PROMINENCE MATCHING IN ENGLISH SONGS: A HISTORICAL PERSPECTIVE

CORRESPONDENCIA DE PROMINENCIA EN LAS CANCIONES INGLESAS: UNA PERSPECTIVA HISTÓRICA

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Resumen: La poesía métrica es la fuente primaria de evidencia lingüística para la reconstrucción del sistema de acentuación de una lengua muerta, y en particular la métrica que controla la coincidencia o ajuste entre acento lingüístico y posiciones fuertes. Para el inglés medio, la distribución del acento léxico a través de los esquemas débil/fuerte del pentámetro yámbico, desde Chaucer hasta Shakespeare, ha ofrecido información importante para el análisis lingüístico. Además de la poesía hablada, las canciones proveen otro tipo de poesía métrica presente en este periodo que, sin embargo, aún no ha sido explotado como fuente de evidencia métrica o lingüística. El presente trabajo intenta contribuir a llenar este vacío a través del estudio diacrónico del *desajuste prominente*.

Abstract: The primary source of linguistic evidence in reconstructing stress systems is provided by metered poetry, particularly by meters that control the matching of the linguistic stress to metrical strong positions. For Middle English, the distribution of lexical stress across the weak/strong patterns of iambic pentameter, from Chaucer to Shakespeare, has provided important clues for linguistic analysis.

In addition to spoken poetry, songs provide another type of metered poetry from that period. However, they have not been exploited as a source of metrical or linguistic evidence. The present paper takes a tentative step towards filling this gap, by focusing on a diachronic study of prominence mismatching.

Palabras clave: Canción. Ajuste acento-pulso (tiempo). Prominencia. Acentos dobles. Inglés medio.

Key Words: Song. Stress-to-beat matching. Prominence. Stress doubles. Middle English.

1. SONGS AND TEXTSETTING RULES

While in spoken poetry the metrical pattern of the line is grounded in the prosody of the language in which it is composed, in songs the overall metrical structure results from the matching of specific prosodic or tonal units of the text (such as vowel onsets, syllables, stress, tone, etc.) to the melodic-rhythmic structure provided by the tune. The process of aligning linguistic units to musical constituents is commonly referred to as *text-setting*.

In (1a), the alignment of the familiar first line of «What Shall We Do with a Drunken Sailor?» is conventionally represented by a musical score. In (1b), the corresponding *metrical grid* is displayed. The metrical grid is a simplified version of the musical score, where staff and pitches are replaced by vertical and horizontal *x*-lines. Any *x* row represents a succession of points that are evenly spaced in time: each point constitutes a «metrical position». The *x* columns represent the metrical strength associated with each position: the higher the column, the stronger the metrical position. Every pitch is represented by a capital letter and aligned with a metrical position that corresponds to the moment of its inception. Syllables are aligned with the metrical positions on which pitches begin. The metrical grid has been used for decades now in works dealing with text-to-tune alignment

in songs. For purposes of the present study, it shall be considered equivalent to a musical score[1].

It is generally assumed that the alignment of a text to a tune is not a random process, but one that is governed by a set of rules that may vary from language to language, and possibly from one singing idiom to another. As a matter of fact, when a text is set to music, syllables are assigned to beats in such a way as to conform to specific requirements of the language. When these requirements are met, the resulting setting is considered well-formed by the participants in the singing tradition, otherwise it is rejected as ill-formed.

It appears that for a language like Present-day English (henceforth PDE), setting a text to music basically implies assigning prominent syllables in words to strong beats in music. The so-called *stress-to-beat matching* rule has been established as a major constraint through a number of works focused on English folksongs (Halle & Lerdahl, 1993; Hayes & Kaun, 1996; Dell & Halle, 2009; Hayes, 2009a, 2009b; Rodríguez-Vázquez, 2010). Violations of this constraint result in prominence mismatches like the one in (2). Here the alignment of the word *drunken* sounds awkward to native ears, and this is because the unstressed syllable *—en* is heard as more prominent than the first syllable *drunk—*, which does not accord with its stress pattern.

According to Dell & Halle (2009), violations of the stress-to-beat matching rule are rare in English folksongs, and they are subject to two basic conditions, as outlined in (3):

(3)

Given two syllables *S* (stressed) and *s* (unstressed), a prominence mismatch is illicit if:

a) *S* and *s* are not separated by a word boundary;

b) *S* and *s* are separated by a word boundary and *s* precedes *S*.

(3a) predicts that mismatches are not allowed within a verbal string where two adjacent syllables belong to the same word (as in *drunken* and *sailor* in example (1)). (3b), on the other hand, predicts that mismatches may not involve sequences such as *a drunk-* in the same example, where the

[1] One main difference between the musical score and the metrical grid is that the latter doesn't display the durational values of pitches.

clitic *a* is associated with a weaker metrical position than the stressed syllable of the lexical word *drunken*[2].

The present analysis is focused on mismatches of the first type and on their occurrence in a corpus of Medieval and Early Modern songs. The aim is to establish a comparison between the textsetting practices in PDE and in earlier stages of the development of English.

2. STRESS-TO-BEAT MATCHING IN A DIACHRONIC OVERVIEW

This section presents an overview of a survey conducted on a corpus of nearly 90 songs ranging from the 13th century to Shakespeare's time[3]. The bulk of my corpus comprises communal songs, hymns, carols and drinking songs; however, it also includes a few specimen of a more sophisticated nature. The survey consisted of identifying illicit prominence mismatches on polysyllabic simplex words[4].

By means of samples belonging to different periods of the history of English, the results of the survey will be illustrated. With the aid of the metrical grid, lines will be scanned and checked against condition (3a). From this brief survey, it would appear that stress-to-beat matching is stricter in PDE than it used to be in the past. A discussion of the potential contributions of this result to the understanding of Middle English (henceforth ME) phonology and metrics will follow in section 3[5].

