Spelling Progress Bulletin Spring 1967

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

"A closed mind gathers no knowledge*, an open mind is the key to wisdom."

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1. Reproduced by permission from *Head Teachers Review, (Pergamon Press),* issue No. 1, Jan., 1967.

Broadstairs C. E. Junior Boys' School,
Broadstairs, Kent, England.
4th November, 1966

The Editor,
The Head Teachers Review.

Dear Sir:
It was a surprise to read the following words in the April *Review:* "Teachers consider the language to be sufficiently phonic for teaching purposes as it stands. *They see no need to change symbols or spelling. They think harm will result from such a change."* (by Icon)

Icon must have had his tongue in his cheek when he wrote this. Research has shown repeatedly that our inconsistent spelling is a serious obstacle to children's education, particularly in the early stages. English has about 40 speech sounds, but we have more than 500 different ways of spelling them. Our children surely have a right to something more scholarly than this.

The greatest authorities on our language, almost without exception, have criticised our conventional spelling and have pleaded for reform. No serious objection to reform has ever been made, though some scholars, such as Trench, Bradley and Craigie, have expressed a quite understandable liking for the unreformed spelling because they have been dealing with it all their lives.

Many of us go through school and college without being told how and why we have come to spell as we do. We may not have noticed that, until quite recent times, English spelling has from time to time adapted itself to changes in pronunciation. Why stop it now? The process would entail some expense and inconvenience to printers and publishers, but our chief consideration must always be education, and – above all – children.

Spelling reform is supported by the most eminent scholarship and by common sense. Scores of countries have reformed their spelling. Reform has nowhere *prevented local dialects* (Italy, Russia, Spanish America) from continuing to be spoken, nor has it cut off people from the literature of the past.

Yours sincerely,
W. J. Reed, Headmaster

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2. A Controlled Experiment to test the Effect of Teaching Reading by an Articulated or Direct Phonics Method,

by Lloyd H. Babcock, B.A., B.Ed.* Helen Henrikson, Ph.D., Dorothy Geiger, B.A.

*Principal, Polson Park Public School, Robert Wallace Dr., Kingston, Ontario, Canada.

A controlled experiment to test the effect of teaching reading in Grade 1 by an articulated or direct phonics method was started in Polson Park Public School, Kingston, Ontario, in September, 1964. The experiment was started because a consonant substitution test showed that the sight word method with indirect phonics did not adequately equip 41% of the Grade 1 Kingston children to read new words.) This experiment was carried out in Grade 1 classes in 1964-65, in 1965-66, and is being continued in 1966-67 in both Grades 1 and 2 classes. The results referred to in this report are from the year 1965-6.

The Grade 1 group was equally divided according to their reading readiness score into two classes: the experimental or phonic group, and the control or conventional method group. Teachers of both classes were experienced, and had considered the conventional method good; one of them volunteered to try an articulated phonic method. The neighborhood of the school is considered above average culturally, with a larger-than-average proportion of professional people, comfortably off, but not wealthy – an A classification. **[1]**

In the experimental class, the *Basic Reading Series* by McCracken and Walcutt (Lippincott) was the text, with the *Nelson Series* as the parallel auxiliary readers. The children in Unit 3 (the last third of Grade 1) completed *Basic Reading 1-1,* while those in Unit 4 (the first third of Grade 2) completed *Basic Reading 1-2* as well. In the control group, the *Nelson Reader Series* was the text in Units 1, 2, and 3 of Grade 1, and *Down the River Road* (Row Peterson & Co.) was used in Unit 4; the parallel auxiliary readers were the Ginn & Co. series. One-third of both groups were accelerated to complete Unit 4 at the end of their first school year.

The *Basic Reading Series* has more than 2000 words in it, as compared with about 380 words in the *Nelson Readers* and *Down the River Road.* However, word lists are included in the *Basic Reading Series,* whereas in the control group words derived by phonic substitution (emphasized in Kingston as a technique for reading new words) are not included in the above totals. These derived words may include any word the teacher or pupils select as examples of consonant substitution in known words, so that the controls would have had many more words than the 340 listed for the Grade 1 *Nelson Series.*

In Table 1 data are presented for two tests given in June 1966 to the experimental and control grade 1 groups of 1965-66:

Table 1

Group		Consonant Substitution Phonic Test			
	N	Failure rate of pupils	Average error after 1st trial	2nd trial	% of errors corrected on 2nd trial
Experimental					
unit 3	24	12.5%	18.1%	11.0%	39.2%
unit 4	12	0%	12.5%	6.6%	46.7%
units 3 & 4	36	8.3%	16.5%	9.5%	41.0%
*Control**					
unit 3	20	65.0%	48.0%	43.0%	10.4%
unit 4	10	50.0%	29.5%	26.0%	11.9%
units 3 & 4	30	60.0%.	42.0%	37.5%	10.7%

Group		Dominion Standard Reading Test (grade year and month)			
	N	Average	Median	Range	80th percentile
Experimental					
unit 3	24		2.55	1.4-4.1	
unit 4	12		4.0	2.9-4.6	
units 3 & 4	36	2.6	2.9	1.4-4.6	4.0
*Control**					
unit 3	20		2.15	1.7-4.6	
unit 4	10		2.6	2.6-4.6	
units 3 & 4	30	2.4	3.6	1.7-3.7	3.6

*There were 34 children in the control group (see text).

a) The Consonant Substitution Phonic Test (1) with the words, "flop, thump, cash, track, buzz, mix, kill, jam, wall, quit, yelp, vet, spun, blot, inch, shed, gown, rust, dent, hog." The words were presented one at a time to be read orally, and a second trial was given for words missed or read incorrectly. None of these 20 words was among the sight words in the *Nelson Series* or in the first books of the *Ginn Series* used by the control group, but all 20 could be derived from the known words by initial or final consonant substitution and some may have been derived in class. "Buzzed" occurred 10 times in the parallel reader used by Unit 4 of the control group., For the experimental group, 3 of the words were new; 13 occurred once, 1 occurred twice, 1 occurred four times, 1 (buzz) occurred five times, and 1 (flop) occurred 19 times in the *Basic Reading Series.*

b) The Dominion Standardized Reading Test. All pupils were given the Grade 1 Word Recognition, Phrase and Sentence Reading, Paragraph Reading rest; those who scored in the extrapolated part of the curve were given the Grade 2 Paragraph (comprehension) Test. The higher of the two scores was taken.

Four of the control group completed only two units of Grade 1. These four were not given the Consonant Substitution Phonic Test, and their Dominion Reading Test scores were not included. The inclusion of their scores would have lowered the control class scores appreciably since all pupils of Units 1 and 2 failed the Phonic Substitution Tests in 1964. [1]

For the substitution or phonic test, the difference between the groups is striking, with the performance of the experimental group being much superior. The failure rate for units 3 and 4 was seven times greater for the control group than for the experimental group. None of the unit 4 experimental group failed, while half of the unit 4 control group did. Failure was scored when 5 or more words were read incorrectly.) After the first trial, the average error of the control group (42.0%) was about $2V_2$ times greater than that of the experimental group (16.5%). On the second trial, the experimental group was able to correct about four times as many of their errors or missed words as was the control group. See the percentage of errors corrected in Tables 1, 2 and 3.

The reading performance as gauged by the Dominion Standardized Reading Tests was above the norm of 2.0 for all groups. All groupings of the data from this test show that the reading scores for the experimental or phonics class were 2 to 4 months above the comparable scores for the control class; these figures do not include the 4 pupils who failed to complete Grade 1. It will be recalled that the reading readiness scores were equal at the beginning of Grade I for the: two classes. It is usual for phonetically taught groups to score above the control group in a variety of tests. [2]

In the experimental class there was little individual correlation between the scores for the standardized reading tests and the number of words read correctly on the phonic test, perhaps partly because there was so little spread of error (only 3 pupils had more than 4 words wrong), and so little difference between unit 3 and unit 4 performance. In the control class there was a rough positive correlation between reading score and the number of words read correctly.

"Inch", "hog" and "vet" did not appear in the *Basic Reading* texts, and were therefore unknown to both the experimental and control groups. The results for these words are summarized in Table 2.

Table 2

Group	Average error after first trial	Average error after second trial	% of errors corrected on 2nd reading
Experimental			
unit 3	12.5%	2.8%	77.8%
unit 4	8.3%	2.8%	66.7%
Control			
unit 3	39.3%	33.3%	13.0%
unit 4	20.0%	16.7%	16.7%

13 of the 20 words appeared once among the more than 2000 words in the *Basic Reading* text. Some of these ("wall" and "mix") were likely the subject of consonant substitution drill (from "ball" and "six") in the control group. The results for these 13 words are summarized in Table 3.

A comparison of the last two tables reveals that the performance by both the experimental group and the control group for words in Table 3 was not as good as for the words in Table 2, despite the experimental group having been exposed once to each of these, 13 words. However, these 13 words included the more difficult words, such as, *quit, gown, cash,* and *shed.*

The spelling ability of the two groups will be the subject of a study this current year.

It is obvious that teaching the children the sound of the phonemes in isolation (articulated or direct phonics) enhanced the ability of these children from a culturally privileged area to read the words on the substitution phonic test, and increased their scores on the Dominion Standardized Tests. Their independence in reading, ability to correct errors, enthusiasm for reading, and widened range of reading material was commented upon with enthusiasm by teacher and parents.

It should be noted that in the experience in Kingston there is not enough repetition of words in the *McCracken Walcutt* readers for the average reader. This series is being supplemented by the use of other conventional readers as auxiliary texts, as well as by additional drill in phonics from other sources.

Table 3

Group	Average error after 1st trial	2nd trial	% of errors corrected on second reading
Experimental			
unit 3	22%	14.7%	33.3%
unit 4	16%	9.0%	44.1%
Control			
unit 3	57%	51.2%	10.1%
unit 4	37.7%	33.9%	10.2%

References

1). H. Henrikson & D. Geiger, *Reading New Words: A Test of Phonic Substitution,* (Given to 835 first year children in Kingston, June, 1964). *Spelling, Progress Bulletin,* vol. VI, No. 4, Winter, 1966.

2) L. Gurren & A. Hughes, Intensive Phonics vs. Gradual Phonics in Beginning Reading: a Review. The Journal of Educational Research, vol 58, p. 339, 1965.

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[Spelling Progress Bulletin Spring 1967 p3 in the printed version]

3. Billi – he'z in trubl, by Anon

I've got a letter, Parson, frum mie sun awae out west,
And mie ol' hart's az hevi az an anvil in mie brest,
To think the boi hooz futur I had wuns so proudli plannd
Shuud wander frum the path o'rite an' cum to such an end!

I told him when he left us, onli three short yeerz ago,
He'd find himself a-plowin' in a mieti crooked roe -
He'd mis hiz father'z counsels, and hiz mother'z praerz too;
But he sed the farm waz hateful, and he gest he'd hav to go.

I no thar'z big remtashun for a yungster in the west,
But I beleevd our Billi had the curaje to resist;
An' when he left I warnd him o' the ever-waeting snarez
That lie like hidden sarpints in life's pathway everiwherz.

Our Bill, he promist faethful to be keerful an' alloud
He'd bild a reputashun that'd make us mitee proud;
But it seems az hou mie consul sort ov faded frum hiz mind,
And nou the boi'z in trubl ov the veri wustest kind!

Hiz letterz cum so seldom that I sumhou sort ov no'd
That Billi waz a trampin' on a mitee rocki rode;
But I never wuns imajind he wood bou hiz hed in shame
An' in the dust wood waller hiz of daddi'z honord name.

He rites frum out in Denver, and the storiz mitee short;
I jest can't tell hiz mother; it'd crush her poor ol' hart!
An' so I rekon'd, Parson, you mite brake the neuz to her.
Bill's in the legislatur, but he duzn't say what fur.

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[Spelling Progress Bulletin Spring 1967 pp4,5 in the printed version]

4. i.t.a. will be t.o. in 2022, by Helen Bonnema, Ed.D.*

Janus was a two-faced god. That doesn't mean he was a hypocrite, but as an ancient Roman deity of doorways, he needed to look in both directions at once. His two bearded faces, back to back, could look toward the rising and setting of the sun, could look at the past while predicting the future.

There comes a time in middle age when a person acts as if he were a Janus. He reminisces about the past decades with an authoritative tone which comes from realizing that his younger listeners cannot question his accuracy. They were not present in those former days. He was!

Not only in looking back does he assume his authoritative mein. Looking ahead, he predicts events with the same wise tilt of his head and assurance of tone. Who can tell if he is wrong? Should anyone find him in error when the future time arrives, he will not be there to answer for it.

With this smugness of the cocksure soothsayer, I solemnly predict that in the year 2022 the mode of writing, that is the alphabet, in vogue will be different from the one we now use. It will be similar to Pitman's initial teaching alphabet which has come to this country from Great Britain and is popularly called i.t.a.

That is to say, our present 26-letter alphabet, the traditional orthography which is dubbed "t.o." from the first two letters of *traditional* and *orthography* will in the future gradually acquire many of the features of i.t.a., the initial teaching alphabet.

I base my prediction for a date 55 years hence upon a comparison of our present day with a time 50 or so years in the past. The direction of changes which have been taking place leads to this conclusion.

In the pre-First World War years, educators were jauntily overthrowing the shackles of irregular spellings by using the twelve words adopted at the N.E.A. Convention in *1898: tho, altho, thru, thruout, thoro, thoroly, thorofare, log* instead of *logue* in *catalog, prolog, decalog, pedagog, program.* President Theodore Roosevelt, with characteristic impetuosity officially announced his conversion to the cause of spelling reform by ordering the public printer to use a new spelling of certain words in government documents. The Carnegie Corporation gave $250,000 for furthering the cause of simpler spelling. Some enthusiastic educators felt that soon the country would be free from the burden imposed on our children by the wretched orthography.

