Spelling Progress Bulletin Winter, 1979

Dedicated to finding the causes of difficulties in learning reading and spelling.

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25th Annual Convention of the International Reading Association at St. Louis, Mo. May 5-9, 1980.

It will include two special meetings of interest to our readers: Committee on Spelling Research – co-sponsored by the British Simplified Spelling Society.

Program Organizer: John Downing, Univ. of Victoria, Can.

Chairperson: yet to be selected.

Speaker John Downing, President, Simplified Spelling Society.

Subject: 'How Children Think About Spelling.'

The other, a joint IRA-Phonemic Spelling Council meeting, will be held Thurs, May 8, 1980.

Organizer: Emmett Albert Betts, Ph.D., LL.D. Research Prof. Emeritus, Univ. of Miami, Fla.

Topic: "Word Perception: Strategies and Tactics"

Chairperson: Dr. Katherine P. Betts, Florida Southern College.

Panel:

Dr. Emmett A. Betts, Univ. of Miami,

Dr. Lou E. Burmeister, Univ. of Texas at El Paseo

Dr. John Downing, Univ. of Victoria,

Dr. Thomas Horn, Univ. of Texas at Austin

Dr. Milton Jacobson, Univ. of Virginia,

Dr. Donald C. McFeely, Indiana Univ. at Pennsylvania

Dr. Michael Strange, Univ. of Texas at Austin

Abstract:

Panelists present facets of English orthography (writing system) which facilitate and interfer with pupil-acquisition of word-perception skills, e.g., phonic rules in terms of application/exception ratios, ambiguity of rules, syllabication generalizations, effects of syllable and phrase stress on applicability of phonic rules. Demonstrate techniques for application and for teaching, e.g., "first-aid" for pupils requesting help during silent reading, phonics countdowns and substitution methods, a Russian training system in word-perception skills. Audience questions may address the above, as well as constraints influencing word perception and factors contributing to effective teaching of word-perception skills.

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1. Report on the SSS Conference of 1979
by Helen Bonnema Bisgard, Ed.D.

The first half of this report was printed in our Fall issue. The rest delayed by lack of space.

The Conference was held at the new campus of Nene College, Northampton, situated among large trees in open fields with a distant view. The meeting started on Friday evening and continued all day and evening on Saturday and Sunday, on Monday morning and early afternoon recessing each day for morning coffee, afternoon tea, and a long lunch. Lively discussions were continued during the meal times with remarkable intensity and even at night at the student resident building where accomodations were conducive to group conversations.

One of the conferees was heard to comment rather ruefully that his family thinks these meetings of "alphabeteers" are futile. Nothing is ever accomplished. Someone else laughingly retorted that we do succeed in having a very good time. We are "birds of a feather flocking together' from distant lands to chirp about Eutopia. We are having just as much enjoyment as those people who spend hours with their bridge club or on bowling team perfecting their scores, or with their scientific society searching for artifacts in archeological diggings. Moreover, if our deliberations result in preparing the public to accept a change which will be of inestimable benefit to millions of school children, we shall have accomplished greater good than any of our hobby engrossed friends.

This does not imply that nothing demonstrable will result from the conference. A post-program meeting of the SSS members held July 31 considered action on the implementation suggestions which had been made, and will be discussed further in the Annual General Meeting held on Oct. 27th. These discussions and any action will be reported in the official journal, *The Pioneer,* and later in an issue of *Spelling Progress Bulletin.* By Spring we may have some more interesting news to report, which is at the present not finalized.

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2. Proceedings of the Second International Conference on Reading and Spelling, by Valerie Yule* held at Nene College, Northampton, Eng. July 27-30, 1979; sponsored by the Simplified Spelling Society

*Old Aberdeen, Scotland.

Several new and significant developments are well in evidence in the papers presented at the 2nd International Conference on Improving Spelling organised by the Simplified Spelling Society. There are, predictably, trenchant criticisms of present English spelling and its social consequences, and the presentation of schemes that would be easier to learn. There is also serious investigation of the meny and sometimes conflicting requirements of an optimum spelling system. It must be easier for children and foreigners to learn than our present spelling. It must also be acceptable to the present literate generation as an improvement,. and easy for them to read and write; it must solve problems of modern technology in translating speech and print;, it must maintain the readability of present spelling into the future; and the transition must meet the essential requirement of costing very little but saving billions of pounds and dollars.

Most of the past arguments pro and con spelling reform has been at an armchair level, pundit agenst pundit, quote agenst quote, assumption agenst assumption. Meny reformers have concentrated on devising splendid new spelling systems incorporating accurate sound-symbol correspondences, hoping that these could take over society from a base of universal schooling or government decree. Such systems have not been adopted even to a limited extent.

The Conference papers, however, show a new desire for facts. All claims and assumptions about fluent reading as well as about learning, must be justified by experimental investigation in the marketplace and in the classroom, where the most elegant studies may be confounded. The emphasis is that the abilities and needs of the people who must use spelling as a tool are more important than the ideal neatness of schemes or arguments.

The papers covered three areas: the nature of present spelling and spellers, the necessity and feasibility of improvement in English spelling, and practical methods of investigating and implementing changes.

Following Prof. John Downing's introductory lead on the crucial significance of factors affecting human motivation for change, examples of this practical type of investigation are presented by linguists, educators, psychologists, and a sociologist. The study of spelling is seen as a complex behavioral science, not   as an abstract or natural science.

Dr. Donald Scragg, the linguist historian, points out how much can be learnt from the history of English spelling, so that improvement can follow natural trends, e.g., in simplification and in the extension of principles by analogy. Dr. Robert Baker, linguist, criticises spelling reform proposals whose systems conform to the sophisticated linguistic intuition of experts, whereas it is non-experts who must use spelling systems, and he uses the terms 'democratic spelling', and the 'psychological reality' that spelling rules must have. Dr. Baker, with linguist Dr. Philip Smith, psychologist David Moseley, sociologist Prof. Abraham Citron, and psychologists Dr. John Beech and Valerie Yule, describe their experiments and observations on how children and adults understand spelling and the nature and bases of popular spelling mistakes, with their implications for the nature of reform that would be both efficient and practicable. Experiments on 'the sort of spelling you would like to have' now go beyond the sometimes misleading technique of simple questionnaire. It was suggested, inter alia, that dictionaries that fail to accept some almost universal spelling 'mistakes' are in fact not

fulfilling their descriptive function of accurate reflection of the status quo.

Dr. Smith and others consider the issue that optimum spelling may not be merely phonemic, but should take into account morphemics lexical, syntactic, semantic, and other actors, and describe some of their own relevant research. The conference emphasis in discussion was that the significance of all factors must be empirically demonstrated, and then they might be applied to achieve a more efficient spelling than we have at present, since English spelling is only spasmodically consistent in eny of these areas.
As Dr. Axel Wijk points out, the really important anomalous spellings for learners are in the 400,500 of the commonest words. It was suggested in discussion that each of these would could be subject to investigation as to whether eny of these non-phonemic i grounds exist to justify their continuance as phonemically irregular spellings.

The 'regularity' or predictability of spelling to enable learners to read and write is investigated by educator Fergus McBride, who says that 'books on phonics have to be red to be believed,' and reveals how meny Scottish teachers teach spelling rules which the Scottish Council for Research in Education has condemned as inadequate. He examines the limitations of present spelling 'rules' for learners and for computers.

The advantages of consistent spelling for modern technological application are described by Dr. Helen Bonnema Bisgard, and recent applications of phonemic-spelling strategies in sound-spelling machines, film-dubbing and simplified shorthands were discussed. Altho quite simple computers can play chess, attempts to program the most sophisticated computers with sufficient rules for present English spelling have never achieved more than 50% accuracy, and big business is now resorting to the expedient of building English dictionaries into their machines – and so, perhaps building another vested interest agenst spelling reform. Meanwhile medical research lags in building similar dictionaries into human learners, so the usual 3 to 8 year program of rote learning is still required for all non-machines who do not have good visual memories.

A pragmatic approach also characterises discussions of arguments and evidence regarding spelling reform.

Prof. Abraham Citron describes the continuing problem of functional illiteracy and dislike of reading in English-speaking countries despite 9-10 years of expensive universal education and the multi-billion-dollar decade of the U.S. Right-to-Read Program, (and Hugh Jamieson, who sent a videotape as his representative, comments that the 30 best spellers out of 10,000 in a recent contest could not score better than 14 words correct out of every 15 – so what of the rest of the population?). Citron emphasises the detrimental effect of the hidden curriculum upon children of the authoritarian imposition of an irrational and inconsistent spelling that does not obey its own 'rules.' Vic Paulsen suggests, not entirely fancifully, that English spelling was not 'orthography,' correct. writing, but. 'pathography,' a collective aberration that could be prosecuted under the laws agenst unfair monopolies, environmental pollution and sex discrimination.

Remedial specialist Alun Bye demonstrates some of the ingenious expedients used to help learners attend to and remember the letters in words since reason cannot be relied on to help them, such as 'wordles' that visibly show their meaning (e.g. *detonate*-exploding) and reading words backward for memorable effects *(murder-red rum),* a sad commentary on the expedients to which some teachers must go to enable some pupils to learn to spell 'difficult' words.

In contrast, Prof. John Downing summarises the over-whelming evidence that i.t.a. teaching proves that sound-spelling consistency makes initial learning easier and reduces failures. However Downing regrets the initial decision to use the script of i.t.a. since it was never designed as a

stepping stone to spelling reform and is unsuitable for such extension.

Dr. Derek Thackray complements Prof. Downing's summary with the findings of his own research which shows that learning to read in i.t.a. requires less maturity of 'reading rediness skills' than present spelling, and so makes it easier and safer for children to start learning earlier, with all the advantages of early-reading experience.

Mrs. Elsie Oakensen discusses the feasibility of spelling reform, and outlines the classical arguments for and agenst improving the conventional writing system.

It is a significant comment on English spelling that so meny foreigners, contrasting it with the efficiency of their native spelling systems, try to invent better systems for English. English people learning foreign languages take it for granted that they can pick up the principles of say Italian or German spelling in an hour or so; foreigners get a nasty shock when they find that learning English spelling takes meny years. Consequently it is no surprise that three of the Conference members presenting their ideas about English spelling are not native speakers. Mr. S. Bakowski, formerly from Poland, and Dr. W. Gassner, from Germany both emphasise the impossibility of extending one's spoken English thru trying to read present English spelling and they put forward their ideas about how inter-national and immigrant learning of the English language could be facilitated by clearer sound-symbol correspondence.

Dr. Axel Wijk of Sweden has always recognised the issue of reconciling the needs of learners and present users of English spelling. The Conference, saddened by Dr. Wijk's recent deth, greatly appreciated the presence of Mrs. Pia Wijk to read the last paper he had prepared for it.

Dr. Wijk has attempted to 'clean up' English spelling by regularising its major inconsistencies to accord with its major consistencies, thus leaving up to 90% of present spelling intact and making the learning of spelling a matter of learning rules. The transition to present spelling is to be made later, by learning the exceptions to the rules. The books he has devised to reach his 'Regularized Inglish' initial learning scheme were on display at this conference.

Two psychologists also attempted to tackle the question of 'transitional' spellings that children could learn easily and also the present literate generation adapt to easily. John Beech and Valerie Yule present similar attempts to find the minimum number of rules that would achieve maximum similarity to present spelling, with 65-80% of words in running text remaining unchanged. Yule puts forward a two-way approach to a transitional spelling – the techniques by which adult readers can reach it by modifying present spelling, and how children could reach it by modifying a simple phonemic initial learning system. The two speakers stressed the tenor of the Conference – that it is time for experimental research to turn from the morbid fascination of what's wrong with children who cannot spell, to what are the critical features of English spelling that can be changed to create the best effect with minimal disruption. The research on spelling which has produced so little in the way of 'cure' for bad spellers and poor readers could all be re-analysed with a human engineering approach aimed at making the spelling fit the people rather than vice versa.

George O'Halloran, in his experience with phonetic alphabets in The Gambia, found that pupils were able to read with ease the Kiriyo dialect when it was written in a script similar to our T.O. but when it was printed in fully phonetic script, it was difficult to read. This convinced him that an orthography should work according to the nature of its own orthography. A practical trial in the field or in the classroom is essential to testing the theories of the new' orthography.

Both psychologists take a broad-band 'diaphonic' approach for the representation of speech sounds, as simpler to learn and making possible a standard international English spelling. Research is called

for as to how symbols are used as conventions to represent sounds. Mr. Sinclair Eustace presents a scheme that has the single aim of representing eny dialect very precisely, and its demonstration of the need for a highly trained ear to use it shows that an accurate phonetic spelling and a generally usable spelling may not be the same thing. The moral of Prof. Betts' paper on the Graphic R in present spelling is, in fact that one spelling can hold together a wide variety of sounds with more practical convenience than inconvenience. The implications of Dr. Katherine Betts' discussion of definitions of the schwa are that it can provide controversy for linguists for years to come. The hearer might infer that while they continue to research on language, the use of the schwa in eny spelling reform might be better determined by research on people.

There are indeed, meny pointers that meny objections that have been put up agenst spelling improvement may be only bogeys after all – e.g., dialects, homophones, and the reliance of fluent readers on linguistic clues optimally provided by present spelling.

The Conference has not concluded with formal resolutions but with practical possibilities for future action:
- the encouragement of research and observation that rigorously tests out all armchair claims about requirements or advantages of eny spelling for English, and the support of bodies such as the Phonemic Spelling Council, whose work is described by Dr. Bisgard.

-evaluation of the use of initial teaching spellings. While it is proven that improving sound-symbol correspondence makes it easier to *learn* to read and write, what types of improvement would be optimum for all purposes?

-implementing John Downing's recommendation to follow the lines of positive motivation for spelling change, e.g. facilitating the trend toward practical, organic social change, the continual thrust of technology and commerce towards efficiency and economy, and the computerised printing techniques that can now cope with spelling change in the media.

