[Later designated Journal 1]

Simplified Spelling Society Newsletter
Autumn 1985 — Conference Number

Contents

The Society

Founded in 1908, the Simplified Spelling Society has included among its officers Daniel Jones, Horace King, Gilbert Murray, William Temple, H.G.Wells. Its stated aim is to "bring about a reform of the spelling of English in the interests of ease of learning and economy of writing". The Society's present officers are:

President: Professor John Downing
Chairman: Chris Jolly
Secretary: Stanley Gibbs
Treasurer: Laurence Fennelly
Public Relations Officer: Mona Cross
Enquiries to the Secretary.

The Newsletter

The Simplified Spelling Society Newsletter has Spring, Summer and Autumn issues.
The editor is Christopher Upward.

[SSS Newsletter Autumn 1985. Later designated Journal 1. p2 in the printed version]
[Chris Upward: see **Journals**, **Newsletters**, **Pamflet**, **Leaflets**, **Media**, **Book and Papers**.]

1. Editorial
Chris Upward

THIS ISSUE
The two main features of this Newsletter form an alliterative pair: the Cover and the Conference. The Conference of course takes pride of place, but it is worth saying in passing that **the cover** is more than just a mass of small print — as is explained at the end of the editorial.

THE CONFERENCE
This Newsletter, as the Conference number, contains only papers presented at the Society's Fourth International Conference, held in Connaught Hall at Southampton University from Friday 26 July to Sunday 28 July 1985. Even so, lack of space prevents publication of a **full record of the proceedings** in this one issue.

Several items from the Conference have regrettably been compressed or deferred — Professor Edgar Gregersen's valuable address on morphological considerations in spelling reform with particular reference to Chomsky's views; papers by Dr Moseley, Dr Damper and Valerie Yule (which appear as abstracts); and some written submissions from overseas, most notably from Australia with a taped accompaniment from Gary Jimmieson of the Spelling Action Society, and from Madhukar N.Gogate, Director of Roman Lipi Parishad in India. The next issue hopes to make amends to those neglected this time.

The Conference had two dominant themes. Firstly, a number of contributors dealt with the use of the computer in orthography, whether to manipulate the spelling of text, or to teach spelling to learners. But secondly the opening address and several later papers discussed the introduction of spelling reform by stages, without losing intelligibility for adults, and using the potential of the present alphabet to make phonemic distinctions obscured by t.o. The design of orthographic stages is of course also a major task of the Society's present Working Party.

NEXT ISSUE
As well as catching up on Conference papers, in the next Newsletter it is planned to include the talk given by Professor Frank Knowles on 12 October 1985, on the relevance of Information Theory to the design of orthographies, and the second article in a series by David Stark, which the Conference squeezed out of this issue.

TRIBUTES
Professor A.C Gimson, late Vice-President of the Society, is remembered by Herr Schmitz-op der Beck: "I shall always remember him as the man whose smile promised support for 'starters and openers'; one BBC gentleman praised him as 'a professor and a clown', by which he meant the amusing presentation to a foreign audience of how usage can influence the sense/sound relationship without anyone really trying to listen! ... How we shall miss that quality stamp of his!"

Tributes to Mona Cross for her work as previous editor of the Newsletter have come from Richard Lung, who writes: "Miss Cross has done more than anyone else in the past 10 years to revive the SSS from its lowest ebb, first with the conferences she started and then the newsletters... I reassure her of my appreciation of her outstanding qualities"; and from Valerie Yule: "Mona... has made a magnificent contribution to SSS".

NEW COVER
At first sight, the small print on the new cover may appear just as background to the title. However it also offers ammunition for the spelling-reform cause, being a catalogue of nearly 3,000 words illustrating the plethora of frequently inconsistent spelling patterns in t.o. Though comprehensive, one could hardly expect it to be exhaustive, and readers are invited to write in if they discover patterns, or single words with particularly aberrant spellings, that are not covered. It will be noticed that some words occur more than once because they represent more than one inconsistency (e.g. knowledge).

The overall arrangement is alphabetic, with A on the front at the top, and Z on the back at the bottom. But within most letters, especially vowels, there are subdivisions. Thus letter A begins with 15 word-groups, demarcated by a comma, each listing different uses of A for the same phoneme. A semi-colon separates these 15 groups from the next 13 groups, each of which lists different pronunciations for the same graphotactic use of A. A semicolon in turn separates these 13 groups from a list of words containing A linked by a slash (/) to phonemically similar words without A. The other vowel-letters are similarly analysed, but consonants are mostly simpler and classifiable in rather more obvious ways. [See **image** and readable version in **Pamphlet 15**.

[SSS Newsletter Autumn 1985. Later designated Journal J1. pp3,4 in the printed version]
[Laurie Fennelly: see **Journals**, **Newsletters**, **Pamphlet 12**, **Leaflet**]

2. Spelling Reform Now

Laurence Fennelly

[Laurence Fennelly is treasurer of the Simplified Spelling Society and is leading the Society's working party which since Summer 1984 has been preparing a revised version of New Spelling as the Society's definitive reform proposal.]

In *New Spelling* the Society has had for many years a complete, coherent system for reforming English spelling. It was prepared by some of the most famous names in English language studies, and all its recommendations are supported by a statistical analysis of current spellings. However it does not discuss how the scheme is to be implemented, and apparently assumes that it would be introduced as a whole, at one given moment. The scheme won wide support especially in universities, and the Society reached a peak in its activities about 1953, when a resolution in favour of spelling reform was only narrowly defeated in the House of Commons. But after that New Spelling (NS) seemed to fade from view and the Society was active in other directions.

The time has come now for a fresh start, and a working party was set up to prepare a revision of NS, and also to draw up a plan for its introduction. A ‘once-and-for-all' introduction would have many advantages, but as it is widely accepted now that an introduction by stages would be more practicable, the working party was instructed to draw up such a scheme.

When we, that is to say the working party, began our work, we had in mind that it might be possible to reduce the number of changes suggested by NS, so that our revised NS would not look so strange or shocking. We were to be disappointed, english traditional spelling is just too erratic.

Our second concern was to ensure that all suggested changes are presented in a way that is comprehensible to laymen. We cannot assume that the layman, whatever his education, is familiar with long and short vowels, let alone voiced and unvoiced consonants. He does not even hear sound differences which are not critical for meaning.

So reforms must be expressed in terms of specific changes to specific spellings.

We decided not to use diacritics or new letters, but this does not preclude their eventual use. Indeed once the spelling is reformed it would be much easier than it is now to replace digraphs by new symbols.

English already has many homonyms. Any reform would increase the number, but we see no difficulty here. *"I peer at the peer on the peer"* is instantly understandable to Britons who have been to the seaside. In any case it would be difficult to work out a consistent system for differentiating homonyms. (Try and work out a scheme, everywhere applicable, to cover *'here/ hear/ hair/ pear /pare /pair/ peer/ peer/ pier*'.)

We decided that the greatest of all virtues was not phonetic exactness, but consistency, both grammatical and phonetic. The world-wide variety of pronunciations makes in any case such a decision inevitable. We use RP as a basis, but we take into account, so far as we know them, other pronunciations current in the British Isles. We have tried to pay attention to American and Australian English, but here we shall be heavily reliant on our American and Australian members for their comment when we issue our first draft.

We began our work with the vowels. The series *'hop/ hope/ hopping/ hoping'* is at the heart of English spelling, and causes great trouble because of its many inconsistencies. It is a sleeping dog that wakes up when you try and make other spelling changes. Consider for example trying to get rid of final Es and double consonants, both reforms that are often put forward as being simple and easy to implement. You immediately come up against vowel lengths.

For these long vowels, or in some cases more accurately diphthongs, NS recommends AE/ EE/ IF./ OE/ UE. We are considering four of these, but we substitute Y for IE, and we use I consistently for the vowels in *'piti'*. NS is surprisingly elaborate in its treatment of Y and I, but we have found as we have gone on, that our proposal has many advantages. A disadvantage is the use of Y for the pronoun I. Of other smaller changes we have made in the use of these digraphs we may mention here substituting U for UE in unaccented syllables, e.g. *'occupation'*.

We have abandoned the NS difference between A and AA, as in *fat/ father*, and we use A for both sounds. The variations between these two sounds are rarely critical for meaning.

A change that caused us much more discussion was the treatment of the vowels in *good/ food*. NS has *good/ fuud*, and the former American Society had the opposite, *guud/ food*. We are considering OO for both. Only in words with identical consonants can this cause trouble — compare *full/ fool, pull/pool*. But these might be treated as special cases if it is felt to be necessary.

Fur/ word/ fir/ her: NS recommends UR for this vowel when stressed and ER when unstressed. We recommend the same spelling for both, e.g. '*fer'*.

The sound represented by the second E in *'secretary'*, or the French *'le'* we left to last, and we have not yet reached agreed conclusions. NS, recognising the problems caused by this sound, changed the spelling of a few suffixes in which it occurred to E but otherwise left the current spellings. This was scarcely consistent, and it left some of the commonest causes of spelling mistakes untouched, e.g. final *-ant/ -ent*.

There are two points to be considered. Firstly this sound occurs in very many words of more than one syllable. Secondly ordinary people are probably unaware that they do not pronounce the full vowel at the end say of a word like *'acceptance'*. This means that setting out the necessary changes will be exceptionally difficult.

Our first decision was to keep the t.o. letter wherever the sound occurred before the stressed vowel, as in *consume/ obtain/ suggest/ assert*. This obviates the need to distinguish the initial vowel in pairs like allege/ allegation, and it also helps with reading recognition, as we have found out with a spelling like *'sejest' ('sujest').*

For the post-accentual sound we are considering two ideas. The first is to use E, e.g. *lugej/ deliberet*. The second is to take advantage of the so-called syllabic consonants, and use no symbol at all, e.g. *tunil/ kornr*. This method does not apply to all cases however. And of course there might be groups of words where it would be advantageous to keep the present vowel letter, providing it could be done consistently.

Consonants: although consonants are more important than vowels for reading recognition, we found them in fact easier to deal with.

Firstly as an absolute rule we retain R wherever it occurs in current spelling. It may not be pronounced in RP, but it is pronounced in many other accents, even if in differing ways.

We discussed at length K, C, and S, and finally decided to retain K for /k/. However changing C to S where appropriate is a far more important change, and need not wait on changing C to K.

S and Z: NS insists on keeping the difference between these two, and we continue to do so in words like *faes/ faez*, but we have made a radical change where inflexions are concerned. *Cats/ dogs* are phonetically /kats, dogz/, but it is far more important to maintain the grammatical link between the two words. We therefore thought at first of keeping S in all inflexions, but then we decided on using Z for all plurals and present-tense endings of verbs, e.g. *my lykz/ he lykz*. I have chosen this example to shock, but in most cases the sound is voiced, /z/, e.g. *'ragz'*. However the important thing is that this spelling frees S for use in place of CE in words '*fence'*: compare *fens/ fenz* for t.o. *fence/ fens*.

The Society had already discarded DH for TH and we continue this. But we also no longer recommend the double G in *fingger'* which is then spelled like *'singer'*. X and CC are where appropriate replaced by KS, and use is not made of GZ in words like *'example'*.

What we have done with S, TH and X in fact is to discard the differentiation between voiced and unvoiced consonants where it is not essential to meaning.

The working party has only now reached the point of discussing a staged implementation of spelling reform. There are many problems to face. One is exemplified by a word like '*phase'*. It could very well be changed three times: *phase ->fase ->faze ->faez*. And a word like '*fight'* might have to go through a change that was only temporary: *figh ->fit ->fyt.*

Where adults are concerned the use of a revised spelling must clearly be voluntary. But the government would have to be involved from an early stage. One cannot imagine the Civil Service acting without instructions. And primary school teachers would not be allowed to act without specific authorisation from, ultimately, the government. Reading material would have to be prepared for initial learners, and later a special course might be needed for teaching the reading knowledge, not writing knowledge, of present spelling.

To begin the task of preparing 'stages' we have listed all the changes involved in Revised NS. These will then have to be grouped together — but into how many stages? It would seem some three or four. Twenty or thirty small stages would simply lead to a state of perpetual chaos.

For discussion one can suggest two possible first stages. One is to reform the long vowel system, including with it the abandonment of final silent E and double consonants. This long-vowel change is what strikes the layman as most strange. But if it was introduced with the familiar consonants left unchanged, then it might be acceptable. Alternatively the first stage could be the removal of all 'useless' consonants, as in *debt/ wrap/ gnome*. This would be easy to understand and would strike the public as sensible, and thus be a good introduction to spelling reform. Dropping 'useless' vowels is not so simple. 'Head' can lose A, but 'heap' cannot. Here the digraph EA has to be changed.

The working party's task is to produce a complete programme of spelling reform that can be the basis of an effective propaganda campaign now. We envisage the Society publishing a pamphlet that opts clearly for one scheme, but which can include, by way of appendices, a discussion of alternative solutions to the various problems of English spelling.

