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[Words originally underlined are now in italics. The spellings are as in the original.]

Preface

In recent years the variety of spoken dialects in English has become a subject for study and appreciation, replacing the former scorn and depreciation for "non-standard English." (Shuy, 1967; Labov, 1970, Butler, 1974)

Similarly, differing but consistent ways of writing standard (or even non-standard) English may be viewed as differing written dialects. These include the standard "traditional orthography," (TO), accepted alternate spellings found in dictionaries (Emery, 1973) such as "altho, thru, dropt, fixt, catalog," Pitman's Initial Teaching Alphabet (ITA), and the 50 or more proposals for spelling reform. They also include earlier spellings such as Chaucer used, with the Anglo-Saxon thorn symbol for "th" (still used in Icelandic), and the alphabetic shorthand systems.

Our traditional spelling became largely frozen with the rise of printing four centuries ago, and dictionaries and grammars two centuries ago, but our spoken language has had a "great vowel shift" and other changes. Hence the correspondence between our spoken and written dialects has become more complex, irregular, and confusing. We are forced to be almost "bilingual" in our native tongue. As a result, foreigners learning English often make use of phonetic texts, in the International Phonetic Alphabet (IPA), World English Spelling (WES), or Speech ITA. The human and financial costs of this divergence between written and spoken English inspire interest in efforts for spelling reforms, such as have been accomplished in other countries.

Some English writers, including John Milton and George Bernard Shaw, have on occasion used non-standard written dialects, to produce specific literary effects, or to convey non-standard spoken dialects more faithfully to readers.

Over a dozen written dialects of English are presented and discussed, from Chaucer's spellings to Pitman's ITA, and several proposed spelling reform systems. Problems of securing acceptance of changes in spellings are reviewed. Criteria for selecting written dialects for specific purposes are suggested.

Materials from several sources are woven together to provide a perspective on written language, its history and problems, its varieties and their uses.

How might such materials be useful to a teacher of English? The materials and references in this book can provide a basis for teaching the history of spelling changes and spelling reform efforts. They will be especially useful to teachers, and to students, where many students speak a non-
standard dialect, or come from a home where some other language than English is regularly spoken. (Kalb, 1965)

In school systems which make use of Pitman's Initial Teaching Alphabet (ITA) or World English Spelling (WES) as an initial teaching medium, these materials can help teachers in obtaining perspective on these written dialects. They can also provide a basis for teaching upper grade students some of the background, logic, and implications of ITA and WES. This can help teachers and students describe and evaluate their experience with their initial teaching medium.

The materials can also provide teachers and students with a background of information on which to base a well thought out philosophy regarding past, present, and future linguistic changes, in pronunciation, spelling, and vocabulary.

**FOREWORD**

To give readers experience in their reactions to a non-standard written dialect, the rest of this book, excluding quotations, is printed in a simple "eye dialect," Economy Spelling 4. This changes only two short common words: "and, the" become "n, h." This eye dialect affects about one word in 10, and saves 3.3 % of typing effort and space. It spells these words as they sound in rapid speech, and uses a new letter for the most common sound now spelled with two letters.

After reading the first chapter, note your reactions to the use of this dialect. When you have finished the book, note your reactions to it again. Have they changed? How? Why do you think you reacted as you did? What other reactions do you think some other types of readers might have? Who might they be? Why might they react differently?

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In the long history of the human race, the alphabet appears to have been discovered only once. … Most of us have never learned to ask the questions to which our alphabet is an answer. And having never looked at it as being the solution of an analytic and technological problem, most of us, its users, never ask how adequate a solution it is … English orthography, as we all know, has long ceased to make proper use of the advantages of alphabetic writing.
Chapter 1. A HISTORY OF ENGLISH SPELLING

The first alphabet that has been found is from the 13th century B.C., in a small kingdom of Ugarit (modern Ras Shami) on the coast of Syria, 10 miles north of Latakia. That alphabet consisted of 22 letters, only consonants. From there, alphabets spread in all directions, with numerous variations.

The Roman or Latin alphabet started in the 7th century B.C., and soon had 21 letters from Etruscan and two from Greek. Anglo-Saxons used "uu" for present "w" until about 900 A.D. By the 11th century, "vv" had combined into "w" for this sound. Later "v" was separated from "u". In the 17th century "j", which had at first been a variant of "i" became solely a consonant with its present sound. These changes brought us from the Latin alphabet of 23 letters to the present English alphabet of 26 letters.

English

Old English was spelled fairly phonetically when it first appeared, around 700 A.D. It included symbols for voiced and unvoiced "th", which are still used in Icelandic.

Following the Norman Conquest in 1066, French scribes substituted French "qu" for Anglo-Saxon "cw". To avoid handwriting confusions, some "u" sounds were respelled. Thus "ou" replaced the long "u", as in "house". When "u" occurred next to "m, n, u (for v sound)" they substituted "o", as in "love" (lufa, luua, loua, love). They improvised "gh" for gutteral "h" as in German "ich".

Court and parliament were conducted in French, but in 1258 the first royal proclamation in both French and English appeared. A century later, parliament and courts changed to English for their sessions.

When English reemerged as a literary language, Late Middle English, it had changed considerably. In the intervening centuries of clash between French and Germanic systems of speech and writing, English had lost most of its genders, and later its inflections. Then since, about 85% of its original Anglo-Saxon vocabulary has been replaced. But a recent study by Roberts (1965) finds that the most frequent 10% of words in use now are 83% of Anglo-Saxon origin, only 12% French. In the next most frequent 10%, only 34% are of Anglo-Saxon and 45% of French origin.

Chaucer

Chaucer's spellings were phonetic for pronunciations of his day. "gh" was pronounced as in "loch, Bach". Final -e, -ed, -en, -es, -eth were pronounced as separate syllables. His spellings were somewhat inconsistent, but differed from our present written dialect principally in these ways (Dun, 1952; 222-225):

1. Anglo-Saxon thorn symbol was used for both "th" sounds (here rendered by the modern Simpler Spelling Association's "h"). These include those now voiced; "hat, hee, hou, he, houh, hane (then), his, hy, neiher, herefore," n those now unvoiced, usually between vowels: "bohe, eerhe, hanke, wi."n
2. Final "I" was not doubled: "ful, shal, tele, wel, wil."
3. "Y" was used for "igh" n "i consonant e" spellings of today: "hye, lyf, wyf."
4. Our final "y" was spelt "i": "ladi, merci."
5. Final silent "e" was omitted: "fals."
6. Some other silent letters: "bilt."
7. "&" was sometimes used for "and."
Readoption of these spellings today could shorten writing, n (with "n" for "&") simplify relations of sounds to spellings.

A sample of Chaucer's written dialect, quoted below, uses "h" for h Anglo-Saxon thorn letter he used. Remember also that "u, v," had not been differentiated at that time. Thus h third n last lines include "loved chivalry; ever."

A knight her was and hat a worhy man
That from he tyme hat he erst bigan
To ryden out he louede Chyualrye
Trouthe and honour freedom and curtesie
Ful worthi was he in his lordes werre
And herto hadde he ridden noman ferre
As wel in Christendom as hethenesse
And euere honoured for his worhinesse.

Vowels in Chaucer's day (1340-1400) were pronounced according to what are now called their "continental values." These correspond more to h International Phonetic Alphabet than to modern English usage. Thus "e, ee" were pronounced "ay," so "be, thee" were pronounced "bay, thay"; "i, y" pronounced "ee" as h "i" in "machine"; "ou, ow" pronounced as in modern "soup." (Dun, 1952; xxvii)

H great vowel shift
Just after Chaucer, thru h 1400's, came h "great vowel shift" in English pronunciation. Similar changes occurred in German n Czech. Some diphthongs became simple vowels. Some long vowels became shorter vowels. Many of these changes seem to represent a substitution of relaxed mouth positions for tense ones, n unstressed for stressed pronunciations.

Some of h vowels went thru more than one step of change. Different vowels changed at different times. Some students give seven steps for h whole process. H result was that someone speaking as Chaucer did would have been almost unintelligible to someone in Shakespeare's day, two centuries later.

Printing
William Caxton introduced printing into England in 1477. His spellings were irregular, n used many more characters than we do now. One of his type styles had 254 characters in a complete set, more than twice what modern ones have. These characters included joined or "ligatured" letters such as, "we, wo," a long n a short "s," letters "d, g," with n without tail, h letter "l" with a stroke, n some contractions: ē for en, ď for oi, p for "per", n a symbol for "and."

These features made for difficult typesetting n difficult reading. Even when transcribed to modern type n syntax, his variable spellings were found by Lazerson (1975) to increase reading time of a passage from 5 minutes 3 seconds to 5 minutes 42 seconds, an increase of 13%. H comprehenshion score declined from 8.7 to 6.5. Variable features included "i" for "y" in "which, with, maister"; final "e" or not in "which, shall, fellow," both "prest, preest" for our "priest," n h symbol for "and" used about as often as h full spelling. Thus readers must adjust to variations such as "said, sayd; it, hit."

Modern readers need to remember that, in h sample which follows, "i, j" n "u, v" had not become separated in Caxton's time.
And knowe ye not said he what it is
worth/ it shold seme a good benefyce/
No forsothe sayd he/ but J wote wel
what it shalle be worthe to me/
why sayd he/ what shalle hit be worth/
Forsotha sayd he/ yf J doo my trewe
dylgyence in the cure of my parysshens
in prechyng and techynge/ and doo my
parte longynte to my cure/ I shalle
haue heuen therfore/ And yf theyre sowles
ben lost or ony of them by my defawte/
J shall be punysshed therfore/
And herof am J sure/

Later printers standardized n simplified their typesetting, usually using models from writers well
known at h time. Many used h King James version of h Bible as a model. It was published in 1611,
shortly before Shakespeare's death.

Shakespeare

By Shakespeare's day, pronounciations of letters n words had become quite similar to what they are
today. Shakespeare's spellings also illustrate h period before "j" was separated from "i," n before "u,
v, w" were in consistent, modern usage. Only a few of his spellings would produce savings today.
These were h main features of his spellings:

1. Our present "-ed" was spelled "-d, -t" as in "curld, disposd, performd, perishd; wrackt."
2. Other short forms were "wil," n h contraction "i'th" for "in the,"
3. "VV" was sometimes used instead of "w": "vvell, vvhat, vvould, vvith."
4. "V" was used for short "u" in "vp, vnder, vndue."
5. "U" was used for "v" before vowels: "arriu'd, diue, diuill, diuide, euer, euery, graue, haue,
   heuens, invisiblle, neuer, seruant, serues, seruice, slaue, twelue, waues, wolues."
6. "I" was used where we now have "j": "enioned, ioyne, proiect, subjext."
7. He n his printers used long Germanic "s" for some "s." Modern readers unused to this see it as
   printed "f" which it very closely resembles: "ferves, poyfonous, miffe, bufines."
8. He used h "-st" ending, then pronounced, but since shortened to "s" or other form: "hast" now
   "have"; "canst, remembrest, liest." 
9. Endings in "-ie" where we now use "-y": "daies, denie, libertie, marrie, qualitie."
10. Where we now use "i" he sometimes used "y": "cabyn, lyes, poysonous, rayinge, toyle."
11. More fina1 "-e" than we use now, often after consonants: "againe, deepe, finde, feare, misse,
   painefull, winde, worke." Also "-oe" where we now use "-o": "doe, goe."
12. Some other differences, such as "I'ld, cheefely"; "then" for "than"; "crede" for "cried."

Two passages from "The Tempest" follow:

… I do not know
One of my fexe; no woman's face remember,
Sawe from my glaffe, mine owne:
Nor haue i feene
More that I may call men, then you good friend.
And my deere Father: how features are abroad
I am skilleffe of; but by my modestie
Correctness, in dictionaries

English borrowed much from other languages in centuries following Chaucer, but by middle 1500's a counter movement of "purists" began to criticize this process. Dictionaries before 1600 were solely designed for translation to or from some other language. In 1604, Robert Caudrey's "Table Alphabetical" was first dictionary solely in English. It included about 3,000 words. Many early dictionaries confined their efforts to "hard words," omitted common ones. With "purist" movement, appearance of King James version of Bible in 1611, flood of words from other languages, "doctrine of correctness" in spelling, speech, word usage gained ground, becoming dominant in 1700's. In France and Italy, Academies were established to improve and make uniform their languages.

