

ISLS: THE INSTITUTE FOR THE STUDY OF

language

&

society

ASTON PAPERS IN LANGUAGE STUDY AND DISCOURSE ANALYSIS

ASTON UNIVERSITY

Christopher Upward

ENGLISH SPELNG:
TH NEED FOR A SYCO-HISTORICAL PERSPECTIV

(ENGLISH SPELLING:
THE NEED FOR A PSYCHO-HISTORICAL
PERSPECTIVE)

Aston Papers in Language Study and Discourse Analysis
(No. 4)

ISLS

This paper has been produced in association with the
Simplified Spelling Society

© The author.

ISSN 1350 2654

ISBN 1 85449 231 4

Published by ISLS (The Institute for the Study of Language & Society),
Aston University, Aston Triangle, Birmingham, B4 7ET, United Kingdom.

Printed by Reprographics Services, Aston University.

First published in 1996.

**ISLS:
THE INSTITUTE FOR THE STUDY OF LANGUAGE &
SOCIETY**

CO-DIRECTORS

Paul Chilton
Christina Schäffner

ADVISORY GROUP

Professor Christopher J Brumfit BA MA PhD DipEd
Sir Adrian Cadbury MA HonDSc HonLLD CBIM
Professor Douglas W J Johnson BA BLitt
Professor Kurt Kohn DrPhil
Professor Sir Randolph Quirk CBE DLitt FBA
John M Raisman CBE MA HonLLD HonDUniv HonDSc
Vincent Wright BSc PhD

Note on th spelng used in this paper

To ilustrate a point made in its conclusion, this paper is ritn in Cut Spelng (CS), a simplifyd orthografy wich cuts redundant letters by 3 rules:

- 1 CS cuts letrs irelevnt to pronounciation: *debt* becomes CS *det*.
- 2 CS cuts letrs representng post-accentul schwa with L, M, N, R: *bottle*, *bottom*, *button*, *butter* becom *bottl*, *bottm*, *buttn*, *buttr*; it also cuts vowel-letters in inflections and some suffixs: *washd*, *washng*, *washes*, *washbl*.
- 3 CS simplifys most dubld consonnts: *bottl*, *bottm*, *buttn*, *buttr*, *accommodation* becom *botl*, *botm*, *butn*, *butr*, *acomodation*.

Aditionly, 3 rules of letr-substitution aply:

- 1 Th sound /f/ is spelt F: *fotograf*, *enuf*.
- 2 Th sound of /j/ is spelt J: *jinjr*, *juj*.
- 3 IG pronounced as long /i/ is spelt Y: *sigh*, *sight*, *sign* becom *sy*, *syt*, *syn*.

CS also reduces th use of capitl letrs and apostrofes.

Readrs unfamiliar with CS shud try to ignor unusul spelngs until, with practis, readng becoms fluent.

A ful acount of CS is givn in *Cut Spelling: a handbook to the simplification of written English by omission of redundant letters*, Birmingham: Simplified Spelling Society, 2nd (revised and expanded) edition 1996.

English Spelling: The Need for a Sycological-Historical Perspective

Christopher Upward

1. Themes and their interpretation: an outline of this paper

This paper arises from a presentation entitled 'The Development of English in Spelling: applying past lessons to the future', given at the 31st Annual Conference of the United Kingdom Reading Association (UKRA) in July 1994. The themes of the conference were announced as 1) the development of English, 2) the demands of a literate society, 3) literacy and language, 4) knowledge about language, and 5) literacy difficulties of children and adults, to which the present author adds, by way of conclusion to his paper, 6) the future. The approach to be adopted to these themes was outlined as follows.

Regarding "the development of English", a historical view of the problems of modern English spelling is argued to be essential. The alphabet is a key invention of human civilization, yet over the past 900 years English has carelessly frittered away its main advantages. We have to understand how a situation has arisen which has been aptly described as "one of the world's most awesome messes" (Pei, 1968).

As to the "demands of a literate society", these are fundamentally two. One is that when people see a written word, they should be able to tell what it says; and the other is that when they wish to write a word, people should be able to do so in a manner acceptable to any reader. If these two demands are not met, none of the more sophisticated demands of a literate society can be fully met either. The ability to decode and encode any English word from and into its written form is the foundation for all education.

"Language and literacy" implies understanding the psychology of alphabetic writing systems, and judging the English writing system (i.e., its spelling) in that light, in the process dispelling some of the myths that are commonly woven around the subject in English-speaking countries at the present time.

"Knowledge about language" concerns how languages are written down, that is, their writing systems, and how these can help or hinder literacy. Specifically, it means knowledge of the obstacles which the present misuse of the alphabet creates for literacy in English. For it is impossible to be as literate in English as in, say, Italian, Spanish, or German.

The fifth theme “literacy difficulties of children and adults” brings together the four previous themes, which highlight and explain the “cognitive confusion” (Vernon, 1957) children and adults alike experience when faced with written English.

The conclusion drawn is that we should not just accept these literacy difficulties as inherent in English, but examine how they can be overcome. Theorists and teaching methodologists tend to look for answers in the learners themselves and in new approaches to teaching, the latter recently associated with such terms as whole language, real books, look-and-say, reading recovery and phonics. Yet this paper will attempt to show that the problem lies not in the learners, nor, primarily, in teaching methods. The problem and its solution lie, it will be suggested, not so much in how learners approach literacy acquisition in English, but rather in what the task consists of. For the task is both absurd, and, as a British government report (Cox 1989) admitted, ultimately impossible.^[1] It is in our hands to make that task more manageable than it is today, by developing a writing system that is more user-friendly, and above all more learner-friendly.

fig 1 Themes and their interpretations

GIVEN THEMES	INTERPRETATION
1. <i>development of English</i>	<i>from (relative) order to (relative) chaos</i>
2. <i>demands of a literate society</i>	<i>to encode and decode ANY word</i>
3. <i>literacy and language</i>	<i>alphabet as psychological cornerstone</i>
4. <i>lack of knowledge about language</i>	<i>English spelling as handicap</i>
5. <i>literacy difficulties of children & adults</i>	<i>cognitive confusion</i>
6. <i>the future</i>	<i>need to reduce confusion</i>

¹The ‘[Cox Report](#)’ ([English for ages 5 to 16, 1989](#)) was the final document of the National Curriculum English Working Group set up under the chairmanship of Professor Brian Cox in 1988 to prepare the National Curriculum for English. It stated (§17.33) that “the aim cannot be the correct unaided spelling of any English word — there are too many ... that can catch out even the best speller”.

2. Appreciating the difficulties

It is hard for literate adults to appreciate the difficulty faced by the learner in English, because they have mostly forgotten what it was like to try and make sense of the way English words are represented in writing. For literate adults, reading and writing are largely automatic and, at least with everyday vocabulary, insuperable difficulties are rare. But specialized vocabulary is another matter, and even in our everyday encounters with written English, there are certain areas where all of us are liable to stumble. Considering these hazards may help us both empathize and sympathize with learners, for whom everyday English spellings are no less perplexing.

