

# English spelling is chaotic: What facts lie behind this popular judgment?

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## Abstract

In this talk I will investigate the popular idea that English spelling is chaotic, and consider how to teach English spelling. I will also assess the relationship between segmentation, reading and spelling. Spelling difficulties are due to the gap between orthography and pronunciation; a word represents both sound and meaning, and good spelling may improve students' overall performance.

## Introduction

In this paper, the writer will investigate the claim about the misconceptions concerning spelling irregularities. The English writing system is often considered chaotic and hard to learn. But linguistic studies suggest that learning to spell in an alphabetic writing system is very much a linguistic process. Memorization plays some role – for example in learning about the ‘s’ of ‘isles’. However, there is much more to spelling than rote memory. According to (Treiman, 2003), children appreciate that spelling are maps of words linguistic structures and they create spelling that reflect their knowledge of linguistic form. Modern research shows that phoneme-grapheme correspondences are not as inconsistent as widely believed. Compared to Finnish which is considered to have a nearly optimal orthography. By the same standard, English is considered to be irregular. However, modern research has shown that spelling consistency increases greatly if the position of the of the

phoneme within a syllable is taken into consideration, and the identity of the phoneme in the environment. This imposes on educators to train primary school teachers on phonotactics, which may bridge the gap between pronunciation and orthographic writing system. Thus the writer will discuss the basic elements of the syllable which are the onset, the rhyme and the coda. By understanding these patterns, the complexity of spelling will be reduced. Above all, the target of this research is teaching and learning. Thus this paper will be geared towards this aspect. This will pave the way to assess the relationship between segmentation, reading and spelling. It is said that spelling difficulties are due to the gap between orthography and pronunciation; however, a word represents both sound and meaning, and good spelling may improve students' overall performance.

## Introduction

Theories of spelling teaching in English have been influenced by notions about the nature of the writing system and by prevailing theories of learning. Until the 1960s, the English writing system was considered to be complex and illogical. This led to the idea that spelling depends upon rote memorization or serial learning. As language researchers began to point to previously unacknowledged regularities in the relations between spoken and printed English as elaborated by Chomsky & Halle, 1968; Venezky, 1970, and as psychologists began to see learners being active people, theories of spelling development changed. It became clear that children have the ability to actively search the structure in written language. Modern research on spelling development has focused on children's acquisition of four important types of linguistic knowledge: phonological, orthographic, semantic and morphological. This will lead the writer to discuss the importance of these factors on learning spelling.

Teaching spelling, without any consideration to pronunciation, is rather a difficult task. Does English language have consistent phoneme-grapheme correspondences? If yes, its spelling system is then considered to be regular (Kessler 2005). This is because Finnish has consistent one-to-one mapping of sounds to letters, which is widely considered to have a nearly

optimal orthography, By the same standard, Dewey (1971, p. 4) asserts that English is generally considered to be "chaotic and indefensible" (Lindgren, 1969). Since English orthography is irrational, the writer maintains that English and spelling are the basic pedagogical problems of both modern and future education. If this premise were true, such views often impede effective reading and writing (Mauer & Kamhi, 1996).

Thus the writer would like to focus on the irregularities of English spelling and how to teach it in a classroom. It is necessary to shed light on teaching English a foreign language by pointing out the relationship between spelling and pronunciation. It is natural for the spelling of English to lag behind the spoken form. This is due to the fact that spoken English has undergone changes, while written English, of necessity more fixed in its conventions, has never been able to catch up with it (MacHannan et al 1992).

## **The Complexity of English Spelling**

**Attempts at measuring the complexity of English spelling usually begin, and end by observing how many different spellings a given sound has in different words. For example, Dewey (1971) lists some different spellings for each phoneme.**

Did he believe that Caesar could see the people seize the seas.

[ˈbɪli:v.....si:z ...si:....si:z]

How would a beginner or even an advanced student decide that <e, ie, ae, ee, eo, ei, and ea> represent the same sound. To add to the confusion, this sentence might crop up later:

The silly amoeba stole the key to the machine.

[sɪli sɪli ..... ə m i:bə .....ki:.....ma i:n]

English speakers learn how to pronounce these words when they learn to read and write and consequently know that <y, oe, ey, and i> represent the same sound as the boldface letters in the first sentence. This will pave the way to discuss the position of the phoneme within a syllable:

## Position of the phoneme

Position is a very important factor in English spelling, and is one that children learn readily and easily. For instance, children learn that double letters do not belong to a word initial position (Treiman, 1993).

## The Phonetic Alphabet

Bernard Shaw followed in the footsteps of three centuries of spelling reformers in English. It is easy to understand why spelling reformers believe that there is a need for a phonetic alphabet.

The English have no respect for their language, and will not teach their children to speak it. They spell it so abominably that no man can teach himself what it sounds like; because they have nothing to spell it with but an old foreign alphabet of which only the consonants – and not all of them – have any agreed speech value (G.B. Shaw, Preface to Pygmalion).

