Editorials

The "Teachability" criterion for reformed spellings for schools.
A major failing of traditional spelling is its poor teachability - part phonic, part visual. Two books on the "regularities" (and exceptions) in it (see pages 3-5 for one) each are over 100 pages. Someone has noted "It would require a linguistic PhD. with an encyclopedic memory' to use it reliably. Neither first grade students, nor their teachers, have these qualifications.

Those books present hundreds of rules. For example, 11 rules for doubling consonants, which most reformers would abolish. The other extreme is the linguists ideal of one spelling rule for each phoneme, hence about 44 spelling rules for English. Unfortunately this plan only spells about 28 % of English words as in the dictionary. The alternate, briefly (and likely controversially) described below would require about 97 rules, with long vowels spelt differently in different positions, but would spell about 50 % of words as in the dictionary.

This plan would need about 9 rules for syllables. It would avoid syllabic "1, m, n, r" as complicating the definition of a syllable. This is another case where the optimum reform for learners differs from the optimum reform for fluent adults.

Phonics First
A first grade instruction plan which would teach phonics first, replacing "invented spellings" with regular spellings as the basic rules are taught may need to be developed and debated. It could make half of English words regular by teaching:
1. pronunciation rules for the articles the, a. Stressed these are pronounced thee, ay. Unstressed they are pronounced with schwa, thuh, uh;

2. pronunciation rules for plural nouns in "-s, -es", when these are pronounced "s" or "z";

3. The spelling rules for long vowels in different positions in a word: end of word = ai, ay; au, aw; oi, oy; ou, ow. Examples are: aid, day; author, saw; oil, boy; out, how. Also me, 1, go, thru.

   end of syllable: ba/by, fi/nal, do/nut, du/ty;
   common schwa sound spellings: apart, perhaps, local, extra over given, event, moment.

Regularized spellings would use the same rules (about 97!)(plus 9 for syllables) on other words: to = tu, write = ryt, of = ov, was = wuz, age = aij.

Using only regular and regularized spellings, first grade students could write any word they hear (as with ITA), and half would be as in the dictionary. It should be possible for them to learn dictionary spellings for over 1,000 words, compared with 200 in Edward Fry's plan, which uses both phonic and sight methods, and irregular spellings.

Guest Editorial

In view of the disappointment of "Literacy by the year 2000" the International Reading Association and the National Council of Teachers of English should appoint a commission to develop a definitive and unbiased answer to these questions:

1. Why, among the developed countries, is the nation with virtually the highest per pupil expenditure for education in the lowest quartile of literacy?
2. In the light of scientific advances in teaching technologies, what steps should be taken to correct this?

The commission should be chaired by Robert MacNeil, author of "The History of the English Language" who retired from broadcasting in April. It should include, for example, Marilyn Adams, author of "Beginning to Read", the U. S. Department of Education's exhaustive study of whole language and phonics; two persons chosen by her; and etymologist like Louis J. Herman or someone of the stature of Mario Pei; educators like Patrick Groff, Helen Bisgard, or Wood Smethurst; a sociologist like Kenneth Ives; someone from Literacy Volunteers, or William Barlow of Laubach Literacy; an expert in Turkey's highly successful solution for its enormous illiteracy problem, like Nur Kurtoglu-Hooton; and an educator and author experienced in computer applications like Edward Lias.

Edward Rondthaler

A History of English for First Graders?

If spelling reformers are to make an impact in elementary schools, one method will need to be imparting some of the history of English to first graders, their teachers, and their parents. This presents a challenge to us. Can such a history, with explicit spelling reform implications, be written in a way that first graders will understand and enjoy? Your editor has made an attempt at this, in 20 lines, each line ryming with a nearby one. Can others come up with similar efforts, in the 20 to 40 line range? Suggested illustrations, and an introduction for parents and teachers might well accompany such an effort. These histories will need field testing on first graders, as preparation for some becoming children's books.
Edward Carney A Survey of English Spelling
Roger Mitton reviews


1. Purpose of the book

Benzene or benzine? Bromene or bromine? Well, if it's a hydrocarbon with a double bond, it's -ENE, and if it's an amine, it's -INE. I expect that's cleared it up for you. You'll find this snippet of information on page 432 of Carney's substantial work, under 'Homophonous affixes', along with a number of words where the ending has nothing to do with this distinction, such as kerosene, margarine, vaseline, codeine and gangrene.

Carney has set out to write a description of the English spelling system (reformers may feel there is a large assumption in that word 'system', but let it pass) as it is today. He has not written a history of English spelling, though he mentions history occasionally. Nor is he promoting a reformed orthography, though again he makes a few small suggestions for reform here and there. He strives to be neutral as between singing the praises of traditional orthography and lamenting its failings. The book can be taken simply as a work of linguistic scholarship, but, if the author has a further motivation, it seems to be his concern about the low standard of educational debate on this topic. Teachers in England and Wales are required by the National Curriculum to teach their pupils that English spelling obeys rules but, while there is no shortage of opinion in this area, there has been a severe shortage of clear thinking and well-founded research. His book is an attempt to elucidate the rules of the English spelling system, though, apart from the occasional suggestion about how this or that aspect of spelling might be brought to the attention of pupils, he leaves it to others to draw out the educational implications of his work.

2. Analytical methods

He considers briefly the possibility of analysing English spelling purely as a graphic system, ie, considering the patterns of written symbols in their own right with no reference whatever to the spoken language, but, though he judges this to be entirely possible and, for some purposes, advantageous, he moves quickly on to his main enterprise which is the mapping of the correspondences, in both directions, between spelling and pronunciation.

The bulk of the book presents the results of an analysis of a large word list. He combined two well-known word-frequency lists - the Thorndike-Lorge list and the American Heritage Dictionary list - with word lists drawn from three widely used computerized corpora of English text - the Brown corpus, the LOB corpus and the Louvain corpus - so his word-frequency figures were based on about 25 million words of running text in all. He boiled this down to a single list of about 26,000 separate words by lemmatizing the lists, ie retaining only the base forms of words and adding the frequencies of inflected forms to those of the base forms. For example, the final list would contain carry but not carries, carrying or carried; the frequencies of carries etc. were added to that of carry. He also included the pronunciation of each word by taking it from the Longman Pronouncing Dictionary. In a separate exercise, he analysed all the entries in the English Pronouncing Dictionary, many of which were proper names, though these did not have any frequency information.
He then developed a computer program which analysed each spelling into orthographic units - for example T, TH, E, EA, EAU might be units - and matched up units with phonemes. Letters did not have to be adjacent to constitute a unit; for example, the A ... E of fate could be counted as a single unit. In many cases, this matching of units with phonemes was a straightforward operation - dog, ship, lunch and so on - but a number of words presented problems. How should you split up sign, build, debt and the like? Reformers might be inclined to say at this point that the spelling of many English words simply doesn't correspond to the pronunciation - you simply cannot do what Carney was trying to do, and that is precisely what is wrong with traditional orthography. But he, obviously, did not take this view.

He expounds a set of seven principles which enable him to split these problem words in a reasonably consistent way. The B of debt, for example, is treated as an empty letter since it corresponds to no phoneme in debt or debtor or indebted or any other word with debt in it. The G of sign is counted as inert, rather than empty, since, though it corresponds to nothing in sign, it does correspond to something in signature. The U of build is regarded as part of the consonant, ie, BU is counted as a single orthographic unit, like the BU of buy and buoy and like the GU of guild. And so on, eventually tackling even the really weird ones like aisle and choir.

These orthographic units are invented, of course, purely to make the spelling match the pronunciation. Change the pronunciation and you change the orthographic units; BU, for example, is not an orthographic unit in an American's buoy - Americans pronounce buoy to rhyme with Hughie. If you have an orthography which does not match the pronunciation and you are determined to pretend that it does - and Carney has to in order to get on with the task he has set himself - then you have to resort to such devices. But at least he goes about it in a workmanlike manner.

3. Sound-symbol & symbol-sound correspondences

Armed now with a complete set of mappings between phonemes and orthographic units, he can proceed to his main task which is, on the one hand, to take each phoneme and to list the orthographic units to which it corresponds and, on the other, to take each orthographic unit and to list the phonemes to which it corresponds. Since he has word-frequency information, he can say not merely that such-and-such a correspondence occurs, but also how often it occurs, taking account both of the number of dictionary words in which it occurs and also of their frequency in running text. He also presents groups of words showing how a particular correspondence occurs in words that share some common feature, such as one-syllable words with short vowels or three-syllable words with stress on the first syllable. At times he seems to play the role of an apologist for English spelling - "Look, traditional orthography is not all that bad; there's a pretty consistent pattern here" - but he is always scrupulous in pointing out exceptions to the patterns.

Taking an example more or less at random, the spellings of the phoneme /f/ are F, FF, PH and GH. The first is easily the most common, accounting for about four fifths of the occurrences. The last is the least common; it occurs in only a few words, but these words are common ones (enough, cough, laugh and the like), a good example of the value of having figures for both lexical frequency (how many dictionary words) and text frequency (how often in running text). The spelling PH is reasonably regular in Greek-style words. He is not suggesting here that you need to know Ancient Greek in order to spell these words, or even to know that they are derived from Greek at all, but just that you could recognize a group of words as having a family resemblance and, having
guessed that a word belonged to this family, could prefer PH to F when spelling it. The reason for the family resemblance is, of course, that they are mostly derived ultimately from Ancient Greek; the history of English spelling tends to force itself into his description despite his efforts to keep it out. He admits the PPH of *sapphire* as irregular but brushes aside the PH of *shepherd* - what we have here is an ordinary P followed by an inert H, not an irregular PH. There follow some lists of words showing single or double F; words with a final /f/ after an unstressed syllable, for example, are regularly spelt with FF - *bailiff*, *tariff*, *dandruff* etc.

4. Rules for computers or rules for people?

In the 1960s a team at Stanford University led by P R Hanna catalogued all the sound-to-spelling correspondences in one of the Webster dictionaries and put them into a set of rules for a computer to follow in generating spellings on the basis of pronunciations. The intention was to demonstrate the extent to which English spelling was predictable on the basis of (in this case American) pronunciation. The rules said that if such-and-such a phoneme came in such-and-such a place (eg, at the beginning of a word or at the end of a syllable), it was most likely to be represented by such-and-such a spelling. The computer could then be given a string of symbols representing the pronunciation of a word and it would generate its best guess at the spelling.

Carney is well acquainted with this work; he presents an excellent critique of it. But although he has several telling criticisms to make of the Hanna project, it seems to have served in general terms as a model for his own, or at least for the sound-to-spelling part. He feels that Hanna et al. did not make a good job of it, the rigid scheme that they adopted preventing them from making use of many obvious regularities in English spelling. Yet, like Hanna, he goes through his word list phoneme by phoneme, showing how this phoneme corresponds sometimes to this unit sometimes to that one. He differs in detail in his analysis of how the phoneme's immediate surroundings can help you to prefer one correspondence over another, and he allows himself to make use of concepts outside the range of the Hanna algorithm - he has special rules for words with Latinate prefixes, for example - but the parallels with Hanna are sufficiently close for him to be able to include Hanna's rules for comparison with his own (generally of course to the benefit of the latter). He doesn't incorporate his own rules into a computer program for generating spellings from pronunciations, but you feel he could if he wanted to.

The point I am getting round to is that this great collection of patterns that he has so painstakingly extracted from his material seem to me to be more appropriate for computers than for human beings. As the basis for a program along the Hanna lines, they would be very useful; as material for teaching, I am not so sure. It may be that these patterns make explicit the orthographic knowledge - the 'feel' for English spelling - that accomplished users of written English have acquired from years of practice; if asked to write the non-existent word *grandiff*, I would spell it with FF in accordance with the rule mentioned above. But if schoolchildren are to be taught that English spelling obeys rules, then presumably these hundreds of patterns, with their sub-patterns and their exceptions, filling 120 pages of his book, are the rules in question. If so, then heaven help the schoolchildren, and their teachers.

The same point can be made, and with greater force, about the rules that go the other way-from text to speech. He begins this with a description of two early text-to-speech computer programs, the kind which tried to segment a spelling into orthographic units and then to produce a pronunciation for each unit on the basis of some rules. He is not presenting these as examples of good text-to-speech technology, which has moved on a good deal since these early efforts, but
rather finds in these systems a model for the presentation of his own rules. This time he goes through the alphabet and, for each letter, presents the various ways in which it might be pronounced.

If we look at G, for example, we find thirteen rules (the vowel letters have far more). The first two tell us that GG and GH respectively almost always correspond to /g/ (haggle, gherkin). Rule 3 tells us that GU corresponds to /gw/ when the preceding letter is N and the next two letters are a vowel followed by a consonant (language, penguin); rule 4 that GU corresponds to /g/ when the next letter is a vowel (disguise, intrigue). And so on to rule 13 which you apply if none of the others apply, namely that G corresponds to /g/ (bogus, gurgle). For each rule, figures are given for how often the rule applies and exceptions are listed. Names are listed separately from dictionary words.

Two features of this presentation show how it is more suited to computers than to humans. The order of the rules is important, and it is counter-intuitive. In the above example, you'd get penguin wrong if you applied rule 4 before rule 3. You also have to remember that the rules are applied left to right as you work your way through the word. To quote Carney's own example of this, if you are going to get build right, you have to apply the rule that says that BU corresponds to /b/ when followed by a vowel, before you apply the rule that says that UI corresponds to /u:/ (as in bruise). So it is no good looking at a rule in isolation. You really need to carry the whole system in your head at once; computers are good at this, people aren't. As to the order being counter-intuitive, if you were describing the correspondences of G to someone, you'd surely begin with rule 13 - G corresponds to /g/ - and then describe the exceptions.

5. Orderly or messy?
There is much else that is of interest in this book apart from the two main central sections that I have concentrated on in my review. He has something on spelling and accent, on the methods that playwrights have employed for indicating dialect, on the kind of spelling rules taught by schoolteachers and on the sorts of spelling errors that people make. He has chapters on homophones and homographs, on the spelling of names and, finally, on spelling reform.

If you have a particular interest in English spelling - if you are a spelling reformer, say, or a psychologist probing the cognitive processes of spelling - this book will be an invaluable resource. Whether it has much to offer schoolchildren and their teachers, I am not so sure.

Where does it all leave us regarding the rules of the English spelling system? I suspect it leaves us where we were to start with. If you thought that English spelling was not too bad and that we really ought to be wary of tinkering with it, you will find comfort in the large numbers of words grouped together in orderly fashion like soldiers drawn up for inspection. If you thought that English spelling was a mess, you will sigh at the convoluted systems of rules and sub-rules set up to describe this or that aspect of it (eleven rules just for the doubling of consonants), you will shake your head at the number of exceptions to this or that rule and you will conclude that it is indeed a mess.
Orthografy vs Litracy: Findings of th IEA Survey
Christopher Upward

This revew is ritn in Cut Spelng

1. Dos english spelng hindr litracy?
One of th ke peces of evidnce spelng reformrs shud idealy be able to produce in suport of ther case is comparativ statistics for litracy in difrnt languajs. Difrnt languajs hav difrnt riting systms, wich ranje from th exeptionly regulr (eg finish) to th exeptionly iregulr (eg english). Since a regulr systm is esir to mastr than an iregulr one, a not unreasnbl hypothesis wud be that ther may be som corelation between regularity and standdrds of litracy. Certnly ther ar bits of evidnce to this efect, such as: th dramatically improved aquisition of initial litracy skils in the Initial Teaching Alphabet compared with conventioal english spelng; [1] Thorstads findngs [2] on th much fastr progress of italian lernrs compared with ther english countrparts; and th presnt authrs reserch into th gretr prevlnce of mispelngs in english compared with jermn. [3] A pioneerng worldwide revew was assembld over 20 years ago by John Downing [4] (previus Presidnt of th Simplified Spelling Society), wich repeatdlly hintd that regulr spelng is an aid to litracy, but that survey did not provide comparativ statistics.