[SSS Newsletter Autumn 1985. Later designated Journal 1. p5 in the printed version]
[David Moseley: see **Bulletin**, **Journal**]

3. Steps Towards More Efficient Learning

David V. Moseley

(Dr Moseley is Reader in Applied Psychology in the School of Education at the University of Newcastle upon Tyne, and has been working on computer programs for learning spelling and on an aurally coded spelling dictionary.)

Abstract . The aim of the first study was to establish an order of spelling difficulty for English graphemes, to be used in a variety of learning programmes, the one to be demonstrated being a microcomputer program, 'The Compleat Speller'. To this end a list of 453 words was drawn up from a master list of some 7,000 words, using constraints of word length and frequency. These were then administered to 99 pupils in low ability bands in three schools. A marking scheme was then applied which treated each grapheme separately.

The resulting grapheme order is presented, together with findings concerning word length and frequency effects. For example, a given grapheme in a three-syllable word is considerably harder to spell than in a one syllable word, frequency being held constant and the presence of three or more consonant graphemes in a syllable was found to double the chances of a spelling error in the vowel grapheme.

The learning theory principles applied in the microcomputer spelling programme are explained and the programme demonstrated on a BBC 'B' machine. Its use is considered in the context of a language-experience approach and in relation to resource-based learning in a variety of subject areas. Progress data of pupils working in two school settings are also presented.

The second part of the presentation is concerned with the construction and trial of a spelling dictionary, shortly to be published by Learning Development Aids. The linguistic principles underlying the grouping of words and the search strategies needed in order to use it are explained as are the results of field trials throughout the country. The dictionary has proved to be of value from infant level through to university and its availability should serve to minimize the frustration experienced by so many children who find spelling difficult.

Vowel Graphemes and Consonant Digraphs in Order of Spelling Difficulty

Order	Grapheme	Sound(s)	Examples
1	a	a/ar	ant, bath
2	e	e	fed
3	i	i	ink
4	o	o	hot
5	u	u/oo	plum/pull
6	o	oe	cold
7	ch	ch	chin
8	a	ae	apron
9	i	ie	kind
10	ow	ou	brown
11	er	(neutral)	river
12	y	i	glossy
13	th	th (voiced, unvoiced)	the thug
14	ng	ng	singer
15	e	ee	she
16	oo	oo	stood
17	sh	sh	dash
18	ou	ou	round
19	e	i	event
20	ar	ar	farm
21=	air	aer	lair
21=	ck	k	black
23	oo	ue	spoon
24	se	z	vase
25	a-e	ae	rake
26	u	ue	stupid
27	oy	oi	toy
28	ss	s	mess
29	i-e	ie	bike
30	ow	oe	yellow
31	ur	ur	burn
32	or	or	form
33	ge	j	lounge
34	o-e	oe	mole
35	oa	oe	float
36	u	uu	ruin
37	ew	ae	stew
38	ee	ee	breed
39	a (neutral)		final
40	oi	oi	coin
41	le	l	mangle
42	a	o	was
43	c/ce	s	city, dance
44	er	ur	mercy
45	u-e	ue/uu	tune, flute
46	ea	ee	eat
47=	a/al	or	also, walker
47=	our	(neutral)	glamour
49	o (neutral)		demon
50	qu	kw	quick
51	io (neutral)		function
52=	ai	ae	train
52=	u (neutral)		cactus
54	ar	or	quartet
55	ll	l	well
56	tt	t	attic
57	pp	p	apple
58	ey	i	alley
59	wh	w	when
60	ou (neutral)		serious
61	se	s	dense
62	ir	ur	first
63	dge	j	wedge
64	are	aer	share
65	aw	or	drawing
66	y	ie	type
67	ve	v	curve
68	nn	n	tunnel
69	ar (neutral)		collar
70	ei	ae	eighteen
71	ie	ee	field
72	aer	aer	aerial

This order of difficulty derives from analysis of errors by 99 10–15 year-olds in the North-East of England in a data-set of some 48,000 words. Graphemes of very low frequency are not included.

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[Govind N Deodhekar. See **Journal articles** and **Pamflet 14**]

4. Lingua Anglica

Govind N Deodhekar

[Govind N. Deodhekar migrated from Bombay to London in 1951 and taught Science and Maths in a South London School until his retirement in 1979.]

I started learning English, at about 10, when I first stepped into a secondary school in a small town near Bombay. I soon learnt that English written consonants had a fixed sound — but not always! Vowels had a system of sorts, as when the cat sat on the mat. But it seemed to break down ever so often and was a bewildering contrast with our well-defined Devnagri vowel-symbols. There was no way out of it I was told, but to learn each group of spellings and each eccentricity, separately. Luckily, I was good at memorizing and I survived.

It had never occurred to me that English children could find English spelling a handicap until I started teaching in England and came across the problem and saw the heroic struggles being waged by the remedial teachers and their pupils.

The need for reform of English spelling is obvious to every foreigner who tries to or has to learn the language. But the English intelligentsia ‘don’t want to know’. In any case, the English upper class has a tradition or a penchant for deliberate distortion of speech to mark itself off from the common people. Hence they speak of Brumpton for Brompton, and Fanshaw for Featherstonehaugh, and Sisiter or Sirenster for Cirencester, no one being quite sure which is the really ‘exclusive’ pronunciation! “If we can master our admittedly difficult spelling, why can’t they?” is the basic attitude. With such an attitude among the upper class intelligentsia, it is no surprise that reform is long time a-coming.

The English language, however, is not merely the mother tongue of the Anglo-Americans. It is the language of international technology, commerce, aviation, etc. If it has gained acceptance in the British Commonwealth because of history, it has gained ascendancy in other parts of the world because of America’s leading role, but above all else because of its simplicity, when compared with French. Lingua Anglica is truly displacing Lingua Franca and is becoming the language of world unity. All it needs now is to be rescued from the stranglehold on its spelling by the short-sighted intelligentsia of Anglo-America. Some pressure towards this end could come from India, but in the last analysis, alas, the decision must come from those whose mother tongue it is.

In view of the importance of English as an international language, and my experience of the non-English speaking peoples, I would like to make a number of suggestions.

1 Consonants. Regularization of consonant symbols is obviously a simpler matter than that of vowels. A number of changes are needed here.

a Use F rather than PH. This is so widely agreed among spelling reformers that no comment is needed.

b Remove the dual value of G, and reserve it for the hard sound as in *‘get’*, while J can be used for the soft sound of G consistently. Hence *‘jem’* rather than *‘gem’*.

Foreigners do not learn English by constantly looking up their dictionaries for the pronunciation of each word. The language is taught by 'live' teachers and once an error has been introduced, it persists. I am slightly taken aback, but not astonished, at the number of times I hear well-educated people in India referring to 'targets.'

c Use only K for the /k/ sound, and not C, CK or CH. Hence *'arkitekt in his kar'*, but *'archbishop in his chair'*. There is some hesitation among reformers for whatever reason, but simple logic demands the use of K for its own sound.

d Remove the confusion of 'silent' letters. Such an absurdity is inconceivable in the Sanskrit or Devnagri script. Alternatively, let us establish a convention that if silent letters are ever pronounced (as they were, at one time, presumably) that will be accepted as Received Pronunciation!

Many people have begun to drop the G in 'recognition', but RP accepts the full use of the G as an alternative (or does it regard the pronounced G as correct and the silent G as slovenly?). Let us keep to this convention because the 'genius' of English speech is to keep on dropping or swallowing all sorts of letters. I cannot see how spelling reform can keep pace with *'trific'*, '*-tikly'* (*particularly*), *'pleece'*, *'griller'* (the hominid) with any degree of *'akrasy'*.

e S & Z, -shun & -tion: there are of course other consonant changes like these but I wished to illustrate rather than write exhaustively.

2 OUGH & AUGH. Reforms F, G/J, K, -TION , I think, are more urgent than S/Z. But we also need to get tuf with OUGH and AUGH words. There is very wide agreement on these. Already I find the use of 'tho' in letters from India from a friend whose command of English spelling is near perfect. I have never discussed spelling reform with him, and his reform is, I am sure, spontaneous.

3 Vowels. If there is general agreement among reformers that the vowel reform suggested by Harry Lindgren in SRI *(fed/ hed/ sed)* and *ar/ hav* etc should be the first step, I can go along with it. But at the same time, we must have a complete scheme ready, as in Nue Spelling or Revised Nue Spelling or whatever.

4 Other Schemes. From time to time spelling reforms are suggested which may be of some help to English children with reading difficulties. The Initial Teaching Alphabet was one such scheme. Shortened spelling dropping shwa-type vowels or even full-blooded vowels may be other such schemes. These are based on the assumption that the learner has English in the head already. They are, possibly, interim measures for helping English readers but they are not likely to be of any use to a foreign learner.

It may be argued that the needs of English children must come above those of foreign learners. But this is a sentimental argument. Such schemes, however useful, are no substitutes for a logical English spelling of universal use. If indeed we succeed in getting a reasonable spelling reform through, we shall not only expedite the use of English as a world language, we would also help English children as an automatic consequence of spelling reform.

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5. Spelling Reform from an Engineer's Point of View

Dr R I Damper

[Dr Damper is a member of the Man-Machine Systems Research Group in the Department of Electronics and Information Engineering at Southampton University.]

Abstract

To set the scene, I will give some initial thoughts on the issues raised by spelling reform, from the point of view of an engineer essentially untrained in linguistics and phonetics. What then is my authority for presuming to speak on the subject? It is partly that my work in human-computer interaction has brought me face-to-face with some of the technical difficulties caused by the complexities of English orthography. But, also, I would contend that the 'engineering' discipline of information theory is at least as relevant to the matter as linguistics and phonetics.

The areas of human-computer interaction where the vagaries of English spelling lead to problems will be reviewed. These areas include text (or word) processing, speech synthesis by rule, computer-aided transcription, and automatic recognition of spoken or written language. The nature of the problem will be analysed in each case, lend the extent to which spelling reform would assist will be assessed. The broad conclusion is that the availability of computer-based aids to language generation makes it easier than ever before to conform to the constraints of 'correct' spelling, and that any gains from simplifying our spelling system would be small in proportion to the immense effort required to gain acceptance for the new spelling.

It is conceded that the arguments advanced are incomplete, and leave out of account important factors such as the difficulty or ease of learning any particular spelling system. Nevertheless, the essential point remains that, in my opinion, the advent of the 'computer era' will of itself give little or no impetus to spelling reform.

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[Valerie Yule: see **Bulletins**, **Anthology**, **Quarterly**, **Journals**, **Newsletters**, **Personal Views** 10 & 16, **Media**, **Books**.]

6. Literate Adults' Response by Valerie Yule

[Valerie Yule has worked as a psychologist in the fields of reading and spelling both in Australia and Britain, and now researches in the Department of Psychology at the University of Aberdeen. She also organized the Society's **Edinburgh Conference in 1981**]

Abstract

The design of spelling reforms can be counter-productive without research to check that however perfect a reform may be in theory, it will actually be suitable for human users and learners. Spelling reformers have in the past ruined their own cause by lack of attention to human engineering — fitting the task to actual needs of users.

Two experiments were briefly reported, which tested how experienced readers reacted to three changes in spelling they had not met before, each representing a possible direction for spelling reform. Omitting surplus letters, changing even up to one word in three, was found to cause no disruption to reading speed or spelling, but other forms were more difficult on first acquaintance, though not impossibly so. This improvement could easily be introduced in trial forms as alternative spellings to test public preferences.

Other pilot experiments were mentioned, whose design could well be copied, to check whether spelling reforms might indeed be the optimum form to benefit those they seek most to help — learners, writers, foreigners, as well as readers.

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[Rob Baker: see **Bulletins**.]
[See **comment about Norwegian** in J9.]

7. Spelling Reform and Politics: the Case of Norwegian.

R. G. Baker

[Rob Baker works in Adult Education at Southampton University, and was co-organizer of the Society's Conference in July 1985. He has researched into machine transcription of speech as part of a system for subtitling TV for the deaf.]

Abstract
This paper looks briefly at successful and unsuccessful attempts to reform writing systems in various European countries. Dramatic political changes in the last two hundred years have fostered a climate in which public opinion has more or less readily accepted linguistic reform. The case of modern Norwegian, reformed several times since the turn of the century, is discussed in detail. The example of Norwegian illustrates some of the kinds of public reaction that may be anticipated if spelling reform is promoted by the central authorities. This paper cautions against a simplistic view of the political implications of spelling reform.

