# Spellbound: Experimenting with Alternative English Orthography 


#### Abstract

By Gregory Bontrager* I doubt anybody who wanted to be taken seriously would claim that our orthography is simple, but few realize the true depth of its notorious incoherence. Fewer still have any more than the vaguest understanding of how it became the creature it is today. As many already know, English vocabulary is an untidy mix of primarily Anglo-Saxon, Old Norse, Norman French, Latin, and classical Greek roots. Where its spelling has mainly failed is in regularly integrating the written forms of all those borrowings so that they conformed to a cohesive Anglo-Saxon whole. Many balk at the notion of spelling reform, arguing against the "dumbing-down" of a long-hallowed orthodoxy that is somehow beyond reproach, but it may now be time to seriously question that characterization and explore just what English orthography could be if it were ever streamlined and renovated. I hope to plant the seeds for such exploration by presenting a detailed overview of an experimental orthography for modern English, one of several complete overhauls that have been proposed in recent years.


## Introduction

The complexity of modern English orthography is hardly a secret. For schoolchildren and ESL students alike, functional mastery of the written standard requires that they wrestle and come to terms with a paradigm whose sound-to-symbol/symbol-to-sound correlations seem to change at the slightest provocation, arguably on an outright lexically-conditioned basis.

One need not even resort to jargonic or morphologically complex lexemes to find ample demonstration of this phenomenon. The spellings for very common words such as <but> for /bst/ and <put> for /put/ imply rhyming where there is none and obscure the rhyming which does occur between <could> for /kud/ and <good> for /god/. Even the most basic vocabulary exposes students to such anomalies, and so their confrontation with the convoluted nature of English orthography is practically immediate. Almost as soon as they learn to recite the alphabet, they are faced with words which pay little heed to the sound values suggested by that very recitation.

Independent literacy researcher Masha Bell, who has amassed a robust corpus of data on English orthographic customs, counts 83 rules which supposedly govern standard spelling, but she could only find 11 of them which

[^0]held true without any exceptions. A few, she states, even have more exceptions than adherents. Her website goes on to declare that, "to become even just moderately competent spellers of English, learners have to memorize at least 3700 words with some unpredictable spellings." This Internet resource also identifies 190 very common words which are particularly adept at impeding children's progress in learning to read.

## The Rules Always Apply...Except When They Don't

It is the capriciousness of the system's governing bylaws, far more than its deviation from a pure one-to-one sound-symbol correspondence, that sets English spelling apart. Even Spanish, a language often praised for its consistent relationship between the written and spoken form, has an average phoneme/grapheme ratio of approximately 1.12 , which means that even its code does not quite attain the alphabetic ideal. The Spanish system, however, uses a concise and logical set of environmentally conditioned rules to allow easy decoding of otherwise ambiguous graphemes. For instance <g> has the value of $/ \mathrm{x} /$ before $\langle\mathrm{e}\rangle$ or $\langle\mathrm{i}\rangle$ and /g/ elsewhere. This is so consistently enforced that, when the sequence /ge/ or /gi/does need to be written, a silent ' $u$ ' is inserted to visually prevent the application of this rule.

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Rule 1: \(\left.\left.\langle\mathrm{g}\rangle \rightarrow[\mathrm{x}] / \_<\mathrm{e}\right\rangle,<\mathrm{i}\right\rangle\)
Rule 2: \(\langle\mathrm{g}\rangle \rightarrow[\mathrm{g}]\) / elsewhere
Rule 3: <u> \(\rightarrow\) [Ø] / <g_e>, <g_i>
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In this way, Spanish turns words which would otherwise become arbitrary exceptions into rule-abiding forms. When English encounters analogous scenarios, the decision between using a circumscriptory device similar to the Spanish silent <u> or merely accepting the form in question as an exception to the relevant rule appears to be governed by a metaphorical coin toss. For example, a general rule of elementary English phonics states that a stressed < o > has the value /p/ before a word-final consonant or medial consonant cluster and /oo/ elsewhere.

$$
\begin{aligned}
& <0>\rightarrow[\mathrm{p}] / \text { / C\#,_CC } \\
& <\mathrm{O}>\rightarrow[\mathrm{ov}] / \text { elsewhere }
\end{aligned}
$$

If the diphthong /ov/ occurs in an environment where <o> would be expected to evoke / p / instead, either a silent final ' $e$ ' or a digraph is generally used.

