spell if they wish to live significantly above the poverty level—even those who have great difficulty memorizing the spellings of tens of thousands of words because they have an ingrained aversion to something as illogical and inconsistent as English spelling. Even the most brilliant engineers, medical doctors and scientists will have difficulty getting a good job if their resume includes a spelling error or two. One cannot help but wonder how many very talented workers have been lost to society because we believe only good spellers are competent to be our leaders in the workplace.

Rather than simplifying our spelling, we blame the student for not adapting to an illogical and inconsistent spelling system; we often believe poor spellers and poor readers are lazy or just not trying hard enough. In other words, rather than placing the blame where it belongs—on the spelling—we place the blame on the people who are *victims* of the spelling. We try to locate those who cannot read and spell and do whatever it takes to get them to read and "spell correctly"—and we have believed for centuries that there is only one correct way to spell most of our words. That one "correct" way for many words is totally unrelated to the pronunciation of the words.

Some educational researchers and teachers try to defend our indefensible spelling system and place the blame on the students by claiming that if only the students would learn all the spelling rules they could be good spellers. As the "How Bad Is the Cause of Our Problems" section of Chapter 5 explains, even a computer programmed to use a set of 203 rules to spell 17,000 common words was wrong 51 percent of the time.[3]

It will become apparent to the truly inquiring mind that the solution to our illiteracy problem must be to make the process of learning to read much easier and faster. In other words, spelling must be so simple, logical, and consistent that the student—whether schoolchild or adult—can learn in two or three months, as do students in most of the other alphabetic languages of the world. At present, the 52 percent or so of American students who do become good readers require an average of two to two and one-half years. After about two and one-half years, students who learn to read English can read second-grade or third-grade reading books, and then throughout elementary school, students can achieve higher levels of reading ability as they learn more words—either through rote memory or through repetition.

Learning to Read English vs. Other Languages

Those who have not studied the differences between English spelling and the spelling of other alphabetic languages may have difficulty understanding why learning to read English takes so much longer than learning other languages. Most of us had several years of spelling classes in elementary school. If we are familiar only with English, we may be surprised to learn that students of most other alphabetic languages do not have separate classes for spelling, as we do.

We may also be surprised to find that students who learn to read a phonemic language do not have the artificial "grade level" reading classification present in U.S. schools. In U.S. schools, a teacher may say, for example, "This student knows twelve hundred words by sight and reads at a third-grade level. Next year, he should know sixteen hundred words and read at a fourth-grade level." Students of most other alphabetic languages learn the sounds of the letters in their language in the first few days of school. After three or four months, they can pronounce any word in their language. They can even correctly and unfailingly pronounce unusual words they have never seen before—something impossible with our present English spelling. When they pronounce or sound out in their minds a word in their vocabulary, they recognize (read) it.

Practically every English-speaking adult has experienced a situation in reading or in listening to someone speak that most other language groups do not: forgetting the pronunciation or spelling of a word we have not used for years. This is because other language groups only have to remember the spelling of the sounds instead of having to remember spellings and pronunciations of every word.

As you know, different people have different abilities. Some people—especially young children and girls—are good at memorizing. Others like to learn by logic. Adults and many young boys prefer to learn new things by comparing them with previous knowledge. Some people—even some very intelligent people—are confused and completely turned off by things that are needlessly inconsistent and illogical. In fact, the above-average intelligence of some students is one factor causing them to *search* for logical connections between related facts and information. Students learning English spelling may see, for example, two words spelled the same except the first letter. These words would rhyme in almost any other language. In English they may sound completely different. As Chapter 5 showed, there is not even *one* invariable rule of English spelling. Students have no choice but to learn by memorization or repetition.

Learning to read is difficult for some students, either because they are not good at memorizing or because they have a strong conscious or subconscious objection to expending so much effort on something so confusing. Research has not shown how many students fit into this category, but even if it is only 0.1 percent, that is still hundreds of thousands too many—especially if one of them is *your* friend or loved one!

Even more important, less than 1 percent of the roughly ninety-three million adult functional illiterates in the U.S. today will ever get enough help to achieve the equivalent of an eighth-grade education. Even an eighth-grade education, however, is usually inadequate for getting an above-poverty-level-wage job. These school children and adult illiterates will never become good readers without intensive one-on-one tutoring or unless we, as a compassionate and patriotic American public, insist upon solving our literacy crisis using the only proven, logical, and economically feasible solution—the one proposed in this book.

Alphabetic languages vary widely in difficulty. As far as grammar and syntax are concerned, English is neither the easiest nor the most difficult—it is easier than many European languages, for example. But in one way—the spelling—English is by far the most difficult alphabetic language in the world.

The school systems in many countries have such high standards that only students who can learn quickly remain in school. Rudolph Flesch explains another important difference:

> Generally speaking, students in our schools are about two years behind students of the same age in other countries. This is not a wild accusation of the American educational system; it is an established, generally known fact...

> What accounts for these two years? Usually the assumption seems to be that in other countries children and adolescents are forced to study harder. Now that I have looked into this matter of reading, I think the explanation is much simpler and more reasonable: Americans take two years longer to learn how to read—and reading, of course, is the basis for achievement in all other subjects.[4]

Frank C. Laubach believes even more time is lost: "It is estimated that two and one-half years are lost in the student's studies because of our chaotic spelling." [5]

How does this compare to other languages? Laubach wrote, "Ninety-five percent of the languages of the world are almost perfect phonetically." Laubach has found that students in many of these languages can learn to read using Laubach Literacy methods in one to twenty days! In some simpler languages, such as some dialects in the Philippines, adults can learn to read in as little as one hour! [6]

Rudolph Flesch points out how quickly children of other nations learn to read. Russian school children, for example, are taught to read forty-six of the 130 national languages of Russia—in first grade! There is no reading instruction, as such, after first grade.[7]

Remedial Reading Classes, the U.S. and Other Nations

Most public schools in the U.S. have remedial reading classes, or remedial reading groups in classes, for almost every grade level. Remedial reading classes are also common in college. David Harman states,

> One indication of [functionally illiterate high school graduates] can be found among students in community colleges, all graduates of high schools. Over half of community college entrants, researcher John Roueche found, are lacking in adequate basic skills: "The most offered courses in American community colleges were remedial reading, remedial writing, and remedial arithmetic."...
>
> Community colleges do not have a monopoly on remedial reading courses for high school graduates: a number of Ivy League colleges also make such courses available to entering freshmen who are found to need them.[8]

A September 1997 report states that "almost one-third of college freshmen require remedial instruction." [9] Are there remedial reading classes in other languages? Dr. Rudolph Flesch states,

> Do you know that there are no remedial reading cases in Germany, in France, in Italy, in Norway, in Spain—practically anywhere in the world except in the United States? [10]

Part of the reason is that the school systems in many other nations do not try to make high school or college graduation a possibility for every student, the way we do. It is also true that there is much less need for remedial reading classes in most other nations.

Students in no other nation on earth have the difficulty that our students have in learning to read. Although we like to take pride in our literacy level, the truth is that in our nation—where by law every child must attend school throughout childhood (and almost all do)—we have more adults who cannot read than in some nations with far less than universal schooling. What does all this mean? Rather than risk overstating the obvious, perhaps the best approach is to ask two questions with obvious answers:

1. Which is easier, learning the letters that represent the thirty-eight phonemes in English and how to blend them into words ***OR*** learning the specific letter sequence required to represent each of the twenty to seventy thousand words in our reading vocabulary by memorization or by repeated use?

2. Does it tell you anything about our spelling to find that students having trouble learning can more easily learn to read English using Chinese characters? (See page 62.)

There are obviously many reasons for our illiteracy problems, but no other reason affects everyone, as our spelling does. It is true that there are many reasons why school children devote their energy to tasks other than learning to read, but if our spelling were as logical and dependable as that of other alphabetic languages, students would have learned to read in first grade. They would also be much more likely to enjoy reading and to see themselves as successful in their schoolwork. They would therefore be more likely to see themselves as able to be successful in any worthwhile task they choose to undertake. The frustration of considering themselves failures causes many of their behavior problems and many of their failures. Many of their attitudes and failures carry over into adult life.

How Can We Improve the U.S. Educational System?

With the recent publicity of U.S. illiteracy there have been increasing cries for someone to do something to improve the educational system. Usually, one of the first solutions proposed is to spend more money on education. In late 2007 the federal government is spending an estimated $146 billion per year of our money on 760 or more education programs spread over about 40 government agencies.[11] In order to influence state policies, the government returns a portion of the $146 billion to the states. Nina Rees, writing for Knight-Ridder News Service, states that while the amount "appears small—about 7 percent of the average state's total education budget—it still adds up to millions, if not billions, of dollars." [12]

Although more money—if spent correctly—can sometimes help, the U.S. has proven that this is not the solution. A September 10, 1993, news report in *The Salt Lake Tribune* states,

> The amount of money America spends on its public schools has soared as much as health-care costs, so that each household now spends an annual average of $2,348 in taxes to fund schools.
>
> A large part of the rise has fattened bureaucracy and there is no sign that the investment improved learning, according to a study released Thursday....
>
> "I know it's fashionable to talk about under-investment in education, but as our study confirms, we've invested and invested heavily in education," said Samuel Brunelli, director of the council and president of The ALEC [American Legislative Exchange Council] Foundation. "This investment has not paid off in terms of student achievement...."
>
> In New Jersey, New York, the District of Columbia, and other places where taxpayers pay among the most for their schools, the students are among lowest achievers.[13]

Dr. William Bennett's 1994 book, *The Index of Leading Cultural Indicators*, shows the details of the relationship of expenditures and scholastic achievement, as indicated by Scholastic Aptitude Test (SAT) scores. Average SAT scores dropped from 975 in 1960 to 890 in 1980. Although the information in Bennett's book shows a slight rise (to about 900 in 1993), the SAT scores are still well below the 1960 level. In the mid-1980s the SAT test was changed in a way that many believe made it easier. Mensa would previously accept SAT and American College Test (ACT) test scores as proof of a high IQ; they no longer do. During the 1960 to 1993 time period

the elementary and secondary school expenditures for education, in constant 1989 dollars, raised from 70 billion to 250 billion or more. Although many factors were involved, part of the reason was that a smaller share of the expenditures went for actual classroom instruction than during any comparable time in recent history.

Furthermore, the U.S. spends more per pupil than other nations (Bennett lists the expenditure—in decreasing order—of the United States, Canada, Italy, West Germany, France, the United Kingdom, and Japan). According to 1993 U.S. Department of Education data, the U.S. expenditure per pupil was about $3,800, Canada spent about $3,500, and Japan spent about $2,200.[14] U.N. statistics for 2006 show that the U.S. spends more per pupil than any other nation except Switzerland.[15]

Also, there is no correlation between the amount spent on education by the states in the U.S. and the results obtained in student performance. For example, in 1992 and 1993 the top five states in SAT scores, in order, were Iowa, North Dakota, South Dakota, Utah, and Minnesota, whose expenditure rankings, respectively were twenty-seventh, forty-fourth, forty-second, fifty-first, and twenty-fifth. On the other hand, the top five states in expenditures in 1992 and 1993, in order, were New Jersey, Alaska, Connecticut, New York, and the District of Columbia, with SAT score rankings, respectively, of thirty-ninth, thirty-first, thirty-third, fortieth, and forty-ninth.[16] Although this certainly does not prove that the more money spent the worse the results, no honest observer could conclude that spending more money will definitely improve educational performance.

Predictably, the major solution proposed was that schools should *raise* their standards. If standards were raised high enough, every student would have to spend more time each year in class and on home-work. They would need help from their parents, as in Korea and Japan, or from private tutors. However, some students are seriously confused by the lack of logic in English spelling. What about these students? Does raising the standards help those in the school system who are having problems in their schoolwork?

If (1) these students were failing because they were simply not trying hard enough, if (2) they believed they could pass if they tried harder, and if (3) they were sufficiently motivated to want to pass, then raising the standards would have a good effect. It doesn't take a genius to figure out that not all students fit all three "ifs." What effect does raising standards have on students who are having trouble reading? Instead of helping them, it squeezes them out. When the poorer students are out of the schools, then the average grades of those left in schools will be higher. Everyone will pat themselves on

the back for improving the school system by raising the standards. The gain, however, has only been possible at the expense (the human-suffering cost in Chapter 1) of the troubled students.

Those who are wealthy enough can ensure that their children get into the good colleges by putting them into private high schools. Others manage to get their children into gifted and talented programs in the public schools. Many parents of students having reading problems are illiterate. Neither of these recourses is open to most illiterate parents.[17]

U.S. Grade Inflation

There were demands for higher standards following the National Commission on Excellence in Education's 1983 "Nation at Risk" report. Four factors caused this to result in grade inflation: (1) "commercial demands" for success in teaching (no governmental funding is received for a student excluded because of low grades), (2) pressure from parents, (3) pressure from students, and (4) pressure from college admitting officers who rely on class rank and grade-point averages. So instead of improving performance, the opposite actually occurred. Twice as many Cs as As were given in 1966, but in 1978 more As were given than Cs, and more than 20 percent of students entering college in 1990 averaged A minus or more. All this was despite the fact that educational achievement had dropped. An A minus or more was the average grade of 54 percent of students entering private universities.[18]

> Both the SAT and ACT, the two big college testing services, report evidence of grade inflation [as reported in September 1997].
>
> The percent of A-average students among SAT test takers has risen to 37 percent from 28 percent in the past decade. Among those all-A students, the SAT averages fell by 14 points over the same period.
>
> Among ACT takers, the percent of all-A students rose to 32 percent in 1996, up from 16 percent in 1970, with no improvement in scores over that time period.[19]

Seeing With an Unprejudiced View

The first step in solving any problem is to be sure you are seeing the problem and the solution with an unprejudiced view. The most perceptive statement concerning our failure to view our literacy problems properly is by Sir James Pitman in his book, *Alphabets and Reading*:

> In my own long campaign in Parliament and elsewhere to have the effect of our alphabet(s) and spelling on the learning processes involved in learning to read tested in a large-scale investigation, the worst obstacle has been the inability of many people to objectify, to depersonalize the problem. They assume that because *they*, personally, managed to learn to read without the alphabet being "tampered with," it must have been easy for them and therefore it must be equally simple for others to do likewise. If children fail to learn to read, the fault must lie elsewhere—in poor teaching, the wrong method, overcrowded classrooms.... As stated in the opening chapter of this book, all these and similar factors are of great relevance, but this is a poor reason for overlooking the [NOTE:] **medium** (emphasis added) in which reading is taught. Some of our educational pundits are not unlike the surgeons when Joseph Lister first urged the advantages of asepsis. To us the necessity for sterilization appears to be self-evident, but it took Lister some twenty-five years before the surgical educationists of the day were prepared even to consider his simple remedy—and a further twenty-five for it to be generally applied. There was nothing, the pundits declared, wrong with their methods of operating; those who died shortly afterwards were as well served as those who lived—the fault must be lack of skill in the surgeon, or congenital weakness in the patient, or it was gangrene which was a separate matter altogether and impossible to cure...and so they continued to carry their instruments round in a velvet-lined morocco pocket-case and to sharpen their scalpels on the soles of their boots. Millions died needlessly just as, equally needlessly, millions of children have failed to read.[20]

Unrealistic Views of Illiteracy

Some people believe that literacy is an elitist idea held by people who have had too many years of indoctrination in sophisticated, snobbish colleges. These people will tell you that:

1. The ordinary person can do many things we could never imagine.
2. The ordinary person has many virtues we could never imagine.
3. The ordinary person shows ingenuity and a basic hardihood that far exceeds that of many college graduates.
4. Plans to educate people endanger these abilities whether they can read or not.

Some people believe that illiterates are doing well without us, so why should we burden them with our middle class ambitions and cultural constraints? Such people will ask, "Does literacy make anyone happy?" Perhaps Jeanne Chall, college professor and author, gives the best answer:

> Does literacy make men happy? Only highly literate people seem to ask [this] question. And only the well-educated seem to say that it does not. They are like the rich who doubt that money makes one happy. Significantly, such doubts come only after they have accumulated enough money and do not have to worry.... And so with the highly literate. They doubt that literacy will contribute to the happiness of those who are not yet literate only because they themselves use it so well and easily in living, working, playing, and in making choices.[21]

We use literacy so well that we've been blinded to the advantages and options such literacy brings us. Such idealization of ordinary, uneducated people might be possible for someone who has never lived with the advantages of a printing press. There is not one community in the U.S., no matter how isolated, where that holds true today. People who write such things should ask themselves, "Is literacy of so little value that I would be willing to give up my ability to distribute, in print, the ideas I just expressed?" Although they are ready to give away other people's ability to read and write, they are not ready to surrender their own.

Recently the idea has arisen that people can function very well today by receiving the information they need from radio and television. Many of the "Human-Suffering Costs" in Chapter 1 show why the electronic media cannot meet all the needs. The following quotation should clinch the matter:

> We live in a world in which important events occur daily. These events affect our lives, directly and indirectly. None occurs in a vacuum. They all have contexts that need to be understood. To some limited extent the electronic media try to provide context, but the accent must be placed on the word limited. Time constraints force the reduction of even the most momentous occurrences to their most basic facts. Full understanding of present events requires literacy, which make it possible, in greater leisure, to fill the canvas with all the necessary background and detail.
>
> Literacy makes possible depth and breadth, the pursuit of inquiry in any direction. The illiterate must be satisfied with the knowledge supplied by others. They are prisoners of what is meted out, unable

> to pursue avenues of inquiry determined by themselves. Such inquiry in itself is a vital force in human development: it fuels invention and innovation, enabling the mind to expand and to reach into the future, guided by the accumulated records of the past.[22]

Beginning Reader Teaching Methods

There are two basic methods used in the United States: the look-and-say (whole word or whole language) method and the phonics method. As Dr. McGuinness convincingly demonstrates in *Why Our Children Can't Read*, however, until the mid-1990s few teachers knew the correct way to use the phonics method. There are, however, various combinations of these two methods. There are also continual efforts at finding and introducing slight variations that are hailed as "new" ways of teaching reading. Kenneth Ives, in his book, *Written Dialects N Spelling Reforms: History N Alternatives*, states,

> Reading would appear to be [the] most difficult [and] controversial subject to teach in school. [The] 1960 *Encyclopedia of Educational Research* devoted 151 pages to reading research, but only two to five pages for each of [the] other school subjects. Another study refers to "1,000 reading research studies completed each year." Most of this research is concerned with [the] teaching of spelling or with [the] problems created by it. (Dewey, 1971; 41)[23]
>
> The number of research reports on reading difficulties has increased since 1960. There are now hundreds of books and about 3000 articles on reading published each year.[24]

A stroll up and down the aisles of any large university library looking at the hundreds of books on reading would be an enlightening experience for most people. An examination of the students' and teachers' books used in teaching adults to read also would be enlightening. Just the table of contents of the four Laubach Literacy Action books requires fourteen large pages, fully packed with all the different letters, letter groupings, spelling rules, etc., that the student must learn in order to achieve eighth-grade reading skill. It usually requires a minimum of one year to complete the four books using Laubach's one-teacher-to-one-student method.

As Dewey states it:

> [T]he currently accepted spellings of T.O. [traditional orthography, i.e., the way English words are now spelled] are the chief roadblock to learning to read and write.… Most reading methods are essentially efforts to detour that roadblock, to put off facing the hard facts of T.O. as long as possible.[25]

Most, if not all, of the spelling methods for beginners start with the simpler words and groupings of similar words. To show them the full story, as presented in tables in Appendixes 1 and 2, would completely bewilder the students. They must learn every word, one at a time, either by memorization or by familiarization through repetition.

Difficult for All, Impossible for Some

English illiteracy does not necessarily show lower intelligence. Researchers such as Sylvia Scribner and Michael Cole[26] in 1981 and Sir James Pitman concur. As Pitman expresses it,

> To begin with, it must be remembered that intelligence is not necessarily a passport to the easy acquisition of reading. Among the seventeen per cent of backward readers [in England in the mid-1960s] will be found a few with considerable intellectual potentiality and even a high level of linguistic ability and experience.[27]

In fact, a higher intelligence level often interferes with learning to read English. This is because the student looks for logic and is confused by so seldom finding any in English spelling.

Facts about English spelling presented in chapter 5 also show why learning to read and write is difficult for all and impossible for some.

Developing Problem-Solving Skills

One important skill students must develop in school is the ability to solve problems. Having such an ability helps the students throughout their lives, not only in solving specific problems, but also in having the self-confidence to try other worthwhile tasks. Learning to read English is one of the most challenging types of problem solving a child meets. Whatever teaching method is used, the hard facts of English spelling are usually put off as long as possible. If this were not true, most of the students would be completely bewildered. As a result of teachers and school curricula postponing the difficulties, the students can learn logical, systematic ways of solving problems on subjects other than English spelling. This will enhance their

ability to solve other types of problems when they are intellectually more mature.

Teaching English Reading

The types of problem-solving skills involved in learning to read English are shown in the following quotation:

> In many systems of teaching reading steps are taken to eliminate some of the irregular words until later. By careful selection a child may first be taught only the words that are phonetically reliable, but he cannot get very far! Before long he has to accept that, whereas *go, so*, and *no* are pronounced in the same way, this does not apply to *do* or *to* and *who* which have to rhyme with *shoe* which, however, does not rhyme with *goes* or with *does* (in a common pronunciation of the derivate from *do*) and what can be made of the *wh* in *who* and *whole*; of *one* and *bun*; of *all* and *ought*; *has* and *was*; and many other common words? It is true that secondary clues in the context will be a help, but searching for these in the early stages is impracticable when three-quarters of the adjoining words are misleading. Moreover too much frustrated searching may well form bad habits of irregular eye-movements and, as we saw in Chapter 2, the reader must at quite an early stage gain some skill in analyzing the shapes of syllables and words and in relating them to the corresponding sounds and meanings. However carefully protected, the beginner soon has to grapple with a capricious diversity of mental associations or relationships. Up to a certain point he can rely on a logical relationship between the visual and spoken forms of words, and between different words that are made up of similar syllables, but he has no means of telling when the relationship is going to let him down. There is no alternative, with our present spelling, for the beginner but to memorize the numerous irregularities among the common words, to learn them by rote.[28]

The Need for Logic in Learning

As Edward Rondthaler and Edward Lias state,

> Systematic spelling takes full advantage of a well-documented educational principle: logic stimulates thinking, thinking encourages learning, and learning is facilitated when what is being learned "makes sense." A spelling that makes sense would open the door to literacy

> for more people, young and old, than all our remedial reading efforts put together. It would go a long way toward rescuing those who if not rescued will greatly magnify our social problems and undermine our democratic structure.[29]

A disturbing report was issued in 1972 by the National Foundation for Educational Research in Great Britain. As a result of this report, Mrs. Margaret Thatcher, the Secretary of State for Education and Science, set up a twenty-member committee to study reading and the use of English. In 1975 the committee, headed by Sir Alan Bullock, vice-chancellor of Oxford University, issued its report. The report was more than 600 pages and cost nearly £100,000 to produce. In his book, *Regularized English*, Axel Wijk says this about the report:

> The most serious criticism that must be leveled against the Committee's report is, however, the fact that they have so completely failed to study and take account of the methods of teaching reading which are universally used in all other European languages. In all these languages phonic methods are almost exclusively predominant, due to the fact that they have all fairly regular spelling systems, whereas in the English-speaking countries reading is usually taught by the aid of mixed whole-word and phonic methods or to some extent even by a purely whole-word approach.
>
> Phonic methods, which presuppose a fairly regular spelling system, are distinctly superior to mixed whole-word and phonic methods, because they are the only ones which permit of a predominantly logical approach to the teaching of reading. It is of vital importance to realize that for practically all children of normal ability the use of a regular spelling system will make it possible and very much easier to learn to read and write. The most essential advantage of such a spelling system is that it permits us to introduce the various phonic units more or less one by one, whereas with the mixed or the purely whole-word approach such a large number of different sounds and spelling units are introduced at the same time that there can be no question of trying to establish an immediate relationship between spelling and pronunciation, especially not in such a language as English which displays an unusually large number of irregular spellings among the commonest words in the language....
>
> When they maintain that "there is no one method, medium, approach, device or philosophy that holds the key" to the solution of the reading problem, they overlook the fact that in all European

languages except English phonic methods are almost exclusively predominant, due to the fact that they have all fairly regular spelling systems....

Since English differs from all other European languages in having such a large number of irregular spellings among the commonest words, it is extremely difficult, almost impossible, to apply exclusively phonic methods to the teaching of English reading. By replacing the irregular spellings by regular ones...traditional English may be turned into a "phonetic" language, which can be taught in accordance with definite rules of pronunciation. It seems therefore that we are fully justified in saying that there is one reliable and efficient method of teaching reading, namely by the aid of a regular spelling system.[30]

Kenneth Ives quotes an earlier statement by Axel Wijk on this subject:

If an orthographic system for English could be devised which would be just as simple, regular and logical as those found in most other European languages, it would be possible for all English-speaking school children to save at least one year's work.

Perhaps even more important would be the fact that such a reform of English orthography would make it possible for English-speaking school children to learn to read and write in the same way as the children of other nations, i.e. by using and training their sense of logic instead of by training and relying mainly on their eye memory, learning words by heart without much reference to the sounds of the letters of which they are composed. The present lack of system constitutes a very serious obstacle to the development of the child's reasoning powers.[31]

Kenneth Ives adds,

With traditional spelling having to be learned by rote, reading [and] writing in it are made difficult from [the] start. [The] usual result is dull drill, which discourages or destroys [the] child's curiosity [and] creativity about [the] world.[32]

In the last chapter of *English Spelling and Spelling Reform*, published in 1909, Dr. Lounsbury convincingly demonstrates the devastating effects that the lack of logic in spelling has upon beginning learners. Thomas R. Lounsbury, LL.D., L.H.D., emeritus professor of English, Yale University,

shows himself to be a careful and thorough scholar through his writing. See the "How to Get the Most Benefit from This Book" section of Chapter 1 for the web address of his book.

Why It Is Difficult for All, Impossible for Some

Now, we get to the essence. What is the result of problems with English spelling? It can scarcely be stated more decidedly than Pitman expresses it:

> *[T]he child is expected to take on a task that is formidable for all and for some impossible* [emphasis added]; to analyze what is scarcely analyzable, to conjure abstractions and generalizations from a printed medium whose associations are in fact neither invariable nor consistent and thus doubly irrational. Would it not be truer to say that the child is perplexed precisely because of his innate ability to reason, to analyze, abstract, and generalize?...
>
> It would scarcely be surprising if the simultaneous presentation of so many problems, so many contradictory concepts, did not merely put an over-severe strain on the memory of many five- or six-year-olds but also damaged the ability to reason logically and to form good habits of problem solving....
>
> Once a child has failed to surmount early instances of illogicality it is arguable that he may stick at this point and that this prevents him from progressing and gives rise to a swelling sense of frustration, confusion, and disappointment that hampers further efforts. My hypothesis is that this is when many backward readers are born. The great majority of these children never succeed in overcoming their bad start.[33]

Dr. Diane McGuinness reaches a similar conclusion. She states that based upon numerous research projects over the past ten years or so, language development in children makes them unable to use a phonetic alphabet unless they are specifically taught the phonemes. Although phonemic awareness can be learned at any age, the earlier it is learned the better it is for children learning to read. When children are learning to read, their logical development makes it almost impossible to understand the complex structure of our spelling code. Although one-to-one mapping logic can be figured out by some students without any help, all other types of mapping must be explicitly taught. Each step must also be based upon something they have already learned—the context must

be familiar. There is no other way for learning to continue smoothly and effectively.

Like adults, children have great difficulty paying attention to tasks they can't do or concepts they do not understand. Their limited capacity to hold information in their minds is very greatly diminished if the information does not make sense.[34]

English is among the most difficult five percent of the world's languages in one narrow respect: consonant clusters. It is neither the consonant clusters, however, nor the grammar and syntax of English that causes the most problems. It is spelling that presents students with problems that are:

difficult for all, impossible for some.

A Proposed Solution in Other Nations

Even after people become convinced of the wisdom of changing, they may have one last means of resisting change. They may ask if other nations or other language groups have successfully made such a change. The hope is that they can say, "Other people don't make such changes, why should we?" In spelling reform, we can point to many extensive and successful changes. Spelling reform scholar Kenneth Ives points out that the Dutch have had

> an evolving spelling...regularly adapted to Dutch speech. Dutch spelling was simplified in 1804 (Siegenbeek), in 1864 (DeVries-TeWinkel), and in 1934 (Marchant),...approximately every sixty years.
>
> Portuguese has been simplified in 1911, 1931, 1943, [and] in Brazil in 1973....
>
> Other language reforms, in over half a dozen countries, range from Turkish adoption of Latin script [in 1928] to [the] Israeli reforms in Hebrew in 1968. These [and] other examples indicate that language reforms can be planned [and] carried out, often with lasting benefits.[35]

Laubach explains that Spain, Russia, and Turkey adopted the findings of "competent academies" called together to consider spelling reform. About Turkey, he writes,

> Turkey began her famous literacy campaign almost immediately after Kemel Pasha became dictator and president. In 1928 he threw the Arabic script out of the schools and replaced it with a splendid Latin phonetic alphabet—and all this during the summer vacation! No textbook with the old script was permitted in the schools when they reopened in the fall.[36]

More significantly for English-speaking people, two spelling reform bills introduced by Dr. Mont Follick were almost enacted in England. As Sir James Pitman explains it,

> Follick believed passionately that his reform could establish English as the world's major second language. It is not, however, for his own particular alphabet that he is likely to be best remembered, but rather for his two Private Member's bills in the House of Commons (1949 and 1952) advocating the need for reform, with which I am proud to have been closely associated. In fact he invited me to draft his second bill and to take charge of it as if it were I and not he who had been successful in the ballot. His first bill was defeated on a second reading by only 3 votes after a five-hour debate; his second bill achieved a majority of 12 votes and was also successful in Committee despite ministerial opposition. After a good deal of "horse-trading" by me behind the scenes, he was induced to withdraw the second bill in return for an offer by Miss Horsburgh, then Minister of Education, to pledge her interest and goodwill "towards proposals by a competent research organization to investigate possible improvements in the teaching of reading by means of a system of simplified spelling.[37]

Why Has the Problem Not Already Been Solved?

Our illiteracy problem remains unsolved because most of us do not understand or believe the following:

1. The vast ***extent*** of illiteracy in the U.S. Warning reports have appeared periodically over the last thirty years, but the public has treated illiteracy as it does many other problems—by ignoring them until they become a crisis that the public cannot continue

to ignore. Most of the public has paid little attention to the education problem until the last few years.

2. The vast ***cost*** of illiteracy, in economic loss and in human misery.
3. The great difficulty of learning English reading and spelling, especially as compared to other alphabetic languages.
4. The vast ***effect*** that the difficulty of learning written English has upon illiteracy.
5. The near impossibility—due to human nature and economic realities—of solving illiteracy through the standard means (improved teaching methods, better textbooks, better teacher training, student motivation, etc.)
6. The vast ***increase*** in the need for literacy. Manual-labor jobs are rapidly being replaced by jobs requiring more reading skills, and world trade is rapidly becoming more competitive. See *The World Is Flat* by Thomas Friedman published in 2005.[38]
7. How easy and helpful a change to logical spelling system would be.

The Proposed Solution

The Logic Behind the Proposed Solution

NuEnglish was developed with two goals: to make reading and spelling English as simple as possible and to keep the present English spellings wherever possible. No English spellings were kept, however, that would interfere with the goal of making reading and spelling as simple as possible. The logical reason behind the choice of each grapheme used in NuEnglish is shown in Appendix 2. Thirty of the thirty-eight graphemes (78.9 percent) chosen for NuEnglish are the most used grapheme for that phoneme in English. If it were not for the pronunciation of *OE* and *F* in the words *does* and *of*, respectively, the *Z* of the common words *is, was*, and plurals such as *bags*, and the *EE* of words ending in *Y*, thirty-four graphemes (89.5 percent) would be the most used graphemes for the phonemes in traditional spelling. The use of *ZH* as in the English word *muzhik* is unusual. This phoneme is more often spelled with an *S* as in *treasure*. The use of *AE* for the long *A* sound is somewhat unusual. The only two NuEnglish usages that are unlike English are the use of *TT* for the sound of *TH* as in *thin* and the use of *Q* instead of *QU*. All four (*ZH, AE, TT*, and *Q*) are a result of conflicts and inconsistencies in English. All four of these phonemes are among the least used English phonemes. See Appendix 1, Figure A1.

Vowels

Since we use "short" vowels (as in, "That pet did not run.") roughly four times as often as "long" vowels (as in, "They eat fried tofu."), the letters *A, E, I, O*, and *U* are used for short vowels. This leaves long vowels and "other" vowels to be represented by digraphs (two letters used together) or single letters with macrons (a line over the vowel). The long vowels are shown as "Mae Green tried roe glue" or "Thā ēt frīd tōfū." We only need four "other" vowels: *AU, OI, OO*, and *OU*. (The terms "short," "long," and "other" vowels are significant only as convenient grouping terms.) This gives a total of fourteen vowel phonemes.

Note that there are two long *U* sounds in English, those in *sue* and in *fuel*. English spelling does not distinguish between the long *U* sounds. NuEnglish spells the sound in *sue* as *UE* and the sound in *fuel* as *YUE*. The logic behind this can be seen by considering *fuel* as the word *yule* with an *F* sound in front. When the letter *Y* is used this way, it can be considered a consonant—the ***only*** way *Y* is used in NuEnglish. The consonant sound of *Y*, however, is actually the sound of the short *I* forming a diphthong with a following vowel. (Similarly, the consonant sound of the letter *W*—its ***only*** sound in NuEnglish—is the sound of *UE* forming a diphthong with a following vowel.)