-'taking spelling to the people,' with recommendations such as the use of Lindgren's SR-1 in daily life, as a step causing less disturbance in the appearance of running print than the average newspaper's misprints. To stimulate popular interest and support, an annual Spelling Improvement Day is suggested – originally the idea of the former Australian Minister for Helth (sic), Dr. Everingham – with the date of Sept. 30 proposed, to make school involvement possible. Valerie Yule's paper gives ideas for possible activities on that day, as well as other publicity-oriented ways to promote active spelling reform. Vic Paulsen's recommendation for 'biliterate' publications, material for schools and public use written in both present spelling and an improved version, as in multilingual notices, could be a good means of introducing alternate orthographies as well as testing their viability. Paulsen was very active in planning and getting publicity for the Conference both in the U.S.A. and with the B.B.C.

The Third International Conference to be sponsored by the Simplified Spelling Society is planned for 1981, possibly in Scotland, on the theme 'Progress in Spelling Improvement.' Dr. Abraham Tauber's book on 'The History of Spelling Reform in the United States,' coming out late in 1979 or Spring of 1980, may by that time need another chapter.

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If you can read this, thank a teacher. (from *Spelling Action*, Australia)

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3. Modern Technology and Spelling Reform, by Helen Bonnema Bisgard, Ed.D.

* Secretary, Phonemic Spelling Council, Aurora, Colo.

Last winter when Fergus McBride corresponded with me about speaking at this conference, he suggested that I include information about the Phonemic Spelling Council, of which I am the Secretary. If we had a few hours time, we could profitably review the history of the Council starting with its antecedent organizations, The American Philological Association organized in 1874, the Simplified Spelling Board 1894, the Simplified Spelling Association 1946, and finally the Phonemic Spelling Council in 1971.

During those one hundred years there were encouraging periods interspersed with disappointing ones. At all times the lack of progress was ultimately caused by public lack of awareness, indifference, or actual opposition.

The by-laws of the organization states: "The purpose of the Phonemic Spelling Council is to encourage investigation of all aspects of phonemic spelling of the English language. Its Board of Trustees shall consist of not less than 8 nor more than 15 members, and elects its own successors."

At present there are 13 trustees. They are all committed to the goal of making easier the learning of writing and reading but are divided in their recommendations as to the means for reaching the goal.

One group believes that the present conventional orthography will be the accepted system for so long in the future that all efforts should be directed toward making initial learning of standard spelling emotionally satisfying. Others urge that rather than a short initial period, the length of time for putting into use a phonemic alphabet should be increased in order to prove the advantages of the system for permanent use. They believe that the positive results of such projects should be used for convincing the public of the need for simplification of spelling. They press for a permanent reform. Such promotion includes urging computer manufacturers to select and market an appropriate product.

There are no clear lines dividing these two groups and both see the need for devoting time to seeking funds from sources such as educational foundations.

Present undertakings include experimentation. A first grade writing-reading learning center in a public elementary school in Stuart, Florida is being conducted by Dr. John Henry Martin, formerly Vice-President of the i.t.a. Foundation. A similar project is being conducted at Nova Univ. in Fort Lauderdale, Florida. Dr. Martin emphasizes to teachers and parents that "children who can write can read" and "all children can write once they learn to encode what they say." His "technological system" as he calls it, emphasizes the importance of the encoding process. His pupils use a recently invented microphonograph, typewriters, sand, clay, felt pens, chalk, rubber stamps, pencils, and paper to facilitate the children's writing.

Also, the Council continues to serve like its predecessor Association as a clearing house and distribution center for people who are interested in spelling reform. It encourages publication of articles such as Abe Citron's "Psychological Child Abuse" and is revising for publication Dr. Abraham Tauber's 1958 *History of Spelling Reform in the United States*. Members write articles for the *Spelling Progress Bulletin* which has been published continuously since 1961 by the editor Newell W. Tune of North Hollywood, Calif. I am pleased to show you the 1961-70 and 1971-78 contents indexes, and this summer's issue. I am distributing to you samples of the front page. Additional *Spelling Progress Bulletins* have been placed on the display table by Mona Cross for your perusal.

The PSC Trustees discuss the feasibility of securing funds for establishing an international academy for the English language, and for a seminar to find reasons for the lack of language skills by juvenile delinquents.

In studying the papers which cross my desk as secretary of the Council, I have come to realize that English writing will likely not be reformed because of the public's insistence but because of the pressure for profit created by commerce and industry. The computer may be the agent for this change.

At Colorado University library recently I used an oral-reading computer invented for the blind. It transforms magazine, book, and newspaper print into spoken words. Its robotlike voice sounds out any printed material laid on its surface. There were some mispronunciations upon the first reading which were corrected after I pressed the "learning" button at the end of the selection: machine /chine/instead of /sheen/, page /pāg/, number /bair/, magazine /zin/, spelling /speel/, cooperation /koop/, book /bok/, break /brek/, reading/redding/. The oral reading of the machine was mysterious magic.

By a reverse process, a device now being developed for the aurally handicapped will "hear" spoken messages and write them on paper. However, the commercial production of such a sound-to-print machine is blocked by its inability to spell traditional orthography correctly. When confronted with an English sound such as the vowel in *dough* (ough), *low* (ow), *foe* (oe), *go* (o), *yeo(man)* (eo), and *beau* (eau), it spells all the word endings with the same "long o." The machine shows the same consistency when writing any of the approximately 44 sounds which are heard in the 561 [1] different spellings of English. The words it writes look like the respellings in a dictionary, e.g., *antique* (anteek). It could equally as well be programmed to print words in World English, if there was a market for such a system.

If the inventors decide to market this voice-activated typewriter in spite of its limited capacity to spell only phonemically, its users can communicate complicated directives on to paper without the intermediary use of pencil, typewriter, or secretary. Not only the disabled, but also writers in commerce, business, and industry will find this shortcut invaluable.

Learning to read phonemically written computer sheets will require little instruction, yet some training will be given in high schools and business colleges to make sure that graduates can scan them efficiently. As students and business people become accustomed to seeing the easy-to-read machine spelling, they will realize that it can be helpful in the initial teaching of young children and foreigners. Eventually it will be used in primers. The books will be so easy to read that a pupil will quickly figure out the sound of any word in his lessons, and also of any word in the encyclopedia. He will not spend the endless hours his parents did in *learning to read* but instead can use that time in *reading to learn.* With his easily acquired reading skill, the pupil will master aspects of science, literature, mathematics, and social studies now delayed until junior high school.

Best of all, from the viewpoint of certain diachronic linguists, he will be able to study the history of the English language and the etymology of words. Because the frustrating inconsistencies of the traditional spelling system have been eliminated, the beginner will experience less psychological stress and have less need for remedial assistance. He will write fluently any word in his own vocabulary and in the speech of those about him.

After his first year in school he will need no further spelling lessons nor rote memorization of word lists. His creative writing will be colorfully descriptive thru the use of polysyllabic words.

[1] Dewey, *Relative Frequency of English Spellings,* p. 3.

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[The following section appears in the Tune anthology as part of an article by Ivor Darreg on Automation for Libraries, Part 2, but in Spelling Progress Bulletin as part of the above article by Helen Bonnema Bisgard, the main part of which is on p215 of Tune.]

By whose standard of pronunciation shall the computer spelling be established? By the same standard now used by a dictionary when it indicates the generally accepted punctuation. For example: *pheasant* is shown as (fez'-ənt). The pronunciation in parenthesis is a broad transcription and does not represent regional or individual practice. If, perchance, an Alabaman says (faz'-ənt), a Polynesian (fiz'-ant), or a lisper (feth'-nt), each of these speakers will nevertheless use the machine's standard spelling. He will unconsciously assign a modified sound just as he does now to the examples shown in the dictionary's pronunciation key. His pronunciation is not so different from the standard that he cannot read standard spelling, or conversely, that he cannot understand speech as presented in Voice of America broadcasts. Listeners throughout the world now tune into these newscasts. Travelers comprehend English whether spoken by native people in Asia, Europe, Africa, Ireland, Texas, or the Bronx. After the change which was triggered by computer technologists has been effectuated, the opposition of historical linguists and the man in the street will be forgotten. Economic urgency will determine what course is followed by technologists. It will determine whether they use a reformed spelling system or continue to be restrained in accomplishments by our discouraging spelling.

The foregoing speculative prediction about future developments makes the process sound predetermined, leaving little for us to do but complacently watch as our dream of sensible spelling comes true. However, as you have likely noted, there are IF's in the prognostication: *If* the inventor decides to market his computer regardless of its inability to spelling in the customary manner, and *if* the public adjusts to these unusual word forms. Then there's a possibility which I should like to only whisper. I am a bit worried that we may aldredy be too late. A computer programmer tells me that simpler spelling will not be necessary because the machine will soon be able to handle traditional orthography.

Consider the phrase *to be*. Although there are six possibilities, three for the word *to*: (t-o, t-w-o, t-o-o) and two for the word *be*: (b-e, b-e-e), t-o-o can be eliminated since it is not good English, neither is *t-w-o b-e,* because after *two,* only the plural *bees* would be correct, not the singular *b-e-e*: so the machine can be programmed to write *t-o b-e* as the only correct spelling.

The task of organisations such as the Simplified Spelling Society and the Phonemic Spelling Council is to ensure the certainty of success in the use of a reformed spelling. They must recommend the most practicable improved system not only for the computer but also for the general public, and not forgetting that an initial learning medium will be useful for a long time. We must also present effective procedures for showing the desirability to business, education, and government.

We must immediately develop our strategy for becoming experts on computer linguistics.

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4. In Defense of a Separate Phoneme for Unstressed Shwa, by Helen B. Bisgard, Ed.D.

Comments on one section of Dr. Katherine Betts' treatise, "Language, Orthography, and the Schwa."

Dr. K. Betts' research paper is comprehensive and states the results of her extensive study with scientific and professional detachment.

After she presented this survey before the British Simplified Spelling Society International Conference of 1979, she answered questions from the audience during the 15 minutes alloted to her, as had been done to other speakers. She stimulated such great interest in her topic that during the subsequent informal discussions at meal times and evening socializing, the shwa was the center of attention. The consensus of opinion held by the groups in which I participated may be summarized as follows: (I use the simpler spelling *shwa,* omitting the German *c*, as in one of the forms recognized by Random House Unabridged Dictionary.)

The Hebrew origin of shwa, "name of a point marking want of a vowel sound," has influenced its English usage. The shwa has for many years signified (1) "an unstressed vowel that is the usual sound of the first and last vowels of *America*" (*Merriam Webster's New Student's Dictionary* 1964), (2) the symbol *a* has represented this unstressed sound in the writings of linguists following the example of the International Phonetic Alphabet (IPA) of 1887. The IPA indicates what is considered a phone*t*ic difference and writes the word *abundant* as [abʌndənt], while K. Betts' paper concentrates upon the phone*m*ic similarity of the vowel sounds and would show the pronunciation as in Merriam-Webster's Dictionary: /əbəndənt/.

The following list compares a traditional spelling of each of the vowels which the public calls "short" and a t.o. pronunciation of each of these vowels, with a system which uses the shwa symbol.

Popular name of vowel sound	t.o. spellings used to denote this sound in syllables receiving stress	Same t.o. spelling used in an unstresed syllable
short a	s*a*ndgl*a*ss	cutl*a*ss
short e	p*e*ll-m*e*ll	cam*e*l
short i	s*i*ckl*i*st	eas*i*ly
short o	t*o*m-t*o*m	t*o*mato
short u	ab*u*t	halib*u*t

a reformed spelling such as British Wurld Inglish, System 2, these words appear as:

sandglass	kutləs
pel-mel	kaməl
sicklist	eezəli
tom-tom	təmaetə or təmaatə
əbut	halibət

When the shwa is defined as indicating lack of stress in syllables where it appears, any other syllables stand out prominently. The readers' eyes can focus on them:

kut	kutləs
kam	kaməl
eez	eezəly
maet *or* maat	təmaetə
hal	halibət

G. & C. Merriam's Webster's Dictionary and 14 linguists are cited by K. Betts as using the shwa grapheme ə for designating *both* stressed and unstressed allophones. They also inject an additional symbol ' to indicate which syllable of a word is stressed. Their purpose is not the same as that of the orthographic reformer who spells words in such a manner that a reader may subconsciously glance at it as an aid to recognizing the meaning of the entire communication. The orthographic reformer strives for a notation having a self-reading degree of compatibility with t.o. Therefore he employs no diacritics. How fortunate that he has the shwa grapheme to convey lack of syllable stress in addition to sound.

To retain this attribute for indicating lack of stress, the shwa *grapheme* should be reserved for use only in those unstressed syllables. Consequently, since the most frequent spelling for shwa *phoneme* syllables which do receive stress is "short u," it seems expedient to continue employing "short u" in that situation.

Lexicographers may not agree with spelling reform strategists about this but both groups will do well to keep in mind that no one phonemic notation can be best for all purposes.

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5. Graphic R, by Emmett Albert Betts, Ph.D., LL.D.*

*Winter Haven, FL, U.S.A.
Presented at Nene College, Northampton, England July 27-30, 1979, International Conference of the Simplified Spelling Soc.

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Graphic R: Phonemic Situation.