$$
\begin{aligned}
& {[\mathrm{ovC} \mathrm{\#}] \rightarrow<_{\mathrm{o} C e \#>},<\mathrm{oaC} \mathrm{\#}>} \\
& {[\mathrm{ovCC}] \rightarrow<_{\mathrm{oaCC}}>}
\end{aligned}
$$

This explains minimal pairs such as <not> for /nvt/ and <note> for /nout/ or <costing> for /'kpstıg / and <coasting> for /'koustıy/. It does not explain, however, why /poust/ is written anomalously as <post> rather than <poast>. It also creates a situation in which the intuition of a literate Anglophone would most likely suggest a pronunciation of the nonce form <noat> which is identical to that of the word <note>, and yet only the latter is recognized as valid. Conversely, <cote> could be a plausible spelling of /kovt/, but only <coat> has any legitimacy.

The other four vocalic graphemes in the conventional English alphabet have similar patterns of alternation (e.g. /æ/ versus /eI/ for $\langle\mathrm{a}\rangle$ or /I/ versus /ai/ for $\langle\mathrm{i}\rangle$ ) in stressed positions, and exceptions of this sort plague them as well, as demonstrated by the aforementioned spellings of "give" and "have." It's been suggested that at least some of these apparent anomalies can be explained by certain graphotactic constraints, such as the prohibition against ending a word with the letter <v>. Still, a very simple question is then raised about such restrictive conventions. If English phonotactics allow word-final /v/, as clearly demonstrated by the above examples, what functional reason is there for graphotactics taking a different stance?

The short answer is that there is none, at least not anymore. Much of the complexity and inconsistency in English orthography can be traced back to the fact that those who were ultimately responsible for establishing the current standard had other criteria in mind aside from phonemic functionality, including traditionalist conservatism, ease of printing, and reverence for GrecoLatin etymologies. The result is that English graphology took progressively fewer cues from native English phonology. In short, the originally close-fitting adaptation of the Roman alphabet to the Anglo-Saxon sound system has been severely degraded during the tumultuous evolution into Modern English, eroded and eaten away by the whims of historical circumstance and the prejudices of its stewards with no significant repairs ever being enacted.

A simple yet clear example of this lies in the loss of the unique monographs $\langle\mathrm{p}>$ and $<\overline{\mathrm{\delta}}>$, originally used to represent [ $\theta$ ] and [ $\mathrm{\delta}$ ] (at the time allophones of a single phoneme), in favor of the more printer-friendly digraph <th>. Each component letter thereof ( $\langle\mathrm{t}\rangle$ and $\langle\mathrm{h}\rangle$ ) is also used for its own independent sound as well. Simultaneously, English phonotactics allow both medial $/ \theta /$ or $/ \delta /$, as in /'wel $\theta \mathrm{i}: /$, and the consecutive sequence $/ \mathrm{th} /$, as in /a'dalthod/. Hence, the <th> in <wealthy> and <adulthood> have different interpretations without any marker or predictive rule to distinguish them aside from purely lexical criteria. Furthermore, the lack of a mechanism to specify voicing is particularly ironic. At the time they were used, having the two symbols $<\mathrm{p}>$ and $<\delta>$ was superfluous, since the two phones they represented were not contrastive. Indeed, Old English texts demonstrate a certain interchangeability between the two glyphs. Modern English, on the other hand, contrasts them phonemically. In other words, now that the two distinct
graphemes would in fact be more useful than they were even in their own heyday，we have long since abandoned them．

## Experimental Reform Orthography

Saundspel，a Yahoo newsgroup dedicated to the issue of reform，is comprised of numerous members who have designed schemes of their own． Much of the discussion in Saundspel revolves around the particular merits of these schemes and on the criteria by which they should be evaluated．The priorities evidenced by these diverse proposals vary greatly．Some put greater emphasis on making only those changes deemed by the schemer to be absolutely necessary so as to facilitate easier persuasion of the general Anglophone public．A key strategy in this camp is maintaining a compact selection of high－frequency＂sight words，＂such as determiners and prepositions，which would retain their traditional spellings so that a certain considerable percentage of any re－spelled text will still seem comfortably familiar to already－literate Anglophones．Meanwhile，other aspiring reformers place more emphasis on acquisition by children and non－natives，some even arguing for an absolute one－to－one sound－to－symbol correspondence．Within this camp，the issue of whether to use digraphs or diacritics to augment the conventional alphabet often plays a greater role in the debate，since the demands for phonemic precision are usually higher．Another varying parameter is the choice between a more continental or more insular vowel system．Some attempt to retain the distinctly English values／eı／，／i：／，／ai／，／ov／，and／ju：／for the letters 〈a＞，〈e〉，＜i＞，＜ 0 ，and 〈 u$\rangle$ ，while others advocate a more Romance－ like configuration（e．g．／a：／，／ei／，／i：／，／ov／，and／u：／）．Finally，compatibility with contemporary typographical hardware（i．e．computer keyboards，etc．）is also a consideration that gets a fair share of attention．