2.1 Early Middle English

The first song under examination is the famous early ME round known

[2] Dell & Halle acknowledge that both (3a) and (3b) fail to capture the relationship between two adjacent syllables in words that actually have an internal word boundary (words like *cowboy* or *software*). Moreover (3) cannot predict whether a prominence mismatch involving a compound is licit or not.

[3] The collections used for the analysis are mentioned in the bibliography.

[4] Not all lines in the corpus have been scanned for this purpose, but only the ones that are written directly under the music.

[5] Traditionally, the start of Middle English is dated in 1066 with the Norman Conquest. For convenience, it is divided into an early and a late stage: the former covers all written English from about 1150-1325; the latter ends with the rise of printing at the close of the fifteenth century. The period 1476-1776 covers the end of Middle English and is generally known as Early Modern English.

as the *Reading rota*. This song takes the name *Sumer is icumen in* from the first line of the text, as it is transcribed below[6].

Svmer is icumen in,

Lhude sing cuccu,

Groweþ sed and bloweþ med,

and springþ Þe wde nu;

Sing cuccu;

Awe bleteþ after lomb,

Lhouþ after calue cu;

Bulluc sterteþ, bucke uerteþ,

Murie sing cuccu.

Cuccu, wel singes þu, cuccu,

Ne swik þu naver nu

It was first written down in the first half of the 13th century, but must have existed long before then. It is a six-voice composition comprised of a four-voice construction over a two-voice *pes*, which is written on the last two staves. The manuscript also provides Latin directions for how to integrate the six voices.

A modern notated score[7], representing the tenor 1 part, and the corresponding metrical grid are given in (4) and (5), respectively[8]. Here the writing has been normalized (e.g. the *thorn* symbol *þ* has been replaced by 'th') and pitches have been omitted for ease of reference. The text is not divided into lines (as it is in the display above) rather it has been segmented in such a way as to be squeezed into the grid. The melodic value of pitches and the division of the text into lines are not relevant to the present

[6] Modern English translation: Summer is come, / sing loud, cuckoo! / The seed grows and the meadow blooms, / and now the wood turns green. / Sing, cuckoo! / Ewe bleats after lamb, / cow lows after calf, / bullock leaps, buck farts, / sing merrily, cuckoo! / You sing well, cuckoo. / Don't ever stop now.

[7] A facsimile of the manuscript is available at *http://www.southampton.ac.uk/~wpwt/harl978/sumerms.htm#How%20to%20sing%20karaoke*.

[8] The musical score is based on Roden *et al.* (2009: 136-138). Due to the lack of indications of rhythm in the manuscript, the rhythmical rendition of this song cannot be determined once and for certain; however, musicologists tend to prefer triple meter. The idea that the original form of the canon was in duple meter has not generally been accepted.

discussion; they will therefore be omitted throughout the paper. Each word involved in a prominence mismatch is boxed, and the syllable carrying the main stress is in boldface.

Let us consider the stress-to-beat matching in this song. Apparently, it is very strict: the syllable that is presumably most prominent in the word is always associated with the most prominent metrical position. The only exception is represented by the word *singes* which is misaligned with respect to the metrical grid: we would expect the root syllable *sing-* to be associated with the strong position and the unstressed ending *-es* to go in the weak position, but in fact it is the other way round. It is as if in PDE the verbal form (s/he) «studies» were aligned with the ending in a stronger position than the initial syllable.

It is interesting to observe how modern editors and performers react to this mismatch: some of them may even choose to eliminate it by changing the original text, so that the setting sounds more natural to their public. For instance, in the musical rendition by the Hilliard Ensemble[9], the syntactic order of the phrase «singes thu» is inverted: they sing «Wel thu singes» instead of «Wel singes thu» as it is actually written in the manuscript. Singing this phrase as it actually appears in the original source (i.e. with the violation of the prominence matching), would result in a setting that sounds awkward to a native speaker today. By changing the syntactic order, the stressed syllable *sing-* is moved to a stronger beat than the *-es* ending, just as one would expect in a current song.

2.2. Late Middle English

The second specimen belongs to the latter decade of the ME period (c. 1485-90). It is drawn from the manuscript Oxford, Bodleian Library, Eng. Poet e.1, 41^{v}, and it is known as «The Salutation Carol»[10]. The facsimile in (6) is taken from Wright's edition (1847: 62). A transcription of the lyric is given below:

[9] The Hilliard Ensemble (2002), *Sumer is icumen in. Medieval English Songs*. Harmonia Mundi HMA 1951154.

[10] At the bottom of folio 41v a note indicates that, to the same tune, one also sings the lyrics written down on the recto of the following folio. These lyrics belong to a drinking song that we will call *Bring us in good ale* after the first line of its burden.

Nowell nowell nowell
this is the salutacyoun
of the angell Gabryell.
Tydynges trew ther be cum new,
sent frome the Trynyte,
be Gabryell to Nazareth
cety of Galile
A clen maydyn and pure virgyn
thorow her humylyte
hath conceyvyd the person secunde in deyte.

The modern musical score in (7) is based on Chappell (1859: 42), as is the corresponding metrical grid. Here the initial repetitive refrain has been omitted. Prominence mismatches in this song involve not only words of Latinate and Romance origin, like *virgin* or *conceyvyd*, but also the native noun *maydyn*[11].

The occurrence of settings of this type, as in our examples from for the 13th and 15th centuries (4) and (7), respectively, suggests that perhaps prominence mismatches were less salient and less perceptible for an English speaker at that time than they are nowadays.

2.3. Early Modern English

This song dates back to the end of the 16th century (1591) and is said to have originated in Coventry where it was first sung at the Corpus Christi play called *Pageant of the Shepherds and Tailors*[12]. The complete text is given below, while the musical score is provided in (8) together with the metrical grid[13].

[11] A prominence mismatch could also be assumed for the prefix-verb construction *be cum* (PDE *become*), if we spell it as one word. This song also contains mismatches involving non-adjacent syllables (e.g. the syllables *Try-* and *-te* in *Trynyte*), however these are not taken into consideration in the present account.