In this report, consonant r and vowel /ar/, stressed and unstressed, are emphasized. Furthermore, diphthong /är/ is considered in some detail. The following *r* situations – as applied to General American speech – are delineated to reveal some grapho-phonemic dimensions:

1. Consonant *r*, as in *red, bread, street*
2. Vowel /ər/, stressed, syllabic (*fern, hurt, shirt*) and unstressed, syllabic as in *mother, harbor, dollar.*
3. Centering Diphthongs
/är/ as in *star*   /ur/ as in *poor*

/ar/ as in *carry*   /ir/ as in *spirit*
/iər/ as in *here*   /īr/ as in *fire* (tripthong)
/aər/ as in *pair*   /aur/ as in *our* (tripthong)
/ōr/ as in *door*   /eər/ as in *care*
/or/ as in *for*   /yur/ as in *cure* (tripthong)

The letter *r* functions as a consonant:
1. First part of a syllable; e.g., *ride*
2. Part of an initial consonant cluster (blend)
      a. Second component; e.g., *br* in *bring*
      b. Third component; e.g., *str* in *street*

The sound /ər/ as in *bird* (stressed) and *motor* (unstressed) functions as an elementary *vowel* sound – i.e., as a segmental phoneme (r-colored vowels).

The final *r* functions as part of a centering diphthong; e.g., *star, fire,* and so on.
      "The Central-Western type of American speech distinguishes nine vowel phonemes. One of these, [r], is peculiar in its inverted tongue position. . . These phonemes are subject to a good deal of non-distinctive variation, some of which depends upon the surrounding phonemes. . ." (Bloomfield, p. 103)

In Godfrey Dewey's 1970 study (*Relative Frequency of English Spellings)* based on 100,000 running words of connected matter, the letter *r* ranked eighth in frequency of occurence. He reported this letter made up 5.94% of English letters. (p. 27) A further analysis of his data on page 124 (again reported in terms of frequency of occurence by Dewey) revealed that *r* initiated syllables (i.e., represented consonantal /r/) only 19% of the time. All other occurences of *r* were in medial position (46%) and in final position (35%) of syllables, representing vowel-plus-/r/ situations. (Note: In final position, *r* may signal unstressed phoneme /ər/, as in *father,* or a diphthong, as in *far.* Hence, Dewey's 35% for final *r* needs re-interpretation.)

The Phoneme Concept.

This report deals with the letter (graphic) *r,* its uses to symbolize consonant and vowel phonemes. In the history of English, *r* has followed a long and somewhat tortuous route. As a result, attempts to regularize English spellings have been often frustrated by complex and complicated situations in both speech and writing.

At this date, the study of speech sounds continues. First, is the somewhat ambiguous vowel-consonant dichotomy in the continuum of phonemes, which needs to be resolved. This phonetic dichotomy becomes increasingly complex in terms of articulatory (sound producing movements) and acoustic (what is heard) definitions of phonemes. These dichotomies introduce difficulties in attempts to segment the stream of speech into categories of sounds.

Second, the delineation of the concept of the *phoneme* and its allophones versus the concept of *phonetic* features (the minutae) requires continued study by the phoneticians and phonemicists. As Leonard Bloomfield commented in 1933: "speech utterances. . . are infinitely varied." (p. 76)

      Bloomfield continued: "Even a short speech is continuous. It consists of an unbroken succession of movements and sound waves. No matter how many successive parts we break up and record for purposes of minute study, an even finer analysis is always conceivable. . ." (p. 76)

The situation regarding the phoneme concept was stated succinctly by Sapir, as quoted by Hall:
> ". . . No language forms a watertight system, and we would be surprised if too pretty a picture results from the phoneme analysis of a phonemically asymmetrical situation." (Hall, *Introductory Linguistics, p.* 97)

On the other hand, the introduction of this basic *phonemic* concept has influenced positively present-day lexicographers. A casual inspection of the pronunciation symbols employed in dictionaries thirty years ago reveals a complex of symbols as contrasted to present-day phonemically based dictionaries. This trend facilitates lay use of dictionaries and enhances realism in phonics for basic reading purposes.

Of recent date, there has been renewed interest in the study of the writing system (orthography). On many counts, the writing system can be contrasted with language (speech). In addition to segmental phonemes – e.g., /ər/ in *father* /'fa-thər/ – there are suprasegmental, or secondary, phonemes (pitch, stress, juncture). These suprasegmental phonemes are represented in writing by punctuation and other devices. But the rhythm of language (intonation) is poorly represented by orthography. Bloomfield stated the situation this way:
> ". . . but our conventions of writing are a poor guide. . . " to the phonemic basis of alphabetic writing. (p. 79)

The /r/ Phoneme.
The variability of the /r/ phoneme is emphasized by Kantner and West:
> "*r* is a sound that, even more than *t, k*, and *l*, is influenced by neighboring sounds. We will not be far wrong if we think of *r* as being dragged all over the mouth cavity by the various sounds with which it happens to be associated. This means that different sounds that we recognize as *r* are sometimes produced by fundamentally different movements. It is doubtful if we should speak of an *r* phoneme in the usual sense of the word. These various *r* sounds are only loosely bound together into one large phoneme. For some of the sounds the movements are of the same type; for others there may be a similar underlying acoustic factor in each case. Some of the *r* sounds, however, are so divergent that probably only their spelling causes them to be considered as *r*'s." (Kantner & West, p. 169)

In The *Pronunciation* of *American English,* Arthur J. Bronstein also comments on the variability of /r/:
> "The /r/ is probably the most variable of all consonants in our language." (p. 117)

Pyles and Algeo regard allophones of /r/ as evidence of variability:
> "Phonemicists, who are primarily interested in distinctive sounds, regard these [e.g., *rot, tree*, and *three*] along with other varieties of the *r* sound as allophones of a single [r] phoneme." (Pyles & Algeo, *English – An Introduction to Language,* Harcourt, Brace & World, 1970, p. 54)

Manser comments on *r* /r/ as in red:
> "Point the tip of the tongue toward your gum ridge and curl it very slightly back toward your soft palate. If your tongue is held in this position, the resulting sound will be voiced, semi-vowel *r* [r]. This sound becomes partially unvoiced when it follows a voiceless consonant in the same syllable. . . " as in *pray* and *try*. (p. 34)

With some reservations, West, Kennedy, and Carr recomend symbol [r] to designate this phoneme:
> "The symbol [r] is used to include all the many members of the [r] phoneme; they differ significantly and yet resemble one another in quality very closely." (West, Kennedy, & Can, *The Rehabilitation* of *Speech,* Harper & Bros., 1937, p. 220)

"The allophones of /r/ vary considerably from one dialect to another and from one speaker to another. The form most common in American English is retroflex, when the tip of the tongue is turned upward toward the roof of the mouth, and constricted, where the tip of the tongue is drawn back and somewhat humped in the middle. There may also be an accompanying rounding of the lips." (Francis, p. 179)

"The [r] sound is seldom considered as a glide. Yet it seems evident that the *r* occuring before and after vowels is definitely a glide sound." (Kantner & West, p. 119)

"The vowelized *r* [ʒ] is closely related to the sound of the [r] phoneme." (Judson & Weaver, p. 121)

On page 154, Kantner & West state
". . . the movement from [ʒ] to some other vowel produces the approach glide [r]. For example, rest [rɛst]?'

On page 161, Kantner and West list as a vowel glide [r] raw [rɔ].

"The consonant [r] is a vowel, retroflex alveolar continuant." (Wise, p. 132)

Kantner and West list the following examples as [r] glides:
1. rare   /ˈraər/   (rer', rār')
2. rear   /ˈriər/   (rir')
3. rue   /ˈrü/   (rū')
4. roar   /ˈrōr/   (rôr')
5. yearly   /ˈyiər-lē/   (yir-lē)
6. chord   /ˈkord/   (kôrd')
7. rural   /ˈrur-əl/   (rur-əl)
8. rhubarb   /ˈrü-ˌbärb/ (rü'-bärb)
9. railroad /ˈrāl-ˌrōd/ (rāl'-rōd)
10. very   /ˈver-ē/   (ver'-ē)

Note 1: The respellings of *rare* and *rear* appear to present special problems.
Note 2: Kantner and West list *er* /er/ of *very* as a vowel glide; Thomas lists *r* as a non-syllabic consonant.

This dependence of consonants on vowels in the syllable was stated succinctly by Martinet, a philologist:
"The name consonant is given to those sounds which are difficult to observe without the support of a preceding or following vowel." (p. 49)

Martinet adds:
"Vowels being more perceptible than consonants, each vowel of an utterance will normally correspond to a peak in the curve of perceptibility or audibility, and as a general rule we perceive as many syllables as there are vowels. ." (p. 51-52)

Limitations.
Because of time and space limitations, this report focuses on a few facets of the graphic *r*. Hence, these boundaries were established:

1. Phonemics rather than phonetics is the basis for segmenting the speech stream.

2. For the most part, pronunciations are limited to General American Speech. Hence, British and other American dialects are not considered.

3. Primary use is made of pronunciation symbols and respellings recorded in elementary school dictionaries.

4. Although English is a stress using language, the emphasis is on stressed syllables – with the exception of the unstressed /ər/, as in *mother* and *actor*. (Betts, "Stress: Syllable and Phrase," 1976)

5. Function, or structure, words – i.e., *and, for* – as a facet of intonation and as special problems in phonics have been considered elsewhere in this series of reports. (Betts, "Function Words: Grammatical Indicators," 1977)

6. Syllabication of words was not deemed to be relevant to this report. Note the disagreements, shared by phonemicists, among lexicographers:

Word	*Webster's (G. & C.)*	*Thorndike-Barnart Elem.*
farmer	/'farm-ər/	(far'-mər)
monitor	/'män-ət-ər/	(mon'-ə-tər)
order	/'ord-ər/	(or'-dər)
satyr	/'sāt-ər/	(sā'-tər)
vigorous	/'vig-ə-rəs/	(vig'-ər'əs)

7. Of the proposed spelling reforms, especially for an initial learning medium, only two included dictionaries WES and i.t.a. Hence, these two proposals were listed for respellings of phonograms.

8. No attempt has been made to critique the proposals of orthographers and amateur alphabeteers. Instead, a delineation of some of the issues relevant to the uses of the letter *r* has been made, basic to spelling reform.

9. Only one facet of phonics – symbol *r* – has been very briefly discussed. The meagerness of phonic methods and some of the ways to confuse learners, however, are spotlighted.

10. This report does not justify any *one* phonics program or any *one* spelling reform proposal. Although the attitude toward phonics is endemic in parents, teachers and the general public, there is significant evidence that polemicists actually contribute substantially to learning disabilities. Furthermore, spelling reform zealots contribute to the devastating confusion about phonics – when they concentrate on phonemic spellings without a grounding in phonemics, perception, or appropriate methodology. (Betts, "Spelling and Phonics," 1976)

This report does focus, however, on some of the facts regarding the loose fit between writing and speaking. Phonic rules appear to be self-defeating when applied to graphic *r* in vowel situations. For example, phonogram *ar* represents /är/ in *arm*, /or/ in *warm*, /aər/ in *wary*, and unstressed /ər/ in *dollar*. On the other side of the phonics coin, the stressed /ər/ is represented by *ir* in *bird, ur* in *hurt, er* in *fern, or* in (*w*)*ork, ear* in *heard* – to mention a few – plus /ər/ in unstressed syllables. These confusing phonic situations are products of highly variable spellings and do not fit the "simple rules" claimed by some phonic zealots.

This report, then, does bring into bold relief the need to give serious consideration to the hazards of the English spelling system for both native beginners and foreigners intent on learning English as a second language. At the same time, orthographers, especially amateur alphabeteers, are cautioned

regarding variability in the phonemic basis of r in vowel situations.

11. Morphemes – determined on the basis of etymology are not considered in this report. Since some students of orthography do emphasize the morphological basis of the English writing system, this facet of the spelling problem merits serious consideration.

Pronunciation Symbols.

In 1888, the International Phonetic Association (founded in 1866) published the first edition of the International Phonetic Alphabet (I.P.A.), revised in 1951. With some additions made by American phoneticians, this *phonetic* alphabet is used today in "narrow" transcriptions.

Fred West explains phonemics and phonetics this way:
> "The phone is the speech sound as it is actually made, and falls under phonetics; the phoneme is the speech sound as it is interpreted by the hearer, and falls under phonemics." (p. 90)

West adds: A phoneme "is the smallest unit of meaningful sound in a given language." (p. 98)

Pronunciation symbols are signalled by different types of enclosures:
Phonetic – brackets
> [ɣ] as in *ladd (er)*
> [ɝ] as in *(ear)n*
> [ɑ] as in *f(a)rm*
> [r] as in *(r)ed*

Phonemics – virgules, or slant lines, or slashes
> /ɨ/ (barred ɨ) as in *furr(y)*
> /e/ as in *m(e)rry*
> /o/ as in *st(o)ry*
> / r/ as in (r)ed
> /ɔ/ as in *h(o)rse*

Note See pp. 31-32 in Bronstein, *The Pronunciation of American English,* 1960, for a discussion of slant lines and brackets to enclose sounds.

Dictionary respellings
> 1. Virgules \ \ (slanted to the left)
> *Webster's New Elementary Dictionary* \ˈborn\
Note: Because virgules slanted to the left are not available on our typewriters, this report encloses respellings in virgules slanted to the right.
> 2. Parentheses
> *Scott, Foresman Beginning* Dictionary (bôrn)
Note: Dictionaries of many other publishers also useʼ parentheses to enclose respellings to show pronunciations.

Dictionaries: Phonemic Respellings.

For this report, two elementary dictionaries were used consistently:
Webster's New Elementary Dictionary, G. & C. Merriam-Webster American Book Co., 1975
E. L. Thorndike/Clarence L. Barnhart, Scott, *Foresman Beginning* Dictionary, Scott, Foresman & Co., 1976

In addition, other higher-level dictionaries were used (1) to identify respellings of words not in the beginning dictionaries, and (2) to indicate other respellings:

Webster's New Secondary School Dictionary, G. & C. Merriam, American Book Co., 1959
E. L. Thorndike/Clarence L. Barnhart, *Thorndike-Barnhart Advanced Junior Dictionary*, Third Edition, Scott-Foresman & Co., 1965
Webster's New World Dictionary, The World Publishing Co., 1961
The Random House Dictionary of the English Language, College Edition, Random House, Inc., 1969
The World Book Dictionary (A Thorndike-Barnhart Dictionary), Field Enterprises Educational Corp, 1976.