As an active Saundspel member，I have spent much time sharing ideas and discussing different perspectives with my fellow reform advocates．My own opinions on the matter have manifested themselves in a proposed orthography for English that I have designed myself，which I will now describe as a sort of illustrative case study．

## Base Phonology

As its name suggests，Restored Latinate Spelling（RLS）is essentially a re－ Romanization of broadcast English．That is to say，it attempts to emulate the result of applying the Latin alphabet to modern English with an approach roughly akin to that employed by the medieval missionaries who first applied it to Old English，though certain influences of contemporary linguistic science are also present．One of the natural consequences of this is that the Great Vowel Shift is finally given its orthographic due，thus restoring vowel correspondences modeled，to the extent that English phonology will permit，on a more typically Roman paradigm such as that found in Spanish or Italian．The primary advantage of this is that the pronunciation thereof becomes much more
intuitive for speakers of most other Latin-script languages who are learning English. Similarly, enterprising Anglophones who study such languages will also find that less readjustment is needed on their parts.

Whose accent should the new standard code reflect? This question could be resolved by hybridizing the national standards of the two most influential Anglophone countries in the world: the United States and the United Kingdom. The result is an artificial accent which deviates sufficiently little from every major natural dialect, especially General American (GA) from the U.S. and Received Pronunciation (RP) from the U.K., as to be the most easily and widely understood.

Table 1. Proposed International Standard Vowel Phonemes

| unrounded rounded | Front | Central | Back |  |
| :---: | :---: | :---: | :---: | :---: |
| Closed | i: |  | u: |  |
| Near Closed | I |  |  |  |
| Closed-Mid |  |  |  |  |
| Mid |  | $\partial$ |  |  |
| Open-Mid | $\varepsilon$ | $3:$ | $\Lambda$ | $0:$ |
| Near Open | $\mathfrak{m}$ |  |  |  |
| Open |  |  | $\mathrm{a}:$ | p |

Table 2. Proposed International Standard Diphthongs

| unrounded rounded | Front | Central | Back |
| :---: | :---: | :---: | :---: |
| Closed |  |  |  |
| Near Closed | ๒ |  | ขว |
| Closed-Mid | eI |  | ov |
| Mid |  |  |  |
| Open-Mid | عə |  | э |
| Near Open |  |  |  |
| Open | aı av |  |  |

Table 3. Proposed International Standard Rhotics

| unrounded rounded | Front | Central | Back |
| :---: | :---: | :---: | :---: |
| Closed |  |  |  |
| Near Closed |  |  |  |
| Closed-Mid |  |  |  |
| Mid |  | $\partial^{\imath}$ |  |
| Open-Mid |  | $3^{\imath}$ | $\partial^{\imath}$ |
| Near Open |  |  | $a^{\imath}$ |
| Open |  |  | $a^{\imath}$ |

Table 4. Proposed International Standard Consonant Phonemes

| -vc +ve | Bilab. | Labiodent. | Interdent. | Alv. | Postalv. | Palat. | Velar | Glott. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stop | p b |  |  | t d |  |  | k g | $?^{1}$ |
| Fricative |  | f v | $\theta$ б | s z | J 3 |  |  | h |
| Affricate |  |  |  |  | ts $\mathrm{d}^{\text {d }}$ |  |  |  |
| Liquid |  |  |  | I |  |  |  |  |
| Lat. Liq. |  |  |  | 1 |  |  |  |  |
| Glide | w |  |  |  |  | j |  |  |
| Nasal | m |  |  | n |  |  | $\eta$ |  |

The only notable disadvantage of this solution is that any spelling based on this hybrid dialect would not quite attain absolute phonemicity from the perspective of any existing dialect. Still, regionally specific discrepancies would undoubtedly be far fewer than the many universal discrepancies which characterize traditional orthography, and by postulating an approximately equal compromise between GA and RP, we stand a good chance of minimizing these challenges across the broadest proportion of the Anglophone world.