An analysis of reforms in writing systems throughout the world indicates that they tend to coincide with major political upheavals. For example, reforms in Rumania (independence and romanization of the alphabet ca. 1860), Albania (independence and romanization in 1909), Turkey (overthrow of the feudal system in 1923, romanization in 1928) and Ireland (home rule and romanization in 1922), all came about shortly after the success of popular nationalistic campaigns. These reforms can be seen partly as direct consequences of the removal of foreign yokes, but also, especially in the case of Ireland **[1]** and in the so far unsuccessful but continuing attempts at romanization in China and on the Indian subcontinent, as part of the movement to join the wider international community. After the defeat of Nazi Germany minor orthographic changes were carried out in formerly occupied Holland and Denmark. In each case reforms could be seen partly as an anti-German reaction.

The case of modern Norwegian, which has the longest, most continuous, most bitter and best documented history of political struggle over spelling, will be used to illustrate some of the political preconditions and consequences of spelling reform. Although the Norwegian situation can hardly be compared directly with that in Britain or anywhere else, it may give us some insights and provide some warnings.

Norway was ruled by Denmark from 1397 until 1814. Norwegian had no written form during that period, though there had been an older tradition of writing in Old Norse. During the period of Danish rule the only written language in Norway was Danish, a closely related Scandinavian language, which could be pronounced in line with Norwegian speech without too much difficulty, though there were differences in syntax and vocabulary. In 1814, following the defeat of Napoleon, Norway was taken out of Danish hands (Denmark had been on the wrong side) and placed under the Swedish crown. However cultural domination by the Swedes did not take place and the Swedish regime was easily overthrown in 1905, when Norway became an independent sovereign nation for the first time in 500 years. During the period of Swedish rule Norwegian nationalism gained sway and there were two parallel movements to de–Danicize the Norwegian language, and especially to create a truly Norwegian written form. The first of these movements may be termed revolutionary and the other reformist.

The main protagonist of the revolutionary line was Ivar Aasen (1813–1896) whose aim was to reconstruct a totally Norwegian new language based on surviving texts from the Old Norse period and on those living dialects of Western Norway which were closest to Old Norse. This form of Norwegian was known as 'landsmål' (country language, or folk language), or more recently 'nynorsk' (new Norwegian).

The 'reformer', on the other hand, was Knud Knudsen (1812–1895), a schoolteacher whose aim was to modify the standard Danish spelling in such a way that it more closely reflected Norwegian speech (mainly the S.E. dialects). This reformed spelling came to be called 'riksmål' (state language) or 'bokmål' (book language).

These two trends gained momentum as Norwegian nationalism gained ground during the 19th century, but the first *official* reform was in 1907, just two years after full independence was achieved. The reform of 1907 was centred mainly on 'bokmål' and the intention was to bring the Danish spelling closer to Norwegian pronunciation, but at the same time, to bring it closer to the spelling of nynorsk, which by this time was developing a strong, mainly regional literary tradition of its own. The official reasons for reform were:

1 nationalistic (throwing off the Danish yoke)
2 linguistic (better match between sound and spelling)
3 educational (it would make it easier to learn to read)
4 'democratic' (Danish spelling was seen as a shibboleth preventing children from less privileged backgrounds from reaching their full potential).

The reforms were implemented first in government publications and in school textbooks. There was strong criticism from educationalists of the idea of starting the new spelling system with children, on the grounds that they would have to encounter unreformed spelling on leaving school and would be confused. This did appear to happen for the first few years, but the reform was nevertheless accepted. This success must be attributed partly to the recency of the dissolution of the union with Sweden and partly to the fact that, riding on the wave of patriotism, the majority of newspapers adopted the scheme wholesale. The power of the popular press in legitimizing or ridiculing spelling reform cannot be underestimated. However this was not enough. There were still two different written standards, bokmål and nynorsk; and most of the last 70 years have been spent attempting to reconcile what have come increasingly to be identified as two separate languages rather than two orthographic variants.

A small reform in 1909 brought in a few changes in nynorsk, and another in 1917 hastened the rapprochement when most of the basic orthographic principles of nynorsk were adopted by bokmål. However there were many problems of detail; notably in selecting which regional spoken variant should form the basis for the spelling. Nynorsk had, for example, one variant of the definite article (feminine gender), bokmål had another, and yet a third variant was actually spoken by people in the main population centres of the South-East. Here issues of spelling became perfectly confounded with issues of the acceptability of spoken linguistic forms per se, and this confusion has dogged the Norwegian reformers throughout. There were bitter arguments in the Norwegian parliament and the 1919 government threatened to resign over the 'language issue'. A cartoon from a 1919 (Danish) satirical magazine shows a Bolshevik soldier fresh from the October Revolution, approaching a street-barricade in Oslo, with the question "How is the revolution coming along in Oslo, comrades?" The reply he receives is "We're still fighting over how to spell it!"

In 1934 a new reform was proposed. This was to be introduced in school textbooks. However teachers were requested not to mark pupils' spellings wrong if they did not conform to the new norm but did reflect the pupils' speech. Teachers found this unworkable and the authorities

retreated from their dogmatic-libertarian position in 1936 by offering lists of 'acceptable alternative' spellings.

In 1938–9 a move to amalgamate nynorsk and bokmål completely was cut short by the German invasion of Norway. The puppet regime of Quisling encouraged the conservative factions in each of the two language camps to entrench themselves.

The attempt to amalgamate, to produce a 'samnorsk' (common Norwegian), was revived after the war. However in a fresh mood of independence literary figures from both traditions called for free and separate development of both standards. Parents, especially in the capital, also rejected a common standard and demonstrated on the streets of Oslo. A permanent Language Commission was set up in 1952 to try and force through new changes in the direction of rapprochement. In 1953 parents in Oslo seized the initiative and their pencils, and 'corrected' the reformed spellings of the new text books in favour of more conservative forms. Authors took publishers to court for ‘misrepresenting' their works in the new spelling. Farmers took legal action against map producers and telephone directory publishers for spelling the names on their farms wrong. The language issue had acquired a life of its own in the popular consciousness and would not be legislated upon.

In 1959, in an attempt to gain popular approval for reforms, a series of plebiscites were suggested in which people could vote for individual spelling changes. But who was to vote — the whole electorate or only parents? In the 1960s the situation stabilized with two official textbook norms, each with many optional forms, and two standards in official government publications. For the ordinary Norwegian a situation exists that has been termed 'schizoglossia’. In applying for a job, or writing an exam paper, the individual must decide which standard to use and the choice will be determined as much by knowledge of who is to read what is written, and by what impression the writer seeks to convey, as by personal preference and loyalty to one's own dialectal group.

In summary, the Norwegian case illustrates some of the reactions that may be expected even if spelling reform gains government approval. It warms against trying to force reform, and especially against imposing new norms on the schools before they have been accepted elsewhere. It raises the question of dealing with co-existing standards. Will the old system be allowed to co-exist with the new? If so, for how long, and under what circumstances will each be used? Can spelling reform take place at all without major changes in the political order? With a major international language, like English, can reforms be implemented unilaterally by the UK, or the USA, or Australia, or the third world? Above all, would-be reformers must have their fingers on the political pulse. In the words of Einar Haugen, the Norwegian linguist, whose documentation is the main source for this paper, "language planning is more of an art than a science. Like politics, of which it is a part, it is the art of the possible. The language planner must foresee the wave of the future and ride it to his goal. He can do so only if his goal is essentially the same as that which the people have unconsciously accepted as their own."

Reference

Haugen, E., *Language Conflict and Language Planning*, Harvard: Harvard University Press, 1966.
Main source of information about other languages: *Encyclopaedia Britannica*.

Footnote

[1] Romanization in Ireland was temporary. De Valera's strongly nationalist constitution of 1937 reversed the decision.

[SSS Newsletter Autumn 1985. Later designated Journal 1. pp10–14 in the printed version]
[Abe Citron, see **Bulletins**, **Anthology**, **Journals**, **Newsletters**.]

8. Spelling for the Computer Age or How English shd be Ritun [1] Abraham F. Citron

[Professor Citron is Executive Vice-President of Better Education thru Simplified Spelling of Bloomfield Hills, Michigan, and advocates an abbreviated orthography, Speed Spelling, or SPD SPLG.]

I

The more common the number, the fewer the digits required to write it. Thus, 0 thru 9 are written with one digit, 10 thru 99 are written with two, 100 thru 999 are written with three, and so on in a regular progression. Our written language has worked out a similar, but irregular pattern; by and large our more common words are written with fewer letters.

In an age of computers and telecommunications, we need a writing system characterized by functionality, ease of learning and speed of use. The first quality sought in spelling reform must be more regularity of letter to sound and of sound to letter, that is, more phonemic spelling. The second quality must he brevity and greater regularization of the principle that our very common words be expressed with fewest letters. Speed Spelling (SPD SPLG) is an expression of both these qualities.

The ultimate economy of a written word is a single letter. Following the Latin example (Latin has only three one-letter words, all formed from vowels: *a, e, o*) and obedient to the mythology of English written forms, English, altho using 26 letters, has developed only three one-letter words, *a, I, O,* all formed from vowels.

The mythology holds that no single consonant can form an English written word. The rule-makers, many Latin-trained, have felt that since no consonant, alone, can be pronounced, uttered or articulated, no consonant, alone, can express a written word. We cannot utter just *b* or *p* or *m*, say the purists, utterance of such sounds requires that at least one vowel be added. The rule-makers have therefore taught that no single consonant be written (it cannot be read!) for an English word.

Clergy, scribes, academicians, scholars, pseudo-scholars, the nobility, the genteel and leisure-class writers of English during the first thousand years of its history were not interested in speed, efficiency, or one-letter words. Thus, we see today that English has developed only three single-letter words.

But is this analysis complete? What of punctuation and other signs (like those used in mathematics) which have been developed in English writing? What of our period, question mark, exclamation mark, comma, colon, semicolon, apostrophe, quotation marks, parentheses, asterisk and other signs? Here are ten signs (more could be noted) each carrying a meaning that we easily read, but in no case spelled out. These are all used in the so-called purity of a written system that supposedly uses only spelled-out words. (If a written word is a written sign of one or more characters, isolated from the rest of text by a space, and carrying a meaning, then punctuation signs are words.) The space between words is also meaningful.

The rule-makers, here as elsewhere, have been insisting on an erroneous rule. Signs that are not spelled out, single-character signs, can carry meaning, can be 'read' perfectly, and many of them are used. Thus we discover that, theoretically, there is nothing wrong with single consonants representing words. Further, we can intersperse non-spelled signs with spelled words without damaging meaning or speed. 'Purity' of text is a myth.

So well do we know our numbers and punctuation marks, and we learned them so long ago, that we have forgotten that there was a time when they were strange to us. We have learned them by memorization and association. Every time we see a '?' the idea of a question pops into our heads with the speed of light. This is so fast that it appears to be instantaneous. This associative power we possess, often lightning-like in its speed, is marvelous, beyond our present understanding, but a fact.

II

We thus arrive at the idea that English should make good use of the denied consonants, that we should develop 25 additional single-letter words. These 25 single-letter words should be substituted for 25 of our present common or very common multi-letter words. We do not assign A since it is already a word. We can use lower case I and lower case 0, spelling the exclamation Oe. What words should these single-letter words be? (Of course we will use all the vowels except A also.)

The first three are obvious. The word *be* (very common with a frequency of 6,377 per million written words) can be assigned to the letter B, since the name of the letter is exactly like the sound of the word *be*. Thus we can write: "What will you b when you grow up?"

On the same principle, *are* (frequency 4,393) can be assigned to R, and *you* (frequency 3,286) to U. Classicists, traditionalists, some linguists, purists will immediately object on the basis that, as these three letters are used, they represent sounds in addition to their alphabetic names, and that therefore the children will be confused. However, preliminary testing using these and other one-letter words with classes of fifth and sixth grade students, shows that these students learn easily, quickly to read these single-letter words. There is no confusion!

For the other single-letter words we move, with some exceptions, to a different principle: the principle of the word with the greatest frequency **[2]** beginning with a given letter. What is the *most common word* beginning with C? (C is always hard in SPD SPLG.) This is found to be *can* with a frequency of 1,722; therefore we assign *can* to C. In like manner *do* is assigned to D, *even* to E, *for* to F, *good* to G (there are no soft Gs), *he* to H, and so on. We assign lower case I to *in*; when *in* begins a sentence it can be spelled as *In* .

There are six exceptions. As *and* is the third most common of all our words (freq. = 28,852) it should be written by a single letter, but A is in use. However, since we often say 'bread 'n butter', 'in 'n out', 'up 'n down', etc., it is practical to assign N to *and*. *Professional* is the most common P word, but since it is often written as *pro*, we select the next most common P word, which is *people*. The most common Q word is *quite*, but as it can be spelled (SPD SPLG) as *qyt* , we assign Q to the second most common Q word, *question*. The most common W word is *was*, which SPD SPLG spells as *wz*, so we use the second most popular W word, which is with. Words beginning with X are too esoteric to be worth representing. However, words beginning with the sound X are rather common. The most common is *experience* , which can be represented by X. *Is* is so common (freq. = 10,099) that it must be represented, but I is in use. However, the Z sound in /iz/ is strong, obvious, so we assign *is* to Z.