2. Th IEA survey
Wen th IEA (International Association for the Evaluation of Educational Achievement) publishd its reports [5] on th multi-nation survey of comparativ readng standrds it had undrtaken at th beginng of th 1990, ther was therfor som prospect of mor substantial data to reinforce th case for english spelng reform. In th event, th findngs turn out to be tantlizingly less clearcut that myt hav been hoped, but they Nevthless offer a valubl demnstration of th facts that need to be taken into acount in making such jujmnts. Th esential infmation is to be found in th first volume to apear, How in the world do students read?, by Profesr Warwick B Elley from th University of Canterbury, New Zealand, especialy in th fifth chaptr ‘How Do High-Achieving Countries Differ from Low-Achieving Countries?’ Th survey testd 9-year-olds and 14-year-olds on ther comprehension of a variety of texts in som 32 cuntris, including nearly evry cuntry in westrn and northrn Europ, as wel as Cyprus, Grece, Hungry, Iceland, Canada (British Columbia), Iceland, th USA, Trinidad & Tobago, Venezuela, New Zealand, Hong Kong, th Filipines, Indonisia, Thailand, Singapor, Botswana, Zimbabwe, and Nijeria. Th tests wer therfor translated into many languajs, with th foloing cuntris taking th tests in english: Botswana(?), Canada (BC), Ireland, New Zealand, Nijeria(?), Singapor, Trinidad & Tobago, th USA, Zimbabwe(?). Needless to say, english was not th home languaj of many of th students in som of som cuntris.

3. British non-participation
Strikingly absent from th list of participnts is th UK. A letr from Dr Tom Gorman of th National Foundation for Educational Research (NFER), wich wud hav administrd th british end if th UK had participated, explains as folos: "The NFER did initially participate in the IEA Readng Literacy Study. The Foundation withdrew…in 1990. Th main reasons…were technical. It was not thought that an exclusive reliance on a multiple-choice question format would yield information of value to teachers in England … I and my colleagues … provided evidence to substantiate our views, but the IEA International Committee did not feel able to take account of these to the extent of
modifying the tests … the policy of the DfE [Department for Education] at the time of the study was that there was little practical value in making absolute comparisons between different educational systems. DfE funds for such purposes were therefore not available."

We can only regret the non-participation of the UK because the world is deprived of an important part of the picture concerning English, as the leading medium of international communication. Whatever the strength of the technical argument about the multiple choice format, the argument that British participation would not produce information of value to teachers in England is depressingly Anglocentric, for, just as information about standards in other countries is of value to the UK, so information about the UK would have been of value to other countries. As we shall see, it was of critical importance that, for instance, Finland did not withdraw on the grounds that the findings would not benefit Finnish teachers. As for the British government's view that comparison between countries is not useful, one can only note that governments are happy to make such comparisons when outcomes are favorable, and refusal to participate therefore suggests the fear that the results might have been unfavorable.

4. Non-orthographic factors affecting literacy standards

The results of the tests show the complexity of factors that determine whether a country has above average or below average scores. The average wealth of citizens of different countries varied by a factor of nearly 100. Health, as measured by life expectancy, varied between 77 and 51, and adult literacy between 99% and 43%. Educational provision varied in terms such as age of entry to school, amount of time devoted to literacy-teaching, level of teacher training, resources, and availability of reading materials. The survey attempted to allow for these variations by means of a Composite Development Index (CDI), by which a factor of over 8 separated the most advantaged from the most disadvantaged country.

Ensuring true comparability between the test results from different countries was difficult for other reasons too. For instance, the average age of subjects varied significantly, with candidates for the '9-year-old' test averaging as much as 10.8 in one country, but as little as 8.9 in another; and while in some countries nearly all the subjects took the reading tests in the language they spoke at home, in other countries the language of education was not that used at home by the majority of students. And then there is the question that we are particularly interested in, of whether the writing system of the test language is itself easy or difficult to master. It is clear that, when all these variables are taken into account, extreme caution must be exercised in claiming that any one factor, such as the nature of the writing system, is shown to have a decisive effect on the literacy standards achieved.

5. Finish and English scores

Nevertheless, a number of observations can be made, though we cannot here begin to do justice to the numerous distinctions that emerge from the IEA report itself, as between the two age groups (9 and 14), or the different types of text (narrative, expository, documentary). The dominant, and unsurprising, outcome of the whole survey, is that standards of reading literacy correlate to a high degree with the level of socio-economic development of each country, countries of Europe and North America, plus Hong Kong, New Zealand and Singapore, achieving markedly better results than countries elsewhere. Within the high-achieving countries, one stands out for its consistently superior performance, and that is Finland; but before spelling reformers rush to claim that the outstandingly regular writing system of finish is responsible, it must be pointed out that Finland also scores well by just about every other criterion that is conducive to high standards.

Then comes a surprise: the United States figures after Finland as the second best performer in the 9-year-old test. This may surprise first because as an English-speaking country it suffers disadvantage of an exceptionally irregular writing system; but second because in the US itself literacy standards are strenuously held to be
disastrously lo—th New York Times recently hedlined a report from President Clinton's Education Department with the words "Study Says Half of Adults in U.S. Can't Read". Yet according to the IEA report, there is 99% adult literacy in the USA. When one compares the American study, which interviewed 13,600 16-year-olds, with the IEA study, which tested about half that number of American 9-year-olds spread over 50 states [6] (ie an average of only a little over 100 per state) from a total population far larger than that of any other participating country, one cannot help wondering how representative the IEA sample can have been. By contrast, both Spain and Singapore tested more 9-year-olds than did the whole USA, and Iceland tested its whole age-group. Another oddity is that the IEA report concludes that TV viewing is merely detrimental to good reading, yet American children are shown to spend far longer watching TV than those of any other country (Figure 7.5).

However, some other English-language countries also performed quite well, although questions arise. New Zealand 9-year-olds performed well, although (Table 6.4) those of its students did not have English as their home language suffered a greater disadvantage than those of any other country; one wonders how far Marie Clay's jenrusly resourced Reading Recovery program may have boosted overall performance in New Zealand. The performance of Singapore's 14-year-olds was remarkable, considering that three quarters of them did not have English as their home language, and here one wonders whether literacy in Chinese may have improved students' visual memory for irregular spellings in English. Students in Botswana, Nigeria and Zimbabwe suffered multiple disadvantages, including higher percentages for hom English was not their home language; here one is reminded of John Downing's research in Papua New Guinea [7], where he identified learning to read in irregular spelling as a particular problem for those who did not speak the language.

6. Effects of spelling regularity inconclusive

The question of how far literacy standards may be influenced by the regularity of writing systems is discussed, along with many other factors, in Chapter 5 of the IEA report, "How Do High-Achieving Countries Differ from Low-Achieving Countries?". It is worth quoting the section concerned (p41):

"7. It is often claimed that languages which show a regular correspondence between sound and symbol make learning to read easier than those which have an irregular sound-letter correspondence. There is quite enough for the young child to remember without being confused by exceptions in the orthography. To check out this hypothesis, the main 15 European languages... were rated on a five-point scale according to the extent to which their graphemes mapped faithfully on to their phonemes. The results of this exercise are shown in Table 5.5.

Table 5.5. Rating of languages according to phonetic regularity.

<table>
<thead>
<tr>
<th>Highly regular</th>
<th>5</th>
<th>Finnish</th>
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<tbody>
<tr>
<td></td>
<td>4</td>
<td>Spanish, Italian, Portuguese, Hungarian, Slovenian</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>German, Dutch, Swedish, Norwegian, Icelandic, Greek</td>
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<tr>
<td></td>
<td>2</td>
<td>Danish, French</td>
</tr>
<tr>
<td>Irreg.</td>
<td>1</td>
<td>English</td>
</tr>
</tbody>
</table>

Each country had these ratings applied according to its language of instruction, and comparisons were made between the high-scoring and low-scoring nations. While the Finnish and Italian students' results bore out the hypothesis of the benefits of regularity, the results of the remaining
countries did not. The degree of regularity may be one factor which assists students when the sound-symbol link is near perfect, and the teaching methods may exploit that fact, but it is apparently not a major consideration in other languages by age nine."

Spelng reformrs wil no doute be surprised by these conclusions (indeed Table 5.3 even states that, acording to th surveys statistics, for 9-year-olds an iregulr riting systm is actuly helpful!), and they wil wish to no more about ther basis. One peculiarity is imediatly aparent wich may or may not be significnt: th section refers repeatdly to sound-symbl, sound-letr regularity, yet th IEA survey is concernd only with readng, not riting, and for reading it is th reverse corespondnce (symbl-sound, letr-sound) that is importnt. One wud like to no in wat respect jermn and greek for instnce wer jujd, from th readrs point of vew, to be less regulr than, say, spanish and italian, altho from th riters point of vew they ar undoutdly so.

7. Verdict for spelng reform
To conclude: th IEA report contains a welth of intrestng infrmation, but for th spelng reformr its findngs ar, at least superficialy, discurajng. Nevtrhless, ther ar enuf douts arising about th findngs for ther mesaj to apear by no means clearcut. We must also remembr that th IEA survey was concernd only with readng, and not with riting, wich is th side of litracy wher mastry of spelng is indispensbl. But abov al: impressiv tho th IEA survey is in its round-th-world covraj, intelijnt and iluminating discussion of th issus, and sofisticated statisticl analysis, it canot invalidate th evryday experience that we hav of english spelng, that it represents a serius handicap to countless lernrs and that almost al of us find ourselves flumoxd by it, even tripng over it, from time to time. Th case for english spelng reform may not be strengthnd by th IEA survey, but it is not weaknd by it eithr. Perhaps th ultmat mesaj of th IEA survey is that cross-cultrl evidnce for th damaj don by english spelng is not best sot in multilingul studis at al, wher th variabls ar so complex as to shroud any straitforwrd conclusion in uncertnty, but rathr in bilingul comparisns wher th numbr of extraneus variabls can be gretly reduced. Here we must again emfazize th importnce of Thorstads anglo-italian study: its conclusions ar devastatng.

Notes
NCE/NFER: Standards in Literacy and Numeracy 1948-1994

Chris Upward discusses

Th British NCE (National Commission on Education) was establishd at th instigation of Sir Claus Moser by th Royal Society, the British Academy and the Royal Academy of Engineering, in response to govrnmnt unwillingness to set up a Royal Commission to examn educational standrds in th UK. In 1993 it publishd its report Learning to Succeed, folod by a series of Briefngs, of wich Standards in Literacy and Numeracy 1948-1994 apeard in june 1995. Havng completed its work, th NCE has now been disbanded. Th foloing discussion is ritn in Cut Spelng, and has beneftted from coments by Greg Brooks.

Th NCE comissioned th National Foundation for Educational Research to produce this study, Standards in Literacy and Numeracy 1948-1994, authrd by Greg Brooks, Derek Foxman and Tom Gorman. Ke points from its introductry sumry ar:

"1. Reading standards have changed little since 1945.
4. Fewer than one percent of school-leavers and adults can be described as illiterate, but almost 15 percent have limited literacy skills.
5. We do not have an effective system of monitoring educational standards throughout the UK. Arguments about standards will continue until such a system is in place."

These conclusions beg som importnt questions. To begin with, th caveat concernng th lak of an efectiv systm for monitrng standrds (at least in England) is in efect telng us that th availbl statistics on wich th basic, measuring conclusion depends ("there is certainly no warrant for doom-laden pronouncements of inexorable decline") ar not necesrly relybl.

But even if it is indeed th case that litracy standrds hav not significntly declined since World War II, we next hav to ask wat those standrds represent in terms of achievable, and wethr they can indeed be considrd satisfactry. Can we be satisfyd if, wen education jenrly has expandd enormusly at al levls since 1945, litracy standrds hav remaind constnt? Shud we not expect hyr standrds now than 50 years ago?

Here, comparisns with standrds acheved in othr languajs with mor lernr-frendly riting systms may provide som indication of wethr standrds in english shud be considrd satisfactry. A numbr of studis (eg Downing 1973, Thorstad 1991, Upward 1992, Wimmer & Goswami 1994) point forcefuly to th posbility that in fact, standrds in english may be seriously held bak by th regularity of th riting systm.
In fact the NCE/NFER study hints intriguingly at further evidence of this kind, under the heading 'Literacy in Welsh language', when it reports as follows:

During the 1980s, the Welsh Office commissioned surveys of various aspects of attainment in the Welsh language. The only valid comparison over time available, however, is the following. Pupils in Year 6 were tested on reading in Welsh in 1978 and 1984. The samples were similar in the two surveys, and the tests included 30 items common to both occasions. The results showed a small but significant rise both amongst pupils speaking Welsh and amongst those learning it as a second language.

This is not the first time that better results have been hinted at for Welsh, or in Wales, than for English, or in England, and in the present context it is worth noting that the Welsh writing system enjoys an exceptionally regular set of sound-symbol correspondences. There may be scope here for a valuable research project to compare literacy standards in Welsh and in Wales with those in English and in England.

All in all, it is perhaps important that we do not accept uncritically the NCE/NFER's mildly measuring conclusion that, though there are no grounds for complacency regarding literacy standards in the UK, "doom-laden prophecies" are uncalled for. The evidence which the study provides may to some degree reassure—but there are grounds for looking beyond its limited purview.

References


Christopher UPWARD (1992) 'Is traditional English spelling more difficult than German?' in *Journal of Research in Reading*, 15(2), pp82-94.

SSS Vice-President Lord Simon of Glaisdale was recently involved in exchanges on literacy matters in the House of Lords, as reported in Hansard. We are grateful to Lord Simon for making this material available to us.

Marie Clay Reading Recovery Programme. 10 May 1995.
Questions about the Marie Clay Reading Recovery Programme, supplementary oral question from Lord Simon, with ministerial reply from Lord Lucas:

**Lord Simon of Glaisdale:**
My Lords, would not the reading ability in primary and other schools be greatly improved if we removed some of the more gross anomalies of English spelling? I refer to the 10 different ways of pronouncing "o-u-g-h" and the six different ways of spelling the sound in the word “see”. Would not that be of commercial advantage also in removing discouragement to foreign traders learning English?

**Lord Lucas:**
My Lords, I am disappointed that such an elegant and frequent exponent of good English should take that attitude to our wonderful language. I celebrate the complexity of English: I celebrate its enormous variety of words and phrases and means of expressing oneself. It is one of the great strengths of our language. If the noble Lord wants an international commercial language, he may care to learn Esperanto.

16 May 1995, consequential question for written answer and ministerial reply.

**Lord Simon of Glaisdale** asked Her Majesty's Government:
In the light of the Answer of Lord Lucas on 10th May (“I celebrate the complexity of English” - H.L. Deb. col. 61), whether they consider that the anomalies of English spelling tend on balance to facilitate or hamper the acquisition of reading ability by (a) English schoolchildren and (b) foreign traders.

**Lord Lucas:**
How easily people learn to read English depends on a range of factors. The relative importance of the nature of English spelling would be difficult to ascertain.
English: International Commercial Use

Lord Simon of Glaisdale asked Her Majesty's Government:

In light of the Answer of Lord Lucas on 10th May ("If the noble Lord wants an international commercial language, he may care to learn Esperanto" - H.L. Deb. col. 61), whether it is their view that it is to the advantage of the United Kingdom that English should increasingly develop as an international commercial language, or that Esperanto should be adopted as an acceptable alternative.

Lord Lucas:

The increasing use of English for international commerce is likely to benefit the United Kingdom and its people to a greater extent than any increase in the use of Esperanto.

Lord Simon writes:

The above calls for some explanation of Parliamentary practice. At the commencement of business in the House of Lords Members may ask four oral questions in total. These questions are printed in advance. The Government Department concerned drafts a reply for the Minister. It also drafts 'Notes for Supplementaries' to prepare the Minister for supplementary oral questions which may arise out of the original exchange. But a particular supplementary question may not be foreseen, in which case the Minister has to do his best without departmental guidance. Lord Simon's question was obviously unexpected; and Lord Lucas gave his own opinion.

In addition to oral questions members may table questions for written answer; the answers are drafted by the Department, though tabled in the name of the Minister. Lord Simon took an immediate opportunity to question the oral answers he had received. The Department was obviously embarrassed by the questions; and was unusually prompt in answering them, thus removing them from the order paper as soon as possible.

The answer to the second question was a retraction of Lord Lucas' oral answer. The answer to the first is a characteristic piece of disingenuousness of the Department for Education (which should really be called "the Department for Illiteracy"). The reason why we are ignorant of the degree to which the anomalies of English spelling conduce to difficulties in learning to read is because the DfE have prevented our knowledge of it. The terms of reference of the Bullock and Kingman Committees were carefully drawn to preclude their examining the matter. And, extraordinarily, the Department, while expressing concern about bad spelling, have not even bothered to find out what words are commonly misspelt: that might provide material for the SSS.
Trying our Luck with IBM

Bob Brown

In July 1995 the SSS submitted an application to IBM for technical support for a computerized spelling project. Although the application was unsuccessful, it seemed appropriate to record the attempt in JSSS. We here present the main details of the application, along with most of our covering letter and relevant excerpts from IBM's letter of rejection.

