Old Norse Influence on English Word Order and English Word Stress

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ABSTRACT. This paper investigates why, how, and when the English language lost its left-prominent and morphologically governed stress pattern. The correlation found between the leveling of inflection and the fixing of word order suggests that English word order shifted from a subject-object-verb pattern to a subject-verb-object pattern during the transitional period from Old to Middle English. The correlation between word order and word stress, on the other hand, implies that the English word order became fixed during the Late Middle English period. To resolve this inconsistency, this paper takes into consideration the Old Norse influence on Old English and revisits the question of the leftward stress shift in Middle English. This revised view suggests the possibility that English word order became fixed during the transitional period from Old to Middle English because the rapid and drastic loss of inflectional endings influenced the Old English stress system as well.

Keywords: inflectional ending, word order, stress retraction, Old Norse, Anglo-French

1．Introduction

It is widely accepted that Old Norse is the most influential language in the history of English. Old English borrowed such functional words as pronouns and prefixes from Old Norse, which suggests that the relation between the two languages was very close. During the third period of the Viking Age（878–1042）, speakers of Old Norse occupied certain northern parts of Britain and cohabited with speakers of Old English. As their languages were still similar, and their cultures were also on proximate levels, the influence of Old Norse on Old English was extensive and pervaded throughout all parts of English. Hotta（2009: 154-73）,[1] who discussed the Old Norse effect on the spread of *s*-plural, lists nine morphological features and five syntactic features which have been attributed to Old Norse contact.

This paper focuses on the leveling of inflectional endings and the fixing of the word order, both of which were carried out during the transitional period from Old to Middle English. In Old English, inflectional endings were extensively used, and they indicated whether a noun had the role of a subject, a direct object, or an indirect object, but word order was not fixed. In Middle English, however, these grammatical distinctions were conveyed using fixed word order, and case endings had become much simplified.

A clear correlation appears between lower degrees of inflection and greater degrees of fixed word order, and both changes are partly due to language contact between Old Norse and Old English.

According to Osawa（2021）,[2] the word order of a language is determined in the first instance by the language's stress assignment rules. The word order of English shifted from a subject-object-verb pattern to a subject-verb-object pattern when the Germanic Stress Rule for Old English was replaced by the Romance Stress Rule, introduced by the influx of French loanwords after Norman Conquest of 1066. It might be thought that this explanation is inconsistent with our view that the leveling of inflection and the fixing of word order were in part results of the contact between Old Norse and Old English. If we take the Middle English stress retraction into consideration, however, some questions regarding the historical period related to the leveling of inflection and the fixing of word order can be solved.

This paper argues that English stress system underwent a major transformation before it came into contact with Anglo-French. The remainder of the paper is organized as follows. In section 2, following studies by Jespersen（1909–49）[3] and Brown（1970）,[4] we review the leveling of inflection and the fixing of word order in English. Then, after a review of Osawa's analysis, section 3 introduces two

questions on the correlation between word order and stress assignment rules in Old English. Section 4 is devoted to a generative analysis of historical changes in stress from Old to Middle English. Concluding remarks will be presented in section 5.

2. The loss of case endings and the fixing of word order

One outstanding characteristic of Present-day English is its inflectional simplicity, which was historically acquired. As the paradigm for the strong masculine noun *dōm* 'doom' below indicates, Old English inherited a rich inflectional system from Proto-Germanic, but a number of originally distinct endings, such as *-a*, *-u*, *-e*, *-an*, and *-um* were reduced to a uniform *-e* in Middle English.

Table 1. The paradigms for doom < doom < dōm 'doom'

	Late Middle English	Early Middle English		Old English
Sg. Nom	doom	< doom		< dōm
Gen.	doomes	< doomes		< dōmes
Obj.	doom	Dat. < doome		< dōme
		Acc. < doom		< dōm
Pl. Nom.	doomes	< doomes		< dōmas
Gen.	doomes	< doom		< dōma
Obj.	doomes	Dat. < doome(n)		< dōmum
		Acc. < doomes		< dōmas

Nakao (1972: 154)[5]

Old English manuscripts show that nouns began to lose their inflectional endings as early as the tenth century. These changes seem to have been complete by the end of the twelfth century.