In a 30-minute discussion-drill-test period, 4 classes of fifth and sixth graders became familiar with 8 of these single-letter words: T=the, O=of, N=and, F=for, W=with, B=be, R=are, U=you. Except for only two or three of the poorer readers in each class these students read these one letter words swiftly and accurately in a brief story.
They enjoyed this session as a 'spelling game'.

How do these words appear in text and what can be achieved with them? Here are some examples:

How are you	= 9 letters,
How r u	= 5 letters, saving 44%;
I can do what you can do	= 18 letters,
I c d wht u c d	= 9 letters, saving 50%;
To be or not to be, that is the question	= 30 letters,
Tu b or nt tu b, tt z t q	= 15 letters, saving 50%;
Do you have the experience for the job?	= 31 letters,
D u hav t xf t job?	= 12 letters, saving 61%;
Can you lend the the money?	= 20 letters,
C u lend me t muny?	= 13 letters, saving 35%;
It is good of you to talk with me	= 25 letters
It z g o u tu tauk w me	= 15 letters, saving 40%.

It will have been noted that in these examples a number of two- and three-letter words, also from the '100 Speed Words' (list available), have been used.

The above texts were chosen to demonstrate top saving levels that can be achieved with one-letter words (and a few other short forms). Please *note also the important savings of space.*

These words are very common. Total frequency for them is 222,839, which means that in a representative million words, these words would occur 222,839 times. Thus one may say that any child or adult who masters these 25 words will have at command over 22% of the words needed to write and read English at a fully acceptable level. One may also say that if these 25 words are adopted, then, with A and I (total frequency 251,249), over 25% of the words needed to write and read English (acceptable adult level) would be *one-letter words*.

Since the average American-English word uses 5½ letters, a million words involves about 5,500,000 letters. If we write a million words, using these 25 single letter words, we will save approximately 382,005 letters, which is 6.96% of 5,500,000. Thus, writers of English would save nearly 7% of their time and effort.

Surely a great thrill of learning and of growing is learning to write. The simplicity, speed, ease with which these one-letter words are written can encourage children to learn to write. Learning to write involves learning to read, which encourages learning to write and so on.

If children are taught these letter-meanings in pre-school, and in the first, second, third grades (experience might wait until the second grade), if they are taught to write as well as read them in texts, if they are thoroughly drilled in them, so that recognition is sure, automatic, instantaneous, then these words can become an excellent base for learning to write and read.

Once sure association is achieved, three qualities of response can be observed:
1) the response is reliable, it always occurs;
2) it is fast, without hesitation;
3) it is smooth, without conscious thought.

From the point of view of teaching and learning, three results are achieved by automatic association of meaning with a limited number of one-letter signs:
1) automatic association is sure, eliminating doubt; it produces security;
2) automatic association eliminates the need to think about the meaning of the single symbols; meaning is at instant command;
3) the automatic association of meaning to common words provides a secure base for decoding other words.

With more or less practice, experience, drill, all normal range students can become automatic with these 25 one-letter words. Such response will enable fast students to become faster and will constitute an important aid to slow students in learning to write and to read. **[3]**

III

In the '100 Speed Words', 28 are spelled with two letters. Five of these (*hu, nu, tu, se, hy*) are phonemic because in SPD SPLG all final U's ar long, all final E's are long, and Y is used as long I. Twenty two of these two-letter words are spelled in consonant outline. This is to say they are spelled using the first and the last consonant of the word. In all cases the first consonant is also the first letter of the word as spelled in t.o. Thus *that* is spelled as *tt;* *been* is spelled as *bn* ; *could* is spelled as *cd*. *Was* is spelled as *wz*, since *was* is sounded as *wuz*. One word, *without*, is spelled *wo*, by using the first letter of *with* and the first letter of *out*.

There is nothing new in spelling in consonant outline. This has been the basis of shorthand, and many of us, in a hurry, have written *cm* for *come*, or *wd* for *would*, or *bf* for *before*, *wr* for *were* . The consonant outline strongly suggests the sound of the word we mean, and is almost always interpreted (with the aid of the context) correctly.

If a child knows the meanings of these words, speaks them, uses them, knows the sounds of the letters of the alphabet, then associating the two-letter spellings of these words with their meanings will not be difficult. It is much easier to team *hz* for *his* than *his* ; it is easier to learn *sd* for said than *said*, and so on down the list.

Twenty-six of the 100 Speed Words require three letters. We can see now that frequencies are dropping. These are still common words, but, as a group, not as common as the one-letter or the two-letter words. We find these 26 composed of three groups.

First there is a group of 9 phonemically spelled words: *hav, wil, tym, yur, wel, hir, myt, duz, tho.*

Then there are 14 consonant outlines: ths, *wch, thr, whn, wht, thm, thn, mst, whr, shd, bcz, ltl, nvr, hvr*.

Over is spelled as *ovr* and *every* as *evy* ; these two words use an opening vowel and then two consonants to outline the sound of the words represented.

Finally, in SPD SPLG, to maintain differential spelling of *no* and *know*, they are spelled *no* and *noe* . (Final E in SPD SPLG is long as in *se, tre, we, me, fre, gle*, etc. However, after O it is used as a sign that the O is long, as in *hoem, groe, .floen, bloen, moen, Oe, noe*, etc.)

The fifteen four-letter words are in 3 groups. First a group of 9 phonemically spelled words: *ther (their), thru, stil, sins, whyl, hows, cors, enuf, muny*. Second, a group of four consonant outline words: *political = plcl, himself = hmsf, business = bzns, committee = cmty.*

Third, there are 2 words spelled in vowel-consonant outline: *education = edcn, secretary = secy*.

The six five-letter words are: *against = ugnst, thought = thaut, school = scool, something = smthg, college = colij, knowledge = nolij*. The full list of these words, with frequencies, is available as explained at the end.

We are now in a position to make some statements about the savings achieved if the 100 Speed Words are used. Their frequencies, per million representative words of text, total 379,919. This means that the mastery of these words would equip a child or adult with 37.9% of the words needed to write English at college level.

Secondly, the total letters saved over t.o. per million written words is 587,069. This is 10.65% of 5,500,000 letters in a million words. We can therefore say that if these hundred words are used, writers of English would save over 10% of the time and effort involved. They would also save over 6% of the space required.

IV

The second component of SPD SPLG consists of eight prefix and suffix simplifications, as follows:

1 Prefix *com* or *con* (unstressed) = *cm* or *cn*: *cmit*, *cmand, cmpleet, cmpeet, cntrol, cntmpt, cntayn*, etc.
2 Suffixes *-cion, -sion, -tion = n: suspicion = suspin, tension = tenn, objection = objecn, national = nanul.*
3 Suffix -ing = *g : jumpg, luvg, sgg (singing), clgg,* etc. If adding G forms a word *(rung),* use *-ing (runing).*
4 Suffix *-ed* sounded as /d/ = *-d: drownd, injurd, plowd, clownd, kild,fild, pilfurd, cluturd, drild*, etc.
5 Suffix *-ed* sounded as /t/ = *-t: stopt, dropt, drest, blest, mopt, cnfest, suprest, hopt,* etc.
6 Suffix *-le* (unstressed) = *-1 : trubl, botl, fidl, catl, taybl, bubl, sutl, ridl, candl,* etc.
7 Suffixes *-mant, -ment = -mt : adumt, cntentmnt, rezentmt, fuulfilmt, divelupmt*, etc.
8 Suffixes *-ant, -ent = -nt : elufnt, importnt, prezudnt, pleznt,* etc.

The third and final component of SPD SPLG consists of the 64 rules for Natural Spelling, in which the vast majority of the some 600,000 English words would be written. These rules provide for the use of the letters of the alphabet with greater reliability than in t.o. These rules, with examples, are found in the Appendix.

V

The spelling achieved thru these three elements or components is easy to learn, fast to use, saves time and space. Several examples follow, with letter savings.

How does this spelling perform?	26
How duz ths splg purform?	20 saving 23%;
Do you have the money?	17
D u hav t muny?	10 saving 41%;
Let's conduct our business in the committee room.	40
Let's cnduct owr bzns i t cmty room	27 saving 32%;
We can quote you a better price.	25
We c qoet u a betur prys.	18 saving 28%;
We can guarantee delivery by the first of the month.	42
We c gerunte delivury by t furst o t munth.	33 saving 21%.

Without extensive comparison of texts it is impossible to quantify the average saving of SPD SPLG. Savings of examples given here range from 14% to 61%.

It is found that in general, simple (short word) vocabularies result in greater savings while complex (longer word) texts result in smaller savings. For example:

You keep that up and you will catch it from me.	36
U keep tt up n u wil cach it fm me.	24 saving 33%;
If you continue to annoy me dire consequences will ensue.	47
If u cntinue tu unoy me dyr consuqensez wil ensoo.	40 saving 14%

Savings in newspaper texts (limited sample) show an average range of 12% to 23%. Newspaper materials contain many names of persons and places which are unaffected by SPD SPLG.

Savings in business materials (limited sampling), including letters, memos, reports, advertising, range from 10% to 30%. In children's materials, changing The Little Red Hen to SPD SPLG produces a 25% saving. When Mary Had a Little Lamb is written in SPD SPLO, a saving of 22.9% results.

Some feel that spelling reform will 'ruin' poetry, but this is short-sighted. Once readers are used to the appearance of SPD SPLG forms, much of poetry becomes more vivid. The spelling is less intrusive, less a barrier. It is as if the poet can speak more directly to the reader. This is all the more true of poetry that emphasizes the sounds of words, the rhythms and cadence of the lines. SPD SPLG enhances the rhythms of poetry. Some examples follow. (When reading the SPD SPLG lines try to imagine that this is the spelling in which you learned to read. If these lines are read, put aside, read again in two days, and again in two or three days, the spelling will begin to appear 'right'. It will begin to fit the words.)

Wm. Blake

Tiger! Tiger! burning bright
In the forests of the night,
What immortal hand or eye
Could frame thy fearful symmetry?

Tygur! Tygur! burng bryt
In t forests o t nyt
Wht imortul hand or ie
Cd fraym thy firfuul simutry?

Saving 19%.

Wm. Shakespeare

Double, double, toil and trouble,
Fire burn and cauldron bubble!

Dubl, dubl, toyl n trubl,
Fyr burn n cauldron bubl!

Saving 24%

VI

In this paper two spirits, one called up, the other aroused, are immediately at war.

The first springs from a deep element of the American character. It is a down-to-earth practicality, the spirit of what works. On the frontier people were forced to discover, respect, live by, what worked. The main test of staying alive, raising a crop, a cabin, a house, in making a living, getting anything 'done', was: does it work? This spirit, motif, called up by this paper, is immediately challenged. An attitude and ideal, outraged by much that is written here is the spirit of the King's English. For, altho a great force in the maintenance of traditional written forms is well-set habits, deeply ingrained habits, a greater force is the general desire to write the English of the King. This is the devout desire of all who set words down that their spelling will display nobility (of spirit), education, gentility, closeness to the standards of the court and of the King. Our spelling reflects, so we feel, our social class, our gentility, our social worth. Our spelling, therefore, must reflect the standards of the King. ('The King' is a historical metaphor; we in the USA have no King, but what we seek is the 'noblest' standard, the safest, the most respected standards available.)

The usual outcome is the calm and immediate throttling of any suggestion of change by the awesome power of following respected authority in written forms. However, in this age, do not rule out practicality. Perhaps reform of our inefficient spelling forms is an idea whose time has come. Perhaps, in this age, SPD SPLG will play a key role in the resurgence of civilization of the West. New odes await their authors, an invigorated literature, a new birth of education, of writing, of science, religion and law, of commerce and industry can be just over the horizon.

If resurgence comes, it will not be by the sword, but by the word.

