

Borrowing, Stress Shift and Word Order Change in the History of English

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ABSTRACT. This paper claims that the well-known word order change in the history of English is caused by a major change in the stress system of English which is previously induced by borrowing from one of the Romance languages. Two probable scenarios are presented for the phonological change in question: (i) the stress system of English is influenced by that of Old French due to the borrowing of Old French words during the Middle English period; (ii) it is influenced by the stress system of Latin due to the borrowing of Latin words during the Early Modern English period. This paper also argues that the stress-based theory of linearization accepts both of the two scenarios, but favors the first over the second.*

Keywords: syntax-phonology interface, linearization, word stress shift, word order change, borrowing

1. Introduction

It is well known that the stress system of Old English is strictly governed by the Germanic Stress Rule while that of Present-day English is defined by the Romance Stress Rule as well as the Germanic Stress Rule. How and when this metrical innovation took place in the history of English is still controversial: Halle & Keyser (1971: 97ff), Nakao (1972: 455f), Lass (1992: 87ff) and Tanaka (2014: 151ff) attribute the origin of the change to the borrowing of Old French (OF) words, and place it in the time of Chaucer, whereas Dresher & Lahiri (2005: 84, 2015: 4f), Fikkert et al. (2006: 144ff), Díaz-Vera (2013: 42) and Minkova (2007: 171f, 2014: 314ff) ascribe it to the borrowing of Latin words, and date it to a later time. This paper attempts to settle this issue in terms of the stress-based theory of linearization advanced by Tokizaki (2011, 2013, 2017) and Tokizaki & Kuwana (2013), demonstrating that the borrowing of OF words into Middle English brought about the change in the Old English word

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stress system, thereby causing the well-known change from object-verb (OV) to verb-object (VO) order in the history of English.

This paper is organized as follows. Section 2 briefly introduces the stress-based theory of linearization. By drawing on data from Miyashita & Tokizaki (2017, 2020), section 3, presents some basic facts about the relative word order of a main verb and its object, and OF loanwords in the *Ancrene Wisse* (AW) and the five texts in the Katherine Group (KG). It is also shown that the word order patterns in these texts are correlated with the presence or absence of OF loanwords. Section 4 discusses the stress systems of Middle English and Early Modern English, and presents two probable scenarios of word order change in the history of English. It is also suggested that the basic facts presented in section 3 support one of the two probable scenarios. Section 5 concludes this paper.

Before going into the details, let us follow Sweet (1891: 211), and assume the periodization of the history of English given in (1) below:

(1) *Three Main Periods of the History of English*

700— 900	Old English (OE)	Early Old English (EOE)
900—1100		Late Old English (LOE)
1100—1350	Middle English (ME)	Early Middle English (EME)
1350—1500		Late Middle English (LME)
1500—1700	Modern English (ModE)	Early Modern English (EModE)
1700—1900		Late Modern English (LModE)
1900—PRESENT		Present-day English (PDE)

(Sweet (1891: 211))

2. Stress-based Theory of Linearization

The Minimalist Program, which is one of the research strategies of the Principles and Parameters approach, maintains that linearization, or word order, plays no role in narrow syntax, and it is determined at the phonological component, as the following quote from Chomsky (1995: 334) in (2) indicates:

- (2) There is no clear evidence that order plays a role at LF or in the computation from N to LF [i.e. narrow syntax]. [...] Then ordering is part of the phonological component, [...]
- (Chomsky (1995: 334))

However, the mechanism of linearization at the phonological component is yet to be elaborated. In order to ameliorate the situation, Tokizaki (2011, 2013, 2017) and Tokizaki & Kuwana (2013) have proposed that the relative order of a head and its complement is determined by stress location, on the basis of the null theory of stress assignment proposed by Cinque (1993), which is given in (3):

(3) Cinque's (1993) Null Theory of Stress Assignment

[The] main stress is located on its most deeply embedded constituent [in a structure].

(Cinque 1993: 271)

According to this theory, the location of the main stress covaries with the location of the innermost complement. For instance, the main stress in a VP falls on the element to the right of V in VO languages (e.g. [_{VP} V [_O σ ... σ σ]]) (if the word stress is penultimate)) while it falls on the element to the left of V in OV languages (e.g. [_{VP} [_O σ ... σ] V]) (if the word stress is initial)). The choice of verb is irrelevant to stress assignment. The essence of the stress-based theory of linearization based on (3) is shown in (4):