One such danger zone is the spelling of names, of both people and places. Let us look at a small sample of English place names, and imagine we have to telephone details of an itinerary to a foreign visitor. Such well-known freaks as *Gloucester* and *Reading* will be ignored here on the assumption their spelling and pronunciation are known (though the *Reading Centre* at the University of *Reading* embodies an appropriately cruel trap, being concerned with *reading*). The recommended tour for our foreign visitor starts at *Warwick*, whose pronunciation is shown on the motorway sign as rhyming with *historic*. That may require some explanation, especially if our visitors are Americans who most likely sound the two syllables as WAR-WICK. Next stop is the little town of *Towcester*, which sounds like *toaster*, though the innocent stranger is likely to read it as though spelled TOE-SESTER, TOUSESTER or TOUSTER. The route then picks up the course of the river *Nene* by Northampton, where it is pronounced as though spelled *NENN*, but by the time it reaches Peterborough the river's name has conformed to its spelling — though *NEEN* would be clearer still. We continue east to *Wisbech*, whose B-E-C-H is in origin the same word and has the same pronunciation as the B-E-A-C-H of nearby *Holbeach*. Next comes *Grantham* in Lincolnshire, whose TH is the same digraph as heard in *anthem* and does not reflect the structure GRANT+HAM; but a detour to *Gotham* in Nottinghamshire provides the reverse reading of TH with separate value (or rather with elided H), as though spelled GOATM. Cutting across country to the northwest, we recommend *Blackley* in Manchester, which sounds like BLAKELEY, followed by Yorkshire's *Keighley* with its unique pronunciation of the jocular weird grapheme GH, as though it were TH. Our destination, the climax of our orthographic mystery tour, is up in the northeast, the district of — how should we read it? — L-A-N-G-B-A-U-R-G-H. A by-election held there a few years ago left the media as unsure how to call the place at the end of the campaign as they had been at the start.

figr 2 Orthografic mystry tour of England

<i>(historic) Warwick</i>	UK /wɒrɪk/	US /wɔːwɪk
<i>Towcester</i>	/toːstə/	
<i>Nene</i>	/nɛn/?	/niːn/?
<i>Wisbech (Holbeach)</i>	/wɪzbiːʃ/	
<i>Grantham, Gotham</i>	/græneə̃m/	/goːtə̃m
<i>Blackley</i>	/bleːkli/	
<i>Keighley</i>	/kiːθli/	
<i>Langbaurch</i>	/læŋbɑːf/?	

Natrly, in foning al these names to our foren visitrs, we chek them in th dictionris (eg, Pointon, 1990; Wells, 1990), but they may wel giv alternativ pronunciations, or pronunciations that disagree with wat th locals say. Th dictionry pronunciation for our final destnation sujests th spelng LANGBARF, but nobody seemd to pronounce it so in th election, wen th herd variants sujestd spelngs like LANGBAU, LANGBAR, LANGBURGH insted.

Sevrl obsrvations folo from this orthografic mystry tour. Th most obvius is that, wen litrat english-speakng adlts canot tel how to read such names, it is english spelng that is to blame for preventng th excrise of a basic litracy skil. This dificlty of english spelng is compoundd for strangers ho ar mor usuly unfamiliar with th place names concernd — a point nicely made by a recent newspaper cartoon [\[2\]](#) wich showd a begr on a Londn street ofrng an american tourist th corect pronunciation of *Leicester Square* for th price of 75p. Non-nativ speakrs, ho ar jenrly even less familir with th varying patrn of sound-symbbl corespondnce in english, face particulr dificlty, tho it is ironic that ther mispronunciations shud so ofn be greetd with supercilius mirth by nativ speakrs wen th latr ar themselvs scarcely less vulnrbl to th vagaris of english spelng.

A secnd obsrvation concerns th way many dictionris try to overcom this opacity of english spelng. If, in ordr to find out how to pronounce a word hos spelng we ar unable to decode, we look it up in a dictionry, we ar then very likely confrontd by th exotic symbbls of th Intrnational Fonetic Alfabet (IFA). Peple ho do not no how to pronounce th GH in *Keighley* ar thus

² Th cartoon apeard in *The Guardian* on 25 july 1994, 2, p8.

expected to not have the Greek letter theta and its sound value — or at least to hunt them down in a table elsewhere in the dictionary. One is bound to ask what proportion of dictionary users are assumed by dictionary makers to be conversant with the IPA, or to be willing (or able) to take the trouble to search for the key. The inconvenience of dictionaries in this respect is highlighted by a typical bilingual Spanish-English dictionary (Smith, 1971), where every English word has its pronunciation separately shown in IPA symbols, while the Spanish pronunciations are transparent from their normal spelling. Similarly, one German-English dictionary (Collins, 1991) says “German pronunciation is largely regular, and a knowledge of its basic patterns is assumed” (what is meant here is of course not that German pronunciation is largely regular, but that German patterns of sound-symbol correspondence are).

Our main lesson from the orthographic mystery tour, however, is that the problems literate adults experience with such place names are precisely the problems that learners experience with the basic vocabulary of the English language. Listed in *fig 3* below are 57 words from among the 200 most commonly occurring in English, yet the reading and spelling of each one is to beginners as unpredictable as those place names were for literate adults. They are unpredictable in the sense that in crucial respects the letters they contain do not tell the reader how to pronounce them, nor the writer how to spell them. (The words of Germanic origin are listed separately to refute the claim by a noted literacy specialist that Germanic derivations have “basically phonemic spellings”. Such fundamental misconceptions as to the nature of English spelling are no rarity.)

fig 3 Beginners mystery tour of written English

57 aberrant spellings among the 200 commonest English words
<p>52 aberrant spellings in words of Germanic derivation: <i>of, to, was, have, are, which, you, they, were, there, one, all, their, would, when, who, more, said, what, some, only, could, two, other, do, any, should, before, where, many, your, work, know, might, through, own, here, great, come, again, though, thought, right, world, while, against, does, always, young, why, once, nothing</i></p>
<p>5 aberrant spellings in words of French derivation: <i>Mr, people, (be)cause, course, government</i></p>

Provided we can detach ourselves from the appearance of normality that these spellings inevitably have for literate, English-speaking adults, the difficulty they present for beginners is evident. For instance, the most common word in the list, *of*, suggests the pronunciation of *off*, and the next most common suggests the pronunciation of *toe*. Particularly notorious among teachers is *once*, which beginners commonly mispronounce as though spelt ONKI. But over and above these 57 exceptionally irregular forms, there are many, many others among the 200 commonest words which contain less unpredictable sounds, such as the vowel in *first* or *most* or *good* or *few*, or the fact that *as* has a different S-sound from *us*, or that the E in *time* and *little* is silent.

3. The alphabetic principle: a case study in B

To understand the cause and the cure for these difficulties, we need to go back to the origins of the alphabet. The general way in which most of our letters came down to us can be illustrated from the development of the letter B (as told by Healey, 1990).