(*A list of the 100 Speed Words, with their frequencies and letter-savings appeared on the penultimate page of the* ***February*** **Simplified Spelling Society Newsletter**. *Copies of the list may be obtained from* Ayb Citron, 2340 E. Hammond Lake Drive, Bloomfield Hills, Michigan, USA. — Editor)

APPENDIX
SPD SPLG Rules of Natural Spelling

1 Webster's Collegiate Dictionary, current edition is the pronunciation base.
2 Personal names, proper names, proper nouns are not affected.
3 Foreign phrases such as *eureka, ecce homo, esprit de corps* are not affected because users wish readers to know such phrases are foreign.
4 Homonyms distinguished in t.o. remain distinguished: *to, too, two = tu, too, tw ; there, their = thr, ther; tale, tail = tayl, tail, etc.*
5 Consonants are not doubled except when
a) both letters are sounded: *actual = acchooul*.
b) used to differentiate homonyms: *sent, cent = sent, sentt ; bear, bare = ber, berr ; sun, son = sun, sunn; bury, berry = bery, berry; fairy,ferry =fery,ferry.*
6 All other silent letters are eliminated.
7 **A** (long a) = *ai* : to differentiate homonyms: *sale, sail = sayl, sail ; male, mail = mayl, mail; tale, tail = tayl, fail, etc.*
8 A (long a). All final A's are long: *da, sa, ma, la, ga, ra, na, pla, tra, tuda, cla,* etc.
9 A (long a). Beginning or midwords = *ay: ayt, fayt, dayt, gray, naybur, creeayt*, etc.
10 A (wide a) = *ah : ah, hah, bah, mahtwh ; before R = a: star, far, dark, cart*, etc.
11 A (short a) = *a : cat, bat, platur, ceractur,* etc.
12 AU, AW. Initial sound or midword = au *: auto, authur, inauthentic; = aw at end of word: law, saw, caw, raw, draw,* etc.
13 AHJ = *ahj : garahj, mirahj, pursiflahj*, etc.
14 **B** = *b: but, bubl, combat, best, aybl*, etc.
15 **C** (/k/) = *c* (always hard): *cat, can, arctic, cemist*.
16 CH (/tʃ/) = *ch : church, chip, senchury, acchoouly, fech, cach,* etc.
17 **D** = *d: dud, dip, doodl, difur*.
18 **E** (long e). All final E's are long: *me we se thre tre* (except after O: *noe, oe*).
19 E (long e). Initial or midword = *ee : eet, feet, eeqal, creeayt, beleev*, etc.
20 E (long e). Final unstressed sound after L, R, etc: = *y : mery, fery, boldly, hotly*, etc.
21 E (long e). Final stressed syllable = *ee : apujee, perujee, purolee*, etc.
22 E (short e) = *e : bed, set, ded, any, nwny, helth, cer*.
23 **F** = *fat, fanfer, flu, fy, foto, graf*, etc.
24 **G** (/g/) = *g* (always hard): *gag, get, jygantic, strugl*
25 **H** = *h : ho, hot, inhibit, helo, unhapy*, etc..
26 **I** (long i). The word *I* = always upper case = *I*.
27 I (long i). Initial position = *ie : iedeeuh, ietem, ievry, iesosuleez*, etc.
28 I (long i). Midword or stressed ending = *y: dy, by, sky, delyt, nyt, reply, deny*, etc.
29 I (short i) = *i : it, bit, hit, inhibit, benufit, print,* etc.
30 I (ion as in million) = *uen : miluen, biluen, buuluen*.
31 **J** = *j : jump, jak, jenurul, trajic, jet, jem*, etc.
32 **K** (where traditional spelling uses K, except where K is silent) = *k : kit, kil, kichun, kitun, kik, brik, kept, kynd*, etc.
33 **L** *l: lap, laydl, ly, culur, colur, long, fuul*, etc.
34 **M** *m : man, memury, minimum, murmur*, etc.
35 **N** *n : no, nip, inturn, mention = menn, nation nayn, inusent*, etc.

36 NK = *nk : bank, tank, sink, blink*, etc.
37 **O** (long o). All final O's are long: *ziro, go, no, putayto, tumayto*, etc.
38 O (long o). Preceding L or R = *o : or, cor, dor, col, gol, gold, old*, etc.
39 O (long o). On both sides of a consonant = *o : hobo, lobo, foto, dodo, gogo*, etc.
40 O (long o). Initial sound or midword = oe *: oek-, ocean = oen, goet, foek*, etc.
41 O (short o) = *o : tot, hot, shot, object, fothur, forgot, nok,* etc.
42 OI = *oi : joy, ploy, poynt, joynt, uhoy, oyntmt,* etc.
43 OO between two consonants = *oo : boot, cool, drool, fool, pool, moor, scool*, etc.
44 OW = *ow: cow, brow, how, now, clown, down, owt, mownd*, etc.
45 ONG = *ong: long, song, tong, gong, strong*, etc.
46 **P** = *p peep, pepur, entempt, cupi, propel, pump*, etc.
47 **Q** = q (since Q is always followed by U, the U is omitted): qyt, qyut, qik, etc.
48 **R =** *r: ror, rip, roest, irutayt, rubur, letur,* etc.
49 **S** = *s : sleep, les, mes, nesusery, nesesuty, noosuns, syt,* etc.
50 SH = *sh: shur, shor, shayp, wish, wash, shaym*, etc.
51 **T** = *t: tot, tatl, tym, catl, braut,* etc.
52 TH (both soft and hard th) = *th: ths, thm, thay, thr, thoez, thump, lyth*, etc.
53 **U** (long u). All final U's are long = *u : u, nu, hu, shu, tru, tu, glu,* etc.
54 U (long U). On both sides of a consonant = *u : tutu, juju, cucu,* etc.
55 U (short u, schwa sound) = *u : nesusery, milutery, difucult, terubl*, etc.
56 U (short u) = *u : up, but, tut, clutur, butur, rut, supur*, etc.
57 UE When t.o. uses U or UE to express 'yoo' sound, SPD SPLG uses *ue : ues, uez, uenyted, buetifuul, uesfuul, produes, proseeduer,* etc.
58 UH (schwa sound ending a word) = uh *: dramuh, bananuh, bandanuh*, etc.
59 **V** = *v : valv, hav, vivayshus, vow, invalueubl, vys.*
60 **W** = w *: wow, win, wethur, whip, why, one = wn*.
61 **X** = *x xsept, xpect, xit, xytmt, thanx, pranx, x-ray.*
62 **Y** = *y yung, yooth, yes, yip, yelo, yel, yur, yurz,* etc (as consonant).
63 **Z** = *z : ziro, haz, zip, zu, layzy, legz , figz, daugz.*
64 ZH = *zh : pleasure = plezhr, measure = mezhr, treasure trezhr*, etc.
65 **OU =** *uu: puul,fuul, buul, bruuk-, wuul,* etc.

Footnotes

[1] Speed Spelling (SPD SPLG) advocated in this paper has three components:

a) the Hundred Speed Words,
b) eight prefix and suffix simplifications,
c) the set of rules for Natural Spelling. It is recommended that SPD SPLG be introduced in stages over a period of ten to twelve years.

[2] 'Frequency' means number of times used in a million representative American English written words from newspapers, fiction, textbooks, business, commerce, finance, science, law, private correspondence, manuals, newsletters, recorded speeches, etc. Frequencies are taken from Henry Kucera and W. Nelson Francis *Computational Analysis of Present-Day American English,* Brown University Press, Providence, R.I., pp. 6–10.

[3] During the first few years of the reform, when publishers are catching up on demand, students will see many materials in t.o. Therefore, during this period it will be necessary to teach students to read both t.o. and SPD SPLG, but to write only SPD SPLG.

[SSS Newsletter Autumn 1985. Later designated Journal 1. pp15–17 in the printed version]
[Chris Jolly: see **Bulletins**, **Journals**, **Newsletters**, **Media**, **Books**.]

9. The Introduction by Stages of New Letter-symbols

C.J.H. Jolly

[As Chairman of the Simplified Spelling Society and member of the Working Party, Chris Jolly contributes years of professional marketing experience in assessing the potential of reform proposals for the business community.]

The difficulty of representing some 45 phonemes by the 26 letters of the alphabet is well known. The problem is worst with the vowels where there are some 20 common phonemes (including diphthongs), but only six letters to represent them. Inevitably widespread use is made of digraphs, but any systematic use of digraphs seems to suffer from problems.

Take the word *poet* for example. If the sound /o/ is represented by OE, then the word should be spelt *poeet.* Otherwise the logical pronunciation is 'pote'.

Again, take the word *liveliest.* If /ai/ is represented by IE and /i:/ by EE, then the word should be spelt *lievleeest.* This is clearly absurd and highlights the main problem in using existing letters methodically:
1. far too often more letters are needed, not fewer
2. the new spellings can still be ambiguous.
3. the 'look' of the new spellings is frequently open to ridicule
4. compromise and modification are needed, so removing many of the intended benefits.

The other alternative of introducing new letters has usually been considered a long term ideal. However it has been rejected in the past because totally new alphabets were proposed. They resulted in wholesale change that is considered to be far too sweeping.

To find new ideas for introducing new letters piecemeal I looked at how this process has happened historically.

Take the letter J. Historically of course J developed from the letter I. Both existed way back in Roman times when the number 7 for instance could be represented by *vij* as well as *vii*. In the book of Common Prayer (1549) is the word *iudge*. However by 1630 the distinction was clear between I the vowel and J the consonant.

The letter V is another example. Both the letter forms U and V existed back to Anglo-Saxon times, and both were used for the vowel in *up* and the sound V. In 1623 Shakespeare was printed with the words *neuer, haue, seruice.* However by 1700 the distinction had been made between U the vowel and V the consonant.

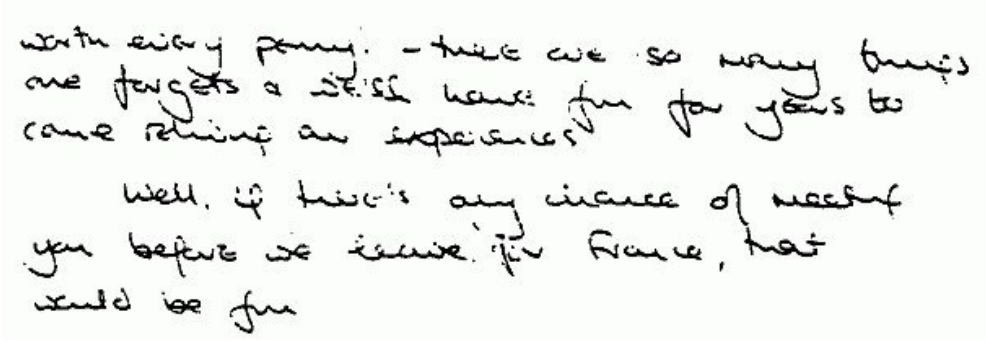
Consider the features these developments have in common:
1. one grapheme had two quite different forms that were being used interchangeably
2. this same grapheme also represented more than one phoneme
3. eventually the two letter forms split, each coming to represent different phonemes.

It is possible to say that a letter in the alphabet can be identified by six different characteristics:
1. sound, 2 cursive form, 3 lowercase, 4 uppercase, 5 name, 6 numerical position in the alphabet.
2. this same grapheme also represented more than one phoneme
3. eventually the two letter forms split, each coming to represent different phonemes.

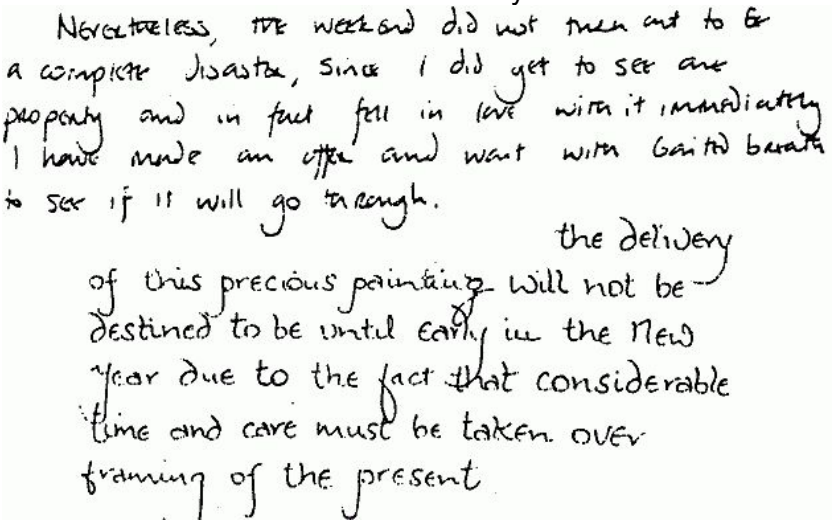
So, having considered the development of J and V, and the key features in the process, I set out to see whether the same features could be seen today in other letters. In particular were there any letters in the alphabet that had two quite different ways of being written (excluding capitals, of course)? Most especially I looked at vowels because it is here that the problems of a shortage of graphemes are most acute. I also started by looking not at printed material but at handwriting, because handwriting represents a person's free and voluntary use of different letter forms.

Let me show some examples, all of them chosen from personal correspondence to me over the years. I'll start first with the address on an envelope of a letter sent to me by Professor Ayb Citron.

Look at the word *Pembridge* and it can be seen that the letter E is formed in two quite different ways. Professor Citron is in good company since here is an example from another letter where the two forms of the letter E are again used interchangeably:



Other friends who have written use only 'Greek' E:



Note in the last example how the letter A is written — with the same letter form as the typescript 'a'. This form of A was hard to find in handwriting. However the distinction between typescript and manuscript form is made of course between normal and italic printing.

So here we find that both E and A have two recognizably different and quite discrete ways of being written. The big question is this: could we direct their use so that they come to be used for different phonemes?