## Design Principles

My approach to designing RLS was to treat the orthography like a piece of computer software. Since its inception, RLS has been tested, revised, and retested several times. If in my experiments I stumbled across a word that the system could not handle sufficiently well, the rules and parameters were promptly tweaked. Even if I was not actively looking for such a bug at the time, as when I offer commentary in Saundspel and then transcribe it into RLS for exemplary purposes, any glitch I found by accident would also trigger a return to the drawing board. I also paid close attention to the feedback RLS earned from other Saundspel members, taking note of especially those questions and concerns which arose with particular frequency.

Throughout this endeavor, it became increasingly apparent that designing a coherent and fully functional alternative orthography for English with a reasonable chance of winning public approbation would be a delicate balancing act between several often conflicting factors. The drive towards phonemic clarity and precision often seemed to play tug-of-war with the need to maintain some semblance of familiarity so that the cause is not doomed by public repulsion. For instance, the alphabet inevitably needs to be augmented if it is to unambiguously represent each and every phoneme in English, but which method of augmentation would ultimately be best is anything but clear. Digraphs prevent the need for unconventional characters and/or diacritics, but they are also prone to potential confusion with sequences of independent monographs, as in the example of the <th> in <wealthy> versus <adulthood>. This problem may be corrected using a circumscriptory device, such as

[^1]doubling one or the other component letter to indicate phonetic independence, but such a move adds another layer of complexity to the overall system. On the other hand, diacritics or unconventional characters avoid such ambiguities but are likely to be unpopular among the general public, both for aesthetic and typographical reasons.

Indeed, opinions also vary as to how much the design of a reformed orthography should favor already-literate natives as opposed to children and non-native speakers. My own opinion is that those literate in the current system should only be considered insofar as they are the only people with the power to effect change and therefore the ones whom it is most important to persuade. Winning their approval will be no easy feat in any case, because I fear that they also have the least to gain personally from reform.

A person educated in traditional orthography (TO) and a person educated in reformed spelling would both ultimately develop the habit of recognizing familiar words more as morphograms than as sequences of phonograms, but it is the speed at which that sophisticated stage is reached that would be markedly different. Most if not all of the benefits offered by a more coherent spelling system would be indirect from the perspective of those who are already comfortable with the current paradigm. Arguably the most salient of them would be merely the knowledge that their children and grandchildren will stand a better chance of attaining functional literacy and will do so earlier in life. Another significant though still ethereal comfort to skeptics might be the fact that a more regular orthography could enhance foreign appeal and thereby enable English to retain its current status as a global lingua franca for longer than it otherwise might. Still, whether we appeal to affectionate hopes for loved ones or linguistic patriotism, the core challenge of persuading the Anglophone world to enact reform may not be so much convincing its alreadyeducated citizens of how it will benefit them directly as much as it is convincing them of the value and self-satisfaction to be gained from embracing reform for the greater good of our society as a whole. Hence, the very point of designing a reformed orthography which caters too heavily to the more direct needs and/or wants of TO-adepts is questionable. Therefore, though I did not by any means ignore the concerns of contemporary literates in designing RLS, my greater priorities lay firmly with those who have yet to become literate. From this conclusion, the following set of guidelines emerged.

1. Any unique sequence of graphemes should have only one possible pronunciation.
2. Any unique sequence of phonemes should have only one possible written form.
3. Digraphs are to be avoided at virtually all costs to prevent confusion with sequences of independent monographs.
4. The variety and frequency of diacritics and/or unconventional characters should be minimized as much as guidelines 1-3 allow.
5. Typability on conventional computer keyboards should be facilitated to the extent allowed by guidelines 1-3.
6. Any unconventional characters should be drawn from territory as familiar as possible (i.e. fellow Indo-European languages to which English speakers are frequently exposed) and used as intuitively as possible under the constraints of guidelines 1-5.
7. Explicit marking of predictable phonological alternations (assimilation, etc.) should generally be avoided, provided that the rules governing those alternations can be easily understood by someone without linguistic training.

## Vowels

RLS assigns two phonemic values to each of the five conventional vocalic letters, here referred to by the terms "checked" and "free." The immediate graphological environment in which the vowel occurs reliably determines which one is applied in any given word.