Samuel Johnson developed his dictionary with this aim in mind, using in part a list of writers, prepared by Alexander Pope, from whom to draw examples. Johnson's dictionary appeared in 1755, after nearly seven years of work. It dominated field for a century thereafter. It contained better definitions, than previous dictionaries had.

The prestige of Johnson's dictionary gave "doctrine of correctness" a firm and uniform source of authority, the rising middle class used it in acquiring "cultivated speech." It was further strengthened by grammarians such as Lindley Murray who (in 1795) published grammar books for schools which tried to make English follow rules for Latin.

This doctrine has only recently begun to be modified. Contributing to this modification are growth of linguistic knowledge, shock of Webster's Third New International Dictionary (1961), such publications as Labov's (1970) "The Study of Non-standard English" and Wells' (1973) "Dictionaries and the Authoritarian Tradition."


Phases

In summary, the history of English spelling can be divided into six phases:
1. Anglo-Saxon period, 700-1066 A.D. Phonetic at start, it drifted away from that as time passed.
3. Late Middle English: Chaucer's era, 1350-1450, when spelling was again phonetic.
4. A period of transition, 1450-1700, involving these trends:
   a. Great vowel shift;
b. The rise of printing, its efforts for standardized spellings;
c. A flood of foreign words;
d. A resulting chaos in vocabulary and spelling.
5. The doctrine of correctness, its rise in dictionaries, grammars as authorities, 1700-1800. This was a reaction against the trends and confusions of phase 4.
6. Scattered, unsystematic efforts at spelling reform, 1800 to the present, starting with Noah Webster.

**Standardization, the first reform**

One indication of the confusions to which he drive for standardization was a reaction, is that the Shakespeare family spelled their name in 34 different ways, Raleigh's in 73 ways. The Mainwaring family name was spelled 131 ways. How would you find a member of these families in a large alphabetic listing if you were not sure which spelling the person used? By contrast, a modern urban phone directory gives only one spelling for Shakespeare, perhaps six for Raleigh (Rahilly, Railey, Raley, Ralyea, Rowley), a major simplification.

One difficulty which had to be overcome was the tendency to spell phonetically, rather than phonemically. Linguist Henry Sweet claimed he could distinguish 11,000 different sounds in English speech by various people. Yet only about 40 symbols are needed to convey differences in meaning. This difference between a phonetic basis which distinguishes all sounds, and a phonemic basis, was one factor in the development of the alphabet, though its original omission of vowels was probably not phonemic.

A phonetic alphabet, diagrams of nose, mouth, and throat positions, and a sound chart, had been developed by John Williams (1614-1672). But the basis for a phonemic approach apparently was not clearly described until 1876. Then Max Mueller stressed that Pitman's Fonotypy showed only those differences in sound which conveyed differences in meaning.

A phonemic basis makes all, and only, those distinctions in sound and symbols which accompany differences in meaning. Thus "bath, both" are phonetically and phonemically different, with different meanings, but "bath, baath" are only phonetically different. Here different sounds signal differing dialect pronunciations for the same meaning. Some present day advocates for, and objectors to spelling reform have not absorbed the significance of this distinction. A phonemic basis permits a standard spelling despite dialect differences in pronunciation. Different dialects use differing sound-to-symbol rules, but the same standard symbols for a word.

Partly because this distinction had not yet been made clear, Samuel Johnson rejected phonetic reform of spellings as a goal when he wrote his dictionary. He argued that speech was changing, and that needed phonetic reforms were too numerous to be accepted.

One view of uniformity which resulted rests on the factor in studies of the history of science known as "prematurity." This is an explanation of why some published advances in a field are ignored or unused, perhaps for decades, before being revived and accepted. The reason is that studies which could bridge the gap from the new discovery to knowledge of the day have not yet been done. Hence the viewpoint presented cannot be tied in, by simple, logical steps, with other ideas and facts then known.

A second view is that uniformity achieved was based on a simple underlying structure, to be described in Chapter 2. This is apparently where people tend to start when they try to organize the writing of a language.

Another reason preventing Johnson from adopting a more phonemic spelling, such as Chaucer's and Shakespeare's, was the feeling that English had "improved" since then, and only more recent
writers should be used as examples. For these reasons, it appears that h "correctness" drive culminating in h development n use of Johnson's dictionary can be viewed as h first great modern spelling reform. It may have been about as good as could have been accepted at h time. N it may have been a necessary first step toward further reforms, now long overdue.

* * * * * * * *

Now note your reactions to h use of Economy Spelling 4. How difficult has it been to adjust to h change in its two words? What advantages, for readers n for writers, might it have? Keep your analysis, for comparison with h one you make at h end of this book.

Chapter 2. H DIVERGENCE BETWEEN OUR SPOKEN N WRITTEN DIALECTS

In 1842, Horace Mann, first Commissioner of Education of Massachussets, published a couplet illustrating h problems in relations of spellings to sounds in English. One version is:

"Though the rough cough and hiccough plough me through,
O'er life's dark lough I ought my way pursue."

By varying h pronunciation of h 8 "-ough" words using their own analogies, h couplet can be pronounced in 8 to h 8th power or actually 16,777,216 different ways, only one of which is correct!

H pronunciations in h couplet would be clearer if they were spelled as in h common words "owe, stuff, awful, up, now, true, lock, awe." Even if we compare only h 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" h possibilities reach 3,125!

No wonder Johnny cannot read what he sees, nor spell what he hears, with accuracy n 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. N he is right. Each word must be learned separately, by memory, in two forms, written n spoken, with no necessary, systematic correspondence between them. He must, in effect, become bilingual in his native tongue!

There are 561 spellings in an abridged dictionary for 40 common sounds of English, or about 14 per sound. If we take only 10,000 most common words, as found in a sample of 100,000, there are still 361 different spellings, or 9 per sound. These range from one for h voiced "th" as in "the," to 23 for h indefinite vowel "schwa," which includes h "a" in "about," h first "e" in "license," "i" in "first," "o" in "world," "u" in "turn," n h "y" in "martyr." In an abridged dictionary there are 43 spellings for "schwa." (Dewey, 971; 8, 110-1)

Thus we see why educators report that h commonest question pupils ask in school is: How do I spell ... ?"

How did this wide divergence come about? Noah Webster, in 1789 (391-2) gave several reasons:

   For this irregularity two principal causes may be assigned. 1. The changes to which the pronunciation of a language is liable, from the progress of science and civilization. 2. The
mixture of different languages, occasioned by revolutions in England, or by a predilection of
the learned for words of foreign growth and ancient origin.

The Northern nations of Europe originally spoke much in gutterals. Thus k before n was
once pronounced, the gh in might, though, daughter and other familiar words, the g in reign,
feign, etc. But as savages proceed in forming language, they lose the guttural sounds, in
some measure, and adopt the use of labials, and the more open vowels. The ease of speaking
facilitates this process, and the pronunciation of words is softened, in proportion to a
national refinement in manners.

To this practice of softening the sounds of letters, or wholly suppressing those which are
harsh and disagreeable, may be added a popular tendency to abbreviate words of common
use. Thus ... Worcester and Leicester are become Wooster and Lester.

H longer spellings Webster refers to are found in Massachusetts towns, h shorter ones in Ohio n
Pennsylvania, respectively.

Modern studies in social aspects of linguistics provide added factors. One is that difficult spelling
served to distinguish learned n leisurely from h rest of society. Another was h rise of h doctrine of
correctness in usage, which involved class snobishness n authoritarian teaching.

More recently, some linguists have argued that English spelling is fairly regular at a deeper level.
(Chomsky n Halle, 1968; 49) Word parts remain spelled h same thru related forms or situations in
which they are pronounced differently. Thus h "-ed" ending remains h same, tho pronounced "-ed, -d, -t," in different situations.

One interpretation is that this deeper regularity is h easiest for adults trying to write grammatical
rules, n for those who write by rule. (Kavanagh n Mattingly, 1972; 113) But it results in
complexities n irregularities for those who try to pronounce what they read, or spell what they hear.

Thus h grammatical rule for past endings is simplest now, "-ed," but h pronunciation, n especially
h spelling rules would be far easier if we spelled such words "ended, earnd, askt," about as
Shakespeare did. How many adults can state h spelling-to-sound n sound-to-spelling rules for "-ed"
endings? Can you?

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)

H rules for past forms could be combined n restated as:

An alveolar sound; spelled n pronounced '-ed' after another alveolar sound (d or t), '-d' after
voiced letters, '-t' after '-l, -n' n unvoiced letters.

This requires a more abstract description of h sound, combined with h phonetic rules for
pronunciation changes in differing phonetic sequences. Such a rule would have phonemic
regularity in spelling according to h sound, retaining regularity in h grammatical form while
recognizing its phonetic variations.
Recent analysts find the "deeper regularity" claimed by Chomsky to be at too abstract a level to help new learners of reading and writing. (Kavanagh & Mattingly, 1972; 60, 122) This regularity affects only about 10% of non-phonetically spelled words. (Yule, 1976; 13)

Costs in school
Currently there are about 300 million native speakers of English. If 15 minutes a day, 200 school days a year, for 10 years are spent on spelling, this comes to 500 hours per pupil. Only about 100 hours would be needed if the language were phonemic. Irregularities of spelling thus require school children to spend an extra 400 hours each. These extra hours per pupil, times 4 million new learners entering school each year, come to 1,600 million hours of pupil time "wasted" a year. At 30 pupils per class, this involves at least 50 million hours of teacher time a year. With teachers paid $6 an hour, this totals $300 million a year in school costs. Thus $1 per person per year of present school tax funds is the minimum directly assignable cost of maintaining archaic spelling in our schools.

In 1925, a study compared the reading ability of Puerto Rican children learning to read in Spanish, a fairly phonetic language, with New York City children learning to read in English. Puerto Ricans were about a year ahead in the content of their reading. Hence one observer (Wijk, 1969; 55-6) notes:

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.

Back in 1887, William Graham Sumner, a sociologist, put the problem in more personal terms when he reported:

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 & Cassidy, 1954; 363)

Reading problems
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 teaching of spelling or with problems created by it. (Dewey, 1971; 41)
H various methods for teaching reading, which have competed for over a century, can be grouped under three types: code emphasis, meaning emphasis, n medium emphasis. Code emphasis or phonic methods are crippled by h irregularities in relations between English sounds n spellings. This approach may have been dominant in h 19th century. It seems to produce better results, tho with many difficulties.

Meaning emphasis methods, dominant in much of h 20th century, include "whole word, look-say, sight word, sentence, reading for meaning" methods. Both code n meaning emphasis methods restrict vocabulary to several hundred words at first. This cramps writing n learning by h students, n reduces interest in h materials.

A side by side comparison is reported from Wales. Primary grades are bilingual.

English is taught by a variety of methods, with the look-and-say or sentence methods predominating, and encountering the usual difficulties. But Welsh, which, believe it or not, is by its own code spelled phonemically, is invariably taught by a simple phonic method as a matter of course. (Dewey, 1971; 42)

A study of misreading (Kavanagh n Mattingly, 1972; 311 found that errors on vowels:

range from 7% for I to 26% for U. 'I' is always represented by 'i,' whereas 'U' is represented by seven letters or digraphs. The correlation between each vowel's rank difficulty and its number of orthographic representations was .83.

Medium emphasis methods are of several types. Least practical may be h use of word shape as a guide. This is based on h configuration of word length n of letters which ascend, descend, or do neither within h word. Too many common words have h same shape for this to be more than an auxiliary aid to recognition.

H 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 H purpose of this study was diagnostic, to highlight problem areas.

H most successful medium centered approach has been Pitman's Initial Teaching Alphabet (ITA), introduced in 1960, n now widely used in England n h United States. ITA has 44 characters. Those not in h traditional alphabet closely resemble present letters or combinations of two letters. (An example in ITA is given in Chapter 3) Since its characters are used in a largely consistent, phonemic way, children learn to read in a logical medium. H problems of spellings which differ from h sounds of spoken words, n h irregularities in these spellings, are largely left til later, after h pupil has learned to read fluently.