IBM Community Connections Awards
Basingstoke, Hampshire
25 July 1995

Dear IBM Community Connections Awards

I enclose an application for one of the awards.

We would draw your attention to the fact that in the mid-1980s IBM sponsored a successful remedial literacy project in New York (James Henry Martin, 'Writing to Read') which also involved a simplified spelling scheme. There are, however, important differences between that scheme and our own proposal, in that John Henry Martin was working with a fully phonetic artificial orthography targeted at remedial students (adolescents, young adults), whereas our proposal is orthographically less radical but has much broader and longer-term implications.

Yours sincerely
SSS

The Simplified Spelling Society
133 John Trundle Court, Barbican, London
17 August 1995

(Dear Simplified Spelling Society)
I am writing to let you know that, sadly, your application for the IBM Community Connections Awards has not been short-listed for an award.

The response to the scheme has been extraordinary, with some 1200 proposals being received. … Faced with a large number of highly creative proposals the assessors have had an extremely difficult task in selecting the forty projects … to go forward for more detailed evaluation. I am very sorry that your project did not get through …in the face of intense competition.…

I know that much effort … will have gone into your proposal, and we … thank you very much for submitting it.

Yours sincerely
IBM Community Connections Awards
IBM Community Connections Awards: Application

1. Information about your organization

Name of your organization
The Simplified Spelling Society

Legal status
Voluntary association

What was total revenue of your organization in the last financial year?
£3264

Date your organisation was founded
1908

Geographical area covered
Worldwide, but centred on UK.

Number of employees in the organization
0

Number of volunteers and members
approx. 100

What are the aims of your organization?
"to bring about a reform of the spelling of English in the interests of ease of learning and economy in writing."

2 Partnership organizations

Name of organization
There are potential partnership organizations for this project, such as ………., but they have not yet been approached.

3 Information about your proposed project

Project description
The project aims to make available online (through an interactive Internet site) a facility for simplifying English spelling. Ever since the Cut Spelling (CS) system (see attached yellow leaflet for outline) was launched in 1992, there have been repeated calls for a two-way online dictionary-based text-conversion facility, so that writers using the Traditional Orthography (TO) of English can produce text in CS, and vice versa.

Specifically, we seek resources for
(1) a suitable computer and software to act as an Internet server, with
(2) appropriate connections to the Internet for an initial period. We also need
(3) technical assistance and possibly software to establish the server functionality. A possible widening of the scope would include
(4) a small population of suitable 'seed' PCs donated to relevant literacy organizations, particularly those involved in teaching learners with special difficulties and who may not be able to afford suitable technology from their own resources.

The Simplified Spelling Society can provide the necessary linguistic and orthographic expertise,
but has for some time been looking for the necessary computer-technical expertise to implement this scheme. The Society can promote the use of the server from its own resources once it has been established.

**What categories of people do you aim to help? How will they benefit?**

In principle, the facility can benefit many kinds of users, but we see a particular value in making it available to assist literacy acquisition in English (by both native and non-native speakers), and amongst learners particularly for those with specific learning difficulties (e.g. dyslexics) who are most seriously disadvantaged by TO. It has been suggested that it might be useful for some categories of the physically disabled too. The project should also serve all categories of literacy teachers, by removing the worst obstacles to literacy acquisition in English, and by giving them a straightforward facility for simplified text-production for teaching purposes. The general aim is to improve literacy wherever an adapted orthography can offer assistance.

**What will be the long-term benefit of the project?**

As well as offering an immediate aid to literacy acquisition, the project will provide a public online facility for more efficient and more reliable text-production generally. In the long term it will educate literacy-workers in the damage to literacy standards and written English as a whole caused by TO, so encouraging a critical re-appraisal of TO and of the possibilities for its modernization.

**How do you think information technology will help you with this project?**

Information technology, in particular the potential for future development of Email, the Internet, the WWW, the Information Superhighway, etc, etc, promises an unprecedented opportunity for the dissemination of educational benefits of all kinds. The interactive character of the proposed project represents an ideal exploitation of present and future technology.

**What expertise do you have in the use of information technology?**

Years of word-processing and desktop publishing, and recent limited use of Email and the WWW.

**Have you secured additional help from other sources if needed?**

Access to the computing facilities of the Department of Languages and European Studies at Aston University, including Webserver.

**What are your plans for continuing the project, once IBM's involvement is complete?**

It is expected that the project will continue to operate of its own accord once it is set up. However, answer No.3 to the next question reflects the Simplified Spelling Society's long-term, continuing commitment to the goal of improving the user-friendliness of the English writing system, for which Information Technology offers infinite possibilities as yet scarcely explored.

**How do you propose to measure the results of the project?**

The success of the project will be measured
1. by the amount of use made of the proposed facility,
2. by the feedback received primarily from literacy organizations, and
3. by the experience the Simplified Spelling Society gains in pursuing its purpose of enhancing literacy standards by overcoming the obstacles currently presented by TO.
Spelling Reform in the Low Countries

Harry Cohen

Born and educated in Holland, Harry Cohen worked as a statistician for the United Nations in Geneva 1958 - 1962, and from then until his retirement in 1981 as a translator for the European Commission in Brussels. He has written widely on economic matters, but also on language and particularly spelling for Dutch papers and for the American journal Verbatim. He made a valuable contribution to elucidating the history of the Nolst Trenité poem 'The Chaos' (see JSSS 94/2 pp27 - 30).

The SSS Newsletter previously reported on Dutch in Summer 1986 p15, and JSSS in 87/2 pp 14 - 16.

1. Nineteenth century vacillations

…It all started in 1804. Holland then was a French satellite state that followed the Napoleonic policy of streamlining broad segments of public life. All citizens had to adopt a surname, the tax system and the postal service were centralized, and rulings were issued on primary education and the practice of medicine. And on spelling. The Leiden professor Matthijs Siegenbeek was commissioned to design an orthographic system for the Dutch language. It was officially published, and followed by a matching wordbook. In 1815, when Holland and Belgium were united following Napoleon's downfall, these standards also became applicable in Flanders.

Siegenbeek's guidelines were not mandatory and never became really popular. When linguists Matthias de Vries and Lammert te Winkel started compiling a comprehensive Dutch dictionary in the 1860s, they first published a study on the spelling principles to be used. Although not intended for the general public, their system was followed in ever widening circles. In Belgium, where Siegenbeek had been renounced after the 1830 secession, it was even adopted officially. The Dutch authorities went less resolutely about it, but at the turn of the century De Vries and Te Winkel's spelling was nevertheless practised by most government offices, schools, the press, and the public at large.

2. Twentieth century simplifications

With the advent of compulsory education, however, more than one teacher felt that this spelling was unnecessarily difficult. Following the historical orientation of nineteenth-century philology, De Vries and Te Winkel had built a number of differentiations based on etymology rather than sound difference into their system (eg, rede ['reason'] and reede ['roadstead'], although pronounced identically, were spelt differently because their vowel sounds had differed in former ages). Gradually, the voices in favour of spelling simplification assumed the form of a movement. The best known campaigner was high-school teacher Roeland Kollewijn. He suggested, inter alia, more coherent rules for vowel representation, deletion of the silent ending -Ch in words like visch ('fish'), and the replacement of PH, RH, AE and C (for /k/) in borrowed words by F, R, E and K, respectively.

Although the drive for simplification grew in scope (and in variety!), no official measures were taken until 1934, when education minister Hendrik Marchant introduced a modernized version of De Vries and Te Winkel's design. It took over Kollewijn's ideas on vowel representation and elimination of silent -CH to a large extent, and did away with a great deal of obsolete case endings. However, as the system was addressed to schools only, it was ignored by the civil service, the press and the general public - and altogether in Belgium.

3. Dutch-Belgian co-operation

During World War II, the exiled governments of Holland and Belgium agreed to deal with spelling matters in a concerted way in future. Co-operation has since been widened by the foundation of the Nederlandse Taalunie ('Dutch-Language Union') in 1980. As a result, identical spelling instructions were promulgated in both countries in 1946/47 and made compulsory for schools and official use. The detailed rules - based on the Marchant model - and a list of over 65,000 words...
were published in *Woordenlijst van de Nederlandse taal* ('Wordlist of the Dutch Language'), colloquially referred to as *Het Groene Boekje* ('The Little Green Book', after the colour of the cover). Issued in 1954, its contents have been a source of continuing controversy. Most arguments centre on the following problems.

4. **Spelling bastaardwoorden**
The term *bastaardwoorden* ('hybrid words') refers to a group of loanwords, mainly of Greek, Latin, French or English origin, which have retained non-native spelling features. Because there is no generally accepted definition, it is impossible precisely to specify which they are, but it is safe to say that they constitute an intermediate category between native words and outright foreign ones. Their spelling often conflicts with Dutch conventions for sound representation (hypothese instead of *hiepoteeze*, quasi instead of *kwazie*, bureau instead of *buro*, clown instead of *klaun*). Since the spelling of a *bastaardwoord* normally goes through a process of gradual assimilation (*critique* became *critiek* over the years, to be followed by *kritiek*), people often feel at a loss as to which variant is the 'correct' one.

The *Groene Boekje* set out word by word the spelling to be regarded as standard (eg, *kritiek*, not *critiek*). However, as compromises between conservative and progressive tendencies were reached separately for each individual entry, the final results proved far from consistent, for instance *criterium* (*criterion*) remained unchanged. Even worse, for many a *bastaardwoord* several spelling variants were given, one being marked as 'preferred' and the others as 'tolerated'. For instance, while the words *kritiek* and *criterium* were given a single standard spelling, *criticaster* was paired up with the 'tolerated' alternative *kritikaster*. In subsequent years, use of the 'preferred spelling' was made compulsory in education and government. In Holland, this directive is also adhered to by the press and the general public, but avant-garde circles and many people in Belgium incline to 'tolerated' variants. In both countries, the *Groene Boekje*, because of its chaotic set-up, often fails as a model for the spelling of the thousands of new words that have made their appearance since its publication. All in all, it has never been quiet on the spelling front.

5. **The tussenletter problem**
The so-called *tussenletters* ('in-between letters') are a second bone of contention. In Dutch, compound words are normally written without spaces (eg, *koffiekop* 'coffee cup'), with hyphens inserted only when required for reasons of legibility. This applies even when the components are relatively long (eg, *levensverzekeringsmaatschappij* 'life insurance company'), and to nonce words. The component parts are frequently linked by a medial sound, usually a schwa or an S (eg, *hond*-'e*vlo* 'dog flea', *land*-'staal* 'national language'). The schwa may be represented by either -E- or -EN-, and the S sometimes coincides with an initial or final sibilant in a component. This can lead to uncertainty among language users. The *Groene Boekje* has laid down rules on the matter, but in some cases these have proved to be vague or ambiguous, or have led to contrived results - an often quoted example is *bess*-'e*sap* ('redcurrant juice') versus *bess*-'en*wijn* ('redcurrant wine').

6. **Latest proposals**
Scores of official (and private!) commissions have tried to remedy these and other shortcomings, but time and again discussions have got bogged down in endless arguing. The latest Spelling Commission's design for a coherent spelling system to cover all present and future *bastaardwoorden* was also turned down, but the *Taalunie* authorities did approve some of the peripheral proposals. This will lead to the following innovations.

1. The 'preferred spelling' will henceforth be the only valid one.
2. The wordlist of the *Groene Boekje* will be reviewed and updated at regular intervals.
3. New rulings will be introduced to deal with the tussenletter problem.
4. The rules on the use of hyphens, apostrophes and diereses will be revised.

Although technical preparation is already under way, the date of implementation is not yet known. The proposed measures still have to go through the legislative machinery. And there certainly will be a period of transition - for the time being no school books need be thrown away.
The Dictionnaire Historique de l'Orthographe Française:
A Landmark in Historical Spelling Research
Susan Baddeley

Dr Baddeley has worked for 10 years on orthographies, writing systems and spelling reform for the HESO group at the CNRS (see article below for details), and now also lectures in English at the University of Versailles-Saint Quentin en Yvelines (France). She is an editorial adviser to JSSS, for which she reported previously on French spelling matters in issues 88/1 pp30-31, 89/1 pp10-12, 89/2 pp14-15, 92/1 pp14-15, 93/2 pp3-5.

Summary
Early in 1995, Larousse, one of France's major publishers of dictionaries, brought out a new and long-awaited work which will be a major contribution to research on the history of French spelling, and to historical linguistics in general. The Dictionnaire Historique de l'Orthographe Française (DHOF), or French Historical Spelling Dictionary, is the fruit of several years of research carried out by Nina Catach and her team at the Centre National de la Recherche Scientifique (CNRS), the French national science foundation in Paris.

Through over 1300 pages, this Dictionary traces the history of French spelling from the 16th century to the present day. It shows how the French spelling system has constantly evolved over the centuries, following (albeit at a distance) changes in pronunciation and in grammar, heeding or ignoring the recommendations of the grammarians, and trying at all periods to strike a balance between the conflicting principles of phonology and morphology, of sound and meaning. Most importantly, it shows that French spelling even today is in a state of flux, with large sectors of variation coexisting alongside what is, by and large, a stable and coherent system.

Introduction
In 1970, Nina Catach founded a research team at the CNRS in Paris, with the name 'Histoire et Structure de l'Orthographe Française' (HESO). The team was given a mission to produce, among other things, a comprehensive survey of the evolution of French spelling from the early modern period to the present day. Over the years, HESO has continually enlarged its research perspectives, producing major works in the field of psycholinguistics (reading and writing acquisition), on the present-day structure of French spelling (with a dictionary of word-families), on the history of writing systems, and in computerized linguistic applications, with a programme that automatically 'translates' any written message into its oral equivalent.

The team and their associates have also been active in the field of spelling reform, drawing up the lists on which the Commission of specialists based their conclusions for the 1990 spelling reform proposals. However, the Historical Spelling Dictionary has always been at the heart of the team's research, and much of the theoretical work it has produced is the result of reflections brought about by the work on the DHOF.

As I had the privilege of working on this unique project during the ten years leading up to its completion, I would like to give SSS Journal's readers not only a conventional review of the dictionary, but also some of the 'inside story' of how it was made.

1. The Corpus: The Dictionary of the Académie Française
When the question first arose of where to find the materials necessary for a comprehensive study of the history of French spelling, the answer soon became obvious. The French language is
fortunate in possessing a particularly rich lexicographical tradition, of which the nine editions of the Académie Française dictionary (from 1694 to the present day) are an especially important feature. External observers in France and elsewhere may look with some condescension on the conservatism of the Académie dictionary, as well as the slowness with which new editions appear; however, for spelling historians and lexicographers, the Académie corpus is a boon. Although new words have consistently been introduced from one edition to the next, old words have seldom been eliminated, which means that the original corpus of lexical items from 1694 has survived, practically intact, up to the present day. This makes it particularly easy to trace the orthographical development of these items over the centuries.

The DHOF therefore traces the orthographical development of some 20,000 lexical items in the Académie editions over three centuries. Of course, the modern reader may be somewhat bemused to find many words appearing in the dictionary which are no longer in use, and not to find more recent ones. However, the advantages of having a complete corpus of this importance seemed to us to outweigh the few disadvantages.

This corpus therefore formed the basis for the dictionary, and provided us with the source of all its lexical items. However, as the Académie corpus represents only a part (and the most conservative part) of the French lexicographical tradition, spelling forms from other contemporary dictionaries were also taken to complete the picture. First of all, the items from the Académie corpus were traced back in time, whenever possible, to the 16th- and early 17th-century dictionaries of Robert Estienne and Jean Nicot (1549, 1564, 1606). Also included for reference were Randle Cotgrave's French-English Dictionarie of the French and English Tongues (1611), Pierre Richelet's Dictionnaire François (1680) and Antoine Furetière's Dictionnaire Universel (1690), both almost contemporary with (and competitors of) the Académie's first edition. We also included Féraud's Dictionnaire Grammatical de la langue françoise (1761) and Dictionnaire Critique de la langue française (1787), which are notable for indicating pronunciation systematically. Finally, from the 19th and 20th centuries, we consulted the dictionary of Littré, the Dictionnaire Grammatical of Darmesteter and Hatzfeld, and the contemporary editions of Le Robert and Larousse.