The writer believes that Shaw's comment that English cannot be spelt is a touch of irony. While psychologists and literacy researchers usually express themselves in more sober terms:

**a) Different letters may represent a single sound:**

to too two through threw clue shoe

**b) A single letter may represent different sounds: English has a deep orthography (Frost, 1992).**

dame dad father call village many

**c) A combination of letters may represent a single sound:**

shoot character Thomas physics

either deal rough nation

coat glacial theater plain

**d) Some letters have no sounds at all in certain words:**

mnemonic whole resign ghost  
pterodactyl write hole corps  
psychology sword debt gnaw  
bough lamb island knot

- e) **Some sounds are not represented in the spelling. In many words the letter is represented a /j/ sound followed by a /u/ sound:**

cute (compare :coot)

futile (compare: rule)

utility (compare: Uzbek)

- f) One letter may represent two sounds; the final <x> in Xerox represents a /k/ followed by /s/. Whatever we support or oppose spelling reforms, it is clear we cannot depend on the spelling of words to describe the sounds of English.
- g) The writer will cite some examples of the relationship between phonetics and orthography. The magic <e> as the British teachers teach their pupils in the primary schools. It changes the pronunciation of the word from <kit> and <kite> /kai/ <can> & /kein/ etc. As shown above this magic <e> changes phonetic alphabet into alphabet.

Nevertheless, if English spelling had been chaotic, English would never have become a global language.

On the other hand, the writer wants to state the case for English spelling. No one can claim that English spelling is ideal. It is so important that the researcher understands the nature of English orthography, for it is seriously misunderstood. However, English spelling is by no means irrational or pathological, but serves several goals other than that of a one-to-one phoneme-letter correspondence that

### **The principles of English Spelling**

**A number of theories of spelling development (see Ehri, 1996; Gentry, 1982; Henderson, 1985) emphasize that children's spellings are initially rooted in phonology. Beginning spellers go through a period during which they progress through each word from left to right, using their knowledge of phoneme –grapheme correspondences and letter names to represent the word's sounds. During later stages of development, additional higher-level sources of information come into play, including knowledge of orthographic patterns and morphological relationships . These latter types of knowledge are thought to be unavailable to beginning spellers (Bourassa & Treiman 2007). The research reviewed here suggests that these views of spelling development be too limited. Even beginning spellers use various knowledge sources: phonological, orthographic and morphological knowledge and semantic knowledge as well – to guide their spellings (see also Rittle-Johnson & Siegler, 1999; Kwong & Varnhagen, 2005; Varnhagen, McCallum, & Burstow, 1997; Wright & Ehri, 2007). Moreover, as we have seen, the four types of knowledge are not homogeneous in nature. Within each domain, children progress from simple to increasingly complex patterns. It is not accurate to state that all orthographic patterns or all morphological patterns are learned at the same time.**

**The writer cannot claim that the English writing system is ideal, nor can we deny the spelling difficulties that pupils encounter. Despite this gloomy account of history of English spelling, it has a system which has been shaped by at least three other major principles: conservatism, the unadapted spelling of loan words, and the representation of non-phonemic information.**

#### **a) Conservatism**

**Once a spelling is widely accepted, it tends to stick . Although conservatism is generally criticized, it can be useful. If spellings changed, effort would be required to learn the new spellings and the new systems (Kessler & Treiman, 2005).Conservatism serves the function of keeping English spelling fairly consistent around the globe. For instance, once the spelling of a word becomes popular, people tend to stick with that spelling, regardless of how the pronunciation of the word changes over time or across dialects. This principle of "conservatism" serves the**

purpose of keeping English spellings consistent, no matter how differently a word is pronounced in England, Scotland, Ireland or America.

### **b) Unadapted Spelling of Foreign Words**

It is known that English borrows from other languages, and it almost always uses the spelling of the original language when it does so. After these words are accepted and entered into the English Lexicography, the principle of conservatism is applied and these words stick.

### **c) Representation of non-phonemic information**

**The spelling of a word** not only tells us of its pronunciation, but also of its meaning. For example, the homonyms <site, sight, cite> are distinguished, in the first case because the spellings are conservative and represent some sounds whose pronunciations have changed (sight where the {gh} represents a consonant that is no longer pronounced), and also because words from Latin use Latin spelling (the stems of < site and cite>). The same principle applies to meaningful parts of words as well (morphemes). The function of morpheme identification is pointed out by Chomsky (1971). Moreover, the orthography of a word may tell us whether a word is a closed or an open system. For example, with rare exceptions, lexical words have at least three letters. The grammatical word <in> is spelled with two letters, but the lexical word <inn> has to be longer. This is achieved by doubling the last letter, resulting in an orthography that looks irregular if one does not understand the principle (Venezky, 1970).

As said before, English spelling carries much more information than just pronunciation, and serves other functions as well. Other features, such as its retention of foreign spellings, only fully benefit people who read the relevant languages. The spelling system is not pathological; it is based on principles and does a reasonably good job of applying them (Kessler & Treiman, 2005).