A child enters school with a speaking knowledge of several thousand words. In contrast, a modern phonics approach to spelling announces that "In the first year, the child learns to spell 168 words." With traditional spelling having to be learned by rote, reading n writing in it are made difficult from h start. h usual result is dull drill, which discourages or destroys h child's curiosity n creativity about h world.

H experience of classes taught to read in Pitman's Initial Teaching Alphabet is quite different. Not only does this phonemic start on reading take less time to learn, but h children taught in ITA become avid readers n creative writers.

In Britain, h Bullock Committee reports (1975; 111 that;
Children tend to learn quite quickly how to spell in i.t.a. and they then have ready access to almost every word in their spoken vocabulary. The value of this for language experience activities is obvious.

Riemer (1969; 127) found that ITA children write earlier, more easily, better, and more. He reports that ITA classrooms in Bethlehem PA used six times as much paper for writing as classes taught in traditional spelling.

By comparison to English, Italian speech uses only 27 sounds. School children there never have to buy a spelling book, a subject is not in their curriculum. American children must buy a speller each year from second thru sixth grade or beyond.

**Costs to adults**

Since at least 10% saving is achievable by some proposed reforms in spelling, a corresponding saving on paper could be made. This would amount to $1 per person per year. Other publishing costs might be saved in proportion adding $4 more per person to that, n to $1 in school taxes. This comes to $24 per family per year of possible savings.

Substantial costs are also found in office work. Much secretarial time is spent looking up spellings n correcting them, as well as in typing longer word forms. American secretarial schools require 50 minutes a day on spelling drills. Spelling is not in the curriculum of Italian secretarial schools. (Riemer, 1969; 103)

Less easily measured are costs of slowness n inhibitions in reading n writing of many adults, even after graduate study. These often arise from forgotten unhappy experience with spelling n spelling teachers in h early grades in school.

**Chapter 3. A HISTORY OF SPELLING REFORMS**

While Samuel Johnson was aware of the need for reforming the relations of English spellings to sounds, he despaired of getting this kind of change accepted. Others before and since have explored what might be done, with occasional partial success in this process, h problems, h factors affecting this effort, n alternate possibilities have become far more clearly defined.

In 1569, John Hart produced a phonetic alphabet. In 1570 he emphasized the need for spelling reform as an aid to learning to read.

A century later, John Milton "deliberately used spelling to convey the sound and meaning of his words." (Darbishire, 1952; xi) N he used some types of simplifications:

1. dropping final silent e: "climat, temperat, doctrin, determin, fertil";
2. apostrophe for indistinct vowel before final n: "oft'n, op'n, spok'n";
3. apostrophe for indistinct vowel after soft "g, c," or long vowel before final "d": "advanc't, oppos'd";
4. dropping "e" from "-ed" endings where apostrophe was not needed as in 3 above: "turnd, heapt, armd";
5. dropping some other silent letters: "forren, iland, suttle."
6. Other distinctive spellings included: "buisness, childern, farder, hunderd, perfet; apeer, neer; cheif, conceal, receave."

Two samples from Milton's "Paradise Lost" printed according to his instructions are:

I should be much for op'n Warr, O Peers,
As not behind in hate; if what was urg'd
Main reason to perswade immediat Warr,
Did not disswade me most, and seem to cast
Ominous conjecture on the whole success.

First, what Revenge? the Towrs of Heav'n are filld
With armed watch, that renders all access
Impregnable; oft on the bordering Deep
Encamp thir Legions, or with obscure wing
Scout farr and wide into the Realm of night.

Benjamin Franklin
A century after Milton, in h American colonies, Benjamin Franklin in 1768 developed "A scheme for a new alphabet and a reformed mode of spelling." Franklin proposed abandoning six letters, "c, j, q, w, x, y," n replacing them with six new letters. These were:

1. A modified "a" for two sounds: h short vowel in "John" n h long vowel in "ball";
2. an inverted "h" for two sounds; short schwa (h indistinct vowel before "r", as in "under," n h longer "u" in "unto";
3. a modified "s" for "sh" sound;
4. a modified "n" for "ing" sound;
5. an unvoiced "th" sound, using a crossed "h" in lower case, n h Greek "theta" for h capital letter;
6. a "dh" combination for h voiced "th" sound.

Apparently Franklin only used this revised alphabet n spelling in a few letters to his friend Polly Stevenson, tho he did cast type for h new symbols. Unfortunately, his modified "a" n "s" symbols are hard to distinguish from h regular letters, n his "dh" looks more like our "ch" than h "th" it was intended to be used for.

A sample, with transliteration (Willcox, 1972; 217), follows:

Your third inconvenience is that "all the books already written would be useless." This inconvenience would only come on gradually, in a course of ages. You and I, and other now living readers, would hardly forget the use of them. People would long learn to read the old writing, tho they practice the new. And the inconvenience is not greater, than what has actually happened in a similar case, in Italy. Formerly its inhabitants all spoke and wrote Latin: as the language changed, the spelling followed it.

Noah Webster commented on Franklin's efforts in 1806, in h preface to his first dictionary (vi):
In the year 1786, Dr. Franklin proposed to me to prosecute his scheme of a Reformed Alphabet, and offered me his type for the purpose. I declined accepting his offer, on a full conviction of the utter impracticability, as well as inutility of the scheme. The orthography of our language might be rendered sufficiently regular, without a single new character, by means of a few trifling alterations of the present characters, and retrenching a few superfluous letters, the most of which are corruptions of the original words.

Noah Webster

Noah Webster's "Dissertation on the English Language" in 1789 proposed many improvements in spelling. Some of these he used the next year when he published "A collection of essays and fugativ writings," a sample of which follows (long s rendered here as "f"): In the next place, our forefathers took measures to preserve the reputation of schools and the morals of youth, by making the business of teaching them an honorable employment. Every town or district had a committee whose duty is to procure a master of talents and character; and the practice is to procure a man of the best character in the town or neighborhood. The wealthy towns apply to young gentlemen of liberal education, who, after taking the bachelor's degree, usually keep school a year or two, before they enter upon a profession.

Webster's friends ridiculed many of his reformed spellings. Hence, when he published his first dictionary, in 1806, he included far fewer of them. But many of his remaining ones, such as "labor" for British "labour," still differentiate American from British spellings.

Webster's plan for reforming English spelling centered on 10 main classes of words (Shoemaker, 1936; 267-271):

1. Omitting "u" in: "candor, error, favor, honor, labor, odor, vigor."
2. Changing from "-re" to "-er" in: "caliber, center, luster, meter, theater." These came from French, n followed t example of "chamber, cider, number," already spelled this way. However, this change introduced a difference between root words n their derivatives, in "central, lustrous, theatrical," which could formerly follow t rule of dropping final "e" before suffixes. It apparently did not occur to Webster to drop "e" entirely, thus making root n derivative agree.
3. Drop h final "k" in "-ck" words such as "cubic, music, public, rhetoric." However, h "k" was retained in participles before "e" or "i," to fit h Romance language rule of softening "c" in these situations: "frolicking, trafficking."
4. Change "e" to "s" in: "defense, offense, pretense." These followed "expense," n fit root to derivative.
5. Avoid doubling h final consonant before derivative endings: "appareled, canceled, dueling, traveled." He propounded h rule: "when a verb of two or more syllables ends in a single, unaccented consonant, preceded by a single vowel, the final consonant is not doubled in derivatives." He used "limiting, pardoning, delivering," as precedents. But to apply this rule, one must know where h accent falls, count syllables, vowels, n consonants, before arriving at a spelling conclusion!
6. Somewhat inconsistently, he doubled h final consonant in: "appall, befall; fortell; distill, fulfill; dull, full, skill," to be consistent with their derivatives. It apparently did not occur to him to change h derivatives instead. He also specified that h "a" before "-ll" is broad, as in "mall." This is again an example of English changing h consonant to influence a vowel sound, rather than changing h vowel spelling itself. If latter would be more logical, n easier to decipher.
7. Webster changed Johnson's "-er" to "-or" in: "instructor, sitor, survivor, visitor," to fit their derivatives.
8. Webster's 1806 dictionary omitted final "e" in: "ax, determin, envelop, famin, medicin, opposit, steril." These were still listed in his 1829 edition.

9. He used a single final "f" in, "balif, mastif, plantif, pontiff" following h French, n single "f" in their derivatives. But he retained double "f" in; "cuff, miff, muff, stiff," because their derivatives had it.

10. He kept h Latin "-ize" endings in: "generalize, legalize, moralize," but h French "-ise" in: "surprise, devise, merchandise," even tho French was derived from Latin.

In h introduction to his 1806 dictionary, Webster argued (vi) against h effort to "freeze" spellings;

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 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 insted of letters.

**Shorthand**

H major effort to achieve faster writing has undoubtedly been h development of h various shorthand systems. H first was invented by Tiro in 63 B.C. These appeared at h rate of almost one a year, from that of John Willis in 1602 til Isaac Pitman's in 1837. Shorthand systems almost universally aim at representing h sounds of h words. As early as 1766 it was recognized that 40 sounds were needed to represent English speech.

**Phonetic reform**

Isaac Pitman n Alexander Ellis in England developed "Fonotypy," an augmented alphabet of 40 letters. This was brought to h United States in 1845, Here n England it was used for teaching reading n writing, particularly in Waltham, Mass., Cincinnati, Ohio, n Syracuse, N.Y., for seven to ten years each. H Waltham Town School Committee Report for 1852-1853 stated:

It has been proved in repeated experiments that if a child upon his first learning his letters, is taught the Phonetic Alphabet, and is confined to Phonetic books for the first six or eight months of schooling, he will at the end of his first year's schooling read common print, and spell in common spelling better than children ordinarily do at the end of four or five year's instruction. (Pitman n St. John, 1969; 85)

A participant in that experiment later reported that:

The fonetic print corrected the brogue of Irish children and the Yankee dialect of the American in a surprising manner. An improvement in the moral and intellectual tone of the schools was also noticeable, arising certainly in part from giving the children interesting reading instead of such absurd falsehoods as that of saying "sea," "you," "pea," spells "cup." (Pitman n St. John, 1969; 87)
In 1876 a distinguished committee of the American Philological Association reported some "Principles of '76" which said, in part:

… regard must necessarily be had to what is practically possibl quite as much as to what is inherently desirabl.
… the first step is to break down, by the combined influence of enlightened scolars and of practical educators, the immense and stubborn prejudice which regards the establisht modes of spelling almost as constituting the language, as having a sacred character, and as in themselves preferabl to others. All agitation and all definit proposals of reform ar to be welcumd so far as they work in this direction. (Dewey, 1971; 22)

The committee proposed 10 new spellings for immediate adoption: "ax, catalog, definit, gard, giv, hav, liv, tho, thru, wisht."

Next year an organization prepared a proposed "Standard Fonetic Alfabet." This was used in Funk n Wagnall's Standard Dictionary, in 1893. It formed the basis for the "Revised Scientific Alphabet" or "NEA Alphabet" prepared 1904-1911 by joint committees of the American Philological, Modern Language, n National Education Associations. This was used as "Key 1" of Funk n Wagnall's New Standard Dictionary, starting in 1913.

Also in 1876, an "International Convention for the Amendment of English Orthography" was held in Philadelphia, during the Centennial Exposition. This developed into the Spelling Reform Association (SRA).

In 1898 the National Education Association adopted 12 words of reformed spelling for its official use; "altho, tho, thru, thruout, thoro, thorofare, program, catalog, decalog, demagog, pedagog, prolog."

In 1906 the Simplified Spelling Board (SSB) was formed, on Andrew Carnegie's promise of $10,000 a year for 10 years (he actually gave it $260,000 in 14 years). This Board consisted of 50 leading scholars n educators, with an Advisory Council of about 250. An early effort was its Circular 5, a "List of common words spelled in two or more ways."

Theodore Roosevelt

While Congress was in recess, on August 27, 1906, President Theodore Roosevelt instructed Government Printing Office to use this list of 300 words. This created an uproar in the press, becoming the most talked of subject that fall.