Consonants

There are only twenty-four consonant phonemes needed for efficient communication. Eighteen phonemes are represented by the single consonant letters other than *C, Q*, and *X* (since *C, Q*, and *X* represent phonemes represented more often by other letters). Since we have billions of dollars' worth of typewriters, typesetters, computer keyboards, and software using *C, Q*, and *X*, economy demands that they be used. NuEnglish uses *C* ***only*** in *CH* as in the first phoneme in the word *chip*, *Q* ***only*** for the *KW* phoneme blend (as in *quit*), and *X* ***only*** for the *KS* phoneme blend (as in *exit*). There are more words in the dictionary with a *TH* sound as in *thin*, but words with the *TH* as in *then* occur about ten times as often in most English sentences. This is due to the common words *the, that, this*, etc. To make NuEnglish more easily readable by those who already read English, *TT* represents the lesser-used *TH* sound as in *thin*. The *WH* sound as in *wheel* or *whale* (not properly pronounced the same as *we'll* or *wail*, if understandability is the goal) is actually pronounced *HW* (air is expelled before a *W* sound) and is spelled *HW*.

NuEnglish Spelling Rules

NuEnglish will not change how you speak English, only how you spell it. Every syllable of every word is to be spelled as you pronounce it, unless you feel that your readers will not understand what you write, in which case you should spell according to "Standard Broadcast English" pronunciation (the way radio and TV announcers and news-people in your area pronounce).

Rule 1, which shows how each of the NuEnglish graphemes are to be pronounced, and Rules 2, 3, and 7 are the primary rules. Readers can easily understand what they read if they know these four rules. All the others are provided to standardize everyone's spelling of NuEnglish enough that—unlike present English—others can understand what we write and a computer can be programmed to unerringly spell NuEnglish correctly. A computer program called Respeller, available on our home page (http://NuEnglish.org) for all to freely use, can very quickly convert up to about 25 pages of traditionally spelled English at a time into NuEnglish.

1. Each letter or combination of letters has only one sound, as follows:

5 short vowels: use *A, E, I, O*, and *U* for the more-often-used sounds, as in "That pet did not run."

5 long vowels: use macrons [mākronz] (lines over vowels) for the less-often-used sounds, as in "Thā ēt frīd tōfū" ("They eat fried tofu"), or add an *E* to the vowels (*AE, EE, IE, OE*, or *UE*) if macrons are not available, as in "Mae Green tried roe glue".

(Note: "short" and "long" as used here are traditional and popular, but not phonetic, terms.)

4 other vowel sounds: use *AU, OO, OI*, and *OU* for the sounds in "Haul good oil out."

18 consonant sounds represented by a single letter: use the letters that are used most often as in "Yes, Val 'Zip' Kim hid our big fan-jet win."

6 consonant sounds represented by digraphs (two letters): (1) use *TH* and *TT* for the sounds as in "then" and "thin", respectively; (2) use *C* ***ONLY*** in *CH* as in "chip"; (3) use *SH* and *NG* for the sounds in "wishing"; (4) use *ZH* as in the English word "muzhik" (= a peasant in czarist Russia, spelled mūzhēk or muezheek in NuEnglish) for the sound of *Z* in "azure", of *S* in "treasure", and of *G* in "massage".

Use *Q ONLY* as follows: use *Q* (not *QU*) for the *KW* sound as "qit" ("quit").

Use *X ONLY* as follows: use *X* for the *KS* sound of "exit", as in "suxes" ("success") and for *CS*, which has a *KS* sound, as in academic subjects: "fizix", "mattum*atix", and "ekon*omix" ("physics", "mathematics", and "economics"). Use *KS* instead of *X* for plurals and possessives ending in *K*, as in "duks" and "duk's" ("ducks" and "duck's").

The two "long U" sounds: There are two "long *U*" sounds in English, as in "fuel" and "sue". To distinguish them, NuEnglish spelling of the English word "fuel" is "fyūl". This is equivalent to adding the sound of the letter *F* before the English word "yule".

The WH consonant blend: All *WH-* words with the *W-* sound are spelled *HW-* (the actual sound) in NuEnglish. Some *WH* words in traditional spelling, such as *who* and *whole*, do not have the *W* sound. They are *hue* and *hoel* (or *hū* and *hōl*) in NuEnglish.

2. There are no silent letters and no double letters that make a single sound, except *OO* and *TT*—and *EE* if macrons aren't used.
3. All sounds must be shown, except for the *NG* sound in *NK* and *NX*, as in "bank" and "jinx".
4. For consistency, the "-able" and "-ible" suffixes are always written "-ubul" in NuEnglish, as in the words "kāpubul" and "terubul" ("capable" and "terrible").
5. So that no words seem foreign, all words, including proper names and trademarks such as "Jon" and "Drānō" ("John" and "Drano"), are spelled phonemically.
6. When proper nouns and trademarks are first used, for clarity and legality the traditional spelling will appear between square brackets after the proper noun or trademark, as in "Mattyū [Matthew]" and "Tīlunaul [Tylenol]". The only exceptions are the names of the months and days ("Janyūarē", "Mundā", etc.), and proper nouns used as common nouns, as in "Mok" ("Mach" number).
7. An asterisk (*), pronounced "star" when spelling aloud, immediately precedes a primary stressed vowel(s) or semivowel, as in "qōt*āshun"; "sur*ound", "dāb*yū" ("quotation", "surround", "debut"), unless the primary stress is on the first syllable, as in "hapē" ("happy").
8. Compound words (words composed of 2 or more words) are hyphenated, as in "hot-daug" and "finggur-print" ("hotdog" and "fingerprint"). A prefix is considered a separate word when its meaning is clear and the meaning of the rest of the compound word is clear also, such as "a-", "anti-", "dis-", "non-", "re-" and "un-" in "ā-mōrul", "antī-statik", "dis-up*ir", "non-profit", "rē-dū" and "un-butun" ("amoral", "antistatic", "disappear", "nonprofit", "redo" and "unbutton"). This special

consideration for prefixes will improve sight understanding, and may not burden a word with more punctuation, as the hyphen may substitute for a star. Chemical names hyphenate all prefixes, such as "polē-tetru-flōrō-ettilēn" ("polytetrafluoroethylene").

9. Use an apostrophe to show contractions, as in "kan't" for "kan not", or possession, as in "Tom'z" ("Tom's").
10. The only deviation from phonemic spelling is for numbers. Thus: "U 3-fōld inkrēs", "1 and 1 iz 2", "Sum-1 iz at thu dōr", and "Īl bē u-wā fōr 4 dāz". The reasons are because numerals are universally understood, are very compact, and are easily distinguished from "won", "to", "too", "for", "fore", and "ate". Ordinal numbers are written as a numeral plus "tt" or "ett": "4tt", "10tt", "100tt", "20ett", "30ett", excepting "1st", "2nd", and "3rd", and the pronunciation of "5tt" (fiftt). The use of numerals instead of spelling the numbers is optional and should not be used when filling out forms such as bank checks which specify spelling out the numbers, or whenever the number 1 could possibly be confused with the letters *I* or *L,* or when the letter *O* could possibly be confused with zero.

After learning these ten simple, unvarying rules, you can remember the pronunciation of the NuEnglish graphemes by learning two memory aid sentences. The first sentence has all fourteen vowels in alphabetical order: long vowels, short vowels, and then four other vowels. The first sentence also has three consonant blends: *GR, BL* and *ND*. The second sentence contains all of the consonants represented by digraphs. The two sentences together contain all the consonants represented by a single letter.

Mae Green lied, "Joe Blue and Kevin 'top gun' Wood haul our oil."
Qit mezhuring fish hwich yuez this ttin box.

Now that you know the invariable sounds that each single letter and each digraph represents in NuEnglish, spelling is easy. Simply write the graphemes in strict left-to-right order representing each phoneme in strict first-to-last order. According to logic this seems so simple that it needs no explanation, but it needs to be stated because many English words do not follow this logical pattern and may mislead us.

Rule 7 is important for easy readability and should be used for all except writing intended only for personal use. Although the pronunciation of NuEnglish is immediately obvious, often the placement of the accent is

needed to make the word immediately recognizable. The use of an accent mark in English would be of as much or more value in English words as in NuEnglish words. The only reason we do not recognize the need is that we have not only memorized (or learned by repeated use) the pronunciation but also the accent placement of English words. If we are not familiar with a given English word, we must often try two or three accent placements before we can recognize the word. Use of the accent mark will also be of great value in programming computers for voice synthesis, since there are no reliable rules for placement of the accent in English words.

As you can see, there are differences between English and NuEnglish spelling other than which grapheme is used for which phoneme. Some NuEnglish spellings appear strange because they correct one or more of the following English spelling inconsistencies:

1. Some English words do not spell in strict left-to-right order. For example, the second vowel grapheme in *little* is on the wrong side of the L. It is *litul* in NuEnglish.
2. Some sounds, such as the second vowel in the word *spasm*, are not shown in English. In NuEnglish it is spelled *spazum*.
3. English uses one grapheme for two adjacent phonemes in some words and that same grapheme for only one of the phonemes in others. For example, the *NG* grapheme represents a different sound in the word *single* than in the word *singer.* They are *singgul* and *singer* in NuEnglish. The use of adjacent *G*s in the word *singgul* does not violate spelling rule 2. They are in different syllables. Similarly, the different pronunciations of *Long Island* is obvious from the NuEnglish spellings *Laung Ielund* [*Long Island*] and *Laung Gielund* [*Long Island*].
4. Many letters in English represent the same sounds as another letter. One of the most confusing is the *S, C, Z* inconsistency. The way NuEnglish solves the problem is best explained by the following example (as you can see, *S, C*, and *Z* are always the same in NuEnglish, but not in English):

English	NuEnglish	English	NuEnglish
fleece	flees	teas	teez
piece	pees	sin	sin
seize	seez	sins	sinz
tease	teez	since	sins
lease	lees	sense	sens
peace	pees	cents	sents
peas	peez	scents	sents
seas	seez		

5. Plurals and past tenses are often shown by adding a suffix that has no relation to the pronunciation of the base word. Use of the suffix is according to complicated rules of doubling or not doubling the final consonants and for dropping or not dropping the final vowels, etc. Some examples of this inconsistency are as follows:

Base Word			Plural or Present Tense	
English	NuEnglish	English spelling rule	English	NuEnglish
bat	bat	add *S*	bats	bats
bag	bag	add S	bags	bagz
dish	dish	add *ES*	dishes	dishuz
bus	bus	double last letter, add *ES*	busses	busuz
carry	karee	change *Y* to *I,* add *ES*	carries	kareez
			Past Tense	
judge	juj	add *D*	judged	jujd
hope	hoep	add *D*	hoped	hoept
laugh	laf	add *ED*	laughed	laft
hop	hop	double last letter, add *ED*	hopped	hopt
wade	waed	add *D*	waded	waedud
bat	bat	double last letter, add *ED*	batted	batud

Note: This completes the essentials needed to learn NuEnglish. The remainder of the chapter contains information regarding pronunciation and a comparison of NuEnglish with English. Information on pronunciation is included only to help you understand the sounds in the words you pronounce and those you hear others pronounce so you can accurately reproduce them in print—not to dictate how you pronounce your words. This knowledge will maximize the chance of people understanding what you write.

Understanding Pronunciation

For all practical purposes, *sens* and *sents* in item 4 in the previous section are the same. A phoneticist using specialized equipment could tell the difference, but unless the speaker purposely pronounces the word slowly and distinctly, the average person could not. If a person pronounces a word slowly and distinctly, the accent and pronunciation are usually different from when the word is used in normal speech. So when spelling NuEnglish, be sure to spell the

words the way they are pronounced in normal speech. Sometimes, of course, we deliberately change the pronunciation of a word for emphasis. We might say, "It's dul*ishus." if we like the taste, but if we are really enthusiastic about it we might say, "It's deel*ishus!" by adding a second emphasis. (Only primary emphases are shown according to Spelling Rule 7.) Note the change in the vowel sound in the first accented syllable.

No one wants to be told how to pronounce their words—nor should they be. Some pronunciations, however, make it more difficult for people to understand us because some speech patterns omit or change a phoneme which is needed to distinguish similar words—such as omitting *R* phonemes not followed by a vowel or of replacing the *R* phoneme with a *U* phoneme or by slightly extending the vowel prior to where the *R* phoneme should be (e.g., is it a party or a potty?).

In standard broadcast English, unaccented syllables are usually pronounced with a short *U* as in *nuts*. Less often, an unaccented syllable is pronounced with a short *I*. Sometimes unaccented syllables have another sound, but if in doubt use *U* in spelling unaccented syllables. Often the use of a sound other than *U* in unaccented syllables makes the speech sound artificial and pretentious, or regional and quaint.

Table 6-1 shows how the English phonemes are formed. The table is largely self-explanatory, but formation of some of the phonemes needs more explanation. The vowels are all "voiced"—the vocal cords hum—and are formed by changing the shape of the tongue and mouth without restricting the flow of air. Drawings and explanations of the required shape of the tongue and mouth for pronouncing vowels are available (e.g., see "Phonetics" in the Encyclopedia Britannica). Although you undoubtedly know how to pronounce the vowels, practicing the following sounds in front of a mirror should help you understand how vowels are formed:

Sound	As In	Jaw Position	Lip Position	Tongue Position
ee	beet	close	smile	forward
i	bit	↓	smile	forward
e	bet	to	smile	forward
a	bat	↓	unrounded	mid
u	but	↓	unrounded	mid
o	lot	open	unrounded	back
au	law	to	least rounded	back
oo	look	↓	rounded	raised
ue	loon	close	most rounded	raised

The diphthongs are blends of sounds as follows:

Sound	As In	Combined Vowel Sounds
ae	bait	e + ee or e + i
ie	bite	o + ee or o + i
oe	boat	u + ue
yue	cute	i + ue
ou	bout	a + ue, a + oo, or a + u
oi	boil	au + ee, au + i, or au + u

In the Southern U.S., *AE*, *IE*, and *OE* are slightly prolonged single sounds. As previously explained, every syllable beginning with *Y* or *W* is a diphthong of *I* and the following vowel or of *UE* and the following vowel, respectively. Many vowel digraphs making more than one sound can be two sounds or a diphthong (e.g., menial: meeneeul or meenyul).

The consonants are formed by obstructing the airstream through the vocal tract. The most basic classifications of consonants are voiced and voiceless (when the vocal cords hum or are silent). As a learning exercise, alternately pronounce the phonemes on the same horizontal line in Table 6-1. Then note the position of your tongue and lips as you read aloud through the table. Most speakers raise the soft palate, sealing off the nasal cavity for all consonant phonemes except *M, N*, and *NG*. Note that *J* and *CH* are formed by briefly stopping the air flow by touching the tip of the tongue to the ridge just behind the front teeth, followed immediately by a *ZH* or *SH* phoneme. Note that the *F, TT, SH*, and *S* phonemes and their voiced equivalents restrict the air flow, but do not stop it. For the *V* and *F* phonemes the lower lip and the upper front teeth are lightly touching. For the *TH* and *TT* phonemes the air flows between the roof of the mouth and the upper front area of the tongue, which is pushed forward and raised to almost touch the ridge just behind the upper front teeth. Note the position of the tip of your tongue and the area just behind it as you pronounce the *S* and the *SH* phonemes. The tip of the tongue is almost against the ridge behind your upper front teeth for the *S* phoneme, but the tip is down very slightly, and the area behind the tip is raised for the *SH* phoneme. Note that the air flows along the sides of the tongue—with little restriction compared to other consonants—for the *L* phoneme. Likewise, there is little air flow restriction for the *R* phoneme—air flows around the tip of the tongue curled slightly up and back or by raising the back of the tongue slightly.

Table 6-1
How the English Phonemes Are Formed

vocal cords hum				vocal cords quiet	
sound	mouth position			sound	mouth position
	lips	tongue			
		tip	back		
B	closed	down	down	P	same as B
D	open	up**	down	T	same as D
G	open	down	sealed on soft palate	K	same as G
J	(same as the D plus the ZH sounds)			CH	same as J (T plus Sh)
M	closed	down	down	The sounds above this ↑ line are made by briefly stopping the airflow through the mouth. There is airflow through the nose only in M, N, and NG.	
N	open	up**	down		
NG	open	down	sealed on soft palate		
V	lower lip hits upper teeth	down	down	F	same as V
TH	open	forward almost to back of upper teeth	down	TT	same as TH
ZH	open, pushed forward	slightly down ***	down	SH	same as ZH
Z	open	almost to roof of mouth	down	S	same as Z
L	open	touch behind upper front teeth	down		
R	open	curled up & back	down		
		down****	up & back		
vowels plus W & Y*	slight variations of lip and tongue (airdlow unrestricted)			H	slight closure in throat area

* W and Y, considered consonants in NuEnglish, actually form a diphthong of a vowel preceded by UE and I, respectively.
** The tongue touches the roof of the mouth just behind the upper teeth sealing the mouth shut.
*** The area just behind the tip is raised almost to the roof of the mouth.
**** This is the more common of the two alternates.

Although all the consonants except *W, Y* and the voiced stops *B, D, G,* and *J* can be said without a vowel, they are not syllables as the glossary shows. The fourteen consonants *M, N, NG, V, TH, ZH, Z, L, R, F, TT, SH, S*, and *H* can be called "continuants," since they can be a prolonged sound without a vowel (although someone would have to be able to see your face and hear you whisper to determine the unvoiced consonants). The *L, R, W*, and *Y* phonemes are often called "semi-vowels" since, unlike consonants, almost no "friction" is needed to say them. The *H, W,* and *Y* phonemes and the *Q* and *HW* blends occur only at the start of syllables. The *NG* phoneme and the *X, NK*, and *NX* blends can occur only at the end of syllables. The *H* phoneme can occur only before (1) a vowel, (2) the *Y* phoneme (as in *huge—hyuej* in NuEnglish), or (3) the *W* phoneme (in the *HW* blend).

Radio and TV have had a standardizing effect upon pronunciation. The adoption of NuEnglish will have even more of a standardizing effect upon the English-speaking population than radio and TV. This is because sounds are permanently recorded in written form instead of lasting for only a split second, as sounds do. This does not mean that a "standard" speech should be imposed upon people. It also doesn't mean that a "standard" is needed for understanding a record of their pronunciation.

Dr. Charles Kenneth Thomas, linguist and author, states,

> The truly sophisticated person recognizes that it is normal for the Bostonian, the Iowan, the New Yorker, and the Alabaman to speak each according to his own standard. He makes this observation without developing any undue sense of either superiority or inferiority in his own speech. With a little further acquaintance he may come to the conclusion that some Bostonians, some New Yorkers, some Iowans, and some Alabamans speak better than he does; others, not as well. No one area has a monopoly on "correctness."...
>
> Generally speaking, no dictionary should be used as the authority for the pronunciation of common words; the true authority lies in the speech around you. *Webster's New International*, for example, uses different symbols for the vowels of *damp* and *dance*. Do not therefore make the mistake of assuming that if you use the same vowel in *dance* as in *damp* you are speaking "incorrectly." A glance at Webster's "Guide to Pronunciation" will inform you that some people in some areas distinguish the vowel of *dance* from that of *damp*, and that others make no such distinction. The dictionary's function is to

keep the categories straight, not to compel you to forsake the established usage of your community....

The acquisition of good speech is part of the individual's adaptation to his social environment. Some types of speech mark the speaker as inferior. Unless he gives unmistakable evidence of superiority in other respects, some opportunities will be closed to him. The traditional American goal of rising in the world can rarely be achieved by speech improvement alone, but speech improvement often helps. Not all of us will become great public speakers, great actors, or great preachers. But most of us can adapt our speech to what the community accepts as normal, and be accepted as normal by our neighbors.[39]

Differences in Pronunciation We Will Hear

Among American speakers there are two major differences:

1. The first difference is retention or dropping of the *R* phoneme not followed by a vowel (or changing the *R* to a *U* phoneme). For clarity, all writers should include the *R*. Even the R-droppers know their location.
2. Some speakers omit the expulsion of breath before the *W* in pronouncing words containing the *HW* blend (i.e., they pronounce weather and whether, wail and whale, we'll and wheel the same). Just as the R-droppers know, those who make no distinction between *W* and *HW* know where the *HW* is located. To improve clarity, writers should show the *HW*.

This is a partial list of words that could be confused if no distinction is made between HW and W:

whale . wail
whaler . wailer
whaling . wailing
what . watt
wheal . we'll
whee . we
wheel . we'll
when . win
whence . wince
where . wear
whet . wet
whether . weather
whew . woo
which . witch
whey . way
whicker . wicker
whither . wither
whine . wine
whir . were
whish . wish
whit . wit
Whig . wig

Speakers in England often pronounce vowels that Americans pronounce the same as the *A* in *hat* the way that Americans pronounce the *O* in *hot*. But other than a few isolated words that are different (such as pronouncing *been* to rhyme with *seen*), the only other major difference (besides the two differences in the previous paragraph) found in pronunciations in England is the distinction they make between the *A* in *calm* and *father* as opposed to the *O* in *comma* and *bother*. Accent placement of many British words is also different from the accent placement in the U.S.

Accents and Assimilations

The purpose of the remainder of this section on pronunciation is not to establish standards but to understand what we are hearing so that we can more easily represent the sounds. These examples are from Dr. Thomas's book, *An Introduction to the Phonetics of American English*.

> Variations in the level of energy we use in speaking have an important bearing on oral communication. We are accustomed to hearing some syllables pronounced with greater force than those which precede or follow them. If we do not hear such a variation, the speaking becomes monotonous, sometimes unintelligible. Occasionally, indeed, a difference in the degree of force may change the meaning: if we pronounce the syllables [of the word *insight*] with more energy in the first syllable than in the second, we pronounce the noun *insight;* but if we put more energy into the second syllable than the first, we pronounce the verb *incite.* Thus the energy level alone may have distinctive value, though ordinarily changes in the energy are accompanied by noticeable changes in the quality of the vowels as well. If, for instance, we add stress to the second syllable of *youngest* [*yungist* or *yungust* in NuEnglish], we change the meaning to that of *young guest* [note that the second vowel has changed]. If we add stress to the normally unstressed first syllable of *occur*, we may confuse the verb with the pigment ocher [*oekur* in NuEnglish, again note the change in the first vowel]....
>
> A double assimilation takes place in the phrase *used to*. The verb *used* [*yuezd* in NuEnglish] has been assimilated to *use [yues* in NuEnglish], by the following [*T*], and has acquired the meaning "formerly accustomed." The unassimilated pronunciation, with looser juncture, has been kept for the meaning "utilized." Thus, *the pen he used to* [*yues tu* in NuEnglish] *write with* means the pen he was accustomed

to write with; *the pen he used to [yuezd tue* in NuEnglish] *write with* means the pen he utilized for writing.

Something similar occurs in the phrases *have to* and *has to* when they denote compulsion. *That is all I have to [haf tu* in NuEnglish] *do* means that that is all I am compelled to do. *That is all I have to [hav tue* in NuEnglish] *do* means that that is all I have on hand at the moment to do. In the sentence, *That is all he has to do*, [*has tu* in NuEnglish] and [*haz tue* in NuEnglish] indicate the same distinction in meaning. The form [*yues tu* in NuEnglish] is fully established in standard speech; the assimilated [*haf tu* in NuEnglish] and [*has tu* in NuEnglish], despite their usefulness, still impress some conservatives as substandard....

Comparison of *sense* and *cents,* and *false* with *faults*, illustrates the falling together of originally distinct clusters. As the clusters [-*NTS*] and [-*LTS*] of *cents* and *faults* have weakened, [*T*] has intruded into the clusters [-*NS*] and [-*LS*] of *sense* and *false*, so that homophonous [words pronounced the same] pairs have developed. Only the laboratory phonetician, with instruments more sensitive than the human ear, can rightly decide whether to record both *sense* and *cents* as [*sens* in NuEnglish] or both as [*sents* in NuEnglish]; whether to record both *false* and *faults* as [*fauls* in NuEnglish] or both as [*faults* in NuEnglish]. For the practical purposes of daily speaking we distinguish *sense* from *cents*, and *false* from *faults*, in the same way that we distinguish see from sea: by context, not by sound.[40]

Understanding Those Who Pronounce Differently

Although NuEnglish will eventually have a standardizing effect, no one has to pronounce their words in a certain way to be understood. Frank C. Laubach points out that "[i]t is a linguistic axiom that what is understandable as speech is also understandable when written with a suitable phonetics." [41] Those who speak English can understand most people speaking English despite their pronunciation, dialect, or foreign accent. One reason this is true is: we understand words in context, whether spoken or written.

Understanding written communication is easier than understanding spoken communication. This is because:

1. When listening, if you miss a syllable or a word it is gone forever (unless it was recorded or you can ask the speaker to repeat the word), but the written word is permanent. We can examine written words at our leisure or examine them intently as long as needed.

2. The reader can look back at the context (just as the listener can remember what was said just before). The reader also can look ahead at the context, something not possible with spoken communication.
3. Perhaps most important, it is easy to see the starting and ending points of written words because of the spaces. With spoken words there is no such separation. Unless the speaker speaks slowly and purposely separates the words, many (if not most) of the words are run together. If we do not immediately recognize each word in the sentence, we may not know if one or more syllables from words both before and after the unrecognized word are a part of it.

Even those speakers who are often misunderstood, however, are usually familiar with the way people who are easily understood pronounce their words. If they want to be sure they are understood in writing, they can write using that pronunciation instead of their own. As Dewey points out, "As early as 1935, the British Broadcasting Corporation had successfully established a standard, 'Broadcast English,' for announcers." [42] A similar pronunciation is standard in the United States. Although large portions of the public do not pronounce their words according to the broadcast English standard, they are almost always familiar with it.

Characteristics of the Proposed Solution

One initial concern about NuEnglish might be the length of the words. Because of the useless and confusing double consonants, the silent letters, and the two-, three-, four-, and even five-letter blends used for a single phoneme in English, the lengths of English and NuEnglish words are nearly the same. The length of NuEnglish words ranges from roughly 7 percent shorter than English if we use macrons but not accent symbols,[43] to 4 percent longer if we use both digraphs and accent symbols. The ideal for readability—use of macrons and accent symbols—is almost identical with English in length.

Another concern is the spelling difference from English: 14.1 percent of the words in a list of all the different words in a 19,486 word example text chosen by the author for test purposes (other than capitalized and foreign words) were spelled the same as in English. The text sample would be about 35 pages in a 5 in. x 8 in. book. When frequency of usage was considered, the spelling was more similar: 25 percent of the one hundred most

frequently used words (see Table 6-2) were spelled the same. Also, 42.5 percent of a list of all the different words in the sample text were the same or with only one phoneme spelled differently.

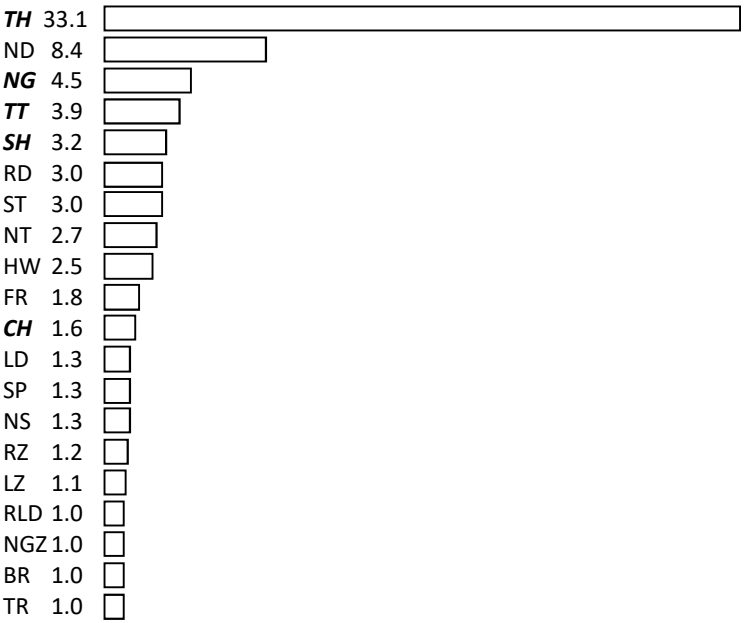
Although every sample of writing will be somewhat different, most NuEnglish writing will be similar to the sample text. There were 7,991 consonant combinations (two or more adjacent letters) in the 19,486 word sample text. Only 3.7 percent of the adjacent consonants were in different syllables (end of one syllable, start of the next). Of the 96.3 percent of the consonant combinations that blend into one syllable, 90.8 percent (or 87.4 percent of the total consonant combinations) were two-letter blends.

The frequency of occurrence of all combinations which made up 1.0 percent or more of the total of the 7,991 blends is shown on Figure 6.

Figure 6

Frequency of Occurrence of Two or More Adjacent Consonants

Percent of Test Sample Blends



The phonemes are in bold italic.

The twenty blends in this figure (which include the *HW* blend and five phonemes) made up roughly 78 percent of the blends in the sample text.

Concerning the two sounds unlike English: (1) the *TT* phoneme makes up only about 4 percent of the total blends, and (2) the *Q* blend makes up less than 1 percent of the total. Note that only two three-letter blends (*RLD*, as in *world*, and *NGZ*, as in *things*) appear in the list—each of them occurs in only 1 percent of the consonant blends.

You Can Help End Our Literacy Crisis Teachers' Guide (see page opposite the title page) has a more complete table of consonant cluster usage frequency and lists 2,191 words that were found in a standard desk dictionary that are spelled the same in English and NuEnglish. Another dictionary would list additional words spelled the same in English and NuEnglish, and an unabridged dictionary would have even more.

Appendix 5 shows a comparison of NuEnglish with other proposed spelling systems. After you finish this chapter, please read Appendix 4, written in NuEnglish, to prove to yourself how easy it is to read.

Why NuEnglish is the Optimum Spelling System

After recently spending almost a year in frequent email communication with dozens of spelling reform advocates, it became obvious that many (if not most) spelling reform advocates had already chosen a spelling system that they favored. As a result, it was very difficult to get spelling reform advocates to carefully examine new proposals. Most spelling reform advocates *really want* spelling reform to occur because they are much more aware of the problems caused by traditional spelling than the general public. Many of them, however, have become so disillusioned by the difficulty of implementing spelling reform that they are not really interested in expending the effort to find an "ultimate" or "best" spelling reform. For them, spelling reform has (perhaps unwittingly) become nothing more than an interesting diversion or hobby. **That is one of the problems in getting spelling reform implemented.** The general public is not interested in spelling reform to begin with, and if they learn that multiple hundreds of spelling reform advocates are advocating a dozen or more different spelling reform proposals — instead of determining and advocating the ultimate system — they are even less interested.

Those who have been in the spelling reform movement for many years are justifiably skeptical that a newcomer to spelling reform can develop the ultimate spelling system — particularly if the newcomer is not a well-known expert with an advanced degree in linguistics. Although most fifth-grade students can pick fault with any proposed spelling system, someone who is passionate about finding the best spelling system will

want to carefully evaluate NuEnglish. If more than 500 million English-speaking people around the world who are functionally illiterate in English knew what is involved, they would *plead with us* to honestly evaluate NuEnglish.

A very large portion of the proposed spelling systems, other than NuEnglish, were designed to be similar in several respects to traditional spelling in order to increase the acceptance of the system by present readers. Most of those who propose simplified spelling systems are very wary about making spelling systems that are too different from present spelling, believing that acceptance by present readers is absolutely essential to the success of the proposed system. They do not realize, however, that the general public will be much more likely to embrace spelling reform if they fully understand (1) how ***difficult*** it is for beginners to learn to read English—particularly those whose native language is not English, (2) how ***seriously*** illiteracy affects not only the illiterates but also those of us who are literate, (3) that NuEnglish was scientifically designed to be as simple as possible for ***beginning*** readers, and (4) that ***present readers can easily learn to read NuEnglish in less than ten minutes.***

After studying dozens of spelling reform proposals which have been proposed since the 1800s, no known proposed spelling system has more than three or four of the following:

Ten Beneficial Characteristics of NuEnglish

(1) No phoneme is ever spelled with more than one grapheme.

(2) No grapheme ever represents more than one phoneme.

> Having more than one way to spell a phoneme or more than one grapheme representing a phoneme obviously requires additional learning. It also adds a very confusing ambiguity to the spelling. Many proposed systems have several of these two problems. Remarkably few proposed spelling systems, other than NuEnglish, has a perfect one-to-one grapheme-to-phoneme correspondence.

(3) There are no silent letters.

(4) There are no double letters which represent only one phoneme except *OO* and *TT* — and *EE,* if macrons are not used.

The use of double letters to represent a single phoneme is perhaps the cause of more misspellings than any other in traditional spelling and is a characteristic of some of the proposed spelling systems, as well. Only one spelling of the phonemes in NuEnglish is unlike any traditional spelling, and that is because the two *TH* phonemes, as in the words *thin* and *then,* are spelled the same in traditional spelling. The ***lesser-used*** *TH* phoneme, as in the word *thin* is spelled *TT.* The only other double letter in NuEnglish used for a single phoneme is the *OO* as in the word *good,* the ***most-used*** spelling of this phoneme in traditional spelling. If macrons are not used, the *EE* is used for the phoneme as in the word *need.*

(5) Every sound in every word is represented (except the *NG* sound in words such as *bank* and *jinx*) ***and*** is represented in ***strict first to last order.***

(6) An asterisk (pronounced "star," when spelling aloud) precedes the vowel in the primary accented syllable unless the accent is on the first syllable. The first syllable in English is more likely to be accented than any other syllable.

The use of an indication of the primary accented syllable is very valuable because ***it will enable easy reading.*** When learning traditional spelling we must not only memorize the spelling of the word but also memorize which syllable has the primary accent. When reading unfamiliar material, we must often try more than one accent placement before we can recognize (read) many of the words. Very few proposed spelling systems, other than NuEnglish, also indicate the primary accented syllable.

