In this paper, I propose a dynamic approach to the origin and development of the English Stress Rule (ESR), with special attention to late Middle English and early Modern English. My main aim consists in determining (i) the historical relations of this rule with two of its predecessors through the analysis of competing phonological rules and (ii) the patterns of phonological variation thereby created. My analysis tries to demonstrate that the phonological rule that affected the pronunciation of Romance loans in eModE had its origin in the need to avoid homonymy between nouns and verbs. However, this necessity produced a second series of stress changes that affected many other nouns for which the existence of a verbal counterpart was not as obvious. Consequently, nouns and adjectives with “more typically” nominal endings (as those included under [+F]) kept their final stress, so that in broad terms the ESR could be conceived as a consequence of the different level of success with which eModE speakers were able to distinguish between nouns with homonymous verbs and nouns without verbal counterparts.

**Key words:** stress variation and change; English Stress Rule (ESR); Middle English; early Modern English; early American English.

1. **Metrical phonology and diachrony**

The paradigm defined by Chomsky and Halle in the *Sound Pattern of English* (1968) has opened the way to a variety of formal models of phonological analysis. Although most of these models were originally developed on synchronic grounds, their *ad hoc*
adaptations to the analysis of sound change are already numerous.  

The application of restrictive formal frameworks to problems of historical linguistics has proven extremely revealing and illuminating in two different aspects. On the one side, the specific historical problems approached from these integrated models have been given new, more satisfactory solutions. On the other, from a more general and interesting perspective, the formalisation of diachronic rules within a mainly synchronic model has contributed to the integration of both types of grammar into a more homogeneous framework.

2. Stress assignment in the history of English

Diachronic and dialectal variation in stress patterns is a widely attested phenomenon. In the case of the English language, differences between Old English (OE) and present-day English (PDE) stress rules can be confidently described as radical. On the one side, the Old English Stress Rule (OESR), which is directly derived from the Germanic Stress Rule (GSR), assigns maximally binary S W feet from left to right (McCully and Hogg 1990: 333). In order to become the head of a foot, a syllable has two fulfil one of the two following conditions:

- it must contain branching, that is, it must be heavy:

(1) \[
\begin{array}{c}
\text{heafode} \\
/ \backslash \\
\text{sw} & \text{ae:a o e} \\
[[\text{heafod} \text{e}]]
\end{array}
\quad \begin{array}{c}
\text{ándsaca} \\
/ \backslash \\
\text{sw} & \text{and a a} \\
[\text{and sa ca}]
\end{array}
\]

- it must be dominated by a branching foot at the left edge of the domain:

\[1\] The most recent diachronic-oriented applications of the Dependency Phonology model, which can be said to be the most “historical” of these post-generative models, can be found in Jones (1989) and Anderson (1992). Further, McMahon (1992) raises some issues on the integration of the Lexical Phonology model to the analysis of historical data.

\[2\] For a different formulation of the Old English Stress Rule, taking it as lexical-sensitive, see Lass (1994, 92–93). Furthermore, Kim (2001) assumes that OE primary stress is morphologically grounded, whereas secondary stress is sensitive to phonological information, crucially to syllable weight.
According to this formulation, most OE words were accentuated on the first syllable of the root, the only exception to this trend being prefixed verbs (such as [on[sácan]] or [ge[wórden]]), which invariably received the accent on the first syllable of the root. OE has been described as a language in which extrametricality rules applied to the left edge of stress domains,\(^3\) this premise allowing the formulation of the principles why OE monosyllabic verbal prefixes (such as on in onsácan, onbindan or to in tofáran, todrífan) always appear in unstressed position (i.e. onsácan, onbindan, tofáran, todrífan), whereas the corresponding nominal suffixes acquire stress (compare onsácan with ándsaca). Thus, the OESR implies that non-lexical prefixes followed by a verbal root are affected by left-edge extrametricality.