1.1 From 20,000 words to 2,000 articles
It soon became apparent that the 20,000 words of the 1694 corpus were more than enough for a history of spelling. Indeed, of the 20,000 items, almost half (in fact, 48.7%) had not changed in their spelling at any time between 1694 and the present day. This figure includes many monosyllables and 'grammatical' words, as well as many of the most common words, such as homme, femme, enfant, pain, vin, etc. Having eliminated these, there still remained a substantial corpus. However, devoting an article to the spelling changes of all these 10,000 words would have entailed a huge amount of repetition, as the spelling changes involved were very often the same: introduction of an accent (27.69%), replacement of I by J, loss of etymological consonants, etc. Eventually, we reduced the corpus to the 2,000 words which seemed to us to be the most interesting, or the most representative. These words cover 148 different types of spelling changes.

This explains why, in the dictionary, there are two types of entries: some simply give the spelling forms in the various dictionary editions, followed by a reference number indicating the types of spelling change represented, while the others are followed by a more substantial article. Originally, the two sets of words were meant to be presented separately; however, the publishers insisted that a dictionary was, by definition, in alphabetical order, and the two lists were therefore merged together.

2. Structure of the Dictionary
The Dictionary is made up of several parts: a 15-page Introduction, a page of statistics taken from the data used, a bibliography, the Dictionary itself, 89 pages of 'Paragraphes de synthèse', a list of
the dictionary entries classed according to their type of spelling modification, and finally a 100-page Index listing all the spelling forms given in the dictionary.

2.1 The 'Paragraphes de Synthèse'
One of the most original features of the dictionary are these paragraphs (148 in all), which describe in full detail the complete history of each of the types of spelling change identified in the dictionary, and almost make up a history of spelling in their own right. The paragraphs are organized as follows: vowels, semi-vowels, accents and auxiliary signs, consonants, double consonants, internal mute consonants, final consonants, Greek and Latin notations, homophones, compound words, lexical pairs and changes in grammatical category. This sequence ranges more or less from the phonetic to the purely graphic and semantic.

These paragraphs make up the backbone of the dictionary, and give both an overview of the features presented in the individual articles, and a more detailed and documented analysis than was possible in the space of a short article.

2.2 The System of Cross-References
Another characteristic feature of the dictionary is its unique system of cross-references. In the 'bare' articles, which just give the spelling forms in each edition, we felt that it was sufficient simply to indicate the paragraph number for the type of spelling change involved. However, in the case of the 2,000 'full' articles, another solution was needed. On the one hand, we could not repeat the same information every time the same type of spelling change was involved; on the other hand, just giving a paragraph number and expecting the reader to look it up every time seemed insufficient. Finally, an economical and original solution was found. We chose, for each of the 148 types of modification, a word that exemplified this change: for example, for all words featuring an I replaced by a J, we chose the word jaser, and for the introduction of the circumflex accent, bât. In this way, the reader would come to associate an orthographical change with a particular word, which is both easier to remember and more evocative than just a paragraph number.

Therefore, in the course of reading an article, readers will be referred to one or more of these 'base words' (indicated by a double asterisk), where they will find more information about the type of spelling change involved, and then, if they look up the base word, another reference will send them to the appropriate paragraph. In the published version, the typography helps to distinguish the different parts of the dictionary and the different types of articles.

The work thus succeeds in meeting the demands both of specialists and of the general public. The specialist who is in search of particular information can find it easily either by looking up entries in the alphabetical order of the dictionary, or in the comprehensive index of spelling forms at the back. Although a dictionary is not the sort of thing one tends to read from cover to cover, casual readers can also 'browse', and, guided by a set of graded cross-references which lead them step by step to more and more detailed information, will be able to make up their own picture of this particular aspect of the history of the French language.
The Structure of the Articles

The 2,000 or so 'full' articles are all organized along the same pattern. First, we present the spelling forms taken from the dictionaries that make up the main corpus (1549, 1564, 1606, then the Académie editions). A short paragraph next gives the etymology of the word, and, where appropriate, spelling forms from Old and Middle French. We then present, in separate paragraphs, the spelling changes undergone in the word, generally in chronological order. When appropriate, we give information about the pronunciation of the word, changes in meaning, and, finally, give the homophones or homographs of the word.

Publishing the Dictionary

Today, the dictionary is available in a very handsome edition, in the 'Trésors du Français' collection by Larousse. At the CNRS, we also have a computerized version on a database, which has
enabled us to carry out a certain number of statistical analyses, which are given in the Introduction
to the dictionary.

However, the transformation of our manuscripts into a published edition took a considerable time,
and did not always go smoothly. On the one hand, we authors wanted to keep our particular
terminology, and give as much information as possible; on the other hand, the publishers wanted
to make the work as widely available as possible, and not swamp the potential reader with too
many erudite details. It was often difficult to compromise, and also to adapt our ‘home-made’
production to the latest publishing technology.

One day, the people from Larousse told us that the dictionary was too long compared to the other
works in the same collection, and we had to find a way of shortening it by several pages. Not
wanting to cut out any of the contents, we did this by introducing a large number of abbreviations.
However, at a later stage we were told that there were too many abbreviations, and they made the
articles unreadable. So, we had to go back over our list, and put the abbreviated words back in
their full form in all the 1300 plus pages of the dictionary. Fortunately, we were able to do some of
this work automatically, but not without a few ‘hicups’: for example, while replacing the
abbreviation ds by dans, one of the keyboard operators forget to tell the machine to replace it only
in whole-word contexts, with the result that words like poids, lourds, ronds etc came out as
poidans, lourdans, rondans, and all these words then had to be corrected ‘by hand’.

Similar problems occurred with a few special characters: the notation of Latin long and short
vowels, and certain phonetic symbols. In some cases, for example, with the special characters
invented by spelling reformers, we simply had to find a simpler notation, which we regretted.
However, that was the price to be paid for publication, and we felt that it was more important to
reach a wider audience than to have the dictionary exactly as we wanted it, and for it only to be
available to a happy few. So far, reactions to it have been overwhelmingly favourable, from the
scientific community as well as from the public at large.

Conclusions
We hope that our Spelling Dictionary will put an end to the widespread myth that French spelling is
something fixed and immovable. We have charted the variations and hesitations that accompanied
every change in spelling, and have shown that, although part of the evolution can be said to be due
to a unified purpose and desire to control, spelling changes are more often than not the result of
the system ‘adapting itself’ to the changing role of written language in society. From this point of
view, each article contains to a certain extent, in miniature, the whole story of the evolution of
French spelling, and, within it, the whole history of society.

The 16th-century dictionaries, based on the written usage of the cultivated Parisian liberal
professions, tended to stress etymology (when it was known), and to give spelling forms which
were as close as possible to Latin and Greek origins. This was useful at a time when pronunciation
was extremely variable and when most people who knew how to read and write also knew Latin.
As reading and writing became more widespread during the 17th century, the Académie editions
reflect this extension of literacy: the first editions are more interested in recording varieties of usage
(both spoken and written) and linking them to different social groups: hence the numerous
comments on how words are pronounced, and the attempts to ‘grade’ spelling variants according
to their social acceptability. The 18th century took this normative tendency even further, and
attempted a large-scale ‘rationalization’ of the spelling system, eliminating variants and
standardizing spelling forms according to established principles (prosody, word-families, etc).
However, even a man with such linguistic insight and force of character as the Abbé d’Olivet [4]
was, at times, obliged to back down when confronted with the irregularities produced by the conflict
between pronunciation and morphological principles, new 'rational' uses and the age-old force of habit, the needs of a modern spelling system and the limitations of the Latin alphabet.

The numerous inconsistencies that the spelling system had spawned over the centuries were carried over into the 19th century, when, with the centralization of the state, the appearance of a huge number of civil servants and of compulsory state education, the need arose to fix the spelling system, and the Académie dictionary, despite all its faults, became the Bible for printers' correctors and for all those engaged in written production of any sort.

The Dictionary shows us, at last, that the process of change is ongoing, and that there are whole sectors of the spelling system (compound nouns, loan words, doubled consonants) where hesitations still exist and a certain amount of 'clearing up' is still needed.

We hope also to have restored some credibility to the Académie dictionary, which has been superseded this century by the more popular and more readily available Robert and Larousse editions. Contrary to popular belief, the Académie has never had any mandate to take decisions or to impose its own recommendations concerning spelling: it has always described itself as the 'custodian of usage', and the DHOF shows that it has consistently fulfilled this role over the centuries: never being in too much of a hurry to record fashionable new spellings that were unlikely to last very long, but rarely failing to do so when majority use prevailed. However, with its latest edition (1986), the Académie has taken the unprecedented step of recommending new, 'rectified' spellings as variants, even before they were adopted by the 'mainstream' dictionaries, Robert and Larousse.

Finally, we hope that our dictionary will not only provide convincing evidence of what spelling was like in the past, but may also give some indication as to where it is going. While we were preparing the lists for the 1990 'Rectifications', we frequently used data taken from the DHOF to show that the reforms proposed (for example, generalization of the grave accent on syllables containing an 'open' E) accorded with the general tendencies of spelling evolution over the centuries. Without this historical perspective (which has, until now, not been readily available), there can be no real, informed debate about the present structure of French spelling (or that of other languages) or about its possible reform.

Notes


[2] According to Académie regulations, any modification in the existing dictionary articles required the votes of at least two-thirds of the Academicians present; however, the addition of an article only required a majority vote (ie, over half).

[3] In the Académie's first edition, many common words were left out by mistake, and were included in the following edition.

[4] Joseph Thoulier D'Olivet was a grammarian and Academician, who brought about the full-scale modernisation of the spelling of the Académie dictionary (mainly by the systematic introduction of accents) in 1740.
They removed only two words from a list of 12,000 and did not object to the 112 rules. A "study group" of officials of the ministries of culture of the 16 German states was very satisfied when they met in Hannover recently. Their mandate was simply a last check of the 244-page proposal for the reform of German spelling.

Last November this set of rules was adopted by an international conference in Vienna, with final approval by Austria, Switzerland, and seven countries with German minorities. The German delegation's vote, however, was subject to approval by the ministries of culture. This is scheduled for September 28 1995 in Halle. Before the end of the year the new Set of Rules will be ceremoniously signed in Vienna.

This reform will bring the most extensive changes to German spelling since the adoption of the first binding Set of Rules in 1901. Until now, Germans were given only vague information about this reform thru news articles and special pamphlets. The Set of Rules was available to participants only. It will be published in a few days by Verlag Gunther Narr, Tubingen. Now those affected, primarily teachers and students, can assess what is approaching them.

The Set of Rules is a compromise between experts, nearly all of them had hoped for a more radical, systematic reform, and the officials of the ministries of culture, who were trying to prevent an unreasonable burden on the writing population. It took seven years for diverse committees on both sides to come to a conclusion.

The seven-year war about the extent of reform left its marks in the current edition of the Set of Rules, lessening its value considerably. A positive result is that many things will be easier, a few will remain unnecessarily difficult or even made more difficult. The ministers of culture could change this.

For example: At the Vienna Conference in November 1994 the dispute about foreign words finally ended. The reformers wanted Germans to write Dubel, Siluette, Tur, and Obergine, also Rytmus, Apoteke, and Kommunikee. The ministers of culture prevented the worst. They insisted on maintaining Double, Silhouette, Tour, and Aubergine. For other foreign words they allowed dual spellings as a compromise. Next to Rhythmus, Apotheke, and Kommuniqué, they also permit Rytmus, Apoteke, and Kommunikee. There is no need for it.

If the ministers of culture make it easy for themselves and add no changes to the reform, teachers and students will have a difficult time. They will have to study some nonsense and a few unimportant things. They are confronted with difficult times anyway, if the reform progresses at the "study group's" time-table.

The new rules shall not be effective until two years from now, in August 1, 1997. Two long school years - 1995/96 and 1996/97 - will be a "phase of twilight" as Franz Niehl calls it. He heads the school department in the ministry of culture of the state of Nordrhein-Westfalen and for the last seven years the "study group spelling reform". During these two years every teacher may choose how much of the old and how much of the new he wants to teach.

Teaching as usual will not start again until 2001. Until then, words spelt according to the old rules may not be marked as mistakes. Probably there will be more rapid progress than these time plans.
indicate. Günther Drosdowski, long-time chief editor at "Duden", says these plans are unrealistic. He says these plans are going too far, but he will put them into action immediately. (See SPIEGEL interview.)

Should the ministers of culture pass the Set of Rules this fall, Duden will publish the new rules in its next edition this year. The editors are working on them with "high pressure". Drosdowski: "As soon as the new Duden is published no teacher will or can teach according to the old rules.

SPIEGEL INTERVIEW by Werner Harenberg: Paket, Rytmus, Tron? Günther Drosdowski on Spelling Reform

SPIEGEL: Mr. Drosdowski, you belonged to the German commission which worked on spelling reform for many years. Most members would have liked to go much farther than the decisions made at the international conference in Vienna last November. Did you agree with them?

Drosdowski: No, I would have liked to make a few cuts here and there.

S: Seven years ago a reform proposal failed because of simplifications like Kaiser to Keiser, Hai to Hei and Boot to Bot. These changes were all logical in theory, but in practice they would have been senseless. Now again a few strange changes are proposed, e. g. Packet instead of Paket.

D: Hey could easily have done without it. They claim the verb packen is its root, but now they have conceded that the word Packet will be pronounced differently because it used to have stress on the second syllable.

S: And behände instead of behende?

D: They reason that this word comes from Hand. I conducted a little test and found that eight out of ten Germanic philologists did not know this. How should laymen be aware of this root?

S: Zigarette gets an additional r and becomes Zigarrette.

D: I am not happy about this either. But you brought along a list of horrors and could add more words, Frefel Kangeru, and Tron come to mind. In my opinion, these could have been omitted, too. These are blemishes which do not alter the fact that the reform proposal as a whole should be welcomed. Most of the other intrusions are moderate, they lead to clear simplifications and improvements. Therefore, the Duden editors are firmly determined to transform the reform into practice quickly.

S: Why so many "blemishes" - there are many more - in this "work of the century"?

D: I don't think anyone has used this lofty term, it is inappropriate. This reform is not a big deal but a small reform of reason, as I like to say. The were too many opposing opinions and interests, therefore, we must be content with this compromise. More was not possible. None of the participants agree with everything, everyone would have liked something differently.

S: What about Rytmus, Katastrofe, Restorant?

D: There you are not talking about any detail but a basic problem. The Set of Rules allows for dual spellings for these and several dozen other words. Rytmus remains, but Rytmus is also allowed. There will be Katastrophe and Katastrofe, Restaurant and Restorant. In newspapers and books you will continue to read Rhythmus, Katastrophe, and Restaurant, I am sure of it. Schools will have to struggle with it, altho it literally leads to nothing.

S: There dual meanings in the Duden.
D: But not nearly as many and only when the development of language calls for it. Therefore, we have Telefon next to Telephon. But do you know of anybody who writes Katastrofe? I don't.

S: 69% of Germans spell Rhythmus incorrectly. From a SPIEGEL test we learned how they spell it: Rytmus, Rythmus, Rhythmus, Ritmus, Rithmus, even Rittmuβ. Even larger majorities have difficulties with portemannaie, Hamorrhoiden, and Necessaire. Can these people be helped? In the future they can also write Portmonee, Hamorriden, and Nessessär.

D: The high percentage of spelling errors has to be taken seriously, but it should not be the only decisive factor. By the way, those who have trouble with Portemonnais will also have trouble with portmonee, because they will put one n too many or one e too few at the end. Even more weighty than the percentage of errors is the fact that dual spelling promotes Germanization which is contrary to the main development of language and life in general. The development points toward mass tourism all over the world and understanding across international borders. But we make Krepp out of Crêpe, Teke out of Theke, Strofe out of Strophe, Spagetti out of Spaghetti. Absurd.

S: Mr. D., the proposal is positive in finally eliminating much nonsense prescribed by Duden. We are astonished to hear your criticism of Duden rules as if you had not been Duden editor for 34 years. In your lectures you speak about coincidences and inconsistencies, questionable rules, and deplorable spellings - existing only because they are printed in Duden. Aren't you responsible for all this?

D: No, not at all. Our spelling grew without systematization for centuries and even Konrad Duden abided by the rules and spellings officially established. Even the editors of Duden consider themselves the extended arm of the state in matters of spelling.