(7) Unlike any other known spelling system, the choice of graphemes used in NuEnglish to represent ***every phoneme possible*** is based upon how the phonemes are ***most often*** spelled in common English usage (traditional spelling). ***Every time a phoneme appears in NuEnglish, it is ALWAYS spelled with the same grapheme.*** NuEnglish is based upon Godfrey Dewey's landmark 100,000 word study of *numerous representative prose samples* of English usage. The maximum possible number of phonemes is spelled as they are ***most often*** spelled in traditional spelling (29 of the 38 phonemes, 76.3% of them). The vowel phoneme, as in the word *say,* must be spelled *AE* or *A* with a macron over it because all other choices conflict with another phoneme spelling. Although the *AE* spelling is somewhat unusual, every time it

occurs in traditional spelling, it is pronounced as the "long" *A*, as in *made*. As stated above, the TH phoneme as in thin is spelled TT. This is the only grapheme that is different than any traditional grapheme. The AE and TT graphemes are two of the 38 phonemes (5.3%). Seven of the 38 (18.4%) are spelled as they are ***expected*** to be spelled, as follows:

1. **The letter *F* is expected to have the sound as in the word *fan,* but more often it has the sound of the letter *V,* entirely because of the very common word *of.***

2. ***OE* is expected to have the sound as in the word *doe,* but it most often has the *U* sound as in the word *nut,* entirely because of the common word *does.***

3. **The letter *S* is expected to have the sound as in the word *set,* but more often it has the sound of the letter *Z* because of the common words *is* and *was* and plurals such as *bags.***

4. **& 5. *E* and *O* are expected to have the sound as in the words *pet* and *not,* but most often have the sound of *U* in *nut* because of the illogical use of them in unaccented syllables.**

6. **IE is expected to have the sound as in the word *lie,* but most often has the vowel sound as in the word *bee* because of changing *Y* to *I* and adding *ES* or *ED* for plurals and past tenses, and**

7. ***Y* most often has the sound of the vowel in the word *bee* because of words ending in *Y,* but *Y* must be used for its "consonant" sound as is *yet,* as it is expected to be pronounced.**

No other known proposed spelling system has the choice of spellings of the phonemes based upon finding the ***most-used*** spelling or the ***expected*** spelling based upon a large study of English common ***usage,*** as in NuEnglish. This will make NuEnglish look much more familiar for present readers. Some of the spelling systems are based upon frequency of appearance of a phoneme's spelling in a dictionary instead of according to frequency of usage in common English prose. For example, the dictionary has far more words with the *TH* phoneme as in the word *thin* than in the word *then,* but because of the common words *this, that, these, those, then,* and *there* and a few others,

based upon *frequency of usage*, the *TH* as in *then* is much more common.

(8) There are 14 vowel phonemes, five of which are spelled with a single letter grapheme (*a, e, i, o,* and *u*), five are spelled with a digraph (*ae, ee, ie, oe,* or *ue*) or with a macron, and four others are spelled only with digraphs (*au, oi, oo,* and *ou*). There are 24 consonant phonemes, 18 of which are spelled with a single letter grapheme and six are spelled with a digraph (*ch, sh, th, zh, ng,* or *tt).* This gives a total of only 38 phonemes to be learned. Although strictly speaking a vowel followed by an *R* phoneme produces a unique diphthong (which many phoneticists consider to be a separate phoneme thus claiming the English language has more than 38 phonemes), beginning students can easily learn these additional phonemes by blending the vowel and the *R* phoneme in the same way as they learn all the other blends. The spelling cannot be simplified any further without adding several very unusual spellings of the phonemes and spelling the phonemes in ways that are not the most-often used in traditional spelling.

(9) There is a free computer program on our http://nuenglish.org website which will quickly convert up to about 25 pages of traditionally spelled material at a time into NuEnglish. The program has an English word database of more than 624,000 words and provides NuEnglish spelling in either General American or British dialects. It was prepared by my colleague, Gary Sprunk, who has a master's degree in English Linguistics, and who formed the NuEnglish, Inc. Corporation. He also wrote and published *Beginner's NuEnglish Workbook,* based upon his experience as a teacher of English as a Second Language in an elementary school in Korea and a university in Thailand. His websites are http://nuenglish.org, http://nuenglish.com, and http://nuenglish.net. He is presently preparing a NuEnglish dictionary.

(10) Due to the simplicity and logic of NuEnglish spelling, people who already read traditional spelling can learn to read NuEnglish in less than ten minutes and return to previous reading speeds after only two or three months of using NuEnglish. Some of the better students may be able to read NuEnglish fluently after only a week, as Dr. Frank Laubach believed. All but the most seriously mentally handicapped beginning students can easily learn to read NuEnglish in less than three months. Dr. Laubach taught students in well over 300 languages. Dr. Laubach's students were able to become fluent readers in 95% of these languages in from one to twenty days, and became fluent in

98% of the languages in less than three months — because 98% of these languages were almost perfectly phonemic. Beginning readers will be able to read fluently after learning nothing more than the grapheme used for each phoneme (spelling rule 1), learning how to blend the phonemes into words, the use of the asterisks for showing primary emphasis (spelling rule 7) and the use of numbers (spelling rule 10). The other seven rules are for providing the consistency needed when *writing* and can be taught after the students are reading fluently.

Learning the grapheme to represent 38 phonemes and learning how to blend them into words is quite obviously much easier than learning every word in a person's reading vocabulary one-at-a-time by rote memory or by repeated use -- the ONLY way students can learn to read English. Most fluent readers have a reading vocabulary of at least 20,000 words. Many people have speaking vocabularies of 70,000 words or more; considerably fewer people have reading vocabularies that large, however. Learning traditional spelling is complicated by the fact that it is so illogical, inconsistent, and chaotic. There is not even ***one*** spelling rule that does not have exceptions — and some of the exceptions have exceptions! A computer programmed with 203 English spelling rules was able to correctly spell only 49% of a list of 17,000 common English words. Not only are there far more graphemes used in traditional spelling than are needed (26 single letters, 184 digraphs, 131 trigraphs, 22 tetragraphs, and 4 pentagraphs, for a total of at least 367 graphemes), but there are at least 1680 or more ways of spelling 38 phonemes in traditional spelling, an average of over 44 each. The very worst is the phoneme *U* as in the word *nut:* it is spelled at least 60 different ways, with the letters *a, e, i, o, u, m,* and *y,* with 33 digraphs, 19 trigraphs, and one tetragraph (*OUGH* in the word *thoroughly*). Four of these 60 graphemes represent another phoneme *in addition* to the *U* phoneme.

Teaching NuEnglish

Teaching NuEnglish will be very easy. *The Let's End Our Literacy Crisis Teachers' Guide* and the *Beginners' NuEnglish Workbook* will give you all the guidance and teaching materials you need. Even without these resources, you will be able to teach most students if you make certain that every student *quickly and unfailingly* pronounces all 38 phonemes correctly

when they see its NuEnglish grapheme on a set of flash cards you have made. Frequent review is important and should be done after learning each group of about five pronunciations of the graphemes. This involves teaching the student the SOUND of the phoneme ***NOT*** the NAME of the grapheme (letter or letters) that represent the phoneme. The names of the English letters, especially the letters *H, Q, W, X*, and *Y*, give little or no clue as to the sound they represent.

Many, if not most, of the students will have been "taught the alphabet" —that is, they will know the ***names*** of the letters—before you begin teaching them. As a result the very first thing you must teach the students is that the names of the vowels are only vowels but the names of the consonants consist of the consonant AND a vowel because many of the consonants cannot be said without a vowel. Tell the students that from this point on in their reading classes they should refer to the graphemes by the phoneme they represent rather than the name of the letter. They should be taught to say the consonant phonemes of all consonants graphemes except the letter *X* by following the consonant with an *U* sound, as in the word "nut," by placing as little emphasis on the *U* as possible. The *Q* blend will be pronounced *KWU* and the *X* blend will be pronounced *UKS*.

Spelling NuEnglish words: When spelling NuEnglish—other than orally—the student will simply record, in consecutive order, the graphemes for the phonemes in the word. When spelling orally, the student should consecutively pronounce the phonemes in the word NOT the letter names. They will already have learned the grapheme (letter or letters) used to represent these phonemes. For example the oral NuEnglish spelling of the words spelled "exquisitely formed" in traditional spelling would be "e-uks-kwu-i-zu-u-tu-lu-ee fu-oe-ru-mu-du," placing as little emphasis on the *U* sound in the consonants as possible. The Letter names should only be used when referring to the physical letter's form or when referring to abbreviations such as FBI, CIA, FDA, TV, OK, ASAP, etc.

Teaching the phonemes that the graphemes represent could take a week or more, especially if you do not teach them every day. The remainder of the teaching time will be needed to help the students blend the phonemes into words. Begin this process by teaching the students some of the consonant blends. Figure 6 shows the fifteen most-used consonant blends, so these should be learned first. These fifteen consonant blends are all of the blends that occur in more than one percent of the words in a typical portion of English prose.

Table 6-2 shows the 100 most-used words in typical English prose. By learning these words, the students will know about 54 percent of the

words they will see in most written material, so the students should be taught these words first.

"What is certain is that the number of words we use is very much smaller than the number of words we know. In 1923 a lexicographer named G. H. McKnight did a comprehensive study of how words are used and found that just forty-three words account fo fully half of all the words in common use, and that just nine account for fully one quarter of all the words in almost any sample of written English.Those nine are: *and, be, have, it, of, the, to, will,* and *you*." [44]

The most important idea to impart to the beginning students is that reading is fun and exciting. This will primarily be true if you choose reading material that is of interest to the students. This means that you should use children's classic literature appropriate for the age range of your students who are children. Do not be concerned about choosing reading material with a very limited vocabulary because most six-year-olds have a speaking vocabulary of 24,000 words or more.

Table 6-3 is optional. The many advantages of adopting NuEnglish, in which students become fluent readers in the first half of first grade, are obvious and have been detailed in this book. At present, many subjects in school must be delayed until the students can read well enough to tackle them. Not least of the advantages of adopting NuEnglish is the multiple billions of dollars that Americans can save by moving most subjects down about two years. The advantages of adopting a more logical alphabet are not so obvious. Assuming that you are a logical-thinking person, however, the question must be asked, “Why don’t we use an alphabet in which the names of the letters are also the sounds that the letters make?”

Table 6-2

The One Hundred Most-Used English Words*

(listed in order from top of the first column to bottom of the third)

English	NuEnglish (if different)	English	NuEnglish (if different)	English	NuEnglish (if different)
the	thē, thu	has	haz	she	shē
of	uv	one	1	made	mād
and		our		other	uthur
to	tū	an		into	in-tū
a	ā, u	been	ben	men	
in		no	nō	must	
that		their	thār	people	pēpul
it		there	ther	said	sed
is	iz	were	wur	may	mā
I	Ī	so	sō	man	
for	fōr	my	mī	about	ub*out
be	bē	if		over	ōvur
was	wuz	me	mē	some	sum
as	az	what	hwut	these	thēz
you	yū	would	wood	two	2
with	witt	who	hū	very	verē
he	hē	when	hwen	before	be-fōr
on		him		great	grāt
have	hav	them		could	kood
by		her	hur	such	
not		war	waur	first	1st
at		your	yur	upon	up-on
this		any	enē	every	evrē
are	or	more	mōr	how	hou
we	wē	now	nou	come	kum
his	hiz	its		us	
but		time	tīm	shall	shal
they	thā	up		should	shood
all	aul	do	dū	then	
or	ōr	out		like	līk
which	hwich	can	kan	well	wel
will	wil	than		little	litul
from	frum	only	ōnlē	say	sā
had					

*See the notes at the end of the book: chapter 6, note 43. Note that 25 percent of the words in this table are spelled the same in English and NuEnglish. These 100 words constitute 54.3 % of the individual words found in the 100,000 word sample. The first ten words make up 26,677 of the entire 100,000 words (i.e. 26.677 percent).

Desiring to avoid change is ***not*** logical when the small, temporary inconvenience of a change is far overbalanced by the many advantages of a making the change — even if those advantages have not been accurately described, as is the case with adopting a new alphabet.

Many, if not most, children will come to school already knowing the present alphabet. For those who have not learned the alphabet, it is logical to teach them the NuEnglish alphabet. Here is why. The present alphabet has the following problems:

- It does not accurately represent some of the letters it includes. The pronunciation of the letter Q as in the word *queue* (*kyue*, as in the alphabet) is quite rare — it much more often has the sound in the word *quit* (kwit). The most often used sound of the letter *G* is in words such as *get.* Instead it is pronounced *jee* in the alphabet, as in *jeep*, a sound that is more often represented by the letter *J.* The pronunciation of the *H, W,* and *Y* letters give no clue as to the sound they make in words.
- It includes only 29 of the 38 phonemes used in English (the 26 letters plus the short *E, I,* and *O*). It uses the "long" vowels which are used only about one-fourth as often as the "short" vowels in most English prose. It does not include the short vowels *A* and *U*, the *AU, OI, OO,* or *OU vowels,* or the *CH, NG, SH, TH, TT, or ZH* consonant digraphs. It only uses the short vowels *E, I,* and *O* as part of the name of consonants and only *before* the consonant.
- Eight of the consonants (*B, C, D, G, P, T, V, and Z*) are pronounced with a following *EE* sound. There is a maximum number of only three consonants having the same following sound in the NuEnglish alphabet. This will help considerably in poor reception conditions on radio, telephone, etc. The only other consonants having a vowel after the consonant in the name are the letters *J* and *K*, both having the long *A* vowel after them.
- There is no pattern whatsoever in the present alphabet as to whether the vowel with the consonant is before or after and what vowel is used. This lack of pattern makes learning the alphabet more difficult.

When the general public learns the advantages of the NuEnglish alphabet — and as more and more students learn the NuEnglish alphabet — its use will undoubtedly increase. It may not be a desired change, but it is the logical way to improve the teaching of reading to children as well as adult immigrants and will gradually replace the present confusing alphabet.

Table 6-3
The Pronunciation Used in Reciting the Alphabet

The example words (in the "As In" columns) are all in traditional English spelling. Letters are capitalized and underlined and vowels are boxed (the "short" vowels are in black boxes and the "long" vowels are in white boxes) ***only*** to show the pattern or lack of pattern.

	Letter	NuEnglish Alphabet	As In	English Alphabet	As In
1	A	A ng	bANG	A	fAding
2	B	B ae	BAY	B ee	BEAm
3	CH or C	CH ae	CHAse	C ee	exCEEd
4	D	D ae	DAY	D ee	DEEd
5	E	E sh	mESH	E	mE
6	F	F ee	FEE	e F	lEFt
7	G	G ee	GEEse	G ee	JEEp
8	H	H ee	HE	(aech)	nATure
9	I	I zh	vISIon	I	kInd
10	J	J ie	JIve	J ay	JAY
11	K	K ie	KInd	K ay	CAse
12	L	L ie	LIE	e L	ELf
13	M	M au	MAUl	i M	hIM
14	N	N au	NAUGHty	i N	IN
15	O	O tt	gOTHic	O	tOE
16	P	P oe	POst	P ea	PEAce
17	Q *	Q oe	QUOte	(kyue)	CUE
18	R	R oe	ROE	o R	ARE
19	S	S oo	SOOt	e S	mESS
20	T	T oo	TOOk	T ea	TEAm
21	U	U th	mOTHer	y U	YOU
22	V	V ue	VOO doo	V ea	VEAl
23	W	W ue	WOO	(dubyu)	(dubyu**)
24	X *	ue X	spOOKS	e X	vEX
25	Y	Y oi	YOIcks	(wie)	WIde
26	Z	Z ou	ZOUnds	Z ea	ZEAl

NuEnglish Digraphs (in addition to no. 3, CH)

	As In		As In		As In
27	AE (or Ā) mAE	33	OO gOOd	39	SH meSH
28	EE (or Ē) bEE	34	OI OIl	40	TH THen
29	IE (or Ī) pIE	35	OU OUt	41	TT THin
30	OE (or Ō tOE	36	NG baNG	42	HW * WHen
31	UE (or Ū sUE	37	NK * piNK	43	ZH muZHik
32	AU hAUl	38	NX * lyNX		

*consonant blends, all others are phonemes **or "double you"

Chapter 7
Advantages and Disadvantages of This Proposal for Worldwide Use

Advantages of Implementing This Proposal

Several advantages of implementing NuEnglish apply to some extent to anyone who learns to read it. The first item, of course, is of particular interest to present non-reader or poor readers. No attempt has been made to rank the advantages beyond listing the most important item first, since what is important varies significantly from one person to another.

1. **Avoidance of the costs of illiteracy**: The main advantage of implementing NuEnglish for those who cannot read English, or who can't read well, will be avoidance of the costs of illiteracy explained in Chapter 1. Chapter 3 shows the advantages of avoiding the costs of illiteracy for both present readers and those who become readers after NuEnglish is adopted.

2. **No embarrassing mispronunciations**: We will never again be embarrassed by mispronouncing a word while reading in public.

3. **No embarrassing misspellings**: We will never again be embarrassed by misspelling something we have written.

4. **Unaided correct spelling**: We may want to consult a dictionary to see what the preferred pronunciation is. We will never again, however, have to consult a dictionary for the correct spelling of a word we know how to pronounce or to record the way we have heard someone pronounce it.

5. **Unaccented syllables are usually obvious**: Chapter 6 shows that a *U* can be in an accented or an unaccented syllable in English or NuEnglish. In a NuEnglish word of more than one syllable, the syllable with the U (or less often, with an *I*) is more likely to be unaccented than a syllable with another vowel. In English spelling, an unaccented syllable could have any vowel letter in it.

6. **Easy learning of pronunciation**: Students will learn correct pronunciation much more easily not only from hearing people speak but also by seeing the words recorded phonemically. Speech is fleeting—miss hearing a word for any reason and (if it is not recorded) it is gone forever. Written words are permanent—they can be read at leisure or studied intently for whatever length of time is necessary.

7. **Pronunciation standardization**: As time goes by, the preferred pronunciation of all the words we use will become more and more familiar to us. NuEnglish will have much the same standardizing effect upon speech as the widespread use of radio and television had in the twentieth century. NuEnglish will probably have even more of a standardizing effect than radio and television because, unlike sounds, written words are permanent and can be studied. NuEnglish will provide guidance in pronunciation now lacking. As Pitman states it,

> A rational phonetic spelling will do much to steady our language in the perilous seas upon which it is now embarked, for, in these days of universal literacy, the visual language exercises a remarkable influence on the spoken language. It is the one constant standard, common throughout the world: the more phonetic it is, the more uniform will pronunciation tend to be. When men first began to write, they wrote as they spoke; now they tend to speak as they write—and we cannot blame them.[1]

8. **No forgetting of NuEnglish words**: There are few, if any, people who do not sometimes forget how to spell an English word. We must ask someone or consult the dictionary. Over time, people usually forget many spellings. This will never happen with NuEnglish. If you know how to pronounce a word, you know how to spell it.

9. **Teachers (and students) need not spend hundreds of hours on reading and spelling**: This will free them for more productive studies and put them on a par with students of other nations.

10. **NuEnglish syllables are obvious**: Pronunciation is more difficult if the division into syllables is not immediately obvious. Syllables are often difficult to determine in English because of silent letters, words where all the sounds aren't shown, words where sounds are not spelled in strict first-to-last order, and standardized plural and past tense spellings, as Chapter 6 shows.

11. **NuEnglish is easy to typeset**: Because of the obvious split into syllables, NuEnglish is easy to typeset. English syllables are not obvious. Therefore, the place at which words can be broken at the end of a line has

been standardized. Syllabification of English has been frozen, the same as the spelling has been. If we are not using a computer for typesetting, we must consult a dictionary to find where syllables can be broken in a new word or if we forget where the English word can be split.

12. **NuEnglish distinguishes between YUE and UE:** English spelling does not show whether the *Y* sound is present before the *UE* sound or not. Readers must learn which "long *U*" sound a word has.

13. **NuEnglish has no confusing heteronyms**: Heteronyms are words with the same spelling but with different pronunciations and meanings; homonyms are words with the same pronunciation but with different spellings and meanings. Although homonyms are unlikely to cause any confusion in NuEnglish (see item 6 at the end of this chapter to see why this is true), any confusion resulting from homonyms in NuEnglish is easily offset by the lack of heteronyms.

14. **Immigrants can more easily learn NuEnglish**: The inconsistencies and lack of logic in English spelling hinder immigrants from learning English more than any other feature. This causes some immigrants to give up in their effort to learn English. The ease of NuEnglish will encourage them to complete their learning. A quotation by Pitman explains why this is true:

> Students, especially when they learn to read English before they can speak it, often complain of the difficulties of English pronunciation, but the spelling is what they really mean, because this fails to offer reliable clues to how words should sound and, worse, proffers countless false clues....
>
> Foreigners learning English are faced with the same conundrums and illogicality as face the English-speaking child learning to read...but with the additional difficulty that they possess no store of spoken words to which to relate the words they are given to read.[2]

15. **NuEnglish is an excellent candidate for worldwide language**: As several scholars have pointed out, English is already the most used spoken auxiliary language in the world. Written English, however, is totally unsuitable as a worldwide language. Most languages other than English are almost perfect (one-for-one letter-to-sound or letter-blend-to-sound correspondence). NuEnglish, however, is perfect—completely consistent and logical one-for-one correspondence. NuEnglish therefore opens the English-speaking countries to all the economic, cultural, and political advantages that come from easy communication with other countries.

16. **By "hearing" authors' dialect, reading will be more interesting**: We'll not only know what the authors are saying, but also to an extent how they are saying it. We'll know the major regional variations that make listening to speakers from other areas so interesting.

17. **NuEnglish uses no unnecessary double letters for a single sound**: The use of double letters in English is unnecessary and confusing. In NuEnglish there are no double letters except *OO* and *TT*—and *EE* if macrons are not used.

18. **NuEnglish has no silent letters**: The use of silent letters makes an immediate location of syllable splits much more difficult. In addition, silent letters require additional labor, paper, and ink.

19. **NuEnglish avoids some British spelling problems**: British spelling is different from U.S. spelling for a few words. Since NuEnglish is completely phonemic, it avoids these spelling inconsistencies.

20. **NuEnglish encourages writing and vocabulary building**: Many people do not like to write. Many people fear being embarrassed by misspelling because they can't look up words or don't want to take the time. NuEnglish will encourage people to express themselves. Looking up words in the dictionary (seldom needed except for vocabulary building) will be easy, reading will be easy, and therefore vocabulary building will be much easier.

21. **English-speaking nations' productivity will rise**: English-speaking nations will be on more of an equal economic base with nations that now have higher literacy rates. In our increasingly competitive world, low productivity due to employee illiteracy is a severe trade disadvantage. Unless the quality of our labor force improves to match that of some of the more literate nations, the trade disadvantage will increase. As other nations begin catching up with English-speaking nations technologically, if their literacy rate is better a substantial competitive advantage may soon become apparent.

22. **Enabling immigrants to learn English more easily will help stop cultural alienation**: In most big cities there are areas where English is not widely used. Because of the difficulty immigrants have in learning English, civil rights advocates are pushing for bilingual (or multilingual) teaching in the grade schools. Besides the huge expense, this can have disastrous effects: multilingual teaching will tend to maintain the cultural and political separation instead of drawing us together as a nation, as a common language would help accomplish. Nineteen or more states were recently considering laws to make English the official language. Legislation of this type, however, will not reduce the difficulty immigrants have in learning

English. It is a problem not found in other nations and little understood by U.S. citizens.

23. **Computer speech synthesis and written transcriptions of speech will be easier with NuEnglish**: Preparation of software for converting written words into understandable audible sounds (speech synthesis) or for transcribing spoken words into written words will be much easier. This is because of the much shorter and invariable listing of phoneme-grapheme correspondences that would need to be programmed and the indication of the primary accented syllable.

24. **No variant spellings in words pronounced the same**: Besides the unphonemic spellings of many English words, there is the confusion of hundreds of variant spellings. Often both (or all) of the variant spellings of a word are unphonemic.

25. **Early grade-school books will be more interesting for student and teacher**: The reading books in the first four grades in school are concerned with teaching reading. Therefore they may stress some words, letter combinations, or sound patterns by repetition and severely restrict the vocabulary. This is true of schools using the "look and say" method, in which an average of only about four hundred words each year is taught by memory in the first three or four grades. As Chapter 8 of Dr. Rudolph Flesch's book, *Why Johnny Can't Read*, convincingly shows, this results in "stories" that are almost unbearably boring.[3] "Whole language" books may be less boring, but they are just as confusing if the students are not learning to read. In NuEnglish grade schools, all the books used can be concerned only with content. Books can be chosen based upon how interesting and helpful they are.

Supposed Disadvantages That Really Aren't

People may have developed some misconceptions if they have not carefully researched the effects of English spelling. Certain items, upon brief examination, may seem disadvantages of spelling reform, although they are not. The supposed disadvantage also may be counterbalanced (or even overbalanced) by a corresponding advantage.

Will Existing Writings Become Inaccessible?

Conventional wisdom states that if a completely different spelling system is adopted, all the existing material in English will become inaccessible. However, learning a new language will not make us unable to understand

our first language. Learning a new way of spelling will not erase all memory of English spelling. Nor would the printing of new books suddenly cause all the existing books to self-destruct. The truth is this: all the existing books in English are *already* inaccessible *to illiterates*.

After NuEnglish is implemented, ***almost everyone*** will read. People who now read English will keep their books written in English and read either English or NuEnglish. Libraries will keep their books in English. All others will read only NuEnglish, unless they choose also to learn English, similar to English literature scholars who must learn Middle English to read Chaucer and other writers of his era. Lawyers, English scholars, historians, and all those whose vocation or hobby requires extensive research through written material of the past—if it is not of sufficient interest to make reprinting in NuEnglish economically feasible—would learn English spelling as a college (or possibly high school) elective course.

All the books that are so important that they have a readership large enough to make reprinting economically feasible for the publishers will be reissued in NuEnglish. Competition among printers for their share of the market suddenly swollen with millions of previous non-reader will ensure such an event. In the same way that we recently saw "Now in HDTV!" preceding certain television programs, we will soon see advertisements by bookstores declaring, "Now in NuEnglish!" Many libraries have few books that are fifty years old or more. Many libraries sell outdated and least used books to make room for new ones. Often the books they sell are only one or two years old. The average age of books in a bookstore is much less than that of books in a library. Few books in a bookstore are so eagerly sought that they will be reprinted for more than a year or two.

Is a Standard Pronunciation Required?

A second supposed disadvantage of spelling reform based on phonemic spelling (such as NuEnglish) is that it would require a fixed standard of pronunciation, which we do not have. This line of thinking is a fallacy. We understand each other's spoken words. We will understand the written transcription of words even more easily than spoken words because of the permanent-versus-fleeting aspect mentioned in Advantage 6 in this chapter and the fact that written words are separated by spaces. It is often difficult to know the start and end of spoken words because they are run together unless the speaker purposely speaks slowly and distinctly. So, basing our spelling upon pronunciation would not require

that we all pronounce words the same to be understood. No one wants to be told how to pronounce their words—nor should they be. As stated earlier however, people's speech will become more standardized as time goes by. This will occur both by choice and by the same process as occurred through the widespread use of radio and television begun in the twentieth century.

Will Linguistic History Be Lost?

A third and much less convincing supposed disadvantage of spelling reform is that reformed spelling would destroy the etymological or linguistic history of words. Samuel Noory shows that "today's spelling is in many respects as much an offspring of fancy as of design." [4] He gives several examples, in his book, *Dictionary of Pronunciation*, in which spelling is not based on historical roots. Also, etymologists themselves would prefer to see English spelled phonemically, and thus, from this point forward, have a dynamic history of the language. As it is, we have 250 years of repetition of a "snapshot" of spelling the way many words were pronounced many years ago—a static history. As mentioned earlier, adoption of NuEnglish spelling would not result in the instantaneous destruction of all books written in English. Therefore, the question must be asked, "How much more static history of a mid-1700s spelling freeze do we need?" A much more pertinent question must be asked. Let us grant for a moment that the etymological history of present English spelling is very valuable. Should we let the desire for etymological data by a limited number of scholars cause us to keep a spelling system that is causing a severe problem for hundreds of millions of people around the world?

Must We Standardize Plural and Past-Tense Spelling?

The final supposed disadvantage to be considered is that a phonemic spelling would hinder the recognition of the plural and past-tense forms of words. This also is untrue. If the plurals and past tenses were shown with a standard ***prefix***, the reader might recognize them as plural or past tense a millisecond sooner. When the reader's eyes reach the end of a word, however, if the word has been recognized (read), the reader knows that the word is plural or past tense not only by knowing the word but also by the context. And as explained before, the ability to decide the pronunciation from the spelling helps in recognizing the word

Although this should be enough to dismiss the argument, a more thorough explanation is needed. The argument has philosophical overtones affecting our overall view of languages.

Philosophical Overtones of Frozen Spelling

Since there are four *spellings* of plurals (adding *S* or *ES* to words not ending in *S* or *Y*, adding *SES* to words ending in *S*, and changing *Y* to *I* and adding *ES*) and only three *sounds* of plurals (*S, Z,* or *UZ*), spelling phonemically *reduces* irregularity—and improves clarity. (Words in which plurals are not constructed in this manner would be essentially the same length in English and NuEnglish.) One source (who will probably appreciate remaining anonymous if he carefully examines this chapter) states that the actual differences in sound are "irrelevant."

Let's analyze this statement.

If written communication were the primary form of communication (that is, if all spoken communication were just a way of turning the written words into sounds)

and if everyone who had a need to read English knew exactly what sounds every *S* added to show plurals stood for, the statement might have some validity. Neither "if" is true, however, and the first "if" is the exact opposite of the truth.

Regarding the first "if," the spoken language is primary for these reasons:

1. Almost everyone learns to speak their native language before learning to read it.
2. Human beings act as talkers and listeners much more than as readers and writers; 90 percent of all human communication is through speech.[5] (Note, however, that written words can be disseminated to more people more easily than spoken words, and the value of what is communicated by written words is often greater, so the last paragraph of the first section of Chapter 4, which points out the great value of the written word, is also true.)
3. David Crystal point out that, "No community has ever been found to lack spoken language, but only a minority of languages have ever been written down." [6]
4. Writing is simply a way of making spoken words or vocal ideas in the mind permanent for later use by the writer or someone else

that the writer wants to communicate with but cannot (or does not desire to) speak to.

5. Whether a language has a written form is irrelevant to the characteristics of the language itself. Many unwritten languages are as highly structured, as rich in vocabulary, and as efficient for communication as languages that are written.

As Aristotle expressed it, "Spoken words are the symbols of mental experience and written words are the symbols of spoken words." [7]

Regarding the second "if," both beginning readers (especially immigrants trying to learn English) and adult illiterates are badly confused by written words that give no hint of how they are pronounced. Since most English words are learned in spoken form first, if the written word does not suggest how it is to be pronounced, it often cannot be recognized (read).

Why Do Some Scholars Oppose Our Proposed Solution?

Most scholars insist upon precision and "exactitude" (as they should). A few scholars insist upon "pedantic exactitude." This is insistence upon maintaining "high standards of scholarship" for the purpose of *displaying* their scholarship. NuEnglish will not require the scholarship of remembering complex spellings and spelling rules. We must not misjudge motives, however. We must not casually attribute all scholarly opposition to spelling reform to pedantic exactitude.

Most opposition to spelling reform comes from a natural human resistance to change. It also comes from overlooking the real purpose of a written language. Scholars (like the rest of us) can easily isolate themselves from the monetary and human-suffering costs of illiteracy to such an extent that they may even fail to see that

**the purpose of writing is to COMMUNICATE IDEAS,
not to display an ability to remember complex spelling
rules and traditional spellings of thousands of words.**

Dr. Lounsbury presents a devastating attack against all the common objections to spelling reform mentioned earlier as well as the objection of spelling heteronyms the same in his book, *English Spelling and Spelling*

Reform. He convincingly demonstrates that the real motivation in opposing spelling reform is the natural human tendency to resist change—even change for the better. Although Dr. Lounsbury convincingly disproved the objections to spelling reform, his book is a scholarly one which was evidently not as widely circulated as it should have been. As a result, present-day references to spelling reform still dredge up these same disproven objections as sufficient, in themselves, to dismiss any further consideration of spelling reform. Perhaps another reason his book had no lasting influence is that, although he vehemently attacked what he recognized as ridiculous arguments against spelling reform, he did not take the next logical step of proposing a solution to the problem by advocating a specific spelling reform proposal. This book does.

Real Disadvantages for Worldwide Usage

Having looked at four supposed disadvantages, we now turn to any real disadvantages there may be.

1. **Learning a new spelling method requires time and effort**. In all honesty, those who carefully research objections to and results of spelling reform must admit that this is the only substantial objection to spelling reform. Human beings simply resist change. People would prefer to endure the inconvenience of the known than the improvements of the unknown, in far too many cases. If the "inconvenience" affected only those deciding whether to change, it would be excusable even though unwise. Unfortunately, for illiteracy, the ones deciding whether to change are "inconvenienced" (a mild word considering Chapter 1 data) much less than the illiterates. As William Dwight Whitney states, "It is the generations of children to come who appeal to us to save them from the affliction which we have endured and forgotten." [8]

The overriding fact about this disadvantage is that if you have carefully read Chapter 6 and unprejudicially tried Appendix 4, this disadvantage no longer applies to you. You can already read NuEnglish! It may take two or three months of practice before readers can return to their former reading speeds.

2. **Speed-reading will require a few months of familiarization**. Most people read silently a little faster than they can read aloud, while speed-readers can read silently several times faster. Few people are speed-readers, at least compared with the number of non-readers. Those who learn NuEnglish will read NuEnglish at a normal speaking

rate, or a little faster, as soon as they learn NuEnglish. It will take a few months of practice before speed-readers can return to their former reading rates on NuEnglish.