1. A vowel is given its checked realization if it is immediately followed by a consonant.
2. A vowel is given its free realization if it is at the end of a word or immediately followed by another vowel.
3. A grave accent is used to check a vowel which would otherwise be free.
4. An acute accent is used to free a vowel which would otherwise be checked.
Ten of the 12 pure monophthongs in English are accounted for in this way. The remaining two are $/ æ /$ and $/ \partial /$, which are respectively assigned to the restored Old English grapheme $\langle\mathfrak{\text { ® }}>$ and the Scandinavian borrowing $<\varnothing>$. The chart below shows the transcription(s) of each vowel in the International Phonetic Alphabet (IPA) and a sample word spelled first in RLS and then in TO.

Table 5. Vowels in RLS

| Vowel | Checked | Free |
| :---: | :---: | :---: |
| a | / $\mathrm{N} /$ pamp ритр | $\begin{aligned} & \text { /a:/ } \\ & \text { spa } \\ & \text { spa } \end{aligned}$ |
| e | / $\varepsilon$ / <br> fec <br> fetch | /3:/ fe fur ( $R P$ ) |
| i | $\begin{gathered} \hline \text { /I/ } \\ \text { kin } \\ \text { kin } \end{gathered}$ | $\begin{gathered} \hline \text { /i:// } \\ \text { kí } \\ \text { key } \end{gathered}$ |
| o | $\begin{gathered} / \mathrm{p} / \\ \text { sob } \\ \operatorname{sob}(R P) \end{gathered}$ | $\begin{gathered} 1 \mathrm{o}: / \\ \text { so } \\ \operatorname{saw}(R P) \end{gathered}$ |


| u | / U/ <br> çuk <br> shook | /u:/ <br> çu <br> shoe/shoo |
| :---: | :---: | :---: |
| æ | $\begin{gathered} \text { /æ/ } \\ \text { mæp } \\ \text { map } \end{gathered}$ |  |
| $\varnothing$ |  |  |

Examining the vocalic grapheme <i> as an example in greater detail, we can see the checked/free alternation at work.

Table 6. Checked versus Free Vowel <i> in Different Environments

| RLS | IPA | TO | CONDITION MET | VOWEL STATUS |
| :---: | :---: | :---: | :---: | :---: |
| bi | /bi:/ | be/bee | \# | Free |
| biiñ | /bi:ın/ | being | V | Free |
| big | /bıg/ | big | C | Checked |
| bígøl | /bi:gal/ | beagle |  | Free |
| bigfut | /bıgfut/ | bigfoot | _C | Checked |
| bikør | /bıkə/ | bicker | _C | Checked |
| bik | /bik/ | *bick | C | Checked |
| bík | /bi:k/ | beak |  | Free |

## Diphthongs

RLS assigns two written forms to each of the five principal diphthongs in English, one to be used before a consonant or at the end of a word and the other to be used only before another vowel. This prevents awkward and potentially ambiguous tri-vocalic grapheme sequences such as <aii>. Three further diphthongs can only occur either word-finally or before <r> or <l> and are therefore always written the same way.

Table 7. Diphthongs

| Diphthong |  | _C or _\# Example | _V Example |
| :---: | :---: | :---: | :---: |
| _C, _\# | _V |  |  |
| ai | ay | /aI/ <br> flait <br> flight | /aI/ <br> flayiñ <br> flying |
| au | aw | /av/ <br> laud <br> loud | /av/ <br> ølawiñ <br> allowing |
| ei | ey | /eI/ plein plain/plane | /ei/ <br> pleyiñ <br> playing |
| oi | oy | /JI/ <br> join <br> join | /DI/ joyøs joyous |
| ou | OW | /ov/ <br> groun <br> groan/grown | /ov/ growiñ growing |
| eø |  | $\begin{gathered} \text { /عә/ } \\ \text { çeØ } \\ \text { share (Br.Rec.) } \end{gathered}$ |  |
| iø |  | $\begin{gathered} \hline \text { /ı/ } \\ \text { Çī } \\ \text { shear/sheer (Br.Rec.) } \end{gathered}$ |  |
| uø |  | $\begin{array}{r} \text { U } \\ \text { tu } \\ \text { tour }(B \end{array}$ |  |

In the rare event that a diphthong needs to be split and read as independent letters, this can be marked with a dieresis over the first pertinent letter, as in <pöiñ> for "pawing" (/ps:in/).

## Consonants

The only consonant with more than one possible value is <n>, which predictably changes from alveolar $/ \mathrm{n} /$ to velar $/ \mathrm{y} /$ whenever followed by $\langle\mathrm{k}\rangle$ or $\langle\mathrm{g}\rangle$. The regularity of this change renders marking it redundant.