What these leaders did *not* see was that neither the public nor the majority of educators were ready to concede that English spelling was really so bad for our children because they had a bright hope.

A new system of teaching reading was being propounded in the second decade of this century. It would teach "sight-words", and by-pass the miserable spelling. It would no longer require the sounding out of each syllable. Children would recognize words by their general appearance.

Teachers trusted that the new system of teaching reading would alleviate the difficulties because it had been tested by research. And so they launched the sight-word system with vigor. They were successful, as they usually are with innovations. Children *did* learn to read without mastering the sounds of letters. I was one of those children. We who entered first grade in Stocking Street School, Grand Rapids, Michigan, in 1913 memorized this jingle:

"Come away, Come and play,"

then they connected the words with those printed on an illustrated chart. Next it was:

Boys and girls, come and play,
Run and jump away, away.
Later, Run with me, to the tree.
And, Rain, rain, go away,
Come again some other day.

Then we read the memorized verses from large cards posted above the chalkboard and also from the pages of our primer.

We astonished our parents by the ease with which we had learned to read. With the promise of such a method of tackling the badly spelled English language, who was interested in extreme measures? What was to be gained? So when the Carnegie money allotted to spelling reform was used up in 1918, no further funds were granted for continuing the work. Roosevelt's earlier plea for reform had become the subject of political jokes. It looked as if the movement for simplified spelling was dead.

Gradually the sight method for beginning reading gained momentum, increasing in popularity for forty years, until it became the only one used in many parts of the country. Some children *quickly* learned to read, many learned fairly well, but quite a few never learned at all. The sad story of failures, discouragements, and difficulties attributed to the ineffectiveness of reading methods need not be repeated now. But when the sight-word system fell into disrepute five or ten years ago, attention was once more turned toward the root of the trouble – the wretched system of orthography – modern English spelling.

Educators felt that if children would *memorize* the hard combinations like *o-u-g-h* for *rough,* and *tough,* one group at a time, they would make better progress. So they went to the archives to dust off all the old phonics methods ever used in the past. They reprinted them in bright colors on beautiful paper with entrancing decorations, advertized them as NEW and tried to accomplish what seven previous generations of American teachers had been unable to do. They are busy now turning out phonics records, phonics tapes, phonics teaching machines, and programmed books. All the while they bemoan the fact that we never really learn how to spell but are slaves of the dictionary. These renovators must be admitting to themselves that nothing will succeed until the basic cause of the trouble is removed-until the orthographic system is changed. And so it is with fresh attention that many of them look at i.t.a. Some leaders predict that by 1980, only 14 years from now, i.t.a. will be generally used in first grades thruout the country. This was the consensus of opinion of discussants at the Aspen Institute for Humanistic Studies last fall. They forsee that with the easy

i.t.a. system, the beginner will learn to read easier. He will master the special alphabet, and within a year or two, read and write with it fluently and accurately.

More books than he will have time to read are available in i.t.a. In addition to the regular reading series: the Downing Readers published by Pitman Company in England and the *Early-to-read* series published in New York by Pitman, there are numerous library titles. For example, Scholastic Services has more than forty on its list. Favorites such as *Curious George, Benny and the Bear, The Five Chinese Brothers, How Big is Big.* The Educational Research Council of Greater Cleveland produces modern math, social studies, and science books written in i.t.a. While the child is enjoying the wealth of material available in this alphabet, he will gradually learn also to read traditional orthography. But his teachers and parents will sooner or later wonder why they should require him to change from his efficient initial learning system particularly in his writing. And so they will not force him to make a transition in his writing.

The adults will be able to *read* what he writes even tho they may not wish to write that way themselves. Likewise, the child will be able to read the t.o. adults are writing.

Each age group will *read* what the other has written, but will *write* with its own alphabetic symbols. Gradually the new way will replace the old just as was done in Russia, Denmark, Norway, Turkey, and many other countries where systems of writing have changed within our century.

It is only fair to Sir James Pitman to insert that with i.t.a. this is not the development for which he is striving. He emphasizes that i.t.a. is not intended as an alphabet to replace the present one. It is not to be used for spelling reform. It was not designed with those requirements in mind. Rather, he asserts, the Shaw alphabet published in 1962 is ideal and should be the eventual standard. However, like it or not, Sir James will be unable to fully control i.t.a.'s future. General use by the public will settle that. People will make it their own. The reason everyone will gradually slip into using i.t.a. is that it is so simple. For example, it has only one way to indicate the short i-sound heard in the word lid. It consistently uses the single letter i, not *ie* as in *sieve, u* as in busy, ui as in build, y as in *hymn,* o as in women, ee as in *been.* Likewise, there is only one symbol for long-e. It is a sort of Siamese-twin letter made by joining two e's together. But a child does not see it as separate letters any more than you see the letter w as two *u*'s in the shape of two v's. The symbol for the long-e sound is used in:

team	to replace	ea
Caesar	"	ae
deceive	"	ei
field	"	ie
people	"	eo
amoeba	"	oe
key	"	ey
quay (wharf)	"	ay
equal	"	e

To give an example of another i.t.a. symbol:

a joined with e represents long-a, æ

This is used to replace	ai in rain, ræn
"	au in gauge,
"	ay in ray,
"	ea in steak,
"	ey in obey,
"	eigh in numeral eight,
"	a and letter e following a consonant, as in ate.

i.t.a. has one weakness which causes criticism from teachers of my acquaintance. It is a feature which can easily be corrected. This concerns the vowels used in unaccented syllables. These vowels are serious stumbling blocks for children not able to ascertain by sound what letter to write. How can a child tell by pronunciation what vowel letter to use in the second syllable of *oven, robin,* or *wagon*? Why should e be required in the first but not in the others?

How much more consistent is the use of the schwa symbol, as shown in the following comparisons:

t. o.	i.t.a.	vowel	version using schwa
woman	wʊman	a	wʊmən
oven	uven	e	uvən
robin	robin	i	robən
wagon	wagon	o	wagən
circus	sircus	u	sircəs
cean	oʃhean	ea	oʃhən
action	aoʃhon	o	aoʃhən
pigeon	pijeon	eo	pijən

Pitman's reason for retaining the t.o. spelling for indefinite syllables is that the shape and general appearance of the t.o. word is retained, and therefore will facilitate the transfer from i.t.a. This is true. i.t.a. trained children do not have trouble in reading these words However, writing is a different skill. Therefore, it is likely that teachers will be practical about the matter and allow children to write with a simpler notation. They will let them use the schwa of the respellings found in the leading dictionaries.

It is when writing i.t.a. that a child experiences freedom to express himself colorfully. It encourages a free and easy flow of words-beautiful polysyllabic words. The boy who exclaims, "The pheasant gyroscoped toward the drift of tumbleweeds" can write this way. How different if he is in the ordinary schoolroom. There he laboriously inscribes, "The bird flew down to the ground." His teacher complains, "Write the way you talk!" But the boy knows he cannot do this. He can't please her in that way. For she will red-pencil the words and admonish, "Watch your spelling!" So he plays it safe with easy words. This is not the case, however, if he has learned to express himself with i.t.a. In that medium he can spell anything he can pronounce.

The invention of a proposed voice-activated typewriter will speed the adoption of a new alphabet. A person talks to the mechanism. It types the message as he speaks, spelling the words according to sounds. That is, when he hears the sentence:

Five high style hats were on models on the aisle next to the store entrance.

the machine can type only one symbol for all the long-i sounds in the sentence, for it does not have the discrimination to write

igh for the long-i sound in high

y " style
ais " aisle

When hearing these words, the machine will simply write:
five fiev
high hie
style stiel
aisle iel

The readers of the message will understand these transliterations, just as they do the pronunciation key in the dictionary, and the trade names such as D-U-Z, Duz, and CH-E-X for Wheat Checks. Right now other countries will find the voice-actuated typewriter practicable, for their languages are written phonetically. Russia with its revised alphabet can make effective use of it. Modern Russian is very easy to spell. Little children learn to read and write it during their first weeks in school and never need to have another spelling lesson.

Finnish is another system that is quite phonetic. The recently revised Japanese system is also usable on the voice writer. Most other countries can use it. Consider the new Turkish alphabet, revised a generation ago, which has practically 100% correspondence between sound and symbol. Others reasonably phonetic are: Modern Danish, Norwegian, Italian, Spanish, and even German. When the United States manufacturers and business men see these other nations using the voice-activated typewriter (manufactured in Japan, I suppose) and see the great saving in time resulting, they will have to use a simplified, consistent alphabet for machines in this country. A phonetic alphabet similar to i.t.a. will likely be used.

As this is done, people will become increasingly familiar with it and will use it even when writing with pen or pencil. If they wish to typewrite, they will be able to do that. On the market today is a machine which prints i.t.a. symbols as well as t.o. The IBM Selectric with a quick change of knob has i.t.a. symbols ready for use.

These developments are taking place now. In 55 years, who can tell how great will be the advances industry and advertisers will cause in communication!

It's what the cab driver told the tourist who was riding past the government archives building. The traveler looked at the carved words, "What is Past is Prologue," and wanted to know what it meant. "It means," said the driver, "that you ain't seen nothin' yet."

When the year 2022 rolls around children will be learning to read in a few weeks instead of taking *years* as they do now. They will then have more time to learn the volumes of facts which are accumulating daily as time goes on.

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[Spelling Progress Bulletin Spring 1967 pp6–8 in the printed version]

5. Quickscript

A MEANS OF SHORTENING THE TIME AND LABOUR OF WRITING AND PRINTING by Kingsley Read*

An alphabet and manual of 'Quickscript' is devised and published by Kingsley Read, Abbots Morton, Worcester, England. [1] Authoritative investigation is called for in this Introductory Review, which we are allowed to print in full.

A review of the many proposals to simplify our spelling shows that two types are explored: 1. a regularizing or simplification of spelling without changing the alphabet, and 2, improvements in the alphabet. Many reforming alphabets seek only to make spelling more consistent. A few seek to reduce the *labour of writing* as well. This is the purpose of *Quickscript.*

Here is a brief review of alphabetic problems and possibilities in general, preparatory to considering *Quickscript* in particular. Its aim is to urge upon educational experts the need for investigation, with experimental trials. Alphabetic reform is no longer rare enough to be ridiculed: it is now so overgrown as to be respectable but bewildering. No conclusions are reached; no action is taken. So we are getting nowhere.

To this general stand-still, the Initial Teaching Alphabet (i.t.a.) is a striking exception if only within self-imposed limits. It repudiates any claim as a reform for permanent use. It is content to evade educational disaster among learners of Orthodox spellings, and this it does admirably. Limited tho it usually is to first and second year pupils, it will disclose to a generation of children the archaic disadvantages of our orthodox or Traditional Orthography. Within two or three decades these same children will be parents and tax-payers, prepared to adopt means of overtaking alphabetic reforms already made by Russia, China, Japan and Turkey. Merely to copy these with a consistent spelling of English, is not enough – we must do better. Are our authorities prepared for action? No; there are proposals by the hundred, few of which are investigated, none adequately put to the test. There is much work to do before any survey can select, test, and recommend a new writing system which, because of its *advantage to the adult community,* should be taught and perfectly acquired in schools.

Classes of alphabets now competing are:

0. The Orthodox 26 Roman letter alphabet with Orthodox spelling; – no reform.
1. The old 26 letters used for simplified or reformed spelling which is therefore necessarily often digraphic (i.e. with two letters jointly used for a single sound).
2. Alphabets of 40+ letters, 23 useful ones (c,q, and x usually discarded) and 17+ new letters (instead of digraphs) for the remaining sounds of English speech.
3. 40+ shorthand-style letters, end-joined in fast unabbreviated writing. (Neither typing nor printing from type can be done with such letters).
4. 40+ letters specially devised for fast but neat writing, typing or printing, and with complete definition for reading.

Class 1 alphabets seek to reform spelling without reforming the old alphabet, resulting in a makeshift reform, wasteful of time and space in writing, phonetically unsound. For example: the letter *h* may be used, digraphically or singly, for seven different sound values: s*h*in, c*h*in, t*h*in, d*h*en, w*h*en, fa*h*dher, lyt*h*aus. Is a child or a foreigner to guess that *th* stands for two separate sounds in 'lythaus' (lighthouse); or whether *sh* has two sounds or only one in 'Bishampton' – where even the inhabitants are uncertain?

Using the old alphabet both for Orthodox and Phonetic spelling would lead to great confusion unless an impossible overnight change is presupposed. Innumerable schemes of digraphic spelling are proposed. They need to write more letters than are necessary. They use an unnecessary second alphabet of CAPITAL letters which is profitless learning for children and a double outfit of type for printers.

Class 2 avoids the ambiguities of Class 1 by dispensing with digraphs. Its 17+ new letters preserve some measure of familiarity in so far as they are made from old letters by adding tails, twists, or diacritical markings, or by joining two old letters to be called a single new one. Unequivocal spelling becomes possible. The extra complexity and width of the new letters tend to cancel any economy made by using fewer letters. There is a clear advantage in learning to spell, or to pronounce if, in fact, the spelling is phonetic. Economy in adult writing and reading is not the intention. (i.t.a. belongs to this class).

Classes 3 and 4 are not content with simplified spelling alone; they seek *speedier writing,* by means of simplified letters. Clearly, such simpler letters will be new and strange; otherwise they cannot effect that lifelong time-saving by writers which outweighs the short time spent in learning a second alphabet as well as Orthodox. If children (and foreigners) are to use an easier spelling, let it be done in a script which perpetually saves time. Classes 3&4 do this, but differently.

