English Orthography and Phonetics: The Basics

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Abstract
The perceived anarchistic tendencies of English orthography pose significant challenges to native and non-native learners alike. In particular, vowel sounds are exceptionally difficult to master in English spelling. This is due to the fact that there are many more vowel sounds in the spoken language than there are symbols to represent them in the English alphabet. However, this perceived anarchy of English is misguided. The pronunciation of written English follows a systematic set of fairly complex rules based on symbol position and environment. A brief historic rationale for orthographic complexity is discussed, and basic rules for primary vowel orthography and pronunciation is presented.

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The perceived anarchistic tendencies of English orthography pose significant challenges to native and non-native learners alike; however, it is not just the layman who classifies English orthography as a flawed system (Johnson, 2000). There is a long history of grammarians and linguists who have and continue to emphasize the need for a one-sound-to-one-symbol relationship between orthography and pronunciation (Venezky, 1970). These spelling reformers call for a transformation of the English orthography to mirror speech, rather than what they currently consider a lawless system that is inherently hard to teach and to learn. But, as Venezky (1999) describes, English spelling did not evolve for the luxury of non-native speakers, nor is it a “failed phonetic transcription system, invented out of madness or perversity” (p. 4). Instead, it is a complex system that sustains etymological foundations, is based on rules involving morphemic structure and environment, and gives explicit pronunciation clues (Venezky, 1970; Venezky, 1999).

Rather than a one-to-one ratio of phoneme and grapheme, English orthography represents sound in a more “graphemically economical fashion whereby position, environment, and overt markers allow the same symbol to perform several distinct functions, and whereby several symbols represent the same sound” (Venezky, 1970, p. 120).

In English, vowels are perhaps the most precarious to understand (Celce-Murcia, Brinton, & Goodwin, 1996). The English alphabet has only six vowel symbols <a, e, i/y, o, u> representing 48 different phonemes (Venezky, 1999; Celce-Murcia, Brinton, & Goodwin, 1996). It is the purpose of this paper to explicate basic orthographic rules related to the pronunciation of English primary vowel units. Specifically, I will review why English orthography is considered so complex by providing a brief overview of the
historical influences, establish basic principals of spelling as they relate to phonetics, and provide fundamental rules regarding the relationship between orthography and primary vowel pronunciation.

**Brief History of English Vowels**

The graphic representation of English is fundamentally alphabetical with the exception of punctuational elements and the use of capital letters to mark word type and sentence position, but these exceptions are not directly related to the phonetic structure of English orthography and will subsequently not be addressed here. The alphabet is derived from Latin, but has a colored history (Venezsky, 1999). Various changes in the English orthographic system have occurred since the 11th century, most notably from neoclassical and American scholars, but its basic structure has remained the same (Scrugg, 1974). Whereas, the spelling system of English can be considered relatively conservative, its pronunciation cannot; English has undergone dramatic changes in pronunciation throughout the centuries, particularly its vowel sounds (Wijk, 1966).

The most ambiguous sound to symbol relationship involves vowels. The source of this ambiguity is primarily due to what linguistic historians call the Great English Vowel Shift. This phenomenon occurred between the 15th and 18th centuries (Celce-Murcia, Brinton, & Goodwin, 1996). During this period the sound quality of English vowels changed. The point of articulation of the vowel sounds rose and the duration of the sound shortened in length; for example, /u:/ in Middle English (pre-vowel shift) became the /aw/ we use in present day English (Celce-Murcia, Brinton, & Goodwin, 1996). The highest vowels, /i:/ and /u:/ became diphthongized and are now pronounced /ay/ and /aw/
(Celce-Murcia, Brinton, & Goodwin, 1996). Although the pronunciation of English vowels changed, the orthography of the language did not; however, this does not mean that the English orthographic system does not contain clues as to the pronunciation of its words.