S: For 90 years Konrad Duden and the editors of Duden did nothing but interpret the Set of Rules of 1901?

D: But, of course, much more, otherwise we could have played Scrabble every day. For some areas, e.g. punctuation and writing words together or separately there were no official rules in 1901. Konrad Duden did that later. The other rules were differentiated first by Konrad Duden then by the Duden editors in order to clear up cases of doubt. Furthermore, during the course of centuries we have always adopted new words, the original Duden contained 27,000. Today there are nearly 120,000.

S: We would like to know: Why couldn't the self-reliant, independently working Duden editors throw out ballast instead of waiting for 90 years for a reform agreed upon by others?

D: There I have to agree with you. Today I regret that we did not step in and eliminate nonsense like "in bezug auf" and "mit Bezug auf", radfahren and Auto fahren.

S: Instead you even tried to explain such nonsense scientifically.

D: Well, not really.

S: Radfahren is spelt in one word and not like Auto fahren in two words "because the image of activity prevails".

D: Because you step in the pedals while biking? Where did you find that?

S: Duden, 20th edition 1991 - that is the latest, Rule 207.
D: (looks it up) Well, yes, it also says, the noun has to be faded.

S: The Duden has been ridiculed for its fading nouns for a long time.

D: But I don't want to defend us. I was unaware of this rule. You see there is not only hurrying-ahead obedience but also hurrying-ahead forgetfulness. These differences should finally be abolished therefore Rad fahren like Auto fahren.

S: In the future there will be an independent committee at the Institute for German Language - also here in Mannheim - which will decide on all innovations. Will Duden then lose its official "order" of 1955 which you often like to mention? At that time the conference of ministers of culture declared "in cases of doubt the spellings and rules used in Duden are binding."

D: Nothing will change in our work, even if the ministers of culture withdraw the 1955 order.

S: The Institute for German Language wants the new committee to decide whether and how rules will be changed. Then the Duden editors only would have to put to reality the committee's decisions.

D: I can understand that some reformers think that way, but that is not the way it will happen. Duden is known for its speedy and up-to-date work. Every new word is in the next edition. We would have to wait much too long for the committee's decision, if it's ever made. I think it is superfluous.

S: When spelling now changes, will Duden change, too?

D: I don't see any reason for that. Lay-out, size, structure, hopefully even price, principally it will remain the same as successfully proven in the past.

S: Most frequently the Duden editors are accused of developing too many and too rigid rules. Famous is a sentence by Hermann Hesse, the Duden is "an authority where no appeal exists, a bogey and god of iron rules, a potentially complete standardization".

D: Hesse never worked with the Duden, but left that to his publisher's reader. Often Hesse was astonished and furious that the reader found so many errors in his manuscripts. Those who reproach us with exaggeration should compare the Duden with the proposal of the new Set of Rules. There is more extensive standardization at least partially than we have.

S: There are bad sections in the new Set of Rules, e.g. 12 special rules just for short vowels. But there are worse sections in Duden, 37 rules just for the comma. In the future there will be only 8.

D: Indeed the new comma rule is easily handled.

S: The Duden throws the tight net of its rules and spellings over all words and sentences. Couldn't you occasionally say, "This is optional"? It seems to us the idea to allow freedom is completely unfamiliar to the Duden editors.

D: Yes, it is unfamiliar and will have to stay that way. When the reformers are perplexed and disunited - a rather typical situation for them - and they cannot decide on one rule, there is always one who calls for liberalization. That is poison for spelling. We need clarity.

S: Couldn't you leave these examples unregulated: kall stelit or kalistellt, kategorischer or Kategorischer Imperativ by Immanuel Kant, in the letter "Ich liebe Dich" or "Ich liebe dich", Multiple-choice-Verfahren or Multiplechoiceverfahren? This freedom exists neither according to Duden nor according to the new Set of Rules.
D: It has to stay that way. It is a fad to complain about difficult spelling and Duden. But the more you liberalize spelling the more difficult will be reading. The reader expects the same spelling, not side-by-side and absolutely no mix-up. And what should the teacher do? Tell the students, write as you like it? Schools need clear, precise rules.

S: In your information pamphlet about spelling reform you write, "many young people are filled with fear of humiliation for the rest of their lives when writing". Are only the schools or also Duden to be blamed for that?

D: I will not blame Duden, on the contrary, it wants to make possible spelling without mistakes.

S: Some reformers consider it a threat when you announce that Duden is starting to convert the new Set of Rules into practice. How big is the danger that the aim of the reform to simplify and facilitate spelling might be undone by Duden's excessive standardization to the last word?

D: Such a danger doesn't exist at all. On the contrary, we will make it easier for everyone to convert to the new rules.

S: What happens to the rules, you do not simply accept them?

D: No, we sort out what is important in practice and incorporate it into the guidelines printed at the front of the Duden.

S: And some of it you throw into the wastebasket immediately?

D: The rules about sound/letter relations are so complicated and superfluous, we put them aside completely. The user of the Duden will learn about changes in this area in the dictionary, that is entirely sufficient.

S: You are critical of some parts of the reform. Will that affect the next Duden?

D: Not at all so, we do not omit what we don't like. We discussed the dual spelling of foreign words. In the dictionary it will say Rhythmus with a reference to the guidelines where the reader will learn that a Germanized spelling also exists.

S: So the word Rytmus will not appear in Duden?

D: Probably not, maybe as an example in the guidelines, in no case in the dictionary.

S: The public debate will resume when the proposal of the new Set of Rules will be published. Internally a critical mood is already developing. Especially educators are finally realizing what they are facing. Some experts are still submitting wishes, e.g. to keep daβ and not introduce dass.

D: It's too late for that. The experts and the associations, by the way also teachers associations, have spoken. Their suggestions were either considered or rejected. Now it's too late. Out. Finished. Next time again in 30 or 60 or 90 years.

S: The ministers of culture have the last word. Mr. D., do you hope the ministers will bless the Set of Rules and not change one iota?

D: That is assumed by all those who are or were participating in this work. Especially we assume this because at the Vienna Conference in 1994 the delegates passed the resolution.
S: The officials’ declarations are not binding on the ministers. In this case they have not yet looked into the matter but left that to their state secretaries.

D: Still, the decision by the conference of ministers of culture will be just a matter of form, I think.

S: The minister of culture of Hessen, Hartmut Holzapfel, looks at it differently. He questions some of the innovations which still must be discussed, "because they are derived from abstract logic of language but do not correspond to living linguistic usage". Why shouldn't the ministers be allowed to discuss such innovations and reject them?

D: Because then the danger exists of failure for the entire reform. Whatever might be changed, whether a detail or a whole section, the whole process would have to start from the beginning. We would have to negotiate anew with the Austrians and Swiss and all the experts would have to be united. I consider this next to impossible.

S: Mr. Drosdowski, we thank you for this interview.

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A SCRABBLE SENIOR
Edward Rondthaler

To the Editor of the JSSS:
For many years a friend of mine and I have played scrabble together. He has always been an excellent speller and has looked with some disdain on my advocacy of spelling reform.

More recently he has shown signs of Alzheimer's, and his playing has suffered accordingly. But since I am the score keeper I can adjust the figures and see to it that he continues to win most of the time.

In January he had an attack of pneumonia and recovered so slowly that not until last night (July 13) - after an interval of six months - were we able to play again.

It was an enormously interesting game. I was fascinated, as you will be, at what happened.

We think of children, functional illiterates, foreigners, and spelling reform cranks as the only ones who spell English words as they sound. But here was a highly educated, well read, adult scrabble player who without qualm or question laid down the following spellings: wor, jem, worp, mod (mode), wont (want).

Of course this needs much more study. But on the surface it seems to say that even in a well educated, mature, adult mind the artificiality of English spelling may not be as deeply rooted as we have assumed.

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A T-SHIRT READS: POOR SPELLERS OF THE WORLD UNTIE

Most viewers read it as "unite", and are chagrined when their error is pointed out to them.
Handwriting, and its Relationship to Spelling
Patrick Groff

Patrick Groff is professor of education emeritus at San Diego (California, USA) State University.

Introduction
The need for spelling reform has long been based on the assumption that changing the spelling of words, so as to make them more predictable will simplify the task people have in learning to spell. Thus students and adults would make significantly fewer spelling errors in writing to others. The logical advantages of simplified spelling are readily apparent from a rational perspective. This also has been confirmed experimentally.

Many experimental studies show that words spelled predictably - whose spellings are based on reliable, invariant speech sound to letter relationships (e.g. "must"), are easier for students to learn than words based on morphological information (e.g. sign" vs. "signature"), or on visual information (e.g. "street" could be spelt "streat" or "strete"). (Martlew, 1992; Waters, et al., 1988). Thus, commonly, the inability of students to process words phonologically affects their spelling growth negatively (Martlew, 1992). Simplified spelling is linked to the phonological awareness of students.

The Handwriting Factor
Spelling reformers may well consider the effects of illegible handwriting. If a word is not written legibly, of course, it cannot be read, even tho its spelling has been appropriately simplified. Predictable spellings could thus go for naught. It is often found that essays written in legible handwriting are assigned higher marks than illegible ones (Chase, 1986; Markham, 1976). Teachers trying to read illegibly written essays immediately expect less content quality in them than they may actually contain.

On Handwriting Instruction
Confusing the relationship of handwriting proficiency and spelling ability is the fact that empirical investigations comparing the handwriting development of children receiving traditional, incidental, or whole language instruction has not been conducted" (Graham, 1992, p. 4).

Whole Language, a relatively new development, claims that students learn to read and write best in school in the same way they learned to speak at home as preschoolers. Thus, in Whole Language classes, little or no direct and systematic instruction in handwriting is provided.

By contrast, experimental evidence indicates that teaching handwriting in a direct and systematic way during a regular period brings on the greatest legibility in students' handwriting (Wood et al. 1987). Explicit drill by children on remedying their incorrectly written letter forms will double the number of legible letters they can handwrite (Mabee, 1988).

Systematic directing of pupils to copy letters (e.g., Manning, 1989), and to learn the rules of letter formulation (Koenke, 1986; Meulenbroek & Van Galen, 1990) develops more legibility in students' handwriting.

On the other hand, no significant differences are noted between poor spellers and good ones in the speed at which they handwrite (Martlew, 1992). Children who write higher quality compositions do not handwrite significantly faster than do pupils whose compositions are of lesser quality (Hamstra-Bletz & Blote, 1993; Rubin & Henderson, 1982).
Emphasizing legible handwriting as children spell words produces higher scores, in both spelling and handwriting, than otherwise are attainable (Thompson, 1942). This integration of spelling and handwriting instruction does not inevitably indicate, however, as Whole Language educators contend, that direct and systematic instruction therefore must be abandoned.

The style that children use to handwrite, whether cursive or manuscript, does not significantly affect their spelling scores (Askov & Peck, 1982; Byers, 1963; Varty, 1938). Therefore, students’ poor manuscript handwriting earlier on is not a good predictor of their later skill in cursive handwriting (Arn3itage & Rat7laff, 1985). Other However, children taught an "italic" handwriting style are discovered to deviate 50 % less from the letter forms they are taught to use than do pupils taught cursive style (Askov & Peck, 1982).

The Whole Language Approach
In the now highly regarded Whole Language classrooms in English-speaking countries around the world, children often receive only indirect, unsystematic, and incidental handwriting instruction. Students here are encouraged to "invent" the shapes of the letters they handwrite. Pupils thus are "empowered" to eventually "discover" for themselves, using their peculiarly individual learning "styles" and pace of learning, how to handwrite letters in the conventional way. Since there are no objective standards of handwriting legibility set in Whole Language classrooms, however, it is unknown precisely how successful the Whole Language approach actually is in this respect.

It is clear, moreover, that handwriting skill in Whole Language classes is not thought of as having much importance. Children here are invited, not required, to handwrite legibly, Whole Language experts relate, since handwriting skills in their view pale next to the substances that written compositions carry (Graves, 1983). This advice obviously assumes that Whole Language teachers will not allow illegible handwriting of students to affect the way they evaluate students' compositions (as opposed to the way traditional teachers are so influenced).

It is not known at this point, however, exactly what percent of teachers accept this advice about legible handwriting, i.e., what proportion are "exclusive" whole language teachers. Bridge and Hiebert (1985) reported that in the first-grade classes in USA they inspected ten years ago, the most common writing activity that teachers here reported they carried out was handwriting instruction of isolated letters and words. These researchers found that these "children spend very little time in writing activities" (p. 169). Therefore, "a great gap exists between writing practices in the schools and the practices that (Whole Language) researchers and theorists in the field recommend." (p. 170).

I observe from my regular visits to elementary schools in the USA that in the past ten years the gap on handwriting legibility, is closing rapidly in favor of the Whole Language position. This is a period in which Whole Language has become mandated by many state departments of education.

Whole Language authorities may be properly alarmed at the lack of students' opportunities to write that Bridge and Hiebert's (1985) found. But there is no convincing evidence that the Whole Language practice of simply allowing first-grade children to "discover" how letters are formed, that is, to self-instruct themselves on this, is the preferable way to develop handwriting legibility (Graham, 1992).

It is likely, then, that the teachers in Bridge and Heibert's (1985) study reflected the finding that poor handwriting are so taken up with the extraordinary effort it takes them to produce legible script that they have little mental energy left over to devote to the content of what they write. Helping young children to master the writing of letters, done best in a direct and systematic way, thus will allow them to direct more intellectual power toward the communication of their ideas (Muelenbroek & Van Galen, 1990).
The de-emphasis of formal teaching and testing of handwriting in Whole Language classes during the past decade is only the latest evidence of educators’ longtime progressive disinclination to view it as a school subject of consequence. In 1900, handwriting still formed one of the classic three Rs. Instruction in penmanship was as integral to classroom studies as was reading and arithmetic (Eaton, 1985).

By the early 1930’s, handwriting often was taught incidentally, as part of written composition and spelling activities. Thereafter, “systematic and handwriting instruction became largely relegated to the early years of school” (Flood et al., 1991). In grades four and beyond very little instruction in handwriting of any kind was given.

By the 1960’s, 30% of U.S. elementary schools had no formal handwriting programs. No separate period for handwriting instruction was set aside in 50% of these schools (Petty, 1982). Since then, “handwriting has not received much attention in either teacher training programs or in field settings” (Graham, 1986a). Very few countries at present have a national handwriting instruction policy (Husen & Postlethwaite, 1985).

 Traverse (1983, p. 399) notes that handwriting “was a matter of declining interest to researchers during the first quarter of this century.” Thus, studies such as that by Muenenbroek and Van Galen (1990) have become increasingly rare. For any educator who is curious, these researchers provide information about the speed at which elementary school students write separate letters, about visual perceptions and motor processes involved in handwriting, and about the implications of these factors for classroom practices. Handwriting instruction “usually has been based on personal opinions and tradition rather than research findings” (Manning, 1988, p. 14). It is less likely that empirical findings on it are put to use in today’s predominantly Whole Language classrooms.

This waning interest is reflected by the little or no attention given the subject in contemporary encyclopedias of educational research. There is no reference to handwriting in these volumes by Alkin (1992) nor by Whittrock (1986). The Handbook of Research on Teaching the English Language Arts (Flood, et al., 1991) devotes a half page of its 843 pages to the subject. The International Encyclopedia of Education (Husen & Postlethwaite, 1985) gives only a page and a half of its 7307 pages to handwriting.

Now some educators view handwriting as a communication anachronism, which they believe it is best to avoid. Computers, word processors, and their printers have technologically displaced handwriting to a great extent. Articles in educational journals counsel teachers to avoid handwriting altogether (Bing, 1988). Teachers are advised to replace handwriting instruction to students who write illegibly with instructions on how to use typewriters, computer, word processors, oral reports and tape recorders, and dictation to a “buddy” who knows how to handwrite in a readable fashion.

The advance of electronic communications may be on the side of such advice. But so far, the effects on writing compositions on the computer have been disappointing. Of 17 studies that Reay (1989) reviewed, only 7 found significantly greater quality in compositions written with the computer.

Assessment of Handwriting

Paralleling the overall disinterest among educators in handwriting has been their increased resistance to measuring, in an objective way, students’ mastery of it. Only a few schools today evaluate handwriting in a formal manner, with established standardized handwriting scales (Petty, 1982). School districts in the USA no longer require that the legibility of their teachers’ handwriting meet a standard level (Groff, 1975).