The symbols of Egyptian hieroglyphics originated a good 5,000 years ago, typically as pictographic representations of visible phenomena. Thus a rectangle with a gap in its lower side represented the ground plan of a one-room house with a doorway. As the word for *house* was pronounced with the consonants /p-r/, the symbol could be taken to stand for those sounds as well as for the word meaning *house*.

egyptian hieroglyphics:  = /p-r/ = *house*

This correspondence between the symbol and the consonants of a particular word allowed the same symbol to be used also to represent the same consonants occurring in different words. In this way, Egyptian hieroglyphics, despite its vividly pictographic appearance, operated to a considerable extent as a phonographic writing system, i.e. one that represented the sounds of words. It could, however, not yet be described as an alphabet, because there were still hundreds of such symbols, and they were not consistently used to represent sounds unambiguously.

The next, crucial stage came around 3,700 years ago, and was initiated by Semitic peoples living in the zone of Egyptian influence. In their Semitic languages the word for *house* was, approximately, *bet* or *beth*, and to represent it, they took the hieroglyphic rectangle symbolizing *house* in Egyptian, and used it to represent no longer the whole word for *house*, but only the first consonant,

wich was /b/, in ther quite difrnt pronounciation of th word. This process of representng th initial sound of a word is nown as ‘acrofony’. These semitic peples then used th same symbl (simplifyd to four asymetricl strokes from th symetry of five in hiroglyfics) consistntly to represent th singl consntt foneme /b/ whetevr it ocurd in ther languaj.

semitic acrofony:  = /b/

So was inventd th alfabetic princip, that each sound shud be ritn consistntly with its own symbl, with that symbl conversly always standng for th same sound. (Incidently, th word *bet(h)* survives in modrn english as th final sylabl of our *alfabet*, as well as hebrew place names such as *Bethlehem*.

Th shape of th letr B subsequently pasd thru sevrل stajes befor acheving th form we no today. Thus th fenicians cursivized th previously rectangulr box:

fenician, c.–1000  = /b/

and erly greek ryt-to-left riting dubld th loop, perhaps to prevent confusion with othr simlrly shaped fenician letrs, tho an alternativ orijn for th greek letr has been proposed (Bernal, 1990) [\[3\]](#):

arcaic greek, c.–700 *beta*  = /b/

Wen classicl greek finaly, by around th –6th century, fixd upon th modrn westrn left-to-ryt direction of riting, many letrs, including *beta*, wer reversd, so producing todays form **B**.

Th signifciance of this hole evlution was that th alfabetic principle once establishd, was observd thruout, with th B symbl consistntly retainng th sound-valu /b/, and that sound-valu being consistntly representd by that symbl. In th same way, most of th letrs of our alfabet wer desynd to corespond unambiguusly to a givn sound and vice versa. Th alfabetic

³Bernal sujests that th dubl loop of greek *beta* may derive from a difrnt semitic letr altogethr; but that dos not afect th argumnt presentd here.

principally represented an enormous advance over earlier writing systems, such as Egyptian hieroglyphics or Mesopotamian cuneiform, as it allowed the whole language to be written down by means of a couple of dozen letters, which could be quickly learned and easily used. It is not surprising that by the early Christian era the cumbersome, complex hieroglyphic script fell into disuse, and indeed that alphabets have today prevailed throughout most of the world.

However, the real secret of the alphabet's success is cyclical: it is based on the simple yet systematic visual representation of speech, which is the primary manifestation of language in human consciousness. The weakness of hieroglyphics was that it failed to integrate the visual dimension systematically with the spoken, a failure that is, fundamentally, also the weakness of modern written English today. That is why there are in English-speaking education circles today endless, and ultimately fruitless, arguments as to whether, in considering literacy in English, it is the visual aspect that should have primacy over the auditory in the teaching/learning process, or vice versa. If written English observed the alphabetic principle there would be no basis for such arguments, as the visual and auditory dimensions would simply be two sides of the same coin.

Nevertheless, as the alphabet spread from one language to the next, from Phoenician to Greek, and from Greek to Latin, and from Latin to English, maintaining the alphabetic principle was not always a simple matter, indeed a variety of complications could arise. Thus, if one language adopted the alphabet wholesale from another, it was sometimes difficult to identify the same phonemes in the new language, and the sound-values of the letters therefore sometimes did not quite fit the original alphabetic scheme. Furthermore, when vocabulary was borrowed from another language, it was not obvious whether its foreign spelling should be borrowed too, especially if the pronunciation of such vocabulary was different in the borrowing language. A separate problem was that, even without borrowing from one language to another, words often change their pronunciation in the course of time, and when that happens, the original spelling may cease to show the sound of a word according to the alphabetic principle. In such circumstances, a language may consider it appropriate to preserve the spelling of words as they were borrowed or as they had formerly been used. Finally, unless the spelling of a language is subjected to critical scrutiny by authorities who understand the factors involved, the written form of words may be determined by historical accident, carelessness, or even crass ignorance.

These difficulties lie at the heart of the English spelling problem, as can be seen from the letter B in the following examples, where the silent B in English is compared with its occurrence or non-occurrence in related words in the same

languages, German and French. The B in *dumb, lamb*, though now silent, is a relic of historic pronunciations, and similarly medieval German pronounced P in the cognate words *dump, lamp*; but when the P fell silent in German, the alphabetic principle ensured its disappearance from the written form of words, and so it does not figure in modern German *dumm, Lamm*. Slightly different is the silent B in English *crumb, thumb*, where it was inserted by analogy perhaps with the historical B of *dumb, lamb*, or perhaps with the epenthetic B in *crumble, thimble*, which was inserted as the new consonant came to be pronounced; but either way, there was no alphabetic or historical justification for inserting B in *crumb, thumb*. A slightly different story lies behind the B in *bomb, tomb* which derive from French *bombe, tombe*; but while French preserves the sound of B, English preserves the letter B without the sound. So the alphabetic principle has become corrupted in English: English-speaking writers can no longer tell from the pronunciation of words which of *ram, lam* or *crum, rum* should be written with a final B, nor can non-native speakers tell from the spelling which of *bomb, bombing, bombard* has a silent B. The inevitable consequence is that misspelling and mispronunciation are rife.

4. Alphabetic modernization and anti-alphabetic conservatism

Old English, the language of the Anglo-Saxons, had the distinction of being the first major European language, other than Latin itself, to adopt the Roman alphabet (around the year 600). The Anglo-Saxons needed several centuries to develop a more or less standard spelling system, but once they had done so (around the 10th century), it was fairly straightforward, because its foundation was the alphabetic principle of predictable sound-symbol and symbol-sound correspondence. There is every reason to believe that, without the Norman Conquest (1066), written English would have evolved smoothly and naturally, continuing to respect the alphabetic principle to produce a modern spelling system comparable in its rationality and simplicity to those of Dutch, German or the Scandinavian languages today.