[12] The only surviving source of this carol is an engraving of 1825 by Thomas Sharp (*Dissertation on the Pageants at Coventry*).

[13] The grid is based on the musical score provided by Dearmer, P., Vaughan Williams, R., & Shaw, M., (1953), and it only represents the soprano part. Non-syllabic final *–e* is represented by the symbol *e* in the grid.

Lully lulla, thow littell tine child,
By, by, lully lullay, thow littell tyne child,
By, by, lully lullay!
O sisters too, How may we do
For to preserve this day
This pore yongling, for whom we do singe
By, by, lully, lullay?
Herod, the king, In his raging,
Chargyd he hath this day
His men of might In his owne sight
All yonge children to slay
That wo is me, Pore child, for thee,
And ever morne and [may]
For thi parting, neither say nor singe,
By, by, lully, lullay.

Only the three stanzas (without the initial refrain) are represented in the metrical grid in (8). Again, if we assume that the stress pattern of polysyllabic words is the same as PDE, then we must admit that these couplets contain a number of illicit mismatches according to (3a). There are five instances and they are all boxed (*yongling*, *raging*, *parting*, *chargyd*, *children*). In all of them, the root syllable of a disyllabic word is associated with a weaker metrical position than the adjacent morpheme at their right. The misalignment involves only disyllabic words, three of which contain the suffix morpheme *–ing*.

Both examples above are drawn from the religious sphere. One could argue that these songs may have been composed by monks and preachers of foreign origins (for instance, Normans) who were not aware of the implicit rules for English textsetting. This would explain the occurrence of mismatches that are forbidden according to (3a).

However, this account fails to explain why occurrences of prominence mismatches are also found in secular songs, as shown in (9) and (10). The display in (9) represents one stanza of a popular carol which was written down towards the end of the 15th century (London, BL, Addit. 5665, the *Ritson ms.*, 1460-1510), and whose text is given below:

The boar's head as I understand

Is the rarest dish in all this land

Which thus bedecked with a gay garland

Let us servire cantico.

In the metrical grid in (9) one prominence mismatch appears on the line-final word *garland*. This Romance loan is stressed on the first syllable according to present-day pronunciation; yet in the song it is set in such a way as to rhyme with the word *understand* which has the main stress on the final syllable[14].

The same mismatch involving this word, though not in rhyme position, occurs twice in (10). This so-called 'Willow Song' is preserved in a manuscript written about the year 1630 (British Museum, Add. MS. 18, so-called *London Book*) and was probably performed on stage by the character Desdemona in the earliest performances of Shakespeare's *Othello* (Act 4, Scene 3, line 41 onwards)[15]. The text of the first stanza and the refrain are given below.

The poore soule sate sighinge

By a Syckamore tree

Singe willo, willo, willo

With his hand in his bosom

And his heade upon his knee

O willo, willo, willo, willo

O willo, willo, willo, willo

Shall be my garland.

Singe all agreene willo

willo, willo, willo

Aye me, the greene willo

must be my garland.

[14] The musical score is based on Dearmer *et al.* (1953: 39). The *Boar's Head* carol is still sung at Queen's College in as part of a traditional Christmas ceremony.

[15] The musical score is based on Sternfeld (1963: 41-42).

In the refrain, the word *garland*, which occurs line-finally but not in rhyme position, offers another example of prominence mismatch. In fact, the supposedly unstressed final syllable appears in a stronger position than the preceding syllable.

Interestingly, alignments of the type exemplified by *garland* in these songs are disallowed in Shakespeare's iambic pentameter, according to a constraint that is formulated in (11). This constraint predicts that weak positions, although they may contain stressed syllables, may not contain any syllable that is strong within a word (Hanson & Kiparsky, 1996: 297). So, while strong monosyllables like *keen* and *fierce* are allowed in weak positions in (11a), the syllable carrying main stress in *immense* and *enraged* in (11b) is not.

In Shakespeare's sung verse, however, both monosyllables and stressed syllables in polysyllabic words seem to be allowed in weak positions: in (10), not only are monosyllables like *soule* and *greene* associated with weak positions, but polysyllables like *garland* are aligned in such a way as to give rise to a prominence mismatch. While (11) is believed to apply strictly in Shakespeare's drama, (3a) is apparently relaxed in the contemporary singing tradition. This apparent divergence in Shakespeare's time between spoken poetry and song has not remained in PDE.

3. METER AND LANGUAGE

There are at least two possible explanations for this difference between spoken and sung poetry in medieval and early modern English: (A) sung and spoken meters may be subject to two different sets of constraints; (B) the phonology of the language changes over time and this account for the occurrence of prominence mismatches in songs[16]. This second hypothesis appeals to linguistic change in order to explain why a constraint that is strictly observed in current folk songs was so often disregarded in earlier repertoires. I will return to this hypothesis after a discussion of (A).

Following the first hypothesis, musical textsetting and literary scansion may diverge in the way they regulate the distribution of stressed syllables in polysyllables: in this view prominence mismatches are purely metrical

[16] A third option might point to unspecified «cultural» factors, such as a change in musical competence or attitude. As too little is known about musical competence, this option is left out of the discussion.

phenomena that can be more or less constrained depending on meters. While I acknowledge that (A) is in principle a viable explanation, there are methodological as well as empirical reasons to doubt that it is the best one. Methodologically, an obstacle is represented by the metrical scansion itself: when scanning a line of literary poetry, the linguistic sequence is mapped onto a given metrical pattern. For accentual poetry, this mapping inevitably requires conditions on the occurrence of stressed and unstressed syllables in weak and strong positions. The problem is that such conditions are often formulated on the basis of assumptions about stress assignment. Thus, for instance, the line «This pore yongling», which occurs in (8), is scanned as trochaic by Minkova (1997: 144), based on the assumption that the word *yongling* has initial stress. However, Minkova ignores the fact that this line is part of a song[17], and her analysis is biased by this and similar problems. When the metrical scansion is driven by assumptions about the linguistic facts, there is always a considerable amount of uncertainty and a risk of circularity. In this respect, the study of musical textsetting offers an escape from the problem of circularity in that the metrical scansion is not conditioned by assumptions about the language, but is determined by a musical structure that exists independently of the text. In the case of *yongling* in (8), it has been shown that this word is involved in a prominence mismatch, and therefore scanning the line as trochaic is at least inappropriate.