Because of the unphonemic nature of English, many scholars believe that English must be taught in whole-word chunks. Dr. Diane McGuinness, Rudolph Flesch, and others have convincingly disproved this and explained why the student must have a phonemic base for reading.[9] An important fact that explains why speed-reading is possible and why Rudolph Flesch is correct in emphasizing phonemic reading, even for irregularly spelled words, is explained by Dr. Miriam Balmuth of Hunter College of The City University of New York and author of *The Roots of Phonics:*

> For writing purposes, therefore, each word to be recorded must be separated into the speech sounds of which it is composed. The characters for those speech sounds are then set down in the same sequence in which they are produced in the spoken word. The reader of such a system must perceive each character in turn, blend their sounds in strict sequence, and so reconstruct the original word.
>
> This procedure would be tedious for a written selection of any length if a fortunate process did not generally take place. That is, with repeated experience, the string of characters seems eventually to be perceived as a whole unit—almost as a logogram—making the process a good deal easier than it would be if every word had to be sounded out anew each time. Exactly how this occurs is not yet clear. There is evidence that, despite this apparently unified perception, the blending of individual units continues to take place, although at an extremely rapid rate.[10]

3. **Puns based upon English heteronyms will not be possible**. Puns have been described as the lowest form of humor. Puns based upon homonyms (words with different meanings but the same pronunciation) will still be possible. The cheap sight gags based upon heteronyms (words pronounced differently but spelled the same) will not be possible.

4. A **small number of reading experts will have to find other jobs**. Those who are employed by the major reading textbook companies to research and produce new material concerned with teaching reading will have to find more interesting work. They could scarcely do otherwise.

5. **Reading textbook companies will no longer be able to sell a new, very expensive reading textbook series every few years**. Printing many other types of books in NuEnglish will take up much of the slack in the

reading textbook companies. The only problem (for them) is that they will be on an equal competitive footing with any competitors with the same printing capabilities. (This is a disadvantage only for the textbook companies. It is an advantage to taxpayers paying for "new, improved" textbooks every few years.)

6. **Words that are homonyms in English will be spelled the same in NuEnglish**. Although the absence of heteronyms will be a counterbalancing advantage in NuEnglish, the absence of different spellings for words pronounced the same in NuEnglish but with different meanings (homonyms) will be a minor disadvantage.

Those opposing spelling reform often exaggerate the "problem" of homonyms, but there are relatively few homonyms (compared to the size of the average adult vocabulary), and the vast majority of homonyms can be distinguished by context or by grammar (whether verb, noun, adjective, etc.). Those who wish to magnify the problem of homonyms will complain that when using phonemic spelling you cannot distinguish between the homophones. They fail to mention, however, that when speaking, those same words are indistinguishable.

See Appendix 8 for a detailed proof that homophones will be a very minor problem in a phonemic spelling, such as NuEnglish.

Figure 7
It Couldn't Be Done*

Somebody said that it couldn't be done,
But he with a chuckle replied
That "maybe it couldn't," but he would be one
Who wouldn't say so till he'd tried.
So he buckled right in with the trace of a grin
On his face. If he worried he hid it.
He started to sing as he tackled the thing
That couldn't be done, and he did it.

Somebody scoffed: "Oh, you'll never do that;
At least no one ever has done it";
But he took off his coat and he took off his hat,
And the first thing we knew he'd begun it.
With a lift of his chin and a bit of a grin,
Without any doubting or quiddit,
He started to sing as he tackled the thing
That couldn't be done, and he did it.

There are thousands to tell you it cannot be done,
There are thousands to prophesy failure;
There are thousands to point out to you one by one,
The dangers that wait to assail you.
But just buckle in with a bit of a grin,
Just take off your coat and go to it;
Just start in to sing as you tackle the thing
That "cannot be done," and you'll do it.[15]

* From *Collected Verse of Edgar A. Guest*

Chapter 8
How to Implement This Proposal

No one would want to have a dictator impose spelling reform in English-speaking countries. However, for sheer efficiency you can't beat Kemel Pasha's methods (see the "A Proposed Solution in Other Nations" section in Chapter 6). What is needed is something more efficient than legislative procedures and less drastic than dictatorial decree. We need a method in which the people decide what they want and implement it directly. The method presented here meets these requirements. Unlike what the nay-sayers say (previous page), ***it can be done!***

At this point in the book, it is important to stay open-minded. All the other chapters are filled with easily verifiable facts. You need only compare the conclusions in this book with those in the books listed in the bibliography and many similar ones to see for yourself. But this chapter is proposing a method to solve the problem in the very near future. The most significant point to remember, however, is that although it has not been attempted in the U.S., it has been proven effective in more than 300 other alphabetic languages.

Long experience in industry has shown that unless a proposed change shows immediate benefits and ease of implementation, it will be resisted. There have been many situations in which workers say that a proposed change will not work, and they will tell you why, if you give them a chance. (Anyone can give you reasons why something ***won't*** work.) This is despite the fact that all the objections may have been extensively researched and disproven beforehand. Many readers will assume that spelling reform would be an impossibly difficult task. Such persons may look at the three simple steps put forth here and assume that the proposed solution is naive wishful thinking. Once that assumption is made, it is difficult to allow room for conflicting information. Human beings detest being wrong, even about something which we have merely *assumed* to be true. So before we begin, let's look at some proven facts on similar events in the past.

The method proposed in this chapter is designed as a grass-roots operation by the masses, depending upon the flow of information. Two quick examples will be very informative. In the 1960s there was a best-selling

book—a large book which had little if any appeal due to its attractiveness or even due to a proven usefulness—entitled *How to Avoid Probate*. I know; I bought one based upon newspaper and magazine advertising, as did many other people.

Another example more like this book is a best seller of the 1950s entitled *Why Johnny Can't Read* by Dr. Rudolph Flesch. As you've heard many times, word-of-mouth advertising is the most effective. *Why Johnny Can't Read* made a hit with parents, and changes were temporarily made in teaching methods, based upon word-of-mouth advertising and subsequent actions. Teaching methods have gone back to being more like they were before the book was issued. This is because Rudolph Flesch's proposed methods improved, but did not solve, the problems with English spelling.

There have been several instances in American history in which the public acted, *en masse*, when the motivation was sufficient. The evidence in part one of this book indicates that we have reached that point again, this time concerning public education.

Although some may object that the author involved in writing a book purporting to solve the literacy problem in English-speaking countries should be an expert in linguistics and education, no honest inquirer can deny that not only are engineers (such as the author of this book) qualified by training, practice, and disposition to research and analyze, but they can also often evaluate situations more accurately than the experts. This is true because many—if not most—experts feel obligated to defend the past practices of their profession. The primary outcome of these practices is to maintain the status quo. Stated differently, one need not be an expert in linguistics or education to be able to accurately evaluate and correlate the writings of scholars who ***are*** experts. Furthermore, over twenty-eight years of researching the subject and delving into areas that Ph.D. programs seldom—if ever—examine, should lend credence to the author's proposals.

The change to spelling our words logically is analogous to Louis Pasteur's experience. Pasteur was a chemist who, based upon experimental evidence in studying cholera, tried to promote the use of vaccines. The medical community scoffed, "He's not a physician. What does he know of medicine?" They made the mistake, however, of challenging Pasteur to demonstrate his anthrax vaccine on sheep in an attempt to humiliate and embarrass him. Fortunately for the world, Pasteur accepted the challenge and proved that vaccines work as he claimed. Will you do what is "fortunate for the world" and accept the challenge to prove that

logic and consistency in spelling will solve the major literacy problem of English-speaking people?

Practically every major innovation or invention has been met with the laughter of skeptics. Before it happened, we were told that man would never fly and that escaping earth's gravity was impossible. Even after working models were demonstrated of such major inventions as the telephone, television, and the horseless carriage, many of them were dismissed as only novelties with no practical value. There will always be small-thinking, negative-minded people who find it more convenient (less work for them) to avoid change, even if change is badly needed. They will say it cannot be done.

Those who are intellectually honest, however, know that when numerous experts agree that a certain change is needed, everyone should take heed, especially if the agreed-upon course of action has been found to be logical and practical not only by the experts but also by unbiased outsiders who do not have a vested interest in avoiding change. Skeptics will tell you that most Americans are only interested in their families and friends, jobs, hobbies, and entertainment. It is, however, a self-defeating policy to believe the negative thinkers who say the American public is too self-absorbed to do what is in their own best interest. What is proposed in this chapter can happen. It can start small and grow, or it can happen very quickly in many places at once if we will just have the courage of our convictions and take action.

The Method

NuEnglish can be implemented with three simple, simultaneous steps:

Step One

Teach non-reading adult friends or relatives to read NuEnglish or locate someone who will do so. It may take non-readers as long as three or four months to learn, but it will not require four solid months of the teacher's time. The real need is to provide non-readers with

1. enthusiasm and encouragement,
2. needed materials, and
3. a small amount of initial instruction.

You do not have to be a professional educator to do this.

Non-readers and poor readers who are exposed only to English after step two begins will need to be taught NuEnglish the same as present day illiterates. Most of these new readers will enthusiastically join you in all three steps. Don't fail to ask!

Step Two

After you discover the great need to take action by reading this book, pass the book along to others or strongly recommend that they get a copy and carefully read it. Then you and a small group of your neighbors should contact your local school-board director and explain that beginning within two years, you want first graders to be taught NuEnglish, first and second graders taught NuEnglish the second year, first through third graders the third year, etc. This will provide a twelve-year period—until beginning students graduate from high school—in which colleges, publishers, and businesses can prepare for widespread use of NuEnglish according to their own timetable. In this way, many of the decisions can be made in the executive branch of government upon direct insistence of the public, avoiding the long delays inevitable in legislation. The cost of the new curricula will be about the same—or even less if new reading textbooks was already on the legislative budget.

Another advantage of dealing with the local school-board directors is that they are more accessible to the average person than one's legislators. In addition, local school-board directors are much more likely to be responsive to the desires of the public than are legislators. Unlike when dealing with legislators, the public does not have to engage in an unfair competition with lobbyists to get its wishes enacted.

Those who learn only English after step two begins (those above first grade when step two begins) will learn NuEnglish the same as other English readers. Those who can read English can learn NuEnglish from this book or by studying Figure 8, which will soon be on most book and magazine title pages and newspaper mastheads.

Step Three

Much more effective than any direct action you can take as an individual is the value of your recommendation. Those who are most concerned will want to purchase extra copies of this book to give to persons who might not be willing to purchase one for themselves. If everyone who sees the value of NuEnglish will recommend to three others not familiar with NuEnglish that they carefully and open-mindedly read this book, and if each

of them does the same, simple arithmetic shows that in ten levels of recommendations, every English-speaker in the world will be exposed to ideas that will bring about the "Reformation of the 21st Century" that Dr. Robert S. Laubach, President Emeritus of Laubach Literacy International, envisioned in an email to the author. Since there will always be those who cannot be motivated to action, regardless of how worthy the cause, you can overcome their inaction by telling more than three others—obviously, the more the better.

An equally effective method will be signing the online petition to your state's education department. This petition can be found at http://NuEnglish.org. These petitions will periodically be forwarded to your state's educational bureaucracy. As the number of petition signers grows, it will soon reach a number that they dare not continue to ignore.

A Clarification of the Method

It is important to note that what is proposed here is not a change in the curricula. Therefore approval of any teachers' organizations, school boards, or textbook selection organizations for a curricula change is not needed. All that is being proposed is that words in books used in the existing curricula at long last be spelled in a logical, consistent, scientifically-designed way instead of the present inconsistent and confusing way. As explained in the School Considerations section later in this chapter, it will very soon become apparent that the students' curricula will need to be improved by making more advanced reading materials available and making materials presently presented in later grades available. This will make the English curricula more competitive with that of other nations. These curricula changes can be determined in each individual school by those responsible for such changes.

Objections to spelling reform have been covered previously, but to clarify exactly what is being proposed, further comment on one of these objections—the objection based upon pronunciation—is needed. A common form of the objection was found on the Internet on May 3, 2004, in which the author of the Website stated that no one would stand for letting another person's pronunciation be used as the standard for a phonemic spelling. The Website also stated that *whatever* phonemic spelling was adopted, it would represent only the pronunciation of one group of speakers. The objection to spelling reform represented by this line of thought is based entirely upon most English speaker's belief that only one spelling is correct and all others are wrong. This is not the case with what is proposed here.

As stated in Chapter 6, it is a linguistic axiom that what is understandable as speech is also understandable when written with a suitable phonetics. In fact, as other portions of this book have shown, it will be *more easily* understandable when written than when spoken. This is true for at least three reasons: (1) the inclusion of spaces between words not present in the spoken words, (2) the ability to study the written words as long as necessary whereas spoken words must be comprehended in the split second in which they are spoken (unless there is an audio recording which can be replayed), and (3) the ability to study the context both before *and after* a written passage—which is impossible with spoken words since the context after a misunderstood word hasn't been spoken yet or has been spoken and not understood because of puzzling over the misunderstood word.

As a result, this book proposes that everyone be allowed to spell their words the way *they* pronounce them. No one can—or should—force us to *pronounce* our words in a certain way. No one can—or should—force us to *spell* our words in a certain way. If writers want to improve their chances of being understood, they may choose to spell their words the way they hear radio and television announcers pronounce them (Standard Broadcast English). They may not pronounce the words that way themselves, but almost everyone is familiar with that pronunciation. If they fail to spell a few words according to Standard Broadcast English, the context will indicate which words they are spelling. This freedom of spelling will also apply to those who choose to continue spelling as they do now.

The spelling reform proposed in this book is *only* as follows. Beginning within a couple of years, the phonemic spelling proposed will be adopted in the school system, first grade in the first year, first and second grade in the second year, and continuing to add a grade each year. Beginning within a couple of years, a large and growing proportion of *all* new publications will use the phonemic spelling proposed here. If a publishing company decides it wants to limit its readership only to those who understand the present spelling system, no one will force it to publish using the system proposed here. Market pressures will, of course, ensure that it will soon begin to publish at least a portion of its publications in the new spelling system. As stated earlier, until such time as almost everyone is using the new spelling system, the publishers will be in the profitable position of being able to sell their publications in both versions.

Basically, what this means is this: no one—readers, writers, or publishers—will be forced to spell their words in a certain way. The only change being made is that after over two and one-half centuries of confusion, we

are finally implementing a logical, efficient, invariable, scientifically designed way of indicating English sounds. This will have no effect on other languages, but from this point on, if we accept a foreign word into our vocabulary, all the sounds in that word will be spelled with the *NuEnglish* way of spelling them.

Reading Textbooks

Although two years may seem like a short timeframe in which to begin such a change, it is only our experience with present reading textbooks that makes this seem quick. Teaching students to read English is so difficult that a dozen or more major textbook companies employ reading experts. These reading experts perform research and then write reading textbooks, teachers' guides, exercise books, and promotional materials. This process can easily require three to five years. NuEnglish reading books do not require this approach.

The students will not require reading textbooks, as such. Reading material provided to NuEnglish students can concentrate entirely upon the content. This is the beauty of teaching NuEnglish. Children should be given children's classics and subjects of interest to them in the age range being taught. Textbooks for present English reading classes must be carefully limited in vocabulary and word repetition. Such limitations are unneeded in NuEnglish.

There need be no limitations upon:

1. Subject matter—except that it is interesting, informative, helpful to the student, and acceptable to parents and guardians; those who are most responsible for a student's welfare should insist on being involved—and have a right to do so.
2. Vocabulary—except that it should consist mostly of words in the vocabulary of children of the age being taught. This gives much leeway. The average six-year-old in the first grade has a listening and speaking vocabulary of more than 24,000 words.[1] By the third grade, the number of words students know by sound, according to studies by the late Dr. Robert H. Seashore of Northwestern University, has reached 44,000 words. This is an astonishing number considering that with the "look and say" reading method, students may memorize only about 400 words each year by sight.[2] Dr. Seashore estimates that the vocabulary of college graduates is 157,000 words.[3]

3. Word repetition—there does not need to be any concern with repeating any given word or words a certain number of times. The repetitiveness in the "look and say" readers is not for vocabulary building but to fix in the students' minds the appearance of words they already know by their sound.

Reading Books for Four Months—Then School Books

The first three or four months of the first grade can be reserved for children's classics and other stories of interest to first graders. The content of beginning students' books is not just to give them interesting and varied reading matter to use in developing their reading skills. A more important purpose of the content of beginners' books is to develop in students a love for reading and learning.

After the first three or four months, students can begin learning all the other school subjects, the same as is done in the non-English-speaking world. They can begin learning some third- and fourth-grade subjects that formerly had to wait until the students could read. Using school books that were formerly used in higher grades usually will not require that the books be rewritten. All that is required is to transpose them into NuEnglish—which can easily be done with the Respeller computer program available at http://NuEnglish.org.

Thus, what may have appeared at first glance to be a huge problem in preparing textbooks turns out to be practically no problem at all. The typesetters who work for publishing companies will be able to transpose into NuEnglish as fast as they can type. We will be able to do the same, that is, write or type in NuEnglish while reading English.

Implementing This Proposal

Governmental Considerations

Upon the urging of the citizenry, the local school-board members must go up the chain of command for this change to occur. The final authority for the local school board will usually be the state secretary of education. A grass-roots change will occur if enough school-board members insist upon what is best, overall, for their districts.

Ideally, most states will decide to order new reading books and begin the new system within the first year after learning the advantages to be gained. Very little works ideally, however, when tens of millions of people

are involved. If most of the states agree, the federal government will be obligated to support (or at least not oppose) the wishes of the people. Otherwise the decision of what is best for their citizens rests entirely with the states.

There are enough benefits to implementing NuEnglish that many states will have the courage of their convictions. They will decide to implement NuEnglish despite what the other states do, if they remember these facts:

1. It will not take away the reading ability of those in their state who already read English. Instead, it will give them another spelling method that they can learn in only five or ten minutes.

2. It will enable millions of children and adults to read who otherwise would not read.

3. It will affect school children in their state who could have learned English by depriving them of that opportunity until they can take elective English spelling classes in college. (It could be as early as high school if there is enough demand to include it in the curriculum.) This will not be a problem for two reasons:

   a. States deciding to adopt NuEnglish will see to it that students receive most of the reading material they need and desire. Also, competition for sales dollars will ensure that private companies both within the state and elsewhere will provide for the pupils' needs and desires and for those of the newly literate adults in the state.

   b. The reading demands of most students in grade school and high school are not so sophisticated that the students will want (or even know about) English publications in other states that are in so little demand in their own state that it is not feasible to reproduce them in NuEnglish.

As time goes on, even if most states do not immediately decide to switch to NuEnglish, more states will adopt NuEnglish. This will be based upon the results gained in all the states with the initial foresight to adopt NuEnglish.

Newly literate adults will probably be even more vocal in urging the school boards to adopt NuEnglish than those who teach them to read. They will know by experience both the benefits of reading and the human suffering caused by not being able to read. Most illiterates in the United

States have sat it out in school for at least eight years. They will have no desire to take a chance on subjecting their friends and family to the same frustrations they endured because of being unable to read English in school.

Private Sector Considerations

The details of when and how newspapers, magazines, and books are gradually converted over to NuEnglish should be left to the publishing companies. The publishers can do market surveys and decide what is in their financial best interest. In anything so complicated and varied, any effort at legislating requirements for publishers would inevitably result in hurting many of them. This much is certain: publishers will be as eager to sell material in NuEnglish as new readers will be to buy it. During the twelve-year interim period when NuEnglish is becoming increasingly widespread, the publishers will be in the profitable position of selling the same printed material in two versions.

The Interim Period

During the twelve-year period when NuEnglish is being adopted, one grade at a time, into all twelve grades of public school, both English and NuEnglish materials will be published. The publishing houses will reprint in NuEnglish many books they believe are marketable. After the twelve-year period, the publishers will have many years in which to test the market. Based on these studies they will introduce other books, magazine articles, and pamphlets that were previously published in English. The advertising phrase "Now in NuEnglish" will, over time, become more and more familiar.

One method of handling the interim period would be for newspapers and magazines to write 8 or 10 percent of their articles in NuEnglish the first year, 15 or 20 percent in NuEnglish the second year, etc. At first it might be desirable to write some articles using both systems. The headlines of the articles could be in both English and NuEnglish, with articles the publishers believe will be most interesting and important written in NuEnglish. This would be one way of gradually switching more readers to NuEnglish. The only accommodation needed for those who can now read only English would be inclusion of Figure 8 on all the magazine and book title pages and newspaper mastheads.

Dictionaries

Eventually complete dictionaries will be published in NuEnglish. The initial dictionaries for those who read English, however, need only be a

cross-reference—NuEnglish words in alphabetical order with the corresponding English spelling. Existing dictionaries, of course, already have the English-to-NuEnglish cross-reference since they show pronunciation.

School Considerations

Within twelve years, colleges will be ready to teach traditional English spelling in the same way that the Middle English of Chaucer's time is now taught. Everything else will be in NuEnglish. After twelve years there will not be any further advantage in using English for newly printed material. (People who now read English will still be able, however, to read books in English they already own or that are in libraries.) Those studying to be attorneys, historians, or English literature scholars, or preparing for vocations and hobbies requiring extensive research into past documents (and that are not in demand by a sufficient number of people to make reprinting profitable for the publishers) are among the very few who will need to learn the traditional English spelling.

Long before the twelve-year interim period is over, research will be completed for taking advantage of the ease of learning NuEnglish. Two big improvements can be made in the public school curricula of English-speaking countries to bring them up to the scholastic levels of other counties.

First, the subjects taught can be moved down a grade level or two because of earlier reading abilities. Also, if individual children and their parents choose to do so, and if their linguistic ability permits it, some children should be allowed to start first grade as early as four years of age. As Pitman explains it,

> It has so far been widely accepted that children are not ready to start learning to read until they have a mental age of six and a half (see page 26). This may be true when children are faced at the out-set with words spelt in the orthodox manner but with i.t.a. (page 22) it would seem that a lower mental age is sufficient for a start to be made—provided, as has been argued earlier, that pupils possess an adequate level of linguistic ability. This is borne out by the research findings in Oldham, an area in which children were eligible for the infants school in the school year during which they reach their fourth birthday; four-year-olds in Oldham were learning to read i.t.a. with such ease that the whole question of reading readiness in relation to mental age demands to be reconsidered....
>
> Eventually it will be necessary to devise new tests of reading accuracy, speed, and comprehension because the existing tests are based on standards expected of children taught with all the frustrations of orthodox spelling. These tests are very suitable for attainments

> of children taught with the orthodox medium and have had to be used, by default, for the comparative between it and i.t.a., but they do not reflect the higher norms to be expected when the use of i.t.a. becomes wide spread, any more than recognized tests of human physical performance in famine areas can be expected to be adequate elsewhere.[4]

Second, the process of teaching all phases of communication in English can eventually be combined and improved. Perhaps Pitman explains it best:

> [T]he advantage of allowing young children to write as they speak is that it assists teachers in detecting bad speech habits. If a child writes [Ie shood ov ben—this is the NuEnglish transliteration; i.t.a. characters are not available], it very clearly indicates that he hears and has learned to say the words wrongly. When it is explained that the sentence should be written [Ie shood hav ben], an improvement is being fostered in the child's diction as well as in his writing. Children with bad speech behavior are often the victims of poor auditory discrimination; when corrected orally they still fail to hear their mistakes. Their visual discrimination is however usually perfect and when they are able to see their own mispronunciations put on paper in i.t.a. and then corrected in i.t.a. they soon become aware of the differences they need to listen for.... Until recently teachers have acted on the supposition that their chief purpose is to teach reading and that improvement of "language" is a by-product; it can now, however, be argued that, with the removal of all the clutter that impedes children when learning to read, we shall come to recognize that their chief purpose is to teach "language" (including speech) and that reading and writing are but the visual half.[5]

Note about i.t.a.: Initial Teaching Alphabet, or i.t.a., is a simplified spelling system that was popular for a few years during the 1960s. It was used as a stepping-stone to reading traditionally spelled English. It was used to quickly teach beginning readers to read, after which they were to be taught traditional spelling. Initial Teaching Alphabet was not a perfect one grapheme to one phoneme system. It had some inconsistencies as a way of introducing inconsistencies in traditional spelling. It required several graphemes in addition to the standard 26 letters. Although it was easy to learn, it was found that many i.t.a. students had great difficulty in converting from reading i.t.a. to reading traditional spelling, perhaps because they

sub-consciously objected to switching from an easy-to-read system to a hard-to-read system.

International Considerations

Eventually most, if not all, of the English-speaking world will adopt NuEnglish, but how will it affect the United States if other English-speaking nations do not adopt NuEnglish as soon as we do? Assuming the nations not adopting NuEnglish want to sell their books, magazines, etc., in the United States, they will print them in NuEnglish. Citizens of those nations who can read English must spend five or ten minutes learning NuEnglish if they want to read U.S. publications. Also, material printed only in traditional English in other countries after the United States adopts NuEnglish will be *paraphrased* and printed in NuEnglish by American publishing companies if it is of enough importance and if there is a sufficient market for it. So, in short, the hesitancy of other countries in adopting NuEnglish will adversely affect only their own citizenry.

Perhaps equally or even more likely is the converse: what if other English-speaking nations adopt NuEnglish before the United States? The exact same conditions as in the previous paragraph will occur. As nation after nation discovers the advantages of NuEnglish, eventually the U.S. will adopt NuEnglish based on its success elsewhere.

Why Implementing This Method Is Critical

Many educational activists will point to the superior success, on the average, of private schooling or home schooling and state that governmental funding should be allowed to be used for private or home schooling, where it would be more effective. The most recent U.S. presidents and vice presidents, as well as about half of U.S. congressmen and many state governmental officials—and a higher percentage of public school teachers than among the general public—send their children to private schools, but tax-payers who want to send their children to private schools cannot get tax benefits to do so. Parents claim—quite correctly—that it is unfair for them to have to pay twice for educating their children, if their public school is failing to educate them properly: once for the cost of the private schooling and once for the taxes used only for funding public schooling that their children will derive no direct benefit from.

Teachers, teachers' unions, and educational authorities will proclaim loudly that diverting some of the tax money for private schooling will "destroy" the public school system, because it is already underfunded,

despite the fact that U.S. public schools already spend far more per student than any nation except Switzerland and all but the most expensive private schools. What is overlooked, however, is that if public school funding is reduced, it will be only because there are fewer public school students, as students transfer to private schools and home schools.

Teachers correctly claim that part of the reason for the better performance of private schools is that public schools must accept and try to teach all students, but private schools can flunk out the poorer students and can expel students who are serious discipline problems. Parents of students who must leave a private school, however, will enroll them in another private school and provide the help needed to see that they succeed in their new school.

Others will state that if we would just go back to phonics instruction, we could solve all the problems. They will claim—quite correctly—that any whole-word instruction before the student knows what sounds each of the letters makes and how to blend the sounds will teach the student the habit of guessing at words—a habit that is hard to break. Dr. McGuinness's book, as explained in Chapters 5 and 6 of this book, goes a long way in proving the truth of this claim ***IF*** phonics is taught in the correct way.

Most adults who learned to read in grade school have forgotten the difficulty they had in learning to read. Many of those who learn to read as adults—usually with a year or more of one-on-one tutoring—as well as those who learned to read as children will tell you that if they can learn to read with our present system, then anyone else can too, because (some of them may tell you) they are not particularly brilliant intellects.

All the earlier arguments have validity, but they all miss the point. As Sir James Pitman and several other scholars have shown, and as Dr. McGuinness's book has verified, English spelling is so difficult that a certain percentage of people will never be able to learn to read it fluently without a year or more of intensive one-on-one tutoring. And it is not strictly dependent only upon the student's intelligence. No one knows what percentage of students this applies to. As stated previously, however, with hundreds of millions of English-speaking people around the world, even if it is only 0.01 percent, that is still hundreds of thousands of people being hurt.

An equally significant point to remember is that all native-born and immigrant students except the most brilliant require two to two and one-half years to learn to read. They must learn one at a time, by rote memorization or by repetition, every word in the reading vocabulary they need to succeed in life. This is time that should be used in learning the facts and skills they need to enable them to compete with students of other nations

who do not have the hindrance of such an inconsistent and illogical spelling system.

Unless *you*, dear readers, are willing to spend a maximum of less than an hour of your time to learn a new spelling system and a few minutes to lobby those in positions of authority to take the compassionate action proposed in this chapter, our nation will continue plodding along, fighting the symptoms of illiteracy but never solving the problem. We will continue spending money every five years or so for "new, improved" reading books with minor variations of numerous failed teaching methods rather than what is proposed here: simpler, less expensive reading books that will not have to be replaced until they physically wear out. The functional illiterates will continue to be hurt, and our students will remain near the bottom, academically, among the industrialized nations of the world.

About Figure 8

Most present readers will be able to read anything in NuEnglish after five or ten minutes learning the Figure 8 spelling rules. Every present reader, in fact, who was shown Appendix 4 of this book, was able to read it aloud with only a few four to six second stumbles over a few words *without having learned the spelling system first!*

In order to standardize the spelling to make it more understandable to those who read what you write, you will also need to learn spelling rules 4 to 6 and 8 to 10 in the "NuEnglish Spelling Rules" section of Chapter 6. These rules standardized the spelling, as necessary, to enable programming of the computer program, Respeller, which will quickly convert up to 25 pages at a time of traditional spelling to NuEnglish. The Respeller program is free for all to use at http://nuenglish.org.

Figure 8
NuEnglish Spelling Rules
Format to use on Magazine and Book Title Pages and on Newspaper and Newsletter Mastheads

This shows how to read the simplified spelling system, NuEnglish, you may see in this reading material. The 14 vowels and 24 consonants (in bold, italicized capitals, for highlighting) have only ***ONE*** pronunciation. (No emphasis—capital, bold, italic, underline, or color—affects pronunciation in NuEnglish.)

1. The ***A, E, I, O***, and ***U*** are pronounced as in "That pet did not run."
2. The ***AE, EE, IE, OE***, and ***UE*** are pronounced as in "Mae Green tried roe glue." These vowels may, instead, be spelled with a macron (a straight line above a, e, i, o, or u) as in "Thā .ēt frīd tōfū."
3. The ***AU, OI, OO***, and ***OU*** are pronounced as in "Haul good oil out."
4. The 18 single consonants are pronounced as in "***Ye S***, ***Va L*** '***Zi P*** ***Ki M Hi D*** ou***R Bi G Fa N-Je T W***in."
5. Six consonant sounds are spelled with two letters:
   (1) ***CH*** is pronounced as in "chip." This is the ***only*** way the letter *C* is used in NuEnglish.
   (2) ***SH*** and (3) ***NG*** are pronounced as in "wishing,"
   (4) ***ZH*** is pronounced as in muzhik. (Muzhik is an English word for a Russian peasant in which the zh is pronounced the same as the *S* in *treasure*.)
   (5) ***TH*** is pronounced as in "then," and
   (6) ***TT*** is pronounced the same as the *TH* in "thin." This is because English spells the sounds in "thin" and "then" the same.
6. Two letters represent more than one basic sound.
   (1) The ***X*** is used ***only*** for the KS blend.
   (2) The ***Q*** (not QU) is used ***only*** for the KW blend. All the other sounds of X and Q are spelled out.
7. Traditional English spelling does not distinguish between the vowel sounds in "sue" and "fuel." NuEnglish spells the vowel sound in "sue" as ue and the sound in "fuel" as yue—sue and fyuel in NuEnglish. (This is equivalent to placing an *F* sound before the word "Yule").
8. The initial sound in words like "which" are actually pronounced as HW. Air is expelled before the W sound, so it is spelled that way: hwich.
9. Sometimes the same letter is used at the end of one syllable and the start of the next syllable. For example, the two *G*s in the NuEnglish spelling "fingger" (finger in traditional spelling) are in two syllables. This is not a violation of the next rule, Rule 10.
10. There are no silent letters and no double letters having a *single* sound except OO and TT. (If macrons are not used, the EE is also used for a single sound.)
11. All sounds are shown except the NG sound in NK and NX as in "bank" and "jinx."
12. To show the accent, an asterisk is placed before the vowel in a primary accented syllable, but an asterisk is not used if the primary accent is on the first syllable.
13. Numbers are used instead of spelling out the number unless numbers are *required* to be spelled out. Numbers must be spelled out on some legal documents, such as on a check. Numbers should be spelled when numbers could be confused with letters such as *I, L*, or *O*.

There are other spelling rules to standardize your spelling if you want to be very sure that what you write in NuEnglish will be easily understood. These rules can be found at http://LearnToReadNow.org and in the Spelling Rules section in Chapter 6 of *Let's End Our Literacy Crisis, (Revised Edition or Second Revision)* by Bob Cleckler.

Potentially One of the Most Useful Memory Aids of All Time

Mae Green lied, "Joe Blue and Kevin 'top gun' Wood haul our oil."
Qit mezhuring fish hwich yuez this ttin box.

(It is "Quit measuring, which, use" and "thin" in traditional spelling.) The first sentence contains all fourteen English vowel phonemes in alphabetical order: long vowels, short vowels, and then four other vowels. (These are popular, common designations of the vowels, not phonetic terms. A phoneme is the smallest sound in a language or dialect that is used to distinguish between syllables or words.) The first sentence also has three consonant blends: *GR, BL* and *ND*. The second sentence contains all of the English consonants phonemes represented by digraphs (two letters). The two sentences together contain all the English consonant phonemes represented by a single letter. The memory aid sentences are in NuEnglish spelling.

Proof That NuEnglish is the Ultimate Spelling System: Simple, Logical, and Easy to Learn

There are 14 vowels, five spelled with single letters (*a, e, I ,o,* and *u*), five with digraphs (*ae, ee, ie, oe,* and *ue*) or with macrons (ā, ē, ī, ō, and ū) and four only with digraphs (*au, oi, oo,* and *ou*) in NuEnglish. There are 24 consonants, 18 single letters and 6 digraphs (*ch, sh, zh, ng, th,* and *tt*) in NuEnglish. This totals 38 letters or letter combinations, 23 single letters and 15 digraphs (or 10 digraphs and five vowels with macrons).