As inflectional endings of nouns and adjectives marked distinctions of number and case, as well as gender, word order is not completely fixed in Old English. A range of possible order types for major constituents, subject (S), verb (V), object (O), are presented in the following examples from the ninth-century Martyrology fragment cited by Lass (1994: 224).[6]

(1) a. mīne englas ðec lǣda ð in hiofonlican Hierusalem
      S   O V
     'my angels thee lead in heavenly Jerusalem'
 b. hē geðrowade eft in Rome martyrdom for Crīste
      S V   O

'he suffered again in Rome martyrdom for Christ'
 c. gemyne ðū mec on ðǣre ēcean reste
     V   S O
     'remember thou me in eternal rest'

During the transition from Old English to Middle English in this period, however, the word order of the language began to shift to a SVO pattern, which became dominant in Modern English. Following the description by Jespersen (1909–49 VII: 59–60),[3] we summarize the historical change in word order, as follows.

Table 2. Historical change in word order

		The incidence of SVO pattern	
		Prose	Verse
Old English	*Beowulf*	—	16%
	Alfred	40%	—
Middle English	*Ancrene Riwle*	66%	—
	Chaucer	84%	51%
Early Modern English	Shakespeare	93%	86%
	Milton	88%	71%
Modern English	Carlyle	87%	—
	Tennyson	—	88%
	Dickens	91%	—

(cf. Nakao: 1979: 205)[7]

Note that the SVO pattern was among the basic orders as far back as Old English. According to Brown (1970: 89),[4] the occurrence of a possible word order can be summarized in Table 3 with the ratio of incidence in main clauses to that in subordinate clauses. *

Table 3. Occurrence of the six possible word orders in Old English

Word order	Occurrences	Incidence in main clauses	Incidence in subordinate clauses
SVO	368	38	62
SOV	606	5	95
VSO	83	61	39
VOS	17	47	53
OSV	292	2	98
OVS	39	3	97

(cf. Ono and Nakao 1980: 493)[8]

Old English word order showed a transition from the SOV pattern of Proto-Germanic to the SVO pattern of Modern

3．Contact between Old English and Old Norse

Because the Germanic languages place the stress on the initial syllable of the word, the ends of words are less prominent and tend to be pronounced less distinctively than the beginnings of words. A weakening of the inflectional system is inevitable, as these languages make the final weak syllable the primary site for shortening of long vowels, deletion of short ones, simplification of clusters, and the loss of segments. As we have noted in the previous section, however, the vowels in the inflectional endings changed to -e in Middle English and dropped out completely in Modern English. While other Germanic languages have not lost most of their inflections, in English, nouns lost their inflectional endings in Early Middle English as Table 1 shows, and then adjectives and determiners also lost their inflectional endings in Late Middle English.

Some scholars, such as O'Neil (1980),[9] attribute the complete loss of inflectional marking to language contact. During the third period of the Viking Age, northern parts of Britain were occupied by the Danes, who were speakers of Old Norse. The language is closely related to Old English, in that both languages go back to a common origin, Proto-Germanic, they share lexical items, and they have a similar case and gender system. There must have been considerable bilingualism between the Old Norse and Old English communities. As the paradigm for strong feminine noun bōt 'remedy' exemplifies, the two languages differ mainly in inflectional endings.

Table 4. The paradigms for bōt 'remedy'

|	Old English	Old Norse
Sing. Nom.	bōt	bót
Acc.	bōte	bót
Gen.	bōte	bótaR
Dat.	bōte	bót
Plur. Nom.	bōta	bótaR
Acc.	bōta	bótaR
Gen.	bōtena	bóta
Dat.	bōtum	bótom

(O'Neil 1980: 257-59)[9]

Some scholars hypothesize, therefore, that speakers of both languages dropped inflectional endings that caused confusion. As a result, inflectional endings were rapidly and radically neutralized, at least in the northern parts of Britain that were exposed to Old Norse.