Class 3, using 40+ single-stroke shorthand-styled letters, spells words in full, joining letters continuously and wandering from the horizontal more than *abbreviated* shorthand does. It is therefore not lettering which can be typed or set for printing. (Every other class is printable from type). Tho producing a fast script, letters often differ only in length, angle of direction, or weight of stroke, and are not the easiest sort to write safely or read swiftly. Confusion results from the least bit of careless writing, and often one writer cannot read another's shorthand. Any *joint* saving by writers-and-readers is questionable.

Such unabbreviated writing can be done with any 40-letter shorthand alphabet. Bernard Shaw wrote his manuscripts in this way to save labour, but advocated a better way.

Kunowski's *'Sprechspur',* of this class, has long been in partial use in German schools by way of first-year training. The subsequent transition to orthodox German reading and writing is said to be effected in 10 to 30 days. It has the advantages and defects of its class which should be worth investigation after more than 20 years' limited service in schools – and by adults.

Class 4 alphabets have 40+ letters designed to be more easily distinguishable than shorthand characters, while being simpler and less space-consuming than classes 0, 1 and 2 (i.e, saving material costs as well as time). As neat in appearance as Orthodox. This class and its aims originated with the Shaw alphabet-devised after his death, to his recommendations. That alphabet produced printers' type in three styles. It produced a cheap portable typewriter. More immediately important, it served for handwritten correspondence spread thinly but widely over four continents, with consequent accumulation of experience on spelling and writing. From this trial by a cross-section of English-writers, marked advances are now formulated in the *Quickscript* Manual. (Apart from their having the same designer and a similar style, they are different and separate alphabets). *Junior Quickscript,* as written in separate letters by young children, is as printable from type as Orthodox.

It should not be difficult to select or compile one alphabet best representing each class; or to discover which class best serves a writing and reading community. That one, when found, should undoubtedly be taught. It does not have to be taught universally before it will bring lifelong advantage to its learners.

But let us be realistic. No better alphabet will suddenly displace Orthodox, its text-books, its libraries, and its newspapers. If it is ever relegated to second place, that will be done by gradual experience of advantages not to be missed. The first advance will necessarily be *in handwriting.* Without any substantial outlay, a new script can be tried in schools, using the old pen and much less paper. Whatever the system chosen, teachers will need no elaborate manual, and children will need none. But let us recognize that Orthodox remains with us, and that any new alphabet in addition to it must be of marked service to the grown community as well as to first-year schoolchildren.

Writing and Reading

We must study these as two aspects of one function – communication. Tho alphabets are better when they allow a more consistent spelling, they are hardly 'best' without also being inherently more writable and/or read able. The adult reader does not go through the childish processes of breaking words down into letters, reassembling their several sounds into pronunciations, and at length recognizing these as meanings. Indeed he does the reverse, instantly recognizing each word-unit as a meaning, and then pronouncing it how he likes. This he must do to read at tolerable speed and to grasp the connected meanings of a sentence.

We are therefore concerned with the function of letters in building uniquely shaped outlines, each of which we treat as an ideogram, a logogram, a word-graph – call it what you will. It only needs in the end to be conveniently simple to write and familiar to read 'automatically.' We write the date '1966' economically and read it instantly; we fumble over the unfamiliar 'MCMLXVI'. We read '£50 + 10%' and pronounce it, without spellings. We are content with familiar contractions such as – & Co Ltd. All the practised reader requires or values is a well known graph. Use will make any graph familiar, any spelling readable; but the *getting used to* words is eased by systematic spelling.

If we intend to learn and use two different alphabets, both should be justified by *utility.* Our Orthodox Capital alphabet serves no real purpose, and we are self-deluded and to say that 'the

alphabet' and 'THE ALPHABET' are spelt by the same letters; they are only m*atching* letters. They differ in shape. In style they are obviously different alphabets. Can any new alphabet differ more than these do? Capital letters now being used to begin sentences are purely ornamental. French uses no capitals for its 'Monday, January, English' etc. There is no need for a separate alphabet to indicate names or sentence beginning; a single indicator such as a preceding dot or an underline serves as well for all of them. Pitman's i.t.a. uses larger or bolder letters of exactly the same shape. Letters can always be enlarged or decorated for display or some special reason. But to have different shapes violates the rule of one symbol-one sound in phonetic spelling and teaching reading by phonics.

Certain familiar features are best retained in a new alphabet. It is our habit to read from left to right. It is not our habit to read whole pages in letters all alike in height. It is our unconscious habit to recognize words all the better by such diversified 'coastlines' as in the word `alphabet' with its several tall letters and one deep letter. Orthodox does not vary sufficiently the shape of its prominent heads and tails – h, b, k, l, d, p, q, y – and is deficient in deep letters (descenders).

Simple letters should in general be assigned to frequent sounds; the frequent sound of t should not require two strokes and a pen-lift.

Any script will have its scribblers. It will be clearer without the confusion of meaningless link-strokes, and lifting the pen before a word is completed does no harm (i.e. no 'break' except in continuity of the ink-on-paper line).

Spelling

It is popularly assumed that a phonetic alphabet is useless unless every spelling is a precise representation of speech, without reservations or conveniences. Whose speech, then, is to be so precisely represented? The beginner's instinct says: 'My own, the only English I can represent with conviction, – how everyone speaks here.'

International correspondence soon discloses that every state, every district, has its almost sacred ways of speaking. Whole cultures are in revolt if 'pass, last, fasten' are spelt with an ah-vowel, or if 'what, which, when' are not spelt with an aspirated-w. While Britain says, It has been sujested,' America says, 'It has bin sug-jested,' and so on. Not only do the Oxford and Merriam-Webster dictionaries differ now and again as to pronunciation – in a very great number of words both will give acceptable alternatives.

If some respected model of speech is chosen (as for his alphabet, Bernard Shaw chose 'that recorded of His Majesty, our late King George V'), then the model varies, as does our own, according to context, emphasis, formality or colloquialism. We can decide to spell as tho every word written is emphatic; but nobody ever speaks in that way, and such spelling ceases to be strictly phonetic.

The raw beginner, unaware of these problems, is least aware of any troubles. For a time he may be left to spell quite phonetically what he believes he should be saying.

It will be intelligible; or if it is nobody's English, it will be the sooner noticed and corrected.

But as soon as we decide that words are not to vary in their spelling, how should we spell 'the'? We are faced at once with making an arbitrary decision. To spell 'the' with the vowel used in 'then' is phonetically misleading.

The natural pronunciation where a vowel-sound follows is as in 'swarthy' (the aim, the oak). But where a consonant follows, we say 'thuh' as in 'flora' (the gun, the book). Our decision, tho arbitrary, can at least be convenient; and in this case the solution which, from experience, satisfies all writers and all occasions, is to omit the variable vowel entirely. This is labour-saving, in *context* the remaining consonant symbol can mean nothing else than 'the.' Constant spelling results, without violence to communication.

Consider, then, how a few such contracted spellings will be justified by their saving of penwork.

Economy

Compared with the *number* of letters required for Orthodox spelling:
Class 1 (26 letters and digraphs) uses about ...4% fewer letters.
Classes 2, 3, 4 (40 letters) use about 15% fewer letters
- or with contractions of 'the, of, and, to, for, it, is, be' uses about 20% fewer letters
- or with contracting a few affixes and 50 more words uses about 30% fewer letters.

It is not to be supposed that time-saving is fully proportionate to letter-saving. But there are further valuable savings of labour if a *simpler alphabet is* written, besides those made by using fewer letters.

Quickscript makes both savings. It has both *simpler* and *fewer* letters. Given any truly comparable experience of both Quickscript and Orthodox writing, the reduction of penwork should be:
In Junior Quickscript (Section 1 only)..... 35 to 40%
In Senior Quickscript (Sections II & III) .. 50%

This *halving of penwork* (and near-halving of ink and paper) seems to be quite possible without detriment to reading.

This review has dealt with technical issues involved in alphabetic reform. The Quickscript Manual is the result of widespread experimental writing. It is not addresed to children but to their instructors.

Will This Lead Any Further?

Is it not time for schools to teach a much simpler script with simpler spelling, *as well as* our present cumbersome way of writing? Who will investigate, conduct trials, and narrow the field for progress? Who will prepare the way for *action?*

[1] *sent by surface mail anywhere on receipt of 500 or by airmail for 800.*

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[Spelling Progress Bulletin Spring 1967 pp8–9 in the printed version]

6. i.t.a. pupils at 8 years of age, by Maurice Harrison, M.A., M.Ed.*

*Director of Education, Oldham, Eng.

English children go to school in the year in which they reach the age of five. They stay in the infant school for 2½ to 3 years and at the age of 7 to 8 they pass to the junior school. In 1963, the majority of Oldham schools (35 out of 37) had introduced i.t.a. and the 1963 children left for junior schools in 1966. For the first time, therefore, it has been possible to get the opinions of a completely different set of people, the junior schoolteachers, about i.t.a. beginners. This information is particularly important because it is the first time that there have been views about i.t.a. with children of this age.

It can be truthfully said that the junior headteachers who received these children had been inclined to be sceptical about what they had heard of the children who would be coming to them. In any case, it would not be unnatural perhaps to expect a rather critical assessment of achievement from the teachers who had to deal with the children for the next four years. In the event, the close approximation of the infant and junior school assessments of the children were a great tribute to the objectivity of the infant school teachers as well as to the great value of i.t.a.

Oldham figures, which accord with national samples, show that with traditional approaches in the past, 31% to 38% of children could read the basic children's readers by the end of the third year in school. But 79.1% of our i.t.a. taught children had done this in 1966 according to their infant school records. (The corresponding proportions for the smaller groups of 1964 and 1965 had been 87% and 71% respectively). The junior teachers were asked how many of their newcomers (within two weeks of their receiving them) could read *well* in i.t.a. The replies showed that 77.9% could do this.

The infant teachers reported that 75.9% of children could read traditionally and the junior teachers reported that 65.3% could read *well* traditionally. This closeness in the figures is amazing when one has in mind that the junior figures covered all children and 5% (2 schools out of 37 schools) still had not used i.t.a.; indeed, a few of these children had come into this country as non-English speaking immigrants since the age of five. It must be remembered, too, that the children had just returned to school after the long summer holiday.

It was not deemed necessary to give teachers at the beginning of the new school year the task of analyzing their attendance registers to find out just how many of the children had never seen i.t.a. The contrast was overwhelming without this.

The junior teachers were asked how many of these incoming children could express themselves in writing and the answer was 61.7%. Only 6% could not write at all at the age of 8. This means that after three years at school nearly twice as many could write meaningfully as could formerly read and that 81% of those who could read could write.

Table I

Code: W=went to school. S=September. E=Easter. G=total number in group. Other figures are percentages of this figure. N=non-readers. ½=first half of reading scheme completed. R=reading scheme completed. T=transferred to traditional orth.

W	S 1961	S 1962	S 1963	E 1964	S 1964	E 1965	S 1965	E 1965	S 1966
					at first term end				
G	150	509	1319	243	1291	273	1354	310	1373

N	77.3	65.4	51.7	63.8	56.8	65.2	54.1	67.8	59.0
½	-	-	0.2	2.5	-	1.1	0.3	0.6	0.4
R	-	-	-	-	-	0.8	-	-	0.1
T	-	-	-	-	-	0.4	-	-	0.4
				at second term end					
G	152	547	1331	255	1279	308	1400	318	
N	17.1	20.8	17.1	14.9	19.6	37.7	22.5	27.0	
½	13.1	12.3	6.9	6.7	5.2	10.1	12.8	6.3	
R	0.6	0.2	0.2	1.2	2.7	1.0	0.5	0.3	
T	0.5	0.2	-	1.2	0.7	1.0	0.4	0.3	
				at third term end					
G	150	538	1298	279	1247	287	1331		
N	4.7	9.8	7.5	12.5	9.5	11.8	9.2		
½	33.9	25.7	25.0	23.6	22.1	36.6	27.6		
R	7.3	6.7	4.0	5.7	4.8	6.6	4.2		
T	5.3	5.2	2.7	3.9	1.5	2.1	3.2		
				at fourth term end					
G	139	542	1288	237	1249	272	1384		
N	2.1	4.1	2.5	3.5	7.1	5.1	6.8		
½	69.9	39.4	38.6	43.1	42.0	52.6	52.6		
R	27.4	14.3	14.0	11.5 10.2	13.6	16.6	11.0		
T	24.5	12.5	9.7		10.2	13.6	9.3		
				at fifth term end					
G	139	518	1297	255	1261	254			
N	1.4	2.7	1.1	3.9	2.6	4.3			
½	84.9	55.2	64.9	69.0	67.2	58.7			
R	57.6	28.2	26.4	29.4	25.2	31.1			
T	51.1	22.8	23.2	25.1	19.7	27.2			
				at sixth term end					
G	135	502	1313	247	1271				
N	-	1.8	1.1	2.8	1.9				
½	87.5	67.8	72.6	83.4	74.8				
R	65.9	43.8	36.5	53.4	40.6				
T	59.2	42.7	32.7	46.1	36.1				
				at seventh term end					
G	131	512	1283	233	1339				
N	-	1.0	1.5	2.1	1.0				
½	87.0	78.6	83.3	86.7	77.7				
R	76.3	50.2	56.0	65.7	51.1				
T	76.3	49.4	51.7	60.1	46.5				
				at eighth term end					
G	132	538	1272						
N	-	0.6	0.5						
½	95.4	88.3	91.3						
R	81.8	64.3	71.8						
T	81.8	63.2	67.6						
				at ninth term end					
G	133	544	1286						
N	-	0.9	0.3						
½	100.0	92.4	93.8						
R	87.9	72.3	81.5						
T	87.9	71.6	78.8						

7. Oldham Education Committee Report on the use of i.t.a. for 1961-66

Below are given the figures supplied by infant head teachers at the end of each school year for i.t.a.taught entrants to infant schools since 1961 when the initial teaching alphabet was first used. The lower percentages in some cases after 1962 are in part at least accounted for by the fact that many children, about a fifth of them all, were not permitted to enter school until the third term of the first year and those children had consequently only been in school for one term instead of three terms in the first year, four instead of six terms in the second year, and seven instead of nine terms in the third year. This was due to a central Government directive because of the teacher shortage.