(4) *Stress-based Theory of Linearization*

- a. [T]he juncture between constituents in left-branching structures is stronger than that in right-branching structures: this strong juncture in left-branching structures makes the structures compounds. (Tokizaki 2013: 280)

i. *Right-branching structures:*

[_{αP} α βP] ⇒ WEAK JUNCTURE = PHRASE
↳ PHRASAL STRESS

ii. *Left-branching structures:*

[_{αP} βP α] ⇒ STRONG JUNCTURE = QUASI-COMPOUND
↳ COMPOUND STRESS

- b. Assuming [...] that the stress location in compounds is similar to that in a simplex word [...], languages with left-hand stress choose OV order for stress conformity at the linearization. Languages with right-hand stress choose VO order for the same reason. (Tokizaki 2017: 93)

i. *Languages with right-hand stress (e.g. penultimate):*

[_{VP} V [_O σ ... σ σ]] / * [_{VP} [_O σ ... σ σ] V] = PHRASE

ii. *Languages with left-hand stress (e.g. initial):*

[_{VP} [_O σ ... σ] V] / * [_{VP} V [_O σ ... σ]] = COMPOUND

First, as in (4a), a junctural difference obtains between right-branching structures and left-branching structures. The right-branching structure has a weak juncture between constituents. This makes the structure in head-complement order a phrase, as in (4ai). On the other hand, the left-branching structure has a strong juncture between constituents. This makes the structure in complement-head order a (phonological) compound, as in (4aii). Second, as in (4b), a word order difference obtains depending on the direction of word stress assignment. Languages with left-hand stress choose complement-head order such as OV order, since this stress pattern is compatible with compound stress, as in (4bi). On the other hand, languages with right-hand stress choose head-complement order such as VO order, since this stress pattern is compatible with phrasal stress, as in (4bii). It follows from the stress-based theory of linearization that languages with word-initial stress choose OV order while languages with right-hand stress choose VO order.

The theory in question is cross-linguistically evidenced by the surveys conducted by Tokizaki (2015). He surveyed the correlation between word stress patterns and word orders in world languages with the aid of the *World Atlas of Language Structures Online* (WALS Online) compiled by Dryer & Haspelmath (2013). The results of his survey indicate that a head follows its complement in the languages with left-hand word-stress such as Germanic languages, while a head precedes its complement in the languages with right-hand word-stress such as Romance languages. The result of Tokizaki's survey on the relative order of a main V and its O is shown in the table in (5), where OV/VO means that these languages have no dominant order:

(5) Relative Word Order of a V and its O in the WALS Online

	Languages with left-hand word-stress	Languages with right-hand word-stress
OV	55 (58.5%)	49 (30.6%)
OV/VO	6 (6.4%)	16 (10.0%)
VO	33 (35.1%)	95 (59.4%)
TOTAL	94 (100%)	160 (100%)

(Tokizaki (2015: 264))

According to the table in (5), 58.5% of the languages with left-hand word-stress exhibit OV order while 59.4% of the languages with right-hand word-stress exhibit VO order. The result indicates that the lefthand-stress languages are more likely to adopt OV order while the righthand-stress languages are more often associated with VO order.

Under the stress-based theory of linearization just introduced, it is predicted that language change results when the lefthand-stress languages come into contact with the righthand-stress languages, or vice versa. The prediction for the case of word order change is given in (6):

(6) *Prediction for Language Change under the Stress-Based Theory of Linearization*

Shift of word stress and change in word order (i.e. relative order of a V and its O) may take place in lefthand-stress languages when they borrow words from righthand-stress languages, or vice versa.

This prediction is borne out by the changes that took place in ME. ME borrowed many words from OF. It also experienced word stress shift and the demise of OV order as well as the establishment of VO order, which we deal with in section 3.

3. Word Order and OF Loanwords in EME

3.1. *Philological Information on the Texts Surveyed by Miyashita & Tokizaki (2017, 2020)*

This subsection gives a brief philological description of the *Ancrene Wisse* (AW) and the five texts in the Katherine Group (KG) we surveyed in Miyashita & Tokizaki (2017, 2020). First of all, Nakao (1972: 426ff) refers to various ME texts which were lexically influenced by OF, including the ones listed in (7):

(7) *ME Texts Influenced by OF after the Norman Conquest of England in 1066*

- a. **AW [c1230: West Midland] ⇐ ONLY ONE EME TEXT**
- b. Chaucer [late 14C: London (East Midland)]: 51.8% (ratio of OF words)
- c. *Mandeville's Travels* [c1400: East Midland]: 51%(ratio of OF words)

(Nakao (1972: 426ff))

Among the Middle English texts listed in (7), the AW is the only text written in EME. Since OV order is almost extinct in LME and later, except in limited syntactic environments, the AW is the only candidate for investigation among the texts in (7). However, there is another candidate for investigation: the five texts in the KG. According to Tolkien (1929: 106ff), both the AW and the five texts in the KG are composed in the so-called AB language, which is one of the West Midland dialects of 13th century English. This is shown in (8):

- (8) ME Texts Composed in the So-called AB Language
- a. AW [c1230: West Midland]
 - b. Five Texts of the KG [c1225: West Midland]
 - i. *Sawles Warde*
 - ii. *Hali Meidhad*
 - iii. *St. Katherine*
 - iv. *St. Juliana*
 - v. *St. Margaret* (cf. Tolkien (1929: 106ff))

It is natural that the five texts in the KG were included in our survey in Miyashita & Tokizaki (2017, 2020) as well as the AW.

