

A Study on the Problems of English Spelling System —— From Chronological Viewpoint ——

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「英語の綴り字方式の問題点を考える
——歴史的観点からの研究」

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Introduction

Claiming that the irregularities of the English spelling system cause reading and writing difficulties among learners, many theorists have made numerous proposals for reforming English spelling over the past four hundred years. However, no one has yet been successful, and any serious proposal for reform is now a more remote possibility than ever. This fact leads us to think that the English spelling system must have some social functions even though it is inconvenient and complicated.

Social Functions of English Spelling

In English-speaking communities, an ability for spelling correctly has often been regarded as a sign of full literacy and a good education. That is to say, spelling has been regarded by many people as a social skill, and a good speller often has high prestige. However, this was not really true before the sixteenth century.

Before that time, spelling was changeable, even in printed books, but by about 1650 printers had begun to use a stable spelling system which is very similar to our present-day convention. By 1700, stabilization was completed, and the norms set by printers were recorded in Johnson's Dictionary of 1755.¹ The concept of a "spelling mistake" is largely an invention of the period after 1770.² Although spelling conventions had been established in printed materials before then, there were still divergences in spellings in handwritten materials, but dictionaries like Johnson's provided a norm for personal writing after that time. In fact, by the end of the eighteenth century, the publishing of spelling-related books had grown into a big business. In the U.S., for example, sixty-five million copies of Noah Webster's "The American Spelling Book" were sold in the hundred years after it was published in 1783.³

Nowadays the English spelling system is very stable and is embedded in a powerful social network which has complicated interrelationships. This powerful social network could consist of: the attitudes of its millions of users, educational systems and libraries, the demands of machine printing in publishings, international communications and the important role of English as a world language, and the relationships between English and other language and writing systems. As a result, it is nearly impossible to change the present English spelling system, which has a lot of irregularities and complexities, to a new reformed system.

In addition to the above, simple conservatism and the inertia of human habits and tradition must also be a part of the reason why we still have not been able to reform the English spelling system in practice. Most people

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invest considerable effort in learning to read and write the complicated English spelling system, and are unwilling to abandon it once they master the system. Also, people tend to feel more pleasure when they accomplish more difficult tasks than easier ones, hence they want to keep a complicated writing system rather than a simple one.

Thus, at this point, it is clear that there is hardly any possibility that the English spelling system will be reformed in practice in the future. Learners have to master the irregular and complicated spelling system if they want to be good readers and writers of English. When learners try to study the English spelling system it would be very helpful for them to know why English has such an irregular and complicated spelling system. This can be explained both diachronically (or historically) and synchronically, but the former approach is centered in this paper.⁴

English Spelling and Sound Shifts

It is likely that English spelling used to be based on much closer grapheme-phoneme (letter-sound) correspondences than it is now. We do not have direct information on the phonology of early English, since we have to make inferences about the sound system on the basis of written forms. But the spelling conventions were fixed in their major characteristics around five hundred years ago (except for some minor details), and the spelling system has changed little since that time, around 1650.⁵ Historically, major changes in pronunciation were occurring between 1400 and 1600, at precisely the same time as spelling conventions were becoming systematized. Thus, for example, as early as the end of the fourteenth century, when the loss of the palatal /x/ in words like “right, sight, wright” made them homophonous with words like “rite, site, write”, the differences of spelling were preserved.⁶ Among such changes in English pronunciation, which are a part of the main cause of inconsistent grapheme-phoneme correspondences in English, the so-called “Great Vowel Shift” (which started around 1400 and was still taking place when Shakespaear died in 1616) was one of the most significant and well-known sound shifts in history.

The Great Vowel Shift

The Great Vowel Shift (GVS) substantially changed the qualities of long (tense) vowels in English. The particular changes which occurred were outlined by Jespersen as follows:⁷

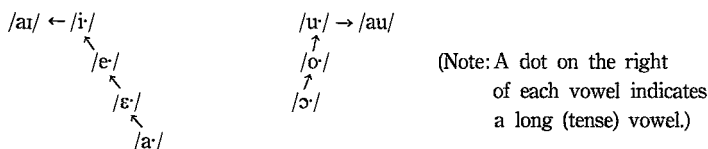


Fig. 1

The shift was quite general and affected a massive portion of English vocabulary. Some typical examples shown by Jespersen are:⁸

Middle English		Modern English	
bite	/bi:t θ /	bite	/baɪt/
bete	/be:t θ /	beet	/bi:t, bijt/
bete	/be:t θ /	beat	/bi:t, bijt/
abate	/aba:t θ /	abate	/ə beɪt/
foul	/fu:l/	foul	/faʊl/
fol	/fo:l/	fool	/fu:l, fuwl/
fole	/fo:l θ /	foal	/faʊl/

Table 1

Spelling substantially stabilized before the completion of the GVS, and permanently left behind information about former pronunciations in thousands of words which do not have synchronic alternate pronunciations in different environments. Thus the major mark that the GVS left on English is the non-phonemic spelling of vowels.