Congress had not liked Theodore Roosevelt, "and his five years of making them do what they didn't want" n decided that the uproar presented them with an opportunity to "give the President a jolt." So they voted, 142 to 24, that "no money appropriated in this act shall be used (for) printing documents … unless same shall conform to the orthography … in … generally accepted dictionaries." (Sullivan, 1937; vol. 3, 185-8) H New York Times editorialized that newspapers would "correct" h President's spelling. When his term of office ended, in March 1909, h conservative New York Sun published a one word editorial, "Thru."
Effects
Of his 300 words on his Simplified Spelling Board's list, 153 were in first preferred usage in his printing office in 1905, n 165 are first preferred in dictionaries now, a gain of 12 in 65 years, or 8% of those not preferred in 1905.

His Simplified Spelling Board employed field workers, n obtained commitments from 460 institutions of higher education to permit their students to use his NEA's 12 words, n many of his "List of 300."

Funk n Wagnall's dictionaries, into his 1950's, gave his Simplified Spelling Board n American Philological Association proposed spellings of words as alternates. They published his Literary Digest, probably his best known magazine to use many of these reforms. With a circulation of half a million, until it ceased publication in 1938, it used "tho, altho," but not "thru, Thoro." It also used "addrest, curst, dropt, slipt, snap, stopt," but retained traditional "kicked, decreased."

A considerable number of his "300 words" are now second choice in dictionaries:
"blest, dropt, dulness, fixt, fulfil, fulness, gipsy, instil, Phenix, skilful, stedfast, subpoena." A few are listed only as archaic: "carest, clat, claspt, clipt."

A computerized sample of one million words, gathered in 1961 from 15 types of sources (Kucera n Francis, 1967) found "program" only in his short form, but "programmed" outnumbered "programed" three to two. "Catalog" occurs three times, to eight for "catalogue." "Thoro" n "tho" were not found in that sample, tho their long forms were. "Thru" n "altho" occurred 1% as often as their long forms, perhaps his influence of his Chicago Tribune, which used them.

Spelling Reform Association
With his end of Carnegie funds in 1920, his Simplified Spelling Board became inactive, n his Spelling Reform Association (SRA.) was reactivated, by many of his same people. It aimed at a more thorogoing reform than his piecemeal ones his SSB had pursued, at Carnegie's insistence. In 1930 his SRA published its phonemic alphabet.

This SRA Phonemic Alphabet contains 24 consonants, 13 vowels, n 4 diphthongs, plus a "wordsign for "the"; a total of 42 letters, 19 of which are not in his present alphabet. Many of these new ones are recognizable variations on his present ones: "h" for voiced "th," h same with a longer stem for unvoiced "th," an "e" for "ee" sound, "c" with a hook on it for "ch," an "n" with a tail for "nk, ng" sound, "z" with a tail for "zh" sound as in "azure," n a long Germanic "s" for "sh" sound. An upside down "e" is used for h indistinct vowel "schwa," n a reversed "c" for "au, aw." Capital letters are indicated by boldfaced type rather than using a different, capital letter form. This could save children h problems of learning two shapes for most letters at first.

This alphabet would save about 17% of letters, or 14% of space. Fitting it onto a typewriter would require much use of h shift key, as at least 14 letters could not be fitted onto h regular level. It achieves his phonemic ideal of a single letter for each sound, n a single sound for each letter. A sample of material written in this alphabet is shown in Chart 1.
In 1946 the SSB merged with the SRA, forming the SSA. In the same year, the SSA produced World English Spelling (WES), which is very similar to the British Simplified Spelling Society's "New Spelling." This shifted the SSA from the two extremes of its predecessors, SSB's piecemeal approach and SRA's phonemic alphabet, to a middle ground of a no-new-letter system on a phonemic basis.

Existing letters are used for the same sounds in WES as in the SRA Phonemic Alphabet. For additional sounds of English, WES uses digraphs, two letter combinations (not three letter) instead of new letters. Thus material in WES can be produced on any typewriter. Its key, in a sample text, are shown in Charts 2 and 3. In both these systems, letters were fitted to sounds by use of a frequency count of sounds in spellings. (Dewey, 1923; 130-1, 184-5)

<table>
<thead>
<tr>
<th>Consonants</th>
<th>Vowels and diphthongs</th>
</tr>
</thead>
<tbody>
<tr>
<td>As in</td>
<td>As in</td>
</tr>
<tr>
<td>p</td>
<td>pay, happy, cap</td>
</tr>
<tr>
<td>b</td>
<td>bay, rubber, cab</td>
</tr>
<tr>
<td>t</td>
<td>town, letter, bit</td>
</tr>
<tr>
<td>d</td>
<td>down, ladder, bid</td>
</tr>
<tr>
<td>k</td>
<td>keep, week; back; expect; quite</td>
</tr>
<tr>
<td>g</td>
<td>game, ragged, bag; exact</td>
</tr>
<tr>
<td>f</td>
<td>fast, office, photograph, safe</td>
</tr>
<tr>
<td>v</td>
<td>vast, never, save</td>
</tr>
<tr>
<td>thh</td>
<td>thought, nothing, both</td>
</tr>
<tr>
<td>th</td>
<td>that, rather, with</td>
</tr>
<tr>
<td>s</td>
<td>seal, lesson, city, race, base</td>
</tr>
</tbody>
</table>
Chart 3: Sample in World English Spelling

Linkon'z Getizberg Adres

Forskor and seven yeerz agoe our faatherz braut forthh on this kontinent a nue naeshon, konseevd in liberti, and dedikaeted to the propozishon that awl men ar kreeaeted eekwal.

Nou wee ar en.gaejd in a graet sivil wor, testing whether that naeshon, or eni naeshon soe konseevd and soe dedikaeted, kan long enduer. Wee ar met on a graet batlfeeld ov that wor. Wee hav kum to dedikaet a porshon ov that feeld az a fienal resting-plaes for thoez hoo heer gaev thaer lievz that that naeshon miet liv. It iz aultogether fiting and proper that wee shuud doo this.

But in a larjer sens, wee kanot dedikaet - wee kanot konsekraet - wee kanot haloe - this ground. The braev men, living and ded hoo strugld heer, hav konsekraeted it far abuv our poor pou.er to ad or detrakt. The wurld wil litl noet nor long remember whoa wee sae heer, but it kan never forget whot thae did heer. It iz for us, the living, rather, to bee dedikaeted heer to the unfinisht work which thae hoo faut heer hav thus far soe noebli advanst. It iz rather for us to bee heer dedikaeted to the graet task remaening befor us - that from theez onord ded wee taek inkreest devoeshon to that kauz for which thae gaev the last fuul mezher ov devoeshon; that wee heer hieli rezolv that theez ded shal not hav died in vaen; that this naeshon, under God, shal hav a nue burthh ov freedom; and that guvernment ov the peepl, bie the peepl, for the peepl, shal not perish from the urthh.

Chicago Tribune's experiments

As early as h 1870's, h Chicago Tribune began using reformed spellings. Joseph Medill, editor n owner, was a member of h Council of h Spelling Reform Association. In 1880 h Chicago Spelling Reform Association met at h Sherman House, n read letters approving h Tribune's efforts.

About 50 years later, under Medill's grandson, Robert R. McCormick, n editor James O'Donnell Bennett, h Tribune began a new effort. This "practical test of spelling reform" started in January, 1934, n continued for 41 years, with various changes.

An unsystematic list of 80 respelled words was introduced in four editorials over a two month period, n used thereafter in h paper, which had h largest circulation in Chicago. On January 28,
"advertisement, catalog." n seven more "-gue" words were among those shortened. H February 11 list included "agast, ameba, bureaucrat, crum, missil, subpoena." On February 25, "bazar, hemloc, herse, intern, rime, sheriff, staf," were among those introduced. On March 11 an editorial reported that "short spelling wins votes of readers 3 to 1." On March 18, h. final list included "glamor, harth, iland, jaz, tarif, trafic." An editorial that day, "Why dictionary makers avoid simpler spelling" claimed that they dare not pioneer, "prejudice and competition prevent it."

On September 24, 1939, h. list was reduced to 40, but "tho, altho, thru, thoro," were added. Addition of "frate, frater," for "freight, freighter," came on September 24, 1945. Changing "ph" not at h. start of a word to "f" came on July 3, 1949, with "autograf, telegraf, , philosofy, photograf, sofomore."

In 1970, a new style book was issued which reduced h. list substantially, dropping "tarif, sodder, clew, frate," among others. An article in Chicago Journalism Review for September, 1970, reported some reasons for h. change: "probably the biggest reason 'is to fall into line with more common practices, especially those taught in college.'"

Five years later, on September 29, 1975, Tribune withdrew from h. effort, with an editorial, "Thru is through and so is tho." One reason given was that "the writers of spelling texts would not yield. When Johnny spoke Tribune style, teacher sat him down." They kept h. short forms for h. "-og" words, n announced that "From now on, Webster's Third will be our guide."

Thus for over 40 years, a substantial proportion of people in h. Chicago Metropolitan area have been exposed to a limited but unsystematic list of reformed spellings in daily use. What h. effects of h. Tribune's spellings have been on h. practice of adults in h. area seems not to have been studied systematically. Certainly "altho, tho, thru," are more acceptable in that area than elsewhere. A survey of a highschool journalism class in downstate Illinois in 1973 found students favoring "thru" by three to one.

**ITA**

While a member of parliament, Mont Follick, proprieter of h. Regent School of Language in London introduced bills to reform spelling. One of these passed several readings in 1953, in spite of opposition by both major parties n h. minister of education.

James Pitman, also an M.P., n others arranged a compromise whereby h. bill was then withdrawn, but h. minister of education undertook to cooperate fully in a test of "the teaching of reading by means of a system of simplified spelling." This paved h. way for experiments with Pitman's Initial Teaching Alphabet (ITA).

H. first British use of ITA began in 1960. By 1966, over 100,000 children were using it, in about 9% of h. primary schools. Its use in h. United States began in 1963, in Bethlehem, Pa., Cleveland, Ohio, n White Plains, N.Y. It is now being used in all 50 states n about 10% of school districts.

In February, 1975, a British Commission studying h. teaching of reading published its report, "A Language for Life." (H. Bullock Report) This reviews a study on traditional spelling (86) where h. researchers:

… examined the 6,092 two-syllable words … in the comprehension vocabularies of a group of six to nine year old children. They recorded 211 different spellings for the phonemes in these words, and these required 166 rules to govern their use. Over 10% of the words still had to be left aside as 'exceptions.'
An interesting sidelight is the observation that the use of ITA, unlocks the child's spontaneous and creative use of writing.

When groups of t.o. and i.t.a. children were matched in the British experiments, the writing produced by the latter was of consistently higher quality. ... there is no evidence of adverse side effects at a later stage. (Bullock, 1975; 111-2)

ITA discards "q, x," n adds 20 new letters. These new letters resemble closely the forms of some existing letters or combinations. Hence it is fairly easy to read, as a sample indicates:

Other spelling reform proposals

In 1974 the Phonemic Spelling Council published a sample text in 53 different proposed orthographies. Several new spelling reform systems are invented n circulated each year. Spelling reform proposals are of three types, depending on whether they would standardize present letters, supplement them, or replace them. Simplest are those, like World English Spelling (WES), which add no new letters or marks.

Most popular of these is Spelling Reform 1 (SR1), proposed by Harry Lindgren in 1969, in Australia. As a result, a Spelling Action Society of about 200 members has grown up, with a monthly newsletter. A resolution advocating its adoption has been passed by h Australian teachers organization.

SR1 uses "e" for h short "e" sound as in "bet," n would make no other changes until this is widely used. This change would affect 264 words, only 27 of which occur 51 or more times in a sample of one million. These 27 make up less than 1% of h words in h sample, n would save about 0.1 % of typing strokes. Thus a typist would have to use these 27 words for 2,700 hours, more than a year of full time typing, to recover h learning time of 2.7 hours. Some criticize this as a "trivial" reform, others defend it as an unobtrusive first step.

A sample sentence in SR1 is:

The Australian Minister of Health was a friend of spelling reform, and said that many people were ready to move ahead on it.