First year end					
Year entered	1961	1962	1963	1964	1965
No. entrants	150	538	1541	1520	1641
Completed first Reading Scheme	7.3%	6.7%	3.6%	4.1%	3.5%
Transferred to Traditional reading	5.3%	5.2%	2.3%	1.3%	2.6%

Second year end				
Year entered	1961	1962	1963	1964
No. entrants	135	502	1550	1543
Completed first Reading Scheme	65.9%	43.8%	32.7%	36.4%
Transferred to Traditional reading	59.2%	42.7%	29.2%	32.1%

Third year end			
Year entered	1961	1962	1964
No. entrants	133	544	1519
Completed first Reading Scheme	87.9%	72.3%	79.1%
Transferred to Traditional reading	87.9%	71.6%	75.9%

These figures should be compared to those of traditionally taught pupils. For the years 1961 and 1962 respectively, 5.0% and 6.6% of traditionally taught children had completed the first reading scheme by the end of the 2nd year, and 31.5% and 37.6% by the end of the third year.

These children had been in school for the *whole* of each of the years under review and the figures compare well with national samples. The comparisons, when put side by side, are quite overwhelming.

Completion of First Reading Scheme

	Traditionally taught		i.t.a. taught and *reading traditionally*			
	1961 5.0%	1962	1961	1962	1963	1964
End of 2nd year	31.5%	6.6%	59.2%	42.7%	29.2%	32.1%
End of 3rd year		37.6%	87.9%	71.6%	75.9%	

It will be noted how in the first year, possibly before they were as confident with i.t.a. as they now are, teachers aimed at transfer to traditional reading. Later this became less true. We know now that those children who can read i.t.a. well, can read traditional print, but no longer do teachers worry about their doing so. So long as children are reading, teachers are content. How true this is, and how wise the teachers' attitude, is shown by the small gap between i.t.a. readers and readers of traditional print. (Shown in the upper table).

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[Spelling Progress Bulletin Spring 1967 p9 in the printed version]

On Deaf Ears

It seems to me, my dear old *c*,
There's just one place for you to be,
And that place is in combination
With the *h* of *ch*urch, *ch*in, *ch*asten,
Ri*ch* and whi*ch* and mu*ch* and tou*ch*,
Tea*ch* and scores of others such,
But when it comes to *c*ent, re*c*ess,
You usurp the role of s
And when you head up *c*ow and *c*at
It's *k* who should be doing that;
As for your silly *lick* and *pick,*
They'd be no worse as *picc* and *likk,*
So list to me, my dear old *c*
And stay right where you ought to be.

Helen Bowyer
Reprinted *from Elementary English,* vol. XLIII, No. 8, Dec. 1966

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[Spelling Progress Bulletin Spring 1967 pp10–15 in the printed version]
[Joined letters are colored green.]

8. An Eclectic Reading Program Based on Psycholinguistic Principles*
by Edmund B. Coleman, Ph.D.°

*This article describes a reading program being developed by the Southwest Regional Laboratory. It is based upon an introduction directed to the kindergarten teachers now testing the program in Pasadena, Long Beach, and Lennox. The psycholinguistic research underlying this program was performed under NSF Grant GB-3535 to the Univ. of Texas at El Paso.
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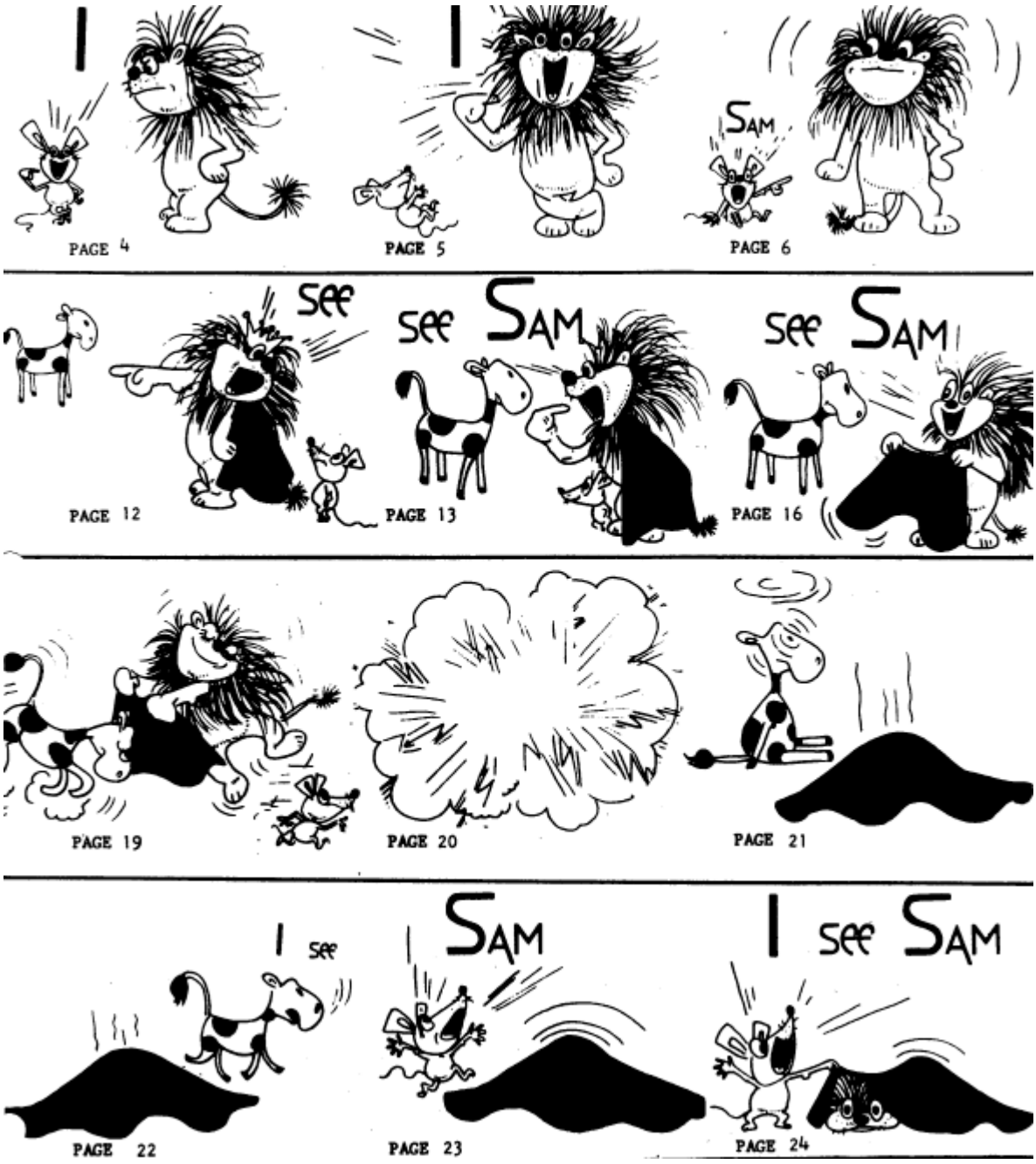
Introduction

The most conspicuous characteristic of this reading program is that it gives the very young child the thrill of reading an entire book his first day. Figure 1 shows excerpts from a book that most five-year-olds can learn to read in one 20 minute lesson. By relying heavily on cartoons, the complete book tells an entertaining story using only three words, "I, Sam, see."

FIG. 1. EXCERPTS FROM A BOOK THAT MOST FIVE-YEAR-OLDS CAN LEARN TO READ IN A 20 MINUTE LESSON. IN ITS LAST TEST, OVER 75% OF A CLASS OF KINDERGARTENERS LEARNED TO READ IT AFTER A SINGLE LESSON.



The book and the lesson are in a continuous cycle of testing and refinement. We have tested them-including earlier versions – in three kindergartens. In the last test, (Larch Elementary School, Lennox, Calif.), over 75% of the children in a kindergarten class were able to take the book home and read it after a single lesson. The next day, in an individually administered test on a new book using the same three words, 27% read the new book perfectly. Only 18% missed more than half of the words in the new book.

The usual preprimers are so difficult that they require a considerable amount of maturation and pre-reading training. By controlling characteristics that affect learnability, it is possible to construct a long series of prepreprimers beginning with a book simple enough to be read and enjoyed immediately (see Fig. 1). The series begins at such a simple level and increases in difficulty so gradually that a preschooler can be taught all the concepts of reading readiness – and much, much more – by actually reading entertaining little books. Thus, even with our present data base, it is possible to redefine and extend the notion of reading readiness.

I. The program teaches all the basic concepts simultaneously.

This reading program is eclectic in that it has selected materials so that it can teach all the basic concepts and skills simultaneously and can combine elements of the basal reader approach, the spelling approach, the analytic phonics approach, the synthetic phonics approach, the linguistics approach, and the look-and-say approach.

I suspect that most classroom teachers have been following an eclectic approach for hundreds of years. The history of reading has been studied from the records left in publications, and these reveal cycles in which phonics predominates for a decade or so only to be followed by a return to emphasis on a whole-word or even whole-sentence approach. During each cycle, the universities are usually able to produce scientific evidence supporting the current system, but I suspect that the true history of reading is unrecorded; I suspect that throughout all these cycles, the average classroom teacher has shown a healthy reluctance to accept any one approach as an adequate answer. Many teachers – perhaps most of them – went their own way blending together a hodgepodge of different approaches.

There is an excellent reason for their perverse reluctance to accept any one method as adequate. Reading is an interlocking hierarchy of skills, and most methods overemphasize one skill and sacrifice others.

The disadvantage of following a single approach is this: materials designed to teach one skill are inferior for teaching others. A linguistic approach has regularly spelled materials that are excellent for teaching spelling and phonics, but children will not learn to read for meaning by reading such deathless prose as, "Get Dan the tan fan." On the other hand, a basal reader that begins with very common words is excellent for getting the child off to a running start, but these words are irregularly spelled and poor material for teaching spelling, phonics, and word analysis. Surely we will delay the child's induction of the basic notion of spelling and of phonics if the first words we teach him are negative instances such as: *come, is, are, was,* would, etc.

Fig. 2. A vowel-by-consonant chart showing the first 64 words introduced in the program. The words were selected to permit the simultaneous use of all reading systems and to facilitate the induction of the concepts underlying spelling and phonics.

	ee	I	A	i	e	u
		I	A			
s	see		SAM sat sad	sit sis	set	SUN us
m	mee meet		AM MA MAN mad matt	miss	mess met	
s	sees			is		
t			at	it		
n	need		ann nan	in		nut
th	thee		that	this	then them	
d			and	did	ed	
w	wee			will with win	wet well	wus
f	feel feet		fan fat	fill fish if	fell	fuss fun
l				ill	let	
sh	shee sheet					shut
r			ran rat			run
h			hat			

By using computers, we were able to select materials that were appropriate for all reading systems – that allow us to simultaneously teach all the skills used in reading (see Fig. 2 above). In the first few dozen little books, we will teach all the basic concepts of reading, spelling, and printing. We have selected a restricted number of their most easily learned examples, and we will teach the concepts by repeating these few examples over and over. We will not overload the child's memory by making him memorize long lists of words and letters until he has completely learned the basic concepts of reading and spelling.

Teaching basic concepts is an important feature of the program so it will bear paraphrasing. At the beginning we are not overly concerned with teaching the child to read or spell or print any particular word or letter. The first words and letters were carefully selected to illustrate all the basic concepts that are of primary concern. After he has

mastered them, we will gradually introduce more detail, but it is extremely important that we permit no exceptions to the basic concepts until they are completely mastered. If we are to eliminate exceptions to spelling regularity, we must spell a few dozen essential words in a transitional alphabet – words such as: iz, mee, thee, etc, etc. Late in the year, we will begin gradually introducing spelling irregularities *in the order of their usefulness.*

II. The program eliminates negative instances to the basic concepts

If the general concepts of reading and spelling are to be taught as soon as possible, it is necessary that no negative instances be permitted. The first words must spelled regularly. There are a number of techniques for regularizing English: using a phonemic alphabet such as Pitman's i.t.a., using a diacritical marking system as in the dictionaries, or by restricting the author to regularly spelled words as do the linguistic readers. There is no reason not to use all three techniques. The i.t.a, or Initial 'Teaching Alphabet, reduces spelling irregularity, but at a high cost. The ITA requires the child to learn a complicated transitional alphabet and a host of misspellings which he must later unlearn. "There are several studies which claim that the ITA does not produce interference. However, these studies have been classroom type experiments that were conducted under partly uncontrolled conditions by proponents of the ITA. This sort of evidence is hard to evaluate; such relatively uncontrolled experiments insure Hawthorne effects. [1] Literally hundreds of far more tightly controlled laboratory studies of proactive inhibition have shown conclusively that interference takes place when an organism learns a response that he must later unlearn in order to give a correct response to stimulus, as for instance, a child who must unlearn such misspellings as *uv, wuz*, etc. The ITA changes the spelling of about 75% of the words in English, and about 40% of these changes are radical ones. Even granting that the ITA is an excellent technique for reducing spelling irregularity, it seems unnecessary to accept it in such an all-or-none fashion.