Indeed, the spelling of quite a few words has developed in this way, with letters ceasing to be written as their sounds fell silent (like the P from medieval German *tump, lamp*) over the next four centuries. Thus we see the Old English form *endleofan* reducing through *endlevene* (13C), *enleven* (14C), to reach modern *eleven* by the 15th century. More drastic was the reduction of Old English *hlafweard*, which became *laford* (12C), *loverd* (13C), and by the 14th century modern *lord*. The Domesday Book (1089) reduced Anglo-Saxon *Dornwaraceaster* to *Dorecestre*, which was already almost modern English *Dorchester*. If every word descended from Old English had evolved like these, beginning learners would not today face 52 problemspellings of Germanic origin among the 200 commonest words in the language.

Howevr, othr Old English forms developd less satisfactrly, thanks to th impact of printng, introduced to England from th contnt in th 1470s by William Caxton. To help sel ther books, printrs tendd to aim for a comn, publicly acceptbl orthografy, wich representd a kind of spelng standrd reachd by consensus. They wer not intrestd in anything as abstract as th alfabetic principl, nor in th needs of litracy teachng for mass education. Once printrs had mor or less agreed on this standrd, it workd against any furthr chanje in spelng, because stranje new spelngs cud be presumed to put readrs off. Yet enormus chanjes took place in th pronunciation of many words aftr th advent of printng, and these chanjes wer then not reflectd in chanjes to th spelng. Thus ther wer certn sounds wich wer stil pronounced perhaps for 200 years aftr printng was introduced, and tho they are silent today, they are stil shown in th spelng. In these cases, th alfabetic principl eccentricitis (and concomitnt litracy problms) that ar caracetristic of modrn english. Typicl cases ar *answer* wich retains a now silent W, *knight* which retains now silent K and GH, and *Worcester* which retains a hole sylabl that no longer coresponds to th pronunciation.

5. Th impact of french

Th abov exampls of spelng developmnt or non-developmnt ar al words desendd from Old English. But long befor printng had stopd english spelng continuing to evolv in line with pronunication, th influx of words from french from 1066 had been undrmining th simplicity of th Old English spelng system mor fundmently. For instnce, unlike Old English, french used th letr C for th sounds of both /k/ and /s/, but also used th letrs K and Q for th sound /k/, as wel as th letr S for th sound /s/. If french was uncertn on these points, ther impact on english was to spred confusion far and wide.

By th 16th century the letrs C and S, wen pronounced /s/, had in many words becom mor or less intrchanjebl. Th foloing exampls sho how, altho they ar mostly no longer intrchanjebl in individul words in modrn english, C and S ofn swich arbitrly between *groce*: *grosser*, modrn english preservs th reverse altrnation between *gross*: *grocer*, and simlrlly from 16th century *lowce*: *lyse* to 20th century *louse*: *lice*, from *offense*:

offensive to *offence*: *offensive*, from *presede*: *supercede* to *precede*: *supersede*, and from *sause*: *saucege* to *sauce*: *sausage*. Comparison with modern French highlights the arbitrariness of other such variations (sometimes in French as well as English): French has *conseil* for meanings which English distinguishes as *council*: *counsel* (*council* served for both senses in 16th century English), and in *danse*: *rinse* French has the reverse alternation to English *dance*: *rinse* (16th century English also wrote *danse*: *rinse*).

Other 16th century alternations correspond to modern spelling traps involving C/K, as in *skeptick*: *skeleton* (cf. American *skeptic* and 16th century *septre*), or C/T as in *antient*: *patient*, *condicion*: *suspition*, *spatious* (modern *spacious*: *spatial*). We regularly note some 16th century spellings which would have benefited learners ever since: *sizzers* avoids the triple trap of modern *scissors* (why C? why SS for /z/? why -OR?), and *vicount* avoids the confusion of modern *viscount*, which is riven with S like Italian *visconte*, but spoken without it like French *vicomte*.

Not merely were the 16th century alternations and alternatives no more illogical than today's equivalents, but we inevitably ask, if C/S were so readily interchangeable 450 years ago, why did English not regularize their use — as America does in a few cases, such as S in both *defense* and *defensive*? If a powerful 16th century monarch like Henry VIII or Elizabeth I had decreed the regularization of English spelling, there were plenty of scholars at that time who would have left to implement the royal command (Scragg, 1974). But the command never came, and teachers today are left unable to explain to learners why, in our efficiency-conscious age, writing *sizzers* is wrong, although the 'primitive' 16th century allowed it.

6. Lost opportunities for regularization

If the best spellings of the late medieval and early modern English periods had been selected as the modern standard forms, many of today's greatest difficulties could have been desyned out of the system centuries ago. Just what opportunities were missed for systematizing the riven forms of the whole language is powerfully demonstrated by the ryming set *leave*, *sleeve*, *receive*, *achieve*, *eve*, which in the 14th century, that is, in Chaucer's day, could all be spelt in parallel with the simplest exemplar, which is *eve*, just as we pronounce them in parallel today. The resulting forms, *eve*, *leve*, *sleve*, *receve*, *acheve* would largely overcome that notorious bugbear of English spelling, the pseudo-rule 'I before E except after C', as well as aligning the last two of those words with the simple E of French *recevoir*, *achever*. Just how variable has been the evolution of the vowel spellings of these words is seen from *figr 4*, which shows for which centuries which spellings are attested by the *Oxford English Dictionary* (OED) for which of those words.

It is symptomatic of all this confusion that the common 20th century ‘misspellings’ **recieve*, **acheive* are not attested as variants in the *OED*, though they are not infrequently seen in the media.

fig 4 Vacillations of -EVE thru the centuries

20th century	<i>leave</i>	<i>sleeve</i>	<i>receive</i>	<i>achieve</i>	<i>eve</i>
EA	15C onwrds	16C, 18C <i>sleave</i>	16-17C <i>receave</i>		17C <i>eave</i>
EE	14-15C <i>leeve</i>	14C onwrds			16-17C <i>eeve</i>
EI			16C onwrds	15C <i>acheive</i>	
IE			17C <i>recieve</i>	15C onwrds	
E—E	14-16C <i>leve</i>	14-17C <i>sleve</i>	14C <i>receve</i>	14-16C <i>acheve</i>	13C onwrds

An additional complication that arose after the invasion of French was that for some centuries England was not just a bilingual country, with French and English, but in an important sense, actually trilingual (as demonstrated in the *Eadwine Psalter*, eds. Margaret Gibson et al., 1992), with Latin dominant in certain spheres, especially the church, the universities and diplomacy. And there were some significant discrepancies between French and Latin spellings which modern English has in its usual careless way contrived to muddy up. Edmond Coote (1596) epitomized the problem with the following example: “Some write *malicious*, deriving it from *malice*. Other write *malitious*, as from Latin *malitiosus*.” The figure of Edmond Coote is of interest as the author of a book entitled *The English school-maister*, a guide to English spelling used for literacy teaching over 150 years from the late 16th to the mid-18th century. He more than anyone else may perhaps be credited with what standardization and simplification of English spelling did achieve during that period, as typified by the reduction of such forms as *bytte* to modern *bit*.