Speech Development*: The r* Situation.

Articulation of consonant sounds appear to develop late in the acquisition of language, according to Irene Poole (In *Newer Practices in Reading in the Elementary School*, DESP Yearbook, 1938). While articulation of /b/, /p/, /m /w/, and /h/ appears early – about three to five years, the articulation of /r/, along with /z/, /s/, and /hw/ appears late – about 8.0 years – for many reasons (e.g., lisping caused by dentation at ages 5 to 7).

Carrell and Tiffany comment:
> "For reasons not entirely clear, [r] and the *r*-colored vowels appear to be the most difficult sounds for children to learn. Sounds within these phonemes are typically the last to be acquired during the developmental period, and one of the most common characteristics of infantile speech is the use of [w] for [r]". *(Phonetics,* McGraw-Hill, 1960, p. 215)

West, Kennedy, and Carr identify five types of defective [r] (p. 221):
1. Infantile (*w* substitute, *wain* for *rain*)
2. Omission of prevocalic *r* (*tain* for *train*)
3. The [l] substitute
4. Labiodentalized [r] ("Especially noted when [r] follows [p] or [b]")
5. Foreign language substitute

The complexity of speech problems relevant to /r/ sounds is delineated by Carrell and Tiffany:
> "It is well known that the *r* sounds pose more pronunciation problems than any other group for anyone trying to master good American speech. Within the phoneme there is a wide range of perfectly acceptable sounds, depending upon such factors as stress and context. A large number of substandard pronunciations are also heard with great frequency." (Carrell & Tiffnay, *Phonetics,* McGraw-Hill, 1960, p. 214)

Pronounceable Graphic Units.

Much confusion in phonics has risen from attempts to pronounce consonants in isolation from a word. Why the confusion? Proponents of letter phonics have perpetuated "sounding out" words letter by letter; e.g., requiring the pupil to pronounce *cart* as "kuh-ar-tuh" /kə-är-tə/. Since the pronunciation "kuh-ar-tuh" has no relationship to the pronunciation /kart/, the beginner in reading is totally confused, as an adult would be if an otherwise sane teacher would say to him, "kuh-ar-tuh, what is the word?"

Attempts at the pronunciation of consonants in isolation produce unidentifiable distortions. First, sibilants (hissing sounds) may be prolonged, but they are distorted as /s-s-s-s/ for *s*. Second, voiceless stops (as indicated above) become "(p)uh, (t)uh, (k)uh," and the voiced stops become "(b)uh, (d)uh, (g)uh." Third, consonantal *r* /r/ cannot be pronounced in isolation without converting to /ər/, confusing indeed! Therefore, it is readily seen that consonants need a vowel, as in *bir* or *ird* of *bird,* to avoid distorted pronunciations. Hence, a pronounceable unit is a consonant-vowel or a vowel-consonant.

Then, too, spelling pronunciations may cause trouble. The avid young reader may pronounce *rumor* /rüm-ər/ as "/rəm-ər/."

That spelling pronunciation of words, especially /ər/, has plagued national television and radio commentators cannot be gainsaid. For example:

Word	*Respelling*	*Mispronunciation*
thorough	/'thər-ō/	/'thor-ō/
relevant	/'rel-ə-vənt/	/'rev-ə-lənt/

Spelling Reform: Basic Research.

Reform Spelling

Before an initial teaching medium or all-out spelling reform can be presented to the public and their politicians, much basic research is required on a number of problems and issues:

1. Discriminability of graphic symbols, e.g., letters *o* and *c*
2. Spellings of stressed syllables, including both primary and secondary stress; e.g., *confirmation* /,kən-fər'ma-shən/ (primary stress on third syllable, secondary stress on first syllable)
3. Spellings of unstressed syllables; e.g., *er* of agent as in *teach(er)*
4. Graphemic differentiation of homophones; *e.g., whole-hole*
5. Use of two-letter ligatures; e.g., *fl* for *fl, æ,*
6. Morphology of spellings versus direct spelling-to-sound relationships (See Scragg, A *History of English Spelling,* 1974, p. 96; Lounsbury, *English Spelling and Spelling Reform,* 1909.)
7. Compatibility of graphic symbols with traditional orthography
    a. Printed symbols in reading matter-capital and lower case letters
    b. Cursive and manuscript symbols for ease of handwriting
8. Causes of reading disabilities of which an outdated orthography is one; e.g., emotional aberrations, visual and hearing handicaps, psycho-neurological anomalies
9. Educational malpractice, including regimented and self-defeating methodology, a lack of prerequisites for courses in methodology, and so on
10. Gradual spelling reform versus total re-appraisal of the writing system and sub-systems (e.g., spellings in terms of phonemics, morphemics, syntactics, form classes, perception and recognition – i.e., phonotactics and graphotactics in terms of psychological processes)
11. Gemination, or double consonant letters (e.g., *ha(pp)y*)
12. Compound graphemes (e.g., voiced and voiceless *th, ph* for *f*)

Furthermore, Classen comments on
    "what a composite character is the English system of spelling. . . It appears during the Old English period spelling was fairly uniform, thanks partly to the fact that West Saxon had risen to the dignity of a standard literary language. In the Middle English period, though writers no doubt still sought to write phonetically, uniformity was impossible because the dialects had again come into their own, and it was not until Chaucer's example created a standard language for literature that there was again an approach to uniformity. At the end of the fifteenth century came the first printed books and with them spelling became to a large extent fixed." (p. 272)

Classen concludes:
    "In this [printing] lay all the positive advantages which flow from uniformity and system, but on the other hand there was the disadvantage that the spelling from this time onward ceased to represent the pronunciation of the spoken language. Hence, our Modern English spelling really represents the sounds of the fifteenth or sixteenth century." (p. 273)

Spelling reform, especially an i.t.m., appears to be an imperative for effective phonics instruction. Antagonists to reform include Chomsky who "believes" that traditional orthography is an optimum writing system. Protagonists of reform include most linguists, many philologists, psycholinguists, and some enlightened educators. For example, the distinguished phonemicist and pragmatist Kenneth L. Pike who urges a practical orthography:

> "A practical orthography should be phonemic. There should be a one-to-one correspondence between each phoneme and the symbolization of each phoneme." (p. 208)
> "In a phonemic orthography, spelling does not have to be remembered as an arbitrary set of rules." (p. 209)

Those who protest any reform of our "intricate and confusing" spelling enjoy membership in the exclusive Society for the Defense of the Status Quo (facetiously defined as "the mess we are in"). They need to form a coalition with the Ancient Order of Regimenters and Standardizers who have contributed mightily for centuries to the de-escalation of reading instruction.

High Frequency Words.

Commonest words tend to be irregularly spelled and constitute a relatively high percentage of the running words on a page:

No. of Words	Percent (%)
3	10
6	20
50	50
100	60
500	66
1000	89

Three words (types) – *a, and, the* – comprise 10% or running words (tokens) in common use. Fifty words (types) comprise 50% of the running words (tokens). Eight of these 50 commonest words use graphic *r: are, for from, letter, our, very your, yours.*

Of Fitzgerald's 109 words misspelled 10% or more of the time by third graders, 41 use graphic *r*. These included "demons" of other lists; e.g., *near, first, learn, birds, right.* (James Fitzgerald, "The Vocabulary of Spelling Errors of Third-Grade Children's Life Letters," *Elementary School Journal,* XXXVIII, March 1938, pp. 518-527)

At the fourth, fifth, and sixth grade levels, Fitzgerald identified 100 spelling "demons." Thirty-seven percent used graphic *r;* e.g., *their, where, sure, early, heard.* (James Fitzgerald, "The Vocabulary of Children's Letters Written in Life Outside the School," *Elementary School Journal,* XXXIV, January 1934, pp. 358-370)

The *r* Situation: Phonics.

Phonemes represented by the graphic *r* have been by-passed by authors of professional textbooks, especially of textbooks on phonics. (In fact, very little, if any, attention is given to phonics in most of today's professional textbooks.) There are several reasons why the *r* issue has been skirted by educators.

First, considerable scholarship is required in phonology, especially in phonemics, to avoid the pitfalls inherent in r situations. For example, some authors of elementary school dictionaries which introduced the *phonemic* concept of respellings have made significant shifts toward *phonetic* emphasis in unabridged dictionaries. Furthermore, knowledge of either phonemics or dictionary pronunciation symbols is NOT a prerequisite for a professional course in the teaching of reading.

Hence, confusion tends to reign supreme, causing word perception to be a puzzlement for teacher and learner alike.

Second, scholarship is required in orthography – the writing system – to understand the relationships between phonemes and the spellings used to represent them. As we shall see, graphic *r* has a multiplicity of roles in the English writing system. For this and other reasons, tyros become bogged down in a sea of rules, vitiating phonics as a sole approach to word perception.

Third, a "working knowledge" of grammar, especially *morphology*, is necessary to fully understand the relationships between language (i.e., speech) and writing. Grammar is a keystone to both perception (e.g., syntactic cues to constraints) and cognition (e.g., semantic and pragmatic constraints).

Fourth, knowledge of perceptual learning (e.g., category, cue, probability, alternation), factors in perception (e.g., need, feedback, grouping or chunking of pronounceable units, perceptual and cognitive closure, etc.) (Betts, "Word Perception: Processes and Medium," 1975)

Sixth, awareness of need for differentiated guidance as a basis for all teaching and, therefore, learning. (Betts, "Reading: A Class is Plural," 1978)

Spelling reform has become a series of bipartisan issues: the pros resorting to polemics to gain a writing system that fits contemporary speech; the cons, equally polemic, offer a whole spectrum of rationalizations why they believe in perpetuating traditional orthography (T.O.) as an "optimum'.' system. Neither side has done their homework; e.g., on false etymology in T.O., phonology basic to a writing system, signals of vowel sounds, discriminability of graphic signals, and a spate of other problems. In short, discussions of spelling reform are prime examples of perpetual emotion.

Alexander Wolcott, after reviewing a play, is quoted as saying: "The scenery of the play was beautiful, but the actors got in front of it." Perhaps a valid parody on Wolcott's cynicism might read: The background of spelling reform is quite appealing, but prejudgements preclude veridical perception of the problems.

Spelling: Hard Spots.

In 1937, Gates published *A List of Spelling Difficulties in 3876 Words* in which he identified the hard spots in words. From these data, the hard spots in Fitzgerald's 41 *r*-words were studied by this writer:

1. Phonogram *ar* was the hard spot in *warm, star, March,* and *garden*.
2. Initial *r* in *right*, *radio*, *rabbit, room* caused no spelling problems; instead the hard spot in each word varied from *rite* for *right*, *rabit* for *rabbit* to *radio* for *radio* and *roon* for *room*.
3. Of the eight words with *r* consonant clusters, seven (*brown, dresses, friend, cream, fruit, draw*) presented spelling problems with the vowels but not with the clusters; *April*, however, was misspelled *Apirl* 42% of the time.
4. Of the six words with stressed /ər/, all presented spelling difficulties – *u* and *ir* for *ur* in *church*, *ri* for *ir* in *first* and *birds, u* for *urn* in *hurry*, *er* and *ar* for *ear* in *learn*, *a* for *o* in *word*.
5. Of the ten words with unstressed /ər/, only three presented spelling difficulties – *ar* for *er* in *father*, *er* for *or* in *doctor*, *r* for *er* in *flowers*.
6. The *wr* in *write* was the hard spot, with 48% misspelling in grade three.
7. The vowel plus *r* was the hard spot in *before, fourth, merry, morning, near, hour, every, your*.

In 1938, Fitzgerald identified 50 words misspelled by third-grade children. Forty-one (82%) of these misspelled words included *r* words; e.g., *draw, learn, your, warm*.

Gates and Bennett included in their test of 30 words three *r* words: *star, war, tar* – ten percent of the total. (1933)

Every classroom teacher has noted pupil word-perception problems with *r* situations; e.g., *very* for *every*, *were* for *where*, *where* for *there*, and so on.

Consonant *r* /r/.

The consonant *r* is a voiced, retroflex continuant – sometimes called a glide. Some speakers in the Southeast and in New England do not pronounce final /r/ as such.

Thomas comments on the change from non-syllabic [r] to syllabic r [ə]:
> ". . . in such words as *better* and *ladder* what was once consonantal [r] has become syllabic [ə] or [ɚ]." *(Phonetics* of American *English,* p. 101)

The phoneme /r/ is represented by *r* (red), *wr* (write), *rh* (rhyme). In general, however, the *r* spelling is quite regular.

Wijk further states:
> "The only important change that has taken place since the spelling became fixed is the weakening of the r sound in final and pre-consonantal positions." (Regularized English, p. 249)

The multiple use of the letter r is reflected in the spelling reform advocated by Ripman and Archer:
> "The letter *r* has many different values according to its position and according to local usage. We propose to leave *r* wherever it occurs in the spelling of today, except where it is doubled, where as a rule only one *r* need be written. . .
> In certain categories of words, however, it seems essential, in order to avoid ambiguity, to use double *rr*. These comprise words like *carry, sorry* and *hurry. . .* " (Ripman & Archer, New Spelling, 1948, p. 28)

They continue:
> "It is therefore suggested that no double consonants be retained, except in. . . (b) compounds involving *rr* (e.g., *earring*); (c) special case words like *carry* (p. 46), *sorry* (p. 56), and *hurry* (p. 59) . . ." (Ripman & Archer, p. 36)

Consonant Clusters.