On the empirical ground, counterexamples to generalization (11) have actually been found in Shakespeare's poetry. According to the Kökeritz survey (1953), 96 out of 137 disyllabic words of Romance and classical origin allow both accentual patterns in Shakespeare's lines. 26 out of 48 disyllables with final stress in PDE also allow the initial syllable in strong position. An example is given in (12), where the adjective *corrupt* shows up once in SW and once in WS within the same line. The first occurrence clearly violates the constraint (11). Conversely, 70 out of 89 disyllables with initial stress in PDE also allow the final syllable in strong position. This type of discrepancy also occurs with longer polysyllabic words: almost half of the tri-syllables with initial stress in PDE are allowed in the metrical configuration WSW. Tri-syllabic words stressed 'σσσ occur in the metrical pattern WSW 12 times out of 27; 13 times out of 28, words stressed σσ'σ occur in the metrical context SWS[18]. Not only loans, but also Germanic

[17] She quotes this line from (1975).

[18] We have a slightly different proportion for four-syllable words: words with stress pattern 'σσσσ may occur in the metrical configuration WSWS (5 out of 18 occurrences); words stressed σσσ'σ may occur in the metrical configuration SWSW (3 out of 14 occurrences).

words are liable to «rhythmic stress-shifting»: disyllabic compounds, such as *daylight* and *midnight*, are aligned in SW or in WS, depending on whether the following word has initial stress or not (Kökeritz, 1953: 337).

The empirical data provided by Kökeritz is significant: more than 50% of the disyllabic words having primary stress on the last syllable also show up in SW configurations; over 78% of disyllables with initial stress also appear in positions that demand WS. Comparable results are found for three-syllable words in Shakespeare. Similar data is also available for Chaucer's pentameter: Cable (2002: 130) reports that in the *Canterbury Tales*, the word *under* occurs 39.7% of the times in clear WS contexts, and another 29.5% in line-initial position; *after*, on the other hand, occurs 15.5% of the times in WS configurations (13.8% at the beginning of the line)[19]. Redford (2003) lists 980 stress doubles, i.e. words showing final prominence in certain metrical positions and non-final prominence in others, for the *Canterbury Tales*. They are mainly disyllabic and occur both in line-final and line-internal positions in a total of 4,321 lines (18.4% of the text). An example is given in (13), where the disyllabic word *siknesse* appears once in SW and once in WS configuration within the line.

The results of my survey on medieval and early modern songs align with the data provided by Kökeritz, Cable and Redford. They can be summarized as follows: 65 settings violate the stress-to-beat matching rule; 43 out of 90 songs (i.e., half of the corpus) provide at least one example of prominence mismatch involving the alignment of adjacent syllables within disyllabic and trisyllabic (non-compound) words[20]. They include words with initial stress (*vyrgyn*, *lady*, *children*) and words with stress on the second syllable (*almicti*, *conceyvyd*), according to current pronunciation. The violations concern not only French loans (*counsel*, *incontinent*), but also native compounds and inflectional and derivational morphemes.

It would thus appear that stressed syllables in polysyllabic simplex words were indeed less constrained than predicted by (11) and (3a). The counterexamples above allow us to rule out the hypothesis that ME literary poetry and songs obey two different sets of constraints: they are comparable as far as the occurrence of prominence mismatch is concerned. In the following sections I shall posit an alternative hypothesis to account for the alternating patterns of prominence in poetry.

[19] Cable observes that already in the *Ormulum* both words oscillate between the two patterns.
[20] Repetitions are not included in these counts.

3.1. Stress doubles in spoken verse

English spoken poetry shows alternations of the kind illustrated above into the 15th century and longer, especially in rhyme position. Traditionally, they had been regarded as a purely metrical phenomenon motivated by the needs of rhythm and above all of rhyme (Brink, 1901; Luick, 1921; Jordan 1974). According to Jordan (1974: 218), the «[French] accent is retained only in Frenchified pronunciation and above all in poetic use for purposes of rhyme», while it was lost in everyday speech. He assumes, however, an intermediate stratum of pronunciation which certainly drew the accent back, but left the originally accented final syllable greater importance by the preservation of the secondary accent. To this stratum belonged words like *honur*, *empir*, *entir*, *exil*, *gentil* (with long *-i*).

A first important attempt to explain such alternations in phonological rather than in metrical terms was made by Halle and Keyser (1971), who claimed that stress-doubles should be regarded as a reflex of the synchronic state of the grammar in which a conflict arose between the Germanic Stress Rule (GSR) and the newly added Romance Stress Rule (RSR)[21]. The GSR is left-handed (i.e. stress is assigned from left to right), sensitive to morphology and insensitive to syllable weight; the RSR is virtually the opposite: it is right-handed, insensitive to morphology and sensitive to syllable weight. According to Halle and Keyser, the stress rules of ME were in a state of flux as a result of the influence of successive phases of the borrowing of Romance loans. For native as well as non-native words, the application of the GSR or the RSR led to an alternation of initial and final stress. This would explain why a class of native words also shows alternating patterns of prominence in poetry and why these alternations also show up line-internally. The RSR, which was added to English in the time of Chaucer, initially competed against the dominant GSR and was gradually extended over the subsequent centuries.

Along the same lines, Lass (1999: 127) proposes that «Modern English stress is based on a complex modification of the RSR, with some GSR or GSR-like elements». He claims that the word-stress assignment rule underwent a change of «handedness», i.e. a change in the direction of parsing: from the Germanic left-to-right (with main stress assigned at the left edge) to the Romance right-to-left (with primary stress on the rightmost foot).