The Great Vowel Shift also left another mark on English in the form of vowel alternations, which occur in the pronunciation of a portion of the Romance vocabulary. Among those words, the single free morpheme in isolation underwent the vowel shift, while an allomorph of it, which occurred with a derivational morpheme and therefore had a short (lax) vowel of the same quality, did not satisfy the conditions for the vowel shift. Thus, today a single free morpheme may have two pronunciations, differing with respect to the vowel, and depending on whether it occurs in isolation or with one of several inflectional suffixes. For example, the free morpheme “divine” historically underwent the vowel shift (parallel to “bite” above), while “divinity” did not, resulting in different pronunciations for the same morpheme (synchronically).⁹ There are several other examples of this kind:

/aɪ/—/ɪ/	/eɪ/—/æ/	/iː/—/ɛ/
line—linear	profane—profanity	serene—serenity
derive—derivative	explain—explanatory	meter—metric

Table 2

Thus, the Great Vowel Shift was the cause of some irregular spellings in English.

English Spelling and Loan Words

Besides the Great Vowel Shift and other sound shifts, borrowing of foreign words is another major cause of inconsistent grapheme-phoneme correspondences in English. That is to say, in English, the spelling of words which were from foreign languages are often spelled differently.

Historically, foreign spellings have been retained in English orthography since the Middle English period.¹⁰ Venezky gives the following example:

/tʃ/ changed to /ʃ/ in French in the thirteenth century although French orthography retained the “ch” spelling. At the time when the first French words with “ch” corresponding to /ʃ/ were borrowed in English the native orthography was still dynamic, yet English “sh” was not generally substituted for French “ch”. Some French spellings were altered, but seldom without prompting by a parallel alternation in French orthography.¹¹

Thus, some of the inconsistent spellings in English were intended to contrast native spellings with foreign ones by

leaving intact foreign spellings.

In addition to the above, some inconsistent English spellings were due to intended spelling changes by scribes in the past to mark them as being of foreign origin. For example, two rules of English spelling do not permit words to end in the letters “u” and “i”. And to prevent this, “e” is often added to the final “u” in those words as a dummy letter, and similarly the letter “i” is replaced in word-final positions by “ie” or “y” in English orthography, as follows:

“argue, clue, true, vague” and “die, lie, by, dry”¹²

Therefore, the several words in English which do not follow the rules and end in those letters (i.e. irregular spelling in English orthography), are marked as being of foreign origin or are coined words, like:

“flu, haiku, gnu, guru”

“khaki, timpani, ski, taxi, chili”

The familiar word “ski”, for example, was originally borrowed from Norwegian as /ši·/, according to Strang’s explanation.¹³ It occurred with the spelling “she-running” in English in the 1850’s. But then the general European spelling pronunciation arose of /ski·/, and the earlier pronunciation and spelling were displaced. On the other hand, “taxi” is an American coined word which came into being in the early twentieth century.¹⁴

In general, there are several constraints in English orthography that tell which sequences of letters may not occur in different word-positions. Some sequences of letters do not occur because the corresponding phoneme sequences do not occur in English. According to Chomsky (1964), and Chomsky and Halle (1968), knowledge of these constraints on phoneme sequences is responsible for the fact that native speakers of English have a sense of what “sounds” like a native word and what does not.¹⁵ For example, the word “brick” is an English word familiar to all speakers of the language, and the word “blick” is equally acceptable in its phonological structure, but happens not to be a word of English.¹⁶ Similarly, there are also graphotactic constraints on letter sequences. In English spelling, for example, geminate letters which correspond to consonants can occur only in medial and final positions, except for the word “llama” which was actually borrowed from Spanish.¹⁷ The reason why the word “llama” is spelled that way, in spite of its irregularity, is simply to mark it as being of foreign origin.