Until we get more evidence about negative transfer, it is only prudent to seek alternative methods for reducing irregularity-methods that will require the child to learn far fewer misspellings he must later unlearn. One way to reduce misspellings would be to marry the ITA to Bloomfield's linguistic system.

In addition to its theoretical contributions, Bloomfield's system shows that it is simple enough to reduce spelling irregularity and still not inflict a novel alphabet and hundreds of misspellings upon the child. From among the 9,000 or so one-syllable English words, Bloomfield chose a subset of about 1000, as *sam, run, see,* which are spelled with internal consistency. That is, within his subset each of the letters always has a single sound. Similar attempts at reducing spelling irregularity had been made many times in phonic systems of the past. These regular materials almost always consist of unconnected words or such tortuously boring, unconnected sentences as "fat Pat sat on the mat."

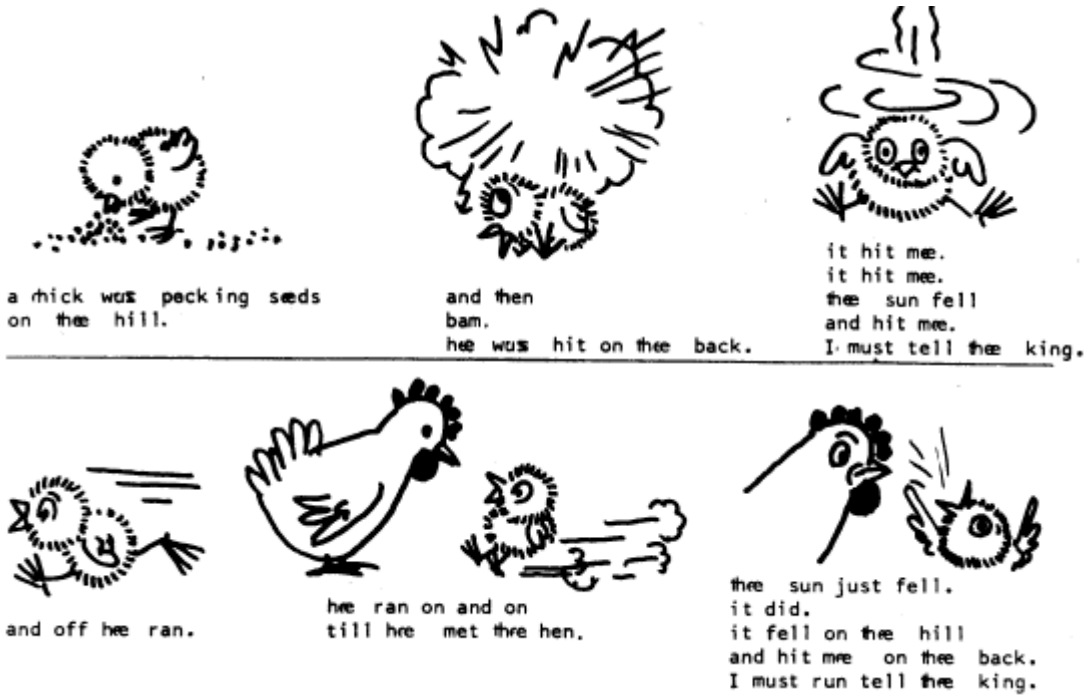
The notion of restricting a book to regularly spelled words has one fatal flaw: the book will lack many of the most important words in English – for the most common, most useful words in English are *not* regularly spelled *are, is, was, were, would, could, one.*

Thus we have two systems – each with great advantages, each with great disadvantages. In the ITA, 75% of the words are misspellings that must be unlearned. A book using only regularly spelled words is unbelievably uninteresting. But it is possible to marry the two and get most of their advantages (regularity) and almost none of their disadvantages.

We can get interesting sentence structures and story plots if we supplement the subset of regularly spelled words by adding a few – a very, very, few – common words spelled in an ITA.

The words spelled in an ITA can not only be restricted to a very small number, but restricted to words whose shape permits them to be spelled according to the internally consistent spelling system, and later gradually faded into traditional spelling (See Fig, 3)

Fig 3. A Reader that combines features of the ITA and the Linguistic system to get idiomatic sentence patterns but only a few misspellings.



However, the teacher should be aware that some function words in English change their pronunciation when they are unstressed (e.g. *a, the,* of, *you, just, can,* etc.) There is probably little or no need to teach these pronunciation changes. Most children know them and will make them automatically.

Regularity becomes less important as the child gains a larger vocabulary. After several months, he has already learned the basic concepts and less damage is done by introducing exceptions. Furthermore, when he meets an irregularly spelled word, he can guess it from context.

The rules we will be most concerned with teaching are spelling rules (or phonic concepts). After all the basic notions of reading and spelling are firmly established, we will gradually introduce spelling irregularities. We will introduce them in order of usefulness, first introducing the one that generates the most words – probably the rule that the silent *e* alters the sound of the preceding vowel.

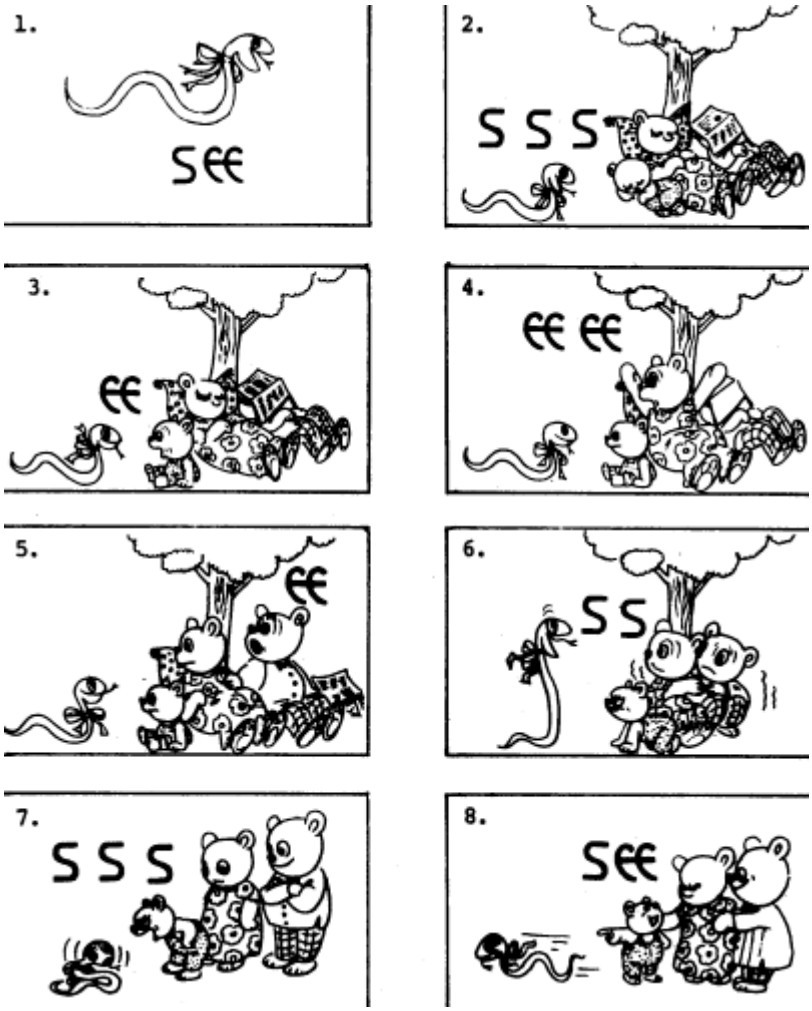
The basic concepts the child must learn are the following:
1. What he can say, he can write. What he can write, he can read.
2. Different word-shapes represent different word-sounds; the printed words tell him what to say.
3. Read from left to right-from top to bottom.
4. Phonics: He can analyze printed words into letters, and different letters represent different sounds. We will teach him the letter-sound associations and we will teach the easiest ones first – the easiest to analyze, easiest of which to learn the sounds, easiest to amalgamate.
4b. He can amalgamate the letter-sounds into words.
5. *Spelling:* He can analyze word-sounds into phonemes. [2] and different phonemes represent different letters. We will teach him the sound-letter associations – the easiest ones first.
5b. He can amalgamate letters into words.

6. Printed words are concatenated into phrases; he must learn to read with proper intonation, juncture, pitch, stress.
7. He can predict from the preceding context; he can form hypotheses about future words.
These are the most basic concepts of reading, spelling, and printing. We can teach them all to a three-year-old if we do not overload his memory with too many lower order details – if we restrict our first books to a very few of the most easily learned letters and words. All these concepts could be introduced in a single book, for instance, one that uses only two letters (s and ee) and only one word (see). Of course, the child will not learn to generalize the concepts until they are illustrated over and over again and only if no exceptions are permitted for the first few dozen books.

Note that we are able to introduce all the basic concepts with the first word only because we selected a word whose component sound can play a meaningful role in the story. We could not have introduced them all if the first word had been *come* or *go.* Most of the words that are introduced in the beginning books were selected because their component sounds can be pronounced in isolation and can play a meaningful role in the story. In this way, the notions of word-synthesis and word-analysis can be introduced as the child reads stories. Fig. 4.

FIG. 4. EXCERPTS FROM A BOOK THAT ILLUSTRATES A TECHNIQUE THAT CAN BE USED FOR TEACHING PHONICS WHEN THE COMPONENT SOUNDS OF THE WORDS CAN PLAY A MEANINGFUL ROLE IN THE STORY.

From Sis and the Three Bears (Southwest Regional Laboratory).



III. The program sequences what it teaches according to usefulness

One way to think about a child's task of learning to read is to say that he must learn a large number of rules. Some can be taught; others are so general that they will be at least partly induced or discovered. These rules lie on a continuum from the very general (letters can be blended into words) to the very specific (*s* usually signals the sound /s-s-s/; ph usually signals the sound */f-f-f/.*

Clearly, we want to reach the more general rules first. A rule such as the left-to-right progression is used in every sentence the child reads. But the specific rules can also be ordered as to usefulness. The rule that *F* usually signals the sound */f-f-f/* is more useful than the rule that *GH* sometimes says */f-f-f/* (as in *enough*). In general, this program introduces the letter-sound relations in order of usefulness.

For instance, the first 10 sounds to be introduced are */s, m, ee, I, a, i, n, th, sh, t,/.* The next sound /*w*/ was selected by a computer to be the most useful; it could be combined with those sounds to add a maximum number of short common words. In general, the sequence of introducing the letters was selected by a computer to satisfy the two requirements of maximum number and maximum frequency of new words altho other considerations such as length of word, availability of synonyms, and ease of learning the letter-sound relation helped determine the sequence.

Names of the letters and capital letters. The names of the letters are not taught in the beginning because knowing the names is less useful to reading than knowing their sounds. Similarly, capital letters are not introduced in the beginning because they are of slight use to beginning readers.

Penmanship. Printing helps the child learn letter discrimination, one of the most important skills he must develop. The stress of our printing program will be on increasing familiarity with letters rather than on penmanship. We do not mean to slight penmanship but it is not our major concern during the first months. At the beginning of this program we are concerned with approximating the letters only to the extent needed to increase discrimination.

The child has a long time to learn only 26 letters, and if he reverses an S or N during the first few months, it should not be a matter of major concern. The hours of tortuous drill a young child needs to develop neat penmanship can be better expended teaching him something more valuable such as phonic concepts and spelling rules.

IV. The program sequences according to ease of learning

Shortness of words. Short words are easier to spell than long ones, so we shall prefer one- and two-phoneme words in the beginning. The selection of the first words was systematic. All the one- and two-phoneme words were printed on punch cards and a number of sifts indicated that the best choice for the first word was *see.* Its component sounds are easy to learn and they combine with other easily learned letters to form a maximum number of easily learned words. In general, the first words used are as short as possible.

Familiarity of the words and number of different words.
The factor that is probably most responsible for the success of the basal readers is that they use a severely restricted vocabulary of familiar words. Look-and-say learning of whole word shapes is easy for the child because the words are strong responses in his repertoire. In most basal series, the response strength is estimated by counting how frequently the word is used by large numbers of children. The language arts approach gets a direct measure of response strength for the particular child by having him tell his own story, since the words he uses himself are obviously familiar to him.

This reading program stresses phonics and uses regularly spelled words, but it also restricts its vocabulary to very common words. For instance, the first 20 words of Houghton-Mifflin's *Tip* have an average Rinsland frequency for first graders of 3432. The first 20 words of this series have a slightly higher frequency, 3672.

Familiarity of the words and the number of different words in a book are extraordinarily strong variables in determining the ease of look-and-say learning. Even when phonics or spelling is emphasized, children do a considerable amount of look-and-say learning; they learn whole word shapes. I once developed a pre-primer that used only seven lower case letters (*s, m, 1, n, ee, a, i)* and the capital I. From these letters I generated *see, mee, lee, al, am, an, ann, sam, sal, seem, man, lam, sis, miss, ill, mill, min.* Since the children had to learn only eight letter-sound pairs, and since these sounds are easily analyzable constituents, it might seem ridiculously easy to teach a child to read such a pre-primer. Such was not the case. We find it is extremely difficult for a beginner to discriminate these 20 whole-word shapes from one another; they are too similar. In the second place, these words – and any other set generated from a restricted number of letters – contain a number of relatively unfamiliar words; their degree of response integration (understanding) is low. For these two reasons the memorization of whole word-shapes was extremely difficult and the book was hard to read. No matter how much phonics and spelling is emphasized, actual reading appears to involve a large amount of such whole-word memorization.