The opposite view is defended by those who argue that the French stress pattern had no lasting effect on English prosody and that almost all Romance

[21] The adjective «Romance» refers to both the French and the Latinate rules.

words that had French stress in Chaucer have initial stress consistent with the Germanic pattern in PDE (Dresher&Lahiri, 2003: 78; McCully, 2003: 367). In particular, Minkova (1997) rejects the idea of a parametric switch from Germanic to Romance and provides an account of ME word stress which explains the evolution from Old English to Modern English in terms of a re-ranking of the universal prosodic constraints that define main stress assignment. She argues that the *Initial Prominence* constraints continued to be ranked highly throughout the ME period and that the evidence from stress doubles has been over-interpreted: such words were, or quickly became, initial-stressed according to the native model (Minkova, 1997: 148).

It has been shown however, that Minkova's analysis relies on a superficial appraisal of the data: too often she invokes headlessness (i.e. zero position at the beginning of the line), syllabic ambiguity and trochaic inversion at syntactic breaks in order to disqualify lines that provide proof of non-initial stress in disyllabic words. She claims that violability of the *Initial Prominence* and *Non-finality* constraints is allowed by «well-defined conventions of art verse» (Minkova, 1997: 148), most notably at rhyme position[22]. I assume, instead, that «poets cannot violate the linguistic givens of their language» (Beaver 1971: 588) and that the rules of general language should always also account for poetic «deviations».

It is under this general assumption that I shall proceed to an explanation of the occurrence of «stress doubles» in my corpus of medieval and early modern songs.

3.2. Stress doubles in songs

The large occurrence of prominence mismatches in both spoken and sung verse raises questions about the very nature of stress in Middle and Early Modern English. Alignments like the ones in (8), where *-ling* and *-ing* show up in a stronger metrical position than the preceding syllable, suggest that these suffixes might not have been stress-neutral. In fact this data gives support to Nakao's hypothesis (1977: 145-146)[23], and goes against the claim

[22] *Initial Prominence* requires that initial syllables be stressed; *Non-finality* prevents word stress from being final.

[23] According to Nakao, no Late Middle English derivational suffixes, including suffixes inherited from Old English, were stress-neutral. To deal with the trochaic attestations of words such as *derling*, *lordling*, *yongling*, Nakao invokes Stress Retraction.

made by Minkova (1997: 153) when she states that the rightward stress-shifting for native disyllabic words such as *darling*, *lording*, *youngling* etc. should be considered a «metrically driven phenomenon of no historical phonological interest».

It is worth noting that prominence mismatches involving *–ing*-suffixed words, such as *thinking*, *clothing*, as well as other simplex polysyllabic words with a falling contour, such as *morning*, *country*, show up unexpectedly in a corpus of folksongs studied by Hayes & Kaun (1996). In analogy with spoken meter, this type of mismatch has been named «lexical inversion». The settings in (14) are drawn from two current folksongs (Hayes & Kaun, 1996): both display a prominence mismatch involving a disyllabic word with initial stress in PDE. The great majority of lexical inversions in folk verse are said to occur at the end of the line, however, they can also occur line-internally as in (14b). I would argue that it is not the position within the line that favours violations of the stress-to-beat matching; it is rather the position of the mismatched syllables within the prosodic hierarchy that allows for it. Interestingly, in all the settings presented in section 2, prominence mismatches occur at the right edge of the phrasal domain. For instance, in (7) the words *maydyn* and *virgyn* occupy different positions within the line, but they are both involved in a misalignment. What is common to them is that both occur in phrase-final position, respectively in the phonological phrases *a clen maydyn* and *pure vyrgyn*. Similarly in (14), of the two lexical inversions only *clothing* appears line-finally. Both, however, occur at the right edge of the corresponding phonological phrase (*her gay clothing* and *one May morning*).

It is conceivable that lexical inversions are a vestige of a previous synchronic stage where prominence mismatches were allowed in songs under specific prosodic conditions[24]. These were restricted to the right edge of phrasal domains. In my corpus of medieval and early modern songs, a word like *maydyn* is usually set according to the stress-to-beat matching principle when it occurs elsewhere than in phrase-final position, as for instance in the expression *maiden and wife*[25]. This would suggest that the principle may not have been operative at levels higher than the phonological word.

The role of phrasal stress in the history of English has been emphasized

[24] Although in songs linguistic form gradually adapts under the pressure of diachronic change, it may happen that a tune is particularly resistant to any modification to the musical structure.

[25] The example is drawn from a fifteenth-century carol. The expression refers to Mother Mary.

by a number of linguists: based on evidence from meter, Beaver (1971) and Kiparsky (1975) have suggested that the application of the Rhythm Rule in Shakespeare's time was less restricted than it is today[26]. More recently, another hypothesis has been put forth by Redford (2003). Based on the occurrence of stress doubles in Chaucer's *Canterbury Tales*, he argues that prominence mismatches are mostly favored at line end, or line-internally at the boundaries of the highest prosodic domains (i.e. Intonational Phrase and Utterance)[27]. He therefore concludes that word stress in ME was initial, except at the end of phrases where both syllables showed a kind of level stress or «split prominence» as a result of a conflict between word stress and phrasal stress rule. This conflict resolved in either a rhythmic and/or an intonational shift, whereby both syllables at the end of the phrase received some kind of prominence[28].

The idea of the emergence of a phrasal rule in ME is corroborated by the data presented here. Although more research is needed in order to clarify what environments and conditions actually require the application of the rule, it seems clear that there is enough empirical evidence to encourage the adoption of a unified phonological approach capable of subsuming, under the same analysis, similar phenomena that take place in both spoken and sung verse.

4. CONCLUDING REMARKS

The application of the stress-to-beat matching rule to a corpus of English songs covering such a long period has revealed that prominence mismatches were more frequent in earlier songs than they are in current English folksongs. There are several possible explanations for this difference, but I suggest that this phenomenon should be accounted for in phonological rather than in metrical terms. The relatively common occurrence of mismatches in earlier songs points to a difference between the stress systems of ME and PDE, at least as far as higher-level prosodic domains are concerned.