Thus, loan words in English are very often spelled irregularly (i.e. they do not follow regular English spelling rules), but we cannot say simply that they are irregular spellings of English because those irregular spellings function as markers of loan words. In fact, if people know precisely how those loan were marked depending on their origins in the past, they usually can identify the origins of the loan words. However, in real situations, it is a fairly hard task for many people, especially for non-native speakers of English, to identify the origins of many loan words in English. Therefore, for those people who are not experts in English etymology, irregular spellings which were actually purported to mark their foreign origins still seem irregular.

Scholars’ Attitudes Toward English Spelling in the Past

By strictly linguistic criteria, there would not be too much difficulty in producing a better, more consistent spelling system for English than we have at present. Thus, as is commonly known, the allegedly antiquated, inconsistent, and “illogical” English spelling system has so far stubbornly defied all attempt at reform.¹⁸ At the “terminus a quo” of this reformative effort can be established in that period of the development of English in which the differences between the spoken and written utterances on the basic level of phonemes and graphemes began to stand out with particular clearness, i.e. at about the middle of the sixteenth century, and the regular flow of the reform projects has not stopped since.¹⁹ In general, all of the scholars (often called “reformers”) commonly assumed that native speakers’ illiteracy problem were due to inconsistent and “illogical” spelling system of English, and proposed the reform projects either as permanent reforms or as aids in the initial stages of teaching reading.

By the latter half of the sixteenth century, several such reform projects were already proposed, like Sir Thomas Smith's "De recta & emendata linguae anglicae" (1568), John Hart's three works written between 1551 and 1570, William Bulloker's "A booke at large, for the amennment of orthographie for English speech of 1580" (1580), and Richard Mulcaster's "The first part of the elementarie which entreateth chefelie of the right writing of our English tung of 1582" (1582).²⁰ But those earlier projects were mainly intended to devise a phonetic transcription system for easier reading and writing and were not stressed as reform movements. More serious reform projects for English spelling actually have taken place in the twentieth century.²¹

Major Projects for Permanent Reforms in the 20th Century

Many of the reform projects for English spelling in this century are mainly intended as permanent spelling reforms. The Simplified Spelling Society, the New Spelling, Anglic, and Regularized English probably were the most well-known spelling reform attempts.

The Simplified Spelling Society was founded in 1908 by the distinguished British Anglicists, W. W. Skeat and D. F. J. Furnivall (its American counterpart, the Simplified Spelling Board, had been established two years earlier).²² In principle, they tried to propose a systematization of spelling by generalizing the relationships between graphemes and phonemes, but they really could not adhere to the principle consistently. As a result of this insufficient proposal, the unresponsiveness of the general public, and financial trouble, this organization became inactive by the 1920's.

The New Spelling was actually a revival of the Simplified Spelling Society in the following decade.²³ However, this time, two renowned phoneticians, Daniel Jones and W. Lloyd James, and the well-known dialectologist, Harold Orton, joined the organization. In the proposal, they suggested adding some more digraphs (like "dh" for the voiced fricative /ð/, "zh" for the voiced counterpart of "sh", "ae" for the vocalic nucleus of "make", etc.) to the well-established Modern English digraphs (like "ck", "ch", "gh", etc.).²⁴ Thus, they tried to minimize the ambiguity of the grapheme-phoneme correspondences in English spelling by introducing a new digraph system which gives more sufficient information about pronunciations of spellings than the present system. This New Spelling movement was supported until recently by some renowned people, like P. A. D. MacCarthy and Bernard Shaw.²⁵ Although Bernard Shaw's project is not exactly the same as the project by the New Spelling group, it is well-known that he jokingly suggested the spelling of "fish" should be spelled as "ghoti" and be pronounced as /fɪʃ/ ("gh" for /f/, like "gh" in "enough", "o" for /t/, like "o" in "women", and "ti" for /ʃ/, like "ti" in "nation").

Anglic was proposed by R. E. Zachrisson in 1931.²⁶ He believed that a spelling reform project would be successfully accepted by English speakers if the general outlook of the texts written in the new spelling system did not deviate too much from what it was under the old spelling system. Because of this principle, he did not change the spellings of several very common words, such as, "he, she, has, then, their, etc." In fact, Zachrisson himself claimed that the texts put down in Anglic preserve between sixty and seventy percent of the original (Modern English) spellings. This was mainly because he originally intended to apply this spelling project, Anglic, for language teaching. However, the underlying theory of Anglic was based on only phonemic aspects of English spelling, but ignored the morphophonemic aspects of spelling. Thus Zachrisson spelled the plural ending of nouns phonetically, like "trublz" and "shoks", just as that of the third person singular in regular verbs, like "kumz" and "points", in spite of the fact that they are alternants of a single morpheme.²⁷ And as a result, Anglic has not been accepted by the general public.