Table 8. Consonants in RLS

| Letter | Sound(s) | Letter | Sound(s) | Letter | Sound(s) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| b | $\begin{aligned} & \text { /b/ } \\ & \underline{\mathrm{bi}} \\ & \mathrm{be} \end{aligned}$ | k | $\begin{aligned} & \text { /k/ } \\ & \text { kæt } \\ & \text { cat } \end{aligned}$ | s | /s/ seiv save |
| c | /t/ ciør cheer | 1 | $\begin{aligned} & \hline \text { /1/ } \\ & \text { lav } \\ & \text { love } \end{aligned}$ | t | $\begin{gathered} \hline \mathrm{t} / \mathrm{l} \\ \text { taim } \\ \text { time } \\ \hline \end{gathered}$ |
| ç | $\begin{gathered} \hline \text { /S/ } \\ \text { ć1ld } \\ \text { shield } \end{gathered}$ | m | /m/ <br> mól <br> mall/maul | p | /日/ <br> bænk <br> thank |
| d | $\begin{aligned} & \hline \mathrm{d} / \\ & \text { dog } \\ & \text { dog } \end{aligned}$ | n | ln/ /n $/$ <br> nou tænk <br> no tank | v | /v/ vérj verge |
| б | $\begin{aligned} & \hline \text { /ð/ } \\ & \text { dæn } \\ & \text { than } \\ & \hline \end{aligned}$ | ñ | $\begin{gathered} \hline \mathrm{n} / \\ \text { siñ } \\ \text { sing } \\ \hline \end{gathered}$ | w | /w/ waiz wise |
| f | $\begin{aligned} & \text { /f/ } \\ & \text { fan } \\ & \text { fun } \end{aligned}$ | p | $\begin{gathered} \text { /p/ } \\ \text { pæc } \\ \text { patch } \end{gathered}$ | x |  |
| g | $\begin{aligned} & \mathrm{lg} / \mathrm{l} \\ & \text { gam } \\ & \text { gum } \end{aligned}$ | q | $\begin{gathered} \text { /P/ } \\ \text { aqou } \\ \text { uh-oh } \end{gathered}$ | y | $\begin{gathered} \mathrm{f} / \\ \text { yes } \\ \text { yes } \end{gathered}$ |
| h | $\begin{aligned} & \hline \text { /h/ } \\ & \text { hot } \\ & \text { hot } \end{aligned}$ | r | $\begin{gathered} \hline / \mathrm{I} / \\ \text { rait } \\ \text { right } \end{gathered}$ | z | $\begin{gathered} \hline \mathrm{zl} \\ \text { zu } \\ \text { zoo } \end{gathered}$ |

In positions where $/ \mathrm{y} /$ is not induced from $/ \mathrm{n} /$ by a following velar stop, the Spanish import $<\tilde{n}>$ is used (cf. $<\sin >$ for "sin" and $<\sin >$ for "sing"). This choice was made due to the fact that many and perhaps even most English speakers are likely to have at least some mild exposure to Spanish, so despite its foreign origin, this particular loan should be somewhat familiar. Furthermore, the close phonetic relationship between its RLS value, its original Spanish value of $/ \mathrm{n} /$, and the value of unmarked <n> make it a rather intuitive option as well. Very similar reasoning lies behind the use of the letter <ç> for $/ \mathrm{S} /$, a voiceless fricative whose homorganic affricate counterpart is conveniently represented by unmarked <c> and whose original French value of /s/ happens also to share its voicing and manner of articulation.

The assignments of $\langle\mathrm{c}\rangle,\langle\mathrm{q}\rangle$, and $\langle\mathrm{x}\rangle$ are mainly pragmatic choices. The two values most traditionally associated with $\langle\mathrm{c}>(/ \mathrm{k} /$ as in "cat" and $/ \mathrm{s} /$ as in "cent") are easily accounted for by the dedicated letters $<\mathrm{k}\rangle$ and $<\mathrm{s}\rangle$. Similarly, the conventional sound of $\langle q\rangle$ can just as plausibly be spelled with $<\mathrm{k}(\mathrm{w})>$, and the polyphone <x> can be substituted with the sequence <ks> or
<gz>. These three redundant graphemes were thus set aside until all other conventional consonant graphemes were assigned to their respective phonemes. Then, seven phonemes were left: $/ \mathrm{J} /, / / / /, / \mathrm{ft} /, / \theta /$, $/ \mathrm{J} /$, $/ \mathrm{y} /$, and $/ \mathrm{z} /$. The letters banked from the first round of assignments were promptly distributed among these remaining phonemes, with $\langle\mathrm{c}\rangle$ for $/ \mathrm{ft} /$ being a particularly intuitive designation due to its role as a component of the digraph that traditionally represents that same sound. In this way, three sounds were accounted for with conventional symbols which would have otherwise obliged us to resort to non-traditional glyphs.