This avoidance of accountability for how legibly students and teachers can handwrite is defended
by Whole Language educators, who feel legibility is of little importance. Also, the results of
standardized test results in handwriting would prove embarrassing. Between World War I and
1964, sixth grade American children's handwriting legibility had declined two full school years
(Groff, 1964). If such a remarkable falloff had taken place in other school subjects, there doubtless
would have been large-scale cries of alarm.

Despite the rejection of them in general by modern educators, there still remain available for sale
standardized handwriting tests of a recommendable quality (Graham, 1986a; Graham 1986b;
Graham et al., 1989; Phelps et al., 1985).

A Handwriting Miscellany
There is considerable modern information about handwriting that, even tho ignored by most
educators, may yet be of some interest to spelling reformers. Among the factors that have been
discovered to affect handwriting legibility (and thus spelling and written composition scores) is that
boys for some unexplained reason typically handwrite less legibly than do girls (Graham, 1986a;
Wood et al., 1987).

Then, altho intelligence does not correlate significantly with handwriting ability, children with the
highest IQs modify letter shapes more eccentrically when handwriting than do children with lower
IQs (Askov & Peck, 1982). Children with lower handwriting legibility show less preference for
personal style (Hamstra-Bletz & Blote, 1993). Their mental efforts apparently are so taken up with
trying to write legibly that they have little or no energy left available for experimenting with style
characteristics. In contrast, one-third of students can use a personalized style, and yet can
handwrite legibly (Askov & Peck, 1982).

Left-handed children handwrite just as legibly as do right-handed ones (Groff, 1964). For years,
teachers were told wrongly that they should expect left-handers' legibility to be inferior. Teaching
the new slanted manuscript style letter forms (called "D'Nealian" does not make students' transition
to cursive writing easier than otherwise (Graham, 1992). There is continuing disagreement, tho, as
to whether children handwrite more legibly with ballpoint pens or pencils (Manning, 1988). Children
definitely write more legibly when given paper with large spaces between the lines than with
smaller spaces (Manning, 1988).

Discussion
Electronic devices, such as computers, into which one types or speaks messages, may at some
point in the future do away with the need to teach students to handwrite legibly enough that their
formations of words are readable by others. Spelling reformers can look forward to this day as
much as anyone else. Nonetheless, in the foreseeable future there is justification for teaching
students, in a direct and systematic manner, to handwrite legibly.

Unfortunately, then, the demise of formal handwriting instruction, urged on by the Whole Language
movement, may become a self-fulfilling prophesy - if the movement retains its powerful attraction to
educators. Whole Language's eagerness to eliminate the formal teaching of handwriting may have
jumped the gun on the electronic revolution, by graduating students with illegible handwriting
without waiting until there are sufficient available electronic communication devices to compensate
adequately for this handwriting disability. They fail to consider seriously enough the potentially
disastrous practical consequences to the nation, or to the English-speaking world, of widespread
illegible handwriting.

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FINDING, DEVELOPING, AND TESTING MATERIALS ON SPELLING REFORM
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Computer databases are likely to overlook re-search on spelling reform unless steps are taken, such as the provision of bibliographies. The electronic control of knowledge can be a threat to progress in spelling reform in two ways. Most unexpectedly, it can restrict access to information and research on spelling reform. Surprise. How is this, and what can be done about it?

The ERIC database, now almost universally available in Universities and colleges, contains 2794 entries on Spelling for the 16 years 1966-1981, and another 2057 for the 11 years 1981-92. This shows an increasing interest in spelling, at about 7 % per year.

The next question for wonder is, why then, after all this research in English spelling, has there been no improvement in the system? Most of the ERIC entries on Spelling are concerned with learning and teaching the stuff, and with what is wrong with those who cannot spell, and how to cure them - whereas from 1982 to 1992, only 12 of the 2057 entries on Spelling are listed under "Spelling Reform".

Worse, this selection of 12 articles omits significant books and articles during that period. From the SSS Third International Conference on Spelling in Edinburgh, only Beech's research is included.

Nothing even of Venezky, or most of Downing's writings, or Rondthal, or the bibliographies and other work compiled by the SSS, Upward's work, or Newell Tune's anthology on spelling reform or from his other publications. Sometimes directly relevant articles are listed under Spelling, but not under Spelling Reform.

When my article on the "Design of Spelling" was published in Harvard Educational Review in 1986, it included arguments that research in spelling improvement was both necessary and feasible, a review across many disciplines drawing attention to research already relevant, outlining what remained to be done, consideration of possibilities for the future and how they could be tested - a foundation for others to use in future work. But others will not find it. The article is listed under "Design of Spelling" - but only if you know of it already, to look there.

The abstract given is the first sentence from the HER editors' introduction. It omits the vital contents of the rest of their summary, "English spelling, ... not only makes the achievement of literacy generally difficult but results in the uneven distribution of power and opportunity. She
proposes areas for research that could lead to creative and practical ways to resolve these difficulties." In the academic world, limits to omniscience of electronic bibliographies are increasingly not recognized, with the assumption that what is not there, under the appropriate heading, is not worth chasing up. It will not be cited, and will not be used.

It is essential that the SSS prepare complete updated bibliographies of research and evidence that are relevant to continuing work and progress in spelling reform, and that we do our best to insure that these bibliographies, with regular further updates, are not only published by SSS in say the Journal or in other professional and research journals, but also appear under the correct heading in electronic as well as paper data bases, e.g. ERIC, Modern Language Abstracts, Social Sciences Index, Language Abstracts, and Psychological Abstracts. With computers, what is put in is what others will get.

Ready Experiments
One experiment badly needing to be done is to continue investigation into the effects of practice in reading in surplus-cut spellings (SC). Yule & McKay made a start at this in a project in which 92 average and poor readers read for an hour a day for three weeks, but circumstances prevented its adequate completion and planned followup. However the 46 texts, around 50,000 total words, are still available in both TO and SC forms, and on disk they can be purpos-adapted for a wide range of experiments.

Most of the texts are at around a nine-year reading level, with some up to easy versions of Shakespeare that retain the quotes. They include fiction, non-fiction, classics, verse, comic stories, adventure, romance, and international authors and settings. They can introduce readers who have read very little to a wide range of interesting and worth-while reading on many subjects. All texts were either purpos-written, out of copyright, or used for research purposes with the permission of the publishers. They include:

1. The Vikings. Their lives and history.
8. Round the world in 80 days. Jules Verne.
19. How to learn spelling.
27. A history of the world in three pages.
33. Parkinson's Law on How work expands.
The 20th Century Japanese Writing System: Reform and Change

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Dr Seeley is Head of the Department of Asian Languages at the University of Canterbury, New Zealand. He has written articles on the Japanese writing system, and a book on the history of the Japanese script from the earliest times down to the present (see 'Further Reading' below). His research also encompasses the history of the Chinese script in China.

Explanatory note

The Chinese script was originally adopted in Japan early in the first millennium AD because at that period the Japanese had no writing system of their own. Modern Japanese is written predominantly in a combination of Chinese characters or kanji (about 3,000-3,500 in texts of a general nature such as newspapers), and kana (Japanese syllabic signs [about 92 in total in two syllabaries], each such sign representing a short syllable of Japanese such as a or ki), with an admixture in some texts of Roman letters and/or Arabic numerals.

There is significant fluctuation in usage, but Chinese characters are used to represent in writing many nouns and verb and adjective stems, while kana (hiragana - 'flowing' in appearance) are used for inflectional suffixes, grammatical particles, some nouns, etc. A second variety of kana (katakana - angular in appearance) is used for representing Western loanwords (largely from English), for onomatopoeic expressions, etc. Thus, for instance, in the Japanese sentence

あの人は１９７０年からイギリスに住んでいます

(Ano hito wa senkyuuhyakunanaunen kara Igirisu ni sunde imasu 'That person has been living in Britain since 1970'), the noun hito 'person' and the verb stem sume- 'live' are typically written in kanji characters, the grammatical particle wa and the -te imasu verb form are written in hiragana, as also the demonstrative 'that', while the loanword Igirisu is represented in katakana.

Introduction

In considering simplified Chinese characters in China and Japan, one needs to distinguish between non-centralized or informal use on the one hand, and centralized official adoption of such characters on the other. In China, simplified characters have been used in some texts in an informal way for several thousand years, though it was not until the 1950s that the Mainland China government moved towards adoption of such characters. In Japan, examples of variant characters, including simplified forms, can be found in texts dating from about the 5th century AD onward. Dictionaries featuring numerous simplified forms were compiled in China from the 8th century onwards; in Japan, many such dictionaries were compiled during the Edo period (ca, 1600-1868).
In Japan, as in China, the force of conservative tradition was such that simplified characters were not officially adopted until about the middle of the 20th century (1946 onwards, to be precise).

In this article, we will focus on attempts at reform, actual reform, and change in Japan affecting Chinese characters and kana signs from about 1900 onwards.

**The period 1900-45**

In Japan of the pre-modern period (before the Meiji Restoration of 1868), writing was invested with values which meant that it was perceived as far more than a mere utilitarian tool. In order to read and write anything more than the simplest and most basic text, one needed a knowledge of many thousands of Chinese characters. To make matters worse, the written language was typically not just a visual rendition of everyday spoken Japanese, but a convoluted entity which reflected the influence of Chinese linguistic forms and older Japanese forms. As if this were not bad enough, it was necessary - other than in informal documents - to write using the often more intricate orthodox forms of characters rather than simplified equivalents, though perhaps it should be noted that this complexity of structure was compensated for to a small extent in the Edo period through the extensive use of a cursivized way (o-ie-ryuu) of writing Chinese characters which meant that some of the strokes which were separate when the characters were written in the slow and formal way ('block script' or 'model script') became joined up or even omitted.

Even from the time before Japan opened its doors to the full influence of the West in 1868, some Japanese intellectuals could not help but note the simplicity of the Roman alphabet compared with the cumbersome writing system for Japanese and Chinese. There were progressive individuals who argued for script simplification from a very early date, e.g. the noted educationalist Fukuzawa Yukichi (1834-1901), but they had to fight an uphill battle against the traditionalists, who saw writing in general and Chinese characters in particular as a kind of intellectual showcase for exhibiting erudition on the part of the writer.

From about 1900 onwards, script reform became a subject of often intense debate among Japanese intellectuals. Discussion and proposals regarding reform, and reform itself as it eventuated from 1946 onwards, focussed on the two areas of the number of different characters for general use, and the shape (form) of individual characters.

When it came to defending the case for retention of use of a very large range of characters and for adhering to orthodox (non-simplified) forms, the Japanese military establishment had been a staunch advocate. Ironically, though, during the Pacific War circumstances led the Army Ministry to implement restrictions on the number of different characters used in certain types of texts. The motivation for this was that the educational level of new recruits had fallen to the point where they were not able to read properly the instructions on weapon-related texts, a situation which resulted in various accidents involving weapons.
The period 1945 onwards

Following the defeat of 1945, the Japanese nation was receptive to change in various areas relating to daily life, including the writing system.

It appears that the Japanese themselves probably made the decisions at this time regarding modifications to their writing system, and that such changes were not imposed on them by the Occupation Forces, as has been suggested. The eventual romanization of Japanese texts appears to have been considered after the War, this being reflected in, for instance, an increase in the number of romanized primary school textbooks around that time. However, this option for reform was overtaken by the more readily acceptable simplification of the conventional writing system.

The main focus of the early postwar orthographic reforms was on reducing the number of different characters in daily use. To this end, a list of 1295 characters was drawn up, but this was considered too restrictive for general use, yet too extensive for teaching during the period of compulsory education. Consequently, a new list was compiled, consisting of 1850 characters. Known as the Tooyoo kanji (Interim Use Characters) List, this group of characters was to form the backbone of the new simplified orthography for Japanese for the next 35 years. Following promulgation of the Tooyoo kanji (TK) List in November 1946, it was adopted by government offices and in school textbooks. The TK List has been misunderstood by some as a character list which set limits not only as noted above, but which also aimed to restrict the range of characters used by individuals; however, this was not the case. If an individual such as a writer wrote an essay which was selected for inclusion in a primary school textbook, then the orthography of the text selected was modified so as to employ only characters in the TK List, words written in non-TK characters typically being rewritten in kana; but if the same writer was writing a letter to a friend, then he/she was free to use any Chinese characters whether they were in the TK List or not.

The TK List of 1946 contributed substantially towards making the Japanese writing system less complicated in everyday life, including education. The List's success was made possible in part by selective but quite extensive modifications to language and script - for instance, many scientific and technical terms were changed so that it was easier to write them using less obscure characters, or alternatively in other cases the same term was retained but was then represented in writing using more common characters. For the modern generation, of course, the revised forms simply represent the norm rather than a recent revision which deviates from an earlier standard.

Despite some movement in the direction of simplification, there were still several aspects of the TK List which merited attention, not least the form of characters. As a result of the 1946 reform, a number of simplified forms had been officially adopted in place of the more complicated orthodox equivalents, for instance

辺 ‘vicinity’ for orthodox 追
In order to help the simplification process further, in 1949 a substantial number of additional simplified characters were officially adopted, replacing their orthodox equivalents in the TK List of 1946.

Taking an overall view, the TK List appears to have been accepted by the majority as not being excessively restrictive. However, there was one area in which the TK List did impinge on the individual's use of characters in a specific way, namely official registers of births. Until the TK List was put into effect, in choosing how to write the names of newborn children, parents had been free to choose any characters (the largest dictionary of Chinese characters published in Japan contains about 48,000) and could assign to them any reading (way of pronunciation), however bizarre or inexplicable in terms of the conventional readings for the characters concerned. This practice gave rise to considerable inconvenience in everyday life, and so to overcome this from November 1946, in deciding on how to write the names of newborn children, parents were restricted to selecting from within the 1850 characters in the TK List (alternatively, kana could be used). This abrupt change was seen by many as an excessive restriction on the rights of the individual, and so to counteract such criticism an additional 92 characters were selected and permitted for use from 1951 specifically for writing given names, over and above the TK List characters.

Apart from the sheer number of Chinese characters in use and the complexity of shape of many of them, another source of difficulty with the prewar writing system had been the fact that a given character often had a large number of words or morphemes (conventionally known as 'readings') associated with it. The character

莓，‘artistic accomplishment’ despite simplified莓

'respond' for instance had readings which included お 'respond', kotaeru (id.), irae '(an) answer', and masa ni 'on the point of', the reading to employ in a particular case being determined by context. This aspect of Japanese orthography was simplified in 1948, at least in some texts, when a comparatively restricted list of officially approved readings for TK List characters was put into effect in government publications, etc.

**Changes to usage of kana (1900 onwards)**

The focus of the above has been firmly on Chinese characters, but mention needs to be made also of the kana syllabaries. Traditionally, the usage for kana was based on historical principles. Thus, for example, in early documents written in kana, the form corresponding to the modern Japanese verb *iru* 'to be' is written

応，‘respond’

reflecting Old Japanese pronunciation *wiru*. Similarly, the word for ‘face’ (modern Japanese *kao*) is written

るる (*wiru*),
in early kana texts, reflecting the Old Japanese pronunciation *kaFo*. In principle, historically correct kana spellings such as those noted above were taken as the basis for historical systems of kana usage, though some spellings (a small proportion) that were proposed were in fact incorrect in terms of the historical principle.

Historical kana usage is in fact rather more convoluted than the above examples might suggest. This is because there are in Japanese a number of syllables for which there are not just two alternative kana spellings but up to five or six (!), the question of the 'correct' spelling being linked to the particular word or morpheme concerned, rather like *I* and *eye* in English. A good example of this is the syllable *ō* which in historical kana spelling was written differently in each case, depending on whether it meant 'parrot', 'concave', 'respond', 'press', 'ruler', or 'old man'.

Around the beginning of this century, such ortho-graphic complexity understandably caused schoolchildren serious difficulty, especially in early years of primary school, because they had as yet learned only a small number of kanji. In consequence the children used a high proportion of kana (many to write words which in texts for adults would normally be written in kanji). To help overcome this difficulty, a pronunciation-based form of kana spelling was put into effect in primary school texts, on a restricted basis, for a few years from about 1900. There was, though, an inherent weakness in this limited reform, in that it was only applied to words belonging to a certain layer (Sino-Japanese) of the vocabulary, not to the vocabulary as a whole. This subtlety was difficult for young pupils to grasp, and in the face also of strong opposition from traditionalists, in 1908 the Japanese Education Ministry abandoned this attempt at pronunciation-based kana spelling.