Most proposals for standardization seem to be "full systems," such as "Ryt Ryting" developed by Clarence Hotson. His system is somewhat more phonetic than most, changing some spellings as stress on a word changes. This should make reading aloud, n taking dictation easier, but silent reading might be more difficult. Words whose spellings change include "the, th; tu, te." A sample follows:

Huy not be braiv and strugl for a nu speling? It shuod bring fredum to meni peepl hu hav had speling trublz, and myt eez thair lyvz.
An intermediate position is taken by "Economy Spelling." This system changes primarily the most common words, makes changes only where letters are saved thereby. Its first three steps add no new letters. It is aimed to offer adults who spell well an incentive to accept spelling changes, thus offering substantial savings of 1% to 9% or more of typing effort.

The first step of Economy Spelling includes words whose short, more phonemic forms are already partially accepted in many standard dictionaries:

altho, tho, thru, thruout, thoro, thoroly; blest, built, burnt, clipt, curst, dreamt, dript, dropt, dwelt, fixt, learnt, publisht, smelt, spelt, stopt; catalog, dialog, prolog, synagog.

These can be adopted unobtrusively, but offer only 0.04% saving.

Economy Spelling 2 substitutes "n" for "and," following a common short pronunciation for it. This saves 1% of typing strokes. Based on studies at IBM, it might require six minutes practice to learn to type. Users could recover their learning time from savings in 10 hours of use - less than two working days. Steps 3 and 4 change "the" to "th" and then "h," saving 2.3% more.

The first 10 steps make a complete change of voiced "th" sound to "h" symbol, complete use of "v" for its sound by respelling "of" as "v," n greatly increase frequency of "z" by using it for "is." This raises "z" from 0.06% to 0.60% of letters in a sample of text. Thus these steps achieve first two "two way, one to one relationships of sound to letter in English," for "v, h."

68 words in these 10 steps produce a saving of 5% of typing strokes. They would take about 6.8 hours to learn, one full day's work. This learning time would be recovered from savings in about a month of full time writing.

A section from "The Meaning of the Twentieth Century" (Boulding, 1964; 7-8) in ES 10 follows:

Anuhr indication v h magnitude v h present transition z h fact hat, as far as many statistical series related to activities v mankind are concerned, h date hat divides human history into two equal parts z well within living memory. For h volume n number v chemical publications, for instance, his date z now (i.e. 1964) about 1950. For many statistical series v quantities v metal or u r materials extracted, his date z about 1910. Hat z, man took about as much out v mines before 1910 as he did after 1910. Anuhr startling fact z hat about 25 per cent v h human beings who have ever lived are now alive, n what z even more astonishing, something like 90 per cent v all h scientists who have ever lived are now alive.

Most widely used example of a system which supplements present letters with added ones is Pitman's Initial Teaching Alphabet (ITA). However, it requires a special typewriter. It is possible to fit two added letters onto some present typewriters having "changeable type" feature. This is taken advantage of by "Economy Spelling," which adds "h, æ," as 'self-reading' symbols for h two most common sounds now needing two letters. Later it can replace "q" by "e" for "ee" sound, using Anglo-Saxon "cw" for French "qu." Use of these three new letters, plus "y" for "ie" sound, converts over half h diphthong occurrences in World English Spelling to single letters. Two Scots dialect short forms are used, "i" for "in," n "wi" for "with," saving 0.6%.
A sample in Economy Spelling 30 follows:

Sins urban dwellers cum i t contact wi vast numbrz v pepl æch dæ, hæ, conserve psychic energy by becumin acwainted wi a far smaller proportion v pepl han hwr rural counterparts do, n by maintaining mor superficial relationships evn wi hez acwaintances. One adaptive response t overload, hrfr, z h allocation v les tym tæch input.

Economy Spelling 30 changes about 250 words, n saves over 9% of typing strokes. It would take about 25 hours to learn to write it, n savings would repay this investment in about 275 hours, or two months of use.

Some proposals for reform or economy add letters by using some present letters or symbols for different sound values. This usually leads to serious "interference" between old n new habits of response, difficult relearning, n slowness in use. One proposal avoiding most of these problems is "Sensubul Spelling," which uses capital letters "A, E, I, O, U," for h "long" sounds of those vowels. This makes, in effect, an alphabet of 31 letters. A sample in "Sensubul Spelling" is:

Lurning fOnEmik speling iz Ezier than ue ml t think. The strAnjnis uv u kaputul letur in the midul uv u wurd wil kwikli disupir with ues.

Some reform proposals would replace h present alphabet with a new one, on fairly strict phonemic principles. h non-alphabetic shorthands such as Pitman n Gregg, n h Shaw alphabet are examples.

George Bernard Shaw died in 1950, n his will provided funds for a contest to prepare a new alphabet of 40 or more characters. Kingsley Read developed h winning entry, n Shaw's "Androcles and the Lion" has been published in it. A typewriter for it has been marketed, n a quarterly, "Shaw Script," issued in it. It resembles shorthand characters somewhat, n uses single letters for "and, is, of, the."

However, this approach is so different from our present writing that it must be viewed as a different written language, not a dialect. It requires a complete relearning. This can be rewarding for professional users of a shorthand, but h cost of this would be excessive for non-professionals.

**Spelling reforms in other languages**

English is not h only language with problems of imperfect correspondence between letters n sounds. It probably shares with French h dubious honor of having h most of these problems.

Dutch has had:

an evolving spelling, ... regularly adapted to Dutch speech. Dutch spelling was simplified in 1804 (Siegenbeek), in 1864 (De Vries-Te Winkel), and in 1934 (Marchant), ... approximately every 60 years.

Portugese has been simplified in 1911, 1931, 1943, n in Brazil in 1973. This has been by government action preceded by discussions among experts, n sometimes by international agreement between Brazil n Portugal.

Faroese was unwritten til about a century ago. About 50 years after a writing system for it was devised, it was discovered that, while it worked well for adults, it was difficult for children to learn. It seems h regularities were at a deeper level, in terms of meanings rather than of sounds. Proposed changes to bring it closer to sounds were resisted by adults.
Other language reforms, in over half a dozen countries, range from Turkish adoption of Latin script, around 1911, to Israeli reforms in Hebrew in 1968. These other examples indicate that language reforms can be planned and carried out, often with lasting benefits.

**Chapter 4. ANALYSIS OF SPELLING REFORM EFFORTS**

From the confusion in spelling three centuries ago, to its traditional but clumsy rigidity at present, four phases of efforts can be distinguished. These have overlapped considerably, and have had widely varying degrees of success.

First was the reform of regularization. This was promoted especially by printers and dictionary writers. It seems to have involved a shift from a phonetic emphasis to a more abstract one. Rather than adopting a phonemic emphasis, which had not been clearly defined at that time, it took a course which seems to be easiest for adults who are trying to write by rules, and stayed closer to meaning and form than to phonemic representation of sounds. In its rejection of a phonetic basis, which could have encouraged different spellings for different dialects, it went to an opposite extreme and adopted a doctrine of rigidity and "correctness."

This reform has had overwhelming, but not unqualified success. With concurrent and subsequent shifts in pronunciation, its rigidity has lost us many of the benefits which alphabetic writing can bring. It is an approach which produces considerable problems for new learners, especially children.

Partly as a reaction to the difficulties built into this reform, Noah Webster took advantage of the nationalist feeling following the American Revolution to attempt some reforms of phonemic simplification. Some of his proposals were adopted, and still distinguish American from British spellings. Many others were not adopted.

Since Webster did not have an integrated system on which to base his reforms, he must be viewed as an early exponent of piecemeal efforts. The American Philological Association in 1876, National Education Association in 1898, Simplified Spelling Board from 1906, and Chicago Tribune from 1934, have been major later examples of this second approach. Lindgren's Spelling Reform belongs here as well.

A third phase of spelling reform effort has been phonemic system building. Benjamin Franklin's new alphabet in 1768, Isaac Pitman's Fonotypy in 1846 were early examples. Phonetic alphabets of the American Philological Association (1877), the joint alphabet produced by them, the National Education Association, the Modern Language Association in 1911, the Spelling Reform Association (later SSA) phonemic alphabet (1930) form a related series of such efforts. World English Spelling (1946) is perhaps the most easily readable of these systems, along with systems based on it.

System-based special purpose spellings are the fourth phase of reform effort. The most widely used of these in schools is Pitman's Initial Teaching Alphabet, with perhaps 10% of children in England and the United States learning to read and write with it. Speech ITA is used to aid some people from foreign language backgrounds in learning the pronunciation of English. World English Spelling is also used for this purpose, especially in Scandinavia. Economy Spelling, with its emphasis on saving effort for educated adults, is another example of this phase. Speech ITA. Additional special purpose spelling systems will be illustrated in Chapter 6.
Present acceptance

What popular acceptance has developed for various spelling reforms which have been proposed in the past? Two types of evidence are available. One is a 1961 tabulation of over a million words from 15 types of sources (Kucera and Francis, 1967). The other is the degree of acceptance various dictionaries give to the alternate spellings (Emery, 1973).

First, what is the acceptance of words from the National Education Association's list of 12, proposed in 1898? Table 1 lists the seven most common of these, with some of their derivatives.

Table 1: SEVEN NEA WORDS, N DERIVATIVES

<table>
<thead>
<tr>
<th>Short: form</th>
<th>Kucera counts: short:</th>
<th>Emery's notes on short form.</th>
</tr>
</thead>
<tbody>
<tr>
<td>program</td>
<td>394</td>
<td>first entry in all; long form British in 4</td>
</tr>
<tr>
<td>programing</td>
<td>13</td>
<td>variant in 3</td>
</tr>
<tr>
<td>programed</td>
<td>2</td>
<td>variant in 3</td>
</tr>
<tr>
<td>programer</td>
<td>0</td>
<td>variant in 3</td>
</tr>
<tr>
<td>catalog</td>
<td>3</td>
<td>variant in 2</td>
</tr>
<tr>
<td>catalogs</td>
<td>2</td>
<td>variant in 2</td>
</tr>
<tr>
<td>cataloged</td>
<td>0</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>thru</td>
<td>10</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>thruout</td>
<td>0</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>thruway, -s</td>
<td>2</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>altho</td>
<td>4</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>tho</td>
<td>1</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>thoro</td>
<td>0</td>
<td>informal, variation, clipped, also</td>
</tr>
<tr>
<td>thoroly</td>
<td>0</td>
<td>informal, variation, clipped, also</td>
</tr>
</tbody>
</table>

"Program" is fully accepted in this country, but "thoro" almost not at all, "Thru, altho," have achieved about 1% acceptance in published writing.

Second, what has been the acceptance of major types of words Webster stressed in his proposals for reform, a century and a half or more ago? Table 2 gives three of these which are overwhelmingly accepted in this country: -or instead of -our, -er instead of -re, and -se instead of -ce endings.

Also largely accepted in this country is his rule for not doubling final consonants before suffixes, as shown in Table 3.

Webster proposed several other changes in endings. Changing some -er to -or, and -se to -ze have been largely accepted here. But his dropping of final -e and final doubled consonant have not fared so well. These are shown in Table 4.

The use of -t for -ed endings after unvoiced letters (ch, f, k, p, s, sh, x) was adopted by the National Education Association for a while. At present it has only about 1% acceptance: "blest" three to "blessed" 13, no short forms found for drop, fix, or stop. Emery notes that "blest" is a variant in all five dictionaries in general use.
Not found in Emery nor in most dictionaries is the common American pronunciation of "-ing" as "-in," in this spelling for it. Surprisingly, this spelling is found over 1% of the time in Kucera n Francis sample, as Table 5 shows.

From these tables it is apparent that the acceptance of spelling reform proposals varies widely, not only among proposals but also among the words affected by any one proposal. Why this is so is not yet clear.