The quotation from Coote shows the dilemma facing 16th century writers when they had to choose between the French and Latin forms of loan words. It was a problem they never resolved, and we suffer from the consequences today. The most pervasive ambivalence is probably the unpredictably varying -ANT/-ENT ending, but the British/American divergence between -OUR/-OR presents a problem of choice for foreign learners. Figure 5 shows a set of words with a common root which originated in Latin, but passed on to various modern European languages. French is seen to adapt the Latin ending consistently to suit the nasalized French pronunciation, while German is seen consistently to retain the Latin vowel to suit the German pronunciation; but English vacillates unpredictably between the French and Latin spelling patterns, although its pronunciation corresponds to neither.

figr 5 *French -ANT or Latin -ENT?*

french -ANT	english -ANT/-ENT	germn (<latn) -ENT
<i>assistANT</i>	<i>assistANT</i>	<i>assistant</i>
<i>consistANT</i>	<i>consistENT</i>	<i>konsistENT</i>
<i>insistANT</i>	<i>insistENT</i>	<i>insistENT</i>
<i>persistANT</i>	<i>persistENT</i>	<i>persistENT</i>
<i>résistANT</i>	<i>resistANT</i>	<i>resistENT</i>

Part of the problem for English here lies in the fact that its pronunciation has neither a clear A-vowel nor a clear E-vowel which could determine a consistent spelling, but the unstressed centralized vowel known as schwa, for which the Roman alphabet has no obvious letter. Earlier centuries dithered over whether to write -ANT or -ENT in such cases, Samuel Johnson remarking: "...some words, such as *dependant*, *dependent* ... vary their final syllable, as one or other language [French or Latin] is present to the writer" (1773, p. iv). The 20th century prefers rigid insistence on inconsistency to such orthographic tolerance. What should we recommend for the 21st century?

Equally unpredictable, but with twists and turns of its own, is the -OUR/-OR variation. The British began to resolve it in the 18th century when *emperour*, *errour* became *emperor*, *error*, but they left America to regularize many \ other examples (*honor*, *harbor*), though *glamour* retains a special aura \ worldwide (see figure 6). Other Franco-Latin uncertainties are seen in the varying \ prefixes DES-/DIS- (*despatch/dispatch*), EN-/IN- (*enquiry/inquiry*) and in

countless pairs of related words (eg, *imperial* from latn, *emperor* from french). Th british -OUR forms.ar not merely unpredictable for riters ho hav to lern wich words take -OUR and wich -OR, and in wich derivativs th -OUR becoms -OR (*honourable* but *honorary*, *favourite* but *invigorate*), but for readrs they create ambiguity with th stressed endng of *devour*. As with th -ANT/-ENT variation, th pronunciation is an essential part of th problm: th vowel letrs of th syllabls -OUR/-OR do not corespond to an equivlnt vowel sound, but to a reduced, unstressed centralizd shwa that can in principl be spelt with any vowel letr, so that th pronunciation can giv no clu to th spelng. But wher th scnd vowel sound of english *honour*: *honorable* is indistinguishbl, th diffrnt EU/O spelngs of french *honneur*: *honorable* reflect quite distinct sounds and so do not constitute a spelng problm (th dubl N in *honneur* is anotr matr).

fig 6 Anglo-french -OUR or US-latn -OR?

modrn french -EUR	british -OUR (<old french)	american -OR (<latn)
<i>honneur</i>	<i>honOUR</i>	<i>honOR</i>
<i>empereur</i>	← <i>emperOR</i> →	<i>emperOR</i> (latn <i>imperatOR</i>)
<i>erreur</i>	<i>errOR</i>	<i>errOR</i>
—	(<i>harbOUR</i> <Old English)	(<i>harbOR</i>)
—	<i>glamOUR</i> (< <i>grammAR</i>)	<i>glamOUR</i>

7. Th greek ingredient

A furthr major complication that arose in th erly modern english period was th influx of lerned words from greek. Som had entrd english previously, in th Midl English period (aprox. 11th-15th centuris), wen they wer typicly spelt mor or less as pronounced — ie, by th alfabetic principl, as cognate words ar in italian and spanish today. But afr th advent of printng th influence of classicl lernng overtook these simpl spelngs, and they wer etmologized. That is to say, they wer respelt acording to th latn tradition of transliteration from greek, and no longr as they wer pronounced in english. That representd a furthr blo to th alfabetic principle.

Figr 7 shos wat hapnd, and by contast, wat hapnd in italian, or spanish, wher th alfabetic principl has been faithfully observd. It wil be noted how, on th hole, th Midl English spelngs corespond to modrn english pronounciation mor closely than do th modrn english spelngs.

The modrn english forms *ache* and *anchor* deserv special note, since, unlike most othr words listed here, th H in ther spelng has no basis in greco-latn derivation. It was Dr Johnson ho in his 18th century dictionry (1773, p22) established th form *ache* in place of *ake* (at least for th noun) in th mistaken belief that th word derived from greek. Th H in *anchor* is simlrly spurius, th Midl English form *anker* paralelng modrn jermn *Anker*.

figr 7 Greco-latn and th alfabetic principl

greco-latn	Midi English	italian	modrn english
<i>asthma</i>	<i>asma</i>	<i>asma</i>	<i>asthma</i>
<i>echo</i>	<i>ecko</i>	<i>eco</i>	<i>echo</i>
<i>physica</i>	<i>fisik</i>	<i>fisica</i>	<i>physic</i>
<i>psalmus</i>	<i>salm</i>	<i>salmo</i>	<i>psalm</i>
<i>rhetorica</i>	<i>retorik</i>	<i>retorica</i>	<i>rhetoric</i>
<i>schisma</i>	<i>sisme</i>	<i>scisma</i>	<i>schism</i>
<i>schola</i>	<i>scole</i>	<i>Scuola</i>	<i>school</i>
	<i>ake</i>		<i>ache</i>
<i>ancora</i>	<i>anker</i>	<i>ancora</i>	<i>anchor</i>
greco-latn	erly ModE	spanish	ModE
<i>hæmorrhagia</i>	<i>hemoragie</i>	<i>hemorragia</i>	<i>haemorrhage</i>
<i>psychologia</i>	<i>psycology</i>	<i>sicologia</i>	<i>psychology</i>

Greek derivations ar not an abstruse area of vocablry that can be efectivly ignord as remote from th needs of th mass of scool pupils. On th contry, they are centrl to many fields of study that al pupils nowadays face in

british secndry scools, in mathmatics, in sience, in jeografy, and elsewhere and anyone ho advances to hyr education is in du corse likely to be suroundd by them. Indeed ther is a new intrest in litracy circls today in how best to prepare yung pupils for ther futur linguistic needs in such areas (eg, Mason, 1985; Byrne, 1986). Yet greek-derived spelngs pose enormus additionl difictis to th lemr, as publicly witnessd by Dr Bernard Lamb (1992), ho has anlyzd th problms of his biolojy students at Imperial Colej, London, in mastrng th termnolojy of th life siences. Just wy they cause such difictis is not hard to se: they constitute yet anothr stratm in th english spelng systm that ofn conflicts with th jenrality of spelng patrnz familir from othr areas of english; and they diverj from th alfabetic principl (quite apart from blatant errs such as *ache*) in ways al of ther own, for instnce with silent letrs (especialy P and H, as in *psychology*) and th vowel Y frequently preferd to I (contrast th perverse DIS-/DYS-variation between *disorganize: dysfunction*, th first of wich atachs a latn prefix to a greek root, and th secnd a greek prefix to a latn root).