A consonant cluster is two or more adjacent consonant *sounds* within the same syllable as /dr/ of /'drem/ *dream* , and /skr/ of /'scrach/ *scratch*. Considerable information has been accumulated on the phonotactics of consonant clusters. For example, /r/ never comes after /s/ or /h/; but initial clusters beginning with a non-syllabic /p/, /t/, /k/, /b/, /d/, /g/, /f/, voiceless /th/, /sh/, /sp/, /st/, /sk/, may be followed by /r/. (See Bloomfield, pp. 131-133; Trager and Smith, p. 35; Thomas, pp. 57-59; Gleason, p. 357.)

In discussing "The Number of Morphemes in English," Warfel states that about 24% of possible two-letter consonant clusters are used in English:
> "The statistics of English spelling show that of the 576 two-letter consonant combinations possible in English, only 137 are in use; of the 11,000 three-letter consonantal combinations, only 40 or so are used. As letters are added, the number of possible combinations increases, but the percentage of those actively employed goes down correspondingly. It is possible to assert, therefore, that a principle of economy exists on the morphemic and word level as it does on the phonemic level of language. A few units must and do carry the burden of meaning; they can do so because they mean nothing in themselves but only what the system makes possible." (p. 114)

In 1923, Godfrey Dewey tabulated initial vowel and consonant situations (100,000 running words in 15 genres) of an adult vocabulary. An examination of his frequency of occurence data revealed that 67% of the syllables in his corpus were initiated by consonants; 33%, by vowels. Of the initial consonant situations, 47% were consonant clusters; almost half (44%) of these consonant clusters included /r/.

Dewey's eleven initial consonant /r/ clusters included:

Initial sound (cluster)	Occurences
pr	1061
tr	859
fr	618
gr	335
str	261
dr	191
thr	184
kr	175
br	147
skr	18
spr	15
Total	3864

To Dewey's list, /shr/ as in *shred, shrew, shrill*, and *shrine* can be added. These words were not in his corpus. The above data appear to validate Bloomfield's statement:

". . . English is especially rich in consonant clusters." (p: 136)

Scholarly accidents can and do happen at the confluence of phonology and orthography. Witness the faux pas by Venezky (*The Structure of orthography,* 1970, p. 81) when he listed the vowel /ər/ as "Final *r* clusters":

rb herb   rm term
rd bird   rn urn
rg berg   rl curl
rf surf   rpt excerpt
rth mirth   rst first
rch birch   rld world

Venezky's three other examples in this list were vowels plus *r* (i.e., post-vocalic *r*'s) usually classified as centering diphthongs. In any event, neither final nor initial consonant clusters are pronounceable units in isolation from vowel sounds. Furthermore, Venezky's three remaining examples of consonant clusters – *-rp* of *sharp*, *-rt* of *smart*, *-rch* of *march* – can be challenged on the basis of this report. (See /ar/ below.) But Venezky seems to have company, including some phoneticians.

Vowel Phoneme /ər/, Stressed and Unstressed.
(*ir* as in *bird* and *er* in *baker*)
Phonemics (allophones of /r/, Bronstein, p. 177)
/ɚ/ hooked schwa, unstressed syllables
/ɝ/ hooked, reversed epsilon, stressed syllables, central vowel

Dictionary symbols
    Webster (G & C)   /ər/ for stressed and unstressed
    Thorndike-Barnart   (er) for stressed, (ər) for unstressed

Random House   (ûr) for stressed, (ər) for unstressed

In the International Phonetic Alphabet, two symbols are used to indicate the pronunciation of /ər/ in stressed syllables:

[ɝ] hooked reversed epsilon to indicate the pronunciation of *ir* in *bird* in most dialects of General American speech.

[ɜ] reversed epsilon to indicate pronunciations of *ir* in *bird;* for example, in Southern England and parts of Eastern and Southern United States – both epsilons only in stressed syllables.

<div align="center">

Vowel Phoneme /ər/: Unstressed.

</div>

Phoneme /ər/: Linguistics
In terms of phonology and grammar (i.e., linguistically and orthographically), unstressed /ər/ usually spelled *er, ar*, and *or* is:

> A phoneme /ɚ/
> A syllable /ər/
> A phonogram (e.g. *er*)
> A derivational ending (e.g. *summ(er)*)
> An inflectional ending (e.g., hott(er))
> A bound morpheme (e.g., batt(er))

Sledd recommends the use of /ər/ to transcribe the unstressed situation:

> "In transcribing the unstressed syllables of words like *dinner, mother, bothered,* etc., most speakers should use /ər/ if they have a final preconsonantal /r/, and /ə/ if they have not /r/ in these positions." (p. 55)

> The *er* in *father* "is the 'r-colored' central vowel heard in such syllables throughout the country (U.S.A.), except in the 'r-less' areas of the country, the South, Eastern New England, and, for many, the New York City area." (Bronstein, *The Pronunciation of American English*, Appleton-Century-Crofts, Inc., 1960, p. 177)

Bronstein continues:

> "Although any vowel may precede [ə] or [ɚ] to produce a centering diphthongal glide, there are five common centering diphthongs. These are [ɪə], [ɛə], [ɑə], [ɔə], [uə], and their 'r-colored' variants [ɪɚ], [ɛɚ], [ɑɚ], [ɔɝ] [uɝ] in the words *fear, care, far, for*, and *poor*." (p. 200)

In 1949, Kenyon and Knott appear to have settled the issue:

> "The symbol ɝ represents the accented form of the so-called 'r-colored' vowel used in the first syllable of *further* ['fɝ-ðə] by those who do not drop their *r*'s. . . The consonantal *r* sound that formerly followed the vowel (hence the present spelling) long ago merged with the preceding vowel and disappeared as a separate sound, though its effect is still heard in the *r*-coloring of the vowel. The simple proof of the nature of the present sound is that the vowel cannot be pronounced separately from the *r* without producing a quite different sound, . . " (p. xix)

Unstressed /ər/: Phonograms and Respellings.

Phonogram	Word	G.&C. Merriam Webster's	Thorndike-Barnhart
at	dollar	/'däl-ər/	(dol'ər)
er	river	/'riv-ər/	(riv'-ər)
it	tapier	/'tā-pər/	(ta'-pər)
or	mayor	/'mā-ər/	(ma'ər)

oar	cupboard	/ˋkab-ərd/	(kub'-ərd)
ur	murmur	/'mər-mər/	(mer'-mər)
ure	pressure	/'presh-ər/	(presh'-ər)
yr	martyr	/'mart-ər/	(mar'-tər)
re	sceptre (or sceptr)	/'sep-tər/	(sep'-tər)

Reform Spellings: Unstressed /ər/.

Word	WES	i.t.a.
river	river	river
tapir	(not available)	tæpir
mayor	mæ or	mæ or
cupboard	cubord	cubord
murmur	murmer	N. A.
pressure	presher	N. A.
sceptre	septet	N. A.
martyr	matter	N. A.

Note 1: Rules for retaining or respelling of unstressed /ər/ are given on page 23 of the Dewey *WES Dictionary* (1969) but are not available in the i.t.a. dictionary.

Note 2: *The Anglic Alfabet* apparently respells stressed /ər/ as *ur* and unstressed /ər/ as *er*. (as in *WES)*

Note 3: In *The i/t/a Handbook for Writing and Spelling,* revised edition, 1965, the following respellings were given for unstressed /ər/:

Word	i.t.a.
pillar	pillar
tapier	taepir
Arthur	arthur
offer	offer

Note 4: In his *Transliteration Guide* from i.t.a. to *WES,* Dewey states: For i.t.a. *r*, "Write unstressed schwa before *r*, usually by *er*; unless t.o. has *a, i,* or *o*." (p. 3) Examples of WES: *further, calendar, parlor*.

A small sampling of Wijk's *Regularized English* reveals these spellings of unstressed /ər/:

Phonogram	T. O.	Wijk R. E.
er	mother	mother
or	honor	honour
at	altar	aultar

Wijk's rules read:
    "The murmur vowel is very common for post-tonic *ar* in both preconsonantal and final
      positions." (p. 153)
Examples: *afterwards, orchard, collar*
    "The murmur vowel is only found in a few words. . . " in post-tonic position. (p. 195)
Examples: *elixir, martyr*

Hunter, in 1930, commented on the history of "orthographic inconsistencies":
    "Another feature to be observed is the manner in which orthographic inconsistence, as in the
      use of different symbols, or group of symbols, to represent the same sound, are often

avoided; . . . Further, the rules which compel us to write schol*ar*, butch*er*, terr*or*, hon*our*, fig*ure*, etc. had, in the sixteenth and seventeenth centuries, not attained their force, and spellings like *scholler, color, tuture* (tutor) are quite common." (p. 7)

Vowel Phoneme */ər/,* Stressed.

Stressed /ər/, usually spelled *ur, ir, or* (after *w*), *er*, is:

A phoneme /ɝ/
A syllable nucleus (e.g., b(ir)d)
A phonogram (e.g., *er* in *her*)
A digraph (e.g., *er*)
A morpheme (e.g., *err*)

Phonology: Stressed /ər/.

Generally speaking /ər/ is classified as a vowel sound, but it is also considered to be a complex one. Consider these views:

"In the pronunciation of many Americans, /at/ is phonetically a single /r/-like vowel." (Gleason, An Introduction to Descriptive Linguistics, 1961, p. 39)

"The combination [ar] is a complex sound, which, since it includes the glide [r], is characterized by movement rather than a fixed position of the speech organs." (Prator, Manual *of* American *English* Pronunciation, 1957, p. 104)

Bronstein comments on a special *r* situation:

"[ɝ] may become [ɝ] plus [r] when the *r* sound is intervocalic, as in *burrow* and *hurry*. The difference is essentially a shift in the syllabication of the word. Those speakers who use [ɝ] split the word as [bɝ-o], the others split the word as [bɝ-ro]." (*The Pronunciation of American English,* 1960, p. 17)

Kantner and West emphasize the allophones of phoneme /r/:

". . . the r phoneme contains many variations of sounds, usually considered as consonants. [ɝ], however, because it is a continuant sound of some length, and because it is produced through an orifice large enough to prevent the formation of friction noises is generally grouped with the vowels and called a vowelized *r*." (Kantner & West, p. 88)

Wise opines:

". . . the characteristic of the consonant [r] which distinguishes it from the two vowelized *r*'s, viz., [ɝ] and [ɚ], appears to be rapidity of motion; or, approaching it from another point of view, it is the mobility of the consonant *r* to be syllabic. Conversely, the greater duration of [ɝ] and [ə], coupled with their syllabicity, constitutes the vowel characteristic of these two sounds." *(Introduction to Phonetics*, Prentice-Hall, Inc., 1957, p. 132)

Sledd discusses the complexity of stressed/ar/ situations:

". . . In transcribing the unstressed syllables of words like *dinner, mother, bothered,* etc., most speakers would use /ər/ if they have a final and preconsonantal /r/, and /ə/ if they have no /r/ in these positions.

In transcribing words like *third* and *turn*, more difficulty may be encountered. Either these words will contain an /r/, or they will not. The vowel will usually be either mid central or high central (though some /r/-less dialects will have a diphthong /əɪ/). And the vowel in /r/-ful dialects may be either short (/ər/, /ɨr/), or long (/əːr/, /ɨːr/). These /r/-producing speakers

who contrast short and long vowels in pairs like *sorry* /a/ and *starry* (/a:/), *hurry* (/ə/) and *furry* (/ə:/) should normally write a long vowel; speakers with no such contrasts should normally write a short vowel." (James Sledd, *A Short Introduction to English Grammar*, Scott, Foresman & Co., 1959, pp. 55-56)

Bronstein explains:
"The stressed vowel of the preconsonantal sound in *burn* and *earn* is another allophone of /r/ in American English, and is represented by the phonetic symbols [ɜ] or [ɝ]." (p. 119)

Kurath emphasizes "drastic changes" in vowels before r:
"The ME [Middle English] vowels, both short and long, suffered drastic changes before an /r/ of the same syllable, as in *fir, fern, for, fur, here, hare, more, poor*, and only less so before intersyllabic /r/, as in *spirit, merry, carry, borrow, furrow, hero, Mary, story, fury. . .*

The general effect of /r/ was to lower and to centralize the articulation of the vowel preceding it, especially if it belonged to the same syllable. From this effect it is safe to infer that postvocalic /r/was velarized, as it still is in the west of England and in America." (Hans Kurath, *A Phonology and Prosody of Modern English,* Univ. of Michigan Press, 1964, p. 27)

Dictionary Respellings *of* /ar/.
The following is a short sample of words to compare respellings of stressed /ər/ in two dictionaries:

Word	*G. & C. Merriam Webster's*	*Thorndike-Barnhart*
bird	/'bərd/	(berd')
colonel	/'kərn-l/	(ker'-nəl)
courage	/'kər-ij/	(kér'-ij)
journal	/'jərn-l/	(jer'-nəl)
squirrel	/'skwər-əl/	(skwer-əl)
turn	/'tərn/	(tern')
were	/wər, 'wər/	(wer)
work	/'wərk/	(werk')

Note: In the above words, both Webster's (G. & C. Merriam) and Thorndike-Barnhart made consistent use of symbols.

T. O. Spellings *of* /ar/, *Stressed.*

Phonogram	*Word*	*Phonogram*	*Word*
er	term	er-e	serve
ere	were	err	err
ear	heard	ir	shirt
or	word	olo	colonel
our	courage	ur	hurt
uer	guerdon	urr	hurry
yr	myrtle	yrrh	myrrh

Reform Spellings (initial teaching medium) of Stressed /ər/
In the following list of words, compare WES and i.t.a. respellings:

T. O.	*WES*	*i.t.a.*
bird	burd	bird
colonel	curnel	curnel
courage	curej	curaej

her	hur	her
heard	hurd	head
journal	jurnal	jurnal
purr	purr	purr
squirrel	skwurrel	skwirrel
turn	turn	turn
were	wur	wer
work	wurk	wurk

Note: In the above words W.E.S. uses *ur* and *urr* to represent stressed /ər/. On the other hand, i.t.a. uses four spellings: *er, ir, ur, urr.*

Note 2: In *The i/t/a Handbook for Writing and Spelling,* Revised edition, 1965, the following respellings are given for stressed /ər/.