Table 2: WEBSTER'S -OR, -ER, -SE ENDINGS

<table>
<thead>
<tr>
<th>Form</th>
<th>American: Kucera counts:</th>
<th>Emery's notes - American form is first entry in all; alternate British form: U.S.:British:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favor</td>
<td>78 2</td>
<td>in all</td>
</tr>
<tr>
<td>Honor</td>
<td>66 2</td>
<td>in all</td>
</tr>
<tr>
<td>Labor</td>
<td>149 4</td>
<td>in all</td>
</tr>
<tr>
<td>Center</td>
<td>52 29</td>
<td>in 2</td>
</tr>
<tr>
<td>Theater</td>
<td>167 1</td>
<td>in 4</td>
</tr>
<tr>
<td>Defense</td>
<td>6 1</td>
<td>in 3</td>
</tr>
<tr>
<td>Offenses</td>
<td>8 0</td>
<td></td>
</tr>
<tr>
<td>Offense</td>
<td>6 4</td>
<td>in 4</td>
</tr>
</tbody>
</table>

Table 3: WEBSTER - NOT DOUBLE FINAL CONSONANT

<table>
<thead>
<tr>
<th>Form</th>
<th>American first in all</th>
<th>Emery's notes - &quot;&quot; in all</th>
<th>British if to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beveled</td>
<td>3 0</td>
<td>&quot;&quot; in 4</td>
<td></td>
</tr>
<tr>
<td>Buses</td>
<td>6 2</td>
<td>&quot;&quot; in all</td>
<td></td>
</tr>
<tr>
<td>Cancelled</td>
<td>6 1</td>
<td>&quot;&quot; in all</td>
<td></td>
</tr>
<tr>
<td>Canceling</td>
<td>1 1</td>
<td>&quot;&quot; in all</td>
<td></td>
</tr>
<tr>
<td>Dialed, -ing</td>
<td>4 0</td>
<td>&quot;&quot; in all</td>
<td></td>
</tr>
<tr>
<td>Gases</td>
<td>7 0</td>
<td>&quot;&quot; in all</td>
<td></td>
</tr>
<tr>
<td>Gased</td>
<td>0 2</td>
<td>if to</td>
<td></td>
</tr>
<tr>
<td>Labeled</td>
<td>9 2</td>
<td>in all</td>
<td></td>
</tr>
<tr>
<td>Towed</td>
<td>7 3</td>
<td>in all</td>
<td></td>
</tr>
<tr>
<td>Traveled</td>
<td>22 4</td>
<td>&quot; first in all, n</td>
<td></td>
</tr>
<tr>
<td>Traveler</td>
<td>8 3</td>
<td>/ long = British in 1</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4: WEBSTER'S -OR, -E, -F, -ZE ENDINGS

<table>
<thead>
<tr>
<th>American form</th>
<th>Kucera counts: U.S.</th>
<th>British: American</th>
</tr>
</thead>
<tbody>
<tr>
<td>instructor</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>visitor</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>ax</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>envelop</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>medicin</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>opposit</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>plaintiff</td>
<td>0</td>
<td>81</td>
</tr>
<tr>
<td>amortize, -zation</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>analyze</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>analyzed</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>compromise</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>generalize</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>legalized</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

First entry in all; axe = British

<table>
<thead>
<tr>
<th>American form</th>
<th>Emery's notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ax</td>
<td></td>
</tr>
<tr>
<td>envelop</td>
<td>first entry in all;</td>
</tr>
<tr>
<td>medicin</td>
<td>axe = British</td>
</tr>
<tr>
<td>opposit</td>
<td>in 1</td>
</tr>
<tr>
<td>plaintiff</td>
<td></td>
</tr>
<tr>
<td>amortize, -zation</td>
<td></td>
</tr>
<tr>
<td>analyze</td>
<td></td>
</tr>
<tr>
<td>analyzed</td>
<td>first entry in all;</td>
</tr>
<tr>
<td>compromise</td>
<td></td>
</tr>
<tr>
<td>generalize</td>
<td>-se British in 3</td>
</tr>
<tr>
<td>legalized</td>
<td>/ -se British in 4</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

### Table 5: AMERICAN -IN FOR -ING

<table>
<thead>
<tr>
<th></th>
<th>short:</th>
<th>long</th>
</tr>
</thead>
<tbody>
<tr>
<td>bein</td>
<td>3</td>
<td>712</td>
</tr>
<tr>
<td>doin</td>
<td>3</td>
<td>163</td>
</tr>
<tr>
<td>goin</td>
<td>12</td>
<td>397</td>
</tr>
<tr>
<td>havin</td>
<td>0</td>
<td>279</td>
</tr>
<tr>
<td>runnin</td>
<td>2</td>
<td>123</td>
</tr>
<tr>
<td>thinkin</td>
<td>3</td>
<td>145</td>
</tr>
<tr>
<td>throwin</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>travelin</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>totals</td>
<td>29</td>
<td>1,755</td>
</tr>
</tbody>
</table>

Or about one in 60

### Chapter 5 PROBLEMS OF ADOPTION

Several major problems need careful attention by both those who favor and those who question the advisability of spelling reforms.

**Costs and benefits**

A major, valid objection by adults to spelling reform proposals is: "It is too much trouble. I have learned to spell." (Dewey, 1971; 176) Few spelling reformers have estimated the time and cost of learning their new spellings. Based on studies at IBM, it would take about seven hours to relearn less than 70 words in Economy Spelling steps 1-10. Savings would repay this investment in about 140 hours of use, or a month's full time writing. But its first four steps of 27 words would take less than three hours practice, to recover this investment in 81 hours, or about two weeks of full time use.

From these figures it is apparent that initial relearning costs for any complete spelling reform system would be prohibitive. Changing half of a basic vocabulary of 10,000 words might take about
three months of full time work to relearn. N most changes, in most systems, do not offer offsetting savings to balance these costs. Hence one or both of two strategies for spelling reform seem indicated.

First, for adults, is a concentration on small steps, preferrably offering them savings as a reward, so h burden of relearning is manageable. This implies concentration on frequently used words n sounds, to maximize phonemic improvements for h amount of work involved. Many of h irregular spellings are found in these common words.

H other major strategy is a "grade a year" plan for school children, without requiring adults in general to relearn their writing habits. This plan would start with Pitman's Initial Teaching Alphabet or with World English Spelling as an initial learning medium, n transfer to an intermediate system for later grades. This might be Economy Spelling 10 or 15, which can be written on some present typewriters which have "changeable type" keys.

As these students graduate from college, about 15 years later, some books n magazines will be likely to have adopted some of h spellings these customers are accustomed to. Most adults will find they can learn to read these materials, without having to take on more difficult task of changing their own writing. For example, over half a million people subscribed to h Literary Digest, into h 1930's, which used many reformed spellings, when most other publications did not. This strategy brings h benefits of more regular n economical spelling to a new generation, without major difficulties for present adults. A "grade a year" plan requires availability of at least some popular school, n other, materials in h initial n intermediate media. There already is a wide range available in ITA, including some for adults.

Class n cultural biases

Reading n writing were at first largely confined to limited, leisured classes of people. Therefore:

... the inconsistency of English spelling was not felt to be any special disadvantage. ... to be able to spell correctly came to be a welcome sign of 'class' and of more than average education. It was only after the arrival of general education that the drawbacks of the archaic script were felt to be serious. Not every reader and writer of English could now be expected to know French and Latin; and there would be few, even among the educated, to appreciate that exquisite game of computing English spelling from a historical knowledge of three languages. (Haas, 1969; 5)

In 1899, Veblen noted, in his "Theory of the Leisure Class" (257) that:

English orthography satisfies all the requirements of the canons of reputability under the law of conspicuous waste. It is archaic, cumbrous and in effective; its acquisition consumes much time and effort; failure to acquire it is easy of detection. Therefore it is the first and readiest test of reputability in learning, and conformity to its ritual is indispensable to a blameless scholastic life.

Brengleman (1971; 208-9) argues that:

Spelling serves as an additional marker, along with matters of grammar and vocabulary, to identify the register as technical or academic written English and the style as clearly above what Joos called the casual level. English spelling serves to inform the reader of the attitude he is expected to adopt toward the message and what sort of response is expected of him.
However, with vocabulary n grammar available as "markers," archaic spelling is not needed for h purpose. Furthermore, this argument can be turned around. A clearly efficient n logical spelling, if easily readable, can be used as a "marker" for h reader to adopt a progressive n logical attitude toward message, n to respond in a similar vein.

Some other perspectives are provided by Yule (1976; 18):

History and Sociology of Spelling: How spelling has been a mark of social class for a mandarin elite, a sacred symbol, an initiation rite into the educated classes, a security shibboleth instead of being what it should be: a tool for ... effective communication ...

Opposition to change
A major reason why educated adults resist spelling reform is explained by Hall (1963; 238):

It takes considerable effort and many years (as we all know) to completely master our English conventional spelling; and once we have learned it, it represents a considerable investment. Nobody likes to give up the fruits of any investment, and the more costly it is, the less we want to discard it; and so it is with the spelling of English. Once we have learned it, we have a strong emotional attachment to it, just because we have had considerable difficulty with it and have been forced to put in so much time and effort on learning it.

This resembles what management consultants call "the sunk cost trap." People try to justify past efforts by continued effort to get results based on them, even if abandoning h past program in favor of a different line of effort would be more productive.

A second major reason is h difficulty of changing, n h fact that most proposed reforms, except for Economy Spelling, offer little or no offsetting benefits to educated adults, in proportion to h relearning efforts required.

A third major reason, for some people, is a generalized opposition to change. This sometimes takes h form of a "symbolic crusade" in opposition to "experts, outsiders, new ideas," n new leaders, who might replace present ones.

Fourth comes vested interests; economic, social, psychological, n educational. To these a proposed change is viewed as a threat to their position.

One manifestation of resistance to change is h phenomenon known as "blaming the victim." Thus it is argued, by many teachers, sometimes to their pupils, that h fault lies in h student, not h irregularities of spelling. This may seem "obvious" to a teacher who sees some students learning spelling, n others not. Yet comparisons with h teaching of Italian indicate that h difference in regularity of sight-to-sound relationships is also a major factor. Italian schools do not teach spelling, nor have spelling books. With a regular spelling system, these are not needed. (Riemer, 1969; 103) How much time n effort in your school could be redirected to composition, literature, n other subjects if h time spent learning n correcting spelling could be reduced by half?

Interrelations of rules
There is also a major technical, linguistic problem, so far inadequately analyzed. This is h interrelations of rules for spelling, pronunciation, n grammar or meaning. These are not as complex as a full "communication model" (Goodman n Fleming, 1971; 73) would suggest.
Most spelling reformers are concerned only with rules for spelling of sounds. Some of their critics are concerned primarily with rules of grammar and meaning. Yule has found (1976; 13) that:

An analysis of the spelling list for Grades III-VI shows that only 10% of the non-phonetic spellings there have any connection with 'underlying structure' which Chomsky claims that English orthography represents.

Economy spelling specifies rule changes for both spelling and pronunciation. Thus prefixes "be-, de-, di-, re-, to-," on affected words are respelled without an indistinct vowel, and resultant consonant cluster is pronounced with an "intrusive schwa." Hence "beauz, becam, developt, tdae," are spelled as indicated, but pronounced "b(e)cauz, b(e)caem, d(e)velopt, t(e)dae," with an indistinct vowel shown in parentheses. A pronunciation rule is somewhat more complex, but the spelling is briefer, and its rule merely substitutes "b-, d-, r- t-," as a prefix. This procedure avoids confusions between "de-, di-," where an indistinct vowel is spelled in different ways.

As indicated in an earlier discussion of "-ed" endings, in Chapter 2, some changes in rules for some reformed spellings, and its corresponding changes in pronunciation rules, often result in a "package" no more complex than the present combination.

Systematic analyses of the relations of various spelling reform proposals to rules for spelling, pronunciation, and "underlying structure" need to be worked out. These would provide far better bases for discussions on proposals for changes, on ways to maximize efficiency of any one, or a combination of all three types of rules, than we now have.

Chapter 6. EYE-DIALECTS FOR DIFFERING USES

There are at least four major purposes for which eye-dialects are used: literary emphasis and consistency; conveying the sounds of an oral dialect; as an aid to new learners of English, especially on pronunciation; for greater speed and economy of effort in writing than traditional spelling permits.

**Literary consistency**

John Milton aimed "to represent, as nearly as possible the individual sounds produced.; to indicate the right metrical reading; and to differentiate grammatical forms, or words of similar sound and distinct meaning." In addition to using some reformed spellings, he used others primarily in riming couplets, so sound and sight would both match at ends of these lines. Thus in those editions of "L'Allegro" which use his intended spellings we find:

Mountains on whose barren brest
The laboring clouds do often rest

She was pincht, and pull'd she sed
And he by Friars Lanthorn led
Tells how the drudging Goblin swet
To ern his Cream-bowle duly set.