The manuscripts compiled in the *Penn-Helsinki Parsed Corpus of Middle English*, 2nd edition (PPCME2) which our survey in Miyashita & Tokizaki (2017, 2020) used, and the manuscripts which previous studies investigated are given in (9):¹

- (9) *Manuscripts*
- a. AW:
 - i. Ms. A (Ms. 402) [c1230]
(Tolkien (ed.) 1962, Millett (ed.) 2005–2006)
 - ii. Ms. C (Cotton Ms. Cleopatra C vi) [1215-1222]
(Dobson (ed.) 1972, Ackerman & Dahood (eds.) 1984)
 - b. Five Texts of the KG: Ms. B (Ms. Bodley 34) [c1225]
(Ker (ed.) 1960, D’Ardenne (ed.) 1977)

The AW is a text composed in one of the West Midland dialects around 1230, and it is also known as the *Ancrene Riwe*. Among the twelve existent manuscripts, Ms. A (a.k.a. Corpus Ms. or Ms. 402) and Ms. C (a.k.a. Cotton Ms. Cleopatra C vi), the oldest manuscript, are considered here. Ms. A is the manuscript taken up by previous studies such as Zettersten (1965), Nakao (1972) and Diansberg (1992) for their investigations into the frequency of OF loanwords in the AW. Ms. C is the one included in the PPCME2 which was used in our survey on word order patterns in the AW in Miyashita & Tokizaki (2017, 2020). The five texts of the KG were also composed in one of the West Midland dialects around 1225. With regard to these texts, Ms. B (a.k.a. Ms. Bodley 34), included in the PPCME2, was considered in Miyashita & Tokizaki (2017, 2020).

¹ The PPCME2 is a syntactically annotated electronic corpus compiled by Kroch & Taylor (2000).

3.2. Frequency of OF Loanwords in the AW and the KG

According to Zettersten (1965: 283) and Nakao (1972: 426), the number of OF loanwords in Ms. A of the AW is about 580, as in (10a), and according to Diensberg (1992: 309), the proportion of OF loanwords in the same manuscript is 3.18%, as in (10b):

(10) *AW: Ms. A (Ms. 402)*

a. Number of OF loanwords: about 580 words

(Zettersten (1965: 283), Nakao (1972: 426))

b. Proportion of OF loanwords: 3.18% (10.71% in Parts 6 & 7 of the AW)

(Diensberg (1992: 309))

As for Ms. B of the KG, the number and frequency of OF loanwords which Clark (1966: 118) found are given in (11):

(11) *KG: Ms. B (Ms. Bodley 34)*

	Total Words	Romance Loanwords	Proportion of Romance Loanwords
<i>Hali Meidhad</i>	1,265	80	6.32%
<i>Sawles Warde</i>	690	29	4.20%
<i>St. Katherine</i>	1,420	55	3.87%
<i>St. Juliana</i>	1,175	34	2.89%
<i>St. Margaret</i>	1,340	34	2.54%
TOTAL	5,890	232	3.94%

(Clark (1966: 118))

The frequency varies among the five texts, but the average is 3.94%, which is not so deviant from the frequency of OF loanwords in the AW. Bearing in mind the frequency of OF loanwords, let us turn now to the word order patterns found in the AW and the KG.

3.3. Relative Word Order of V and O in the AW and the KG

This subsection presents the result of our survey on the relative word order of a main V and its O in the AW and the five texts in the KG. Our survey used the PPCME2 in Miyashita & Tokizaki (2017, 2020). Our survey was restricted in three points, which are given in (12):

(12) *Survey on the Ms. C (Cotton Ms. Cleopatra C vi) and the Ms. B (Ms. Bodley 34)*

a. Restricted to subordinate clauses (i.e. excluding main clauses)

b. Restricted to definite full nominal objects (i.e. excluding indefinite full nominal and pronominal objects)

- c. Excluding complex NP objects (e.g. full nominal objects with a relative clause or a *that*-clause)

First, our survey was restricted to the subordinate clauses, as in (12a), since the main clauses exhibit the so-called V2 phenomenon or V-to-T movement which obscures the position of the O in the clause. Second, our survey is restricted to the definite full nominal Os, as in (12b), since the indefinite full nominal Os tend to appear in the post-verbal position while the pronominal Os tend to appear in the pre-verbal position. Third, the complex/heavy NP Os are excluded from our survey, as in (12c), since they tend to appear in the clause-final position.