[26] Beaver calls it Stress Exchange Rule, and claims it was lexically unrestricted.

[27] This observation is corroborated by the study of the Hengwrt manuscript, where stress doubles are either preceded or followed by a virgule in 86.3% of the lines. assumes that the virgule is a marker of phrasing.

[28] Split prominence is equivalent to the «schwebende Betonung», «hovering stress», or «fluctuating stress», previously proposed by Bischoff (1897), Brink (1901: §§ 274-275), and Dobson (1957: 446-449). It is also comparable to the kind of «level stress» found in some Scandinavian dialects and in Welsh.

My account also provides an explanation for the occurrence of a specific type of mismatch allowed exceptionally in folk verse (so-called «lexical inversions»). I argue that this type of mismatch should be regarded as a remnant of an earlier textsetting rule, which allowed the violation of the stress-to-beat matching at the right edge of phrasal domains.

REFERENCES

BEAVER, J.C. (1971). «The Rules of Stress in English Verse». *Language* 47, 586-614.

BISCHOFF, O. (1897). «Über zweisilbige Senkung und epische Caesur bei Chaucer». *Englische Studien* 24, 353-392 and 339-398.

BRINK, T.B. (1901). *The Language and Metre of Chaucer* (2nd ed. revd. F. Kluge, trans. M.B. Smith). London: Macmillan.

CABLE, T. (2002). «Issues for a new history of English prosody». In *Studies in the history of the English Language. A millennial perspective*, D. Minkova & R. Stockwell (eds.), 125-151. Berlin: Mouton de Gruyter.

CHAPPELL, W. (1859). *Popular music of the olden time. A collection of ancient songs, ballads and dance tunes, illustrative of the national music of England* (vol. 1). London: Cramer, Beale & Chappell.

DEARMER, P.; VAUGHAN WILLIAMS, R. & SHAW, M. (1953). *The Oxford book of carols*. London: Oxford University Press.

DELL, F. & HALLE, J. (2009). «Comparing Musical Textsetting in French and in English Songs». In *Towards a Typology of Poetic Forms*, A. Arleo & J.-L. Aroui (eds.), 63-78. Amsterdam: Benjamins.

DOBSON, E. J. (1957). *English Pronunciation 1500-1700*. Oxford: Oxford University Press.

DRESHER, B.E. & LAHIRI, A. (2003). «Main stress left in Early Middle English». In *Historical linguistics 2003: Selected Papers from the 16th International Conference on Historical Linguistics, Copenhagen, 11-15 August* .D. Fortescue *et al.* (eds.), 75-85. Amsterdam: Benjamins.

HALLE, J. & LERDAHL, F. (1993). «A Generative Textsetting Model». *Current Musicology* 55, 3-23.

HALLE, M. & KEYSER, S. J. (1971). *English Stress. Its Form, its Growth and its Role in Verse*. New York: Harper & Row.

HANSON, K. & KIPARSKY, P. (1996). «A parametric theory of poetic meter». *Language* 72, 287-335.

HAYES, B. (2009a). «Faithfulness and componentiality in metrics». In *The Nature of the Word: Studies in Honor of Paul Kiparsky*, 113-148. Cambridge, Mass.: MIT Press.

— (2009b). «Textsetting as constraint conflict». In J.-L. Aroui & A. Arleo (eds.), *Towards a typology of poetic forms*, K. Hanson & S. Inkelas (eds.), 43-61. Amsterdam: Benjamins.

HAYES, B. & KAUN, A. (1996). «The role of phonological phrasing in sung and chanted verse». *Linguistic Review* 13, 243-303.

JORDAN, R. (1974). *Handbook of Middle English Grammar: Phonology* (trans. by E.J. Crook). Den Haag/Paris: Mouton.

KINES, T. (1964). *Songs from Shakespeare plays and popular songs from Shakespeare time*. New York: Oak Publications.

KIPARSKY, P. (1975). «Stress, Syntax, and Meter». *Language* 51, 576-616.

— (1977). «The rhythmic structure of English verse». *Linguistic Inquiry* 8, 189-247.

KÖKERITZ, H. (1953). *Skakespeare's pronunciation*. New Haven: Yale University Press.

— (1978). *A guide to Chaucer's pronunciation*. New York: Holt, Rinehart and Winston.

LASS, R. (1999). «Phonology and morphology». In *The Cambridge History of the English Language* (vol. 3, 1476-1776). R. Lass (ed.), R.M. Hogg (gen. ed.), 56-186. Cambridge: Cambridge University Press.

LERDAHL, F. & JACKENDOFF, R. (1983). *A generative theory of tonal music*. Cambridge, Mass.: MIT Press.

LUICK, K. (1921). *Historische Grammatik der englischen Sprache* (vol. 1). Leipzig: Tauchnitz.

McCULLY, Ch. (2003). «Left-hand word-stress in the history of English». In *Development in Prosodic Systems. Studies in Generative Grammar 58*, P. Fikkert & H. Jacobs (eds.), 349-393. New York/Berlin: de Gruyter

MINKOVA, D. (1997). «Constraint ranking in Middle English stress-shifting». *English Language and Linguistics* 1, 135-175.

NAKAO, T. (1977). *The prosodic phonology of late Middle English*. Tokyo: Shinozaki Shorin.

PRESTON, M. J. (ed.) (1975). *Concordance to the Middle English shorter poem*. Leeds: W.S. Manley.

REDFORD, M. (2003). «Middle English stress doubles: New evidence from Chaucer's meter». In *Development in Prosodic Systems. Studies in Generative Grammar* 58, P. Fikkert & H. Jacobs (eds.), 159-195. New York/Berlin: de Gruyter.

RODEN, T.; WRIGHT, C. & SIMMS, B.R. (2009). *Anthology for Music in Western Civilization* (Vol. 1. *Antiquity through the Baroque*). Boston: Schirmer Cengage Learning.