\(^3\) This option is described as marked by Hayes (1981, 107–108), who claims that right-edge-metricality is the most frequent pattern in most languages.
3. Stress assignment and phonological change

As described above, differences in stress prominence between OE and PDE imply a substitution of the full apparatus of extrametricality of the English phonological system. The change from one stress rule to another has traditionally been connected with the massive influx of French and Latin borrowings into Middle English (ME; Danielsson 1948; Dresher and Lahiri 2005; Fikkert, Dresher and Lahiri 2008), and the progressive establishment of the Romance Stress Rule (RSR; Lass 1992: 87). According to this Latinate rule, French words were accented on the last heavy syllable (e.g. arrést, pilgrimáge), and only in the case of words with no heavy syllables, stress moved back to the first one (e.g. bácheler).

The Latinate pedigree of the ESR becomes more evident from the above assumptions. However, several questions regarding with the historical development of this new rule from the Norman Conquest onwards remain unexplained. In the first place, Latin and French loanwords in OE were universally adapted into the OESR (e.g. L mantélum > mántel), and the same can be said about most Romance bisyllables adopted by ME, independently of their original stress in the source language (e.g. prisun, mirour, cástel, miracle). According to Borroff (1962: 135), “[t]his tendency was apparently due to the influence of familiar native words […] in which the first syllable received the predominant accent.” Further, the initial syllable of many prefixed words tended to acquire stress in the English realization of French loans4 (i.e. cómrade, pártlament), so that left-predominance became even more preponderant than in the OE period.

Secondly, the RSR failed to extend to the few onsácan-type verbs that had survived into ME. In words like becúmen, answáren and ofþínken the original OE accent was maintained on the first syllable of the root, independently of its weight. Moreover, final heavy syllables as the ones represented by the English verbal suffixes -ing (present participles) and -est (present second-person singular) never acquired stress, as one should have expected from the application of the RSR.5

Moreover, most late Romance loans were soon remodelled by imitation of the OE initial stress. This is especially frequent in the tonic suffix -oun /-u:n/, that coexisted alongside its anglicized counterpart -on /-on/ in pairs like nacióun ≈ nátion (Blake 1993: 89). As for the other French loans adopted by ME, it should be noted here that

4 This is especially true of heavy prefixes (e.g., per-, par-, com-, con-), that are thus differentiated from light ones (e.g. de-, re-, en-).
5 A few exceptions can be found in early Middle English rhymes, e.g. me luste bet speten þane singe / of þine fule 3o3elinge (Owl and Nightingale vv.39–40; c1220).
most of them fitted into both the RSR and the OESR, so that no conclusion can be reached on the prevalence of the first over the second one.

This continuing preference for the Germanic pattern of accentuation demonstrates that the OESR (or a very slightly modified version of it) was productive during much of the ME period. If what I propose here is true, a closer look at the question of when, if ever, the RSR imposed itself on the OESR is needed.

4. Stress variation in early Modern English

The situation described above points to a co-existence of two stress rules in late ME. This conflict gave rise to a large amount of phonological doublets, the nature of which can be reconstructed in two different ways: a) through the comparison of diverging stress patterns in different English contemporary dialects, and b) through the reconstruction of the rhyming usages made by 16th and 17th century poets (Lass 1997: 76–77).

Stress differences in English dialects become easily evident by comparing American and British usages. According to Kingdon (1958: 198), in “a considerable number of words that are, or are taken to be, of French origin […] American speakers have preferred to keep stress on the final syllable of the word, in imitation of French practice.” This tendency is the source of the following present-day differing pronunciation of French loans between both varieties of English:

<table>
<thead>
<tr>
<th></th>
<th>BrE</th>
<th>AmE</th>
</tr>
</thead>
<tbody>
<tr>
<td>amper</td>
<td>ðæmpɘə/</td>
<td>ðəm’pir/</td>
</tr>
<tr>
<td>barrage</td>
<td>ð’bærə:ʒ/</td>
<td>ðə’raʒ/</td>
</tr>
<tr>
<td>blasè</td>
<td>ð’bla:zi/</td>
<td>ðbla’zei/</td>
</tr>
<tr>
<td>cachet</td>
<td>ð’kæʃei/</td>
<td>ðka’ʃei/</td>
</tr>
<tr>
<td>chateau</td>
<td>ð’ʃætou/</td>
<td>ðʃə’tou/</td>
</tr>
<tr>
<td>clichèt</td>
<td>ð’klɪʃei/</td>
<td>ðkliʃei/</td>
</tr>
<tr>
<td>premier</td>
<td>ð’priəmir/</td>
<td>ðpri’mir/</td>
</tr>
<tr>
<td>tableau</td>
<td>ð’teblʊə/</td>
<td>ðte’bloʊ/</td>
</tr>
</tbody>
</table>

However, the number of final-stressed French loans in present-day British English (BrE) is far from scarce. In this respect, one can cite words like baróque, police, petit, diván, coiffure, routine, or even chauffeur and chiffón (alternating with cháuffeur and chiffon). Obviously, all these forms correspond to the first step in the diachronic process of phonological adaptation of the bulk of French loans. However, and differently to the words cited above, where final stress has been replaced by initial
stress in BrE, these terms represent a fossilized stage of this process of stress change.

At this point of the discussion, it is clear that the previously cited rule of NE has affected this lexical category with mixed success: whereas most French nouns have been adapted into the present-day stress rules only in BrE, American English (AmE) has preferably maintained the original stress patterns. Differences between BrE and AmE allow a time-depth treatment of such a rule that apparently started to affect these nouns not before the 16th century. Until that date, nouns of French origin like quinine or tableau could be analyzed as a verb of the OE onsácan type (see [3]), and not as the bulk of initially-stressed English nouns (as in ãndsacan; see [1]) extant in the vocabulary of early Modern English (eModE):

\[
\begin{array}{c}
\text{quine} \\
/\w s i
\end{array}
\quad \begin{array}{c}
\text{tabléau} \\
/\w s a
\end{array}
\]

Later, non-branching stress syllables in final position became heavy through vowel lengthening, so that /ta´blo/ > /ta´blo:/, and /bla´se/ > /bla´se:/; in this way, many of the words included in this group become “fully adapted” to the first condition of the OESR as respects foot formation (i.e. the stressed syllable acquired branching). Further, lengthening extended even to vowels with branching syllables (e.g. /kwi´nin/ > /kwi´ni:n/); the present-day realizations of these words in AmE, where the final vowels of /am´per/, /ba´raȝ/, /pri´mir/ and /po´lis/ have remained short, clearly indicate that this lengthening took place in a second stage.

5. Towards a chronology of stress change in early Modern English

It should be clear at this point that late ME did not have a NE rule in the set of parameters that shaped its stress assignment pattern. Moreover, the continuous flow of French nouns and adjectives had contributed to the increase of the number of final-stressed words in eModE, a category previously reserved for prefixed verbs.

According to Görlach (1991: 64), this pattern was more frequent in the sociolect of the educated classes and in poetic and careful speech. Contemporary statements on accentuation also tend to relate final stress to educated speech. Richard Stanyhurst’s observations on the English spoken by Irish women (“The Historie of Irelande”, published in Raphael Holinshed’s Chronicles of Englelunde, Scotlande and Irelande,
1577) seem to constitute a curious instance of hypercorrection by imitation of French stress patterns:

For the women haue in their English tongue an harris and broade kynd of pronunciation, with vterryng their wordes so péeuishly & faintly, as though they were halfe sicke, and ready to call for a possette. And most commonly in words, of two sillables, they giue the last the accent. As they say, Markeate, Baskeate, Gossoupe, Pussoate, Robart, Niclase, etc. which doubtesse doth disbeautifie their Englishe aboue measure.

As Lass (1992: 90) points out, stressing of Romance words on the grounds of the RSR soon became but a poetic option, as it had no analogue in ordinary speech. However, Gabrielson (1909) cites a wide number of instances of the maintenance of French accentuation patterns by British poets well into the 19th century.