**Conveying dialect sounds**

The most consistent well known user of dialect writing was probably Robert Burns, who published most of his poems and songs in Scottish dialect. Two examples are:
The best laid schemes o' Mice an' Men  
  Gang aft a-gley,  
  An' lea'e us nought but grief an' pain  
  For promis'd joy  
Still thou art blest, compar'd wi' me!  
The present only toucheth thee  
But Och! I backward cast my e'e  
  On prospects dreer  
An' forward tho' I canna see,  
  I guess an' fear!  

Scots wha hae wi' Wallace bled  
Scots wham Bruce hae aften led ...

George Bernard Shaw indicated dialect, especially h Cockney dialect of lower class London, in several of his plays. Thus in "Captain Brassbound's Conversion" Drinkwater says:

You awks me wot e is, gavner? Ee's a Puffick Genlmn. Thets wot e is. Hinglish genlmn, gavner, Hinglish speakin; Hinglish fawther; West Injin plawnter; ... A sliver is abaht the wanne thing in the wy o a genlmn o' fort' tht e ynt. Bless yr awt, y' cawnt be a pawrit naradys. If aw was to do orn tht there Hntlentc Hwcean the things aw did as a buoy in the Worterleo Rowd, awd ev maw air cat afore aw could turn maw ed.

In Shaw's play "Pygmalion," made into h musical "My Fair Lady," h heroine is transformed from a lower class Cockney flower salesgirl into an entrant into "high society" by a linguist who teaches her h upper class dialect.

At some points Shaw despairs of giving an accurate picture of Cockney speech by means of our present alphabet. He found that actors who specialized in Cockney roles could not read semi-phonetic spellings, but readily gave Cockney translations from standard spellings.

**American examples**

Some American writers have also used eye-dialects to indicate oral dialects or variant pronounciations. Finley Peter Dunne expressed Irish-American dialect in h "Mr. Dooley" series as follows:

Well, last night says I to mesilf, thinkin' iv Dorsey, I says: 'I swear that henceforth I'll keep me temper with me fellow-men. I'll not let anger or jealousy get th' betther iv me.' I says. 'I'll lave off all me old feuds; an' if I meet me inimy goin' down th' sthreet, I'll go up an' shake him be th' hand, if I'm sure he hasn't a brick in th' other hand.' Oh, I was mighty compliminthry to mesilf. I set be th' stove dhrinkin' hot wans, an' ivry wan I drunk made me more iv a pote.

Leonard Ross depicts h language of another immigrant background in "The Education of Hyman Kaplan" with a mixture of English n German (1937; 116, 158-9):

Leesen, Moe! Don' talkink all de time in reedles: I esk a tsimple qvastion, so give, pliz, a strong, plain enswer. ...
Fromm noose-peppers de messes loin abot de voild. Even de edvoitisments in de pepper is a kinda lasson. An ufcawss de odder pots a newspapers de hatlininks, de auditorials, de cottoons, de fine pages pitchiss on Sunday, dat ve callink rotogravy sactions.

Natives to this country also speak regional n class dialects, as Mark Twain (Samuel Clements) illustrated in "Tom Sawyer." He has Huckleberry Finn express himself in these words:

I don't want nothing better 'n this. I don't ever get enough to eat, gen'ally - and here they can't come and pick at a feller and bullyrag him so.
Dern'd if I would.
I reckon I ain't dressed fitten for a pirate.
'Taint thunber, becuz thunber ...
Tom, I wisht you'd come too.

More recently, Marjorie Kinnan Rawlins depicts h speech of several characters in "The Yearling" in this fashion:

Oliver was gettin' the wust of it. Hit didn't seem right, a hull passel o' you-all whoppin' Oliver.
Dogged if you don't figger the farrest of any young un I've ever knowed.
Hit'll be no time, and it not needin' nothin',
Kin I he'p?

These attempts to depict non-standard pronounciations make interesting n perhaps confusing mixtures of standard n semi-phonetic spellings. H authors tend to use standard spellings for standard pronounciations, even where these spellings are not phonetic or phonemic, n a more nearly phonetic spelling where non-standard pronounciations are being described. Since most readers - n most writers - have not been trained in phonetic spelling, this appears h most 'realistic procedure.

New learners of English

English is h only language whose dictionaries routinely supply pronunciation for all root words. (Wijk, 1966; 7) Teachers of English to adults of other language backgrounds often make use of phonetic texts, to teach pronunciation. Many of these are in International Phonetic Alphabet. This is well suited to learners from European backgrounds, as its letters tend to have their "continental" values. But it is poorly adapted to other backgrounds, n to a transition to traditional English spelling.

In Scandanavia, World English Spelling has been used as an initial learning medium. Since this uses h commonest English pronounciations as h basis for its use of letters, it provides far easier transition to h reading of traditional English.

Pitman's Initial Teaching Alphabet (ITA has also been used for this purpose, n a series of books for adult learners has been published. For learning to speak English, a further development of ITA has been made. This "Speech ITA" indicates stressed sounds n syllables in boldface, normal stress in normal ITA, n unstressed sounds in smaller type. A sample is given here.
SPEECH ITA SAMPLE

The international phonetic alphabet is widely used as a medium for teaching listening and speaking, but with great departure from the forms of traditional orthography (T.O.) that teach the reading, writing, and particularly spelling in T.O. is greatly vigified.

Thus the great advantage of speech i.t.a. is that when it may be used just as effectively as T.P.A. to teach listening and speaking, it offers a much more effective tool in teaching reading, writing, and courteous as research has established, even spelling alone.

Economy in speed
Writing in longhand in traditional spelling goes at about 30 words per minute. Most writers think much faster than that, so traditional writing becomes an obstacle to their productivity. In 1944, George Bernard Shaw noted that:

Shakespeare might have written two or three more plays in the time it took him to spell his name with 11 letters instead of 7, "bough" with five instead of two, tho he spelt much more phonetically than Dr. Johnson. In my own practice I use the phonetic alphabet of Isaac Pitman. It has saved me a prodigious quantity of manual labor. (Tauber, 1963; 82-3)

A completely phonemic spelling would only increase writing speed from 30 to about 36 words per minute. Alphabetic shorthands can be written at from 60 to 120 words per minute, n nonalphabetic ones, such as Pitman n Gregg, from 120 to 200 words per minute. In contests in court reporting, experts write as high as 280 words per minute.

Basic shorthand techniques
There are four ways by which shorthand systems achieve greater speed than standard handwriting:

1. replacing letters, to correspond more to sounds;
2. dropping letters, even syllables;
3. reducing the complexity and length of lines in letters;
4. substituting symbols for some letters and combinations.

Shorthand systems are based on the sounds of words, so dropping silent letters is universal among them. They drop not only short internal vowels, but sometimes syllables as well. N often they substitute particular letters or syllables for combinations of letters, such as prefixes or suffixes. Often the same symbol is used for several combinations. Reducing the complexity of letters, substituting symbols require relearning penmanship, as they replace familiar muscle sequences with new ones. This increases learning time on both writing and reading.

Many of these devices move h resulting writing farther from h sounds again. They result in more homographs - words written h same but with differing pronunciation n meaning. These increase
learning n transcribing time. It is often necessary to stop n think thru h meaning of alternate transcriptions to find one which makes sense. Some unpracticed shorthand users come up with many wrong words as a result.

In general, as shorthand systems get briefer, they reduce h time taken to write their symbols, but increase h time taken to decipher them, n to learn or keep fluent on them. Thus in selecting a shorthand system to use, h purpose it will be used for must be kept clearly in mind.

Where speed of writing is highly important, as in court reporting, a system such as Pitman or Gregg may be h best. For such professional uses, h time spent on learning n brushing up, n h time spent deciphering, may be worthwhile. But where speed of writing is less crucial, n ease of transcribing is more important, an alphabetic shorthand is better.

Using just h first two techniques can bring substantial savings. For example:

Ecnmi spln cndnst t a shrt hn wd lk lyk hs. Dropn mos intrnl vowlz z a mæjr dvys.

In these two sentences, a third of h letters are saved. Thus writing speed can be raised from 30 words per minute to about 45, in typewriting or handwriting. Reading n deciphering are easier than with systems which go farther.

Shortening lines in letters, n using symbols for some letters n combinations in handwritten versions, can save at least another 33 % in alphabet based shorthands. This brings savings to over half h writing effort, n speed to 60 words per minute or higher.

One can use a variety of stages of condensation for differing uses. Standard spelling may be best for writing to traditionalists. Economy Spelling 4 may be readily accepted by progressive people, saving 3-3%. Economy Spelling 10 or 15 can be used for more economical typing, saving 5 or 6%, n are easily read by many people. A condensed typed or written version, such as illustrated above, may be adequate for notes from written sources, n for first drafts of essays n reports, saving over 30%. Further abbreviated handwritten styles, such as h published alphabetic shorthands, may be needed for some lecture n interview notes, with savings of 50% or more.

**Criteria for eye-dialects**

If a writer wants to design an eye-dialect, or select one, what criteria should be used? Or if a reader or teacher finds one in use, how should it be evaluated? Three major factors are: purpose, readability, n semi-standardization.

A first step is to define clearly purposes for which it is to be used, n h audiences for which it is designed. Most spelling reform proposals have been weak on this step. When these are clear, h features selected to implement each purpose should be specified. Only with these specifics can appropriate testing be done. This approach should greatly reduce h confusion in comparing alternate systems.

If h purpose is h presentation of oral dialect, or securing some other literary effect (like e. e. cummings) h devices used will differ, but should usually be consistent within any one document. An exception is where a character uses different oral dialects in talking with different people, or in different situations.

For readability by h intended audience, changes from familiar, tho perhaps variant, spellings should not be too drastic. A "key," glossary, or introductory "note to the reader," explaining h "eye-dialect"
used, in its relations to pronunciation sometimes to grammar, is often needed. Strangeness in over a sixth of h words has been found to slow reading and comprehension substantially.

A major problem with spelling reforms and reformers is their tendency to differ on many minor points, resulting in a "babelization" of proposals. This reduces readability of examples, and confuses efforts to make progress on common problems of traditional spelling.

A preponderance of research and experience for over half a century favors World English Spelling (WES) and its close relative, British "New Spelling." Pitman's Initial Teaching Alphabet is based on these, and all three use 40 basic sounds expressed in Pitman shorthand for over a century, with minor variations.

Hence proposals for spelling reforms, and other "eye dialects," should use World English Spelling as a starting point, and explain purpose and rationale for deviations from it. Where WES will serve a purpose about as well, it is to be preferred over idiosyncratic systems which have to be learned individually for an occasion.

Chapter 7. IMPLICATIONS FOR TEACHING

Now that the history of English spelling and spelling reform efforts, and of uses of non-standard spellings have been reviewed, what conclusions can be drawn for teaching of English?

Some of these were suggested by Francis (1958) in his chapter on "Linguistics and the English Teacher." He said in part:

The child ... applies his analogies in situations where usage contradicts their conclusions. So we get "childish" but perfectly logical forms like "sheeps, mans, and gooses." This process is particularly noticeable with verbs, where analogy may produce regular but unconventional past-tense forms like "throwed, seed, goed, comed, bited, hitted, and buyed."

Ideally, it would be a wise and practical course if we parents would learn from our children, in this matter at least, and adopt these analogic forms into our own speech. This does happen to some extent in the history of language, though slowly and gradually. The very regularity of the "-es" plural is the result of gradual extension of this form to nouns which formerly used other plural suffixes.

If we were to give the language over to the children for a generation, their rigorous application of analogy would eliminate most irregularities in one clean sweep. ... when we correct a child's "throwed" to "threw," we should at least have the decency to recognize that he has more right to be amused or shocked than we have! (552–3)

Linguistics can supply no easy solution to the problems of teaching spelling.

1. The poor speller should not be considered deficient in intelligence or linguistic ability. Some poor spellers are actually more perceptive in linguistic matters than good spellers, since their misspellings often result from attempts to render the English graphic system more phonemic than it actually is. Such misspellings often make better phoneticians than those who always spell correctly.
2. Spelling should be treated as a special phase of the general skill of writing, and one whose importance is more social than linguistic. Misspelling seldom prevents or even hinders communication, ... (562)

Wells, in his 1973 survey, "Dictionaries and the Authoritarian Tradition," refers to five dimensions "for evaluating current American usage; social, situational, methodological, temporal and regional." This implies the appropriateness of differing speech and writing patterns for people in differing locations along these five dimensions. He concludes that "The only possible position is a healthy linguistic pluralism." (97, 120)

This pluralistic approach has gained ground with the publication of studies such as Shuy's (1967) "Discovering American Dialects," Labov's (1970) "The Study of Non-Standard English," and the growth of bilingual education movement.