Figure A1 in the Appendix shows all of the graphemes used in NuEnglish arranged by percentage of use in typical English prose. Figure A1 shows that each of the ***digraphs*** constitute 1.0% or less of ***all*** the graphemes (single letters and digraphs), except for the *TH* (2.75%) and the *AU* (1.31%). Tables A2-3 and A2-4 in the Appendix show that 29 of the 38 phonemes are represented by the ***most-used*** letters for those phonemes in traditional spelling and that another 7 are pronounced the way we ***expect*** them to be pronounced — and the reason why. The “long” A phoneme is represented with *AE* because other choices conflict with other vowels, but when *AE* appears in traditional spelling it is pronounced with a long *A*. The *TT* grapheme is the only grapheme different than traditional spelling and is used because the *TH* is used in traditional spelling for two different phonemes. ***NuEnglish spelling cannot be made any simpler without introducing letter usages or letter combinations that are very unusual or unknown in present spelling.***

Chapter 9
Summary and Challenge

Chapter 7 listed the primary objections raised to spelling reform based upon the supposed disadvantages of changing English spelling. It showed that none of these supposed objections apply to NuEnglish. Two final objections to implementing changes in anything affecting literacy need to be considered: (1) the need for further research and (2) the impossibility of a quick fix for illiteracy.

To avoid the pain of change, many scholars, social scientists, and politicians often advocate more research. Although many scholars and researchers will profit from additional research, we should not automatically attribute such calls for additional research to a conscious profit-motive attitude on their part. In truth, most people sincerely want to be sure that any change made is the right change—especially one as far-reaching as changing the way that hundreds of millions of people read.

Is More Research Needed?

As Jonathan Kozol points out in his book, *Illiterate America*, very-much-more-than-"enough" research has already been done. From his research we know that it is time to act upon what we already know, instead of doing more research that will only serve to confirm previous findings. Kozol points out that in these research programs, all the funds that are spent (or all but a tiny portion) go into the pockets of the researchers or into the accounts of their university or company. Non-readers in America would have been helped significantly more if the money used for the research had been spent directly on teaching them to read.

Is a Quick Fix Possible?

One major reason that scholars, social scientists, and politicians want more research is their knowledge that solving illiteracy is such a complicated problem. This leads us to the second objection: the impossibility of a

quick fix. A large portion of David Harman's book, *Illiteracy: a National Dilemma*, is devoted to showing the difficulty of solving the illiteracy problem. Chapter 4 of his book shows the strong influence students' cultural environment, particularly their family, has upon their desire to learn to read. If children never see their parents reading, it is understandable if they see little importance in reading. Reading ability is just something their school-teacher wants them to develop. It has little or no relation to their lifestyle and goals, particularly if their peer group places little importance on it.

Television also has a strong influence in molding lifestyles. There may be occasional pitches for literacy in commercials. In the television programs themselves, however, the story line is much too action oriented to be slowed by showing a main character quietly reading for any length of time. If some "egghead" secondary character does spend time reading, that character is often more of a target for ridicule than a role model to be followed.

Years later, as adults, illiterate children may begin to see the advantages of literacy. By that time, however, they have developed the self-image of someone who "can't" learn to read. Or they don't have the time and opportunity to learn to read. Chapter 5 of David Harman's book then expands upon their desire to learn to read and shows the extreme importance of motivation if people are ever to become proficient readers. Examples of several different types of literacy programs are shown in Chapter 6 of Harman's book. The success or failure of each of these different programs can be largely tied to the amount of motivation in the students.

Impossibility of a Quick Fix Using Traditional Methods

All this is presented to verify Harman's assertion that the problems of illiteracy are so diverse that a quick fix is an unreasonable expectation. Similar to the Bullock Report (“The Need for Logic in Learning” section of Chapter 6 of this book), Harman does not mention (and presumably has not considered) spelling reform. His assertion that the problems of illiteracy are very diverse and complicated is correct. Although most people try to end illiteracy by attacking the problems associated with illiteracy, they are attacking the ***symptoms*** of the "disease of illiteracy" rather than the cause of the illiteracy. There are many symptoms. There is only one root cause of the disease: our confused and illogical spelling method.

Our huge national deficit almost guarantees that we will not spend the minimum of $10.5 billion (updated from the amount shown at the start of Chapter 3 to the 2011 amount) each year needed to significantly reduce illiteracy by combating the symptoms. Even if we did spend $10.5 billion on literacy programs, the difficulty of English spelling is such a strong demotivator that millions would still lack the motivation necessary to become proficient readers.

As pointed out by Ben Wood, former Director of the Bureau of Collegiate Educational Research of Columbia University in his foreword to Godfrey Dewey's book, *English spelling: Roadblock to reading*, the difficulty of English spelling even makes many people who can read, dislike reading. David Harman refers to those who can read but seldom do so with apparent puzzlement: "The numbers of people who are capable of reading but don't is as baffling a problem as the numbers of people who are unable to read." [1]

All this points out the importance of two actions:

1. We must motivate those learning NuEnglish by helping them find reading material of interest and value to them.

2. We must remove the demotivation that adult illiterates experienced in trying to learn English by stressing the great ease of learning NuEnglish.

A Nation at Risk

The National Commission on Excellence in Education, after observing the literacy crisis and the falling standards in high school and college, warned us on April 26, 1983, "Our nation is at risk." One of the statements from the report states,

> If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war.[2]

In *Illiterate America*, Kozol ends Chapter 3, "The Price We Pay," by agreeing that, as the National Commission on Excellence in Education stated, our nation is at risk because of illiteracy. Kozol points out that after the "Nation at Risk" report was issued, the Secretary of Education may not really have understood the nature of the risk. Kozol says we are, in effect, held captive by the actions or our fellow citizens. As a result every citizen—even

the wealthiest and those who think they are most removed from the problem—will be forced to pay a "formidable price" for illiteracy.[3]

We have no choice but to pay a "formidable price" because of illiteracy, but will the money be spent in "fighting the disease or in fighting the symptoms of the disease?" Will we solve the problem in the most logical way and simplify the spelling, or will we continue spending money on the resulting illiteracy?

As Kozol expresses it, in a society that the common citizens did not create, our President and our leaders have enabled the growth of illiteracy by their "malign neglect." Kozol then asks the all-important question: will we show the courage and character to solve a problem that so many nations poorer than the U.S. have found it natural to solve—the illiteracy that is putting us all at risk? [4]

There have been some improvements since the 1983 "Nation at Risk" report, but are we still at risk? Many recent reports show that we are. The following quotation shows some examples of the difficulty U.S. companies are having with illiteracy:

> The talk of a nation at risk is no idle rhetoric. One recent survey of Fortune 500 firms found that 58 percent of the companies surveyed had a problem finding employees with even the most basic skills. In fact it has been established that 20 percent of our nation's present work force is functionally illiterate.
>
> Motorola reports that only 20 percent of its applicants could successfully pass a simple, fifth-grade level test of arithmetic and a seventh-grade test of written comprehension. New York Telephone, likewise, reports that only 16 percent of its applicants could pass a fifth-grade level exam for an entry level position. According to a General Motors spokesman, 87 percent of its employees are incapable of performing tasks beyond a fifth-grade level.
>
> These workers are competing against a highly educated work force in Japan, where a high school education has been roughly equated with a college education in the United States.[5]

What is our position in 1990 and later? It is summed up in the following quotation:

> It's been seven years since the "Nation at Risk" report raised a national alarm about our schools. Reform efforts have lifted minimum

> standards in many communities. But those standards are not nearly high enough to meet the needs for economic survival....
>
> If this situation goes unremedied for another decade, this nation is doomed to decline. We simply cannot survive as a first-class economic power in the information age with "minimal" capacity to acquire and communicate facts, information, concepts or ideas.[6]

The optimists among the readers of this book will have noticed that most of the previous quotes are from the 1990s. They will say, "I'm sure we've made improvements since the 1990s." An April 20, 2003, report entitled "'At Risk' Report 20 Years Later" by Fredreka Schouten for Gannet News Service stated that after the "A Nation at Risk" report of April 26, 1983, there was a movement to improve the schools, raise standards, and hold both students and teachers accountable for academic performance. Notwithstanding, experts claim that twenty years of effort have yielded no dramatic change.

The reading scores of 9-year-olds have shown little or no change between 1983 and 2002, and almost 60 percent of high school seniors scored below basic on recent U.S. history tests. Also, high school seniors scored near the bottom in a recent twenty-three nation math and science academic competition. Despite the fact that some experts believe changes made a few years ago to the SAT made the test easier, average 2002 SAT scores on the verbal portion are virtually unchanged from 1983 scores. Performance on the American College Testing exam only improved slightly: 20.8 in 2002 versus 19.9 in 1983.

Phyllis Eisen, vice president of the Manufacturing Institute, said that about half of the money manufacturers spend on training employees is for remedial work. She also said that after twenty-five years of school reform, manufacturers have a feeling of despair about employees. Few job applicants have the basic knowledge they need, and too many job applicants cannot even read the application form. Deborah Wadsworth, president of Public Agenda said business people are profoundly unhappy with job applicants.

Although 78 percent of teachers believe public school graduates have the skills to succeed in the workplace, only 41 percent of employers agree. Furthermore, only 47 percent of college professors believe these graduates are ready for college.

Finally, in Schouten's report Education Secretary Rod Paige said, "I don't think we can sustain our international leadership unless we achieve better performance in our educational system. The consequences are dire." [7]

Our condition is much worse than it was in 1887. Even that far back, however, the need was easily recognizable. Sociologist William Sumner stated,

> I have two boys who are learning to spell. They often try to spell by analogy, thus using their brains and learning to think. Then I have to arrest them, turning them back from a rational procedure, and impose tradition and authority. They ask me "Why?" I answer "Because your father and others who have lived before you have never had the courage and energy to correct a ridiculous old abuse, and you are now inheriting it with all the intellectual injury, loss of time, and wasted labor which it occasions. I am ashamed that it should be so." (Robertson [and] Cassidy, 1954; 363) [8]

Summary

Some of the conclusions from the facts presented in this book are:

1. "[M]any of our children, even some of the brightest, find their sense of logic unable to cope with the illogic and disorderliness of English spelling."
2. The “Adult Literacy in America” report proves (1) that 48.7% of U.S. adults are functionally illiterate (using the functional illiteracy definition: the inability to read and write well enough to hold an above-poverty-level-wage job) and (2) that 31.2% of the individual functional illiterates are in poverty and (3) that they are more than twice as likely to be in poverty because of illiteracy as for all other reasons combined. This five-year, $14 million study used lengthy interviews of 26,049 adults statistically chosen for age, gender, ethnicity, and location to represent the entire U.S. population.
3. Less than 1 percent of adult illiterates are learning to read then going on to complete the equivalent of eighth grade, which is still inadequate for getting a good job.
4. There is a "pressing demand for a much higher level of literacy in the United States as we move from a manufacturing economy into a sophisticated high-tech economy of services and communication."
5. There is a growing "awareness of the connection between illiteracy and our mounting social problems: dropout, crime-in-the-streets, hard core unemployment and poverty."

6. There is the "largely overlooked but very serious fact that illiteracy is a real threat to democracy. Those voters who depend on the spoken word alone...are easily deluded and manipulated."
7. There is a widespread "acceptance of English as the emerging [worldwide language] of international communication.... A reduction in language barriers can open diplomatic, commercial, civic, and societal doors that are now scarcely ajar." Although English is already the most-used “second” language in the world, it is unsuitable for such use because it has by far the most illogical, inconsistent, and chaotic spelling of any language.
8. There is recognition "of the fact that traditional spelling tends to promote the mispronunciation of English.... A better fit between sight and sound should not only reduce illiteracy but lead to greater stability of pronunciation, to less chance of misunderstanding, and to more reliable communication overall." [9]
9. Illiteracy costs everyone: **the illiterates**: serious physical, mental, emotional, medical, and financial problems which we would consider a crisis if they occurred to us; **all U.S. adults,** both reader and non-reader: cost of social welfare programs, the truancy and crime costs directly related to illiteracy, and higher prices for consumer goods (a total of *at least* $5,186 per adult every year); and **the nation**: the competitive edge in world markets. Spelling reform will cost less than illiteracy now costs.
10. English spelling and the effect it has upon learning are much worse than most people realize.
11. Based upon this and previously presented evidence, perhaps the most important conclusion is this: whatever improvements may be devised for teaching reading to school children, none of these will have a significant effect on adult non-readers. The only *practical, permanent* solution to illiteracy—***for everyone***—is spelling reform.

Scholars have been advocating English spelling reform ever since the spelling was frozen in the mid-1700s. When the first significant English dictionary was issued in 1755, the spelling system was not a logical, scholarly, designed system. No one had gone to the effort of simply finding the phonemes used in English and deciding which letter(s) would most logically and efficiently represent these phonemes. It was merely a cataloguing of specific ways of spelling individual words, as they were then pronounced, or as the foreign words from roughly 350 languages we've

adopted into English since 1755 were spelled in their original language (in most cases).

NuEnglish will freeze the spelling of the phonemes, thus restoring to our alphabet the true purpose of an alphabet. The purpose of an alphabet is not to provide the writer with weird-shaped strokes to be combined sequentially, Chinese-writing-style, into representations of words. In such a system we must remember the sequential arrangement of these "strokes" for the twenty thousand to seventy thousand words we normally use. Or we must refer to a dictionary, ***IF*** one is handy ***AND IF*** we can find the word we need. Such a system is as much a hindrance as it is a help to communication. The true purpose of an alphabet is simply to provide a visual recording of the sounds that combine to form the words and meanings that we want to express.

In one narrow aspect of the problem—book sales—the question is not, "Will we spend more money for students' textbooks and books for the general public?" That has already been decided; we will. The question is, "What books will we spend the money on?" Will we spend money for tons of books that tens of millions of Americans (30 to 50 percent of our population) will never read, or will we spend money for books that everyone can read?

Some of these new books will be spelling books. The method by which spelling is taught may change slightly, but the spelling itself does not. As Edward Rondthaler and Edward Lias state, "[Spelling] is the only branch of learning that has undergone no serious update or repair since before the 16th Century. Other disciplines receive continuous updating. But not spelling." [10]

Fighting the Disease

Why fight the inevitable? When one shot of penicillin (spelling reform) will cure the disease (illiteracy), why spend billions of dollars on the symptoms? Why spend money on aspirin to reduce the fever (better reading textbooks), decongestants to combat excess mucus (better methods of teaching reading), oxygen therapy to ease breathing (publicizing and funding adult literacy programs), and research to find better methods of combating symptoms (educational research) if the disease can be cured?

It is long past time for America to have the courage and the fore-sight to do what several less-developed nations have done. It is long past time to do what dozens of educators, linguists, and scholars have advocated for centuries—fight the disease, not the symptoms, and make our spelling perfectly phonemic with NuEnglish.

David Harman may be correct in saying that a quick fix is impossible. If he is correct, however, it is only because our resistance to change prevents us from doing what should be done, not because there is no solution. The "fix" can be as "quick" as we, the American people, insist that it must be. There were undoubtedly many scholars in Turkey who said it "couldn't be done" or that a quick fix was impossible. Kemel Pasha's "shot of penicillin" cured Turkey's spelling problems in only one summer!

A newspaper editorial shortly after the news that 48 percent of U.S. adults are now functionally illiterate stated, "For many who are unplugged from society's basic communications and lack of rudimentary intellectual skills, life must be a constant source of bewilderment and frustration. No wonder alienation, poverty, anger and violence abound." It ends by stating,

> [T]he dismal findings of this comprehensive study should galvanize leaders to place even more emphasis and resources into reading.
> Can the United States afford to do that? Can the United States afford *not* to do that?
>
> Forget about the federal budget deficit, the economy, unemployment and health care reform. Until this nation can begin to cope with the literacy deficit, the hope of solving its other challenges will be dim.[11]

Challenge

As Edward Rondthaler and Edward Lias explain,

> The genius of alphabet, the one-to-one, sound-to-letter correspondence, is largely obscured in our writing. English is by far the most erratically spelled of modern languages…It is indeed a major factor in creating our mass of adult English-speaking functional illiterates....
>
> It is difficult to understand why a nation bearing the enormous social and economic burden of illiteracy has made no serious effort to eradicate its root cause. It is to our public shame and embarrassment that more than 40 countries have a higher percentage of literates than we. Yet we refuse to challenge our spelling. We accept it as a "given." We struggle along blindly, desperately using what are no more than remedial measures; never attacking the underlying source of the trouble.[12]

More than anything else, this book is a test of your resolve.

WILL YOU:

A. Do what you know should be done (if you've carefully read this entire book) and

1. make arrangements today to begin teaching a friend, relative, or acquaintance who is functionally illiterate to read NuEnglish,
2. contact today your local school board, and
3. recommend today a careful reading of this book to three or more friends who haven't read it yet.

OR WILL YOU:

B. Take the easy way out and say,
1. "(sigh) It probably won't work,"
2. "I don't want to get involved. I don't have time," or
3. any of a dozen other excuses?

Try as we might, we cannot avoid making a choice. By failing to choose A, we are automatically, unavoidably choosing B. It may at first seem that the proposals in Chapter 8 are somewhat naive, but who is more naive, someone who has spent the last twenty-eight years studying the lifetime research of numerous linguistic and educational experts, or those who know little about the subject other than what they have read here? This is especially pertinent since, if the reader so chooses, much of what is presented here can be *assumed* to be inaccurate. It may be that Chapter 8 is the product of wishful thinking, but wishing we would finally solve our literacy problems cannot be considered wasted effort, except by those who have assumed spelling reform is unnecessary and impractical. Perhaps this is because they do not want to have to contend with too much change in their lives—regardless of how much help it would be to people who, unlike themselves, cannot read.

The Final, Irrefutable Evidence

One final quote should provide the proper perspective to the problem. Arthur W. Heilman, Ph.D., an internationally known expert on reading instruction ends his book, *Phonics in Proper Perspective*, with the following statement:

> The many alternative approaches available for cracking the code might be interpreted as evidence that mastering the English system of writing poses a formidable challenge. There is no question that English spelling reform is long overdue. The present practice of attempting to teach ***all*** American youth to read and spell English is the foremost example of conspicuous consumption of a nation's resources since the building of the pyramids. Unfortunately for many children, the belief is still widely held that our economy can still afford this cruel waste.
>
> Without doubt, the most patriotic and educationally sound endeavor that reading teachers, and their teachers, could follow would be to set a date a few years in the future and decline henceforth to teach another child to read traditional English writing. The brief delay suggested would provide time for a federal commission to devise a sweeping and thorough spelling reform of English.
>
> This suggestion is not likely to be followed since man is a thinking animal; and he is now busily thinking of numerous "new approaches" to teach archaic English. Furthermore, the federal government has indicated its willingness to raise the ante in support of education. It would be unbecoming of educators not to attempt hundreds of new and devious approaches to the problem rather than advocating the one logical (and eventually inevitable) solution.[13]

This section will expand upon the practical meaning of the last paragraph of Dr. Heilman's quote.

Many educational and governmental officials will tell you progress is being made in solving our literacy crisis, assuming they are knowledgeable enough and honest enough to admit that a crisis exists. New plans and new books come out frequently. On the Larry King Live program on CNN on November 8, 1999, a book to be published in late 1999 was announced: Dr. William Bennett's book, *The Educated Child.* From Dr. Bennett's description, the book is obviously an excellent attempt at solving educational problems—one of the better approaches presently available. It contains suggestions that every parent should implement with their children to ensure they get the best education presently available, and it addresses educational problems other than learning to read. There are at least two problems, however, that the book will not solve: (1) it attacks symptoms of the illiteracy problem rather than the foundational, root cause, like almost every other book or plan proposed in the last thirty-five years and (2) many parents will never follow the excellent advice offered.

Fighting the symptoms versus fighting the disease has been adequately addressed, but the problem of all—or even a majority of—parents' not doing what educational experts recommend is equally problematic. Parents' failure to do what many authorities believe to be best cannot be solely ascribed to lack of love and concern for their children's welfare. Even if ***all*** parents were to buy and read Dr. Bennett's book, understand it, and agree with it (which, of course, they cannot do if their own literacy skills are lacking), many would not benefit from doing so. Many parents must spend so many hours working just to maintain a reasonably decent standard of living that they do not have the time or energy to do the things necessary to ensure an adequate education for their children. Many of these time-consuming activities would be largely unnecessary if learning to read were as easy as it is in other languages.

In short, new plans and new books which "attempt hundreds of new and devious approaches to the problem rather than...the...logical solution" will continue to appear. The fact of their appearance is obvious; the reason why authorities propose their particular plans is much less obvious. Ask anyone in a position of authority in education or government and they will tell you they want to solve our literacy crisis—and most of them do want to solve the problem. One or more of Dr. Samuel Blumenfeld's books explain why some people in positions of authority really do not want the masses to be as literate as they and their friends and relatives are. Some of Dr. Blumenfeld's more enlightening books are *Is Public Education Necessary?, The Whole Language/OBE Fraud,* and *The New Illiterates*. Whether or not you believe Dr. Blumenfeld there is one obvious conflict of interest—at least on a subconscious level: if everyone could become fluent readers in the first half of first grade (or in kindergarten) as they do in most other countries, our need for existing governmental services of all kinds would be greatly lessened.

You will notice that even though the experts come up with many "new and improved" educational ideas, none of them go outside the limits of what is taught in teachers' colleges. When they tell you that they really do want to solve our educational problems, what they do not tell you is that they want to solve them only in ways ***they*** decide. Among other things, this is not only because they want to claim the credit, but also because they do not want a system that is *too efficient*, or our need for their continued services, i.e., their job, would be lessened. The experts feel, of course, that ***they***, rather than the uneducated masses, should decide which changes to make.

One should not be too surprised at this; it occurs in all professions. Some of the most influential English spelling-reform advocates around the world are sincere in their desire to simplify our spelling. But after exchanging hundreds of emails potentially seen by over 500 spelling reform enthusiasts over a period of eight months it became very obvious that although they may want to improve our spelling, they want to do so with the systems ***they*** designed or that ***they*** have been advocating. Few, if any, of them have an interest in studying alternative proposals.

There are, of course, those who can read about the emotional and physical pain and suffering that hundreds of millions of illiterates and functional illiterates around the world must endure—such as described in Chapter 1 of this book or in Jonathan Kozol's book, *Illiterate America*—and ignore what they have read. All those, however, who are absolutely sincere and passionate in their desire to solve our literacy crisis, will be eager and willing to consider ***all*** reasonable chances of doing so—whether or not it is a method that they've personally designed or advocated.

Since most people in present-day America are very busy, even those who are most passionate about solving our literacy crisis need to be cautious of one common tendency. Most people have a strong inclination to leave many important and complicated decisions to so-called experts. You must be cautious about asking "experts" their opinion on spelling reform. You will find many who do not want spelling reform. You will also find many—who know far less about the subject than you do, if you have carefully read this entire book—who will authoritatively tell you that "spelling reform will not work." They will even give you convincing-sounding reasons why it will not work, if you let them. What they will not do, however, is refute—point by point—the facts that are clearly stated in this book. They can't.

There are those who will see the title of this section and take it as a personal challenge. They will proclaim loudly that the arguments here ***can*** be refuted. Examine carefully what they say, however. It is standard practice to attack the messenger instead of refuting the message. This attack usually takes the form of name-calling, attacking the messenger's qualifications, or dismissing the message as "unworkable" or some other claim which is unproven and perhaps even more inflammatory. Name-calling or dismissing the ideas of the messenger without refuting the ideas, point by point, should never be accepted by those who are truly passionate about solving the problem. In this case, "the messenger" has honestly evaluated and correlated the lifetime work of numerous scholars. "The messenger" is delivering the message of these scholars—in a way that engineers, by training and by temperament, are uniquely qualified to do, and in a way that educational and governmental authorities interested in maintaining the status quo will never do.

More effective than trying to refute the message is to *ignore* it. That is where you come in. The problem of illiteracy has been treated with half-measures for too long. *Solving* illiteracy instead of fighting its symptoms has been *ignored* for too long. Don't let our leaders ignore the problem any longer.

The bottom line is this: will we allow our governmental and educational officials to continue wasting our tax money on, as Dr. Heilman stated earlier in this section, "the foremost example of conspicuous consumption of a nation's resources since the building of the pyramids"? Or will we insist that we do what other nations have done and solve the problem, once and for all? Stating the problem in its most basic form: will we allow those responsible for the future of our children, our friends, and our nation to continue to be irresponsible by wasting our tax dollars on, as Heilman also said, "hundreds of new and devious approaches to the problem rather than advocating the one logical (and eventually inevitable) solution"?

Dr. Lounsbury's irrefutable defense of spelling reform in 1909 was largely unseen by the masses and ignored by those in positions of authority more interested in keeping the status quo than in solving problems. Due to technological advances and other changed conditions, the problem is much more urgent now. Anyone who is truly interested in solving our literacy crisis is hereby challenged not to ignore the unanswerable arguments in this book.

If you've read this far and still aren't sure, please read Appendixes 5 and 6 and the last two chapters of Dr. Lounsbury's book (see the "How to Get the Most Benefit From This Book" section of Chapter 1 for the web address). Also check the material in the bibliography, particularly (1) Blumenfeld's excellent and detailed history of methods for teaching reading in the U.S., *The New Illiterates* and his book, *The Whole Language/OBE Fraud*, (2) portions of Dr. William Bennett's book, *The De-Valuing of America*, which refer directly to educational problems; and (3) Dr. Bennett's book, *The Index of Leading Cultural Indicators*, which, perhaps more than any other book in print, will convince you of the need for immediate action on our educational problems. Verify for yourself that the quotations in this book are used correctly and that the data and conclusions in this book are correct. The need is so great that if such research on your part will spur you to action, then it will be well worth the expenditure of time both for you and for over a billion English-speaking people all around the world.

If you've ever tried to multiply or divide using Roman numerals, you have a small foretaste of the need to make our spelling logical. NuEnglish is destined to replace English in the same way that Arabic numerals replaced Roman numerals.

The Beginning

Appendix

An Introduction to the Appendixes

Individual Notes Needed for Some of the Appendixes

Appendix 1

Figure A1: This figure shows the usage frequency of each of the phonemes, the most basic sounds, in normal English speech. It shows that since all the phonemes represented by digraphs (two letters) in NuEnglish are among the least used, the choice of letters to represent each phoneme cannot be significantly shortened or simplified.

Table A1: This table shows the number of pronunciations of each of the 367 graphemes in traditional spelling. Although there are many silent letters in the letter combinations shown, treating each silent letter as part of a letter grouping is far easier than trying to remember the hundreds of silent letters in individual words, because there are no invariable rules for when a letter is silent. Also, it is important to remember that each example word shown in these tables represents many other words using the same pronunciation pattern. The fact that there is only one pronunciation shown for a certain letter combination does not mean that these are rare pronunciations. For example, although there is only one pronunciation for AUGH, it represents words such as taught and daughter, in addition to the example word shown.

The most important concept to note about this table, however—**besides the shocking number of graphemes used for traditional spelling when only 38 are needed**—is that there are undoubtedly ***OTHER*** graphemes used besides those shown. This table was based upon the 736 spellings of 38 phonemes that have been found over the years from several sources. Professor Julius Nyikos found ***1,768 spellings of 40 phonemes.***

Appendix 2

Table A2-1 and A2-2: These tables show the 736 spelling of the 38 phonemes used in NuEnglish—433 spellings of 14 vowel phonemes and 303 spellings of 24 consonant phonemes. The number beside the phoneme at the beginning of each of the 38 columns is the number of graphemes used to spell that phoneme. Professor Julius Nyikos, however, found many more: 1,768 ways of spelling 40 phonemes. Meaning or the asterisks: * These words have an additional phoneme spelled with the highlighted grapheme in addition to the one indicated. ** The tables do not include capitalized words or words not found in a standard desk dictionary. An unabridged dictionary would undoubtedly contain others.

Table A2-3: Figure A1 shows how often the phonemes appear in English spoken and written usage. This table shows what letter or letter combination is used to represent these sounds—how they are spelled. The numbers in the table are percentages and should total 100 percent on each horizontal row. The grapheme chosen for NuEnglish is shown bold and underlined.

Table A2-3 Notes: * These are letter sounds occurring less than ten times in the 100,000 word sample (see Chapter 6, note 43). This table is calculated from the 1,027 most used words from a 100,000-word sample containing 10,161 different words. These 1,027 words comprise 78.6 percent of the 100,000 words and include all words occurring more than ten times (more than 0.01 percent of the total). Only the consonant sounds with more than one spelling in the 100,000-word sample are shown.

Appendix 3

This appendix is a supplement to the first part of Chapter 6. It explains part of the reason that English spelling is so inconsistent and illogical: the historical development of the language as an amalgamation of parts of the language—and spelling—of all the nations that conquered or occupied England prior to the thirteenth century.

Appendix 4

This appendix is included as somewhat of a final test of reading ability. It is written at what is called—in English—an adult reading level. (Reading levels are essentially meaningless in NuEnglish—if persons can read NuEnglish, they can read anything written in NuEnglish. If they encounter a word

not in their vocabulary, they can correctly pronounce the word and may be able to determine the meaning from the context.)

Appendix 5

This appendix compares NuEnglish to other proposed spelling systems. The reader will naturally be tempted to believe that the author is advocating his system precisely because it is *his* system. This appendix proves that this is not the case. The facts speak for themselves. No spelling system could be found in which—like NuEnglish—(1) there is only one spelling per phoneme, (2) each grapheme is pronounced in only one way, (3) the primary emphasis (which helps considerably in quickly recognizing a word) is shown, **and** (4) over 80 percent of the graphemes used are the same as the ***most used*** graphemes for those phonemes in English.

Appendix 6

This appendix is a point-by-point refutation of the first chapter of a recent book claiming there is not a literacy crisis. It is included for all those who question the accuracy of information included primarily in Chapters 1 and 2 of this book.

Appendixes 1 and 2
The Phonemes and Graphemes Used in English and NuEnglish

Figure A1, Relative Frequency of the English Phonemes

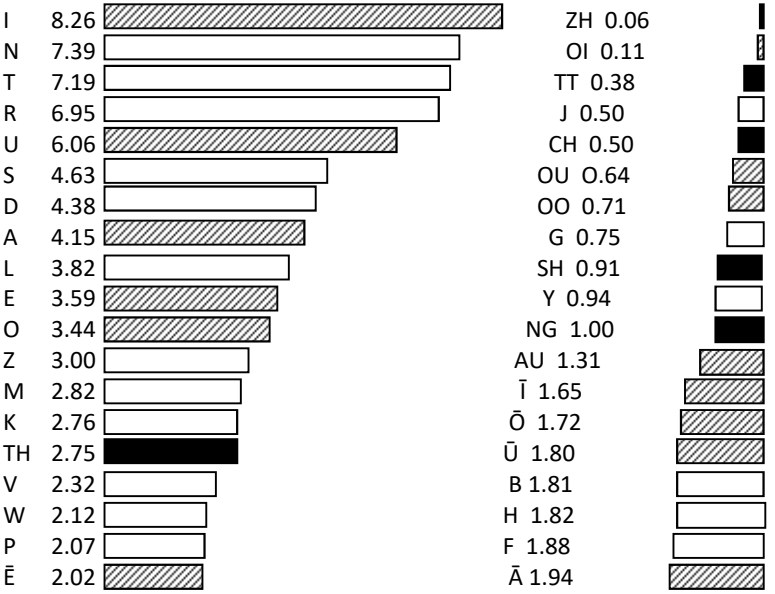
1. Only two phonemes are used less-often than *TT*, the only spelling unlike traditional English spelling.

2. Only *ZH* and *AE* (shown as Ā below) are somewhat unusual spellings. *ZH* is the least-used consonant; AE is one of the least-used vowels (less than 2% of all the phonemes).

3. Since phonemes represented by digraphs are among the least-used phonemes, the number of letters used for graphemes cannot be reduced significantly.

4. The "long" vowels are used almost three times as often as "short" vowels, which, in turn, are more than three times as often-used as the four "other" vowels, which are only digraphs.

This graph is based upon Table 16 of *Relativ Frequency of English Speech Sounds* by Godfrey Dewey, Ed.D., which is based upon a 100,000-word sample of a representative variety of written material. Table 16 and Chapter 6 note 43 (of this book) list the types of written material in the word sample.



Percentage of Total Phonemes

Vowel phoneme boxes are cross-hatched;
consonant digraphs boxes are black.

Table A1
A List of 367 of the English Graphemes

This list is based upon 736 ways of spelling 38 phonemes in English. These spellings were found over a period of years from several sources. Since Professor Julius Nyikos found ***1,768 ways of spelling 40 phonemes***, there are undoubtedly more than these 367 graphemes. Every single letter grapheme is also silent in some words.

Explanation of the Table: Each grapheme used in traditional spelling, in capitals, is followed by (1) a sample word or words and (2) the NuEnglish phoneme(s) represented.