### **d) Relation between spelling & phonology**

Nevertheless, research has shown that learning to spell and learning to read rely on much of the same underlying knowledge — such as the relationships between orthography and sounds —

and, not surprisingly, that spelling instruction can be designed to help children better understand that key knowledge, resulting in better reading. Snow et al.(2005) summarize the real importance of spelling for reading as follows: “Spelling and reading build and rely on the same mental representation of a word. Knowing the spelling of a word makes the representation of it sturdy and accessible for fluent reading.” In fact, Ehri & Snowling (2004) found that the ability to read words “by sight” (i.e. automatically) rests on the ability to map letters and letter combinations to sounds. Because words are not very visually distinctive (for example, car, can, cane), it is impossible for children to memorize more than a few dozen words unless they have developed insights into how letters and sounds correspond. Learning to spell requires instruction and gradual integration of information about print, speech sounds, and meaning — these, in turn, support memory for whole words, which is used in both spelling and sight reading.

In the English writing system, good spelling involves segmenting a spoken word into phonemes and choosing the appropriate letter or cluster to represent each one . These processes are readily applied to words such as <bad and dip>, and such words represent a little difficulty for young writers. However, other words are more problematic . These young writers fail to capture the entire problematic make-up of certain words , they may spell some phonemes inaccurately because they have difficulty with certain sound-letter mapping.

For example, consider a child who fails to represent the initial consonant of a syllable-final cluster, spelling <hand> as <had>. Generally speaking, nasals such as /n/ and /m/ and liquids such as /r/ and /l/ are omitted more frequently than obstruent consonants such as /s/, /t/ and /f/ (Treiman, Zukowski, & Richmond-Welty, 1995). For these young readers , /æ/ and /n/ of hand may form a single vowel unit rather than a sequence of two phonemes.

Accordingly, phonotactics may help to bridge the gap between pronunciation and orthographic writing system. Primary schools teachers are to be trained on Syllables and clusters.

A syllable must contain a vowel (or vowel like). The most common type of syllable in language also has a consonant (C) before the vowel (V) and is typically represented as CV. Technically, the basic elements of the syllable are the onset (one or more consonants) and the rhyme. The

rhyme (sometimes written as 'rime') consists of a vowel, which is treated as the nucleus, plus any following consonant(s), described as coda.

Syllables like *me*, *to*, or *no* have no onset and a nucleus, but no coda. They are known as open syllables. When a coda is present, as in the syllables *up*, *cup*, *at*, or *hat*, they are called 'closed' syllables. The basic structure of the kind of syllable found in English words like *green* (CCVC), *eggs* (VCC), and (VCC), *ham* (CVC), *I* (V), *not* (CVC), *them* (CVC), *like* (CVC), *Sam* (CVC), *I* (V), *am* (VC) .

Both the onset and the coda can consist of more than one consonant, also known as a consonant cluster. The combination /st/ is a consonant cluster (CC) used as onset in the word *stop*, and as coda in the word *post*. There are many CC onset combinations permitted in English phonotactics, as in *black*, *bread*, *trick*, *twin*, and *throw*. Note that liquids (/l/, /r/) and a glide (/w/) are being used in second position.

## Conclusion

English is not Finnish. Its spelling system needs years of study to master, and many pupils find it frustrating. But the widespread belief that it is chaotic and unprincipled arises from a misconception that its only goal is to express the sounds of the speaker's accent. Once the additional goals are understood, whether or not linguists agree with them, it is easier to see that English generally follows them in a principled way. And even if we do restrict the writer's view to sound-letter correspondences, common misconceptions about their degree of inconsistency can be overcome by using measures that do not assign undue importance to rare spellings, and by considering the effects of position and environment. The knowledge that English is more principled and consistent than commonly believed should help in teaching spelling to normally developing children as well as to those who find spelling problematic.

An overview of the goals of English orthography counters the misconception that its spelling is chaotic and unprincipled. Direct representation of the speaker's phonemes is not its only goal. But even the sound-to-letter correspondences are not as inconsistent as widely believed. A survey of first-grade text vocabulary shows that spelling consistency is increased significantly if one takes into account the position of the phoneme within the syllable and the identity of the

phonemes in the environment. Environmental influences within the rime are especially important. Understanding these patterns may reduce the complexity of spelling for learners and those with spelling problems.

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## **Endnotes**

1. Typically, that error would occur in spelling a vowel sound; vowels have multiple alternative spelling and some are quite variable (e.g., these words all have a long u /uː /, sound: use, few, beauty).
2. More current and sophisticated analyses of the sound-to-spelling system of English have shown that vowel spelling variation is much greater than consonant variation (Kelssler and Treiman, 2001).
3. Of course, the reliance on Greek continues today in science, mathematics, and philosophy; recently coined terms include synthesizer and cryptogram.
4. This is why linguists describe English spelling as a morphophonological alphabetic system.
5. For more detail on the speech-to-print system, see Moats, 2000 or Moats, 2004.
6. All of these spellings (plus –c as in tonic) come from the Anglo-Saxon layer of the English language. Three additional spelling for /k/ were adopted as English evolved over the past thousand years: –que (antique) and qu (quit) from Norman French and ch (chorus) from Greek.
7. Open syllables end with a long vowel sound that is spelled with a single vowel letter (as in program); closed syllables have a short vowel and end with a consonant (as in hostel).

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