The results of our survey on the relative word order of a main V and its definite full nominal O in the subordinate clause are shown in the tables in (13), (14), (15), and (16).

- (13) *Relative Word Order of a Main V and a Definite Full Nominal O in Subordinate Clauses in the AW*

	VO	OV	Total	Sentences
cmancriw-1.m1	195 (87.8%)	27 (12.2%)	222	3,558
cmancriw-2.m1	49 (84.5%)	9 (15.5%)	58	1,163
TOTAL	244 (87.1%)	36 (12.9%)	280	4,721

(Miyashita & Tokizaki (2017: 101))

As shown in (13), the proportion of the VO order in the AW is 87.1% of the VPs with a definite full nominal O in the subordinated clause, while that of the OV order in this text is 12.9%.

- (14) *Relative Word Order of a Main V and a Definite Full Nominal O in Subordinate Clauses in the KG*

	VO	OV	Total	Sentences
cmsawles.m1	14 (87.5%)	2 (12.5%)	16	276
cmhali.m1	38 (86.4%)	6 (13.6%)	44	511
cmkathe.m1	41 (70.7%)	17 (29.3%)	58	544
cmjulia.m1	21 (72.4%)	8 (27.6%)	29	568
cmmarga.m1	32 (74.4%)	11 (25.6%)	43	639
TOTAL	146 (76.8%)	44 (23.2%)	190	2,538

(Miyashita & Tokizaki (2020: 117))

As shown in (14), furthermore, the proportion of the VO order in the KG is 76.8% while that of the OV order in these texts is 23.2%, with a little difference among the texts. These proportions show that the OV order is already declining in the AW and the five texts of KG.

The tables in (15) and (16) show the number of tokens and the proportion of OF loanwords appearing as an O in the VO and OV orders found in the AW and the five texts in the KG, respectively:²

(15) *OF Loanwords Appearing as an O in VO and OV Orders in the AW*

	VO	OV	Total
cmancriw-1.m1	17/195 (8.7%)	2/27 (7.4%)	19/222 (8.56%)
cmancriw-2.m1	3/49 (6.1%)	0/9 (0%)	3/58 (5.2%)
TOTAL	20/244 (8.2%)	2/36 (5.6%)	22/280 (7.9%)

(Miyashita & Tokizaki (2017: 101))

(16) *OF Loanwords Appearing as an O in VO and OV Orders in the KG*

	VO	OV	Total
cmsawles.m1	1/14 (7.1%)	0/2 (0%)	1
cmhali.m1	8/38 (21.1%)	0/6 (0%)	8
cmkathe.m1	3/41 (7.3%)	0/17 (0%)	3
cmjulia.m1	1/21 (4.8%)	0/8 (0%)	1
cmmarga.m1	1/32 (3.1%)	1/11 (9.1%)	2
TOTAL	14/146 (9.6%)	1/44 (2.3%)	15

(Miyashita & Tokizaki (2020: 119))

As shown in these tables, 8.2% of the VO order found in the AW and 9.6% of the VO order found in the five texts in the KG include OF loanwords appearing as an O. On the other hand, the OF loanwords appearing as an O are included in only 5.6% of the OV order in the AW and 2.3% of the OV order in the five texts in the KG. The proportion of the VO and OV orders in the verb phrases including an OF loanword as part of an O is given in the table in (17) for the AW and the table in (18) for the five texts of KG:

² If *crune* 'crown' is not considered as an OF loanword but as a Latin loanword, the total proportion of the OV order with OF loanwords appearing as an O drops from 5.6% to 2.8% in (15). See also (19) and footnote 3.

(17) *Proportion of VO and OV Orders with OF Loanwords in the AW*

	VO with OF Loanwords	OV with OF Loanwords	Total
cmancriw-1.m1	17 (89.5%)	2 (10.5%)	19
cmancriw-2.m1	3 (100%)	0 (0%)	3
TOTAL	20 (90.9%)	2 (9.1%)	22

(Miyashita & Tokizaki (2017: 102))

(18) *Proportion of VO and OV Orders with OF Loanwords in the KG*

	VO with OF Loanwords	OV with OF Loanwords	Total
cmsawles.m1	1 (100%)	0 (0%)	1
cmhali.m1	8 (100%)	0 (0%)	8
cmkathe.m1	3 (100%)	0 (0%)	3
cmjulia.m1	1 (100%)	0 (0%)	1
cmmarga.m1	1 (50%)	1 (50%)	2
TOTAL	14 (93.3%)	1 (6.7%)	15