Learnability of the letters. Since we will be teaching phonics and word analysis, sounds that can be pronounced in isolation (*m, n, s, s h,* etc) will be more easily learn able than the stops (*d, h, t, p, k, g*) which cannot. The stops are responsible for a great deal of the difficulty in phonics programs. It is impossible to pronounce them in isolation and the child inevitably learns sounds such as *puh,* which he cannot blend into words. When the stops are first introduced in this reading program, they will be used only as the final sounds in words.

Legibility of letters. Experimental studies have verified the impressions of teachers that a very few letters are responsible for almost all the mistakes children make in discriminating among the letters. Most i f the confusions are between *d-b, p-q, h-n,* and *i-l.* In fact, most of the confusions are between mirror images: *b* for *d,* and *p* for *q.* Concept formation studies show that such confusions could be easily remedied by adding other criterial dimensions. It would be a very simple matter to correct the difficulties of many of these letters and in a way that will not cause conflict later and that will impose no new learning upon the child. All we need do is to replace a few of the lower case letters with small capitals. This has been done in this reading program.

Legibility of words. Of course the question of legibility of individual letters is only part of the problem. The child confuses whole words with other words. A series of experiments on reading show that during our fixations we apparently perceive only a few letters and the general form of the word. In addition to context, clues that helped us to fill in the gaps are (1) number and position of protruding letters, and (2) internal patterns-number and position of curved letters (*a, s, o)* as opposed to angular letters (*k, 1, z).* Words can be made more distinctive by roughly equalizing the number of ascenders (upward protruding), descenders (downward protruding), and non-protruding letters, and by equalizing the number of curved and angular letters (that is, equalized after weighing for frequency of occurence). Very slight changes in the alphabet – changes slight enough to involve little chance for negative transfer – will approximate such an alphabet, for instance, by substituting *A, M, N,* for lower case letters as was done in this program.

V. The program teaches the pleasure of reading

The first dozen or so books are simplified to the extent that the child should be able to finish each of them in a single day, and unless the first day in class is unusually disorganized, it is recommended that the children be taught to read immediately. The thrill of reading an entire book the first day in school is one that should not sacrificed lightly. Furthermore, it is recommended that the child be allowed to take the books home with him and indulge in a little harmless boasting and showing off.

It is extremely important to teach the children *to like to read* and to be proud of being able to read. Perhaps acquiring this attitude is more important than the skills and rules he learns. If we ensure that he likes to read and give him books simple enough to manage, a good part of his problem is solved. He will begin reading to himself and teaching himself.

VI. Concluding suggestions

This report can be concluded by listing 3 suggestions:

1. Do not introduce so much formal drill that reading, spelling and printing become distasteful. There is a particular danger that some teachers will require too much drill in printing, phonics, and word analysis. Remember that the child must learn to print only 26 letters and must learn a slightly larger number of letter-sound relations. He has a long time to learn these skills. There is little need for him to completely master them during the first few months. An approximation to printing the letter will be adequate at first-just enough to be sure of his ability to discriminate the letters from one another.

2. Knowing the capital letters is of such minor value that there is little justification for inflicting this memorization on the child during the first months.

3. Similarly, knowing the names of the letters is relatively unimportant at first, and there is little need to burden the child with this memorization load. He can better spend his time learning the sounds of the letters and the numbers.

Notes

[1] In education experiments, the most common Hawthorne effect is that teachers are enthusiastic about new methods and so new methods are usually more effective than traditional ones – not because of any intrinsic superiority, but simply because the teacher's enthusiasm is contagious.

[2] If the reader who is unfamiliar with the term "phoneme" will accept a brutally oversimplified definition, he can understand it as the "sounds of a letter."

-o0o-

Why is there *never* enuf time to do it *right* but always enuf time to do it *over?*
Its better to be late at the pearly gate than to arrive in hell ahead of time.
A diet is for people who are thick and tired of it.

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[Spelling Progress Bulletin Spring 1967 pp16–17 in the printed version]

9. A Publisher Speaks Up

Theodore B. Dolmatch, Publisher i/t/a Publications, Inc.

As the publisher of books in Pitman's Initial Teaching Alphabet, I should like to share with you some of our thoughts about these books. I shall not deal with i|t|a itself; this has been done in many other places. Rather, I shall attempt to describe how and why the *Early-to-Read* materials depart significantly from conventional reading texts – in ways *other than* the change in alphabet and spelling.

As a new medium, i|t|a needs new methods. To use traditional reading materials – the old familiar stories of Dick and Jane that we know so well – simply turning those words into i|t|a is as wasteful of i|t|a as if we were to invent an airplane and then run it on the ground because of our familiarity with automobiles. i|t|a as a major innovation can only fulfill its potential if we make changes in approach and material – changes that will allow us to "fly."

Old Ways Do Not Serve

One of the exciting aspects of educational innovation is the catalytic effect it has on the total educational environment. A single new concept never edits alone for very long. If it is valid, it generates still further invention. If learning to read is easier with i|t|a then perhaps long-overdue changes in *what* is read are also possible.

The "materials" of first-grade reading have not changed significantly in the past 30 years. We have felt a nagging need to move to something better, but before i|t|a, we were stalemated. Just as the illogical spellings of sounds in our language required strict vocabulary control, repetition, and "thin" content when teaching reading, so the Initial Teaching Alphabet and its regular spellings now give us an opportunity to get rid of those impedimenta to reading which are necessary when using a difficult orthography.

If we did not seize the advantages offered by the Initial Teaching Alphabet to develop true linguistic facility, to "stretch" the minds of our children by presenting them with different materials – materials designed to take advantage of our new invention – we would be incredibly wasteful of Sir James Pitman's gift.

It is easy simply to transliterate existing texts, to continue the primer tradition and all that it implies, changing only to the new, easier code. This easiest way is the most economical in terms of the conventional publisher's resources. But it is also the least sound educationally. If we continue to restrict vocabulary, confine beginning readers to a world circumscribed by their mother's apron strings, ignore the child's increased motivation, we would be wasting the benefits of i|t|a.

The Key Is Linguistic Capability

Research has shown that children who are linguistically able most often come from homes in which they are read to, spoken with, listened to, and responded to. They are told stories about fairies and elves, rocket ships and dinosaurs, golden geese and Tom Thumb. Their imagination grows with these adventures. Their vocabulary and, most important, their *concepts,* grow. In contrast, linguistically deprived children live in a tight world of monosyllables. For these children, the excitement of myth and legend – the world of the growing imagination – doesn't exist. And, more

important, these children have not learned to communicate – with themselves or with others. For these children, especially, language learning *must* accompany learning to read.

When these children arrive at school, they meet books for the first time – books whose aims and approaches were set well over a generation ago. Their stories are traditionally centered around backyards and mothers' kitchens. Ostensibly, the choice of subject matter in conventional readers is based on the idea. that children begin to learn what they already know.

The truth of the matter is, however, that such circumscribed story materials are limiting of themselves. It's possible that a child's "reality" is broader than the "experts" think it is now, and was so even when these stories were first introduced. In today's expanding universe, certainly, children meet dinosaurs and space capsules early in their lives and they see far-off places on television and film.

Outside of their traditional textbooks, children meet imaginative and artistic books, but we seem to have assumed that the content and appearance of the juvenile library book are not to be echoed in primers and readers. We don't ask that home or school library books tell children about their own pets, their own toys, and their own homes. Even we adults respond to the fanciful world of Dr. Seuss, to the insatiable and troublesome curiosity of George the monkey, and to folklore and myth. Is it reasonable, therefore, for us to hold to suburban kitchens and backyards in these same children's first books in school?

Special Books for City Children . . .
The monotony and sterility of traditional story content have been blamed on the necessary low vocabulary load and accepted as an inevitable concomitant of learning to read with our difficult spelling. Lately, however, critics have begun to stress *another* point that they feel inhibits interest for many children: Too many basal readers, they say, contain "familiar" material that is often very *un*familiar to most children. Story environments in typical readers are rural or suburban. Children who never saw a cow read about trips to "grandfather's" farm. The environment is inevitably upper-middle class, presented photographically and in full color. The excessive realism and detail of the pictures are necessary – because so much of the story has to be carried by illustrations; too few words are available for, "reading" by the child.

What is more important, the children are usually blond and blue-eyed, and do not physically reflect the broad diversity of Americans. In response to this difference between the child's actual experiences and those portrayed in conventional readers – a disparity blamed for increasing reading disabilities of urban children – we publishers have been urged to pay attention to urban environments, multi-racial groups, and to stress the "real" as it really is – in the city. Educators and publishers are talking about *urban* books.

. . . or Books for All Children?
At i|t|a, we have chosen to represent the ethnic and geographical variety in American life explicitly, *but* we have tried to avoid superimposing it artificially or making it the *only* rationale for the content we provide. Our children are white and brown, farm and city.

To answer the legitimate objection that basal readers have been traditionally concerned with suburbia by merely switching the environment to the city misses the whole point. A variety of environments will help a child know and appreciate the infinite variety of the world around him. At

the same time, he needs to know that his point of contact with his fellow man is to be found in himself – in the *non*environmental world of human response. Environment in i|t|a materials serves as backdrop, not focus, for a story.

Illustrations Change, Too

When it came to our choice of artists for our i|t|a books, we decided once again to depart from the tradition of four-color, photographic illustration. We wanted to provide heightened visual perceptions through "strong" illustrations, ranging from cartoon style to sensitive line drawings. We believe that a child can respond to a variety of art styles, just as he responds to a variety of stories. In short, we wished to expand the child's horizons, not diminish them.

i|t|a -New Horizons

Since i|t|a permitted us – as publishers – to escape the restrictions of controlled vocabulary, we would have been remiss *not* to go beyond other restrictions also. This is why we varied the story content of the i|t|a *Early-to-Read* series. Our guiding principle was to select stories that enlarge the conceptual and verbal horizons of the child. We assume that every child is an intelligent being, interested in learning about his world and about himself. We want our books to extend his world from himself and his immediate surroundings outward – as far as outer space. We want stories set in a child's street to accompany stories that take place under the sea, stories about baseball to accompany tales of dinosaurs, and elves, and leprechauns.

Most important, we want to help the child develop useful self concepts; therefore, many of our stories stress the *inner* reactions and emotional experiences shared by all children everywhere. We tried to present parent-child relationships as they truly exist, not romanticized. In our books, children sometimes get angry, sometimes misbehave, sometimes are hostile. As children read these stories, they learn that they share these emotions with other children of all races and ages, and that these human responses are worthy of exploration and necessary to growth. We hope that children will search for the causes of their actions, consider motives, perceive the complex process of growing up alertly and honestly. We want to help children learn about *human* experience.

In short, we want to show children that they – every one of them – possess precious things that we call creative intelligence and imagination, that reading is an important key to their world, and that their world is very wide indeed.

Stories in the *Early-to-Read* series are designed to do more than teach a child to read. They help the child discover that reading is a *pleasureable* activity – something that he will want to do. No child should ever have to say, "Now that I have learned to read, do I *have* to?"

You see, therefore, that we have ventured into new lands beyond the one opened to us by Pitman's Initial Teaching Alphabet as an alphabet alone. We ventured because we wanted to seize all the opportunities provided by this alphabet, and because we believed that many of these changes were long overdue.

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[Spelling Progress Bulletin Spring 1967 pp18,19 in the printed version]

10. The Coming Revolution in Education, by Matthew T. Downey, Ph.D.

Ed. note: *This article is only part of one chapter in the book "Ben D. Wood, Educational Reformer" by the above author. This book, while telling largely about Ben Wood as an educational reformer, also gives a good account of the many reforms in education brought about in the last generation and Wood's energetic and wise leadership in bringing many of them to fruition. The book is available from Dr. Miriam C. Bryan, Educational Testing Service, Princeton, N. J.*

Ben. D. Wood is first and foremost an educational reformer. He probably prefers to be called just an educator. Yet his definition of education is so broad and so laden with social implications that it has inevitably made him an outstanding citizen and patriot. Wood's activities in the Second World War illustrate very well the civic implications of his definition of education. He served thru the Second World War as the civilian Chairman of the Joint Advisory Committee on Aviation. This committee was established early in 1942 to coordinate the activities of the Civil Aeronautics Administration and the United States Office of Education in adjusting American education and thinking to the new realities of the air age. He decided the best way to perform his duty was to keep himself well informed about airpower and periodically to send reports to his superiors about the military potential of the airplane. The non-air-minded Army command of that time, the same Army command that had cashiered General Billy Mitchell for his heretical air-age ideas, must have regarded Wood as something of a nuisance. In written proposals and in conferences with the Air Force Planning Board, Wood urged that the curriculum be designed to produce not truck drivers of the air, but liberally educated officers who would represent the United States with distinction at their bases thruout the world.

Ben D. Wood at 70 is as optimistic and as full of reform fervor as he was at 30. He is still forward looking. When he recounts the past he will pause now and then to repeat that he is a very fortunate man to have seen so many of his ideas accepted and put into practice. One suspects that Wood's optimism is, in fact, due less to what has happened, to his successes over the years, than to what he thinks is about to happen.

Ben Wood thinks that education in the west, especially in the United States and Great Britain, is on the threshold of a major breakthrough, a revolution that will make every reform of the past seem trivial by comparison. The changes which he forsees will not only remodel the physical appearance of the school, but will-have far-reaching social and moral implications as well. The breakthrough will come with the culmination of several coordinate revolutions, all of which are discernible at the present time.