Single Letter

1. A cat a, plate ae, any e, homage i, want o, cupola oe, about u, always au
2. B bed b
3. C cat k, cello ch, eczema g, centre s, ocean sh
4. D dog d, graduate j, hoped t
5. E there a, melee ae, end e, me ee, serious i, entrée o, silent u
6. F fish f, of v
7. G garden g, gentle j, digit j, girsh k, garage zh
8. H house h, eighth tt
9. I meringue a, vanilla e, ski ee, ink i, pretty i, I ie, bite ie, lingerie o, April u
10. J jug j, jai alai h, hallelujah y, jardinière zh
11. K kite k
12. L lips l, colonel r, bouillon y
13. M man m, spasm um
14. N nose n, ink ng, manana y
15. O women i, hot o, old oe bone oe, front u, do ue, soft au, woman oo
16. P pin p
17. Q quick kw, quay k
18. R rug r
19. S sun s, sure sh, was z, treasure zh
20. T tap t, picture ch, negotiate sh, equation zh
21. U bury e, busy i, cup u, truth ue, put oo, cube yue
22. V van v
23. W window w, cwm ue, wedeln v
24. X fix ks, exam gz, luxurious gzh, except k, luxury ksh, anxious (ng)sh, xylophone z, anxiety (ng)z
25. Y yes y, funny ee, mystery i, by ie, physician u
26. Z zip z, mezzo d, pretzel s, pizzicato t, azure zh

Two Letters

27. AA baa a, bazaar o
28. A'A ma'am a, ma'am o
29. AE aerial a, maelstrom ae, aesthetic e, aeon ee, caesura i
30. AG diaphragm a, seraglio o
31. AH dahlia a, dahlia ae, shillalah ee, shah o
32. AI plait a, wait ae, said e, mountain i, assegai ie, captain u, tall au
33. AL salmon a, calm o, talk au, victual l
34. AO gaol ae, pharaonic o, extraordinary au
35. AR quandary r
36. AS faux pas o
37. AT éclat o
38. AU aunt a, gauging ae, sausage o, mauve oe, restaurant u, sauce au, sauerkraut ou
39. AW saw au, lawyer oi
40. AY prayer a, play ae, says e, yesterday i, quay ee, bayou ie
41. BB rabbit r
42. BD bdellium d
43. BE robe b
44. BH bhang b
45. BT debt t
46. CC account k, accept ks (x)
47. CE face s, sacrifice z, liquorice sh
48. CH spinach j, character k, chat ch, chute sh, choir qu
49. CI facial sh, suspicion sh
50. CK pick k
51. CT indict t
52. CU biscuit k
53. CZ czar z
54. DD eisteddfod th, add d
55. DE blonde d, grandeur j
56. DG judgment j
57. DH dhow d, edh th
58. DI soldier j
59. DJ adjust j
60. DT veldt t
61. EA bear a, great ae, head e, eat ee, hear i, heart o, ocean u
62. EB debt e
63. ED Wednesday e, seemed d, asked t
64. EE matinee ae, keelson e, eel ee, been i
65. E'E e'er ae, e'en ee
66. EG thegn ae, phlegm e
67. EH eh ae, eh e, vehicle ee
68. EI their a, vein ae, heifer e, leisure ee, weird i, eider ie, mullein u
69. EN opening n
70. EO leopard e, people ee, feod yue, pigeon i, yeoman oe, luncheon u, courteous y
71. ER chert a
72. ES belles letters silent, scores z
73. ET ballet ae, billet doux i
74. EU neutral yue, maneuver ue, connoisseur u, pleurisy oo
75. EW newt yue, few yue, sew oe, shrewd ue
76. EY they ae, key ee, money i, geyser ie
77. EZ rendezvous e, rendezvous i
78. FE safe f
79. FF stuff f

80. FT often f
81. GE oblige j, garage zh
82. GG egg g, exaggerate j, suggest gj, loggia zh
83. GH hiccough p, trough tt, ghastly g, rough f, lough k
84. GI region j
85. GL intaglio l
86. GM phlegm m
87. GN gnome n
88. GU guard g
89. HA habitant o, gingham u
90. HE rhetoric e, diarrhea ee, herb u
91.HI exhibit i, rhino ie, vehicle u
92. HL buhl l
93. HO honor o, ghost oe, hors d'oeuvre au
94. HU humor yue, rhubarb ue, humble u
95. HY rhythm i, rhyolite ie
96. IA marriageable i, diamond ie, special u
97. IC victuals i, indict ie
98. IE lingerie ae, friend i, field ee, carried i, pie ie, mischievous u
99. IG sign ie
100. II shiitake ee
101. IO mustachio oe, fashion u
102. IS debris ee, chassis i, island ie
103. IT esprit ee, petit i
104. IU jiu jitsu ue
105. JJ hajji j
106. JU marijuana w
107. KE bake k
108. KH khaki k
109. KK chukka k
110. KN knot n
111. LC falcon k
112. LD would d
113. LE mile l
114. LF half f
115. LH silhouette l
116. LK talk k
117. LL tortilla y, all l, llama l
118. LM calm m
119. LN kiln l
120. LO colonel r
121. MB dumb m
122. ME home m
123. MH mho m
124. MM dummy m
125. MN mnemonic n, autumn m
126. MP comptroller n
127. ND handkerchief ng, handsome n
128. NE gone n
129. NG ring ng
130. NH ipecacuanha n
131. NN dinner n
132. NT habitant n
133. NW gunwale n
134. OA boast oe, cupboard u, broad au
135. OE foetid e, phoebe ee, toe oe, shoe ue, does u
136. OG imbroglio oe
137. OH demijohn o, oh oe
138. OI connoisseur e, reservoir o, avoirdupois u, coin oi
139. OL roll oe, solder au
140. ON reasoning n
141. OO door oe, food ue, blood u, good oo
142. OR worsted oo
143. OS apropos oe
144. OT depot oe
145. OU cough o, soul oe, group ue, couple u, cough au, could oo, out ou, bivouac w
146. OW knowledge o, bowl oe, pillowcase u, toward au, now ou
147. OY coyote ie, toy oi
148. PB cupboard b
149. PE rope p
150. PH photo f, shepherd p, nephew v
151. PN pneumatic n
152. PP supper p
153. PS psalm s

154. PT receipt t, pterodactyl t
155. QU bouquet k, quit kw
156. RE pure r
157. RH rhubarb r
158. RR merry r
159. RS hors d'oeuvre r, worsted s
160. RT mortgage r
161. SC fascism sh, viscount k, disc k, discern z, scene s
162. SE case s, wise z, nauseous sh
163. SH dishonest s, dishonor z, shop sh
164. SI business z, pension sh, tension ch, vision zh
165. SK ski sh
166. SL island l
167. SP raspberry s, raspberry z
168. SS scissors z, fission zh, issue sh, less s
169. ST listen s
170. SW sword s
171. TB hautboy b
172. TE delicate t
173. TH posthumous ch, thyme t, this th, thin tt
174. TI equation zh, question ch, station sh, spatial sh
175. TS Tsar s, Tsar z
176. TT button t
177. TW two t
178. TZ waltz s, Tzar z
179. UA guarantee a, guard o, quahog oe, piquant u
180. UE guest e, cue yue, blue ue, guerilla u, tissue oo
181. UH buhl ue, buhr u
182. UI mosquito ee, build i, guiding ie, fruit ue
183. UO quoth oe, buoy ue, liquor u
184. UY plaguy ee, buy ie
185. VV chivvy v
186. WH whelk w, who h, when hw
187. WL knowledge l
188. WN known n
189. WO sword oe, two ue, sword au
190. WR write r
191. WS bellows z
192. YE rye ie
193. ZH muzhik zh
194. ZI brazier zh
195. ZV rendezvous v
196. ZZ buzz z
197. O'E o'er oe
198. 'RE they're r
199. 'VE we've v
200. A_E have a, table ae, cafe ae, image i, nuisance u, false au
201. A_U plaguing ae
202. E_E there a, fete ae, allege e, even ee, college i
203. I_B climb ie
204. I_E police ee, give i, fine ie, engine u
205. I_O iron ie
206. O_B tomb ue
207. O_E gone o, more oe, some u, move ue, gone au
208. U_E minute i, pleasure u, rude ue, sure oo
209. W_O who ue
210. Y_E apocalypse i, style I

Three Letters

211. A_UE harangue a, plague ae, barque o
212. E_UE cheque e
213. I_UE meringue a, antique ee, bisque i, oblique ie
214. O_UE catalogue o, rogue oe, tongue u, torque au

215. U_UE brusque u, brusque oo
216. W_O_E whose ue
217. AG_E champagne ae
218. AI_E millionaire a, raise ae, aisle ie
219. AO_E gaoled ae
220. AU_E gauche oe, because o, because au, because u, gauge ae
221. EA_E cleanse e, please ee, mileage i, hearse u
222. EE_E cheese ee
223. EI_E seine ae, receive ee
224. ES_E demesne ee
225. EU_E deuce ue
226. EY_E eyre ae
227. HI_E rhinestone ie
228. HY_E rhyme ie
229. IA_E marriage i, collegiate u
230. IE_E conscience e, patience u, believe ee, sieve i
231. IS_E lisle ie
232. OA_E coarse oe
233. OI_E porpoise u, turquoise au, noise oi
234. OG_E cologne oe
235. OO_E loose ue
236. OW_E browse ou
237. OY_E gargoyle oi
238. UE_E guessed e
239. UI_E guimpe a, guide ie, cruise ue
240. UO_E quote oe
241. ACH drachm a, yacht o
242. AGH shillelagh i, shillelagh u
243. AIG arraign ae
244. ALF halfpenny ae
245. ALL victualler l
246. ANC blanc mange u
247. AOH pharaoh oe
248. AOU caoutchouc ue, caoutchouc u
249. AUT hautboy oe
250. AUX faux pas oe
251. AWE awe au
252. AYE aye ae, aye ie
253. AYO mayor ae
254. BBE ebbed b
255. CCH saccharine k
256. CHE ache k, niche ch, mustache sh
257. CHI marchioness sh
258. CHM drachm m
259. CHT yacht t
260. CIO delicious sh
261. CKE locked k
262. CQU lacquer k, acquire kw
263. DGE bridge j
264. EAU bureaucracy o, beauty yue, plateau oe, bureaucrat u
265. EEW leeward ee
266. EIG reign ae, foreign u
267. EIP receipt ee
268. EOU gorgeous u
269. EWE sewed oe, brewed ue, ewe yue
270. EYE conveyed ae, keyed ee, eye ie
271. EYO eyot ae
272. FFE stuffed f
273. GEO gorgeous j
274. GHT righteous ch, drought tt, night t
275. GUE plague g
276. HAU exhaust au
277. HEI heir ae
278. HEU rheumatic ue
279. HOU silhouette oo, hour ou
280. IER dossier ae
281. IEU lieutenant e, lieu ue
282. IEW view yue
283. IGH might ie
284. IOU conscious u
285. LFP halfpenny p
286. LLE travelled l
287. LVE halve v
288. MME shammed m
289. NGE winged ng
290 NGG mah jongg ng
291. NGH gingham ng
292. NNE planned n
293. OAT boatswain oe
294. OEU manoeuvre ue
295. OIG poignant oi
296. OIS chamois i
297. OOE wooed ue
298. OOH pooh ue, pooh oo
299. OUB doubt ou
300. OUE caoutchouc oo, denouement ue
301. OUI bouillon oo
302. OUL could u, would oo
303. OUP coup ue
304. OUS rendezvous ue

305. OUT ragout ue
306. OUX billet doux ue
307. OWA toward oe, toward au
308. OWE owe oe, allowed ou
309. OYE employed oi
310. PPE flopped d
311. PPH sapphire f
312. PSH pshaw sh
313. QUE cheque k, queue ky
314. RHE rheumatic r
315. RPS corps r
316. RRE referred r
317. RRH diarrhea r
318. SCE coalesce s
319. SCH schism s, schist sh
320. SCI luscious sh
321. SLE aisle l
322. SNE demesne n
323. SSE kissed s
324. SSI mission sh, fission zh
325. STH isthmus s, asthma z
326. STR mistress s
327. TCH catch ch
328. THE bathe th
329. TRE mistress i
330. TSW boatswain s
331. UAY quay ee
332. UEA squeak ee
333. UET bouquet ae
334. UEU liqueur u
335. UEY plaguey ee
336. UOI quoin oi
337. UOY buoy oi, buoy ue, buoy ee
338. UYE guyed ie
339. WAI boatswain u
340. YOU you yue
341. ZZE whizzed z

Four Letters

342. EA_UE league ee
343. AIS_E aisle ie
344. EIG_E reigned ae
345. IGH_E sighed ie
346. OIG_E coigned oi
347. UOI_E turquoise oi
348. AIGH straight ae
349. AUGH caught au
350. CHSI fuchsia sh
351. CHTH chthonic tt
352. EHEA forehead e, forehead i
353. EIGE greige ae
354. EIGH weight ae, height ie
355. IAOU giaour ou
356. IGHE sighed ie
357. NGUE harangue ng
358. OUGH nought o, thorough u, through ue, bought au, plough ou, cough auf, tough uf, trough ott, dough oe, hiccough up, lough ok, shough uek
359. OUSE rendez-voused ue
360. PHTH phthisic t,
361. RECA forecastle k
362. THES clothes z
363. UOYE buoyed oi

Five Letters

364. DDING studdingsail n
365. EIGHE weighed ae
366. OUGHA brougham ue
367. OUGHE ploughed ou

Table A2-1 Spelling of the Vowel Sounds** 1 of 3 **Note:**

This is a partial list. Prof. Julius Nyikos found **1,768 spellings of 40 phonemes**

A-23	40 for**EHEA**d	80 v**IC**tuals	120 mem**OI**r *
1 m**A**t	41 l**EO**pard	81 carr**IE**d	121 repert**OI**r**E** *
2 b**AA**	42 bell**ES** lettres	82 s**IE**v**E**	122 pat**OIS** *
3 m**A'A**m	43 rend**EZ**vous	83 chass**IS**	123 l**OU**gh
4 h**A**v**E**	44 r**HE**toric	84 pet**IT**	124 c**OU**gh**E**d
5 l**A**ps**E**	45 van**I**lla	85 w**O**men	125 n**OUGH**t
6 har**A**ng**UE**	46 fr**IE**nd	86 cham**OIS**	126 kn**OW**ledge
7 dr**ACH**m	47 consc**IE**nc**E**	87 mis**TRE**ss	127 g**UA**rd
8 **AE**rial	48 l**IEU**tenant	88 b**U**sy	**U**-60
9 diaphr**AG**m	49 f**OE**tid	89 min**UtE**	128 **A**bout
10 d**AH**lia	50 conn**OI**sseur	90 plag**UEY**	129nuis**A**nc**E**
11 pl**AI**d	51 b**U**ry	91 b**UI**lt	130 shillel**AGH**
12 s**AL**mon	52 g**UE**st	92 plag**UY**	131 verand**AH**
13 **AU**nt	53 g**UE**ss**E**d	93 m**Y**th	132 capt**AI**n
14 l**AU**gh**E**d	**I**-41	94apocal**Y**ps**E**	133 capt**AIN**E**d**
15 pr**AY**er	**54 imAging**	**O**-33	134 blANC mange
16 th**E**r**E**	55 im**Ag**E	95 w**A**s	135 rest**AU**rant
17 b**EA**r	56 c**AE**sura	96baz**AA**r	136 bec**AU**s**E**
18 th**EI**r	57 shillel**AGH**	97 m**A'A**m	137 h**E**r
19 ch**ER**t	58 shillel**AH**	98 **A**r**E**	138 w**E**r**E**
20 l**I**ngerie	59 mount**AI**n	99 b**A**rq**UE**	139 oc**EA**n
21 mer**I**ng**UE**	60 capt**AIN**E**d**	100 y**ACH**t	140 h**EA**rs**E**
22 g**UA**rantee	61 yesterd**AY**	101 ser**AG**lio	141 bur**EAU**crat
23 g**UI**mp**E**	62 pr**E**tty	102 sh**AH**	142 mull**EI**n
E-30	63 coll**E**g**E**	103 c**AL**m	143 lunch**EO**n
24 **A**ny	64 h**EA**r	104 phar**AO**nic	144 gorg**EOU**s
25 **A**t**E**	65 b**EE**n	105 faux p**AS**	145 connoiss**EU**r
26 **AE**rial	66 for**EHEA**d	106 eclA**T**	146 ging**HA**m
27 s**AI**d	67 forf**EI**t	107 n**AU**tical	147 **HE**rb
28 s**AY**s	68 for**EIG**n	108 bec**AU**sE	148 ve**HI**cle
29 b**E**d	69 pig**EO**n	109 s**E**rgeant	149 **HU**mble
30 all**E**g**E**	70 bill**ET** doux	110 h**EA**rt	150 f**I**rst
31 l**E**dg**E**	71 mon**EY**	111 bur**EAU**cracy	151 eng**IN**E
32 ch**E**q**UE**	72 rend**EZ**vous	112 **HA**bitant	152 **IrO**n *
33 h**EA**d	73 ex**HI**bit	113 **HO**nor	153 spec**IA**l
34 cl**EA**ns**E**	74 r**HY**thm	114 l**I**ngerie	154 colleg**IA**t**E**
35 d**EB**t	75 bId	115 h**O**p	155 alleg**IA**nc**E**
36 k**EE**lson	76 gIvE	116 g**O**n**E**	156 misch**IE**vous
37 phl**EG**m	77 b**I**sq**UE**	117 c**O**nn**E**d	157 pat**IE**nc**E**
38 **EH**	78 marr**IA**ges	118 catal**O**g**UE**	158 fash**IO**n
39 th**EI**r	79 marr**IA**g**E**	119 demij**OH**n	159 consc**IOU**s

Table A2-1 Spelling of the Vowel Sounds** 2 of 3

Note: This is a partial list. Prof. Julius Nyikos found 1,768 spellings of 40 phonemes

160 peop**LE** *
161 criticis**M** *
162 s**O**n
163 s**O**m**E**
164 **O**n**E** *
165 t**O**ng**UE**
166 cupb**OA**rd
167 d**OE**s
168 av**OI**rdupois
169 porp**OI**s**E**
170 c**OLO**nel *
171 bl**OO**d
172 t**OU**gh
173 t**OU**ch**E**d
174 thor**OUGH**ly
175 c**OUL**d
176 pill**OW**case
177 b**U**d
178 pleas**U**r**E**
179 j**U**dg**E**
180 br**U**sq**UE**
181 piq**UA**nt
182 lacq**UE**r
183 liq**UE**r
184 b**UH**r
185 liq**UO**r
186 boats**WA**In
187 mart**Y**r

AU-24

188 b**A**ll
189 f**A**ls**E**
190 hurr**AH**
191 t**AL**k
192 extr**AO**rdinary
193 h**AU**l
194 bec**AU**s**E**
195 c**AUGH**t
196 s**AW**
197 **AWE**
198 ex**HAU**st
199 **HO**rs d'oeuvre

200 s**O**ft
201 g**O**n**E**
202 t**O**rq**UE**
203 br**OA**d
204 mem**OI**r *
205 turqu**OI**s**E**
206 s**OL**der
207 c**OU**gh
208 f**OUGH**t
209 t**OWA**rd
210 sq**UA**ll
211 s**WO**rd

OI-12

212 l**AW**yer
213 **OI**l
214 n**OI**s**E**
215 p**OIG**nant
216 c**OIG**n**E**
217 b**OY**
218 garg**OY**l**E**
219empl**OYE**d
220 q**UOI**n
221 turq**UOI**s**E**
222 b**UOY**
223 b**UOYE**d

OO-13

224 pl**EU**risy
225 sil**HOU**ette
226 w**O**lf
227 g**OO**d
228 p**OOH**
229 w**OR**sted
230 b**OUI**llon
231 caoutch**OUC**
232 c**OUL**d
233 p**U**ll
234 s**U**r**E**
235 br**U**sq**UE**
236 tiss**UE**

OU-13

237 c**AOU**chouc

238 sauerkr**AU**t
239 g**IAOU**r
240 **HOU**r
241 l**OU**d
242 h**OU**s**E**
243 ren**OU**nc**E**
244 d**OUB**t
245 b**OUGH**
246 pl**OUGHE**d
247 n**OW**
248 br**OWS**E
249 all**OWE**d

AE-42

250 f**A**ding
251 f**A**d**E**
252 pl**AG**uing
253 pl**AGUE**
254 m**AE**strom
255 chanp**AG**n**E**
256 d**AH**lia
257 m**AI**n
258 r**AI**s**E**
259 arr**AIG**n
260 str**AIGH**t
261 h**ALF**penny
262 g**AO**l
263 g**AO**l**E**d
264 g**AU**ging
265 g**AUG**E
266 d**AY**
267 pl**AYE**d
268 m**AYO**r
269 m**E**lee
270 th**E**r**E**
271 **E'E**r
272 st**EA**k
273 matin**EE**
274 th**EG**n
275 **EH**
276 v**EI**n
277 s**EI**n**E**

278 r**EIG**n
279 r**EIG**n**E**d
280 gr**EIGE**
281 sl**EIGH**
282 w**EIGHE**d
283 dossi**ER**
284 ber**ET**
285 pr**EY**
286 **EY**r**E**
287 conv**EYE**d
288 **EYO**t
289 **HEI**r
290 linger**IE**
291 bouq**UET**

EE-30

292 **AE**on
293 m**E**
294 th**E**s**E**
295 **E'E**n
296 **EA**sy
297 l**EA**v**E**
298 l**EAG**U**E**
299 b**EE**p
300 ch**EE**s**E**
301 v**EH**icle
302 **EI**ther
303 rec**EIV**E
304 rec**EIP**t
305 p**EO**ple
306 dem**ES**n**E**
307 k**EY**
308 k**EYE**d
309 diarr**HE**a
310 sk**I**
311 mar**IN**E
312 ant**IQU**E
313 gr**IE**f
314 bel**IEV**E
315 debr**IS**
316 espr**IT**
317 am**OE**ba

Table A2-1 Spelling of the Vowel Sounds** 3 of 3

Note: This is a partial list. Dr. Julius Nyikos found 1,768 spellings of 40 phonemes

318 q**UAY**	347 **IS**land	376 d**OE**	405 m**O**v**E**
319 sq**UEA**k	348 l**IS**l**E**	377 imbr**OG**lio	406 sh**OE**
320 mosq**UI**to	349 ch**OI**r *	378 col**OG**n**E**	407 man**OEU**vre
321 trust**Y**	350 c**OY**ote	379 **OH**	408 t**OO**
IE-37	351 g**UI**ding	380 y**OL**k	409 l**OO**s**E**
322 m**AE**stro	352 g**UI**d**E**	381 d**OO**r	410 w**OOE**d
323 assegA**I**	353 b**UY**	382 aprop**OS**	411 p**OOH**
324 **AI**sl**E**	354 g**UYE**d	383 dep**OT**	412 s**OU**p
325 b**AY**ou	355 b**Y**	384 s**OU**l	413 r**OUt**E
326 **AYE**	356 t**Y**p**E**	385 c**OU**rs**E**	414 d**OU**ch**E**d
327 h**EI**st	357 d**YE**	386 th**OUGH**	415 den**OUE**ment
328 h**EIGH**t	**OE**-36	387 kn**OW**	416 thr**OUGH**
329 g**EY**ser	358 phar**AOH**	388 t**OWA**rd	417 br**OUGHA**m
330 **EYE**	359 ch**AU**ffeur	389 **OWE**	418 c**OUP**
331 r**HI**no	360 m**AU**v**E**	390 q**UA**hog	419 rendezv**OUS**
332 r**HI**n**E**stone	361 h**AUT**boy	391 q**UO**th	420 rendezv**OUSE**d
333 r**HY**olite	362 f**AUX** pas	392 q**UOt**E	421 rag**OUT**
334 r**HY**me	363 plat**EAU**	393 s**WO**rd	422 billet d**OUX**
335 k**I**nd	364 y**EO**man	**UE**-40	423 fl**U**
336 f**I**n**E**	365 s**EW**	394 c**AOU**tchouc	424 r**Ul**E
337 sh**II**take	366 s**EWE**d	395 l**EE**ward	425 bl**UE**
338 **I**r**O**n *	367 g**HO**st	396 man**EU**ver	426 imp**UG**n *
339 obl**I**q**UE**	368 mustach**IO**	397 d**EU**cE	427 b**UH**l
340 d**IA**mond	369 n**O**	398 cr**EW**	428 fr**UI**t
341 ind**IC**t	370 m**O**r**E**	399 br**EWE**d	429 cr**UI**s**E**
342 p**IE**	371 **O'E**r	400 r**HEU**matic	430 b**UO**y
343 s**IG**n	372 r**O**g**UE**	401 r**HU**barb	431 t**WO**
344 s**IGn**E**d**	373 c**OA**l	402 l**IEU**	432 **W**h**O**
345 h**IGH**	374 c**OA**rs**E**	403 j**IU**jitsu	433 **W**h**O**s**E**
346 s**IGHE**d	375 b**OAT**swain	404 d**O**	

Table A2-2 Spelling of the Consonant Sounds** 1 of 3

Note: This is a partial list. Dr. Julius Nyikos found 1,768 spellings of 40 phonemes

B-7	**D**-8	448 me**Z**zo	455 ha**LF**
434 **B**ad	441 **BD**ellium	**F**-11	456 tele**PH**one
435 ru**BB**er	442 **D**im	449 **F**an	457 sa**PPH**ire
436 eBBEd	443 a**DD**	450 sa**FE**	458 lie**U**tenant
437 ro**BE**	444 fa**DE**	451 o**FF**	459 **V**eldt
438 **BH**ang	445 **DH**ow	452 stu**FFE**d	**G**-9
439 cu**PB**oard	446 seem**ED**	453 o**FT**en	460 e**C**zema
440 hau**TB**oy	447 wou**LD**	454 lau**GH**	461 **G**et

Table A2-2 Spelling of the Consonant Sounds** 2 of 3

Note: This is a partial list. Dr. Julius Nyikos found 1,768 spellings of 40 phonemes

462 e**GG**
463 be**GGE**d
464 **GH**ost
465 **GU**ide
466 pla**GUE**
467 eXam *
468 eXHibit *

H-4
469 **H**ad
470 **J**ai alai
471 **WH**o
472 **WH**ich *

J-14
473 spina**CH**
474 e**D**ucation
475 gran**DE**ur
476 ju**DG**ment
477 bri**DGE**
478 sol**DI**er
479 a**DJ**ust
480 **G**em
481 saGE
482 gor**GEO**us
483 exa**GG**erate
484 re**GI**on
485 **J**am
486 ha**JJ**i

K-26
487 **C**an
488 a**CC**ount
489 sa**CCH**arine
490 **CH**aos
491 a**CHE**
492 pi**CK**
493 lo**CKE**d
494 la**CQU**er
495 a**CQU**ire *
496 bis**CU**it
497 lou**GH**
498 **K**in
499 ba**KE**

500 **KH**aki
501 chu**KK**a
502 fa**LC**on
503 ta**LK**
504 **Q**uit
505 **QU**ay
506 anti**QUE**
507 fo**RECA**stle
508 vi**SC**ount
509 e**X**cept
510 ne**X**t *
511 e**XH**ibit *
512 no**XI**ous

L-16
513 victu**AL**
514 victu**ALL**er
515 mus**CLE** *
516 inta**GL**io
517 bu**HL**
518 **L**ad
519 mi**LE**
520 peop**LE** *
521 si**LH**ouette
522 a**LL**
523 trave**LLE**d
524 ki**LN**
525 i**SL**and
526 ai**SLE**
527 nes**TLE** *
528 kno**WL**edge

M-11
529 dra**CHM**
530 phle**GM**
531 ca**LM**
532 **M**an
533 criticis**M** *
534 co**MB**
535 ho**ME**
536 **MH**o
537 du**MM**y
538 sla**MME**d

539 hy**MN**

N-20
540 stu**DDING**sail
541 op**EN**ing
542 si**GN**
543 vi**GN**ette *
544 **KN**ot
545 **MN**emonic
546 co**MP**troller
547 **N**ut
548 ma**N**ana *
549 ha**ND**some
550 do**NE**
551 ipecacua**NH**a
552 di**NN**er
553 pla**NNE**d
554 habita**NT**
555 gu**NW**ale
556 reas**ON**ing
557 **PN**eumatic
558 deme**SNE**
559 kno**WN**

P-7
560 hiccou**GH**
561 ha**LFP**enny
562 **P**an
563 ro**PE**
564 she**PH**erd
565 su**PP**er
566 fla**PPE**d

R-15
567 quand**AR**y
568 co**LO**nel
569 **R**an
570 pu**RE**
571 they'**RE**
572 cent**RE** *
573 **RH**yme
574 **RHE**umatism
575 co**RPS**
576 me**RR**y

577 refe**RRE**d
578 dia**RRH**ea
579 ho**RS** d'oeuvre
580 mo**RT**gage
581 **Wr**ite

S-26
582 **C**ity
583 mi**CE**
584 **PS**alm
585 wo**RS**ted
586 **S**ad
587 **SC**ene
588 coale**SCE**
589 **SCH**ism
590 mou**SE**
591 di**SH**onest
592 ra**SP**berry
593 le**SS**
594 ki**SSE**d
595 li**ST**en
596 i**STH**mus
597 mi**STR**ess
598 **SW**ord
599 **TS**ar
600 boa**TSW**ain
601 wal**TZ**
602 **X**i
603 ne**X**t *
604 e**XH**ibition *
605 pret**Z**el
606 scher**Z**o
607 pi**ZZ**icato *

T-16
608 de**BT**
609 ya**CHT**
610 indi**CT**
611 hop**ED**
612 vel**DT**
613 ask**ED**
614 ni**GHT**
615 **PHTH**isic

Table A2-2 Spelling of the Consonant Sounds** 3 of 3

Note: This is a partial list. Dr. Julius Nyikos found 1,768 spellings of 40 phonemes

616 receiPT	643 WHale *	CH-10	706 penSIon
617 Tan	Y-9	675 Cello	707 SKi
618 faTE	644 azalEa	676 CHin	708 iSSue
619 THyme	645 courtEOus	677 niCHE	709 miSSIon
620 buTTon	646 viGNette *	678 riGHTeous	710 negoTiate
621 TWo	647 unIon	679 tenSIon	711 naTIon
622 scherZo *	648 halleluJah	680 naTure	712 luXury *
623 piZZicato *	649 bouilLon	681 maTCH	713 noXIous *
V-9	650 tortiLLa	682 maTCHEd	"soft" TH- 7
624 oF	651 maNana *	683 posTHumous	714 CHTHonic
625 haLVE	652 Yes	684 quesTIon	715 trouGH
626 nePHew	Z-22	NG-7	716 drouGHT
627 Van	653 sacrifiCE	685 haNDkerchief	717 eightH
628 haVE	654 CZar	686 siNG	718 PHTHonic
629 we'VE	655 scorES	687 wiNGEd	719 THin
630 saVVy	656 iS	688 giNGHam	720 bliTHE____
631 Wedeln	657 diSCern	689 mah joNGG	"Hard" TH- 4
632 rendeZvous	658 raiSE	690 haraNGUE	721 eisteDDfod
W-11	659 diSHonor	691 iNK *	722 eDH
633 mariJUana	660 buSIness	SH-22	723 THen
634 chOir	661 raSPberry	692 oCeanic	724 baTHE____
635 OnE *	662 sciSSors	693 oCEan	ZH-12
636 memOIr *	663 aSTHma	694 maCHine	725 rouGing
637 repertOIrE *	664 cloTHES	695 mustaCHE	726 garaGE
638 patOIS *	665 TSar	696 marCHIoness	727 loGGis
639 bivOUac	666 TZar	697 muCHSIa	728 Jardiniere
640 persUade	667 belloWS	698 speCIal	729 meaSure
641 Win	668 Xylophone	699 PSHaw	730 occaSIon
642 WHelk	669 eXam *	700 Sure	731 fiSSIon
	670 eXHibit *	701 faSCism	732 equaTIon
	671 Zoo	702 SCHist	733 luXurious *
	672 raZE	703 conSCience	734 aZure
	673 buZZ	704 nauSEous	735 muZHik
	674 whiZZEd	705 SHed	736 braZIer

The numbers beside the phonemes at the head of the columns is the number of different graphemes used to spell that phoneme.

* The capitalized letters make another sound in addition to the phoneme at the head of the column.

** Tables A2-1 and A2-2 do not include capitalized words and words not in a standard desk dictionary. An unabridged dictionary would undoubtedly contain others.

Table A2-3 (1 of 3)

Usage Frequency of Letters For English Phonemes

This table shows that 81.6% the graphemes chosen for NuEnglish are the grapheme that most-often represents the phoneme in traditional spelling. Comparing the occurences of A, E, I, O, and U versus AE, EE, IE, OE, and UE shows that the "short" vowels occur far more frequently than "long" vowels in tradtional spelling.