(Miyashita & Tokizaki (2020: 120))

As shown in (17), 90.9% of the verb phrases with an OF loanword appear in the VO order in the AW. As shown in (18), furthermore, 93.3% of the verb phrases with an OF loanword appear in the VO order in the five texts in the KG. These proportions indicate that OF loanwords are likely to appear in VO order. This is exactly what the stress-based theory of linearization predicts. All the OF loanwords found in our survey are given in (19) and (20):³

(19) OF Loanwords Appearing as an O in a Subordinate Clause in the AW

(*crune* ‘crown’ × 3) / *priuetez* ‘privates’ / (*messen* ‘masses’) / *vreisuns* ‘prayers’ /

³ We consulted the *Oxford English Dictionary*, 2nd edition (OED2) and the *Middle English Dictionary* (MED) to determine the OF loanwords listed in (19) and (20). Some of them (in parentheses) are still subject to debate. According to the OED2, for instance, *castel* was taken into English at two different times: it was borrowed from Latin into OE and subsequently reinforced by OF or AN or CF equivalents. The OED2 indicates that *engel*, *crune* and *messen* followed a similar development path. Similarly, the OED2 gives an OE instance of *sabaz*, but the MED shows its OF (and Latin) origin. According to the OED2 and the MED, moreover, only the stem of *sturbinge* seems to be OF origin. Treatment of *overgart* (which we suppose the original spelling of *ouergant*) is also problematic. The OED2 does not acknowledge any OF element in this word, but the MED cross-refers it to *-gard/-gart* and *-gard/-gart* to *angard*, which the MED considers to be of OF origin. While *overgart* is first found in the 13th century in both the OED2 and the MED, *angard* is first record in the 14th century. Since removal of these words does not invalidate our final result, we will retain them in (19) and (20), but they should be taken with a grain of salt.

penitence ‘penitence’ / *ures* ‘canonical hours’ / (*castel* ‘castle’ × 2 (Latin/AN/CF)) /
(sturbinge ‘trouble’) / *seruise* ‘service’ / *hurt* ‘injury’ / *beast* ‘beast’ / *pris* ‘price’ /
meoster ‘role’ / *ermite* ‘hermit’ / *fame* ‘fame’ / *feblesce* ‘weakness’ / *spuse* ‘spouse’ /
present ‘presence’ / *graces* ‘grace’ (Miyashita & Tokizaki (2020: 121))

(20) OF Loanwords Appearing as an O in a Subordinate Clause in the KG

(ouergant ‘arrogance’) / *stat* ‘state’ (AN/CF) / (*engel* ‘angel’ × 3) / (*sabaz* ‘Sabath’) /
spuse ‘spouse’ × 2 / (*crune* ‘crown’) / *maumez* ‘idols’ × 2 / *strif* ‘strife’ (OF/AN) /
lei ‘law’ × 2 / (*castel* ‘castle’ (Latin/AN/CF)) (Miyashita & Tokizaki (2020: 121))

All the instances of the OV order found with an OF loanword are given in [1] in the appendix for the AW and in [2] in the appendix for the KG. Although the instances of the OV order with OF loanwords given in the appendix are unexpected under the stress-based theory, we will not go into the probable explanation.

To sum up, an investigation into the relative word order of a main V and its O in the AW and the five texts of the Katherine Group reveals that the frequency of the VO order with an OF loanword is high, and that almost all the instances of the OV order with an OF loanword are considered as exceptions. It follows that the well-known word order change in the history of English was induced by the borrowing of OF words into EME. Under the stress-based theory, however, this cause and effect must be mediated by the change in the stress system. Let us turn now to the change in the stress system in the history of English.

4. Stress System of EME and Word Order Change

Much research has been conducted on phonological change in the history of English. Based on the previous studies, this section briefly introduces two different viewpoints on the word stress shift that took place in the history of English. Accordingly, this section also presents two probable scenarios of word order change in the history of English and suggest that the basic facts presented in §3 support one of them.

First of all, Goedemans & van der Hulst (2013) notes that PDE exhibits right-oriented word stress, as shown in (21):

(21) *Stress System of PDE*

Stress pattern: right-oriented (antepenultimate, penultimate or ultimate) word stress
(Tokizaki (2013: 298))

a. ... PDE has a layered stress-system. (Minkova (2014: 58))

- b. ... [S]tress-placement in PDE is a mixture of prosodic patterns, some inherited from Old English, some introduced in Early Modern English. (ibid.: 320)

As the quotes from Minkova (2014: 58, 320) in (21a) and (21b) clearly indicate, PDE has a layered stress system, which is defined by both the Germanic Stress Rule in (22) and the Romance Stress Rule in (23):