In an address at Cleveland, Ohio one of the 1963 Jennings Scholar Lectures, Wood outlined his vision of the future of education. "We all remember that H. G. Wells said, 'Civilization is a race between education and catastrophe.' With the stockpile of atomic bombs already available, we can change the word 'catastrophe' to 'total extinction of all life on this planet.' This is more than enough to make us realize that education is the most indispensible, as well as the most inspiring, of all human enterprises. While atomic developments have enormously increased the burden and the obligation of education, we can mercifully find new hope in the fact that other technological and psychological advances have put us at the threshold of a greater revolution in education than has ever occurred or ever been dreamed of since the dawn of history. This unprecedented and benign revolution in education will be enforced by necessity and made feasible by several recent

discoveries, inventions, and rediscoveries. The revolution, which has already actually begun in the most advanced nations and which in self-defense the most advanced nations will necessarily help spread as rapidly as possible to the underdeveloped and new nations in the world, will embrace not only the traditional intellectual divisions of the curriculum but will for the first time in history hopefully include a successful program in the hitherto stubbornly intractable areas of character development and moral understanding, with social responsibility and constructive motivations securely based on emotional maturity." He then described the separate revolutions that are now under way.

First, there is the revolution in educational technology. Wood's interest in the new technology has already been noted. The new machines are only a means to an end, and that end is a greater degree of individualized instruction and self-learning. The result of this aspect of the coming revolution will be a transformation of the role of the teacher. As he said: "In view of the increasing shortage of top-flight teachers, it would be difficult to exaggerate the potentials of the revolution in the more efficient utilization of the available supply of teachers and of teaching talent by team teaching, varied uses of TV presentations (both closed and open circuit), as well as by the massive saving of teacher's time, energy, and perspective from the use of programed instruction in various types of learning machines and paper-and-pencil devices."

The successful and efficient utilization of the new technology and of the teacher depends upon certain other advances, which are also now under way. Wood thinks that at long last the movement toward ungraded schools is taking hold. "We should not 'sell short' the long-delayed and still unhappily slow but sure emergence of the ungraded school which not only removes the most stubborn block to individualized education, but also automatically entails the whole train of flexibilities and adaptabilities of teachers, of teaching goals and methods, of curriculum evaluation and guidance, which with other related improvements and implementations add up to individualized education."

The revolution in educational methods, Wood predicts, must and will be accompanied or soon followed by a revolution in educational research. Single-track research projects, conceived and managed by one director, will give way to large-scale, long-term research programs capable of dealing with more fundamental and complex educational questions. "Such research programs would be conceived and planned by teams of advisers... The team of directors would constantly seek help and ideas from all levels of the research program staff, including classroom teachers, community service officers, civic leaders, judges, medical doctors, etc, as well as advisory groups of scholars from the usual education-oriented disciplines, sociology, psychology, psychiatry, etc. The time of the one-man research department and the 'penny-budget' type of research project for one or two years has passed as surely in education as it has in industry and military weaponry." The allocation of larger sums of money for larger research programs will tend to accelerate all the other revolutions and bring them to their culmination more surely and quickly.

The research program of an educational system should tap the full resources of the community. The Educational Research Council of Greater Cleveland has demonstrated that the improvement of education can be a total community effort. "Personally I do not know of any other curriculum reconstruction effort with such appropriate and comprehensive goals, with such laudable local support from local foundations, local business and civic leaders, from local lay and religious groups, from local educators representing both administrative and classroom teaching groups; nor do I know of any other such effort conducted with more statesmanlike wisdom and foresight." The

Cleveland program has been developed by the imaginative genius of George H. Baird, its executive director.

"Continuing our enumeration of the factors that are making feasible and in fact demanding a basic revolution in education, it seems to me that none is more important than the discovery, or rather rediscovery, that the rationality, reasoning powers, intellectual interest, and learning capacities of infants aged 2 to 6 years are very much greater than has been suspected. This revolutionary 'discovery' has been boldly and clearly announced by Professor Jerome S. Bruner of Harvard Univ. in his 1960 book called *The Process of Education,* published by the Harvard University Press, Cambridge, Mass. in the following paragraph on page 32:

'We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. It is a bold hypothesis and an essential one in thinking about the nature of a curriculum. No evidence exists to contradict it; considerable evidence is being amassed that supports it.'

These astonishingly large capacities are dramatically revealed when infants have been released from the traumatically restricting limitations of an inappropriate writing instrument (the pencil or pen), and *from the even more traumatically confusing and frustrating inadequacies of our Roman alphabet and of the multiple contradictions and pyramided absurdities of our English spelling conventions."*

The two instruments which Wood thinks will contribute most to releasing the energies of young learners and permitting their often underestimated powers of concentration to focus on productive intellectual effort are the typewriter and the Pitman Initial Teaching Alphabet.

The experiment which he and Frank N. Freeman conducted convinced Wood that the typewriter had an extraordinary potential as an early learning aid. Writing on the typewriter was faster, less frustrating, and more attractive than pencil writing. He is still convinced. "It is a question of enabling the pupil to make his letters 'look just like the book,' to increase writing speed so that the very slow pencil-writer will not exhaust his interest or forget what he has started to write before he writes the first word of his sentence, and to reduce the frustrations and too often painfulness of manipulating a pencil before the nerves of the hand and fingers are sufficiently myelineated to permit acceptably aesthetic coordination of the movement of the pencil point-The available evidence indicates that the early use of the typewriter will improve the quality of the child's handwriting, as well as the quality and quantity of his handwritten creative writing; but it should not be necessary to add that, once a child has used a typewriter in kindergarten and first grade, he should have throughout the rest of his school career a portable typewriter (or its equivalent) as a standard part of his school equipment, preferably as a built-in part of his Cornberg carrel (or similar facility), along with the usual assortment of books, pencils, tables, chairs, learning machines, etc."

The principal obstacle to the wide use of the typewriter when Wood and Freeman first explored its potential in 1928 was the expense involved. The cost of a school system's equipping its kindergarten and elementary classrooms with typewriters was considered to be prohibitive, especially during the depression which followed shortly after that depression. On the heels of the depression came the war with its preoccupations and metal shortages.

Only in the past two or three years has interest in the typewriter as a learning machine revived. A major typewriter manufacturer is presently trying to develop a simplified equivalent of the

typewriter, an inexpensive writing machine that will break through the cost barrier. This project is still under wraps and Wood declines to comment further about it. He does not say that the cost of equipping classrooms with typewriters should not be a consideration. "Far from increasing costs, the typewriter and other learning machines and audio-visual learning aids will decrease all costs of education, especially the increasingly intolerable costs of pupil *failures* and their consequent human and moral degradations. We must invest millions of dollars to save billions of dollars plus savings of incalculable human and moral values."

The effective use of writing machines by infant learners depends in turn upon some measure of alphabet and spelling reform. It will do little good to teach a four-year-old to write painlessly if he does not learn to read until he is seven or eight. The principal obstacle to early reading and spelling is the *malphonetic character of the Roman alphabet and the consequent inconsistencies in English spelling.* Words do not always look the way they sound and syllables that sound the same are not necessarily spelled the same. At present, elementary teachers must spend the larger part of two or three school years teaching children to recognize on paper the basic vocabulary that they hear and use nearly every day. If the alphabet were phonemic and the spelling of sounds consistent, a child who knows the alphabet could recognize almost instantly any written word that he has heard and remembered. Reading would come almost automatically. Such is the great advantage of the Pitman Initial Teaching Alphabet.

"Two years of experimental work in England," Wood said in his Cleveland address, "indicate that children using the Pitman Initial Teaching Alphabet learn to read in about half the time required by comparable groups using beginning books in our traditional orthography, that the experimental children like to read and do more reading on their own than the control classes, and that the experimental children more than the control children develop the habit of independent, self-propelled and successmotivated study and learning, attacking as a matter of course new words never before seen by them in print, by the strictly analogical reasoning method made possible by the Pitman transitional alphabet... Successful practice in learning by analogical reasoning, as in learning to read through the medium of the Pitman Initial Teaching Alphabet, will almost surely 'carry over' to and be effective in exploiting more fully one of the most promising and dynamic elements of the educational revolution, that is, learning by discovery, which will probably turn out to be the long-sought breakthrough in the old, old problem of learning *how to learn!"*

Another development that is hastening the breakthru in education is the new role that many educational thinkers are designing for the classroom teacher. The new design entails a reordering of the priority of the teacher's duties and objectives. The teacher of the future, Wood said, will concentrate less on teaching in the traditional and authoritarian way and more on helping children learn for themselves. He will organize the class on a much less regimented basis than at present and will cease to regard himself as the repository and dictator of knowledge. This is not to say that the teacher with his classroom assistants will abdicate the responsibility of teaching. Wood does not suggest that the teacher should become merely the custodian of the learning machines. The teacher will still be involved in the learning, but in a much different way. His principal responsibility will be to help children think things out for themselves, including the moral implications of knowledge, and the ethics of ordinary social and classroom behavior. The teacher's role should be more that of a guide to lead his pupil's thots.

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[Spelling Progress Bulletin Spring 1967 pp20–22 in the printed version]

11. Spelling and the Dictionary, by Helen Bowyer

Much of the confusion and heat of the growing controversy over spelling reform could be cleared and calmed by this one simple realization: we already have reformed spelling and have had it during the whole lifetime of everyone now engaged in the controversy and the lifetime of the grandfathers of most of them. There it stands in the Pronunciation Key and in the parentheses of every good school and college dictionary, – the obvious solution to that 'reading problem' over which our schoolmen are wringing their hands and turning out such tons and acres of futile dissertations.

Here is the pronunciation key of the *American College Dictionary,* hereinafter referred to as the ACD.

Pronunciation Key
The symbol (′), as in moth·er (mŭ~~th~~′ər), is used to mark primary stress; the syllable preceding it is pronounced with greater prominence than the other syllables in the word. The symbol (′), as in grand·moth·er (grănd′mŭ~~th~~′ər) is used to mark secondary stress; a syllable marked for secondary stress is pronounced with less prominence than the one marked (′) but with more prominence than those bearing no stress mark at all.

ă	act, bat	m	my, him	ŭ	up, love
ā	able, cape	n	now, on	ū	use, cute
â	air, dare	ng	sing, England	û	urge, burn
ä	art, calm				
		ŏ	box, hot	v	voice, live
b	back, rub	ō	over, no	w	west, away
ch	chief, beach	ô	order, ball	y	yes, young
d	do, bed	oi	oil, joy	z	zeal, lazy, those
		oo*	book, put	zh	vision, measure
ĕ	ebb, set	oo**	ooze, rule		
ē	equal, bee	ou	out, loud	ə	occurs only in unaccented syllables
f	fit, puff	p	page, stop		and indicates
g	give, beg	r	read, cry		the sound of
h	hit, hear	s	see, miss		
		sh	shoe, push		a *in* alone
ĭ	if, big				e *in* system
ī	ice, bite	t	ten, bit		i *in* easily
j	just, edge	th	thin, path		o *in* gallop
k	kept, make	~~th~~	that, other		u *in* circus
l	low, all				

[oo* has a breve over both letters; oo* has a macron over both letters]

For the 43 basic speech sounds into which it analyzes our language, it provides exactly 43 basic spelling units, each one sworn, as it were, to the visualization of one and only one of those sounds. "Away," it cries to our schools and our press, "with those 464 other spelling units with which you desecrate the beautiful simplicity of your mother tongue and place your children at such an appalling disadvantage with their grademates in phonemic Russia, and the four-to-one swarm of them in soon-to-be phonemic China. There's not an entry in all the tens of thousands between our

covers which needs your *ph, gh, ck, wr, gn, bb, dd, fl, gg, mm, rr, ss, zz.* As for your redundant *c, q, x,* what need have we of them? *Cat, cent, quit, box, exist*, spell more efficiently as *kat, sent, kwit, boks, egzit*, so why complicate a pronunciation key with more symbols than it needs?

Outside our dictionaries, to be sure, diacritics are foreign to English print, but there are other ways of portraying this ideal one-to-one relationship of sound and sign. The five short vowels can simply drop their breves and write themselves as in *nat, net, nit, not, nut*. Short *oo*, to be sure, must do more than shed its diacritic if it is to spell *good, look*, in contradistinction to *food, fluke.* In T.O., this shorter *oo*-sound also spells itself as in *wolf, should, put*, but since those vowels serve just as cheerfully in *wold, shroud,* but, there's no help there. The simplest solution would seem to be to leave *oo* to the exclusive use of food, rude, who, two, true, and their many rhymers, and change *good, wolf, should, put* to *guud*, *wuulf, shuud, puut*.

Some of our *Bulletin* friends, tho dropping the breves of the short vowels, would retain the macron over the corresponding long ones. Among these is the eminent reformer missionary, Dr. Frank C. Laubach. Others would dispense with the macron, but write all long vowels in capitals, thus writing mate, mete, mite, mote, mute into mAt, mEt, mIt, mOt, mUt. Both groups are motivated by the wholly laudable desire for not only *one-sound-one-symbol* but also *one-sound-one-letter.* And would that this were attainable with our Roman alphabet, as it is in Shawscript and the new Quikscript of Kingsley Read. But with *ou, oi, ch, sh, th, t/h, zh* irreducible, why any outre treatment of the long vowels? Better to follow the example of the Simpler Spelling Assoc., i.e. intern the final *e*'s of the first five and spell them *maet, meet, miet, moet, muet*. Then with short *oo* provided with a well-differentiated spelling, long *oo* can be left unchanged as it is in these important, very common words: *food, roof, cool, fool, pool, skool, spool, stool, tool, broom, room, moon, noon, soon, boot, root, shoot*.