Anothr importnt point arising from th 'greek' chart concerns comparativ standrds of litracy in english and italian. As th abov exampls sho, even tecnicl terms of greek derivation hav predictbl sound-symbll corespondnces in italian. We shud therfor not be surpris'd at recent reserch findngs (Thorstad, 1991) to th efect that italian yungstrs far outstrip ther english countrparts in basic litracy skils. Particulrly striking was th findng that italian children cud ofn read words they had nevr previously met, wheras th english children wer ofn unable to read words they wer familir with. Undrlyng this disparity between litracy standrds in english and italian is th fact that english dos not observ th alfabetic principl wile italian dos (Upward & Pulcini, 1996), a difrnce that is nowher mor markd than in th spelng of greek-derived words.

8. Lesns for th presnt

Th abov analyses merely sampl th quagmire of english spelng at a few selectd points, but giv a fair indication of its jenrl incoherence. They demnstrate how ilfoundd ar som of th populr beliefs about it, such as that th orthografy usefuly reflects th derivations of words or corrections with othr languajs, and that such virtus compnsate for its falts. Abov al, th analyses sho that over th last 500 years th prime quality a good orthografy shud posses, its observnce of th alfabetic principl has in english been egrejusly neglectd. Five hundred years ago ther was perhaps som chance that a natrl tendncy to spel as we speak myt hav prevaild, but especialy th

impact of classical learning at the time of the Renaissance, coinciding with the advent of printing, dealt that opportunity a fatal blow.

The consequence for literacy standards is grave throughout the English-speaking world. There is tremendous concern about standards in England today, but the various nostrums proposed nearly all ignore the fundamental problem, whether they are called *phonics* or *real books*, *look-and-say* or *whole language*, *reading recovery* or whatever other new approach may be launched next week or next year. Some of these approaches show a quite basic misunderstanding of what alphabetic literacy entails. For instance, recent research into literacy promotion by TV, with children watching televised versions of stories with key phrases shown as subtitles, was rated successful because children “remembered a lot of the text” and “used picture cues to guide them”, even though “they were far less confident in doing so with phrases they had not seen” (Marshall, 1994). Literacy does not mean being able to decode not merely words that one has not seen before, but words that one has not heard before either, and literacy teaching should mean equipping children with the techniques that will enable them so to decode whatever words they encounter (as well, of course, as the reverse skill of encoding, as required for writing). New words are after all the essence of education. Fortunately, the ‘top-down’ theory of literacy, which regarded word-decoding as unimportant (global understanding of text without precise identification of each word was considered the natural process of reading) and which created such a stir in the 1970s, is now becoming discredited, as the experimental research carried out in the 1980s accumulated evidence that the ‘top-down’ view of the processes involved in literacy was systematically unfounded (Stanovich, 1991).

However, among these approaches we should not be in any doubt about the importance of phonics: phonics is the key to literacy in every language that is written alphabetically (as most languages have always appreciated), and it is the key to the best results that can be obtained in English today. But those results will forever limp behind what is achieved with far less effort in most other languages, until English regains the respect it ought to have for the alphabetic principle. Whether or not we investigate the history of English spelling to discover how we got into our present parlous state, whether or not we try and catalogue the innumerable inconsistencies and absurdities with which written English is riddled, the practical evidence for the problem is all around us. It faces us on road signs whenever we travel around the country. It faces us whenever we have to check the spelling of a word in the dictionary when we do not perfectly well how to pronounce it, or conversely when we check its pronunciation though we may have been familiar with its written form for most of our lives. It is implicit in unfavorable comparisons between English-speaking and non-English-speaking countries (Upward, 1995). But above all it faces us whenever we see our pupils and students, whether at infant school or university, struggling with written English.

Those are the lessons the past has for the present, enabling us to diagnose our present problems. Underlying them all is the fundamental importance of the alphabetic principle. One of the criticisms of education standards in English-speaking countries is that our expectations of what children can achieve are too low. In no field is that truer than in literacy. We do not expect 8-year-olds to be able to read whatever English word they meet anywhere whether they are already familiar with it or not, and whether they understand it or not. A Hungarian physicist once told me of a Hungarian physics professor whose grandchild would read scientific papers aloud to him, naturally without understanding, but equally naturally conveying the sense to the listening grandfather. We must ask why we should not expect as much of English-speaking children.

9. Looking to the future

Diagnosing a disease is the first step. Finding and prescribing the appropriate treatment is something else again, and actually applying the remedy is a further step which, in this world of human fallibility, sadly does not automatically flow from diagnosis and prescription. But to diagnose a problem, and let it rest there, is no way to advance the cause of education in which we all have an interest. We have to think ahead and consider what might usefully be done, and what practical possibilities there may be for implementing improvements to English spelling. Other languages recognize the need to update their writing systems, and in the 20th century at least they have done so (in approximately chronological order): German, Norwegian, Romanian, Russian, Afrikaans, Turkish, Dutch, Danish, Japanese, Irish, Spanish, Chinese, Malay-Indonesian, Malayalam, Greek, Portuguese. In 1990 the French Ministry of Education announced a number of permissible simplifications, for instance that children need no longer learn to write the circumflex accent on many words that had previously been spelt with it (thus in French *flûte* could align with its rhyme *chute* and be written *flute*, as in English) (*Rectifications*, etc, 1991). In 1995 the education authorities in Germany/Austria/Switzerland and in the Netherlands have been finalizing plans for a simplification of written German (Heller, 1996) and Dutch (Cohen, 1995). For English as a world language the organization of a spelling reform would be far more complex, and this paper is not the place to consider those complexities; but at least the need for reform, of whatever kind, should be understood and accepted. One has to say that at present, in the English-speaking countries at least, such understanding is rare, though elsewhere it is more often taken for granted because in other languages the alphabetic principle is more often taken or granted as the necessary basis for any alphabetic writing system. It is no accident that the author of the remark, quoted early on in this paper, about English spelling being "one of the world's most awesome messes", was an American who received his primary education, including his first instruction in literacy, in Italy (Pei, 1968).

This paper has attempted to make the case for the need for spelling reform in English, and it has itself been written in a simplified orthography, Cut Spelling (CS), as an example of a moderately radical kind of reform. A handbook (Upward, 1996) to the system sets out its various advantages, which include economy, legibility for readers without instruction, flexibility, far-reaching compatibility with traditional written English, but above all greatly improved regularity and predictability. An outline of its rules is given at the beginning of this paper. It must be emphasized that, in order to preserve a strong visual resemblance to traditional spelling, CS deliberately does not attempt to rectify every irregularity. Its main procedure is merely to remove redundant letters, though there are also a few patterns of letter-substitution. By way of illustration, we will here list the simplifications that CS applies to certain of the problem spellings discussed above.