To stand a chance of success a reform would have to apply to just a few vowel phonemes — not to all of them at once. So vowel phonemes would need to be classified into 5 groups, so that reform can take place to just one or two groups at a time.

Let me explain what this could mean. There are some 16 vowel phonemes (including diphthongs) that could reasonably require separate graphemes. These 16 have been classified into 5 groups which I have called the A vowels, the E vowels, the I vowels, the O vowels, and finally the U vowels. These vowel groups are listed below with some invented names for some of the vowels — those without common names:

Vowel Group	Example	Recognizable Spellings	Name	% of all phoneme occurrences
A	cap	a	short A	4.04
	carp	ar/ah	'lower' A	0.50
	cape	a..e	long A	1.88
E	bet	e	short E	3.50
	beat	ee	long E	1.96
	a bout	? final ER	neutral sound/ schwa	3.52
I	pit	i	short I	8.12
	file	i..e	long I	1.61
O	pot	o	short O	2.86
	port	or, aw	'lower' O	1.29
	pole	o..e	long O	1.66
	pool	oo	'upper' O	1.63
U	put	-	'upper' U	0.70
	putt	u	short U	(+
	pert	stressed ER	'lower' U	(=2.38
	fuel	ue	long U	0.31

Let us start with the three E vowels, the short E, long E and the neutral vowel. The choice of the E vowels has the advantage that E is already the most common letter, and hence is overused. At the same time it would allow the neutral vowel to be drawn out as a separate letter, so breaking an enormous deadlock in spelling reform.

Such a distinction between the E vowels could look like this:

		Short E	*Long E*	*Neutral sound/schwa*
1	Sound	/e/	/i:/	/ə/
		bet	beat	*a*bout
2	Cursive	*e*		
3	Lower case	e		
4	Upper case		E	
5	Name	et	ee	yer
(i.t.a. letter		e		-

Positions in Alphabet A B C D E F G

In practice this might mean:

1 words being spelt sed, sed; seat, set

2 printers' typefaces, and typewriters being encouraged to include both e and and in due course ə.

3 interim measures in typed material that allowed,say * or + for and where the distinction was important.

Marketing men often talk about 'relaunching' a product. Usually that means no more than a slight change to the packaging together with some new advertising. However the effect can be quite dramatic and a good candidate, for instance, might be a relaunch of Weetabix as 'W tabix'.

Let us continue this process with the A vowels, short A, long A and what I have called 'lower' A, the /a:/ sound as in carp.

Distinguishing the A vowels could look like this:

		Short A	*Long A*	*'Lower' A*
1	Sound	/æ/	/eI/	/ :/
		cap	cape	carp
2	Cursive			
3	Lower case	a	æ	*a*
4	Upper case		A	
5	Name	al	ay	arn
(i.t.a. letter		a	æ	

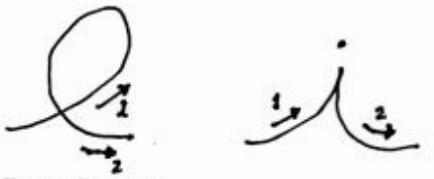
Positions in Alphabet A B C D E F G

To conclude, the disadvantages and advantages of the approach suggested here could be summarized as:

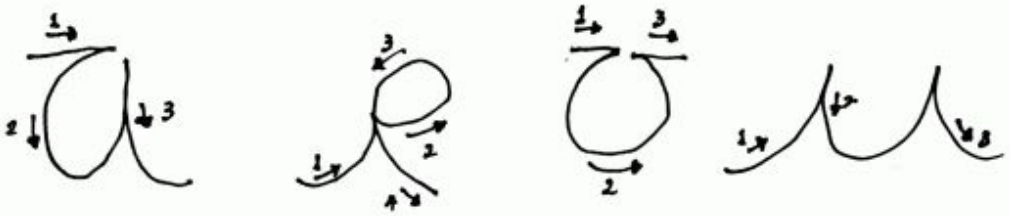
Disadvantages of new letter forms
1 unfamiliarity, learning needed
2 existing keyboards cannot print
3 printers' typefaces would need new letters
4 dictionary order.

However, against these points can be set:
Advantages of new letter forms
1 unambiguous
2 economy of letters
3 gradual introduction is possible
4 possibly less open to ridicule
5 assists in our understanding of phonemes.

1 One turning point:

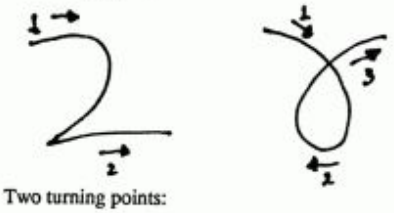


2 Two turning points:

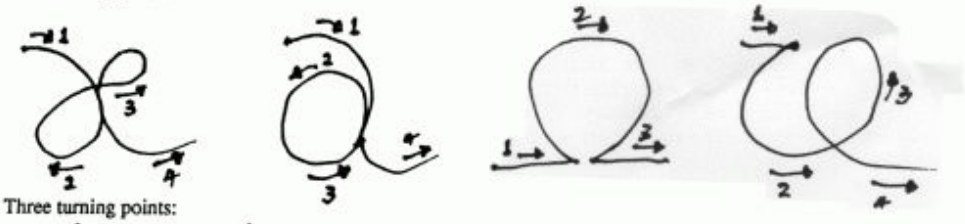


Potential Vowel Letter Forms

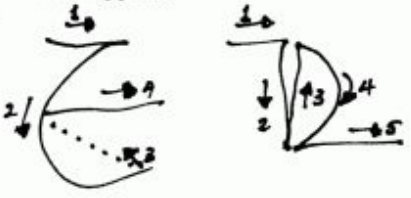
1 One turning point:



2 Two turning points:



3 Three turning points:



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10. Cut Spelling as a First-Stage Reform

Christopher Upward

[Christopher Upward lectures in the Modern Languages Department at Aston University, Birmingham, and is on the Society's working party revising New Spelling, as well as being editor of the Newsletter.]

Abstract
Spelling reformers must consider the practical implications of reform. Total reform without stages would risk undermining literacy, and, to avoid this, two criteria for a first stage are proposed:
1) it must be easily readable by adults without instruction;
2) children who are taught the first stage must be able to read t.o.
To ensure these criteria are met, ease of reading must have priority over ease of writing, and the disruptive visual impact of changes must be minimized. Types of reform are then analysed for their visual impact, and finally, Cut Spelling is claimed by its nature to satisfy the above requirements uniquely well, and is introduced with accompanying exercises.

1.1 Overall Strategy

To introduce a reformed orthography for English implies several major planning stages. Firstly, orthographers would need to propose an attractive, practical scheme and get it accepted. Secondly, there would need to be international co-ordination, at least by the English-speaking countries, or perhaps through the U.N., to ensure a single world standard for written English. Thirdly, each government would need to plan implementation of the reform in its own country. This article is however only concerned with the first part of the first of these major stages: the design of a reformed orthography.

1.2 Design and Implementation

When designing a reformed orthography, one cannot ignore the practicalities of its implementation. Design and implementation inevitably interact: design is subject to practical constraints, but at the same time the proposed reform may require practical measures to be taken which go beyond questions of spelling as such. Thus a reform needing whole populations to return to school is clearly impractical, while the introduction of even a single new character would entail changes to printing equipment.

1.3. Orthographic Stages

Some reformers earlier this century concerned themselves exclusively with designing what they hoped was a complete, coherent orthographic system, but gave little thought to the impact of its sudden introduction to a society already inured to a very different system. More recently the awareness has spread that reform must be introduced gradually, to ensure a smooth transition, but a full programme of suitable orthographic stages has yet to be devised. This paper attempts to establish some criteria for devising such a programme and then proposes Cut Spelling as a specific, far-reaching first stage that accords with these criteria. But to begin with we need to examine more closely why stages are needed at all.

2.1 Reform without Stages?

Two kinds of reform without stages are conceivable: one would tinker with details, without regard to any overall master-plan; and the other would aim at systematic wholesale restructuring of the orthography

2.2 Unplanned tinkering
English spelling could of course be improved by just adapting some details, regularizing a phoneme here, rationalizing an outrageous spelling there. But the chances of achieving the supreme orthographic quality of consistency by this method would be small. Almost certainly, opportunities for a profound rationalization would be missed, and later changes might conflict with earlier ones. This is the criticism Axel Wijk made of the 1920 proposals of the' American Simplified Spelling Board, though it is perhaps also ultimately the weakness of Wijk's own work, albeit on a much more scholarly level.

2.3 Systematic Reform without Stages
Could a *comprehensive*, systematic reform be introduced at a stroke, without stages? The Simplified Spelling Society's *New Spelling* is essentially such an attempt at the near-total regularization of English spelling, but its authors did not examine the likely effect of its introduction on different kinds of reader. Let us now do so.

2.4 Test-text for Reformed Orthographies
The following verse (with title) contains at least one example of each letter of the alphabet and each RP phoneme, and so demonstrates in concise fashion the visual effect of the orthography it uses. In t.o. it reads:

Fuzzy-opaque Orthographical Visions
There was a poor boy couldn't spell
His teachers thought: "Brain-sick!"
Mum and Dad hoped: "Dyslexic?"
Yet the child rashly jeered: "What the hell!"

2.5 New Spelling (NS) Transcription
Transcribed into New Spelling (1948) the verse reads:

Fuzy-oepaek Orthografikal Vizhonz
Dhaer woz a puur boi koodnt spet
Haaf dhe wurdz in our langgwej tuu wel.
Hiz teecherz thaut: "Braen-sik!"
Mum and Dad hoept: "Disieksik?"
Yet dhe chield rashly jeerd: "Whot dhe hel!"

2.6 Criteria of Acceptability
How can we judge if a reformed orthography is suitable for immediate introduction? We must consider the pattern of literacy after reform, when children would be taught the new spelling in school, but most adults, especially the less well educated, would not have received formal instruction. So the first criterion of feasibility has to be: *could all adults read the new system without instruction?* But equally important is surely the criterion: can *children who have only been taught the new orthography read t.o.?* For obvious reasons, failure to meet either of these conditions could mean a serious breakdown of written communication in society.

2.7 Does NS meet these Criteria?
Adults. Well-educated adults can struggle through an NS text, because (except for the digraphs DH/ZH/AE/UU) the sound-symbol correspondences are more or less familiar from t.o. and they are regular; and fluent reading would come with practice. Whether the less well educated could or would master reading in NS must be more doubtful.

Children. More serious however is whether children educated in NS would still be able to read t.o. The irregularity of t.o. would present enormous difficulties to children who had been taught only the regular forms of NS (and to have to teach t.o. as well would defeat the object of the exercise), the

letters Q and X would be unknown, and almost 70% of words (according to Wijk) would be spelled differently. Even simple words in the limerick like *there/was/though/hoped/vision* might prove obscure. NS thus appears not to meet the criteria for introduction proposed in paragraph 2.6.

3.1 Reform by Stages

Stages are needed, therefore, because any total reform will be visually so different from t.o. as to be incompatible with it from the reader's point of view. An idea for stages to overcome this problem is put forward in Harry Lindgren's *Spelling Reform, A New Approach*. His final system, Phonetic B, is even more remote from t.o. than NS is, and he suggests there should be some 50 small stages leading up to it. The need for stages here will appear inescapable from the transcription of the limerick.

3.2 Phonetic A/B Transcription

For lack of some of the diacritical characters used by Phonetic B, the following transcription also uses some forms from Harry Lindgren's intermediate system, Phonetic A, and is therefore somewhat less radical than full Phonetic B.

Fuzi-ôpék Orthografikl Vizhnz
Dher wz 'púr bó kudnt spel
Hàf dhwurdz in âr langgwj tû wel.
Hiz tìcrz thòt: "Brén-sik!"
Mum 'n Dad hôpt: "Disleksik?"
Yet dhcáld rashli jírd: "Wot dhhel!"

Without studying Fonetic A/B, even cryptologists might hesitate at this. It looks like a foreign language, uses apostrophe for shwa and diacritics instead of digraphs, spells vowels phonemically, merges articles with nouns, and only 4/33 words appear as in t.o. The system has great virtues, but could not be introduced without stages.

3.3 SR1, a Phonemic Stage.

As a first stage towards Phonetic B, Harry Lindgren suggests the sound /e/ should always be written plain E (*head* thus becomes *hed*) — a step he labels SR1. But SR1 can be criticized on two counts. Firstly its scope is very limited, as it only affects 1 out of 44 phonemes. Secondly it adopts an auditory, or phonemic, rather than a visual approach: though it writes /e/ consistently as E, SR1 does not mean the letter E is always pronounced /e/. SR1 tells you how to spell a sound, not how to pronounce a letter; in other words, it helps the writer rather than the reader.