**Vowel Graphemes and Pronunciation Rules**

According to Venezky, one of the principal rules to understanding the relationship between spelling and sound in English is that “letters represent sounds and mark graphemic, phonological, and morphemic features” (1999, p. 7). English contains functional units that are suggestive to sound. Functional units are divided into relational units and markers. These are represented by graphemes (e.g., <n>) and grapheme clusters that function as distinct units (e.g., <ng>) (Venezky, 1999). A relational unit is a grapheme or grapheme cluster that is indicative to a zero phoneme, a single phoneme, or multiple phonemes that can be corresponded to sound (Venezky, 1999). Markers have no pronunciation themselves; rather, they act as guides to the pronunciation of other letters in the word (Venezky, 1999). The relationship between vowel sound and spelling becomes more apparent once one understands the role of relational units and markers in English orthography.

Relational vowel units are classified into two groups: primary and secondary (Venezky, 1970; Venezky, 1999). Primary vowels are derived from the earliest records of English, are comprised of the single letter spellings of <a, e, i/y, o, u>, are the most common, and have the highest range of correspondence patterns (Venezky, 1999). Relative to primary vowels, secondary vowels are recent additions to the language, occur
less often, and have straightforward correspondence patterns (Venezky, 1999). Secondary vowels are digraphs and trigraphs, such as <eo, ieu> (Venezky, 1999). Because primary vowels occur with the most frequency and have the most complex relationship between spelling and pronunciation, this paper will only examine their correspondence patterns.

By examining the consonant environment and morphemic structure of the primary vowel unit, one can see a major pattern and several subpatterns of pronunciation (Venezky, 1999). Each primary vowel is associated with two phonemes. Venezky (1970; 1999) describes them through the phonological terms of checked and free; this categorization is based on whether the vowel can end a syllable (free) or not (checked). Celce, Brinton, and Goodwin (1996) use the terms tense and lax to describe the physiological motions of muscular structures in the face when articulating of the phonemes of the units. Cummings (1989) uses the more traditional terms of long and short to distinguish the qualities of the vowel. Cummings description is the most popular in educational literature and most dictionaries, but, as Venezky explains, the description is “neither historically accurate nor mnemonically useful.” For the purposes of this paper, I will use Venezky's portrayal because, I believe, it is easier to interpret the relationship between orthographic representation and sound quality through highlighting the vowels' syllabic description.

Words containing a single morpheme correspond to free alternates in two scenarios: First, a vowel followed by a simple consonant unit, in turn followed by <l> or <r>, and then followed by another vowel unit; and second, a vowel followed by a simple consonant unit and then another vowel (Venezky, 1999). For example, the grapheme <a> is pronounced /e/ as in lane and stable in these two scenarios. The checked alternate is
used in three scenarios: First, a vowel followed by a compound consonant unit; second, a vowel followed by a cluster of consonant units; and third, a vowel followed by word-final consonant unit(s) (Venezky, 1999). For example, the grapheme <a> is pronounced /æ/ as in *badge*, *battle*, and *cat* in these three scenarios.

The subpatterns for the primary vowel units involve markers. The most prevalent include the final <e> pattern and the geminate consonant pattern (Venezky, 1999). The finale <e> and geminate consonants are considered markers of primary vowel pronunciation. The final <e> pattern occurs for monosyllabic and most polysyllabic words. A vowel followed by a consonant and a final, unpronounced <e> is phonemically represented by a free alternate (e.g. *rate* vs. *rat*) (Venezky, 1999, p. 176). Primary vowel spellings before geminate consonants correspond to checked alternates (e.g. *diner* vs. *dinner*) (Venezky, 1999).