## Rhotic Combinations

Four vowels are subject to rhotacization if immediately followed by an $/ \mathrm{x} /$ within the same syllable. The vowels <a> and <o> are considered to be rhotacizable primarily because the pronunciations one would ordinarily expect from sequences like those in <start> and <fort> (/ $\mathrm{I}_{\mathrm{I}} /$ and $/ \mathrm{m} . /$ ) seem to be phonotactically prohibited, and so eliminating those otherwise possible forms with acute accents would probably be redundant.

Table 9. Rhotics in RLS

| Combination |  | _C or _\# Example | _V Example |
| :---: | :---: | :---: | :---: |
| _C, _\# | V |  |  |
| ar | arr | $\begin{gathered} \mid \mathrm{a} / 2 \\ \text { start } \\ \operatorname{start}(G A) \end{gathered}$ | $\begin{gathered} / \mathrm{a}-/ \\ \text { starri } \\ \text { starry }(G A) \end{gathered}$ |
| ér | érr | $\begin{gathered} \hline / 3 / \\ \text { férst } \\ \operatorname{first}(G A) \end{gathered}$ | $\begin{gathered} \hline / 3^{\prime} / \\ \text { férri } \\ \text { furry }(G A) \end{gathered}$ |
| or | orr | $\begin{gathered} \hline 10 / \\ \text { fort } \\ \text { fort }(G A) \end{gathered}$ | $\begin{gathered} 10 / \\ \text { forrom } \\ \text { forum }(G A) \end{gathered}$ |
| ør | ørr | $\begin{gathered} \hline \not \supset / \\ \text { ofør } \\ \text { transfer }(G A) \end{gathered}$ | $\begin{gathered} \hline / ゐ / \\ \text { oførriñ } \\ \text { transfering (GA) } \end{gathered}$ |

As shown above, the <r> in any of these combinations must be doubled if followed immediately by another vowel. In many cases, this device may seem superfluous. However, rhotacization can only occur if the affected vowel is in the same syllable as the $/ \mathrm{I} /$. Whenever followed by another vowel, a single ' $r$ ' is susceptible to being read as an onset instead of a coda. The fact that this is sometimes an accurate interpretation (e.g.<ørest> for "arrest," pronounced $/ \partial '$ 'ssst/ and not / $\downarrow \cdot$ ' $\varepsilon s t /$ /) means that the syllabic placement of an intervocalic $/ \mathrm{I} /$ /, and therefore the rhotacization status of the preceding vowel, is not reliably
predictable. Both rhotacized and non-rhotacized forms can occur in pre-vocalic environments, as in the words "arise" and "cauterize" (/ə'sazz/ and /'ko:tə-(I)auz/, which RLS would render as <øraiz> and <kótørraiz>). The centering diphthongs, with their schwa off-glides, are also subject to this rule,
 "caring," respectively).

## Typing in RLS

While RLS clearly uses a few graphemes beyond the conventional alphabet, those additional letters along with the diacritics were chosen partially due to their availability on the U.S.-International keyboard layout. This keyboard configuration comes pre-installed on most Windows PCs and can be activated within minutes via the Control Panel. Once it is enabled, every nonconventional character used in RLS can be accessed primarily via the righthand Alt key (e.g. Alt $+\mathrm{D}=\langle\delta\rangle$ ) without any change of hardware or paid software.

## Sample Text in RLS

Below is a brief text in TO which has been transcribed into RLS, followed by an IPA rendition to show the intended phonemic values of each word. A few observations are worth being made. Perhaps most importantly, as shown by the spelling of the past-tense inflection in the form <læft> for "laughed" below, RLS is a very shallow orthography, explicitly representing contrastive allomorphs of any morpheme. Moreover, all homophones automatically become homographs. The only morphograms usually allowed are Arabic numerals, currency symbols, and mathematical signs.