T. O. Characters	T. O.	i.t.a.
ear, er	earn, fern	ern, fern
it, irr	girl, stirring	girl, stirring
ur	turn	turn
or	word	word

Note 3: In his *transliteration guide from i.t.a. to WES,* Dewey states:
  For i.t.a. -r, **"**Write stressed schwa before *r* always by *ur*." (p. 3) Examples: *further, hur, furst*

Note 4: "The characters is used in the strong and stressed *her, sir, arthur, martys*." (Pitman, 1964, p. 32)

Note 5: ". . . r (er) was added to make the neutral or central vowel (schwa) more effectively characterized in the single word 'colonel' and whenever spelled in the traditional orthography with an *r* following *e, i, u*, or *y*. This made the doubling of the *r* in very, etc. no longer necessary, e.g.,
  bert but *beri-beri*
  cur but *curry*
  sir but *irak* (Iraq)
  myrr but *syrup*

and in the four corresponding unstressed forms such as *muther, elixir, arthur*, and *martyr*." (Ibid, p. 33)

A quick sampling of Wijk's *Regularized English* reveals these spellings of stressed /ər/:

Phonogram	T. O.	Wijk R. E.
ear	early	erly
or	word	wurd
our	courage	currage

In his *Rules of Pronunciation for the English Language,* Wijk lists three rules for stressed /ər/:
  "The first long pronunciation [ə:(r)]: *her, deter, infer.* ." (p. 43)
  "The first long pronunciation [ə:(r)]: *fir, sir, stir. . .* " (p. 44)
  "The first long pronunciation [ə:(r)]: *cur, fur, furred.* ." (p. 44)

In 1930, Zachrisson commented on his "Anglic Muuvment":
  "Anglic oenly aims at bringing ordr into the prezent confuzion by jeneralizeng the moste comon ov the egzisting speling vaerients. Thus . . . ur for the sound in urn, dern, third, learn, now rendrd in 16 waes." (In Ripman, et al, 1930, p. 12)

Phonics: /ər/, Stressed and Unstressed.

More confusion than learning is produced by programs with the mystic label *phonics.* In fact, facets of effective phonics dealing with both stressed and unstressed /ər/ appear to be non-existent.

Durrell and Sullivan tend to emphasize *letter* phonics rather than vowel-consonant (e.g., *urch* in *church)* or consonant-vowel (e.g., *chur* in *church)* phonograms. Furthermore, they put all the *r* situations in one category. Hence, their treatment of /ər/:

> "These words end in *r*. Say them after me: *after, alligator, bear, beaver, car, door, farmer, hair*, etc. Are you ready to tell me the words that end in *r*?" (1941, p. 53)

In her *The Word Method* of *Teaching. Phonics,* Cordts emphasized "sight" words:

> "Purpose: To learn to recognize at *sight* the syllable ending *er*
> Procedure: Step 1. Write on the blackboard these words: deep, deeper, neat, neater, etc." (p. 290)

As evident, Cordts employed visual and auditory contrast (e.g., *deep-deeper)* for directing attention to the syllable /ər/ spelled *er.*

> In a previous activity, she violated *stress* by referring the pupils to "frame and pronounce" the *unstressed* last syllable. (p. 288)

Later, Cordts provided an activity

> "To learn that the syllable endings *er, or*, and *ar* have similar sounds." (p. 292)

She suggested that the teacher:

> "Write on the blackboard: rob, robber, beg, beggar, etc."
> You may say: "We have already learned the syllable *er* ending has the sound (ur). Today we are going to see if there are any other syllables that have the same sound. This will be a lesson for sharp eyes and sharp ears. Who is ready to frame and pronounce the words on the blackboard? Let us all look carefully each time at the syllable that ends the word." (p. 292)

In her *Word Recognition and Discrimination Development,* Smith was content to limit her phonics to *listening* and discussing

> "New words: kite, paper, sticks
> In discussing these new words, have the children listen for the *p* in *paper*. Compare with *put, pulled, pullman, Polly, and play. . .* " (p. 17)

Too often, however, Smith merely listed new words:

> "New words: *turkey, sweater, catch*" (p. 20)
> "New words: *while turned*" (p. 38)
> "New words: *hanger, light*" (p. 50)

Later, Smith follows a hazardous   "finding a word within a word" plan:

> "New words: *head, winter, old*
> Assist children to work out the word *winter* by finding the little word *in*, combining it with *w*, and then trying to fit a word that begins with *win* into the context of the sentence." (p. 39)

The above is fraught with possible confusion because some teachers reach the zenith of silliness by having the pupils find *he* in *her.* Furthermore, this is a weak use of context clues because there are several possibilities; e.g., syntactic, morphologic, semantic.

Much confusion is created by authors of basic readers who have little or no understanding of phonemics. Consider this sample of naivete in Gray's *Developing Word-Attack Skills – Grades 1-3:*

> "When the vowel *e* is followed by *r*, it has neither the long nor short sound. It usually sounds the way it does in these words. Write the words *corner, matter, paper, mother, roller, wonder, other*. Have the pupils pronounce each word and point to the letters *er*." (p. 32)

The above sample of obfuscation has several strikes on it:

1. The phoneme is /ər/, an unstressed vowel sound is spelled *er*.
2. Pupil need, as a factor in perception, to learn this ending is defaulted.

> "To avoid mere 'word getting' provide sentences for the children to read which will emphasize the importance of this phonogram as an aid to thought getting.
> Application:
>> Sister will *answer* the letter.
>> After *dinner* we will *gather flowers*.
>> The *water* runs *under* the bridge.
>> The *farmer's* dog ran *after* the paper kite.
>
> Illustrate how word variants are formed by adding *er* and let children change words by adding *er* to such words as *near, fast, slow, soon, hard, soft*. Have children make up sentences containing both forms of the word. For example:
>> I have a *long* pencil.
>> Bob's pencil is *longer* than mine.
>> Jane is six years *old*.
>> Susan is *older* than Jane." (p. 31)
>
> In their *Writing Road to Reading,* Spalding and Spalding recommend their Unified Phonics Method for ". . . accurate speaking, spelling, writing, and reading – as one integrated subject." (p. 80 They further state: "There is a reason or rule to cover almost every spelling in English. A study of word formation and euphony has contributed to formulating a set of easily learned, simple rules which explain and govern the spelling of all words suitable to each school grade, with surprisingly few, easily learned exceptions." (pp. 27-28)

Spalding and Spalding introduce either naivete or shysterism into the justification of their highly questionable method:

> "The Unified Phonics Method of teaching enables every child in a group to acquire the unilateral dominance necessary for reading without delay or disturbing the progress of those fortunate few who are born with it." (p. 29)

Here is a sample of the Spalding's proposal for teaching the spellings of /ər/:

> "H*er* fir*st* n*ur*se w*or*ks *ear*ly.
> This sentence gives five spellings of the sound "er" and it should be memorized. Their phonogram cards are numbered 27 to 32. The spelling *er* is used most often.
> Rule 8. or may say "er" when *w* comes before the *or*, as in *works*. There are few other guides in the choice of the spelling of the sound "er."
> "First dictate the sentence containing the five spellings of the sound "er." It sits on the top line of this page. Teach each word as described for teaching words on page one. Then dictate the five words across the second line, and so on.
> Check the children's knowledge of this page by asking, for example, "Which 'er' is in *church?"* The answer is, "The one in nurse." (The word in the model sentence at the top of the page.) Do this same checking with any word having an "er" sound.
> For children who find spelling difficult it is advisable to consider *or* and *ar* as having only the sounds as in *for* and *far* – not the sound *er* as in *doctor* and *collar*. In speaking, the *or* of *doctor* and the *ar* of *collar* deteriorate in sound because the accent is on the first syllable. In writing them say 'doc tor' and 'col lar.' " (p. 104)

These comments are relevant to the above. First, their "rule 8" covers only *w* plus *or.* The other "simple reasons or rules" are omitted. Second, the syllabication of the word *collar* /ˈkal-ər/ is based on the vocabulary entry *col-lar* rather than the respellings in the dictionary – a gross violation in phonics. Third, phonemes and spellings (phonograms) are confused in the question, "Which 'er' is in *church*?"

In his *On Their Own in Reading,* W. S. Gray taught "the consonant *r* as a clue to the vowel sound" under one general heading:

> "On the basis of known words like *arm, barn, park, her, herd, term, bird, girl, first, north, fort, corn, burn, curl, fur*, pupils note that if the consonant letter *r* follows the vowel letter, the vowel letter probably does not stand for a short vowel sound but for an *r*-controlled sound." (p. 43)
>
> W. S. Gray suggested that the learner's listening and speaking activities prepare the learner for unstressed /ər/: "Through listening to and using in their own speech. . . such forms of comparison as *big, bigger, biggest*, pupils also become aware that the endings -*s, -ed, -ing, -er,* and -*est* carry meaning." (p. *56)*

Gray also recommended teaching phonogram *er* as a suffix:

> "Such suffixes as -*y, -ly,* and -*er* of agent, which children encounter frequently in derived forms as they read, may be used to develop understanding of suffixes as meaning units." (p. 57)

Relating phonogram *er* to grammar and semantics was heavily emphasized by Gray:

> "On the basis of such known inflected and derived forms as *bigger, earliest*, and *driver*, children learn that the spelling of a root word often changes when an ending or a suffix is added. For example, the final consonant may be doubled as in *bigger, muddy, shopping*; the final *y* may be changed to *i* as in *earliest, busily, cried*; the final *e* of a root word may be dropped before an ending or a suffix as in *baking, driver, greasy*. By studying such words in sentences, children strengthen the understanding that the meaning of the root is present in an inflected or derived form even though the spelling may change." (pp. 57-58)

On the other hand, Gray's word-perception program reflects strength in many areas, including meaning clues to root wards and affixes, semantics, selected dictionary skills (e.g., pronunciation symbols), cognitive closure, homonyms, homographs, syntax (e.g., derivatives and inflected forms), and a number of other pluses.

But Gray confused the issue via an unrealistic approach to syllabication. For example, he stated this rule:

> "If the first vowel letter in a word is followed by two consonant letters, the first syllable usually ends with the first of the two consonants." (p. *127)*

For illustrations, he used *ladder* and *slender.*

Word	Gray	Vocabulary Entry	G & C Merriam Webster's	Thorndike-Barnhart
ladder	lad der	lad.der	/'lad-ər/	(lad'-ər)
slender	slen der	slen.der	/'slen-dər/	(slen'-dər)

This confusion of the syllabicated vocabulary entry and the syllabicated respelling to indicate pronunciation has compounded the learner's frustration. It should be quite obvious that an effective phonics program is based on the dictionary respelling, not on the vocabulary entry. Furthermore, reading motivation is better served by authors of textbooks – pupil and professional – and by teachers of teachers who understand gemination and other facets of orthography as well as phonology and grammar.

Gray commented on double consonant letters (gemination) but confused the issue by (1) failing to recognize the syllabication in dictionary respellings to *indicate pronunciation* and (2) offering the time-worn, catch-all, and ambiguous phonic rules (cliches) regarding "the vowel sound controlled by *r*":

"Recall that two consonant letters are a clue to accent and to vowel sound in two-syllable root words like *cannon, supper, kitten*. Then comment that a doubled consonant letter before an ending or suffix is also a clue to accent and to vowel sound. To illustrate, write the words *forgetting, admitted, beginner, preferring*. Ask which syllable is accented in the root word of each. Is the vowel sound in that syllable long, short, or *r*-controlled? Then call attention to the doubled consonant before the ending or suffix; bring out that two like consonant letters before an ending or a suffix are a clue to an unaccented final syllable in the root word and to a short vowel sound in that syllable except when the vowel sound is controlled by r."
(William S. Gray, *On Their Own in Reading,* Revised edition, Scott, Foresman & Co., 1960, p. 144)

Williams recommended introducing the phonogram *er* both stressed and unstressed /er/ – in one activity:
"To teach the phonogram *er*, have children identify it in familiar words such as *her, mother, father, over*, and *other* which should be written on the board. After the phonogram has thus been presented, write on the board words they will soon meet in their reading which contain the phonogram *er* and have the children pronounce them." (p. 31)

Later Williams "teaches" the phonogram *er* as an inflectional ending:
"The phonograms est and er have already been presented in simple sight words: *rest, best, west, and over, other, mother, father*.

Use these phonograms now as inflectional endings or suffixes with such adjectives as warm, cold, sweet, etc. to indicate comparison. "(p. 36)

Finally, Williams "teaches" suffix *er*:
"By the use of the following words ending in *y* it may be shown that only the words taking the suffix *ing* retain the *y*." (Examples:)

	er	ing
merry	merrier	marrying
easier	easier	hurrying
busy	busier	

(Linda Williams, How to Teach *Phonics,* Hall & McCreary Co., 1941, p. 70)

(obfuscation continued)
3. The *er* is a syllable in
    mother /'məth-ər/
    matter /'mat-ər/
    other   /'əth -ər/
4. The *er* is part of a syllable in
    roller /'rō-lər/
    paper /'pā-par/
    wonder /'wən-dər/

The sample has one redeeming feature: the pupils are directed to point to the letters *er* in *mother, matter, other*. Hence, the misconception of pointing to *sounds* in a written word was avoided.

On the other hand, Williams recommended teaching the phonogram both in isolated words and in a sentence context. This application in the context of the textbook is crucial in both cognition and recognition. Furthermore, she emphasized syntax and morphology by having the pupils add *er* to selected words – hopefully useful immediately in legitimate reading activities.