In 1946, in the new political and social climate after the War, the historical kana usage was replaced by a simpler, pronunciation-orientated type of kana spelling at the same time as the TK kanji reforms came in.

**The 1980s and 1990s**

In 1981, the character list that had held sway since 1946 (the TK List) was replaced by another list, the Jooyoo kanji (General Use Chinese Characters) List (JK List) after a lengthy process of deliberation and consultation.

The JK List was a modestly expanded version of the earlier list, containing all 1850 TK List characters together with a further 95. These had been selected on the basis of their usefulness for representing words which had become more prominent in everyday life in Japan since 1946. An important point to note about the new List is that it was intended to be less prescriptive, being essentially a 'guide' to the principal characters for use in the general life of society. This 'guide' status was the subject of much controversy, with opposition from those who feared that the new List would lead to a sudden increase in the range of characters used.
In fact, from about the mid 1980s on there does appear to have emerged something of a trend towards use of a greater number of different characters, though this has been brought about not so much by the replacement of the TK List by the more liberal JK List, but through changes in writing technology in Japan.

Until the late 1970s, using a typewriter for Japanese had meant employing a manual machine. This was of necessity very cumbersome and slow because of the need to handle a large character set (over 2,000 characters) plus kana, etc. Round about 1978, though, a technological development took place that was a milestone in writing technology - the invention of a word-processor for Japanese. Now, at the touch of a button, the user had access to more characters than on manual typewriters for Japanese, and could print out Japanese text in the conventional character-kana orthography much more quickly than in the past.

By about 1984, word-processors were being marketed as an affordable and convenient tool for the ordinary consumer, and since then their use has become very widespread. It is precisely because of the ease of use of word-processors for Japanese that users have tended to end up using more Chinese characters than if writing the same text by hand, since all that is needed to produce a Japanese text, at the level of characters, is passive recognition of the characters concerned, not active recall.

Since word-processors for Japanese have encoded in them about 6,300 characters (the characters having been determined in the late 1970s as a Japan Industrial Standard), the use of the word-processor in Japan is something which has major implications for education and script use in society in general. The changes which the word-processor has brought to Japanese writing habits have yet to be reconciled to Japanese script education in the schools. Change could well take the form of establishing a smaller set of common Chinese characters for active acquisition, and a second set of less widely-used characters for passive acquisition. Whatever steps are taken, change in this area represents an urgent task for the Education Ministry and other groups, and needs to be attended to without further delay.

Further reading
The Ethiopic Writing System: a Profile

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1. Origins and current use

The Ethiopic writing system has its origins in the same ancestral writing systems as those of European alphabets, namely the Semitic scripts that proliferated in the Middle East more than three thousand years ago (Coulmas 1989). Little is known about the precise timing and location of the emergence of the earliest Semitic phonetic writing system though speculations abound.

All that seems reasonably certain is that a consonantal script developed among Semitic people on the Eastern shore of the Mediterranean some time between 1800-1300 BC. (Gaur 1987: 88).

A family tree model of the writing systems (eg, Coulmas: 142; see Fig.1) shows two main branches descending from Proto-West Semitic: North Semitic and South Semitic. Among the descendants in the North Semitic branch are Hebrew, Arabic and Greek (and hence Roman and Cyrillic). Note that we are speaking here of writing systems and not languages. The South Semitic side is usually held to have produced Ethiopic via the Sabean system, which is speculatively dated as emerging in the 11th and 10th centuries BC, but there are dissenting voices. Bernal (1990), rejecting the family tree model, dates the origins of Ethiopic script earlier, relating it to Thamudic, an older script (1990: 64).

The Ethiopic system is used on a large scale in the representation of three Semitic languages, all confined to Ethiopia and Eritrea (the latter being formerly part of Ethiopia but now an independent state). These three languages are Giiz (also spelt Gl’iz, Geez or Ge’ez), Amharic and Tigrinya.

Giiz is a dead language, ie, not the mother tongue of any living person, but it still has a very significant role in the culture of highland Ethiopia as the traditional language of literature and religion. One of Ethiopia’s many distinctive features is that it is the only country in Africa whose dominant religion is a non-European form of Christianity dating back to the 4th Century AD. This is embodied in the Ethiopian Orthodox (or Coptic) Christian Church.

The role of Giiz in Ethiopia resembles that of Latin in Europe in pre-modern and even recent times. The liturgy and religious texts, such as books of the Bible, translations of Arabic Christian texts from Egypt and many original Ethiopian writings are in Giiz, including a large body of literature such as the qine /k’i ne/, poems of remarkable subtlety compiled in the ‘wax and gold’ mode, the essence of which is a play on words in accordance with strict conventions (Levine 1965). The compilation of qine is a living tradition both within the church (in Giiz) and outside it (formerly in Giiz but nowadays in Amharic and Tigrinya). The wax and gold technique seems to date back only to the 14th century AD, some hundreds of years after Giiz ceased to be a living language in the technical sense; and indeed the heyday of Giiz literature is held by some to be the 14th to 16th
centuries. Bender, Head and Cowley (1976: 99) point out in a footnote that "several important Judaeo-Christian documents (such as the full text of the Book of Enoch) were preserved only in a Geez (sic) translation". This classical language is still a source for the coining of Ethiopian literary and technical terms, much as Latin has been in Europe, and, like Latin, it is sometimes perceived as a criterion by which to judge aspects of modern languages.

Giz inscriptions in the Ethiopic script can be traced back to the 4th century AD when Giz was the language of the empire of Aksum, a flourishing Semitic civilization based in what is now northern Ethiopia, but with wide military and trading contacts in the neighbouring territories and far beyond. Tablets from that period relating to the Emperor Ezana, the first known Ethiopian convert to Christianity, feature inscriptions in Giz, Sabean and Greek. Sabean was a language of what is now Yemen, across the Red Sea from Aksum and the putative homeland of the ancestors of the Semitic highland Ethiopians. Ethiopian monarchs down to and including the last one, Haile Selassie (1891-1975), claimed descent from Solomon and the Queen of Sheba (Saba), and are often referred to as the Solomonic line. (Readers will recall that a visit by the Queen of Sheba to Solomon's court is recorded in the Old Testament (Kings I.10; Chronicles II.9). Ethiopian traditional paintings go one better and show them - discreetly - in bed together.)

Amharic and Tigrinya are probably as closely related as, say, Spanish and Portuguese. It is not clear whether they are directly descended from Giz, as Romance languages are from Latin, or whether all three are the progeny of an earlier language. What is fairly certain is that the Ethiopic writing system was passed on from Giz to Amharic and Tigrinya. Tigrinya is the majority language of Eritrea and of Tigray, a province of Ethiopia. Amharic has been the language of the politically dominant ethnic group in Ethiopia for many hundreds of years, and, with the exception of one Tigrinya speaker in the nineteenth century, it has been the language of the emperor, the ከጋሱስ ብሆን, literally, 'king of kings' as the Giz title puts it. It has also been the official language of the state, the day-to-day language of the Church (outside the liturgy, gospels, etc.), the language of primary education as well as a widespread lingua franca (there are others) and the mother tongue of over fifteen million people. [3] Ethiopic script is still the normal medium for newspapers, magazines, novels, poetry, primary school texts, official and legal documents and other printed matter as well as for private correspondence.

There are many other languages in Ethiopia, but most have no established written form. Those that have been written have normally used the Ethiopic script. Representatives of other language groups are currently debating whether to use the Ethiopic or the Roman system. The trend seems to be towards the latter, with possible major long-term effects on Ethiopian culture, but the outcome is still in doubt at the time of writing.

2. The system
There is some dispute as to whether or not this writing system is a syllabary. In theory, an alphabet has individual symbols (letters) representing phonemes with individual vowel and consonant symbols; a consonantal system represents only consonants, leaving the reader to guess the vowels; a syllabary has individual signs for syllables (consonant + vowel combinations); in practice, the systems are often mixed. Ethiopic essentially uses one character per syllable, exploiting a repertoire of 275 symbols. It is often referred to as a syllabary (eg, Bender 1968, Bender, Head and Cowley 1976), but Sampson (1985) explicitly rules it out of the syllabary category. His argument is that what he considers to be a true syllabary, such as the Mycenean Greek system known as Linear B, has unrelated symbols for phonologically similar syllables; for example, the sign for the syllable /da/ has nothing in common with the sign for the syllable /do/ or the syllable /ka/. The Ethiopic system, on the other hand, can be analysed as thirty-three basic consonant forms with relatively systematic variations to indicate vowels and/or labialization. Thus it could be argued that Ethiopic to some extent resembles other Semitic scripts such as the Arabic and Hebrew consonantal systems, which basically indicate consonants but, for teaching purposes, etc, have developed optional diacritics to signify vowels. However, there is the significant difference
that in Ethiopic the variations are obligatory and an integral feature of the symbol, more akin in this respect to some Indian writing systems (Gaur 1987: 100).

Unlike Arabic and Hebrew, Ethiopic is written from left to right. This orientation may have developed via an earlier *boustrophedon* style in the ancestral form, that is, 'ploughing back and forth' or left-to-right and right-to-left on alternate lines. The Ethiopic system makes no distinction between upper and lower case letters and has no conventional cursive form, though, of course, rapid handwriting can result in an ad hoc cursiveness and often a lack of clear distinctions. Unlike Hebrew and Arabic, there are no systematic variations in the form of the symbol according to its position in the word.

Word boundaries were originally unmarked and later were indicated by two vertically placed dots like a colon, ..., though, with foreign influence, letter spaces are now often used instead of the traditional symbol. A sentence boundary is indicated by four dots ..., and less frequently, what would in Roman script be a comma by the symbol ..., :. The old form of the question mark, three vertically placed dots, :, has been largely superseded by the question mark ? . Quotes are usually in the French style << ... >> and parentheses and exclamation marks are as in the Roman system: ( ... ). The last three are modern innovations.

To simplify somewhat, the system works on the basis of thirty-three base symbols with seven 'orders', representing seven vowels, for each base symbol. (Out of context, the first order is the normal reference term for each set of items, its 'name', as it were.) To consider some examples, the seven orders of the syllables identified with the consonants /b/, /l/, /k/ and /z/ are as in Fig. 2:

**Key:** Note: correspondences are very approximate.
1. somewhere between the neutral English vowel at the end of *river* and the vowel in *red*.
2. similar to the vowel in *boot*.
3. similar to the vowel in English *seat*; closer to that in French *vite*.
4. similar to the vowel in Northern English *bad*.
5. somewhere between the vowels in English *bed* and French *bé*.
6. similar to the vowel in English *bit* but with something of the sound of the neutral vowel at the end of English *river*.
7. similar to the vowel in Scots *cloak* or French *eau*.

It is easy to see that there is a consistent pattern in the shapes given in the chart where:
- the 1st order is the base symbol with no explicit vowel indicator (though a vowel is pronounced); C(onsonant) + /ə/;
- the 2nd order is the base symbol modified by a projection half-way down the right leg; C+/u/;
- the 3rd order has a projection at the base of the right leg; C+/i/;
- the 4th order has a short left leg; C+/a/;
- the 5th order has a loop on the right leg; C+/e/;

The 6th and 7th orders are less systematic, but some regularity can be discerned:
- the 7th order corresponding to /bol/, /kol/ and /zo/ all feature a short right leg;
- the 6th order corresponding to /bi/, /li/, /ki/ and /zi/ all have something happening on the left though it is something different in each case.
This gives a rough idea how the system works. There is considerable regularity of letter shapes, but some orders are more regular than others. The shapes are most consistent in the 5th order, slightly less in the 3rd, slightly less again in the 2nd, still less in the 4th and even less in the 7th. The 6th order is least consistent, with the greatest number of patterns, so that the form is largely unpredictable although in the entire system some clusters of similar 6th order patterns can be found.

Unfortunately, the system is not quite as regular as the examples in Figure 2 suggest. Thus the set of syllables with /g/ starts off regularly enough but is unpredictable in the 4th, 6th and 7th orders. The /l/ set is even more irregular and /w/ is especially unpredictable with regard to the 2nd and 6th orders. (Fig. 3, )

The system has other kinds of regularity, however. For example, one form of /s/ (as in English see), written .. has a corresponding form .. for /ʃ/ (as in English she), phonetically its palatal equivalent (Fig. 4). Once the learner knows the forms of one of these, the forms of the other are entirely predictable.

Moreover, the same phonetic relation of palatalization works equally well for the pairs /zl/: /ʒ/; /tʃ/:/tʃ̪/; /dʒ/:/dʒ̪/; /t/:/t̪/"(Fig.5). The last pair are ejectives: where the speaker pronounces a 'glottal stop simultaneously or almost simultaneously with another sound.' (IPA 1949: 17); /t̪/ is phonemically distinct from /t/; /t̪ʃ̪/ from /tʃ/, etc, in Amharic and many other Ethiopian languages.

These parallel forms indicate that somewhere in the history of the development of the system there was considerable phonetic expertise involved, either conscious or intuitive. Naturally, most learners of this system know nothing of these formal phonetic categories, but the correspondences are to some extent identifiable by intuition.

Of the 33 base forms, two represent vowels in isolation and the rest consonants and the semivowels /w/ (as in English well) and /j/ (as in yes) (henceforth classed as consonants).

In addition to the (33 x 7 =) 231 major symbols, there are 44 additional variants for labialized consonants (plus vowel), that is, syllables involving consonants with lip-rounding, for example, /ka/.

3. Redundancy and ambiguity

In Giiz times, the system added two extra symbols (ie, 2 sets of 7) to cope with two new sounds (/p/ and /p'/), originally required for use in ecclesiastical Greek and Latin borrowings and names (eg, Paula, Paul); these now show up in loanwords like /polis/ (police) and, of course, in the name of the country: /tiop'ja/. Scholars who believe that Ethiopic is derived from Sabean claim that when Giiz adopted the Sabean system, it dropped a number of unwanted symbols. This did not happen when Amharic and Tigrinya took up the system from Giiz. They kept all the symbols (later adding 8 more for consonants not used in Giiz, and even later adding a modified form of the /b/ symbol to represent the foreign phoneme /v/). The result is that there is a considerable amount of systemic redundancy, particularly in the case of Amharic, which lacks several consonant sounds found in the phonology of Giiz. Thus, 4 distinct sets of 7 can represent the sound /h/ + vowel: .., .., .., ..; 2 sets represent /s/: .., .., .. and 2 /s'/ (ejective) .., ...
The 44 labialized consonant symbols (kₐ/a/, etc.) are also arguably redundant, wholly or partially, and there is considerable variation in the spelling of many words that may involve them.

In addition to the irregularity in its forms, the 6th order presents another problem. This is the systemic ambiguity of its representation: it can stand for either a consonant in isolation or a consonant with the short vowel /i/. For example, can represent either the vowelless consonant /b/ at the start of the name Bloor, or /b/i (similar to /bi/ in English bit /bit/). In reading, this is a problem largely for foreign users of the system since there is rarely, if ever, any ambiguity about which word is intended. It could indeed be regarded as an advantageous economy in the writing system since in pronunciation C+i/i/ and C+zero (ie, vowelless consonant) alternate fairly freely without affecting meaning; the /i/ tends to creep in between two consonants to maintain the Consonant-Vowel pattern with lack of consonant clusters that prevails throughout Ethiopian languages. (This is known to phoneticians as an epenthetic vowel.) This ambiguity may occasionally present spelling problems, though; Bender, Head and Cowley (1976) cite the example of . . . (dove, pigeon), which is variously pronounced /rigib/ and /irɡib/ but normally spelt as above, ie, with an initial /r/ equivalent: /irɡib/ rather than as /i/. . . . . ie, with an initial vowel symbol: /irɡib/, which is equally plausible.

Usually, a word-initial vowel is represented by one of the two basic sets reserved for consonantless vowels (as in the words for Addis or Ethiopia). These occurred in Sabean (and probably old Gиз) as consonant symbols, but as the consonants in question were not required for Amharic, the two sets became used for vowels alone. One set would have been enough, of course, and even inside the sets there is redundancy since, with consonantless vowels and /h/, the 1st order vowel is pronounced identically to the 4th order: /a/. Thus the name of the capital, Addis Ababa (/addis abəba/, literally 'New Flower') is written as using the 1st order form for /a/. (Note: the second syllable in Ababa is not stressed). The two consonantless vowel sets are as in Fig.6:

Transcriptions of foreign names might present difficulties for reading aloud: for example, Bloor (in my pronunciation /bluə/ - or /bluə.ɪ/ before a vowel) is not a problem for Amharic phonology unlike, say, Smith, which has a non-Amharic word-initial consonant cluster /sm/ and a non-Amharic consonant /b/, or Upward (with its non-Amharic initial vowel). Bloor could be transcribed as . . . but this in principle could be read as /bluər, bɪlʊər, bɪluərɪl/, etc. However, this is hardly more variable than the pronunciations the name receives from English speakers, and, even without undue modesty, cannot be conceived of as an issue for Amharic spelling.