4.1 Reading as a Prime Social Function

This leads us to propose a central reform-principle that the needs of readers must have priority over those of writers. In a literate society, reading is a universal, indispensable activity: we are surrounded by the written word, on TV, on signs and hoardings, on public transport, in shops, in instructions, at work, and in our dealings with government and the law. Unlike what we write, we have no choice over much of what we read — nor over its spelling. We are obliged to read whatever text we are face, as best we can. It is therefore crucial that readers should not be defeated by strange spellings.

4.2 Reading as a Psychological Function

Psychologically too reading and writing differ. Reading entails *visually* recognising groups of letters; while writing depends on recollecting the *sounds* of words (though there is also an auditory element in reading and a visual element in writing). If for a smooth transition between old and new we have to give priority to ease of reading, then the stages we propose for our reform must be based on visual rather than auditory criteria.

4.3 Visual Disruption in SR1
When we *look* at the SR1 changes, rather than *listening* to them, we find that the simple regularization of the phoneme /e/ has some far from simple visual consequences. Admittedly, most words in the SR1 list drop A (*head --> hed*) when it misleads as to pronunciation, and since no unaccustomed letters are inserted, visual disruption with these words is minimal (SR1 ignores the same pattern in the 14 words of the *earn* type, though). However SR1 also affects some common words whose forms differ jarringly from t.o. They all substitute letters, either one-for-one (as A/U = /e/ = E : *Any/ bUry = Eny/ bEry*), or one-for-two (as Al/AY/A ... E= /e/= E: *agAIn/ sAYs/ AtE = agEn/ sEs/ E*). One also notes that the /e/ pronunciation is not necessarily standard in these words, especially not in *ate*, which Americans pronounce /eit/.

4.4 Cutting to Reduce Visual Disruption
If the visual, rather than the phonemic, effect is the essential criterion for a first stage, clearly the regular pattern of cutting EA to E is visually far less disturbing than the sundry substitutions made in *et/ agenst/ ses* etc. Indeed in general we can say that omission of superfluous letters is less disruptive to the familiar look of words than is inserting or substituting letters: cutting leaves the essential phonic skeleton of words untouched, and indeed in longer words may even pass unnoticed.

4.5 Arbitrariness of Phonemic Stages
Another aspect of SR1 is the seeming arbitrariness of the foneme chosen. Almost all RP phonemes require attention, so why pick /e/? It may seem simple to deal with, but we have seen the visual disruption it causes.

4.6 Disruptive Long Vowels
If one criticism of SR1 is its limited effect, regularizing long vowels transforms spellings. The problem here arises from precisely that fact: because so many words are changed, a visual upheaval results. Again, the choice of the long values of AEIOU is rather arbitrary; and we have to ask whether children taught an orthography with regularized long vowels could then read t.o.

5.1 Degree of Change from T.O.
We have arrived at the idea of minimal visual disruption as a criterion for first stage reform. Let us apply now this concept to different orthographic systems, and examine how radically each diverges from t.o.

5.2 Computer-readable Codes
Computer-readable codes are perhaps the most remote from t.o. The opening words in a t.o. dictionary might be:

a aardvark aardwolf aback abacus abandon;

for the computer these could be compacted as

a 1ardvarj 4wolf 1back 3cus 3ndon.

Or the word *itself* could be spelled *itse* because no other word starts with these 4 letters and no ambiguity arises. Such forms may be efficient for data-processng, but they are not readily assimilated by the human reader, since the brain cannot store for ready recall all the information required to interpret such codes.

5.3 Redesigned Alphabets
One step nearer t.o. might be the most efficient conceivable human-readable system, perhaps not based on the Roman alphabet at all, but on characters designed specifically for easy reading and writing. Such systems may interest the typographical designer, but the upheaval their introduction would entail rules out their consideration for first stage reform.

5.4 Shorthands
Closer to t.o. again are shorthands designed for fast writing rather than easy reading. Some, like Pitmans, do not use the Roman alphabet, but others, like Speedwriting, do. Secretarial experience suggests shorthands are inherently reader-unfriendly, but a systematic examination of their potential for normal use might be illuminating.

5.5 Non-phonographic Abbreviation
The same doubt about reader-friendliness arises with systems of abbreviation whose forms do not represent phonemes, but have to be learnt individually. T.o. uses many such, with acronyms like USA and symbols like %. *Dutton Speedwords*, though using the Roman alphabet, builds up the vocabulary from 493 abbreviations for common root-words; but its abbreviations do not always derive from English — the personal pronoun 'you' for instance is written 'v', from the French 'vous'. Professor Citron's *100 Speed Words* on the other hand all have some affinity to t.o., but many nevertheless abandon the phonographic principle and so constitute a code.

5.6 Phonographic Systems with Diacritics
The systems listed below do adhere to the phonographic principle, but the closer to t.o. they get the more erratic become the sound-symbol correspondences. Phonetic B, which replaces the clumsy, ambiguous device of digraphs with acute, grave and circumflex accents, is highly efficient and economical (the great advantage of diacritics) but their disruptive visual impact rules them out as a first stage: they make English look more like Czech.

5.7 Phonographic Systems with Digraphs
NS on th other hand is neither phonetic nor economical. It uses digraphs for long vowels, diphthongs and consonants where the alphabet lacks an appropriate single symbol, and even expands X to KS, which is uneconomical as well as visually disruptive. Though less revolutionary than Harry Lindgren's diacritics, *NS* is still disturbingly different from t.o., and clumsy to boot.

5.8 Tidying-up Systems
Axel Wijk's *Regularized Spelling* essentially constitutes a tidying-up system. It changes the t.o. spelling of far fewer words than NS (29% instead of 69%); and to that extent it is visually less disruptive. It tries to ensure that a given spelling always represents the same phoneme; but it does not ensure the reverse, that a given phoneme always has the same spelling. Even so, the system requires a plethora of basically arbitrary rules, and one must ask: if one is going to go to such trouble, why not devise a fully consistent system? But if the system is unconvincing, the book itself is a treasury of t.o. sound-spelling correspondences of great value to orthographers for reference.

5.9 Phoneme-based Reforms
We have analysed two such proposals, SR1 and long vowels, in paragraphs 3.3 and 4.3–4.6 above. Their problem lies in the paradox that the more comprehensive they are, the greater the visual disruption they cause, and vice versa.

5.10 Reform by Visual Pattern
Lastly, before t.o. itself, we come to *Cut Spelling*, which is based on phonemically-defined visual patterns. It has just 3 main patterns (cf. the 50 SRs, or Axel Wijk's innumerable case-studies), and by omitting rather than actually changing letters, it ensures that the essential phonemic features of t.o. spelling are preserved, while visual disruption is minimized. Yet the gain in both regularity and economy is very substantial indeed.

6.1 Cut Spelling: its Rationale

Cut Spelling (CS) aims at maximum advantage by way of regularity and economy, combined with minimum disadvantage by way of visual disruption. A basic feature is that no letter that is pronounced, even if wrongly, is omitted; in this way the fundamental, recognizable framework or phonemic skeleton of each word in t.o. is retained. The word *any* (which SR1 changes to *eny*), for instance, is unchanged: because the A is pronounced, it is kept. If strictly applied, CS does not actually change any letters at all, but only omits them. Nevertheless it is worth considering whether some letter-changes can perhaps be profitably combined with CS. CS should meet the two key criteria previously set out: adults can read it uninstructed, and children taught only CS should still be able to read t.o., since it contains all the CS letters.

6.2 Rules of Cutting

CS has 3 main rules. Rules 1 and 2 (omit silent letters, simplify doubled consonants) are commonplace in most reform proposals. Rule 3 (non-spelling of post-accentual shwa) has a broad application to an intractable t.o. problem. CS cuts only post-accentual shwa because in fluent reading it is primarily the early letters in words that trigger recognition, while later letters (except for the final one) have the lowest visual prominence. Not spelling post-accentual shwa has the additional advantage of indicating the stress-pattern in words more clearly: if the noun *present* is cut to *presnt* , the second syllable cannot possibly be stressed, whereas the spelling of the verb *present* shows the second syllable may be stressed.

6.3 Application of CS to T.O.

The 3 rules may be formally stated as follows:

1 omit letters having no bearing on pronunciation;

2 simplify doubled consonants;

3.1 do not spell post-accentual shwa before L/M/N/R & -BLE suffixes (on the model of syllabic L/M in *appl(e)/ spasm/ rhythm*); and

3.2 do not spell the unstressed vowel in -D/-S/-ST inflections (on the model of *hate+D, hale+S, late+ST*).

These rules produce forms as follows:

Rule I

A hed ern coco
B lam det
C sience
D wensday
E edg ampl com shon imagin ar loos delegat liv valu ew; hart siv
G naw foren eit
H eir onest scool gost rythm thru wen wy
I frend juce receve
K nave nife noledg
L shud samn haf
N condem
O peple choclat tuch colnl
P seudo sycology receit
S iland
T hasen wisl cach
U bild sholder tho
W rite windo

NB No cut in: *comB to delegatE siGn acHe shoWn*

Rule 2
BB eb pebl abreviat
CC/CK pik pikl aclaim
DD ad padl adict
FF snif bafl aford
GG eg gigl agravate
(JJ=)DJ ajust ajectiv
LL bel alow filet aleviate
MM hamr imediat
NN in winr anul
PP apl aply
(QQ=)CQU aqit aqire
RR er wory iritate
SS fus tasl asembl
TT batl atemt
(XX=)XC exept
ZZ buz puzl
NB — No cut in *aCCept*, etc as both Cs are pronounced.
— Ambiguity in: *hoping/hopping, duly/dully,* etc.

Rule 3.1
L principl principly hovl fosl petrl usefl dificlt
M madm systm victm fathm conundrm autm
N hoolign importnt importnce beatn dependnt dependnce dependncy raisn curtn suspicn cushn pasn informatn lemn
R burglr standrd boundry teachr bitrly modrn lotry amatr authr histry vigr murmur figr martr
BL pasbl posbl
NB — Repeated consonants arise in such cases as: *maximm eminnt wandrr Febrry probbl*
— Possible non-omission after vowels, L and R.

Rule 3.2 (Regularize tense and number inflections of verbs and nouns, and the superlative inflection of adjectives, by only ever adding -D/-S/-ST)
+S archs teachs hedgs dodgs bushs pushs axs fixs breezs freezs
+D heard
+ST richst lushst
NB Forms containing doubled and/or repeated consonants such as: *masses gases losses fusses buses added needed* become: mass *gass loss fuss buss add needd*.

6.4 Test-text transcribed into CS,

Fuzy-Opaqe Orthograficl Visns

Ther was a poor boy cudnt spel
Haf th words in our language too wel.
His teachrs thot: "Brain-sik!"
Mum and Dad hoped: "Dyslexic?"
Yet th child rashly jeerd: "Wat th hel!"

(This CS transcription contains 152 letters; t.o. has 13.6% and NS 9% more, but Phonetic B 16% less.)

6.5 Degree of Visual Disruption

Just as Section 5 arranged various orthographies in order of remoteness from t.o., so the following hierarchy of cutting-patterns in CS shows the degree of visual shock each occasions, relative to t.o., the first being the least disruptive and the last the most disruptive.

1 Post-accentual shwa in polysyllabic words (Rule 3): *meteorologicl vice-presidnt*
2 Simplified consonants in polysyllabic words (Rule 2): *acomodating paralel comitee*
3 Silent letters in mid-word (Rule 1): *honymoon iland hauty cardbord gingerbred*
4 Post-accentual shwa in short words (Rule 3): *chapl randm pistn presnt undr*
5 Silent final letters (Rule 1): tho *handl imagin theatr goos minut elusiv ew wido*
6 Silent letter and post-accentual shwa omitted (Rules 1 & 3): *autm*
7 Consonant simplified, silent letter omitted (Rules 1 & 2*): rubd lakd snifd lagd feld jamd pland dropd rord hisd buzd buzd folo wino aro*
8 Consonant simplified, post-accentual shwa omitted (Rules 2 & 3): *batl botm bitn butr*
9 Omission of post-accentual shwa highlights misleading consonant-value: *suspicn visn permisn informatn crucifixn*
10 Silent initial letter omitted (Rule 1): *naw neel seudonym rong*
11 Various combined cuts: y

If some straightforward letter-substitutions are incorporated in CS, then the following patterns might arise:

12 GH/PH = /f/ = F: *laf cof fonetic autograf nefew*
13 DGE/GE = J: *ej juj bajr larj jinjr*.

6.6 Simplicity of CS

As well as satisfying the two criteria of first stage feasibility, a great attraction of CS is its simplicity. Firstly, it is simple to use, because it regularizes some of the most perplexing inconsistencies of t.o., such as single/double consonants and the spelling of post-accentual shwa, and it shortens words — a benefit that should not be underestimated. Secondly, it is relatively simple to apply to t.o., since cutting redundant letters is simpler than inserting new letters (insertion requires an additional set of rules).