An important consequen ce of lexical borrowing and nominalization was the creation of new pairs of homonyms in the English vocabulary (e.g. *accent, account, demand, deluge, perfect, permit, pervert*; Görlach 1991: 180–181). The tendency here was for nouns and adjectives to receive stress on the first syllable when this was heavy (*áccent, pérfect, pérmít, pérvért*), and to maintain it on the second syllable when the first one was light (*accóunt, demánd, delúge*), whereas verbs hardly ever lost their original final stress. Unlike the French nouns and adjectives cited in the previous sections, it should be noted here that none of these homonyms underwent lengthening of their final vowel, for which both processes could be taken as complementary.

This change affected AmE only partially, where most of these nouns have kept a secondary stress on their final syllable (*áccènt, pérvèrt*). If this secondary stress is to be taken as a fossilized form of the next stage of phonological adaptation of French nouns into eModE, we should probably expect the following set of evolutions for some of the words mentioned above in BrE:

(6)

a. with lengthening of final vowel:

/kəˈʃe/ > /ˈkəʃe:/ > /ˈkəʃe:/ > /ˈkəʃe:/
/təˈblo/ > /ˈtəblo/ > /ˈtəblo:/ > /ˈtəblo:/

b. with lengthening of both vowels:

/kliˈʃe/ > /ˈkliʃe:/ > /ˈkliʃei/ > /ˈkliʃei/ > /ˈkliʃei/
/bləˈse/ > /ˈbləse:/ > /ˈbləse:/ > /ˈbləse:/ > /ˈbləse:/
The tendency of OE nominal lexemes to receive stress on the initial syllable was thus reinforced in eModE through a diachronic version of the NE rule, which caused a wide series of phonological changes in finally-stressed words. The first effects of this process are to be seen in French nouns and adjectives with verbal homonyms, where stress became initial if the first syllable was heavy; this change occurred gradually and with different results in BrE and in AmE, so that secondary stress was maintained in this variety. In the second stage of the change, French nouns and adjectives underwent a lengthening of their final stressed vowel, and finally most of these nouns became initially stressed in BrE. This time, the change was independent of the structure of the initial syllable, although it should be noted that in many cases this syllable became heavy after a further lengthening of the initial vowel.

6. Stress change and the Great Vowel Shift

It is obvious that the embedding of this hypothesis within a more general theory of phonological evolution in eModE will further contribute to the reconstruction of this process of stress change. I will concentrate here on the relation between stress assignment and the change traditionally known as Great Vowel Shift (GVS), and more specifically on the apparently irregular diphthongization of ME /ɛ:/ in the words great, break, yea, steak and drain (ME drean).

According to Labov (1994: 180; 304–305), three of these words (great, break, drain) represent an allophonic class of vowels after initial clusters of voiced stop plus /r/ in words of English origin. This allophone of /ɛ:/, defined as [+low] and [+back], merged with ME /a:/ as a consequence of the GVS. Parallel phenomena of vocalic raising and lowering after obstruent/liquid clusters contribute to strengthen this theory, which however does not account for the problem of the otherwise irregular evolution of / ɛ:/ in yea and steak.⁶

What I will propose here is a parallel coalescence of final /ɛ:/ with ME /a:/ into eModE /ei/. My theory has to do with the fact that the PDE diphthong /ei/ is found not only in the word yea, but also in the large group of French loans in eModE where final /e/ received stress (written <-é> or <-et>), which probably means that this sound was lowered into / ɛ:/ after its lengthening. This gives the following evolutions for two of the words analyzed under [6], the process of lengthening and diphthongization of /e/ occurring early enough as to have affected AmE:

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⁶ Labov avoids phonetic conditioning, and prefers to explain this evolution on the basis of analogy (between yea and nay) or etymology (in the case of steak, from Old Norse steik).
In a word like *ampere*, it is clear that final /e/ lengthened into /ɛ:/ which, on the model of words like *pear, tear* or *bear*, has become /ɛǝ/ in PDE. The retarded effects of the GVS on vowels followed by /r/ (Görlach 1991: 72) produced here a further phonetic divergence between BrE and AmE.