Slightly more significantly, loanwords involving vowelless consonants produce some variations in spelling and in pronunciation: the English word carbon (RP /kəbən/) is normally transliterated as . . . (Bender, Head and Cowley, 1976: 127) but could be read as /karbon, karibon, ikaribon/, etc. In fact, a more phonetic transliteration would be . . . since the 1st order vowel is closer to the English neutral vowel sound in the second syllable than is the 7th order /o/ vowel, but Amharic transliterations tend to follow English spelling rather than English pronunciation, with the result that when spoken they are sometimes unrecognizable as words of English origin. Once again, though, this is not likely to be a problem for Ethiopians.

The greatest problem for the reader (especially the foreign reader) is perhaps the failure of the system to indicate gemination (the 'doubling' or 'lengthening' of consonants in pronunciation). In Amharic, gemination is phonemically meaningful, as it is in many other languages such as Italian
(eg, Italian *mola* 'grindstone' versus *molla* 'spring'), but not in English. This phenomenon does occur in English, but, as it is not within a single morpheme, it is not classed as gemination. We find it in the difference between the /l/ sounds in (1) *cool leaves* and (2) *cool leaves*. There are numerous cases of minimal pairs of words in Amharic where the only difference in pronunciation is the presence and absence of gemination, eg, /a:lə/ ('said') and /a:lə:lə/ ('is present'), but this difference is not reflected in the orthography since both are written ጓ. Amharic speakers, of course, perceive that there is a difference, but, unless they are phoneticians, they do not perceive the feature as a doubling or lengthening of the consonant so much as a matter of slight stress variation, which is in fact sometimes a corollary of gemination.

4. Transliteration into Roman

Most basic consonants transliterate without problems into the Roman alphabet. No distinction is usually made between ejective and non-ejective pairs, though sometimes a systematic distinction is made using K and Q to distinguish between ጓ and ጐ. Most of the other consonants are fairly straightforward.

The English spelling of the first word in *Addis Ababa* accidentally represents the gemination feature better than the Amharic spelling, which does not distinguish between /d/ and /dd/. But the fact that double letters do not normally indicate gemination in English orthography means that this transliteration has no significance for English readers, though it might well have some for Italians. However, in language teaching books for foreigners, dictionaries, scholarly papers and so on, the double letter convention can be - and sometimes is - easily implemented with a clear explanation. Unfortunately, the frequent wrong placement of stress and lengthening of the vowel in the second syllable of *Ababa* by English and other foreign speakers could not easily be contra-indicated by alternative transliterations without the use of stress-diacritics.

The question of transliteration of vowels is perhaps the most difficult. There are more than seven vowel sounds in the phonology of Amharic, just as there are more than five in English; Armbruster's (1908) classic study of Amharic lists eighteen. Even so, the Amharic vowel system is fairly well represented by the seven orders in Amharic but is difficult to represent with the resources of the Roman alphabet. For example, there are not two, but three, distinct vowel sounds in the Amharic pronunciation of the name *Addis Ababa*: /i/, /a/ and /ał/. Of the vowels represented by A in the Roman rendering, all except the middle one in *Ababa* are the 4th order /a/ (close to a Northern English /a/ in *bad*), but the middle vowel in *Ababa* is closer to the 'neutral' schwa /a/ than to an /a/. (In fact, in some Ethiopians' casual pronunciation the middle vowel is almost lost and the B sounds become a fricative /β/, between /b/ and /v/ as in the Spanish *haber*, but lengthened or repeated.) When the stress is roughly right, the English pronunciation of the name accidentally gets a reasonable approximation to the Amharic 1st order vowel because unstressed vowels are usually neutralized in English, but this also means that the final vowel gets neutralized too, which is not the case in the Amharic pronunciation.

Sometimes this 1st order vowel, which I have very loosely transcribed as /a/, is transliterated by an E: *Abeba*; but this tends to produce the English reading /əˈbeiba/ with stress on the second syllable (also found in Italian and French renderings). The city which used to be written in Roman script as ከራር · ከ.Lib. now tends to be transliterated as *Harer* to avoid the common mispronunciation /ˈɛɾə/ (US) or /ˈɛɾə/ (RP), with heavy stress on the second syllable, but it remains open to misinterpretation. ( · is 1st order /rə/ and · is 6th order /rɪ/ or, as in this case, /r/ without a vowel.) This discussion is not intended to suggest that English should try to emulate the Amharic pronunciation exactly; after all, we do not pronounce *Paris* in the modern French manner. It is simply meant to illustrate the problems of transliteration with a familiar example.
The 3rd order vowel /i/ (as in English see) is fairly straightforwardly transliterated by I, as in Addis, but then the 6th order vowel /i/ in /dʒɪmма/ (the name of a city) also has I in the transliteration Jimma. In other instances, this 6th order vowel may be transliterated as E; for example, in the common spelling of the language name Giiž /ɡiʔiz/ as Geez (/ʔ/ indicates a glottal stop). Mockler, a historian, uses the spelling enjerra for the noun /ɨnjərə/ (the staple bread of Ethiopia), ie, he uses E for 1st and 6th order vowels; but he is cavalier about transliteration on the grounds that: “Amharic names won’t go into English exactly; their alphabet has too many consonants and vowels” (Mockler, 1986: xiv). Frydenlund and Svensen in their Amharic primer (1967) and Levine also use E for the 6th order, if more methodically.

In the usual Roman alphabet version of the name of the last Ethiopian emperor, Haile Selassie /ˈhaiəl ˈsələsəj/, the first E represents the 1st order vowel (approximately /ə/); the second E represents the 6th order vowel (/i/); and, oddly, the digraph IE represents the final vowel, which is the 5th order vowel /e/ (somewhere between the E in English bed. and the É in French blé). So it seems that here the strongest candidate for transliteration as E is the one that does not get a straight E; perhaps this is to avoid its interpretation by English (or French) readers as a silent E: /ˈsələsə/. (In fact, the usual French rendering is Selassié, which has the last vowel about right but includes a redundant I, leading to another mispronunciation.)

A source of great confusion for English speakers reading about Ethiopian affairs is the pair of terms Tigray (a province of Ethiopia) and Tigre (a province in Eritrea). The confusion is worse confounded by the frequent transliteration of both as Tigre, whereas, besides being pronounced differently by Ethiopians, the Ethiopic written form clearly distinguishes: /tɨgray/ and /tɨgre/ hence the most recent transliteration given above.

One way of indicating these distinctions is to use diacritics. Thus Ā may be used to represent the 1st order vowel: hence Abāba; but Levine uses Ā for the 4th order vowel and A for 1st order. The 5th order vowel /e/ is usually represented by E but is sometimes represented as É: hence, Tigré. Frydenlund and Svensen use E in this way, and, as already stated, reserve unaccented E for the 6th order. The tilde is sometimes used, as in Spanish, to indicate the palatalized /i/: hence Tigrinya instead of Tigrinya. (Possibly under Italian and/or French influence, the digraph GN is commonly used: Tigrigna.) Dawkins (1960) eccentrically but effectively places the numerals 1 to 7 as diacritics over the letters E, U, I, A, E, I, O for the seven vowels.

Alternately, phonetic symbols can be exploited. However, even when this is done, there is enormous variation. Obolensky et al. (1964) use /s/ for the 1st order vowel (as I have done), but Bender, Bowen, Cooper and Ferguson (1976) use /E/. For the 6th order vowel, Bender et al. use /i/ and Obolensky et al. /É/, but /i/ is used by some writers.

5. Spelling reform?
It has to be said that Amharic orthography using the Ethiopic syllabary (or ‘consonantal system’ as Sampson would have it) seems much more regularly phonetic than English orthography (or at least, pace Chomsky and Halle 1968 or Stubbs 1986, the regularities are more transparent). However, it is also true that the task of learning over 270 symbols is daunting, and, even if we allow for the systematic regularities in the vowel indicators, palatalization markers, and so on, the memory load is quite considerable. (I have omitted discussion of a number of confusing exceptions.)

The practical case for reform is fairly obvious and there are simple improvements which leap out at the impartial observer. The reduction of the four /h/ sets to one would immediately reduce the overall number of symbols by twenty-one (since there are seven versions of each consonant). Loss of the duplicates for /s/, /sʼ/ and /a/ would free the system of a further twenty-one.
With more difficulty, the seven vowel-indicator shapes could be virtually standardized for all sets.
Gemination could be indicated by doubling consonants, or perhaps by a diacritic, since two consonants together would invite an intrusive /i/ in the reading. Granted, as stated above, this last is a much greater problem for foreigners than for the Amharic speaker, and orthographies do not usually develop for the convenience of foreigners. Even so, as long as Amharic retains its special national status, the problems of second language learners need to be considered since the majority of Ethiopians are not mother-tongue speakers of Amharic.

The forty-four symbols indicating labialized consonant+vowel syllables might, as sometimes happens already, be replaced by the use of the symbol for /w/ after the relevant consonant or an added vowel /o/. Some of these symbols are already becoming obsolete without any deliberate action being taken. On the other hand, they are unambiguous and economical in terms of the number of symbols required to write a given word; for example, in the traditional way, /kʷənkwə/ ('language') is written  but with the suggested change would be . More drastically, the system could be converted to a simple alphabet with one symbol per phoneme instead of one per syllable; thus we could have the 1st order symbols representing vowelless consonants and use the seven forms of  as the vowels, giving a total of twenty-seven letters. This would make the system vastly simpler, but, among other disadvantages, it would result in some very long written words since Amharic words have on average more syllables than English. How serious this disadvantage would be is a moot point since, for example, the current system involves two strokes on the typewriter for most symbols; one for the base and one for the vowel indicator. It just takes up less space on the page. In any case, as reformers have found elsewhere, such considerations are fairly insubstantial when set against the weight of centuries of tradition.

Such suggestions have been considered over the years. Cowley (1967:1) refers to an Amharic document of 1940 (Ethiopian Calendar, ie, 1947 Gregorian Calendar) where the reform of the alphabet "received a thorough airing". Cowley's scholarly article concerns "logical standardizations, not plans for radical reform" (ibid.). Conceding briefly that the simplest solution for the multiple forms would be to use the same form in all instances, so reducing the total number of symbols in the system, he goes on to argue, on the assumption that all the symbols will be retained, for using Giz spelling for obvious Giz words wherever possible as the basis for selection among the four /h/ symbols, the two /s/, the two /s' and the two consonantless symbols. On other issues he argues variously on etymological, grammatical and phonological grounds, and seems to opt for clarity rather than economy. The article indicates that alternative spellings occur for a considerable number of individual words in written Amharic.

Under the pre-1991 military government, the Ethiopian Academy worked on possible reforms but did not implement them, and since 1991 the new government has sponsored investigation of the issue. Presumably, these efforts have come to nothing for the usual reasons: among others, natural human conservatism and emotional attachment to traditional modes (not a trivial matter); the fear of losing access to the body of literature, which is here further intensified because of the intimate connection between writing and religion; and the immediate practical difficulties and expense of making the changes. Even more significant perhaps is the relative lack of urgency of the problem since from 1971 to 1991 - and before, though to a much smaller extent - Ethiopia was in an almost constant state of war, civil strife and famine, and since then has been undergoing major reorganization - conditions which may push even spelling reform down the agenda. It is the post-revolutionary period that is often a time for innovative language planning (Yule 1994) and Ethiopia is no exception to this trend. Thus, reform at some time in the near future remains a strong possibility.
References

Notes
[1] I am indebted to Wondwosen Tamrat for information about current developments in Ethiopia and to Chris Upward for detailed comments on an earlier draft of this paper.
[2] The Ethiopic system is sometimes referred to in other publications as the *Ethiopian, Giiz, Amharic* system (syllabary, alphabet, etc). In this article the terms Giiz and Amharic are used exclusively for the names of languages, and Ethiopian as relating to the country or to a citizen thereof. Ethiopic is the writing system, whether it be applied to the writing of Amharic or any other language. However, I do refer to Amharic spelling/orthography since that is only one application of the Ethiopic system itself, just as English spelling is one application of the Roman system. The people are the *Amhara*.
[3] This figure of 15+ million is based on the Ethiopian National Office of Population report (1993). Bender (1968) placed Amharic (at an estimated 8 million, including fluent second language speakers and 3 million native speakers) as being the language with the highest number of speakers in Ethiopia and the third highest in Africa. As far as Ethiopia is concerned, it is now usually considered to be second to the Oromo language in number of speakers, but huge population increases have changed the raw figures dramatically.
[4] This is not to mention Tigrinya, the dominant language of Tigray province (in Ethiopia) and of most of Eritrea but not of Tigre province (in Eritrea), where the language is also Tigre.
Antony was an Englishman, and throughout his early life he had difficulty with his name. His parents had given no thought to the danger when they chose it, but on going to register his birth, his father had a first inkling of the trouble ahead when the registrar asked, "With H or without?" On the spur of the moment, his father decided 'without' - not for any carefully considered reason, but just because Antony seemed simpler than Anthony.

It was some years later, when Antony began school and the written form of his name needed to appear on official documents such as class lists and school reports, that the problem really started. His parents became aware that, more often than not, their son's name was being written Anthony, and attempts at correction frequently proved unavailing. The problem persisted throughout his education, with the additional complication that occasionally the misspelling Antony provoked the mispronunciation /ænθˈni/.

Many years later, as an adult, Anthony moved to America, and found that the problem scarcely arose. For in America it is usual to pronounce the spelling Anthony with the sound of TH (/θ/). Consequently, if a person becomes known as /æntˈni/, Americans are much less inclined to presume the spelling Antony.

Several reflections arise from this experience.

One is that the above confusion, and consequent life-long irritations, are typical products of the English writing system, where predictable correspondences between speech and spelling are not the norm.

Another is that, as a first step towards resolving this particular problem, parents who wish to give their sons such names, should insist on the spelling Antony if they do not wish their name to be pronounced as with TH, and conversely that, if they decide on the spelling Anthony, they should themselves always pronounce it with /θ/, and insist that others do so too. In other words, they should encourage people to observe the alfabetic principle.

Finally, however, we may note that the spelling with H is historically anomalous, since neither the source, Latin Antonius, nor cognate forms in other languages such as French Antoine, German Antón, Italian Antonio, nor the feminine equivalent Antonia, nor the abbreviation Tony, is spelled with H. It is thought that the H may have been inserted by analogy with Greek ανθός (anthos), 'flower'.
A survey of English spelling by Edward Carney; 1 edition; First published in 1994; Subjects: English language, Orthography and spelling.  Are you sure you want to remove A survey of English spelling from your list? There's no description for this book yet. Can you add one? Subjects. English language, Orthography and spelling. 1 edition First published in 1994. Add another? Edition. (Edward Carney, A Survey of English Spelling. Routledge, 1994). Misguided Spelling Reforms "The 16th and 17th centuries must surely be the Golden Age of . . . etymological tinkering. . . . A 'b' was added to debt, making explicit a distant link to Latin debitum." Which dialect would be chosen as a standard? . . . "The second concern is that evidence from psychology suggests that some of the so-called irregularities of English actually serve to facilitate reading, especially for the experienced reader. Experienced readers tend to perceive words as single units and do not 'read' them letter by letter. Evidence suggests that we process the information slightly faster when homophonous morphemes are spelled differently: pair-pear-pare." (Henry Rogers, Writing Systems: A Linguistic Approach. Read "A Survey of English Spelling" by Edward Carney with Rakuten Kobo. Published at a time when literacy and spelling are issues of topical concern, A Survey of English Spelling offers an aut..." Published at a time when literacy and spelling are issues of topical concern, A Survey of English Spelling offers an authoritative, comprehensive, and up-to-date overview of this important but hitherto neglected area of the English language. The text brings together a vast body of knowledge, both synthesised from diverse sources and original, unpublished research. The emphasis is on a functional exploration of the spelling regularities and markers that underpin literacy in English. An extensive database has been used throughout to provide a wealth of examples, statistics and analyses.