Grapheme Occurrences in 100,000 word sample	Each cell below has (1) the phoneme that the grapheme in the first column represents, (2) the percentage usage in the 100,000 word sample (percentages in all the cells in a horizontan line with each grapheme total 100.0%), and (3) an example word. Asterisks represent percentages less than 0.01% The grapheme chosen for NuEnglish is underlined bold. Example words showing pronunciation of phonemes are: Th**A**t p**E**t d**I**d n**O**t r**U**n. M**AE** Gr**EE**n tr**IE**d r**OE** gl**UE**. H**AU**l g**OO**d **OI**l **OU**t. **Y**e**S**, **GaNG**, **FaX** **TH**e **SH**ip **CH**art.				
1. A 20,808	**A, 50.0** **hat**	U, 24.0 about	O, 8.7 was	AE, 8.6 fading	AU, 5.4 ball
	E, 2.9 any	I, 0.3 imaging	silent, 0.1 read		
2. AE 0	**AE, *** **maelstrom**	A, * aerial	E, * aerial	EE, * aeon	I, * caesura
3. E 28,068	U, 42.6 her	**E, 13.6** **bet**	EE, 13.0 me	I, 5.1 pretty	silent, 25.7 have
	AE, * eh	O, * sergeant	Y, * azalea		
4. EE 1,131	**EE, 71.0** **see**	I, 29.0 been	AE, * matinee	E, * keelson	
5. I 16,031	**I, 77.2** **bit**	IE, 16.1 kind	U, 5.1 first	EE, 1.0 ski	silent, 0.6 business
	E, * vanilla	O, * lingerie	J, * soldier	Y, * opinion	
6. IE 225	EE, 53.3 grief	U, 18.7 mischievous	E, 15.1 friend	**IE, 12.9** **pie**	AE, * lingerie
	I, * carried				

Table A2-3 (2 of 3)
Usage Frequency of Letters For English Phonemes

Grapheme Occurrences in 100,000 word sample	Each cell below has (1) phoneme represented, (2) percentage of use in common English prose (Dr. Godfrey Dewey's 100,000 word sample), and (3) an example word. The phoneme pronunciation in the table is shown by these examples: Th**A**t p**E**t d**I**d n**O**t r**U**n. M**AE** Gr**EE**n tr**IE**d r**OE** gl**UE**. H**AU**l g**OO**d **OI**l **OU**t. **Y**e**S**, **G**a**NG**, **FaX** **TH**e **SH**ip **CH**art				
7. O 19,214	U, 52.1 son	OE, 14.6 no	**O, 12.7** **hot**	UE, 8.9 do	AU, 8.7 soft
	OO, 0.3 wolf	I, 0.2 women	silent, 0.2 sophomore		
8. OE 64	U, 82.8 does	**OE, 17.2** **toe**			
9. U 3,407	**U, 78.9** **nut**	YUE, 8.6 cute	OO, 5.1 pull	I, 3.0 busy	YOO, 2.5 during
	UE, 1.9 flu	E, * bury	F, * lieutenant	W, * persuade	
10. UE 153	**UE, 59.5** **sue**	YUE, 40.5 fuel	E, * guest	U, * lacquer	OO, * tissue
11. AU 169	**AU, 89.9** **haul**	U, 10.1 restaurant	A, * aunt	O, * nautical	OU, * saurkraut
12. OO 998	**OO, 72.7** **good**	UE, 27.3 too	U, * blood		
13. OI 63	**OI, 100.0** **oil**				
14. OU 2,763	**OU, 44.3** **out**	UE, 28.6 soup	U, 18.8 rough	OE, 5.4 soul	OO, 2.9 bouillon
	AU, * cough				
15. F 8,148	V, 54.8 of	**F, 45.2** **fan**			
16. G 1,816	**G, 89.7** **go**	J, 10.3 gem	ZH, * garage		
17. S 12,754	Z, 59.1 is	**S, 40.1** **sat**	SH, 0.4 sure	ZH, 0.4 treasure	

Table A2-3 (3 of 3)
Usage Frequency of Letters For English Phonemes

Grapheme Occurrences in 100,000 word sample	Each cell below has (1) phoneme represented, (2) percentage of use in common English prose (Dr. Godfrey Dewey's 100,000 word sample), and (3) an example word. The phoneme pronunciation in the table is shown by these examples: Th**A**t p**E**t d**I**d n**O**t r**U**n. M**AE** Gr**EE**n tr**IE**d r**OE** gl**UE**. H**AU**l g**OO**d **OI**l **OU**t. **Y**e**S**, **G**a**NG**, **F**a**X** **TH**e **SH**ip **CH**art				
18. X 238	**KS, 69.7** **exit**	GZ, 15.6 exam	K, 14.7 except	GZH, * luxurious	KSH, * luxury
	Z, * xylophone	(n)GSH anxious			
19. Y 4,465	EE, 47.3 busy	**Y, 29.9** **yet**	IE, 21.4 by	I, 1.2 myth	U, 0.2 physician
20. CH 369	**CH, 96.5** **chip**	SH, 1.8 machine	K, 1.7 choir	J, * spinach	
21. NG 1,546	**NG, 93.1** **singer**	NJ, 5.4 plunge	NGG, 1.5 single		
22. SH 3,052	**SH, 100.0** **ship**	S, * dishonest	Z, * dishonor		
23. TH 389	**TH, 88.6** **then**	TT, 11.4 thin	T, * thyme	CH, * posthumous	

Table A2-3 above shows the phonemes represented by the 23 graphemes in traditional spelling of all 14 vowels, 5 of the 18 single consonants, and 4 of the 6 consonant digraphs. Seven graphemes, *B, K, P, R, V, TT,* and *ZH,* represent only one phoneme in traditional spelling. The *T* grapheme represents the phoneme as in the word *tap* 98.9% of the time and the phoneme *CH* as in the word *nature* 1.1% of the time and two other spellings less than one percent of the time. The other 7 graphemes, *D, H, J, L, M, N, W,* and *Z*, each represent from one to three unusual phonemes, all of which total less than one percent of the usages. (23+7+1+7 totals 38, the number of phonemes in NuEnglish.) This table shows that there are 7 phonemes that NuEnglish does not spell with the ***most-used*** spelling in traditional spelling (*E, IE, O, OE, F, S*, and *Y*). In addition the AE grapheme is used although very few English words use this spelling for this phoneme because all other choices conflict with other vowel choices. And since traditional English spells two different phonemes with *TH*, NuEnglish uses another spelling for the phoneme which is ***less-often used*** in common English usage. See the next table, Table A2-4, for an explanation of the reason for choices of graphemes different than traditional spelling.

Table A2-4
Reason For the Choices of Graphemes to Represent the Phonemes in NuEnglish

English Grapheme *	NuEnglish Grapheme Chosen	Reason the ***most-used*** grapheme in traditional spelling was not chosen (NuEnglish spelling ***always*** represents the phoneme in the word)
m**E**t	E	due to the illogical use of *E*, pronounced as *U* in the word "nut," in unaccented syllables
p**IE**	IE	because of changing *Y* to *I* and adding *ES* or *ED* for plurals and past tense
p**O**p	O	due to the illogical use of *O*, pronounced as *U* in the word "nut," in unaccented syllables
t**OE**	OE	based entirely upon the common word "does," where the *OE* is pronounced as a *U*
Fan	F	based entirely upon the word "of," where the *F* has a *V* sound (pronunciation)
Sat	S	due to "is, was," and plurals such as "bags," where *S* has a *Z* pronunciation
Yet	Y	because of words ending in *Y* that have an *EE* or *IE* pronunciation, but Y must be used as in "yet"
m**AE**lstrom	AE	because letters other than *AE* conflict with letters that must be used for other phonemes
THin	TT	Traditional spelling uses *TH* for the two different phonemes, as in "then" and "thin." (The words "thin" and "then," in fact, are usually pronounced exactly the same except for the starting phoneme.) A very large number of English words are distinguished by whether or not the vocal cords are humming when the *TH* grapheme is read. In order to ease learning and prevent confusion for beginning readers, ***EVERY*** phoneme in NuEnglish has only ***ONE*** spelling (one grapheme). NuEnglish uses TH for the phoneme that is ***most-used*** in traditional spelling.

* The English grapheme **and** phoneme is the bold, capitalized letter(s) in the sample word.

Appendix 3
Why English Spelling Is So Bad*

"Just before the beginning of the Christian Era, the inhabitants of the British Isles were illiterate Celtic peoples, with no written language. Fifty-five years after the birth of Christ, when Julius Caesar commenced the conquest of the islands, he found a number of hardy, adventurous Vikings from Iceland and Norway living among the Celts, who had adopted some of the Norse words into the Celtic tongue. Four centuries after Caesar's conquest, the islands were under Roman domination, and the language of the rulers, the soldiers, the merchants, and the law was spoken Latin, which differed considerably from the elaborate written Latin of Caesar and Cicero.

"Naturally, the language of the natives was greatly modified during this occupation, but it was never completely romanized; in fact, the Celtic tongue is used in Wales down to the present day.

"At the beginning of the fifth century the Romans withdrew from England, which was soon overrun and conquered by the Angles and Saxons, Germanic tribes from the region south of Denmark. During the next six hundred years, the language of the island natives was greatly altered by the necessity of understanding and using the language of their new rulers. The fusion of tongues that grew out of this condition became known as Anglo-Saxon. It was spoken quite generally, but very little of it was written.

"Then, in 1066, William the Conqueror from Normandy made himself king of England, and for the next three hundred years the language of the court, laws, and trade became Norman French. So during these years the speech of the common man was again enriched by the inclusion of hundreds of words of Norman and French origin.

"Thus for hundreds of years the spoken language of these island people grew, changed, and developed. All the laws and literature of each period were written only in the language of the rulers.

"It was not until the year 1256, thirteen hundred years after Caesar's invasion of the islands, that the first public document was written in what

we call English—it was the language of the common man, compounded through the centuries of Celtic, Norse, Icelandic, [Latin], Anglo-Saxon, German, Danish, and French words!

"Having grown in this manner, with its roots in the languages of so many different lands, English has the richest vocabulary in the world. It has many synonyms for most of its words. Note, for instance, the sources of the synonyms for growth, used quite naturally within these few paragraphs; grow from Anglo-Saxon, change from Celtic through Old French, alter and modify from French, develop and vary from Latin."

Unfortunately, English also inherited many types of orthography, and so is as difficult in spelling as any alphabet language in the world. English is unusually rich in vowel sounds, many more sounds than letters. When spoken English was put into written form, using Roman letters, there were only five Roman vowels.... Seven of the pure English vowel sounds are not found in Latin at all....

There were a few phonetic experts in those days, but they made a sorry tangle of it. We are still struggling to get out of that tangle.

* Frank C. Laubach, *Teaching the World to Read* (New York: Friendship Press, 1947) pp. 100-102.

Appendix 4
A Practical Exercise

This appendix is taken from *The Little Red Book of Wisdom*, an excellent book by Mark DeMoss (Nashville, Tennessee: Thomas Nelson, Inc., 2007) ISBN 978-0-7852-2168-5 containing eleven chapters of practical wisdom for your professional life and twenty-two chapters of practical wisdom for your personal life. Chapter 9 from this book shows the very impressive way Mark DeMoss deals with his employees. It is shown here in NuEnglish.

GOOD PĒPUL OR EVRĒ-TTING; MUNĒ IZUN'T

Yū kan bē u pursun'z handz but yū kan't
bē hiz hort. Hiz hort iz hwer
*hiz entt*ūzēazum iz, hiz loiultē iz.*
Stēvun [Stephen] Kuvē [Covey]

Thē īd*ēu kām tū mē 7 yirz u-gō, but Ī rem*embur, az if it wur yesturdā, thu mentul konflikt that kām witt it. Ī wuz thu yung prezidunt uv u relutivlē nū furm witt thē un-komun īd*ēu tū re*waurd good wurk witt nō wurk at aul. Az mī valyubul vīs prezidunt'z 1st 5-yir mork upr*ōcht, Ī wundurd if it woodun't bē wīz tū prē-empt enē burn-out bī giving hur pād lēv—u sab*atikul—then māking that 5-yir re*waurd standurd kumpunē polisē.

Thu dis*entur in mī hed endud evrē sentuns witt u qeschun mork. Kood u kumpunē uv 8 ōr 10 pēpul u-fōrd in wurk-lōd u-lōn tū giv up u kē pursun, ēvun fōr u fyū wēks? Hwut u-bout klīunts hū rel*īd on hur survis and kounsul? Hwut if, during hur tīm u-wā, shē des*īdud tū chānj kumpunēz ōr kur*irz? Hwut if mōr and mōr emploi*ēz beg*an tū qolifī? (Ī nou bel*ēv 1 uv thē indikāturz uv thu strengtt uv our furm iz hou menē pēpul hav tākun sab*atikulz.) Hwut then? Fyū kumpunēz aufur that kīnd uv tīm auf—mā-bē fōr good rēzun.

Ī tōld mī-self that thu risks uv undur-rīting u sab*atikul faul for be-lō thu risk uv u valyūd emploi*ē fēling rung out and un-upr*ēshēātud. Furthur-mōr, if 1 pursun'z absuns kan jepurdīz an ent*īr opur*āshun, wē had bigur problumz than tīm auf. Ī aul-sō ttaut uv thu plezhur uv teling u fātt-ful wurkur tū rap up 5 yirz uv efurt bī rē-fyūling hur pursu-nul intrests, then kuming bak tū us. Sum-1 hū found hur-self re-nūd aftur thu 1st 5 yirz, Ī rēzund, wuz mōr līklē tū stā u sekund 5.

Sō witt sum fanfar, Ī intrōd*ūst Thu DuMaus [DeMoss] Grūp sab*atikul. Aftur 5 yirz uv survis, enē emploi*ē uv enē rank (kumpunēz that aufur sab*atikulz tipiklē limit them tū egz*ekyutivz) wuz en-tītuld tū 4 kuns*ekyutiv wēks uv pād lēv—witt thē opshun tū ut*ach un-uthur wēk uv regyulur vāk*āshun. Wē aul-sō wood rē-imb*urs up tū $2,500 in travul exp*ensuz.

Tū shō that Thu DuMaus Grūp ment biznus, enē-1 on sab*atikul wood bē fullē extr*aktud frum aul furm wurk. Nō cheking e-māl ōr vois māl. Nō kaulz, fōr enē rēzun, frum felō emploi*ēz. Ther wood bē nō biznus ōr prōf*eshunul req*īrmunt, such az rēding ōr tāking an ejuk*āshunul kōrs. In ret*urn, Ī askt ōnlē that thu pursun tāking u sab*atikul kum*it tū spend at lēst 1 mōr yir witt us.

Bett [Beth] yūzd hur tīm u-wā that yir tū hīk thu nōrtt kōst uv Mān [Maine], vizit familē and frendz in Nōrtt Karōl*īnu [Carolina] and Vurj*inyu [Virginia], and spend tīm dūing nu-tting at aul. Mēn-hwīl, Ī kunf*es that unt*il shē waukt bak in thu frunt dōr—our exp*irimunt in this purk—Ī hadun't rēulīzd that Ī kood hōld mĪ brett fōr 5 wēks. During that tīm, wē didun't spēk wuns. Tū mī del*īt, thu hwēlz uv thu furm rōld on az thu tēm deftlē kuvurd Bett's [Beth's] klīunt wurk (rēulīzing uthurz wood dū thu sām fōr them hwen thār sab*atikul rōld u-round).

Just az swēt wuz Bett's sumurē stātmunt on hur wēks u-wā: "Thu tīming wuz imp*ekubul, yū'l nevur nō," shē sed, blōing in thēz dāz witt fresh windz and nū enurjē. Shē ttankt mē az if Ī'd nōn aul u-laung that līk u kor stuk in stop-and-gō sitēē trafik, aftur 5 yirz u pursun nēdz tū flush thu bild-up in hur mentul enjin. In trūtt, litul infōrm*āshun egz*ists fōr ōr ug*enst biznus sab*atikulz. Lojik sez that loiultē runz 2 wāz—an emploi*ē hū givz hur best dez*urvz mī best in ret*urn. Then, tū, az Īnstīn [Einstein] wuns sed, u pursun duzun't sō much nēd rest az vur*īitē.

Sins Bett's polisē-pīun*iring trip tū nōrthurn Mān, 7 pēpul in our smaul kumpunē hav urnd sab*atikulz. 1 spent 5 wēks expl*ōring Austr*ālyu [Australia], having pland out ōnlē 1 wēk uv hiz trip prīur tū bōrding hiz plān fōr Doun Undur. Bett aul-sō qolifīd fōr hur sekund sab*atikul, u land-mork u*waurd that kām up hwen thu 5-yir

sab*atikul beg*an tū help prōd*ūs 10-yir veturunz. Thu 10- yir mork u*waurdz 6 wēks uv pād lēv, u $10,000 bōnus, and u wēk-laung, aul-exp*ensuz-pād trip fōr 2 tū enē Rits Korl-tun [Ritz Carlton] hōt*el ōr rez*ōrt in Um*eriku [America].

Nou, hwut yū'r rēding hir māks sens ōnlē if yū'r aul-sō rēding bet*wēn thu līnz. Thē implik*āshun iz that in biznus, hou yū trēt yur pēpul trumps hwut yū dū witt yur klīunts, skejulz, out-poot, and spred-shēts. Hapē pēpul uf*ekt evrē-tting els. Yū mīt aul-sō rēd bet*wēn thu līnz, in aul kaps, that u kumpunē'z polisē haz tū bē mōr than tauk.

Tū thu grōing list uv inkr*ēsinglē un*ēmik biznus frāzuz līk "kum*itud tū exeluns" and "qolitē kounts"—frāzuz that hed-līn kōrpurut brōsh*urz witt-out figyuring in-tū kumpunē polisē—Ī wood ad, "Pēpul or our best asets." Stat*istiklē, ōnlē haf uv wurking Um*erikunz [Americans] or satis-fīd witt thār jobz. Um*ung thu satisfīd 50 pur-sent, ōnlē 14 pur-sent or "verē satisfīd." Dig u litul furthur and sē that 40 pur-sent uv aul Um*eriku'z [America's] wurkurz fēl dis-kun*ektud frum thār emp*loiurz; 2-3rdz kum tū wurk witt skant mōtiv*āshun tū help uch*ēv thār emp*loiurz' biznus gōlz ōr ubj*ektivz; 25 pur-sent adm*it tū shōing up just tū kōl*ekt u pā-chek.

Mī ōn jurnē frum an es*enshullē aut*onumus P-R kuns*ultunt tū thu hed uv u furm haz ben u star-wā uv verē hyūmun in-sīts. Chēf um*ung them iz that witt-out good pēpul—trustud, prōf*eshunul, resp*ektud, mōtivātud, insp*īrd, restud pēpul—Ī hav nō furm. Urlē on Ī rez*olvd tū utr*akt 1st-rāt emploi*ēz and kēp them az laung az posu-bul, u simpul konsept in hwich munē fakturz les than sum mīt ttink. Tū ilustrāt, wuns hwen u grāt emploi*ē left us tū mūv bak tū hiz fāvrut stāt, u klīunt urjd mē tū aufur him mōr munē tū stā. Thu klīunt's sugj*eschun wuz u komplu-munt and u straung vōt uv konfiduns, but Ī nū betur; pur-sunul des*izhunz ultimutlē hav nō prīs.

On that nōt, thō Thu DuMaus Grūp pāz kump*etitivlē, sum uv our emploi*ēz wilinglē left hīur-pāing jobz tū join us. And thō evrē pur-sun'z des*izhun haz its ōn in-tanjubulz, Ī bel*ēv u chois uv hwer tū wurk trāsuz tū 4 es*enshul mōtivāturz.

Thu 1st mōtivātur iz mishun. Kumyūnik*āshunz prōf*eshunulz wont-ing tū yūz thār skilz tū adv*ans thu wurk uv fātt-bāst ōrguniz*āshunz and kauzuz wil luv it hir. Aul onest wurk glōrifīz God, that's u givun. Sum uv our emploi*ēz, fōr thār port, wirēd uv prōm*ōting grōsrē stōr grand ōpuningz and hōt*el konfruns fus*ilitēz—wurk dun in prēvēus publik rel*āshunz jobz. Thā wontud thār skilz tū mōr dir*ektlē sup*ōrt Krischun [Christian] ōrguniz*āshunz and kauzuz, and that iz hwut Thu DuMaus Grūp iz in

biznus tū dū. In thu hīurorkē uv u kumpunē'z rēzun fōr bēing, u dā witt Thu DuMaus Grūp iz mōr than u job des*kripshun witt u dolur sīn; it's u mishun tū dū Sum-tting that Maturz.

Thu 2nd mōtivātur iz u good lēdur. Not neses*arilē thu smortest ōr brītest—ōr Ī'd hav mōr trubul utr*akting emploi*ēz—but u lēdur fixt on mishun and kum*itud tū thu pēpul hū help purs*ū it. In mī dez*īr tū wā mī kumpunē'z evrē mūv in turmz uv its ef*ekt on aul emploi*ēz, Ī pā mī-self les munē nou than hwen our furm wuz haf its kurunt sīz. Ī'v lurnd 1st-hand that pēpul hav an ēzēur tīm surving u lēdur hū iz hōl-hortudlē surving them.

3rd iz kōrpurut kulchur, and evrē kumpunē haz 1: that un-ritun kōd uv wurk env*īurnmunt, pēpul kemistrē, trud*ishunz, and manujmunt stīl—ēvun dres kōd (kazhūul dres iz aul-mōst aul-wāz ax*eptubul hir; and, nō, our wurk haz not sufurd)-and wethur it fōrsuz thē emploi*ē tū def*end hiz turf ōr frēz him tū help thē ent*īr grūp gān nū ground.

Wē del*iburutlē wurk in u klas-A aufis pork witt u vyū frum our 5tt-flōr aufisuz that, on u klir dā, strechuz 20 mīlz tū hist*ōrik Stōn Mountun. Hwī not sāv munē in u singgul-stōrē kum*urshul aufis kumpl*ex? Thē an-sur iz that aul uv us, kōl*ektivlē, or wiling tū shāv profit-sharing fōr wurk spās that tāks in byūtē. Wē aul-sō valyū thē anyūul faul retr*ēt fōr aul staf and spousuz, prar and Bībul studē evrē Mundā mōrning, snaks and drinks in our kaf*ā and our "qīut rūm" witt mus*ozh charz and noiz-kansuling hed-fōnz.

Thu Du Maus Grūp kulchur'z waurp and woof iz kōlabur*āshun and tēm-wurk. Wē prēch and praktis ōpun-dōr manujmunt. Wē jointlē kum*emurāt vikturēz and kuns*ōl 1 un-uthur on enē-tting that faulz shōrt. Hwen konflikts u-rīz, hwich iz seldum, thē undur-līing us*umpshun iz ēch pursun'z valyū. Thu wurd that ekōz bak tū us ōvur thu yirz iz that ēvun thōz hū hav left our furm ut*est tū its rar kōrpurut kulchur.

Ī sed that munē iz les u mōtivātur than sum mīt im*ajin, and thō it kan not mach mishun, lēdurship, and kulchur, it definitlē fakturz. Thu 4tt mōtivātur iz kompens*āshun/benefits: salurē, heltt in-shuruns, ret*īrmunt planz, vāk*āshun skejulz, and uthur purks. Thu muj*ōritē uv our kump*etitiv benefits took shāp in an emploi*ē kum*itē uv hwich nēthur Ī nōr enē vīs prezidunt wuz u membur. Our emploi*ēz or satisfīd witt our menyū-stīl benefits prōgram be-kauz thā dez*īnd it. Thā aul-sō port*isipāt in u profit-sharing pūl ēch yir, u tanjubul re*waurd fōr hord wurk, good atitūd and solid rez*ults fōr our klīunts.

Thu Galup *[Gallup] Manujmunt Jurnul* rēsuntlē ran u studē that plāst Thu DuMaus Grūp in u smaul min*ōritē (27 pur-sent) uv Um*erikun [American] wurk-plāsuz hūz emploi*ēz or "eng*ājd," that iz, pashunutlē and prōf*oundlē kun*ektud. Mī rē*akshun tū that nūz iz les prīd in our

surkumstansuz than u sens uv trajudē fōr thu muj*ōritē uv Um*erikunz un-ābul tū us*ōsēāt 8-plus ourz uv wurk u dā witt pur-sunul mēning, much les joi.

In un-uthur rēsunt ranking, our emploi*ēz' resp*onsuz plāst us 8tt in thē *Atl*antu [Atlanta] Biznus Kronikul'z* survā uv Atl*antu'z [Atlanta's] A+ Emp*loiurz (undur 100 emploi*ēz). Thu Best Krischun Wurk-plāsuz Institūt rankt us 1st thu past 2 yirz um*ung produkts and survi-suz kumpunēz witt fyūur than 90 emploi*ēz, u survā in kunj*unkshun witt *Krischē*anitē [Christianity] Tū-dā* maguz*ēn and thu Krischun Manujmunt Usōsē*āshun. Uthur furmz, ēvun klīunts, frēquntlē kum tū us witt qeschunz u-bout our sab*atikul prōgram and our kōrpurut kul-chur.

If Ī had tū dist*il it tū an epigram, Ī'd sā that in biznus, u lēdur duz wel tū ttink les u-bout bēing grāt and brilyunt than bēing good and uprēshēu-tiv. M-B-Az, manujmunt kuns*ultunts, and konfrunsuz aul pōt*enshullē hav grāt lesunz fōr us. But thu best biznus kās studē, fōr mē, on hou tū kēp good emploi*ēz, stortud witt mē nurv-raking des*izhun tū send mī best pēpul out thu frunt dōr fōr u hwīl. Thu point iz that Ī had tū māk it u-bout them and not mē be-kauz good pēpul orn't just thu mān tting u-round hir, thā or *evrē-tting*.

Appendix 5
Comparing Our Proposal With Other Proposals

This appendix could have listed the characteristics of numerous spelling reform proposals over the last two centuries or more and compared them with NuEnglish—as the original edition of this book did. It became apparent, however, that the only persons interested in reading the comparison tables showing the different characteristics of the spelling systems in the original edition were those who either invented a spelling system or who had been advocating one of them for a period of time—to be sure their spelling system was not misrepresented. It therefore made more sense, in this updated appendix, to employ the same tactic that banks use to train their money-handlers to recognize counterfeit money: they become ***very*** familiar with genuine bills and spend no time whatsoever examining counterfeit bills.

In a sense, that is what this appendix will do: help you become very familiar with the design and logic behind NuEnglish. It will soon become obvious to any unbiased observer that NuEnglish is so easy to learn for both beginners and those who can presently read that there are few, if any, improvements that can make it any easier to learn. Even more importantly, waiting until everyone agrees that a spelling system is "as good as it can get" will only serve to prolong the suffering of hundreds of millions of English-speaking people around the world who are functionally illiterate in English.

There is a common saying, "It takes all kinds of people to make a world." If you are an extreme skeptic who distrusts everything you read until you personally verify it, then you are certainly welcome to examine dozens of other proposed spelling systems, as the author has done for the last twenty-eight years. An Internet website, http://www.wyrdplay.org/reform-files.html, provides links to dozens of other websites which have a description of other proposed spelling systems. In the extremely unlikely event that you find a spelling system that is provably easier to learn—*primarily* for the beginning reader and *secondarily*

for present readers of traditional English spelling—please notify Literacy Research Associates, Inc. immediately at literacy_research@msn.com.

However, if you are the inventor or an advocate of another spelling system, please *do not* contact us—we want *unbiased* information. The author has been a keen observer of human nature for many years, but he never ceases to be amazed at just how biased—almost to the point of "blindness"—that people can be. Perhaps you have heard the familiar couplet, "A man convinced against his will, is of the same opinion still." Perhaps you have even—as I have—proven something to someone and then see them a day or two later and they say, "I *still* believe…[whatever they believed before]. There must be some trick to your proof."

The author spent a large portion of his time for eight months in late 2006 and early 2007 communicating by email with four groups of spelling reform advocates, potentially numbering more than 530 persons. He read *hundreds* of emails during that period, and he *sent* about a dozen emails describing NuEnglish. Amazingly he had advocates of a particular system who assured him that their spelling system was easier to learn than NuEnglish, but when carefully examined, none of them were noticeably better, and some were quite obviously much more complicated to learn than NuEnglish. For example, one advocate had the audacity to claim that his system was easier to learn, but the description of his spelling system required a large three or four page table with dozens of example words in his spelling system and in traditional spelling followed by thirty or forty spelling rules, some with exceptions! Furthermore, several of the phonemes could be spelled with more than one grapheme. The author saw several proposed systems that the inventor or advocate claimed were easy to learn, but the claim was only true if you were already very familiar with traditional spelling. Many of the systems which were claimed to be easy to learn only seemed easy to the inventor—*of course* the inventor easily understands something that he invented!

One of two conclusions can be reached concerning those who sent the author emails claiming their spelling system was easier to learn than NuEnglish: they either did not carefully, honestly examine NuEnglish (which is likely) or they have a very weird idea of what the word "easier" means.

Characteristics of NuEnglish

Keep this in mind concerning the design of NuEnglish: spelling with NuEnglish will be extremely easy—once you know which grapheme represents each phoneme, if you know how to pronounce a word, you know how to spell it. So NuEnglish should be (and is) based upon the frequency of the

graphemes used in traditional spelling for the phonemes in regular English prose, as a means of making it also easy for present readers to learn.

In dozens of email exchanges with spelling reform advocates, they usually wanted to base the choice of graphemes upon *dictionary* frequency rather than *usage* frequency. Using dictionary frequency will not help present readers learn to read NuEnglish—present readers will want to see NuEnglish phonemes spelled the way they most often see them spelled in common written material in traditional spelling. This is what NuEnglish does.

Making it Easier for Beginning Readers

The grapheme/phoneme correspondence is simple and logical: use single vowels for the more-often used "short" vowels, as in "That pet did not run." Add an *E* or a macron for the less-frequently used "long" vowels, as in "Mae Green tried roe glue." ("Short" and "long" are commonly used designations, not phonetic terms.) There are only four other vowels, as in "Haul good oil out." Use all of the single consonants except *C, Q*, and *X* as they are most-often used or are expected to be used. There are only six consonant digraphs, as in *chip, ship, ttin (thin* in present spelling, which does not distinguish between the two pronunciations of the *TH* grapheme), *then, sing*, and *muzhik* (an English word meaning a Russian peasant). Note that the letter *C* is only used in the *CH* digraph. *Q* and *X* are used only for the *KW* and *KS* phoneme blends, respectively. All other combinations of phonemes (such as *yue*—for the "long *U*" sound in the word "fuel") are phoneme blends.

What makes NuEnglish particularly easy, unlike dozens of proposed spelling systems seen over the last twenty-eight years, is that (1) every grapheme represents only one phoneme and every phoneme is spelled with only one grapheme—without any exceptions (this is not true of any other spelling system the author has seen). Any exceptions require additional learning, (2) there are only 23 single letters (all except C, Q, and X) and only 15 digraphs (two letters) used for the 38 phoneme spellings that must be learned (or 10 digraphs and 5 “long vowels” with macrons), (3) every sound is represented and is in strict first-to-last order, (4) there are no silent letters, (5) there are no double-letters representing a single phoneme except for *OO* and *TT* (and *EE* if macrons are not used), and (6) an asterisk is used immediately before the vowel in the syllable with the primary emphasis, unless primary emphasis is on the first syllable. (Knowing which syllable has the primary emphasis helps considerably in quickly recognizing a word.)

Making it Easier for Present Readers

As stated above, the choices of which graphemes are used for each of the phonemes are based upon the most common usage in present spelling or the way the grapheme is expected to be used. The only exceptions to choosing the most-used grapheme are the following six. (1) Present readers expect the letters *E* and *O* to have the sound as in "pet" and "pot," respectively, but more often they have the sound of the *U* in "nut" because they so often are used in the last, unaccented syllable of words. (2) Present readers expect the digraph *IE* to have the sound as in "pie," but it more often has the sound as in "carried" because of changing *Y* to *I* and adding *ED* or *ES* for past tenses and possessives. (3) Present readers expect the *OE* digraph to have the sound as in "doe," but it more often has the sound of the *U* in "nut" entirely because of the very common word "does." (4) Present readers expect the letter *F* to have the sound as in "fan," but it more often has the sound of a *V* entirely because of the very common word "of." (5) Present readers expect the letter *S* to have the sound as in "set," but more often it has the sound of a *Z* because of the very common words "is" and "was" and plurals such as "bags." (6) Present readers expect the letter *Y* to have the sound as in "yet," but more often it has the sound as in "bee" because of words ending in *Y*. NuEnglish uses graphemes to represent the phoneme that readers expect in all six of these exceptions.

Thirty of the thirty-eight letters chosen to represent the phonemes (78.9 percent of them) thus have the most-used grapheme for that phoneme in present English spelling. If it were not for the two very common words, "of" and "does," thirty-two of the thirty-eight (84.2%) would be the most-used graphemes for the phonemes in traditional spelling.

In twenty-eight years of studying spelling reform proposals, I have never seen a spelling reform proposal which has even ***one*** of the following characteristics. (1) It is based upon choosing graphemes which are the ***most-used*** graphemes for each phoneme or the ***expected*** grapheme for each phoneme according to ***usage*** in typical English prose. (2) It *never* uses a grapheme for more than one phoneme. (3) It *never* spells a phoneme with more than one grapheme. NuEnglish does all three and can very accurately be described as a logical, engineering approach to spelling reform—it was designed by an engineer.

Using the graphemes that are most-used or expected for every phoneme makes reading NuEnglish so easy for present readers that everyone

who has tried has been able to read NuEnglish aloud to the author at a normal speaking rate with only an occasional four to six second stumble over a word even though they had not been shown the spelling system beforehand.

Must Spelling Be Like English to Be Acceptable?

All variation from a perfect one-sound-to-one-symbol correspondence is counterproductive. Variations from one-to-one correspondence may make the spelling system more like English, but it also makes it harder to learn and defeats the very *purpose of inventing* another alphabet.

Knowledge of people's natural tendency to resist change has caused scholars in the past to advocate spelling systems that are less than ideal—at least partly to improve their chances of acceptance among those who could already read. In the twenty-first century, however, it is important to consider three important facts:

1. Some of the strongest resistance to change comes, not from the masses who will benefit the most from it, but from the scholars' own peers, many of whom will gain from keeping our spelling unchanged. In many cases, the beliefs and desires of the scholars' associates will have more influence upon them than the beliefs and desires of the nameless, faceless masses. Scholars who have spent a lifetime studying language skills, reading difficulties, and teaching methods will understandably be skeptical of a system that will make their previous research and teaching skills unneeded.
2. Many scholars believe a simplified spelling system must have some of the inconsistencies of English to be acceptable to those who already read English. Therefore, scholars have not adequately researched the acceptability of a phonemically perfect system that is very different, yet very easy.
3. With our increasingly complex society, in which one form or another of information processing is rapidly replacing manual labor, the need for a highly literate society has now reached crisis proportions. Our position in the family of nations will continue to slip until we are willing to face this resistance to change head-on and solve our literacy problems.

Is NuEnglish the Logical Ideal or Minimum Alphabet?

NuEnglish is not the ideal digraphic language, logically speaking. Ideally, NuEnglish would be changed as follows: use the *X* and *Q* graphemes for the *AU* and *OO* phonemes and add an *E* or a macron to these for the *OI* and *OU* graphemes. The *C* grapheme would represent the *CH* phoneme, as in the word *cello*. The *KS* and *KW* blends would be spelled out, as are the other phonemes represented by *X* and *Q* in NuEnglish. In this way the fourteen vowel phonemes would be represented by seven single letters plus the addition of an *E* or a macron to these letters. This proposal would only reduce the number of letters in typical written material by 1.6 percent or less, because all the phonemes involved are among the least used. This small gain does not justify the additional learning involved.