If the spelling of place-names were simplified, the following new forms would arise (those for which no CS equivalent is given remain unchanged whatever the deficiencies of their present spelling):

Warwick >CS *Warik*, *Towcester* >CS *Toestr*, *Nene* >CS *Nen*
Wisbech (Holbeach), - *Grantham* >CS *Granthm*, *Gotham* >CS
Gotam, *Blackley* >CS *Blakly*, *Keighley* >CS *Keighly*,
Langbaurgh >CS *Langbrh* (if the final syllable is pronounced as in
Edinburgh), *Leicester Square* >CS *Lestr Square*.

The 57 most aberrant spellings among the 200 commonest words are affected by CS as follows:

of, to, was, have >CS *hav*, *are* >CS *ar*, *which* >CS *wich*, *you*
>CS *u*, *they, were* >CS *wer*, *there* >CS *ther*, *one, all* >CS *al*
their >CS *ther*, *would* >CS *wud*, *when* >CS *wen*, *who* >CS
ho, *more* >CS *mor*, *said, what* >CS *wat*, *some* >CS *som*, *only*,
could >CS *cud*, *two, other* >CS *othr*, *do, any, should* >CS
shud, *before* >CS *before* *where* >CS *wher*, *many, your* >CS
yr, *work, know* >CS *no*, *might* >CS *mvt*, *through* >CS *thru*,
own, here, great >CS *gret*, *come* >CS *com*, *again, though* >CS
tho, *thought* >CS *thot*, *right* >CS *ryt*, *world, while* >CS *wile*,
against, does >CS *dos*, *always, young* >CS *yung*, *why* >CS *wy*,
once, nothing.

Here 32 of the 52 words of Germanic derivation are simplified in CS, as are the following 3 among the 5 particularly aberrant spellings of French derivation, thus altogether 35 from the total of 57:

Mr, people >CS *people, (be)cause, course* >CS *corse, government* >CS *governmnt*.

Among the other common but less perversely irregular words listed from among the 200, only one is affected by CS:

first, most, good, few, as, us, time, little >CS *litl*.

Silent B disappears in CS, unless it distinguishes a preceding long vowel:

dumb >CS *dum, lamb* >CS *lam, crumb* >CS *crum, thumb* >CS *thum, bomb* >CS *bom, tomb, bomng, bombard*.

Words of Old English origin with surviving silent letters are affected as follows:

eleven >CS *elevn, lord, Dorchester* >CS *Dorchestr, answer* >CS *ansr, knight* >CS *nyt, Worcester* >CS *Worstr*.

Examples listed in connection with the 'French' S/C variation are affected as follows:

gross, grocer, louse, lice, offence >CS *ofense, offensive* >CS *ofensiv, precede, supersede, sauce, sausage* >CS *sausaj, council, counsel* >CS *counsl, dance, rinse, skeleton* >CS *skeletn, sceptic* >CS *skeptic, sceptre* >CS *septr, ancient, patient, condition, suspicion, spacious* >CS *spacius, spatial, scissors* >CS *sisrs, viscount* >CS *vicount, defence* >CS *defense, defensive* >CS *defensive*

The -EVE words are regularized in CS back to their common 14th century forms:

eve, leave >CS *leve, sleeve* >CS *sleve, receive* >CS *receve, achieve* >CS *acheve*.

Conflicting Latin vs. French spelling patterns are regularized as follows:

malicious >CS *malicius, assistant* >CS *asistnt, consistent* >CS *consistnt, insistent* >CS *insistnt, persistent* >CS *persistnt, resistant* >CS *resistnt, dependent* >CS *dependnt, dependent* >CS *dependnt, emperor* >CS *emprrr, error* >CS *err, honour* >CS *onr, harbour* >CS *harbr, glamour* >CS *glamr, despatch* >CS *dispach, enquiry* >CS *inquiry, honourable* >CS *onrbl, honorary* >CS *onry, favourite* >CS *favorite invigorate* >CS *invigrate, devour*.

Patterns of greco-latin spelling are affected in CS as follows:

asthma >CS *asma*, *echo* >CS *eco*, *physic* >CS *fysic*, *psalm*
>CS *salm*, *schism* >CS *sism* (or, depending on pronunciation,
perhaps *scism*, *shism*), *school* >CS *scool*, *ache*, *anchor* >CS
ancr, *haemorrhage* >CS *hemraj*, *psychology* >CS *sycology*,
disorganize >CS *disorgnize*, *dysfunction*.

These examples of CS relate to the orthographic problem cases discussed earlier in this paper, but they do not highlight the key cyclojical advantages of the CS system, namely that, by targeting the many (c.10%) redundant letters in traditional spelling, CS removes those very features which cause learners and users most difficulty. The reason redundant letters cause most difficulty goes back to the alphabetic principle: readers cannot tell from the written text whether a redundant letter is to be pronounced or not (eg, the G in *paradigm* is silent — but what about the G in *paradigmatic*?), and writers cannot tell from the sound of words whether redundant letters are needed, nor which ones, nor where they should be placed (eg, hence such common misspellings as **business*, **buisness*). To gain an inkling of the full, systematic impact of CS on written English, readers may care to reread the outline of its rules given at the beginning, and to reflect on their impressions, having now read some 20 pages of text in CS.

CS is of course but one possibility of a first stage in the modernization of English spelling. Other proposals, ranging from the minimalist replacement of British forms by simpler American alternatives, to the maximalist replacement of the present Roman alphabet by a completely new alphabet such as the Shaw Alphabet (Shaw, 1962), need to be examined also.

As yet, the question of English spelling reform, though occasionally attracting public attention, has not convinced the relevant authorities that it requires serious, informed consideration. Where spelling has been in the public eye, it has usually been in terms that do not focus on the key issues presented in this paper. Thus the editorial to a recent number of *Language & Literacy News* referred merely to “the debate about the English spelling system and the desirability of directly teaching it to children”. The purpose of this paper is to try and raise the general level of awareness of the true nature of English spelling, but its format and style are probably too ponderous for general consumption. It will now conclude with some samples of a more direct attempt at public education, in the form of three questionnaires — which are therefore naturally not couched in CS.

1 — DOES ENGLISH SPELLING NEED MODERNIZING?

Tick one of the righthand columns	<i>yes</i>	<i>un- sure</i>	<i>no</i>
1. The letters of the alphabet were designed to represent speech sounds; that is the alphabetic principle.			
2. The alphabetic principle makes literacy easy, allowing readers to pronounce words from their spelling, and writers to spell words from their sounds.			
3. As pronunciation changes through the centuries, the alphabetic principle tends to be undermined; the spelling of words then needs to be adapted to show the new sounds.			
4. Unlike other languages, English has done little to modernize its spelling for nearly 1,000 years, and today it only haphazardly observes the alphabetic principle.			
5. Neglect of the alphabetic principle now makes literacy unnecessarily difficult in English, and all education suffers.			
6. Procedures are needed to manage improvements to English spelling for the future.			

2 — HOW SHOULD ENGLISH SPELLING BE MANAGED?