6.7 Some difficulties of CS

Cutting does not however always just involve mechanically applying 3 rules, since snags are encountered in some orthographic or phonotactic contexts. Consider for instance the effect of omitting the capitalized letter in the following words: for Rule 1, *siGn* (becomes *sin*); for Rule 2, *hopPing* (becomes *hoping*); for Rule 3, *fatAl* (appears to rhyme with *cattle* which is cut to *catl*). In these cases omission is problematic, as will also be seen in the exercises at the end of this paper. These cases are however only snags for users of CS proficient in t.o.; children taught CS instead of t.o. would not perceive them as snags.

6.8 Implementation scenario

How could the implementation of CS be envisaged? The two key steps would be its introduction in schools in place of t.o., and a few years later its use by the publishing industry, particularly newspapers. Adults would receive guidelines for its use, but the only adults who would need actually to become proficient in it would be teachers and those professionally concerned with the production of printed text for public consumption. Such a relatively straightforward scenario depends on that characteristic of CS which other reform schemes do not share to anything like the same degree: the mutual intelligibility of CS and t.o. — which is another way of saying that CS meets the two essential criteria of feasibility.

7.1 Cut Spelling Reading Practice

This CS text also demonstrates the substitution rule GH/PH = /f/ = F. Read the text twice, once as fluently as possible, then more slowly, noting the variations from t.o.:

> Altho we ofn se unusul spelings such as 'Donut', english-speakrs ar normly taut evry word has a singl corect speling wich must be lernt, howevr much it difrs from th sound. Yet in most othr languages peple no speling needs modrnizing ocasnly, in acordnce with pronunciatn or

riting and reading habits. English has undrgon few changes in th past thre centuris howevr, tho genratns of scoolchildrn hav found it an obstcl to efectiv litracy. Not merely can most letrs be soundd in numerus difrnt ways, but ther ar so many ways to rite most sounds, and to make matrs wors, printd texts ar litrd with letrs wich cud be dispensd with altogethr — as this paragraf is intendd to sho. (14% letters saved)

7.2 Rule 1 Exercises

1 Write these words omitting the redundant letter:

plait	chaos	gauge	bad	heart
wrath	earth	doctrinaire	doubt	beauty
threat	climate	sergeant	bomb	chlorine
heir	witch	campaign	czar	heroine
white	friend	helped	badge	people
ascent	yeoman	ghost	cities	obvious
boar	rhythm	whole	frenzied	why
guard	seize	dye	juice	courtesy
court	turkey	sapphire	window	piece
peace	heated	island	camouflage	gnome
centre	come	shone	were	serve

2 Write these words omitting both redundant letters:

whore	porpoise	weight	couple	sieve
aisle	eye	psalm	handsome	journey
ptomaine	convalesce	psychology	Wednesday	bough
tongue	foreign	caps	meadow	subtle
should	trouble	caught	acquisitive	jealous

3 Write these words omitting all redundant letters:

autumn	courage	January	drought	knelt
build	wheeze	muscle	tortoise	kidney
please	exhaustive	condemned	pharaoh	psychotic
double	blackguard	straight	cupboard	ocean

7.3 Rule 2 Exercises

1 Write these words simplifying the doubled consonants
(NB i not all repeated consonants are 'doubled';
ii DJ, CK, XC count as doubled J, K, X):

rabbit	occur	add	cuff	egg
adjust	sack	all	annul	choppy
opportunity	err	fuss	attire	except
buzz	abbreviate	accept	account	adds
accommodate	afford	aggravate	adjudicate	alleviate
ammonite	annotate	appetite	irradiate	excite
assimilate	attribute	illusion	parallel	inn
committee	connexion	innocent	exaggerate	corrupt
support	odd	fizz	appalling	fully
massacre	irrelevant	connoisseur	unnatural	worry

2 Write these words as required by Rules 1 & 2:

fulfilled	apple	wholly	traveller	pillow
haemorrhage	success	parallelled	appropriate	licked
rheumatism	innocuous	scissors	whinny	furry

acknowledge	married	rubble	possessive	valley
allowed	bacchic	addressed	tapped	sizzle

7.4 Rule 3.1 Exercises

1 Write these words without spelling post-accentual shwa:

animal	vowel	devil	petrol	awful
flotsam	problem	denim	quantum	venom
curtain	dependant	dependent	raisin	season
burglar	modern	sulphur	satyr	author
vigour	injure	standard	history	anger

2 Write these words without spelling post-accentual shwa, noting the repeated consonants:

maximum	consonant	conjuror	February	linen

3 Write these words without spelling post-accentual shwa, noting the palatalized consonants:

special	politician	proficient	suspicion	vision
mission	condition	crucifixion	picture	seizure

4 Write these words, applying Rules 1, 2 & 3.1:

lacquer	pressure	banner	pennant	mirror
difficult	differ	different	sufficient	scissors
measure	smaller	bigger	beggar	builder
channel	thicker	thicken	thickener	bottom
written	chattels	battles	battlement	cotton
innovation	supplement	straightened	corrosion	addition

7.5 Rule 3.2 Exercises

1 Write these words without unstressed E and simplify any doubled consonants:

baited	raided	conceited	heeded	loaded
rooted	hooded	pushes	pouches	bridges
hisses	losses	gases	coldest	lushest

2 Write these words, applying Rules 1, 2 & 3.2:

biggest	sweated	touches	catches	guarded
embedded	congresses	discusses	discuses	fittest

7.6 GH

1 Write these words omitting GH:

naughty	straight	onslaught	weight	drought
bough	plough	taught	neigh	sleigh

2 Write these words omitting GH and any other redundant letters according to Rules 1, 2 & 3:

daughter	through	although	neighbour	brought

3 Write these words with F instead of GH and without any other redundant letters according to rules 1, 2 & 3:

laughter	enough	cough	draughtsman	tough

4 Write these words without G:

bright	high	mighty	midnight	alright

5 Write these words omitting G and any other redundant letters in accordance with rules 1, 2 & 3.

height	shipwright	frightened	eyesight	slightest

6 Write these words omitting letters in accordance with all the above rules and patterns:

rougher	farsighted	heighten	draughty	frightful
eighty	slaughter	sleighbell	sought-after	well-thought-of

7.7 PH

1 Write these words with F instead of PH where appropriate:

telephone	photograph	physics	uphold	elephant
atmosphere	philosophy	nephew	pharmacy	phrase

2 Write these words with F instead of PH where appropriate, and omit other letters in accordance with all the above rules and patterns:

phantom	upheaval	physical	shepherd	orphan

7.8 QU

Write these words without U after Q and omit other letters in accordance with all the above rules and patterns:

quite	quiet	question	queue	acquaint
equal	conqueror	mosquito	unique	opaque

7.9 Doubtful cases

Consider how and whether the following might be cut:

great	break	broad	group	sign
fatal	penal	final	total	comb
borough	thorough	dough	conscientious	squirrel

7.10 Transcription exercise

Write the following text in Cut Spelling:

> The Japanese have two ways of writing many of their words: they can write a character for each syllable, or a single logograph for the whole word. The latter system, it has been found, is read faster. Why should this be? Consider the physiology of reading: the eye moves along the line of script not smoothly, but in jerks (fixations), and at each fixation the brain registers only that segment of text that falls within the angle of vision. If words are shorter, more of them will tend to fall within the scope of each fixation, which should make reading quicker. Harder to assess however is whether there is any psycho logical obstacle to digesting more meaning per second.
>
> Reading of course is only one aspect of literacy. The benefits of a more economical script for the writer are easier to calculate. If 10% fewer letters are needed, then writing will be that much faster; and if spelling is more regular, there will be fewer errors and less recourse to the dictionary. When these words come to be printed, there will be similar savings on paper, the amount of space the paper takes up, the amount of energy required for making paper, printing and transport. Public sign-boards will no longer need to be so big, as many place-names will be shorter, sometimes sensationally. If the city of Leicester only ever used the spelling 'Lestr', the gains might even be measurable in the rate-payers' pockets.

8 Key to CS Exercises

Please note that a number of problematic forms are included in the answers (with a few alternative forms), which it is hoped will provoke discussion.

7.2.1	plat	caos	gage	bazar	hart
	rath	erth	doctrinair	dout	beuty
	thret	climat	sergent	bom	clorine
	eir	wich	campain	zar	heroin
	wite	frend	helpd	badg	peple
	asent	yoman	gost	citis	obvius
	bor	rythm	hole	frenzid	wy
	gard	seze	dy	juce	curtesy
	cort	turky	saphire	windo	pece
	pece	heald	iland	camuflage	nome
	centr	com	shon	wer	serv
7.2.2	hor	porpos	weit	cupl	siv
	ile	y	sam	hansom	jurny
	tomain	convales	sycology	wensday	bou
	tong	foren	cor	medo	sutl
	shud	trubl	caut	aquisitiv	jelus
7.2.3	autm	curage	janury	drout	nelt
	bild	weez/weze	must	tortos	kidny
	plese	exaustiv	condemd	pharo	sycotic
	dubl	blagard	strait	cubord	ocen
7.3.1	rabit	ocur	ad	cuf	eg
	ajust	sak	at	anul	chopy
	oportunity	er	fus	atire	exept
	buz	abreviate	accept	acount	adict
	acomodate	aford	agravate	ajudicate	aleviate
	amonite	anotate	apetite	iradiate	exite
	asimilate	atribute	ilusion	paralel	in
	comitee	conexion	inocent	exagerate	corupt
	suport	ad	fiz	apaling	fuly
	masacre	irelevant	conoiseur	unatural	wory
7.3.2	fulfild	apl	holy	travler	pilo
	hemorage	succes	paraleld	apropriat	likd
	reumatism	inocuus	sisors	winy	fury
	aknoledg	marid	rubl	posesiv	valy
	alowd	bacic	adresd	tapd	sizl
7.4.1	animl	vowl	devl	petrl	awfl
	flotsm	problm	denm	quantin	venm
	curtn	dependnt	dependnt	raisn	seasn
	burglr	modrn	sulphr	satr	authr
	vigr	injr	standrd	histry	angr
7.4.2	maximm	consonnt	conjrr	febrry	linn
7.4.3	specl	politicn	proficnt	suspicn	visn
	misn	conditn	crucifixn	pictr	seizr/sezre
7.4.3	lacr	presr	dificit	difr	difrnt
	banr	pennt	mirr	suficnt	sisrs
	mesr	smalr	bigr	begr	bildr
	chanl	thikr	thikn	thiknr	botm
	ritn	chatls	batis	batlmnt	cotn

	inovatn	suplemnt	straitnd	corosn	aditn
7.5.1	baitd	raidd	conceitd	heedd	loadd
	rootd	hoodd	pushs	pouchs	bridgs
	hiss	loss	gass	coldst	lushst
7.5.2	bigst	swetd	tuchs	cachs	gardd
	embedd	congress	discuss	discuss	fitst
7.6.1	nauty	strait	onslaut	plou	nei
	weit	drout	bou	taut	slei
7.6.2	dautr	thru	altho	neibr	brot
7.6.3	laftr	enuf	cof	draftsman	tuf
7.6.4	briht	hih	mihty	midniht	alriht
7.6.5	hiht	shipriht	frihtnd	ysiht	slihtst
7.6.6	rufr	farsihtd	hihtn	drafty	frihtfl
	eity	slautr	sleibel	sot-aftr	wel-thot-of
7.7.1	telefone	fotograf	fysics	uphold	elefnt
	atmosfere	filosofy	nefew	farmacy	frase
7.7.2	fantm	upheavl	fysicl	sheprd	orfn
7.8	qite	qiet	qestn	qu	aqaint
	eqal	conqrr	mosqito	uniqe	opaqe
7.9	gret	brek	brod	grup	sign
	fatal	penal	final	total	comb
	boro	thoro	doh	concientius	sqirel

7.10

Th Japnese hav t(w?)o ways of riting many of ther words: they can rite a caractr for each sylbl, or a singl logograf for th hole word. Th latr systm, it has been found, is red fastr. Wy shud this be? Considr th fysiology of reading: th y moves along th line of script not smoothly, but in jerks (fixatns), and at each fixatn th brain registrs only that segmnt of text that fals within th angl of visn. If words ar shortr, mor of them wil tend to fal within th scope of each fixatn, wich shud make reading qikr. Hardr to ases howevr is wethr ther is any sycologicl obstcl to digesting mor meaning per secnd.

Reading of cors is only one aspect of litracy. Th benefits of a mor economicl script for th riter ar easir to calculate. If 10% fewr letrs ar needd, then riting wil be that much fastr; and if speling is mor regulr, ther wil be fewr errs and les recors to th dictnry. Wen these words com to be printd, ther wit be similr savings on paper, th amount of space th paper takes up, th amount of energy reqired for making paper, printing and transport. Public sign-bords wit no longr need to be so big, as many place-names wil be shortr, somtimes sensatnly. If th city of Lestr only evr used th speling 'Lestr', th gains miht even be mesrbl in th rate-payrs pokets.