School systems which use Pitman's Initial Teaching Alphabet or World English Spelling as an initial teaching medium may find it useful to follow Kalb's (1965) advice, to teach their students the history of writing, including history of the initial teaching medium they learned.

Teachers can place themselves on a firm foundation if they know to teach the history of spelling and efforts at spelling reform, along with suggested criteria for selection and deliberate use of non-standard spellings. Familiarity with many publications in related areas will help. These are listed in Appendix 1.

Now that you have completed this book, review your present reactions to its use of the eye-dialect Economy Spelling 4, "n, h." Have your reactions changed since you finished first chapter? Can you now read this dialect faster, or slower, than traditional spelling? What advantages and problems do you see in its use?

Appendixes

Appendix 1. RESOURCES FOR FURTHER READING

For those who wish to delve deeper into the history, problems, and possibilities of written dialects and spelling reforms, three types of materials are listed and commented upon in this Appendix. Materials on the history and analysis of writing systems are followed by source books giving examples from well-known writers in their original spellings. For those interested in current spelling reform proposals, addresses for materials on several are listed.

Writing Systems

This section includes major publications this study has drawn on. It supplies notes on special sections or emphases some of these sources have.

Sections on early spelling reformers (252-7) and the great vowel shift (287-9). Also appendix with examples of early spellings.

Discusses spelling, grammar n vocabulary as markers of casual, academic, technical n other styles. Also h "reclassicization" of spellings borrowed from Latin, in Late Middle English period.

Bullock Committee (1975). A Language for Life. London, Her Majesty's Stationery Office. This is h major recent British study of problems of teaching English. It is highly favorable to h use of Pitman's Initial Teaching Alphabet (ITA.). Quotations from it may also be found in Spelling Progress Bulletin, Spring 1976, 4-5 (listed below).


Dewey, Godfrey (1923, 1950). Relativ Frequency of English Speech Sounds. Cambridge, Harvard University Press. Still h only available source with counts of words, sounds, n letters from h same sample. Word count of 100,000 made in 1916 is superseded by Kucera n Francis, below.


Kavanagh, James F., n Ignatius G. Mattingly (1972). Language by Ear and by Eye: The Relations Between Speech and Reading. Cambridge, MIT Press. Includes papers on: One second of reading, Philip B. Gough; How alphabets might reflect language, Edward S. Klima (57-110); How language is conveyed by script, John Lotz; Our collective phonological illusions, young and old, Wayne O'Neil; What the child knows about speech when he starts to learn to read, Harris B. Savin; Misreading, a search for causes, Donald Shankweiler n Isabelle Liberman.


Pitman, James, n John St. John (1969). Alphabets and Reading. London, Pitman. Much material on h history of spelling reforms, h development n use of initial teaching alphabets in h 1850's, n on ITA n its use since 1960.


Rycenga, John A., n Joseph Schwartz(1968). Perspectives on Language: An Anthology. New York, Ronald Press. Includes articles on: Usage, Porter G. Perrin (225); Cultural levels and functional varieties of English, John Kenyon (229); Social aspects - class, taboos, politics, Margaret Schlauch (236);


Includes detailed description of Noah Webster's efforts for spelling reform.


Describes Theodore Roosevelt's effort to have h Simplified Spelling Board's list of "300 words" used by h Government Printing Office, n h storm this raised. (Especially pages 162-188).

Current information n viewpoints on "the causes of difficulties in learning reading and spelling."

Reviews h "first dictionary war" between Webster n Worcester in h 1800's, n h "second dictionary war" on publication of Webster's Third in 1961. Concludes that dictionary makers are largely captive to authoritarian attitudes toward language held by h public, rather than being a major cause of them.

About 128 pages of rules n exceptions, indicating how complex h relations of spelling to sounds of English have become.


**Examples of written dialects**
Most modern editions of early writers have "corrected" h original spelling to conform to present day usage, in whole or in part. H sources listed below endeavor to render more accurately h spelling h authors intended. Modern examples of written dialects are also listed.

Difficult dialect words are translated in h margin.


Clements, Samuel (Mark Twain) (1920). Adventures of Tom Sawyer. New York, Collier, Authors National Edition. (117-9, 125, 139)


Shaw, George Bernard (1906). Three Plays for Puritans. (Includes Captain Brassbound's Conversion) New York, Brentano's.


**Spelling reform proposals**

Descriptive and other materials on principal proposals referred to may be obtained from these sources.

ITA; catalogs of materials:

Educational Research Council of America, Reading Department, Rockefeller Building, Cleveland, OH 44113.

Pitman Publishing Corporation, 6 Davis Drive, Belmont CA 94002. ITA catalog lists


Economy Spelling: Free description (postage appreciated) from: Progressiv Spelling, 401 E. 32, #1002, Chicago IL 60616.

Ryt Ryting: Free leaflet available from Clarence Hotson, Yale Farm Road, Romulus NY 14541.

Sensubul Speling: Sensubul English Speling Dikshuneri available for $3.50 from Americans for Sensubul Speling Inc., 7047 Tokalon Drive, Dallas TX 75214. Respells about 30,000 words.

Spelling Reform 1: Spelling Action Society. U.S. representative is Robert M ayhew, Mayhew English Academy, Box 285, Calexico CA 92231. $5 membership first year includes Lindgren's "Spelling Reform, A New Approach" n a rubber stamp to use on letters; $3 a year thereafter. Includes monthly "Spelling Action."

Appendix 2 CHRONOLOGY

Periods, authors, events. (@ = dates approximate)

PRE-ENGLISH PERIOD, to @ 700 A.D.
   @ 1250 B.C. Alphabet invented
   @ 650 B.C. Latin alphabet, 23 letters.
   63 B.C. First shorthand, by Tiro.

OLD ENGLISH, @ 700-1100 A.D.
   Phonetic start, then drifted away.
   @ 900 A.D. "w" begins to emerge.
   1066 Norman Conquest.

MIDDLE ENGLISH, @ 1100-1450
   1258 First royal proclamation in both English n French.
   1340-1400 Geoffrey Chaucer
   @ 1350 Parliament changes to English.

EARLY MODERN ENGLISH, @ 1450-1700
   Great Vowel Shift.
   John Hart 1569-70 Phonetic alphabet, spelling reform advocated.
   1564-1616 William Shakespeare 1589 The Tempest
      "u, v" differentiated, "vv" becomes "w."
   1611 King James Bible
   1608-1674 John Milton 1667 Paradise Lost
      "j" differentiated from "i"; 26th letter of alphabet.

LATER MODERN ENGLISH, @ 1700-now.
   1709-1784 Samuel Johnson 1755 Johnson's Dictionary
   1706-1790 Benjamin Franklin 1768 New alphabet proposed
   1759-1796 Robert Burns 1786 Poems, Chiefly in the Scottish Dialect.
   1758’1843 Noah Webster 1789 Dissertation on the English Language
      1806, 1828 Webster's Dictionary
   1796-1859 Horace Mann
   1813-1897 Isaac Pitman 1837 Pitman shorthand; then his
      1843 Fonotypy, Used in U.S. 1851-63
   1856-1950 George Bernard Shaw
      1876 Spelling Reform Association
   1858-1919 Theodore Roosevelt 1906 Simplified Spelling Board
   1887-1977 Godfrey Dewey 1930 Spelling Reform Association's Phonemic Alphabet
   1946 World English Spelling
   1901- James Pitman 1960 Initial Teaching Alphabet, first used in England, 1963 in U. S.
      1961 Webster's Third Dictionary published.
Appendix 3. WRITTEN DIALECTS: EXAMPLES

<table>
<thead>
<tr>
<th>Writer</th>
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<td>36-37</td>
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<tr>
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<tr>
<td>World English Spelling</td>
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<td>Initial Teaching Alphabet</td>
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<tr>
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<td>58</td>
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<td>Burns, Scottish</td>
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<td>Shaw, Cockney</td>
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<td>Dunne, Irish</td>
<td>78-79</td>
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<td>Ross, German</td>
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<td>Clements, American</td>
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<td>Rawlins, American</td>
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<tr>
<td>Speech ITA</td>
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<tr>
<td>Economy Spelling Shorthand</td>
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4. ACCEPTABILITY RATINGS

A preliminary study of acceptability of various spelling reforms asked for reactions, from +3 to -3, to a long list of proposed changes. About a fourth of the sample reported neutrality (=0). A fifth marked all changes -3. Most of these seemed to be traditionalists, but one was a consistent classicist—his wrist watch has Roman numerals. Based on proposed changes receiving favorable ratings, eight steps of "Progresiv Spelling" have been devised. The first four include only spellings listed as alternates in most dictionaries. They are based on the National Education Association's 1898 list of 12, Noah Webster's rule against doubling, n NEA.'s use of "-t" endings, adopted about 1906.

These first four steps are:
- PS1: altho, tho, thru, thruout, thoro, thoroly.
- PS2: catalog, cataloger, cataloging; dialog, prolog, synagog.
- PS3: canceled, diagraming; programed, programer, programing; traveled, traveler.
- PS4: burnt, dropt, fixt, mixt, spelt, stopt.

Step 5 follows usage by Edmund Spenser n John Milton. Step 6 has precedents in Shakespeare.
PS7 drops or changes more "gh". And it changes some "ph" to "f", as popularized by George Eastman and "foto" shops.
PS8 uses "syllabic l." Its "vocal murmur" is like h indistinct vowel "schwa." (Dewey 1970; 2)
These second four steps are:
PS5: appeard, calld, concernd, considerd, coverd, designd, determind, followd, happend, involvd, livd, obtaind, opend, playd, receivd, remaind, returnd, seemd, servd, showd, turnd.
PS6: askt, developt, establisht, finisht, increast, lookt, publisht, reaecht, slipt, stept, walkt, wisht, workt.
PS7: enuf, ruf; nabor, nabors, naborhood; foto, fotograf.
PS8: fiscl, levl, locl, norml, totl.

Ratings n other data on these steps are:

<table>
<thead>
<tr>
<th>Steps</th>
<th>Words</th>
<th>Occur in 1 Million</th>
<th>Saving</th>
<th>Sample Rating</th>
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<tr>
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<tr>
<td>PS8</td>
<td>5</td>
<td>964</td>
<td>.015</td>
<td>+</td>
</tr>
</tbody>
</table>

Ratings on some other proposals are:
"th" for "the" | 69,971 | 1.18 | -0.4
"h" for "the" | 69,971 | 2.36 | -0.6
"n" for "and" | 28,252 | 0.96 | -0.7
SR1: agen - sed | 4,213 | 0.1 | -0.5
cæm - mæd - wæ | 11,997 | 0.22 | -1.1
between-ech-yr | 7,366 | 0.13 | -1.1
by - tym - whyt | 8,568 | 0.2 | -1.1

Reactions to other proposed changes fall between +0.1 and -1.4 ("wn" for "one").

Thus PS1-8 include h most favorably viewed spelling reforms, n so should be h easiest to gain acceptance. (A longer discussion of this is referred to on page 112.)

ACKNOWLEDGMENTS

The quotation from Kenneth Boulding's "The Meaning of the Twentieth Century" is used with the kind permission of the author.

Material from Helen Darbishire's edition of "The Poetical Works of John Milton" is used with the kind permission of Oxford University Press.

Material from Godfrey Dewey's "English Spelling: Roadblock to reading" is used with the kind permission of Teacher's College Press, the Phonemic Spelling Council, and the author's family.

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The description of "Acceptability Ratings" in pages 109-111 was first published in second of three related articles, by this author, in Spelling Progress Bulletin in 1979:

Cultural Lag and Prematurity: The Case of English Spelling (Spring);
Acceptability of Proposed Spelling Reforms (Summer);
Acceptable to Whom? Progressives and Reformers View Spelling Reforms (Fall).