Tick one of the righthand columns	<i>yes</i>	<i>un- sure</i>	<i>no</i>
1. Do nothing, struggle on, and hope the difficulties will sort themselves out.			
2. Ignore ‘mistakes’, and let everyone (children, adults, foreigners, media, business, officialdom) spell as they like.			
3. Campaign for some of the most troublesome spellings to be officially regularized.			
4. Set up a body to develop and implement policies for the future of spelling in Britain.			
5. Ask an international organization (UNICEF? OECD?) to co-ordinate a world standard for English spelling.			
6. Encourage people to adopt easier American spellings (eg <i>ax, catalog, center, color, esthetic, fetus, skeptic, mold, traveled, maneuver</i>).			
7. Teach beginners some simpler spellings as a new standard for future generations.			

3 — WHAT PRIORITY SHOULD THE FOLLOWING SPELLING IMPROVEMENTS HAVE?

Tick one of the righthand columns	<i>now</i>	<i>soon</i>	<i>later</i>	<i>never</i>
1. Always spell short /e/ as E, eg <i>hed, frend, lepard</i> ?				
2. Introduce spelling rhymes like <i>eve, leve, sleve, receve, acheve</i> ?				
3. Always spell /f/ as F, eg <i>cof, ruf, nefew, filosofy, fotografy</i> ?				
4. Always spell /dJ/ as J, eg <i>jeneral, jinjer, majic, brij, juj</i> ?				
5. Always spell /s/ as S, eg <i>sertain, sity, sycle, presede, proseed, sauser, sinse</i> ?				
6. Always spell /S/ as SH, eg <i>shampagne, shugar, shure, mashine, oshean, speshial, conshience, mishion, nashion, preshious</i> ?				
7. Always spell /z/ as Z, eg <i>hiz, buzy, reazon, surprize, spellz, dogz</i> ?				
8. Don't normally write consonants double, eg write <i>acomodation, exagerate, inocuous, ocured, ofice, paralel, sak, symetrical, traveler, traveled, traveling</i> ?				
9. Don't normally write consonant double, e.g. <i>hav, foren, onest, samon, colum, neumonia, iland, bilding</i> ?				
10. Regularize -ER-type endings as just -R: <i>burglr, teachr, doctr, harbr, theatr, murmr, injr, martr</i> ?				

SELECT BIBLIOGRAPHY

- Bernal, Martin (1990) *Cadmean Letters*, Winona Lake: Eisenbrauns, pp91-93.
- Byrne, Mary (1987) *Eureka! a Dictionary of Latin and Greek Elements in English Words*, Newton Abbot: David & Charles.
- Cohen, Harry (1995) 'Spelling Reform in the Low Countries' in *Journal of the Simplified Spelling Society*, 1995/2, pp 11-13.
- Collins Gennan-English English-German Dictionary*, 2nd edition (1991), p.xxiv.
- Coote, Edmond (1596) *The English School-maister*, London: Ralph Jackson & Robert Dexter.
- Cox, Brian (1989) *English for ages 5 to 16*, Department of Education and Science (th 'Cox Report').
<http://www.educationengland.org.uk/documents/cox1989/cox89.html>
- eds. Gibson, Margaret, Heslop, T A, Pfaff, Richard W (1992) *The Eadwine Psalter: Text, Image, and Monastic Culture in Twelfth-Century Canterbury*, London: The Modern Humanities Research Association.
- Healey, John F, 'The Early Alphabet' in ed. Hooker, J T (1990) *Reading the Past*, London: British Museum Publications, pp197-235.
- Heller, Klaus (1996) 'Rechtschreibreform' in *Sprachreport Extra Ausgabe* January 1996, Mannheim: Institut für deutsche Sprache.
- Johnson, Samuel (4th ed. 1773, 1st ed. 1755), *Dictionary of the English Language*, reprintd 1979, Beirut: Librairie du Liban, Preface.
- Lamb, Bernard (1992) *A National Survey of UK Undergraduates' Standards of English*, London: The Queen's English Society.
- Marshall, Bethan (1994) 'Books on the Box' in *The Guardian*, 19 july, p21.
- Mason, Mary (1985) *Language across the Curriculum, Part I Language Awareness*, Metropolitan Borough of Wigan.
- Pei, Mario (1968) Preface to Abraham Tauber 'Better English thru Simplified Spelling — a History of Spelling Reform', reprinted July 1982 (2nd edition) in ed. Newell W. Tune Spelling Reform, *A Comprehensive Survey of the Advantages, Educational Benefits, and Obstacles to Adoption* p104, North Hollywood, California: Spelling Progress Bulletin.
http://spellingsociety.org/uploaded_books/a6whichway.pdf, Item 10, and
http://spellingsociety.org/uploaded_bulletins/spb68-1-bulletin.pdf Item 14.
- ed. Pointon, G E (1990) *BBC Pronouncing Dictionary of British Names*, Oxford University Press.
- 'Les Rectifications de l'orthographe: texte officiel' (1991) in *Le Français dans le monde*, No.239 (feby-march 1991).
- Scragg, Donald G (1974) *A history of English spelling*, Manchester University Press, Chs. 4-5.

Shaw, Bernard (1962) *Androcles and the Lion, printed in the Shaw Alphabet with a parallel transcription in traditional orthography*, transcribed by Peter MacCarthy, Penguin Books: Public Trustee's Edition.

Smith, Colin (1971) *Collins Spanish-English English-Spanish Dictionary*, London and Glasgow: Collins.

Stanovich, Keith E (1991) 'Changing Models of Reading and Reading Acquisition' in L Rieben and C A Perfetti *Learning to Read*, Hillsdale, New Jersey: Lawrence Erlbaum Associates, pp 19-31.

Thorstad, Gwenllian (1991) 'The effect of orthography on the acquisition of literacy skills' in *British Journal of Psychology*, 82: 527-37.

http://spellingsociety.org/uploaded_books/b2thorstad.pdf

Upward, Christopher (1995) 'Writing Systems in Different Languages: A Factor Affecting Literacy Standards?' in eds. Pamela Owen & Peter Pumfrey *Children Learning to Read: International Concerns*, Vol.2, pp70-87.

- (1996) *Cut Spelling: a handbook to the simplification of written English by omission of redundant letters*, Birmingham: Simplified Spelling Society, (2nd revised and expanded edition), 1996.

<http://spellingsociety.org/books>

- & Pulcini, Virginia (1996) 'Italian spelling, and how it treats English loanwords' in *Journal of the Simplified Spelling Society*, 1996/1 (forthcoming).

http://spellingsociety.org/uploaded_journals/j20-journal.pdf Item 6.

Vernon, Magdelene (1957) *Backwardness in Reading*, Cambridge University Press.

Wells, John C (1990) *Longman Pronunciation Dictionary*, Harlow: Longman.

Wray, David (1994) 'Editorial Comment' in *Language and Literacy News*, Summer 1994, No. 14, p 1.

The author

Christopher Upward, formerly Senior Lecturer in the Department of Languages and European Studies, Aston University, is Editor-in-Chief of the Simplified Spelling Society, and his publications include *Cut Spelling: a handbook to the simplification of written English by omission of redundant letters* and articles on spelling in the *Oxford Companion to the English Language*.