RODRÍGUEZ-VÁZQUEZ, R. (2010). *The Rhythm of Speech, Verse and Vocal Music: A New Theory*. Bern: Peter Lang.

STERNFELD, F.W. (1963). *Music In Shakespearean Tragedy*. Oxon: Routledge. [reprinted in 2005].

STEVENS, J. (ed.) (1952). *Medieval Carols* (*Musica Britannica*, vol. 4). London: Stainer and Bell (revd. ed. 1958).

HILLIARD ENSEMBLE (2002). *Sumer is icumen in. Medieval English Songs*. Harmonia Mundi HMA 1951154.

WRIGHT, Th. (ed.) (1847). *Songs and Carols from a manuscript now first printed from a ms. of the fifteenth Century.* Percy Society 23. London: Richards.

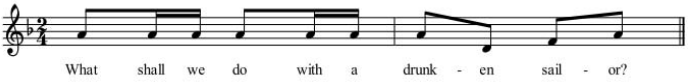
http://www.lel.ed.ac.uk/ihd/laeme1/laeme1.html [*A Linguistic Atlas of Early Middle English, 1150-1325*, compiled by Margaret Laing and Roger Lass (Edinburgh: © 2007- The University of Edinburgh)].

http://www.southampton.ac.uk/~wpwt/harl978/sumerms.htm#How%20to%20sing%20karaoke.

TABLES & FIGURES

(1)

a.

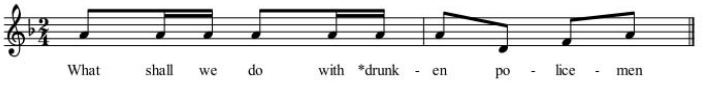


b.

x								x								
x				x				x				x				
x		x		x		x		x		x		x		x		
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
|		|	|	|		|	|	|		|		|		|	
A		*A*	*A*	*A*		*A*	*A*	*A*		*D*		*F*		*A*		
What		shall	we	do		with	a	drunk-		en		sail-		or		

(2)

a.

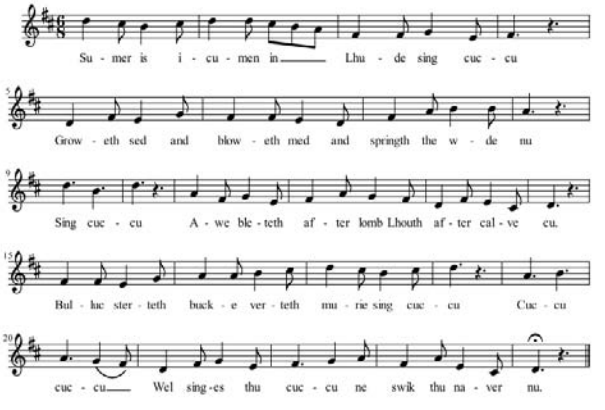


b.

	x								x								
	x				x				x				x				
	x		x		x		x		x		x		x		x		
	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
	|		|	|	|		|	|	|		|		|		|	
	A		*A*	*A*	*A*		*A*	*A*	*A*		*D*		*F*		*A*		
*	What		shall	we	do		with	**drunk-**	en		po-		lice-		men		

(4)

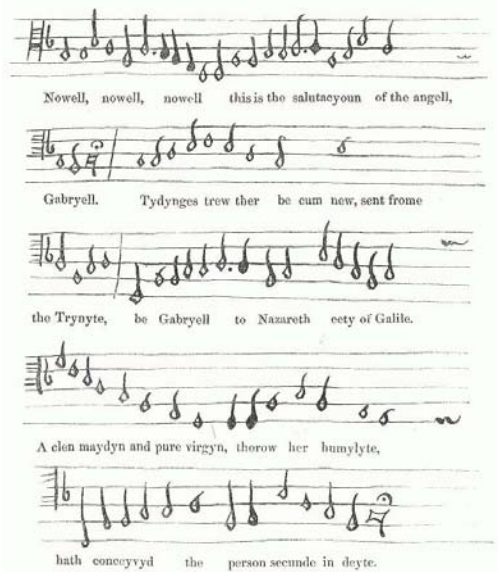
Sumer Is Icumen In



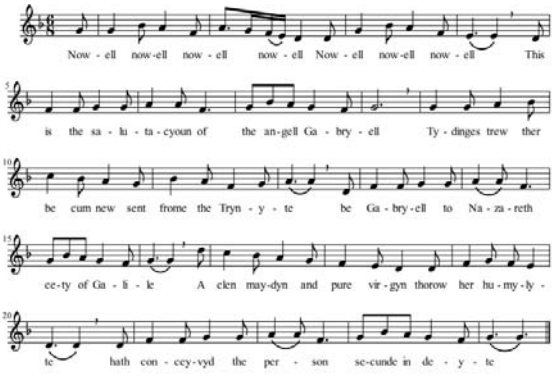
(5)

x						x				
x			x			x			x	
x	x	x	x	x	x	x	x	x	x	x	X
|		|	|		|	|		|	|		|
Su-		mer	is		i-	cum-		-en	in	--	--
Lhu-		de	sing		cuc-	cu					
Gro-		weth	sed		and	blo-		weth	med		And
spingth		the	wu-		de	nu					
Sing			cuc-			cu					
A-		we	ble-		teth	af-		ter	lomb		Lhouth
af-		ter	cal-		ve	cu					
Bul-		luc	ster-		teth	buck-		-e	ver-		Teth
mu-		rie	sing		cuc-	cu					
cuc-			cu			cuc-			cu		--
Wel		**sing-**	es		thu	cuc-			cu		Ne
swik		thu	na-		ver	nu					

(6)