"The phonogram *er*

To teach the phonogram *er*, have the children identify it in familiar words such as. *her, mother, father, over*, and *other* which should be written on the board. After the phonogram has thus been presented, write on the board words they will soon meet in their reading which contain the phonogram *er* and have the children pronounce them."

Extant textbooks on the methodology of reading have introduced newer terms: *graphemes, phonemes, morphemes, graphophonics.* These terms replace *letters, sounds, roots* and *affixes, sound-spellings* without contributing to an improved teaching program.

Recent textbooks on the teaching of reading are really *about* reading rather than on *how* to teach reading, especially word perception. In general, only a very brief mention is made of "vowels controlled by *r*." For example, on page 54, Harris and Sipay list *ir, or*, etc. (performance of) as in *teacher, sailor*. Inflectional endings (e.g., *er* of *warmer*) are not mentioned in the index.

Fry quotes the usual "vowel plus *r*" rule: "When the letter *r* follows a vowel, the vowel is usually neither long nor short." (p. 28) He then discusses stressed vowel plus *r* in the following paragraph:
"First of all, the digraphs IR, ER, and UR all make the same sound, as seen in the example words "sir," "her," and "fur." Different dictionaries handle these vowels in different ways – short U's, schwas, etc. – but the sound is just like the consonant plus an /r/."

Fry discusses "Phonics: Our Alphabet, Phonemes, Methods" in chapter 2, pages 20-48. Here he reports on vowels and consonants, phonemes and graphemes, vowel principles (rules), homophones, phonics tests, but methods are conspicuously absent.

"Phonic Correspondences for Single Vowels, Vowel Combinations, and Vowel Generalizations" are listed on page 170 by Hall, Ribovich, and Ramig. But here only stressed "R-Controlled Vowels" are even listed: *a-car, e-herd, i-bird, o-cord, u-fur*. Of course, the vowel in *herd, bird, fur* is stressed /ər/, not *e, i, u*! Apparently, *er, ir*, and *ur* are not one of those graphophonic clues. A nod is given to consonant clusters (blends) with *r* on page 131; e.g., *br, cr, str*, etc.

Miller proposes:
"Phonic analysis is a very important word recognition technique also presented at the initial stages of reading instruction in most approaches. Phonic analysis involves determining the pronunciation and meaning of unknown words by associating phonemes (sounds) with the graphemes (symbols) that represent them." (p. 5)
In chapter 7, "Phonics," pages 97-117, she lists:
or with the magic e
ore, more, pore, snore, sore
or without the magic e
or, for, corn, horn (Miller, p. 104)
On pages 113-114, Miller lists among the vowels:
e h*e*rd, w*e*ar, *e*arn, s*e*rgeant
*a a*rm, *a*ir,
i b*i*rd
*o o*r, w*o*rm
u fu*r*
Incidental attention is given to suffix -*er* on page 180.

This is the phonics program in its entirety. It avoids crucial and basic issues in both the foundations of word perception and methodology. (Betts, "Reading: Phonics Countdown," 1974; Betts, "Spelling and Phonics," 1976)

Centering Diphthong /ar/ (ar as in far)

Phonemics:	[ɑr]	(Bronstein, p. 117)
	[ar]	(Prator, "In short position before r," pp. 113, 120)
	[ɑ]	(Thomas, p. 90)
	[ar]	(Cordts, p. 103)
	[ar]	(Kenyon, p. 222)
Dictionary:	Webster	/är/
	Thorndike-Barnhart	/är/
	Random House	/är/

Classification: centering diphthong

Phonology.

Several symbols are used to designate the vowel sound in *(a)re, h(ea)rt, h(o)t*:

I. P. A.	[ɑ]
Trager & Smith	[a]
Thomas	[ɑ]
Carrel & Tiffany	[ɑ]
Lloyd	[a]
Fries	[a]
Webster (G & C)	/ä/ (two-dot a)
Thorndike-Barnhart	/ä/ (two-dot a)
Random House	/ä/ (two-dot a)
i.t.a.	*a* ("ahn")
W.E.S. (Dewey)	aa

Trager & Smith	[a]
Thomas	[ɑ]
Carrel & Tiffany	[ɑ]
Lloyd	[a]
Fries	[a]
Webster (G & C)	/ä/ (two-dot a)
Thorndike-Barnhart	/ä/ (two-dot a)
Random House	/ä/ (two-dot a)
i.t.a.	*a* ("ahn")
W.E.S. (Dewey)	aa

Bronstein makes this comment regarding centering diphthongal glides:

> "All front and back vowels may glide into the central vowels [ə] or [ɚ]. Words spelled with *r* following a vowel in the same syllable (such as fear and poor) are diphthongal forms in our language." (p. 199)

In terms of tongue position, the vowels /ər/ [ɝ] and /ər/ [ə] are mid vowels. That is, in the formation of the vowels, the highest part of the tongue is at the central area, or mid point, of the mouth.

For these *r*-colored vowels in *b(ir)d* and *moth(er),* the tongue tip is usually turned up toward the portion of the glide /r/. The lips are open and neutral. The retroflex /ər/ of *bird* /ˈbərd/ is *tense, stressed*, and usually "*long*." On the other hand, the /ər/ of *mother* is *lax* and unstressed.

Carrel and Tiffany offer this opinion:

> The [ɑr] diphthong features an off-glide from the relatively low back [ɑ] to the central-vowel position for [ɝ] or [ɜ]. Among those who do not pronounce their *r*'s, the glide is either toward [ɜ] or virtually absent. In the latter case the *monothong* [ɑ] is increased in length and

the vowel distinguished from the [ɑ] of *father* in this way. The symbol for the long monothong [ɑ]. (Carrell and Tiffany, *Phonetics*, McGraw-Hill, 1960, p. 159)

[a] is a low, back vowel. It occurs at the beginning and middle of words, and is spelled *a* as in *arm, calm, farm*. (Charles Kenneth Thomas, Phonetics of American English, The Ronald Press, 1958, p. 90)

Kantner and West recommend use of [r] for broad versus narrow transcriptions:

". . . In accordance with general practice among American phoneticians, [r] is used here to represent in broad transcriptions any of our American consonantal or glide *r*'s. . . "(Kantner and West,, p. 293)

"In broad transcription, if any one symbol is to be used to represent all the *r* sounds (except the vowel forms) it should be [r]" (Kantner and West, 1960, p. 173)

Praetor believes:

The *a* in the short position followed by *r* usually has the sound [a]: *arm* [arm]. (Prator, *Manual of English Pronunciation*, Holt, Rinehart & Winston, 1957, p. 113)

Bronstein records the long sound of *a* in *yard*:

As [ɑ] is the lowest of the back vowels. . . the sound is . . . long in such words as *yard*. . . (Arthur J. Bronstein, The Pronunciation of American English, Appleton-Century-Crofts, 1960, p.

On the other hand, Kantner & West offer this opinion:

The [r] sound is seldom heard as a glide. . . In the word *are* [ar];. . , the [r] is the acoustic effort of moving to the [ɚ] position. (Kantner & West, Phonetics, Harper & Brothers, 1941, p. 119)

Carrel and Tiffany cite a list of "words nearly always pronounced with [ɑr], rather than [ɔr]!" including *are, farm, large*.

They also cite "words which may be pronounced with [ɑr] or [ɔr]," including:

Entry	Webster's*	Thorndike-Barnhart
forest	/'for-ə-st, 'fär/	/fôr'-ist/
sorrow	/sär'ō/	/'sor'-ō/
foreign	/'for-ən, 'fär-/	/fôr'-ən/
borrow	/'bär-ō/	/bor'-ō/

*Some of these alternate pronunciations are recorded in *Webster's New Secondary School Dictionary* (1959).

Wijk cites three pronunciations of the combination *ar*:
1. /är/ as in *car* /'kär/, *garden* /'gärd-n/
2. /ear/ as in *care* /'keər/, *vary* /'veər-ē/
Note: In this category of pronunciations, he also lists *parent* /'par-ənt,'per-/ /per'ənt/, or /'par-ənt/.
3. /ar/ as in *baron* /'bar-ən/, /bar'-ən/, *marry* /'mar-ē/, /mar'-ē/

"Whenever the pronunciation of the combination *ar* deviates from the general rules concerning the distribution of the three pronunciations, the spelling will have to be changed in Regularized Inglish. This is only the case in a few words. In accordance with the principle stated the following changes in the present spelling are suggested:
1. For "are," write *ar*." (Wijk, Regularized English, 1959, pp. 160-161)

Ripman and Archer emphasize alternate pronunciations of *ar*:

"The combination of vowel or diphthong with *r*, not followed by a vowel, is variously pronounced by English speakers, and this variation has to be taken into account!' (Ripman & Archer, New Spelling, 1948, p. 44)

T. O. and Dictionary Respellings of /ar/.

Phonogram	Word	Webster's	Thorndike-Barnhart
ar	bar	/'bär/	/bär'/
aar	bazaar	/bə-'zär/	/bə-zär'/
are	are	/ər, är/	/är or ər/
arr	starry	/'stär-ē'/	/stär'-ē/
er	sergeant	/'sär-jənt/	/sär'-jənt/
ear	heart	/'härt/	/härt'/
orr	sorrow	/'sär-o/	/sor'-o/
uar	guard	/'gärd/	/gärd'/

Note 1: /ər/ in unstressed position, e.g., function word *are* as /ər/

Note 2: Some pronunciations of *or* in *forest* /'for-əst/, *sorrow* /'sar-o/ or /sor'-o/, *foreign* /'for-ən/, *moral* /'mor-əl/ or /mor'-əl/, *torrid* /'tor-əd/ or /tor'-id/. (See Carrel and Tiffany, p. 132)

The spelling *ar* in *bar* and *farm* is a phonogram representing /ä/ plus *r*; *ar* in the function word *are* represents /ər/ in the unstressed position (e.g., *collar*) and /ä/ plus *r* in the stressed position. In the teaching of reading, *ar* is a phonogram, e.g., *far, farmer*.

The phonogram *ar* /är/ is used at the beginning (e.g., *arm*), the middle (e.g., *farm*), and at the end (e.g., *bar*) of words.

Reform Spellings.

The following is a list of words comparing W.E.S. and i.t.a. spellings with T.O. (traditional orthography) and dictionary (*Webster's New Elementary Dictionary*, 1970) respellings:

T. O.	Dictionary	W.E.S.	i.t.a.
are	/ər, är/	ar	ɑr
bar	/'bär/	bar	bɑr
bargain	/'bär-gən/	bargen	not available
bazaar	/bə-'zär/	bazaar	bazɑar
borrow	/'bär-o/	borroe	borroe
foreign	/'for-ən/	foren	foren
guard	/'gärd/	gard	gard
heart	/'härt/	hart	hɑrt
sergeant	/'sär-jənt/	sarjent	sɑrjeant
sorry	/'sär-e/	sorry	sorry
startle	/'stärt-l/	startl	startl
starve	/'stärv/	starv	stɑrv
are	/ər, är/	ar	ɑr
bar	/'bär/	bar	bɑr
bargain	/'bär-gən/	bargen	not available
bazaar	/bə-'zär/	bazaar	bazɑar
borrow	/'bär-o/	borroe	borroe
foreign	/'for-ən/	foren	foren
guard	/'gärd/	gard	gard
heart	/'härt/	hart	hɑrt

sergeant	/'sär-jǝnt/	sarjent	sɑrjeant
sorry	/'sär-e/	sorry	sorry
startle	/'stärt-l/	startl	startl
starve	/'stärv/	starv	stɑrv

A casual inspection of Wijk's *Regularized English* reveals one spelling of /ar/:

Phonogram	T. O.	Wijk
ear	heart	hart
er	sergeant	sargent

Phonic Rules.

Rules listed in books on the teaching of phonics provide little, if any, real help:

"A vowel followed by r has neither the long nor short sound-the vowel is modified by r." (Heilman, *Phonics in Proper Perspective,* Charles E. Merrill Pub. Co, 1964, p. 9) Examples *car, fir, fur, her, for, part, bird, hurt, perch, corn,* etc.

"A vowel (or vowels) followed by the letter r results in a blended sound with neither the short nor the long sound of this vowel." (Heilman, p. 68)

"Vowel-r combinations – the vowel letter has its sound modified or controlled by the *r*, e.g., *car, learn, fern, bird, word, far, fur*." (Scott & Thompson, *Phonics,* Webster Pub. Co., 1962, p. 348)

Fry's discussion of /ar/ is limited to the paragraph below:

"When an A or an O is followed by an R, the situation is different. OR is rather uncomplicated in that it usually makes the sound heard in "for." But AR is a bit more complex in that it makes two different sounds as heard in the words "arm" and "vary." Both of these A sounds are a little difficult to teach because they are relatively infrequent. Some dictionaries mark the first with an umlaut or double dot over the /ä/ as in "arm," and a tilde over the /ã/ as in "vary." One help is that these A's usually precede an R; however, the second sound is also sometimes spelled AIR as in "fair." (Edward Fry, *Elementary Reading Instruction,* McGraw-Hill, 1977, p. 29)

In his pamphlet on phonics, W. S. Gray, an eminent scholar, fell into the same trap as tyro authors. Here is his rule:

"Consonant controllers: If the only vowel is followed by *r*, the sound of the vowel is usually governed by the *r*, proceed as follows:
1. We know that the vowels *a* and *i* are neither long nor short when they are followed by the letter *r*. Write the words *bird, first, third, car, cart, far, park, start* and have the words pronounced. Call attention to the fact that each of the words has a vowel letter in the middle of it but that the letter does not have the short sound. Lead the pupils to conclude that the vowels are not short because they are followed by *r*.
2. (Irrelevant to ä*r* /ar/)
3. Write the words *had* and *hard* on the blackboard. Discuss why the vowel in the word is short. Bring out the fact that the word has only one vowel letter and that it is in the middle of the word. Ask pupils to tell why the vowel in the word *hard* is not short. . ." (Gray, *Developing Word Attack Skills,* Grades 1-3, Scott, Foresman, 1947, p. 32)

Hay and Wingo made a tangential and somewhat obscure approach to "teaching" the phonic skills relative to /är/:

> "In this activity each of the sounds of the murmuring diphthongs *or*, as in *for*, and *ar*, as in *farm* (is taught). A test is given on this page for *or* and *ar*. (Hay, Wingo, *Reading with Phonics,* Teachers' Edit. J.B. Lippincott Co, 1948, p. 80)

On page 80, 16 *or* words (e.g., *for, fork)* and 16 *ar* words (e.g., *far, farm)* were presented in isolation, followed by 20 "scrambled" words in a test.
On page 82:

> "On this page appears a phonetic story containing *ar* words." For example:
> "Betty, have you seen my little red cart?"
> "Yes, Bobby. It is in the barn or the yard," said Betty.