As stated above, many seemingly irregular pronunciation-to-spelling patterns can be explained by look at their consonant environment (Venezky, 1970). Post-vocalic /t/, final <ll> or medial <ll> followed by another consonant, and /w/ followed by the spelling of velars /k, g, ñ/ are considered here. There are three <r> environments that effect vowel unit quality: “r followed by a vowel unit, which in turn is followed by a vowel unit or juncture[:]; r followed by a vowel unit, which in turn is followed by a consonant, or r followed by r[; and] r followed by a consonant or juncture” (Venezky, 1970, p. 110). For example, in the first <r> environment grapheme <o> is pronounced /ɔ/ or /o/ (depending on dialect) as in *glory*; however, in a non-<r> environment <o> is be pronounced /o/. In the second <r> environment, grapheme <o> is pronounced /o/ as in *horrid*, whereas in a non-<r> environment it is be pronounced /a/. In the third <r> environment, grapheme
<o> is pronounced /o/ or /ɔ/ (depending on dialect), but in a non-<r> environment <o> is pronounced /a/.

In phonetic representation of the graphemes <a> and <o> generally differ if followed by either a word final <ll> or a word medial <ll>. For example, the <o> in poll is pronounced as /o/, but in the word pollen the <o> is pronounced as /a/ (Venezky, 1970). Similarly, the <a> in fall is pronounced as [ɔ], whereas it is pronounced as /æ/ in fallow (Venezky, 1970). The other vowel spellings are not influenced by the positioning of <ll> as seen in fell/fellow, fill/filly, and bull/bullet (Venezky, 1970).

In environments in which <a> is preceded by <w> and then followed by velars /k, g, η/ the <a> is pronounced as /æ/, if not, it is pronounced as /a/ (Venezky, 1970). For example, in wangle the <a> is pronounced as /æ/, but in swam it is pronounced as /a/ (Venezky, 1999, p. 180). This is also apparent when <a> is present between <qu> and <a> in words such as equality and squalid (Venezky, 1999, p.180).

There are also several other influences that consonant units have on primary vowel unit quality of the graphemes <i> and <o>. When <i> is followed by the final consonant units <nd, ld, gn, gm, gh> it is phonemically represented by its free alternate [ai] (e.g., behind, child, design, paradigm, fight) (Venezky, 1999, p. 180). If <o> is followed by <ff, ft, ss, st, th>, <o> is pronounced as /ɔ/ rather than /a/, as in off, loft, loss, lost, and moth (Venezky, 1999, p. 180).

Suffixes also influence the pronunciation of primary vowel units. The most common suffixes that transform free vowel articulations to checked vowel articulations are <ic, ion, ian>. Examples include angel/angelic, provide/provision, and
comedy/comedian (Venezky, 1999, p. 207). Celce-Murcia, Brinton, and Goodwin (1996) also indicate that there is a pattern for vowel pronunciation preceding what they describe as “weak endings,” which include <al, an, ance, ancy, ant, en, ence, ency, ent, ide, is, ite, oid, on, um, us> (p. 274). The authors elaborate, “[i]f the preceding syllable has a [consonant, vowel, consonant] spelling pattern, which standing alone would signal a lax vowel, the vowel of this preceding syllable is tense when followed by a weak ending, which functions much like a silent e to lengthen the preceding vowel sound” (Celce-Murcia, Brinton, & Goodwin, 1996, p. 274). In other words, when the previous syllable can stand alone, such as the sin in sinus, the checked vowel in sin becomes a free vowel when the suffix <us> is added (Venezky, 1999, p. 181).

Conclusion

English orthography is entangled in its etymology, checkered with borrowings from other languages, and consists of a wide range of dialectic variation. These are the most distinct causes for exceptions to the rules stated above. In checked environments the rules most readily apply; however, in free environment there are quite a few irregularities. This, as Venezsky states, is “because of borrowings and phonological shortenings (many of which occurred almost 1,000 years ago), quite a number of such spellings correspond to their checked rather than their free alternates” (1999, p. 182). The description of such irregularities would require excavating the history of each word, and therefore cannot be addressed in this short document. What has been presented above is a brief description of the primary vowels and basic rules related to their orthographic to phonemic representations. It is certainly not all that can be said about the matter, but it is a substantial beginning for novice English language teachers.
References