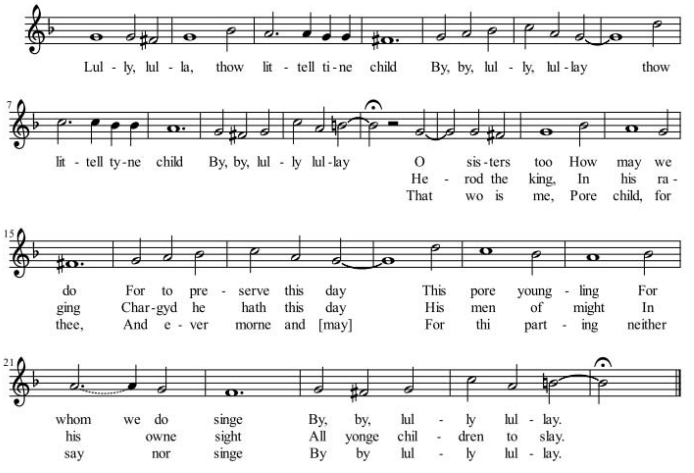


(7) **The Salutation Carol**



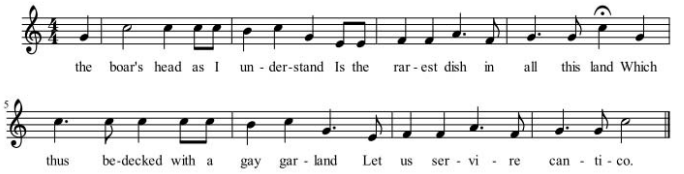
	x						x				
	x			x			x			x	
x	x	x	x	x	x	x	x	x	x	x	x
This	is		the	sa-		lu-	ta-		cyoun	of	
	the	an-	gell	Ga-		bry-	ell				
	Ty-		dingęs	trew		ther	be		cum	new	
sent	fromę		the	Try-		ny-	te				
be	Ga-		bry-	ell		to	Na-		za-	reth	
	ce-	ty	of	Ga-		li-	le				
A	clen		**may-**	dyn		and	purę		**vir-**	**gyn**	
thorow	her		hu-	mi-		ly-	te				
hath	con-		**cey-**	vyd		the	per-			son	
	se-	cundę	in	de-		y-	te.				

(8) **The Coventry Carol**



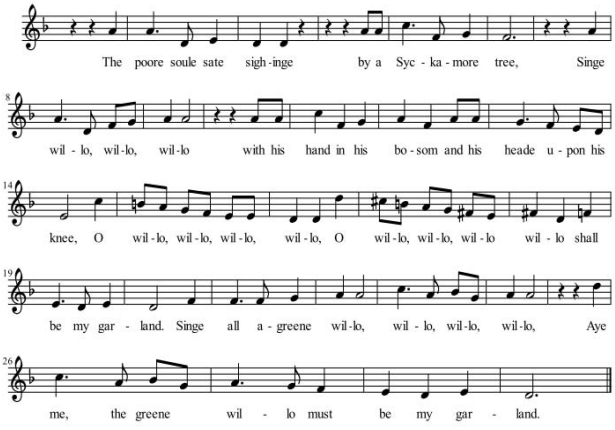
		x						x						x						x			
x		x		x		x		x		x		x		x		x		x		x		x	
x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
O			sis-		sters		too				How		may				we		do				
	For		to		pre-		serve		this		day						This		pore				
yong-	ling				For		whom			we	do		singe						By		by		
lul-	ly		lul-		lay																		
He-			rod		the		king				In		his				**ra-**		ging				
	Char-		gyd		he		hath		this		day						His		men				
of	might				In		his				own		sight						All		yonge		
chil-	dren		to		slay																		
That			wo		is		me,				Pore		child,				for		thee				
	And		e-		ver		morne		and		[may]						For		thi				
par-	ting				nei-	ther	say				nor		singe						By		by		
lul-	ly		lul-		lay																		

(9) **The Boar's Head Carol**



			x				x				x				x								
x			x			x			x			x		x			x			x			
x		x	x		x	x		x	x		x	x		x	x		x	x		x	x	x	
|			|			|			|			|			|			|		
The			boar's				head			as	I	un-			der-			stand			is	the	
rar-			est			dish			in	all				this	land								
which			thus				be-		decked	with	a	gay			**gar-**			land				Let	
us			ser-				vi-			re	can-			ti-	co								

(10) **The Willow Song**



						x						x						x					
		x				x			x			x			x			x			x		
x		x		x		x		x	x		x	x		x	x		x	x		x	x		
	the			poore				soule		sate		sigh-			inge								
	by		a	Syc-				ka-		more		tree											
	Singe			wil-				lo		wil-	lo	wil-			lo								
	with		his	hand			in			his		bo-			som			and		his	headę		
u-	pon		his	knee						O		wil-	lo	wil-	lo	wil-	lo	wil-		lo			
	O			wil-	lo	wil-		lo		wil-	lo	wil-			lo			shall			be		
my	**gar-**			land						Singe		all			a-			greenę			wil-		lo
				wil-				lo		wil-	lo	wil-			lo								
	Aye			me				the		greenę		wil-				lo		must			be		my
	gar-			land																			

(11)

No weak metrical position may contain a syllable which is strong within a lexical word
(Hanson&Kiparsky 1996: 297)

a. W S W S W S W S W S
Pluck the keen teeth from the fierce tiger's jaws *Sonnet* 19.3

b. W S W S W S W S W S
*Pluck immense teeth from enraged tigers' jaws (construct)

(12)

W S W S W S W S W S
Might *c o r r u p t* minds procure knaves as *c o r r u p t* *Hamlet* 5.1.132

(13)

W S W S W S W S W S
in *s i k n e s s e* nor in mischief to v i s i t e CT, 1:493

W S W S W S W S W S
and hath *s i k n e s s e* and great a d v e r s i t e e CT, 1:1311

(14) **Lexical inversions**
(Hayes & Kaun 1996)

a.

x x x x
x x x x x x x x
x x x x x x x x x x x x x x x x

She soon ran through her gay cloth- ing

b.

x x x x
x x x x x x x x
x x x x x x x x x x x x x x x x

One May mor- ning so ear- ly

Recibido el 18 de mayo de 2012.
Aceptado el 17 de septiembre de 2012.