Unfortunately, instrumental studies on the special behaviour of final vowels in English are almost inexistent, the frequency of such sounds in English being equally scarce. However, acoustic evidence from other contemporary languages\(^7\) tends to relate word-final position with both lowering and backing of vowels, this tendency being even clearer for vowels in unstressed position.

7. The lexicalization of the English stress

As we have seen before, a large number of French words (such as *baróque, police, petit, recórd, preténd, expórt*) have kept their stress on the final syllable in PDE, in spite of the set of changes described above. Obviously, most of these words are verbs, a lexical category where the Germanic tendency towards initial stress seems to have been weakened already in OE. Adjectives with final stress are not as frequent (e.g. *petit, augúst*). Finally, only a very small group of nouns receive final stress in BrE, and most of them fall into one of these subgroups: (1) nouns primarily derived from French adjectives (e.g. *baróque*); and (2) nouns ending in a monosyllabic suffix or quasi-suffix which nevertheless becomes the most prominent part of the segment: *-ette, -ise, -(o)on*, etc. (see Fudge 1984: 40–41, 52ff for a more comprehensive list).

This group of suffixes, to which we shall refer with the diacritic [+F], offers a further point of divergence between BrE and AmE. Among the [+F] suffixes that have maintained stress only in AmE we find *-eau, -et, -ere* and, to a lesser extent, *-age* (in *barráge*, but not in earlier loans as *lúggage*). Seemingly, the stress changes previously described expanded progressively through this set of words, so that some of these suffixes lost their stress sooner than others, whereas some of them even retained it. The historical process of change from a phonological accent (as the one described for Old English by McCully and Hogg 1990; McCully and Anderson 1996) to an accent that is morphologically and lexically sensitive (as in PDE) apparently has its origin in

\(^7\) Such as, for example, Spanish, a language with a strong preference for open syllables (72\% according to Delattre 1965) in contrast to English (with only 40\%; see Quilis 1981: 230–238).
the lME period, when a tendency towards word-initial stress (which was derived from, or at least similar to, the general Germanic preference for this accentual pattern) started to discriminate between different lexical classes on the model of the pre-existent vocabulary.

8. Concluding remarks

In the preceding pages I have presented an analysis of a wide series of phonological phenomena related to the time-depth variability of the ESR. My provisional results can be summed up in the following way: in the first place, I have claimed that the OESR, or more specifically the part of the OESR that made word-initial stress prevail over final-stress, continues to affect the pronunciation of PDE, and that, in order to show this, a strong relation between PDE NE and the OE trend towards initially stressed words is to be established, since both facts are to be taken as different sides of a general tendency for English to avoid final stress.

Since most of the words that have not been affected by this initial-stress rule are Romance loans from lME and eModE, the gap between the OESR and the ESR is to be located in that period. Further, as we have seen before, an approximative chronology of the set of mutations related to stress change can be established, which is mainly based on dialectal divergences between BrE and AmE and on the effects of the GVS. This chronology permits the formulation of two different diachronic rules, of which the first is phonology-sensitive and the second lexically motivated.

Interestingly enough, the phonological rule through which a noun like *tormént* becomes *tórmènt* in eModE (and from there in present-day AmE) fits perfectly into the principles of the OESR (see [1]), and so does the maintenance of final-stress in a noun like *demánd* (with non-branching initial syllable) or in a verb like *tormént* (on the model of OE *onsácan*). At this stage, stress change affected exclusively nouns and adjectives for which homonymous verbs existed, whereas their verbal counterparts continued to be interpreted on the model of OE prefixed verbs. Further, the phonological consequences of the maintenance of this stress rule can also be seen in the lengthening of final stressed vowels in words like /bla`se:/ (both in BrE and in AmE), a change that affected both nouns and adjectives, and tended to implement the structure of the final syllable according to the principles of the OESR, so that it acquired branching.8