(22) *Germanic Stress Rule*

Stress [is placed] on the stem-initial syllable, regardless of quantity, building secondary stress from left to right. (Dresher & Lahiri (2005: 76))

(23) *Romance Stress Rule*

- a.
 - i. If the final σ is heavy, assign S.
 - ii. If the final σ is light, go back to the penult.
- b.
 - i. If the penult is heavy, assign S.
 - ii. If the penult is light, go back to the antepenult.
- c. Assign S to the antepenult regardless of weight. (Lass (1992: 87))

According to Halle & Keyser (1971) and Dresher & Lahiri (2015: 1), however, OE exhibits left-edge word stress, as shown in (24):

(24) *Stress System of OE*

Stress pattern: left-edge (i.e. initial) word stress

- i. initial stress
 - ii. no ultimate stress
 - iii. primary stress on the word-initial stressed syllable (in case of the double stress)
- (Halle & Keyser (1971: 88ff))

- a. Main stress falls on the initial syllable of a word.
- b. Certain prefixes do not receive a stress. (Dresher & Lahiri (2015: 1))

In OE, the word stress is placed on the initial position and it is never placed on the ultimate position. In other words, the stress system of OE is strictly governed by the Germanic Stress Rule. An obvious question to ask is how and when the stress system of PDE came to be defined by the Romance Stress Rule as well as the Germanic Stress Rule. There are two different viewpoints.

One viewpoint argues that the stress system of English underwent a major change during the ME period (see Halle & Keyser (1971: 97ff), Nakao (1972: 455ff) and Tanaka (2014:

151ff)). We call this viewpoint the OF-driven change hypothesis. The OF-driven change hypothesis maintains, more specifically, that the stress system of ME was influenced by that of OF in (25) due to the borrowing of OF words after the Norman Conquest of England in 1066:

(25) *Stress System of OF*

Stress pattern: right-oriented (i.e. antepenultimate, penultimate or ultimate) word stress
(Tanaka (2014: 153))

- a. The further application of reduction... — traditionally referred to as apocope — led ultimately to Old French becoming an oxytonic language, which can be described by End Rule Right only. (Lahiri et al. (1999: 394))
- b. ... [I]n the evolution from Preclassical Latin (initial syllable) to Old French (final syllable), the location of stress shifted from the left edge of the word to the right edge. (ibid.: 396)

According to Lahiri et al. (1999: 394ff) and Tanaka (2014: 153), OF exhibits right-oriented word stress, as shown in (25). The stress system of OF, which developed from that of Classical Latin, is strictly governed by the Romance Stress Rule. The OF-driven change hypothesis suggests that the stress system of EME is a compound of the Germanic-type stress system of OE and the Romance-type stress system of OF, as shown in (26):

(26) *Probable Stress System of EME*

Stress pattern: mixture of the OE stress system and the OF stress system

- i. avoidance of initial stress (under the influence of the OF stress system)
 - ii. avoidance of ultimate stress (under the influence of the OE stress system)
- (cf. Halle & Keyser (1971: 97ff), Nakao (1972: 455f), Tanaka (2014: 151ff))

In EME, initial word stress is avoided under the influence of the OF stress system, whereas ultimate word stress is also avoided under the influence of the OE stress system.

If the OF-driven change hypothesis is on the right track, the stress-based theory predicts that the EME stress system just introduced is not compatible with the compound OV order any longer, and that this incompatibility causes the emergence of phrasal VO order in the history of English. As shown in the diagram in (27), more specifically, it is concluded that the shift from OV order (the basic word order in OE) to VO order (which abruptly arose in EME) was triggered by the change in the word stress system which was, in turn, caused by the loanwords from OF:

(27) *Word Order Change in the History of English: Scenario 1*

OE	OV order	↔ COMPATIBLE	left-edge word stress system
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↓ VIA OF LOANWORDS

EME	VO order	← INDUCING	right-oriented word stress system (mixture of the OE and OF stress systems)
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The other viewpoint argues that the stress system of English underwent a major change during the EModE period (see Dresher & Lahiri (2005: 76, 2015: 1) and Minkova (2014: 307f)). We call this viewpoint the Latin-driven change hypothesis. The Latin-driven change hypothesis maintains, more specifically, that the stress system of EModE was influenced by that of Latin (described in (28)) due to the borrowing of Latin words during the Renaissance:

(28) *Stress System of (Classical) Latin*

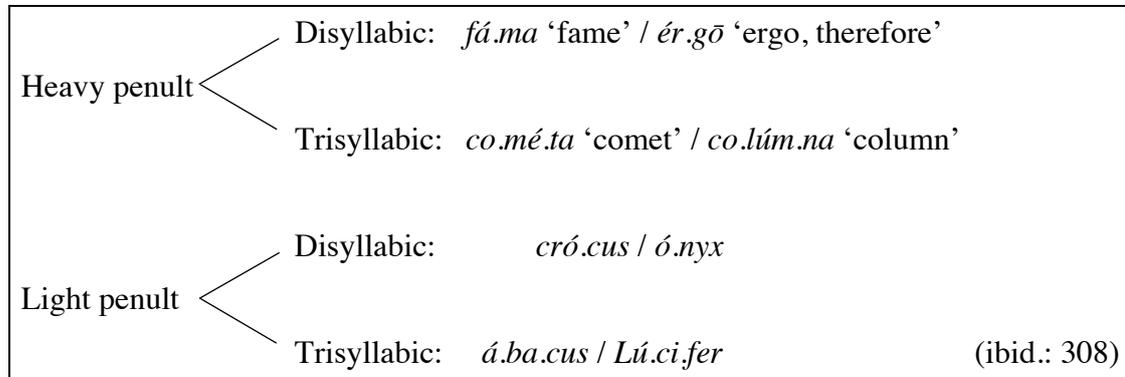
Stress pattern: right-oriented (i.e. antepenultimate or penultimate) word stress

... [S]tress was on the penultimate syllable if this syllable was heavy, and on the antepenultimate if the penultimate was light. Except in monosyllables, stress never fell on the final syllable. (Lahiri et al. (1999: 379))

According to Dresher & Lahiri (2005: 76, 2015: 1) and Minkova (2014: 307f), Latin exhibits right-oriented word stress, as shown in (28). The stress system of Latin is strictly governed by the Latin Stress Rule in (29), and differs from that of OF in that the Latin stress system does not allow any stress on the final syllable:

(29) *Latin Stress Rule*

... [S]tress falls on the penultimate syllable if it is heavy, otherwise, on the antepenultimate syllable. The final syllable is invisible to the stress rule and CV syllables are light, while all other syllables are heavy. (Minkova (2014: 307))



The Latin-driven change hypothesis advocates that the stress system of EModE is a compound system of the Germanic-type stress system of OE and the Latin-type stress system of Latin, as shown in (30):

(30) *Stress System of EModE*

Stress pattern: mixture of the OE stress system and the Latin stress system

- a. ... [T]he important innovations [are dated] to a later time, due to the influence of Latin borrowing. (Dresher & Lahiri (2005: 76))
- b. ... [T]he change in directionality [is associated] with the accumulation of words with Latinate stress-affecting suffixes in Early Modern English.

(Dresher & Lahiri (2015: 1))

Approximate dates of changes in English metrical structure

Foot type = Resolved moraic trochee throughout.

- i. –1570 Foot direction *left*, main stress *left* (as in Old English).
- ii. 1570 Foot direction *right*, main stress *left*.
- iii. 1660 Foot direction *right*, main stress *right*.

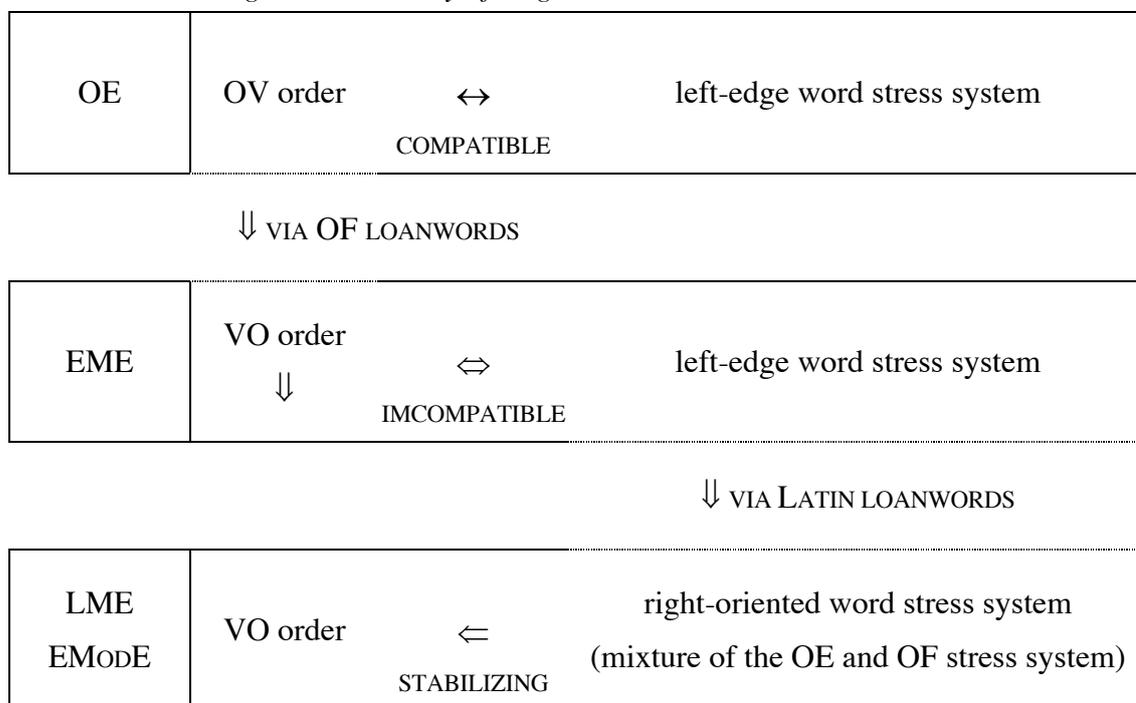
(Dresher & Lahiri (2015: 4); italic emphasis theirs, cf. Dresher & Lahiri (2005: 83))