As for the rest of the ACD vowels, the circumflexed a, as heard in *air, dare, prayer, wear, their* is so little different from the long a of *aim, tame*, that some phonetists don't give it a separate status, but this little discussion will. Its symbol will be *air* and the four other key words will respell themselves as *dair, prair, wair, thair*. The circumflexed *o* is heard in *tall, talk, raw, order, fault* and can be effectively spelled with the *au* of this last keyword. The circumflexed *u* is always followed by *r* and changes *term, learn, thirst, worm, courage, myrtle* into *turm, lurn, thurst, wurm, kurij, murtl*. It is distinctive enough without any diacritic.

The dieresised *a* is ubiquitous in our everyday speech as *are, car, father* and frequent in *calm, art, bazaar*. The *a*s of this last word may well serve as the transcription of this sound.

Here, then, are these 19 ACD vowels, represented by single letters or digraphs which (except for ~~th~~ and puut) are already familiar to us:

5 short: nat, net, nit, not, nut	2 : boot, fuut (foot)
5 long: dae, doe, die, doe, due	2 : out, oil
3 : air, bazaar, haul	1 : əloen, sistəm, eezəli, galəp, surkəs, maartər.

Thus, 19 spelling units would take care of all the vowel sounds of our language if we would only permit it. Why don't we? How far we are from the simple good sense of that we have only to turn to page xxvii of the ACD to realize. There in its TABLE OF COMMON ENGLISH SPELLINGS, it gives 140 T.O. transcriptions for these 19 vowel sounds. 140, think of it, running as high as 11 for some of them and averaging 7 for the lot. And mind you, these 140 are but the *commoner* spellings of a still more appalling total. But that we'll take up later.

Worse even than the number of transcriptions is their maddening irresponsibility. Not one of them except the schwa, confines itself to the rendition of just one sound. Even *oi* takes over the *waa* sound of *memoir* and moreover permits itself to be spelled as *oy*. As for *ou*, far from confining itself to *out,* it chameleons its sounds in *soul, soup, rough, cough, should, journey.* Single *a* serves indiscriminately in *have* and *behave,* in *father* and *lather,* in *baron* and *bar. E* not only tacks itself on to *met* to lengthen its vowel to *mete,* but it makes the same silly move with *cheese* and *choose,* whose stem vowels are long already. Single *i* takes over *chin, China, union, first, machine;* single *o* thinks nothing of visualizing both *on* and *only* or of representing 9 sounds in: *for other women no woman do honors down.* And *u* officiates serenely in both *uninformed* and *uniformed.* And so on, so forth, and even et cetera, till the mind fairly reels.

What about the consonants in that TABLE OF COMMON SPELLINGS? With *c, q,* and *x* omitted, and *ng, t/h* included they number 24 in the ACD alphabet, and this table loads them down with 113 common spellings. If these seem a little less chaotic, a little less overlapping than those of the vowels, it is because of those consonantal doublings already touched on and because of the unsounded intrusion of some of them into such words as: *ghost, lamb, gnat, salmon, knit, listen.* But *sh* puts on a performance which exceeds anything the table records for any of the vowels. As against the 11 of their tip-toppers, *sh* flaunts a shameless 14, of which *ocean, mission, mention, sugar, schist, tissue* are a choice half dozen. Its nearest runner-up – k – contents itself with 3 fewer common spellings, but in 9 of these it includes the *c* or *q* ousted from the ACD pronunciation key – to wit: *car, account, bacchanal, character, back, acquaint, plaque, biscuit, licquor.*

Here are these 24 consonants with their key words spelled with the foregoing vowels:

b-but, tub	m-mat, tam	w-weel,wheel
d-den, Ned	n-net, ten	y-yam, yoo
f-fin, if	ng-sing, fingger	z-zeel, hiz
g-gob, bog	p-pit, tip	ch-chin, nich
h-him	r-rot, kor	sh-shin, wish
j-jet, ej	s-sael, laes	th-thin, both
k-kween, nit	t-tip, pit	~~th-th~~en, bree~~th~~
l-leev, veel	v-vaen, naev	zh-plezhur, garaazh

So now between vowels and consonants we have 253 spellings for our 43 English speech sounds. *Common* be it reiterated, for in his invaluable *English Heterografy,* Dr. Godfrey Dewey, of the Simpler 'Spelling Assoc, lists a total of 507 in all. But the 253 common spellings is calamitous enough. It puts us in the imbecile position of tolerating six times as many spellings as we need.

Why do we do it? Have we here the outcome of generations of brainwashing at so early an age that most of us had nothing with which to resist it. There was delight in the instinctively realized analogy of *Jane* and *lane,* of *after* and *rafter,* of *ate* and *gate.* That weakened a little with *lane* and *rain,* with *after* and *laughter,* with *gate* and *eight.* But it was so gratifying to be among the first in the class to get these discrepancies well in hand, and daddy and mommy were so pleased with the report cards we brought home. By the time it came to *pain* and *reign, 21* to *daughter* and *water, door* and *oar, dozen* and *cousin, room* and *tomb,* somehow we'd lost that early expectation of "look alike-sound alike," and buckled down to the tedious memorizing of whatever form the word took. Sometimes to be sure we went wrong on *wolf* and *wool*, or *wool* and *bull,* and *yew* never seemed to quite square with *you*, but we had it from both our teachers and our parents that we were doing nicely with our reading, writing and spelling. So we came to take *phone, flown, sewn, moan,* as in the nature of things, and helped out those of our friends and playmates who were less verbally adept than we, even to letting them copy their homework from ours.

Naturally, with a good reading foundation, we did better than most of our classmates in history, geography, hygiene, etc, and if none too brilliant in math and laboratory science, we made normal school or teacher's college without difficulty. After which, some of us found ourselves back in those very primary classrooms where we had thrilled to *hear* and *dear,* but had been a little nonplussed over *here* and *there.* With our pedagogy and psychology courses telling us how, we had no doubt that we could bring most of our beginners through their primers and readers with a fair recognition of at least half of their 400 word vocabulary. Those who fell short of that might get enough "remedial" attention in Grade 2 to scrape through into Grade 3 at the end of that year.

Some of us studied Spanish in high school or college, but so thoro had been the brainwashing of our elementary years that the beautiful phonemicism of its spelling made no practicable impression on us. To be sure, its *c*, like ours, says both *s* and *k*, but an immediately following *e* or *i* invariably makes it say s, and under every other condition, it says *k.* G acts in a similar manner. It is sounded as in *gala* except before *e* and *i* where it always has the sound of *h.* With no other departure from one symbol, one sound reliability, it is easily handled. Below the Rio Grande, the young mejicanos never lose that instinctive delight in consistency which we got in *wood* and *good* but lost in *good* and *food.* What that does for their education is obvious from the fact that on graduating at 17 from a standard *preparatorio,* they are ready for the junior year of almost any good American university. And what it does for their classroom attitude all the 11 years before that... Well, as a *gringo* who taught in their Capital City during a period of serious tension between their country and mine, I shall never forget their eagerness, their affectionateness and how seldom any of them needed even a mild reproof.

That similar results would follow the phonemicizing of our English spelling is all but guaranteed by the teacher reports which pour in to the i.t.a. headquarters in New York from those schools all over the U. S. which have been using the i.t.a. medium for even a year. Most of these teachers had had a child or two among her T.O. beginners whose eagerness, self-confidence, concentration on the job, had led to an astonishingly easy conquest of his primers and readers, but *whole classes* of such children – who had ever experienced this before? Not, of course, even with i.t.a. that all careered ahead at the same pace. But all felt sure they were going to make the grade and what this did to their whole classroom attitude -well, it was a joy to see. No more timidity, no more withdrawal from an activity in which they couldn't compete, no more humiliation at being left behind, no more tears over their report cards – and no more hurt in a teachers heart that there seemed to be so little she could do about it.

But these i.t.a. practitioners are such a tiny few among the half-million in our primary classrooms who are still brainwashing their charges into the patently anti-educational like of *one, two, eight – son, do, straight.* Doing it now when the speediest, most mind-developing, happiest road to reading is a veritable must, if they are to meet their portentous future with anything like the knowledge, the understanding, the wide cooperation it is going to require. What can be done to awaken these teachers wake them now? The Bulletin has an idea or two which, seemingly, has not yet been attempted. If any reader has what seems to him a feasible suggestion or plan for putting spelling reform into use, please send it in. Basic, of course, to any effective plan is a thoro understanding of the phonetics of our language – and in the Bulletin's opinion, the ACD's pronunciation key and its parenthetic spellings are an excellent guide to that.

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12. Loglan – A Logical Language, by James Cooke Brown, reviewed by Ivor Darreg

Loglan – A Logical Language, by James Cooke Brown. 1966, $4. Pub. by the Loglan Institute, Salisbury, N.C.

This 222-page volume submitted for review is called a "preprint edition," and states that much further material exists in manuscript, such as a dictionary and a more technical treatise. After Loglan's debut as the lead article in June, 1960, Scientific American (this is still well worth consulting), little was heard of the system, so we are relieved to learn that actual teaching and speaking trials took place.

Since the number of artificial, compiled or constructed languages probably exceeds the number of "natural" languages, going over the 2000 mark, why discuss another one? Because Loglan is different: it applies phonemics, logic, and structural linguistics in a manner other languages do not; Loglan could be called an engineered language. Loglan is not primarily an international language, but rather a test of the Whorf hypothesis, viz. that the structure and patterning of a language influence the thinking of those who speak it.

This notion is debatable, but certainly deserves testing out, and one of the motives behind Loglan is to discover whether basing its structure on symbolic logic and other mathematical concepts will cause its speakers to think more logically. For instance, 14 logical connectives are listed and described in an Appendix, with a word for each; it is hoped this will make for clearer discourse.

Then an attempt is made to show that Loglan resolves some of the ambiguities inherent in natural languages. It is claimed, for instance, that the English phrase (headline style, one might say) pretty little girls school, has at least 17 distinct meanings, which are rendered in Loglan and also illustrated by symbolic-logic expressions in Appendix B.

Taking this as a sort of challenge, this reviewer experimented by translating some of the meanings into Spanish, Esperanto, and Russian. Now Russian does not have any reputation as a logical language, yet it passed this test with flying colors. So did Esperanto and Spanish. This unexpected result leads us to believe that ambiguity and precision are more properties of human beings than of the languages they use – as a semantist would say, ":Words don't mean-people do."

Perhaps if groups of lawyers and of philosophers learn Loglan, we will have a definitive test of its logic.

Since the present writer is the author of Numaudo Code, a thumbnail comparison might not be out of place: Loglan is a complete language that could have a large vocabulary. Numaudo is only a code, not a language by itself, that uses syllables to speak the already-existing symbols of mathematics and symbolic logic. Loglan seeks to influence people's speech and writing habits in the direction of logic by carrying its mathematico-logical structure and principles into everyday conversation. Numaudo deliberately restricts its "vocabulary" to a few hundred notions precisely expressed by the present written symbols, so that it will be possible in speech as it already is in writing, to contrast full mathematico-logical precision with the vagueness and ambiguity of ordinary unplanned languages, using each for its proper purpose without blurring such a valuable distinction. However, Loglan does provide for a metaphorical and poetic element.

The special syllable-structure of Loglan sets it apart from practically all schemes proposed in recent decades. One has to go back as far as Volapük to find anything like it. Loglan classifies words quite

differently from traditional grammar's nouns, verbs, conjunctions, etc. This special classification, into structure-words and content-words, is expressed in their very sound. Certain arrangements of vowels and consonants automatically classify the words and at the same time mark word boundaries in the swiftly flowing stream of utterance. Thus people can readily learn to analyze a spoken sentence into words and very likely a machine will be able to do it too. Proper names have a special form.

Of course, a price is paid for this feature: the vocabulary, carefully chosen for maximum internationality, suffers Procrustean distortions by getting forced into an arbitrary phonetic framework. Here are some examples: *mrenu*, man; *fumna*, woman; *matma*, mother; *dzaso*, soap; *fikco,* work of fiction; *muzgi*, piece of music; *srite*, act of writing; *nirli*, girl. Words are based on 8 widely spoken languages: English, French, German, Spanish, Russian, Hindi, Chinese, Japanese. Strangely, Greek and Latin are ignored, but they sometimes sneak in the back door.

Loglan aims at accurate correspondence between writing and speech. There are no digraphs at all – indeed, there is no letter *h* to make them with! Only 21 letters make up the alphabet: a b c d e f g i j k l m n o p r s t u v z. *C* has the *sh*-sound, while *i* has the (French) *zh* sound. *I* and *u* can form diphthongs and thus take over the *y* and *w* functions. The English *ch* and *i* sounds are analyzed (as in the I.P.A.) into *tc* and *df*.

Most constructed languages use a somewhat longer alphabet. For instance, Esperanto has 28 letters; and there have been quite a number of languages with the traditional 26, altho they have often given them very strange values. This reviewer has examined enough constructed and natural languages to conclude that a complete language like Loglan (as opposed to a mere code) would be more "comfortable" with perhaps 25 letters – and sounds than only 21 – altho above 30 sounds there would be undue difficulties of pronunciation for speakers of many nationalities. (There is considerable risk that if English ever became the international language, it would lose a dozen or more of its sounds down to the 30 limit: for instance, the two *th*'s, a as in *hat*, o as in *hot*, *er*, and several others. This raises an interesting question: Should a reformed spelling for international English be based on the way the newcomers will pronounce it? Wouldn't this simplify the orthographic problem tremendously, if there were no *th* and *ng* and fine vowel-shadings to deal with?)

The maker of Loglan is to be commended for facing and solving the problem of speech-writing correspondence; rather than ignoring it, as the constructors of Interglossa and Interlingua did. An unphonetically-spelt language does not deserve to be called logical or scientific- certainly not in this era of structural linguistics and phonemics – and the forthcoming language-processing machines. Thus Loglan is truly modern. It has room for growth, and willingness to change to meet future contingencies.