8 If eModE had a CE rule, the later lengthening of vowels in closed syllable in BrE (e.g. /kwi`nin/ > /kwi`ni:n/) could also be conceived as a process of maintainance of branching.
At a second stage, a lexical rule started to affect eModE accentuation patterns, so that most finally-stressed nouns started to acquire initial stress. This change affected the bulk of extant end-stressed nouns of French origin in eModE quite differently, as many of them even failed to lose their original accentuation. [+F] suffixes played a most important role regarding the evolution of these nouns, as can be seen from their PDE pronunciation. My impression here is that this second wave of stress changes started by imitation of the first one, so that some nouns and adjectives without verbal homonyms acquired word-initial stress. In this situation, I find it more than probable that the words less affected by this change were precisely those for which the inexistence of a verbal counterpart was more clearly evident, i.e. words ending in a nominal or adjectival suffix (such as -ee, -ise, -ette, -que, -Vche) or in any segment that could have been easily reinterpreted as a nominal or adjectival suffix (-oo, -oe).

At this point, it is clear that the phonological rule that affected the pronunciation of Romance loans in eModE had its origin in the need to avoid homonymy between nouns and verbs. However, this necessity produced a second series of stress changes that affected many other nouns for which the existence of a verbal counterpart was not as obvious. Consequently, nouns and adjectives with “more typically” nominal endings (as those included under [+F]) kept their final stress, so that in broad terms the ESR could be conceived as a consequence of the different level of success with which eModE speakers were able to distinguish between nouns with homonymous verbs and nouns without verbal counterparts.

Homonymy between words representing different parts of speech had become an especially frequent phenomenon in eModE, thanks to its syntactic and semantic freedom to form new words (Görlach 1991: 180). Examples of new nouns derived from bases formally marked as verbs in 17th century English are the adorn, the detain, the repent, the riotize. Moreover, peculiar verbalizations of nouns include to exception, to remembrance or to supplication. In this situation of growing homonymy, the possibility of stress change being a direct consequence of the need to distinguish between homonymous nouns and verbs becomes even more probable. Obviously, an important series of problems remain unexplained (such as the treatment of words of more than two syllables, or the function of the CE rule). In any case, I hope that my initial intention of relating the ESR to the OESR within a mainly dynamic framework has been achieved, and that this initial approach to such a complex question will lead to a deeper understanding of stress change and to the developing of a stress theory that is diachronically accurate and theoretically sophisticated.
References


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Stress change and phonological variation in early Modern English, British
and American

PROMJENA NAGLASKA I FONOLOŠKA VARIJACIJA
U RANOM SUVREMENOM ENGLESKOM, BRITANSKOM I AMERIČKOM

U radu se predlaže dinamičan pristup izvoru i razvoju engleskog naglasnog pravila s posebnim osvrtom na srednjeengleski i rani suvremeni engleski. Glavni su ciljevi rada: i. odrediti povijesne odnose ovog pravila s njegova dva prethodnika putem analize fonoloških pravila koja međusobno konkuriraju; ii. odrediti uzorka fonološke varijacije koji tako nastaju. U analizi se pokušava pokazati da fonološko pravilo koje je utjecalo na izgovor posuđenica iz romanskih jezika u ranom suvremenom engleskom prozlasti iz potrebe da se izbjegne homonimija među imenicama i glagolima. To je međutim dovelo do drugog niza promjena naglaska kod mnogih drugih imenica kod kojih nije bilo očito postojanje glagolskog ekvivalenta. Rezultat je toga bio da su imenice i pridjevi s “tipičnijim” imenskim nastavcima (poput onih uključenih u [+F]) zadržale završni naglasak tako da se englesko naglasno pravilo općenito može shvatiti kao posljedica različitog uspjeha u razlikovanju imenica s homonimih glagolima od imenica bez glagolskih ekvivalenata.

Ključne riječi: varijacija u naglasku i promjene; englesko naglasno pravilo; srednjeengleski; rani suvremeni engleski; rani američki engleski.