For the words *cart, barn, yard,* the first three letters were printed in red; the rest in black. This did have the advantage of calling attention to the phonograms *car* (cart), *bar* (barn), and *yar* (yard) in the *whole* word!

In a very brief presentation of *ar,* Williams recommended the consonant-"substitution" technique plus use of both initial and final blends:

> "Have the children hear and show the like elements in key words such as *cart, bark*, and *farm*. Build on either side of the phonogram, change initial or final consonants to make new words. From *farm* get *farmer*, *far*, and *arm*. Change *arm* to *harm*, *harm* to *hard.* From *cart* get *cars, car, carpet*. Change *car* to *bar*, and in turn get *jar, tar, star, start, art, part*, and *party*. Children will enjoy the exercise and gain alertness in recognizing and blending parts in pronouncing." (Williams, *How to Teach Phonics,* Hall & McCreary, 1941, p. 33)

In her Colorado phonics program, Nettie S. Freed makes no mention of the *ifr* /ar/ situation. (Freed, *The Program in Word Analysis)*

In Conclusion.

Graphic *r* represents both consonant and vowel phonemes and, therefore, is a maverick for both phonemicists and orthographers. Hence, it provides frustration par excellence for educators concerned with phonics – the relationships between graphemes (spellings) and phonemes (sounds). Perhaps this and succeeding reports on graphic *r* will have served one primary purpose: to spotlight traps and, at the same time, to offer a rationale for regularizing spellings for beginners in reading.

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6. Analogy in English Spelling, by D. G. Scragg*

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Presented at 2nd International Conference of S.S.S. at Nene College, Northampton, July 29, 1979.

It is my contention that for any effective improvement to be made in the efficiency of our spelling system, there must be very full information not only on the way in which we use the orthography today (which is what most of the papers given at this conference are concerned with) but on the way in which our system has developed over the past ten centuries. The major problem with English spelling, after all, is that it has a longer history than the spelling of any other language using the alphabet – there is a longer continuous history of writing in English than there is in any other European language. We cannot – and should not – ignore this history, but we may learn from it.

English spelling has grown organically – not haphazardly, as some have supposed – over the centuries, and clearly some of its developments have been advantageous (for example, an alphabet of 26 characters is obviously better geared to a reflection of speech patterns (if that is the desired aim) than is the alphabet of 24 characters which was all that was available to Shakespeare). I believe that the more we understand about 'how our spelling system evolved, the better our chances of seeing why – not just how – it went wrong, and the more successful we are likely to be in putting right those anomalies which we all recognize that it contains. Four years ago at the first conference I talked about the way in   which English spelling stabilized into the present system whereby we have a single fixed form for each word (with a very few exceptions). Today I intend to examine with you some of the effects of one particular linguistic factor – analogy – on spelling of different periods, and I hope to be able to show how we could capitalise on it in our efforts to improve the efficiency of our written language.

First let me explain my specialised use of the term analogy. Linguistic analogy is the influence exerted by the use of language in one context on another in which it is historically inappropriate. To explain by means of an example: the historical plural of *staff* (a stick or long narrow piece of wood in its original meaning) is *staves,* but this plural involves a considerable disruption of the sequence of the sounds of the singular the replacement of a simple vowel by a diphthong /eɪ/and the alteration of /f/ to/v/. Most English words form their plural by adding s, so by *analogy* with the majority pattern in the language, a new plural *staffs* was formed. *Staves* as a plural was reserved for situations in which the word in its original sense was regularly used in the plural, e.g., a fence is made of a series of upright sticks or *staves.* When you pick out one of these, it is called a *stave* – by analogy of the fact that to form a singular in English you normally simply take away the *s.* So here we have two new words created in the language*: staffs* and *stave* – both created by analogy.

Analogy is a powerful factor in many areas of language, not least in spelling. We all know how children make spelling errors by applying to one word criteria for spelling which are strictly applicable to another. Hence because the sound /ɔ/ is spelt *or* in /or/ itself, why not *cort* or *bort*? This is spelling by analogy. Equally, on the analogy of *bought, caught, daughter, fought, naught, sought,* and *taught,* all of which have the sequence *a* or *o* followed by *ugh,* why not *pought* for *port* or *waughter* for *water?* A child acquiring the tortuous (or taughtuous) technique of modern British spelling has no inhibitions about such forms, but he is normally weaned away from them to the conventional spelling of the printed word. If in doubt, he turns to the dictionary for the generally agreed and acceptable form. Now dictionaries are a relatively new invention. There was no attempt at an all-inclusive lexicon of English before the 18th century, and consequently before such a

complete catalogue of all words with their fixed spelling was achieved, it was much easier for an individual word or a group of words to be influenced by a prevailing fashion or popular analogy. Writers had no dictionaries to stifle them. English borrowed the word *delight* from French. The French spell it (or did when they used it) -ite. But in English, words with the sound sequence /aɪt/ are more rarely spelt *ite* than *ight* (c.f. *might* is commoner than *mite, sight* commoner than *cite* or *site,* and there is also *bright, fight, fright, flight, light, height, night, right, tight,* against *bite, kite,* and *quite),* so by analogy we have come to spell *delight* with *igh.* Frequency of use of a symbol (however cumbersome that symbol may be) is an important factor here: it is the basis of Prof. Wijk's proposed reform.

Analogy, however, need not be confined, in the case of borrowed words like *delight,* to the recipient language. The first man to write *delight* as we do did so because he was thinking of the sound sequence which is also found in *light,* but many of his contempories in the 16th century were less interested in the echoes of the written word in the spoken language than in the reverberations from other written contexts. Lots of words we use are what might be called literary words, in that they are more often encountered in written language than in speech. I suppose *analogy* is a good example. In the 16th century English prose, especially the prose of the technical language such as that of science, medicine, learning generally, was still in its infancy. Most learned works were written in Latin. When a writer used English, he was aware that all his more literate audience was familiar with Latin, and hence when he created a literary echo in his reader, he was as likely to do so in a passage of Latin as in a passage of English writing.

Today it is sometimes said by opponents of spelling reform that it is useful to have visual links between related words. The linguistic philosopher Noam Chomsky has used the example of the pair *doctrine, doctrinal.* 400 years ago, a similar visual link was created by inserting an excrescent and entirely unpronounced (perhaps unpronounceable) *b* into *debt* and *doubt* to show their association in meaning with such Latin words as *debitum* and *dubilare.* Let us take note of the fact that writing is not a simple reflection of speech – writing has no way of symbolising patterns of intonation and has very inferior devices for denoting the variations of stress and pitch practised in speech. But, in a form of compensation if you like, writing has this ability for creating visual echoes which speech lacks, and spelling reformers will ignore this aspect of written language at their cost. What I would say, however, is that visual echoes of Latin are useful only when it can be guaranteed that the readers of English are equally fluent readers of Latin. Such is not now the case and I would say that the *b* in *debt* and *doubt* has outlived its purpose.

However, there are instances of the practical operation of analogy. Take the verbs *could, should* and *would.* All three have a silent *1*. In two, *should* and *would,* the *l* is etymologically acceptable in that these are historically the past tense forms of *shall* and *will,* in which *d* is added much as it is in *walk, walked.* As in *walk,* pronunciation of the *l* has been dropped since the word acquired its fixed written form. But *could* is a different kettle of fish entirely. Historically, it is the past tense of *can.* It acquired its very different pronunciation through a complicated series of changes which began some centuries before the birth of Christ, but at no time did anyone ever pronounce *could* with any of the sounds we normally represent by *l* (except perhaps in error). In this word, *l* is an analogical spelling, introduced by association with *should* and *would.* But is it not a useful association? After all, these three words are unique in the sense that while they carry no lexical meaning (they have no referential meaning which a dictionary can define, as it can say with *horse* or *ride),* they do have a distinct grammatical meaning (they are modal auxiliaries – not indicating an action as a lexical verb like *ride* may do, but a subject's attitude to the action: *could ride, should ride, would ride*). In this sense it is perhaps useful to have them marked off, by their visual form from the general run of written forms.

Let me return finally to Prof. Wijk's Regularized Spelling which I briefly referred to earlier. He has applied the principle of analogy systematically and I take this opportunity of applauding his system publicly. I offer only two thoughts on it.

The first – and this is very obvious – is that the success of any system based on analogy depends wholly on the point of the analogy. In other words, if the statistical survey on which the analogy is based is insufficiently broad, then the disturbance of the conventional system will be out of proportion. (A simple example – I showed at the beginning that there are more words in English with the sequence *ight* representing the sounds /aɪt/ than there are words in *ite*. But this does not take into account the frequency of occurence of such words, and in order to arrive at a proper estimate of the frequency of occurence, you have to choose your sample very carefully. The word *light* will occur more often in *War and Peace* than the noun *kite*, but this alone is not enough to prove that it is of more frequent occurence in the language as a whole. Conversely, readers of Enid Blyton may be more familiar with *kites* than with *fighting*.)

Secondly, I should like proposals for spelling reform to take account of what technically I call morpho-phonemic rules. My example of *could, should, would* falls into this category but perhaps it is simpler to see it in the plural marker in nouns: in speech, we have three regular plural markers depending on context. /s, z, -ɪz/ in *cats, dogs* and *horses.* would it be wise to have three differing markers in writing, or is it simpler to have just one?

The moral of my tale (let me stress it again): there is more to writing than a simple reflection of speech.

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Editor's comment: Something simpler is not necessarily better. In this case, simpler to him (the author) means keeping the status quo, even tho it fails to suggest the proper pronunciation. If a pupil is going to be taught to sound out words according to the pronunciation indicated by the spellings, then failure to indicate this, as in T.O., must cause failure on the part of the pupil to understand the proper pronunciation. And this will cause confusion. How can a pupil be taught pronunciation when many words only partly indicate pronunciation? Which is more important – that a beginner learn the derivation of words thru morphophonemic indicators, or that he learn how to pronounce words properly?

Morphophonemic indicators, such as the silent *l* in could, etc., are not helpful to learners. They are not helpful to teachers either. They are harmful because they interfere with teaching by phonics, and they are not useful to the teacher in teaching morphophonemic relationships because they are unreliable in this extent. Also a reform along morphophonemic lines would mean very little reform. And this kind of a reform would still be so unphonetic that it would be no help at all to the beginner. Actually it would still offer all the confusing anomalies now handicapping learners. Only in the fourth or fifth grade could such rules be of the slightest help- too late for learning reading – if indeed it was any help at all.

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7. Book Review, by Helen Bonnema Bisgard, Ed.D.

Kenneth H. Ives, *Written Dialects n Spelling Reforms, History n Alternatives,* Progressive Publisher, Chicago, Il, 112 pp., $5.00 (to readers of *SPB,* $4.00)

This paperback book has a neat, pleasing format with an inviting preface and table of contents. Any student of education or linguistics who is researching the history and future of the spelling reform movement will find the book informative and provocative. The reader becomes involved immediately as a participant in an experiment. He sees that two short, common words *the* and *and* are represented by [n] and [h] thruout, [1] and is directed to note his first impressions upon noticing these wordsigns, and later his final reaction after finishing the last page. From his own feelings he can deduce the readiness with which the public might shift gradually from traditional orthography to a streamlined system.

The opening chapter reviews the history of English spelling thru six phases which are recapped in a convenient table, and delineated more fully in four pages of the appendix "Chronology of periods, authors, events." The "Resources for Further Reading" beckons to a score of works published within the present decade, as well as to an equal number of books of long-standing reputation.

Having approved the above mentioned excellent features, it is with reluctance that this reviewer makes the following criticism. In the title and thruout the book the way he uses the term *dialect* leads to confusion. Thru the ages, since the Greek use of *dia* (between) legein (to speak), the word has meant language transmitted only orally, and has never referred to an alphabet written to show the sounds of such speech. A dialect possesses not only its own sound system but also its distinctive vocabulary and features of sentence formation. However, the author applies the term *dialect* to World English Spelling, Gregg shorthand, Pitman's Initial Teaching Alphabet, Sensubul Spelling, and many other systems which do not possess their own phonology and grammar. He overlooks the fact that a sentence written in World English Spelling (WES) is pronounced exactly the same as one written in Gregg Shorthand. Even tho author Kenneth Ives designates these systems as *written* or *eye dialects,* the fact remains that they are merely alphabetic scripts used to graphically *represent* human speech. The distinction between dialect and writing system is important, for some people believe that their language (or dialect) will be changed if the spelling is reformed. They need to be assured that only the graphic symbols representing the sounds will be altered.

After the author describes a number of what he calls "written dialects," he recommends "Economy Spelling" because it changes common words by removing redundant letters, thereby saving space, and because it is to be put into use by 30 gradual steps. Altho this reviewer does not agree that the plan would be superior to a complete one-step reform, she does acknowledge that the pro's and con's of Ives' recommendations should be considered by the serious student who is planning a strategy for eliminating resistance to spelling reform.

[1] A new reader is unable to understand the contraction *n*. Is it *an, in, on, un,* or *and?*