Regularized English was proposed by Axel Wijk, a Swedish Anglicist scholar, in 1959.²⁸ His spelling reform project was based on the fundamental principle of discovering all regularities in the English spelling system. He not only tried to find regularities that occurred with high frequency, but also the ones with less frequent occurrence. As a result of this approach, Wijk proposed many digraphs (or polygraphs) which do not have

one-to-one relationships with phonemes. Thus, for example, /i/ can be spelled either "ea" or "ee" or "ei"; the digraph "oo" is pronounced as either /ʊ/ or /u/; /ð/ can be spelled either "th" or "dh", like "their", or "udher" ("other"), etc. Although the two reform projects, New Spelling and Anglic, introduced similar digraphs, only the Wijk project introduced digraphs which have non-monopolistic relationships with phonemes. This approach actually contributes to the system by considerably reducing the percentage of words whose new spelling differs from the old. Another noticeable point of Wijk's project is the constant use of the grapheme "-e" in final positions of words which have long pronunciations (free pronunciations) of the vowels, i.e. tense vowels (like /e/ in "make, take" and /o/ in "code, node") to indicate the pronunciations of vowels. Thus the conventional spellings of words like "both, cool, most" must be changed to "bothe, coole, moste" in Wijk's system, and, conversely, the final "-e" must be dropped from the conventional spellings of words, like "come (com), love (lov), give (giv)". As a result of such remarkable suggestions, many scholars, like Vachek, supported Wijk's project, but, again, it has not been accepted by the general public.

Thus all of these projects, which were intended to be permanent spelling reforms for English, have not been able to replace the conventional spelling system, in spite of their convincing suggestions.

A Reform Project for Initial Stages of Teaching

Some spelling reform projects were just intended as aides in the initial stages of the teaching of reading. The most recent and best-known of this type of project is the Initial Teaching Alphabet (ITA).

ITA was proposed by Pitman and St. John in England in 1969, and was being used in actual teaching (but only as an experimental teaching).²⁹ According to the proponents of this system, the immediate results of these experiments with ITA were successful, but few critical analyses of the experiments or their results were published.³⁰ In general, ITA was based on the principle that the readers' needs should precede the writers' needs because we have more readers than writers in our society. As a result, ITA has a lot of advantages for readers, but not for writers. In ITA, twenty-one new non-Roman alphabet symbols are provided for phonemes which cannot be represented by individual Roman alphabet symbols. According to Pitman and St. John, this new alphabet not only makes the initial teaching and learning of reading much easier but also helps reading by the conventional spelling system. Thus, Pitman and St. John's ITA can coexist with the conventional spelling system.

Systematic Analyses of English Spelling

In recent years, systematic analyses of English spelling have been done by linguists and others. Unlike the reformers, they only intended to do a systematic analysis and representation of the English spelling system. They did not intend to reform the spelling system at all. Although their approaches for the analyses were varied, they all showed how English spelling is organized as a system in great detail. Among such studies, Chomsky's and Halle's work and Venezky's work are probably the most successful ones.

The study by Chomsky and Halle, "The Sound Pattern of English", is based on the extreme theory that the actual phonemic presentation of a word can be derived by the application of a set of rules.

On the contrary, Venezky's study, "The Structure of English Orthography", was done by the use of a computer. His study was actually aimed at language teaching and tried to show how the English spelling system is well-organized, even though it does not appear that way.

Note

- 1 c. f. H. L. Mencken. *The American Language*. Alfred A. Knopf, New York, 1979, p. 480.
- 2 Barbara M. H. Strang. *A History of English*. Methuen, London, 1970, p. 107.
- 3 Mencken. *op. cit.*, p. 402.