Figure 10. Sample Text in TO, RLS, and IPA

Once upon a time, the beautiful daughter of a great magician wanted more pearls to put among her treasure. "Look through the center of the moon when it is blue," said her royal mother in answer to her question. "You might find your heart's desire." The fair princess laughed because she doubted these words. Instead, she used her imagination, went into the photography business, and took a picture of the moon in color. "I perceive most

Wans øpon ø taim, ðø byútiføl dótør ov $\varnothing$ greit møjiçon wontid mor pérlz tu put ømañ hér trexør. "Luk pru дø sentør ov døø mún wen it iz blu," sed hér royøl maঠ̈ør in ænsør tu hér kwescon. "Yu mait faind yor hart's dizayør." Đø fear prinses læft bikoz çi dautid đíz wérdz. Insted, çi yúzd hér imæjineiçøn, went intu dø føtogrøfi biznis, ænd tuk $\varnothing$ pikcør ov ðøø mún in kalør. "Ai pørsív moust sértønli ðæt it iz ólmoust houli wait," çi bót. Çi ólsou faund ðæt çi kud meik inaf
/wans ə'ppn ə taim ðə 'bju:tifol 'da:ta' pv a g.ent ma'dzifan 'wontid mo p3-lz tu: pot o'may h3-
 pv дə mu:n wen it iz blu:
 'ænsə tu: h3' 'kwestfon ju: matt faind jov ha-ts dı'zaər дə fear'p.ımses læft bi' knz fi: 'daotid ði:z w3'dz in' sted fi: ju:zd h3I mæd3I' nerfon went 'intu: дə fa'togıəfi: 'biznis ænd tok a 'piktfor pv дə mu:n m 'kslə aı pə'si:v moust 'su-tanli: ðæt it iz 'o:lmoust 'hooli: watt fi: 0s:t fi: 's:lsoo faund ðæt fi: kod merk

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certainly that it is almost
wholy white," she
thought. She also found
that she could make
enough money in eight
months to buy herself to
lovely, huge new jewels,
too.
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mani in eit manps tu bai insf mani: in ett man日s hérself tu lavli, hyúj nu tu: bai ha' self tu: 'Invli: jüølz, tu.
hju:d3 nu: dzu:əzz tu:/

## Conclusion

I doubt anybody who wanted to be taken seriously would claim that our orthography is simple, but few realize the true depth of its notorious incoherence. Ironically, much of the current nature of the beast stems from the same attribute that many hail as a unique virtue of English: its apparent propensity for importing and integrating vocabulary from an unusually high diversity of sources. While the language's habit of importation is undeniable, the subsequent integration is far less regular, at least from an orthographic perspective. Where English mainly failed is in systematically naturalizing the written forms of all those borrowings so that they conformed to a cohesive Anglo-Saxon whole. The United States, for example, has traditionally been called a "melting pot." Nowadays, this metaphor is often deemed outdated and politically incorrect, because it implies glorification of the fact that the various ingredients were stripped of their distinctive qualities in order to blend seamlessly into the precious molten ore being smelted. A popular alternative in contemporary parlance is the "salad bowl," rejoicing in the maintenance of separate identities which nevertheless cooperate in collectively forming a tasty and nutritious whole. A cultural salad bowl is undoubtedly commendable and almost certain to enrich its host society. A linguistic salad bowl, or at least an orthographic one, may not ultimately function quite as well. Perhaps in the realm of spelling, the melting pot is the better model.

My own goal in writing this has been to inspire a re-examination of the seemingly prevalent assumption that our current spelling paradigm is a refined tradition which is worthy of unconditional reverence. In language, as in culture, knowing one's history certainly has its rewards, but do they outweigh the cost? Have we sacrificed untold future benefits so that we may continue paying homage to a hodge-podge of largely undirected historical accidents? In offering one example of what could be if we decided that some significant readjustment was indeed necessary, I have only endeavored to incite and/or facilitate a more objective look at an often passion-inducing phenomenon. For further exploration, I highly recommend visiting Saundspel at http://groups.yahoo.com /group/saundspel (Saundspel) and/or reading the unabridged version of this paper at http://www.hsmespanol.com/RestLatSpellSite/Spelbaund.pdf (Bontrager 2014). More information about RLS specifically can be found at http://www. hsmespanol.com/RestLatSpellSite/Index.html (Bontrager 2013),

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[^1]:    ${ }^{1}$ The glottal stop is included only to provide a dose of dialectal flexibility.