In EModE, the foot direction is to the right and the main stress is placed on the right, as shown in (30iii).

The Latin-driven change hypothesis suggests that the shift from OV to VO order in EME was not induced by the change in the stress system, but solely by mere borrowing of OF words, and that the stress shift in EModE just stabilized the existing VO order. As shown in the

diagram in (31), more specifically, it is concluded that the shift from OV to VO order was triggered in EME solely by mere borrowing of OF words which bear right-oriented word stress:

(31) *Word Order Change in the History of English: Scenario 2*



This change caused an undesirable state of affairs: the coexistence of VO order and the pure Germanic-type stress system. This may be the reason why OV order is still found sporadically in LME and EModE. The change in the word stress system in EModE which was caused by the borrowing of Latin words ended the undesirable state of affairs, and stabilized the existing VO order.

To sum up, the stress-based theory of linearization favors the scenario of word order change based on the OF-driven change hypothesis on the word stress shift in the history of English, but it also permits the scenario based on the Latin-driven change hypothesis.

5. Conclusion

To conclude, the stress-based theory of linearization might seem to favor the scenario of word order change based on the OF-driven change hypothesis in (27), but it also permits the scenario based on the Latin-driven change hypothesis in (31). We still need to investigate the timing of stress shift, but the stress-based theory of linearization can give us an explanation for the word order change in English.

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Appendix

[1] *OV Order with OF Loanwords in the Ms. C (Cotton Ms. Cleopatra C vi)*

- a. *‘Leauedi Seinte Marie, for þe muchele blisse þet fullede alle þe
Lady Saint Mary for the great bliss that fulfilled all the
opere þa he vnderfeng þe wið vnimete blisse ant
other when he accepted you with enormous bliss and
wið hise blisfule armes sette þe in trone ant **cwenene**
with his blessed arms set you in throne and queen’s (OE)
crune sette þe on heaued brichtere þenne þe sunne,
crown (OF) set you on head brighter than the sun
heze heouenliche quen, vnderfeng þeose gretunges of me swa
noble heavenly queen accept those greetings of me so
in eorðe, þet ich mote blisfulliche grete þe in heouene.’
in Earth that I may gloriously greet you in Heaven
‘Lady Saint Mary, for the great bliss that fulfilled all the other when he accepted you
with enormous bliss, and set you in the throne with his blessed arms and set queen’s
crown on your head brighter than the sun, noble heavenly queen, accept my greeting
on Earth, so that I can gloriously greet you in Heaven.’*

(CMANCRIW-1,I.72.277 / PPCME2 / Miyashita & Tokizaki (2017a: 102))

- b. *for inbaðe me ifint þt god hise **dearne** **runes**
for in-both one discovers that God his (OE) secret (OE) mysteries (OE)
& **heouenliche** **priuetez** **schaude** hise leoueste freont, naut in
and hevenly (OE) privates (OF) showed his dearest friends not in
monie floc, ach dude þer ha weren ane bi ham seolf,
many flock but did there they were alone by themselves
‘... because in both one discovers that God showed his secret mysteries and sacred
mysteries to his dearest friends, not in many companies, but he did it where they are*

alone...'

(CMANCRIW-1,II.121.1544 / *ibid.*)

[2] *OV Order with OF Loanwords in the Ms. B (Ms. Bodley 34)*

wei wake beo we nu. Ah noht wurð mid alle. hwen ameiden

alas weak are we now and not worthy with all when a-maiden

ure muchele ouergant þus aealleð.

our (OE) much (OE) arrogance (OF) thus cast-down

'Alas! We are weak now and utterly helpless, when a maiden casts down our immense pride like this.' (CMMARGA,81.411 / PPCME2 / Miyashita & Tokizaki (2017b: 4))