- 4 The linguistic terms, "diachronic" and "synchronic", were introduced first by Ferdinand de Saussure (c. f. *Course in General Linguistics*, p. 81). A diachronic explanation is used to explain the present state of a language by pointing to the varying forces at work on it in the past. A synchronic explanation is an explanation of how a language system works at one particular point in time, such as the present.
- 5 c. f. G. H. Vallins. *Spelling*. Andre Deutsch, London 1965, p. 11 and p. 68-9.
- 6 Josef Vachek. 'Review of R. Venezky, "The Structure of English Orthography"'. *Language*, Vol. 47, No. 1, 1971, p. 216.
- 7 Otto Jespersen. *A Modern English Grammar on Historical Principles: Part 1: Sound and Spelling*. Bradford and Dickens, London, 1954.
- 8 *Ibid.* p. 232.
- 9 In this case, a diachronic explanation, the GVS, is responsible for the vowel alternations. But it can be explained by synchronic explanation. Such synchronic explanations can be found in Chomsky and Halle's work, "The Sound Pattern of English" (1968), and in Venezky's work, "The Structure of English Orthography" (1970).
- 10 Venezky. *op. cit.* p. 121.
- 11 *Ibid.*, p. 121-2.
- 12 c. f. Vallins. *op. cit.* p. 45, 54, 68-9.
- 13 c. f. Strang. *op. cit.* p. 28.
- 14 Venezky. *op. cit.*, p. 59.
- 15 c. f. Noam Chomsky. "Current Issues in Linguistics" in *The Structure of Language: Readings in the Philosophy of Language*, Ed. J. Fodor and J. Katz. Prentice-Hall, Englewood, 1964, p. 64, and Chomsky and Halle. *op. cit.* p. 380.
- 16 Larry M. Hyman. *Phonology: Theory and Analysis*. Holt, Rinehart, and Winston, New York, 1975, p. 19-20.
- 17 Venezky. *op. cit.*, p. 106.
- 18 Vachek. *op. cit.*, 1971, p. 212.
- 19 Vachek. *op. cit.*, 1973, p. 57.
- 20 c. f. Vachek. *op. cit.*, 1973. p. 58. and Venezky. *op. cit.*, p. 31.
- 21 c. f. Vachek. *op. cit.*, 1973. p. 58.
- 22 *Ibid.* p. 59.
- 23 *Ibid.* p. 60.
- 24 "Digraph" is a technical term for the two-letter clusters, Also "polygraph" is used for other letter clusters.
- 25 P. A. D. MacCarthy. "New Spelling with Old Letters", in *Alphabets for English*. Ed. by William Haas. Manchester University, Manchester, 1969, p. 89-104. and Bernard G. Shaw. *Androcles and the Lion* (Shaw alphabet edition) Penguin, Harmondsworth, 1962.
- 26 R. E. Zachrisson. *Anglic: a New Agreed Simplified English Spelling*. Almqvist & Wiksell, Uppsala, 1930.
- 27 *Ibid.* p. 62-4.
- 28 Axel Wijk. *Regularized English: An Investigation into the English Reform with a New, Detailed Plan for a Possible Solution*. Almqvist & Wiksell, Stockholm, 1959.
- 29 Sir James Pitman and J. St. John. *Alphabets and Reading*. Pitman, London, 1969.
- 30 Venezky. *op. cit.*, p. 33.

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要 約

今日に至るまでの400年間にわたって、英語の不規則なスペリング方式が英語の学習者に対して数々の困難な問題を引き起こしてという議論がなされ、数多くの改善的な提案がなされてきたのであるが、その成果はあがっていない。今日、英語に於てスペリングの正確さということは、その人の教育程度を示すと考えられているのであるが、歴史的に考えてみるとこの様な実情が出てきたのは、16世紀以降のことである。つまり約1650年頃より、印刷の定着によって、印刷職人達が定着化したスペリング方式を使用し始めたことにより今日まで続いているスペリングの問題が出てきたのである。Menckenによれば、その定着化したスペリング方式の原典は1755年に発刊されたJohnsonの辞典に出てくるとのことである。

さてこのスペリング方式の不規則の問題を歴史的に考えてみると、まず、その大きな原因を発生させたものとして「大母音変換」(Great Vowel Shift)が1400年頃より1600年にかけて起ったことがあげられ、中世英語と現代英語の発音の間に、大きな差異を生じさせてしまった。次にあげられる原因としては、英語に導入された外国語によるものである。これら外国語より英語に入ってきた語は、スペリングの中に目印の如く残されており、今日ではそれらの語の語源を知る指標として重要な役目を果しているのである。

歴史的にこのような英語のスペリング方式の不規則制を無くしようとする動きがあったのも当然のことであったと言える。この不規則制の是正の動きは大きく分けて2つに分かれ、その一つは発音に合致するスペリング方式にしようというもので、他方は、逆にスペリングにあった発音にしようというものであった。前者、つまり、発音にあったスペリング方式にしようという努力は後者よりもはるかに強く、数多くの提唱がなされてきたのである。又、近年においてはコンピュータの導入によって、現在の英語のスペリング方式の規則制を系統的に分析しようとする試みもなされている。