One example of an absolute *minimum* number of graphemes possible in a spelling system could be made by changing some of the NuEnglish graphemes as follows: (the first grapheme on each side of the dot is NuEnglish; macrons are not available for most of the consonants)

(1) i,y . i (2) ue, w . w (3) au . x (4) oi . ẍ (5) ou . ū (6) oo . ŵ (7) ch . ĉ (8) sh . c (9) th . ǫ (10) tt . ǭ (11) zh . ŷ (12) ng . y.

(Basically, the minimum alphabet replaces all the digraphs with C, Q, X, W, and Y, with and without a mark above the letter.) All of the single consonants would be the same as NuEnglish. This alphabet is 4.1 percent shorter than NuEnglish, but only 50 percent of phonemes use graphemes that are most used English graphemes (instead of 76.3 percent as in NuEnglish), and only 67.6 percent of graphemes represent the same phoneme as in English (instead of 97.4 percent as in NuEnglish). A 4.1 percent improvement does not justify the additional learning required.

Summary

Scholars and researchers may profit from endless speculations upon the chance that any given proposed alphabet may prove inadequate in some way "if we test it on enough different combinations of many thousands of words." The following quote by Edward Rondthaler and Edward Lias should resolve the matter:

> Vivian Ducat…puts into words a truism we instinctively know to be correct but do not fully appreciate until it is expressed very simply: "Anything becomes familiar if you see it often enough." [1]

With NuEnglish you very soon become familiar with the thirty-eight phonemes from seeing them over and over, spelled the same way every time. Those who might benefit from more research or who are too cautious about (or resistant to) change will no doubt want to examine other possibilities. Phoneticists might desire an alphabet that includes several more sounds, although, for the practical purpose of understanding what someone is saying, NuEnglish is more than adequate. But the significant points are these:

1. NuEnglish is logical, workable, and very easy to use.
2. The chance of significantly improving upon NuEnglish, regardless of how much research is done, is very small.
3. The need for a workable solution to English illiteracy is very great and growing.
4. Hundreds of millions of people will be hurt by our failure to act upon what we already know!

Appendix 6
Is There Really a Literacy Crisis?

The information presented in the text of this book will, in most cases, be sufficient to convince any open-minded reader of the existence of the literacy crisis. This appendix is included for those who have a vested interest in believing there is no literacy crisis—and for those who may have seen and believed one or more reports or a recently published book claiming otherwise. There is a large volume of material published by educators which, in effect, defends the practices and beliefs of educators. The groups most likely to disbelieve that there is a literacy crisis are teachers, educational administrators, some of the politicians most closely involved in educational policies, and some of the parents of students who learned to read with little difficulty. When people read and believe material published by a profession that they revere, they may believe that any conflicting information contains errors or omissions that render it untrue. This appears to be the conclusion of the author of a recently published book.

The first chapter of this book, published in 1998, disputes the reality of a literacy crisis in the U.S. by supposedly answering seven statements about education in the U.S. which the book classifies as myths. As a safety engineer in a solid propellant rocket missile plant, it was necessary to carefully examine what the engineers advocating as an improvement in the manufacturing procedure, ingredients, or equipment offered as proof that the change was safe. Failure to do so could result in an explosion that killed dozens of people and destroyed facilities, products, and equipment worth millions of dollars. What was offered as proof was sometimes found to be no more than the engineers' biased evaluation of what they saw as an improvement. The presentation of facts in the first chapter of the above-mentioned book was similar to many of the engineers' presentations of facts. Although the facts presented may appear impressive, when carefully analyzed they do not add up to a proof of what they are supposed to prove.

Unlike this book, the above-mentioned book does not answer opposing views point-by-point. For example, it mentions Dr. McGuinness' book, *Why Our Children Can't Read,* but never mentions any of the facts she presented in her book. The same is true of all of the research findings presented in this book, nearly all of which was available to the author of the above-mentioned book.

The **first statement** dismissed as a myth was the claim that student's reading abilities have declined in the last twenty-five years. The federal government's National Assessment of Educational Progress (NAEP) testing began in the late 1960s. NAEP data are shown for nine of the test results for the 1971 to 1996 period. These data show little if any change in test scores during this period. There are three problems with this, however. The first is that most of the decline in reading ability occurred before 1971. Little change in teaching methods occurred between 1971 and 1996. The decline in reading ability has been continuing to some extent ever since about 1810. The most serious decline occurred since the early 1920s when whole-word or look-and-say methods increasingly came into use. Further declines occurred as a multitude of pleasant and time consuming activities were introduced and as a similar multitude of detriments to learning occurred, as Chapter 5 of this book explains. Student Aptitude Test (SAT) results, which students desiring to attend college often take, showed the most recent decline, beginning in the early 1960s.

A second problem with using only the NAEP data to gage reading ability is that it only compares what individual students are learning about reading in their age group in school as compared to the average student scores for that age group and is not in any way tied to the results they achieve later as adults in functional literacy tests. The educational problems detailed in the NAEP's 1985 report that came to be known as the "Nation at Risk" report (which an April 20, 2003 report shows to still be a serious problem) and the 1993 report titled "Adult Literacy in America," which is summarized in the second chapter of this book, shows that 48.7 percent of adult Americans read so poorly they have difficulty holding a job that provides an above-poverty-level income. What is important about reading is not so much what is learned as what is *retained* and how *useful* what they have learned is in helping them cope with the everyday problems of life.

A third problem, as Dr. McGuinness shows, is that teachers can manipulate reading test scores by telling poor readers and non-readers to stay home on reading test days. Dr. McGuinness does not document how prevalent the practice is, but she *has* found evidence that the practice exists.

The bottom line on this argument, however, is that proving there has been little change in students learning to read in the last twenty-five years obviously does not prove that a literacy crisis does not exist.

The **second statement** dismissed as a myth is that 40 percent of children in the U.S. cannot read at a basic level. The author points out that although the proficiency levels were established by "a broadly representative panel of teachers, education specialists, and members of the general public," there is disagreement between where the proficiency cut-off for each level should be between fourteen of the states and the NAEP. In some cases the states showed their students to be more proficient than the NAEP tests. Other states showed their students to be less proficient than the NAEP tests. This led to charges of "arbitrariness" in the cut-off levels. The author does not prove that the 40 percent claim is wrong, but he claims that it has not changed in twenty-five years and therefore if it is true, it has been true for twenty-five years and makes the author wonder "how the nation has managed to survive up to this point."

As with the first myth, even if he had proven that more than 40 percent of U.S. students could read at a basic level, it would not prove that there is no literacy crisis.

The **third statement** dismissed as a myth is the claim that 20 percent of U.S. children are dyslexic. In this case, he is correct. He points out that the number of students judged as dyslexic is dependent entirely upon the cut-off point below which students were labeled as dyslexic—because of poor reading ability—in the study which was most often cited in support of this myth: the Connecticut Longitudinal Study (CLS) of the early 1990s. The CLS was ***not*** based upon any neurological measurements. Note 5 in this section also correctly points out that choosing the cut-off points for each competency level upon what average students in the group can do is not a reading standard at all—it is just a measure of what average students in the group can do. Some brain disorder specialists in 2004 estimate that no more than 2 or 3 percent of students have neurological reasons for being unable to read. Disproving the claim that 20 percent of students are dyslexic, however, does not prove that there is not a literacy crisis.

The **fourth statement** that is dismissed as a myth is that students of the baby boomer generation read better than today's students. In this case he may be correct, but proving that today's students read as well as students of the 1940s and 1950s does not in any way prove that the "Adult Literacy in America" study is incorrect. Much of the drop in literacy occurred before the 1940s—***nearly all*** of it occurred before the 1970s.

The **fifth statement** dismissed as a myth is that U.S. students are among the worst readers in the world. He presents data from "the most

recent round of testing" by the International Association for the Evaluation of Educational Achievement reported in 1992, which showed that U.S. nine-year-olds ranked second and U.S. fourteen-year-olds ranked ninth in a thirty-one nation study. Without knowing more about the conditions and controls upon the testing, the results are questionable at best. For example, economic conditions in many nations are such that the schools do not have the financial resources to teach every student to read, so only the top students are allowed to stay in school. In any case, even if U.S. students are not "among the worst in the world," this does not prove that there is not a literacy crisis in the U.S. and other English-speaking nations.

The **sixth statement** judged as a myth is that poor readers are increasing while good readers are decreasing in number. He presents NAEP data for 1971 to 1994 showing that this is not true, but once again, the major drop in literacy occurred before 1971.

The **seventh statement** he calls a myth is that test scores dropped dramatically in California because of the whole language teaching method. He correctly points out that none of the data used to make this claim is dated before California began their whole language type of teaching and is therefore invalid. He then presents data from fourth grade teachers—by which time every student should have been, but wasn't—a fluent reader and finds a slight disadvantage for teaching by the phonics method. The scores were 220, 221, and 208 of a possible 500 for whole language-emphasis, literature-based, and phonics teaching, respectively. As Dr. McGuinness conclusively proves, however, unless the proper method of teaching phonics is used, the teaching will be ineffective. Perhaps the most important factor in using the phonics method is that it should be the first and only teaching method for beginning readers—anything else is confusing to the beginning student and develops in the student the bad habit of guessing at the pronunciation of letters, letter combinations and words. Also, as note 12 of this chapter points out, Fisher and Hiebert's 1990 study "often found *little* correspondence between what teachers called themselves ('whole language,' 'phonics') and the teaching method they actually used."

This is a relative short book: eighty-six pages of text. The first chapter is fourteen pages. Chapters 2 through 7 are basically a defense of California's use of "whole language" and "literature based" teaching methods. The author is an Assistant Professor of Education at a California university. Although he includes an extensive bibliography, he admits that many of the findings in the reports are open to very different interpretations. In any case, it appears that none of the reports he references prove that there is no literacy crisis—if they do, he certainly does not present them.

Appendix 7
Calculating Average Yearly Earnings In the *Adult Literacy in America* Study

The *Adult Literacy in America* study tests adults in three types of abilities, prose, document, and quantitative, very basically: reading, working with forms, and doing the arithmetical calculations they need to "get by" in life as well as they should. Figure 2.7 on page 63 of the 2002 version of the report lists the percentage of adults, by literacy level, who are employed full time, employed part time, unemployed, and out of the labor force (many of whom gave up looking for a job after years of being unsuccessful). Each of these data points were shown for prose (P), document (D), and quantitative (Q), so the first step is to average the three for each literacy level and employment situation. **Level 1 calculations are shown**; other literacy levels are calculated the same way.

Out of work force: 52% P, 53% D, 53% Q: (0.52+0.53+0.53)/3 = 0.527

Fraction working: 1 - 0.527 = 0.473

Weeks worked each year, (page 65): average of 19 P, 19 D, 18 Q (19+19+18)/3 = 18.7 weeks

Percentage of Level 1 adults, from page 17: 21 P, 23 D, 22 Q (21+23+22)/3 = 22 percent

Total U.S. adults, 1993, from page xvi: 191 million

Total Level 1 adults: 191 million x 0.22 = 42.022 million

Level 1 adults working: 42,022,000 x 0.473 = 19,875,546

Median weekly wages (page 66): $240 P, $244 D, $230 Q (240+244+230)/3 = $238

weeks per year worked x median weekly wages x number of Level 1 adults who worked = total earnings by all Level 1 adults, combined

total earnings by all Level 1 adults combined divided by total number of Level 1 adults = average yearly earnings of all Level 1 adults

(18.7 ~~weeks~~) x ($238/~~week~~) x 19,875,546 = $88,458,105,000

$88,458,105,000 divided by 42,022,000 = **$2105 yearly average.**

Appendix 8
The "Problem" of Homonyms

(1) Traugott Rohner, in his book, *Fonetic English Spelling*, prepared a list of the homonyms among the five hundred most common words from the *Teacher's Book of 30,000 Words*. There were *seventy sets* of homonyms in the list. Frequency data from the 30,000-word list was not available, so Dewey's more complete 100,000-word list frequency data (see Chapter 6 Note 43 for data on this word list) were used. There were 10,161 different words in Dewey's 100,000-word list (as compared to a "typical educated adult vocabulary" of roughly 70,000 words—see the "Reading 'Textbooks'" section of Chapter 8). There were more than 78,633 words (i.e., 78.6 percent) in the list that occurred more than ten times (1,027 different words). There were 87,358 root words (1,131 different words) that occurred more than ten times (since root words include individual words appearing ten times or less). The following tabulation shows how often the words in these seventy sets of homonyms appear among the 87,358 root words from the 100,000-word sample:

The left-hand column below is the number of homonyms FROM EACH SET found in the 87,358 words. The middle column is the number of sets. The right-hand column is the number of words.

none *	2	0
one	54	54
two	13	26
three (to, two, and too)	1	3
Total	70	83

* since this was a different word list than that used for the homonyms

This shows that most words in the list of seventy sets of homonyms are in the list because there is an infrequently used word (i.e., less than ten occurrences, or 0.01 percent of the 100,000 words) that sounds like a common word. And since it is common, of course, it is less likely to be misunderstood. More significantly, only six homonym sets have any reasonable

likelihood of being misunderstood, but only the words in one of the six sets (the words *to, too*, and *two*) are among the 87,358 words. Stated differently, seven out of eight words (or 87.36 percent, to be more exact) in typical English written material will not contain any confusing homonyms, and the frequency of any one confusing homonym appearing in typical written material will be less than 0.01 percent of the words (ten out of 100,000).

(2) Concerning context, Edward Rondthaler and Edward Lias state:

> Context will clarify the meaning [of homonyms in written material]—just as it does in our speech. For example:
>
> "Come heer to heer the music."
>
> There's nothing new in using context to clarify meaning. We do it all the time:
>
> "That gold mine is mine."
>
> "Bank at the bank on the bank."
>
> Context is stronger than spelling. If I write
>
> "Come hear to here the music."
>
> you know exactly what I mean. Thousands of words with just one spelling have numerous definitions. The word point has 86! [1] The word *set,* however, is the champion: it "has 58 uses as a noun, 126 as a verb, and 10 as a participial adjective. Its meanings are so various and scattered that it takes the [Oxford English Dictionary] 60,000 words" to discuss them all.[2]

(3) Charles C. Fries, author of *Linguistics and Reading*, as quoted by Dewey, states,

> Context makes clear such distinctions in speech, in which spelling gives no help; still more so in the deliberate processes of reading, with opportunity to glance backward or forward as necessary.

As against a few hundred homophones [homonyms] now distinguished more or less fortuitously by different spellings, there are in [English spelling] many thousands of words of like sound ***and spelling*** (homographs), and there is no demand to create artificial distinctions of these. A few suggestive examples are:

bay (a color, a tree, a part of a building, a body of water, a prolonged bark)
fair (good weather, impartial, an exposition)
right (a privilege, opposite of left, opposite of wrong)
sound (a condition, a noise, a body of water)
spring (a season, a leap, an elastic device)
state (to express in words, a condition, a unit of government)....

Fries reports that for the 500 most used words of English the *Oxford Dictionary* records 14,070 separate and different meanings—an average of 28 different meanings for each word.[3]

Those who object to spelling reform because of spelling homonyms the same in NuEnglish—to be intellectually honest—would have to object even more strongly to the thousands of English words (as opposed to a few hundred homonyms) spelled and pronounced the same with many different meanings!

(4) Dr. David Crystal in his book, *The Cambridge Encyclopedia of Language* provides the clincher: "Normal speech proves to be so rapidly and informally articulated that in fact over half the words cannot be recognized in isolation—and yet listeners have little trouble following it, and can repeat whole sentences accurately." [4]

Appendix 9
What Is Functional Illiteracy?

There are obviously several different ways of determining literacy rate. What should be sought in any determination of literacy rate is accuracy. If researchers have an agenda in their determination of literacy they can determine the outcome by (1) carefully choosing the interviewees or subjects of the study, (2) carefully choosing starting and ending dates of the study in the collection of the data, or by (3) eliminating some of the test data as being "irrelevant" or "erroneous." Even if the researchers do not have an agenda their results can be erroneous if they do not include enough study subjects or a long enough study period or if a method that is not statistically accurate is used.

Many studies of illiteracy are based upon simply asking people if they are literate, or what grade in school they completed. Other studies are concluded very soon because the researchers incorrectly decide they have found enough data to be representative of the entire group of people they are studying.

Many believe that the U.S. is a highly literate society because of the official U.S. Census Bureau reports. See information in "The U.S. Census Reports" section of Chapter 2 for why the U.S. Census Bureau reports on U.S. literacy rates have been proven to be inaccurate.

Quite obviously, a study method that ***tests*** the literacy of each interviewee is far superior to one in which the subjects of the study are simply asked if they can read. Testing was the method that was used in the *Adult Literacy in America* study. We have all seen studies or polls in which 1,000 people are studied and then see the statement that the study represents the entire U.S. population with a two or three percent margin of error. Although there are literacy studies using not many more test subjects that 1,000, that is not the method used with the *Adult Literacy in America* study. It was a five-year $14 million study using lengthy interviews of 26,049 people statistically chosen by age, gender, ethnicity, and location (urban, suburban, and rural from a dozen states across the U.S. and including 1,100 prisoners from 80 prisons) to represent the entire U.S. population. The study grouped the interviewees in one of five literacy groups according to how well they responded to written material in English that they were given to read.

In addition to the interviewee's response to the written material they were given to read, the *Adult Literacy in America* study reported other facts about the interviewees which made the determination of the rate of functional illiteracy very accurate. If anyone trying to determine the characteristics of another person has a financial interest in the outcome of their study, they have a much greater incentive to be accurate. When employers are seeking new employees, it is in their financial interest to hire workers who can do the job for which they are being hired. Most jobs today cannot be done as efficiently by a functional illiterate as they can by someone who is fully literate. Although a very small percentage of employers will hire persons they know to be functionally illiterate and see to it that they are taught to read, most will not. Therefore, functional illiterates are much more likely to be unemployed. By reporting the number of days each year that the interviewees were employed part-time, full-time, unemployed but looking for work, and unemployed and out of the labor market, the report presented a much more accurate picture of the functional illiteracy rate of the interviewees.

As a result, this book uses the following definition of functional illiteracy: Functional illiterates are those who may be able to read as many as one or two thousand simple words learned in the first three grades in school but cannot read and write well enough to hold an above-poverty-level-wage job.

In today's world, we Americans like to believe that we are more advanced in our knowledge than at any time in the past. In some ways, of course, that is true, but our literacy rate has actually declined from what it was in the 1700s and early 1800s. This is true for several reasons.

In the 1700s and early 1800s the tasks given to teachers were much more burdensome than today. They not only had to teach, many of them were required to take care of the schoolroom as well -- janitorial duties and taking care of the heating and cooling of the classroom. Most of them worked much longer than eight hours per day. Grading papers and teachers' reports were all done without the benefit of computers and printers. Teachers' unions and "progressive" educational leaders made changes that reduced the burden on the teachers *and the amount of subject matter taught.* Then in the early 1900s an increasing number of pleasurable activities took up much of the long hours that students previously spent on rote memorization of words in their reading vocabulary. In addition, new negative influences in the last half of the 1900s also took time away from learning to read. See the last section of Chapter 5, "A Summary of Phonemic Problems With Present English Spelling," pages 65 and 66, for a brief summary of all the causes of illiteracy in English. As a result, neither students nor teachers had the patience to spend the long hours on learning each word in their reading vocabulary as were spent in simpler times. "Whole word" methods and various combinations of

other similar methods were adopted and are silll in use instead of the boring, long hours of rote-memory learning which had been used successfully in the past. See the books *The New Illiterates, N.E.A., Trojan Horse in American Education,* and *The Whole Language/OBE Fraud,* written by an education insider, Dr. Samuel Blumenfeld. **Unfortunately, a lower reading ability inevitably produces a lower level of learning in a given time period.**

In case you think the previous paragraph is an exaggeration, please consider the 1895 Salina, Kansas Eighth Grade Final Exam, taken from the original document on file at the Smokey Valley Genealogical Society and Library in Salina. The truth is that many of today's college graduates could not pass this test. The truth is that many 13 and 14 year-old students in the early 1800s had the knowledge they needed to serve well as ambassadors or presidential cabinet members in representing the U.S. in Europe, as some of them did successfully.

Note that the time given to complete this test was only five hours.

Grammar (Time, one hour)

1. Give nine rules for the use of capital letters.
2. Name the parts of speech and define those that have no modifications.
3. Define verse, stanza and paragraph.
4. What are the principal parts of a verb? Give principal parts of "lie, play," and "run."
5. Define case; illustrate each case.
6. What is punctuation? Give rules for principal marks of punctuation.

7-10. Write a composition of about 150 words and show therein that you understand the practical use of the rules of grammar.

Arithmetic (Time, 1 hour 15 minutes)

1. Name and define the Fundamental Rules of Arithmetic.
2. A wagon box is 2 ft. Deep, 10 feet long, and 3 ft. Wide. How many bushels of wheat will it hold?
3. If a load of wheat weighs 3,942 lbs., what is it worth at 50cts/bushel, deducting 1,050 for tare?
4. District 33 has a valuation of $35,000. What is the necessary levy to carry on a school seven months at $50 per month, and have $104 for incidentals?
5. Find the cost of 6,720 lbs. Coal at $6.00 per ton.
6. Find the interest of $512.60 for 8 months and 18 days at 7 percent.
7. What is the cost of 40 boards 12 inches wide and 16 ft. Long at $20 per metre?
8. Find bank discount on $300 or 90 days (no grace) at 10 percent.
9. What is the cost of a square farm at $15 per acre, the distance of which is 640 rods?
10. Write a Bank Check, a Promissory Note, and a Receip

U.S. History (Time, 45 minutes)

1. Give the epochs into which U.S. History is divided.
2. Give an account of the discovery of America by Columbus.
3. Relate the causes and results of the Revolutionary War.
4. Show the territorial growth of the United States.
5. Tell what you can of the history of Kansas.
6. Describe three of the most prominent battles of the Rebellion.
7. Who were the following: Morse, Whitney, Fulton, Bell, Lincoln, Penn, and Howe?
8. Name events connected with the following dates: 1607, 1620, 1800, 1849, 1865.

Orthography (Time, one hour)

1. What is meant by the following: alphabet, phonetic, orthography, etymology, syllabication.
2. What are elementary sounds? How classified?
3. What are the following, and give examples of each: trigraph, subvocals, diphthong, cognate letters, linguals.
4. Give four substitutes for caret 'u.'
5. Give two rules for spelling words with final 'e.' Name two exceptions under each rule.
6. Give two uses of silent letters in spelling. Illustrate each.
7. Define the following prefixes and use in connection with a word: bi, dis, mis, pre, semi, post, non, inter, mono, sup.
8. Mark diacritically and divide into syllables the following, and name the sign that indicates the sound: card, ball, mercy, sir, odd, cell, rise, blood, fare, last.
9. Use the following correctly in sentences: cite, site, sight, fane, fain, feign, vane, vain, vein, raze, raise, rays.
10. Write 10 words frequently mispronounced and indicate pronunciation by use of diacritical marks and syllabication.

Geography (Time, one hour)

1. What is climate? Upon what does climate depend?
2. How do you account for the extremes of climate in Kansas?
3. Of what use are rivers? Of what use is the ocean?
4. Describe the mountains of North America.
5. Name and describe the following: Monrovia, Odessa, Denver, Manitoba, Hecla, Yukon, St. Helena, Juan Fernandez, Aspinwall and Orinoco.
6. Name and locate the principal trade centers of the U.S. Name all the republics of Europe and give the capital of each.
7. Why is the Atlantic Coast colder than the Pacific in the same latitude?
8. Describe the process by which the water of the ocean returns to the sources of rivers.
9. Describe the movements of the earth. Give the inclination of the earth.

Appendix 10
English Usage and Functional Illiteracy Around the World

The data presented in this appendix shows that all countries where English is the native language have problems with functional illiteracy in English — most of them are very serious problems. The first step, of course, is to answer the question of where English is spoken.

The Wikipedia article answering this question is found at http://en.wikipedia.org/wiki/List_of_countries_by_English-speaking_population. This article, reporting year 2000 data, shows that of the more than six billion people in the world in 2000, 1.295 billion of them speak English and 342 million of them speak English as their native language. English is used as a "second language" — to communicate with people who do not speak a person's native language — far more than any other language. Only Mandarin Chinese is spoken by more people than English, and the vast majority of those who speak Mandarin Chinese are in China.

There are seven countries where all those whose native language is English constitutes more than one percent of all those around the world whose native language is English, as follows:

Country	Native English-speaking people	% of Population Speaking English	% of ***All*** Native English Speakers
United States	225,505,953	94.2	65.9
United Kingdom	58,200,000	97.7	17.0
Canada	18,232,195	85.6	5.3
Australia	15,581,334	97.0	4.6
South Africa	4,892,623	31.0	1.4
Ireland	4,400,000	98.4	1.3
New Zealand	3,500,000	97.8	1.0
			Total: 96.5

There are from 30 to 2,600,000 persons in sixty-nine other countries that speak English as their native language. Altogether they constitute the other 3.5% of the native English speakers. Four nations with a population of more than five million and with 85% or more who speak English are Netherlands, 90%; Sweden, 86%; Israel, 85%; and Denmark, 86%. One hundred thousand of the 6,205,000 who speak English in Israel are

native speakers of English, all others in these four nations speak English only as a second language.

The functional illiteracy rate for six of these nations (excluding South Africa which is not a predominantly English-speaking nation) is, as follows. Note that as Appendix 9 shows, there are different ways of determining functional illiteracy, and as the Wikipedia article referred to above states, "Moreover, some numbers [in the Wikipedia article] have been calculated by Wikipedia editors from data in other sources, so *these figures are imprecise and should be treated with great caution.*" This also applies to functional illiteracy rate calculations. The links to the data in the following table are listed, in order, following the table.

Country	Functional Illiteracy Rate, Percent
1. United States	48.7
2. United Kingdom	47.0
3. Canada	48.0
4. Australia	47.0
5. Ireland	23.0
6. New Zealand	45.0

1. (this book, Ch. 2)
2.http://www.google.com/#q=What is the functional literacy rate in the United Kingdom?
3. http://www.thecanaduanencyclopedia.ca/en/article/literacy/

4. http://www.abc.net.au/local/videos/2012/09/07/3585457.htm
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Dr. Frank Laubach, perhaps the foremost reading teacher of all time, found that he could teach adult students in 98% of the languages in which he taught to read fluently in less than three months. He taught in more than 313 languages! On page 48 of his book, *Forty Years With the Silent Billion,* he stated, "If we spelled English phonetically, American children could be taught to read in a week." The English Spelling Society on their website, http://www.spellingsociety.org states, "English speaking children take up to three years longer to learn to read and write than others and some never succeed." Chapter 5 of this book explains in great detail why it takes so much longer to become a fluent reader in English than in any other widely used language.

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    The data in Appendix 2, table A2-3, are also based upon Dewey's data, pages 8, 9, and table 3, pages 19-29. Table 3 is based upon 100,000 words of connected matter (excluding numerals and proper names) representative of both written and spoken English. It includes words from each of the following:

15 percent (i.e., 15,000 words) from newspaper editorials
15 percent from newspaper news (six different newspapers, three each)
15 percent from modern fiction (5 percent each from two novels, two short stories, and two dramas)
10 percent (10,000 words) from speeches by three U.S. presidents
5 percent (5,000 words) from five business manuals
5 percent from nineteen advertisements
5 percent from three scientific magazines
5 percent from five magazine editorials
5 percent (1 percent each from the Bible, two sermons, and two religious magazine editorials)
5 percent from personal correspondence of two individuals
5 percent from five "special articles" from four different magazines
5 percent from the first one hundred words, top of second column, from fifty consecutive pages of the *Saturday Evening Post*

5 percent from the first one hundred words, top of second column, from fifty consecutive pages of *Literary Digest*.

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Appendix 8

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Glossary

Allophone: variations of a phoneme which are not different enough to be used to distinguish between words or syllables in a given language or dialect. (Sounds that are allophones in one language or dialect might be phonemes in another. For example, the English phonemes R and L are allophones in Japanese.)

Blend: the sound of two or more letters combined into one syllable. (The term "combination" is sometimes used in the text as a synonym for blend. When two or more consonants are combined, they can also be called a consonant cluster.)

Combination: See blend.

Consonant Cluster: See blend.

Dialect: a regional variety of language distinguished by features of vocabulary, grammar, and pronunciation from other regional varieties and constituting with them a single language of which no one variety is construed as the standard.

Digraph: two letters used together to represent a single phoneme.

Diphthong: a blend of two vowel phonemes. The sound goes so quickly from one vowel to the other that it is perceived as a single phoneme.

Grapheme: a letter, letter combination, or symbol that represents a single phoneme, syllable, or word. In NuEnglish only single letters and digraphs are used as graphemes. There are only ten digraphs (fifteen if macrons are not used) in NuEnglish. (In English, letter blends up to five letters long are used for a single phoneme, and there are at least 341 of them.) See the "Sounds per Symbol: Effect upon Reading" section of Chapter 5.

Heteronym: one of two or more words with the same spelling but with different pronunciations and meanings.

Homograph: (1) one of two or more words spelled and pronounced the same with different meanings (such as sound: a condition, a noise, a body

of water) and (2) one of two or more words with same spelling but different pronunciations and meanings (same as heteronym).

Homonym: one of two or more words with the same pronunciation but with different spellings and meanings; it is also called homophone.

Homophone: same as homonym.

Macron: a line that is added directly above a vowel to show its pronunciation.

Morpheme: a meaningful linguistic unit whether a free form (as pin) or a bound form (as the -s of pins) that contain no smaller meaningful parts.

Phoneme: the smallest sound that distinguishes one word or syllable from another in a language or dialect.

Sound: phonemes, allophones, or any combination of phonemes and allophones.

Syllable: A syllable is a single sound composed of: (1) V, (2) CV, (3) VC, or (4) CVC where

1. V = any one* of the fourteen vowel phonemes
2. C = any consonant or consonant cluster

Note:

1. Vowels and diphthongs can be at the start, middle, or end of a syllable; consonants can only be at the start or end.
2. A sound must have a vowel to be a syllable.
3. Many consonants can't be said without vowels. (See the paragraph just after Table 6-1.)

* The diphthongs, as shown in the "Understanding Pronunciation" section of Chapter 6, are considered single phonemes. Whether other vowel-vowel combinations are considered diphthongs or two syllables depends upon how quickly they are blended together by the speaker. For example, the word usual could be two syllables if the UE-U combination is pronounced quickly (i.e., a diphthong)—or with a more careless pronunciation as yuezhul. It can also be three syllables: yue-zhue-ul.

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To order the teachers' guide, which will provide student teaching materials, teachers' guidelines and principles, and additional information about the English language, order *Let's End Our Literacy Crisis Teachers' Guide*. Send a check for $14.95 (includes shipping and handling) to Literacy Research Associates, Inc. P.O. Box 57978 Murray, UT 84157.

About the Author

Bob C. Cleckler grew up in Texas where he was an avid reader from early childhood. After studying elementary and secondary education and art at Hardin-Simmons University for two years, he switched to an engineering curriculum. Upon graduation from the University of Texas with a Bachelor of Science degree in Chemical Engineering, he joined Hercules Incorporated, where he worked for twenty-nine years. During this period he conducted many short research programs to solve various types of manufacturing problems and wrote dozens of extensive technical reports on his findings. He also taught numerous adult classes as an officer in the U.S. Army Reserve, Utah National Guard Special Forces, and elsewhere.

In his position of Assistant Secretary of the Plant Process Control Board, in the Safety Department of Hercules Incorporated, Cleckler was responsible for analyzing numerous procedures for susceptibility to unintended explosive initiation at a $400 million, solid propellant rocket motor plant. His failure to consider all possibilities could have resulted in an explosion, killing dozens of people and causing millions of dollars in damage. These scientific and statistical studies of manufacturing problems were an ideal preparation for what has been a consuming interest in our literacy crisis. He became passionately concerned about illiteracy in 1985 after reading about the serious physical, mental, emotional, medical, and financial problems, as described in Jonathan Kozol's book, *Illiterate America*—a passion that has extended to the present time. Most of us would consider the problems that illiterates must constantly endure a crisis if we had to endure them.

In order to learn the publishing business, Cleckler worked for four years as a desktop publisher for a trade paperback publisher. He typeset 144 books of all types during that time and attended the American Booksellers Association conventions for each of the four years, where he discussed an earlier version of this book with several publishers and

booksellers. That book, entitled *Instant Literacy for Everyone* and published in 1993, is now out of print but was still listed by Amazon.com when this book was published.

Cleckler read every book on the subject of his research at the University of Utah's Marriott Research Library and at the Salt Lake City main library. Although he does not have a degree in education, he has spent far more time in private study than would be required to receive a Ph.D. in education. His private study consisted of analyzing and correlating the life's work of several educational and linguistic scholars. His private study enabled him to examine aspects of education and linguistics that Ph.D. programs in education almost never delve into. This is largely because of the peer pressure on linguists and educators to search for traditional or conventional means of improving literacy that will not upset the status quo. Because his scientific training and experience are very different from those of linguists and educators, he is able to explore all solutions and then carefully, scientifically evaluate them. Compassion for the suffering of unemployed and "underemployed" illiterates, as well as concern for taxpayer costs and the adverse effect of U.S. illiteracy on international trade made him feel compelled to form Literacy Research Associates, Inc., a nonprofit educational corporation, and to write this book.

Cleckler also serves as Vice President of Research & Development of NuEnglish, Inc., a nonprofit, 501(c)(3) tax-exempt, educational corporation.