As the vowels -a, -o, -u, -e in inflectional endings were reduced to a single sound /ə/, English came to express the relationship between words by means of word order and prepositions. That is, the fixing of word order was partly due to the contact between Old English and Old Norse, whose speakers were ethnically close and had similar cultural levels. One might think that the leveling of inflectional endings does not explain why English chose an SVO pattern rather than an SOV pattern. A typological study suggests, however, that the shift to an SVO pattern was also driven by language contact.

Following Tokizaki (2011),[10] Osawa (2021)[2] ascribed the variation of word order in language to the head directionality parameter, defined by Tokizaki as follows: stress falls on the initial syllable of the word in head-initial languages while stress goes to the right edge of the word in head-final languages. This correlation is consistent with Cinque's (1993: 245)[11] stress assignment rule, which states that the main stress is found in the most deeply embedded constituent of a phrase. The stress assignment rule is in turn based on Chomsky and Halle's (1968)[12] proposal requiring that a sentence receive main stress. As Figure 1 illustrates, a head-final language is left-branching, and the leftmost constituent A is the most deeply embedded constituent, while a head-initial language is right-branching and the rightmost constituent D is the most deeply embedded constituent.

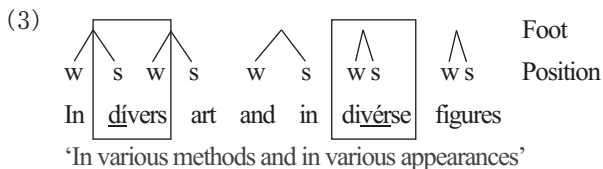#### Figure 1. Left-branching and right-branching languages
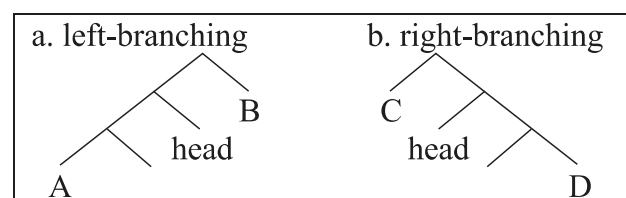
(Osawa 2021: 23)[2]

Stress in Old English invariably falls on the first syllable of the word unless the word is prefixed, in which case the prefix is root-like and stressed in nouns and adjectives but not in verbs. In other words, Old English manifests root-initial stress. This can be seen in the examples below.

(2) a. bóc 'book'   círps 'curly'   fon 'take

   æcer 'field'   átol 'terrible'

   ádesa 'hatchet'   æþele 'noble'

   b. begángan 'visit'   oþgán 'escape'

   cf. bígènga 'inhabitant'   úþgènge 'alien'

(Nakao 1985: 474-5)[13]

English inherited this left-prominent and morphologically governed stress pattern, the Germanic Stress Rule, from Proto-Germanic. As Figure 1a illustrates, a language with initial stress is head-final, which means that Old English had the SOV pattern. After the Norman Conquest, many words entered English, mainly from Latin and French, which place stress on one of the final three syllables of the word depending on their syllable weight. The right-to-left and phonologically governed stress pattern of these languages, also known as the Romance Stress Rule, had a significant effect on the stress system of English. The following line from Chaucer's *Friar's Tale* (III 1486),[14] first noted by Jespersen (1909: 161)[3] in this connection, is often cited as an example of the vacillation between the Germanic stress pattern and the Romance stress pattern.

(3)

Foot
Position

In | dívers | art | and | in | divérse | figures

'In various methods and in various appearances'

The poet places the word *divers(e)*, whose final -e was not pronounced, so that the strong position of the verse (the S-position) could be filled by the stressed syllable, which demonstrates the Romance Stress Rule was introduced in English. As Figure 1b illustrates, a language with final or penultimate stress is head-initial, which indicates that Middle English had an SVO pattern. Osawa thus concludes that the shift from an SOV pattern to an SVO pattern was driven by the historical change in English stress placement.

Two questions remain unsolved here, as Osawa herself notes. First, as we observe in section 1, the SVO pattern was among the basic word orders even in Old English, which featured a Germanic vocabulary. In addition, surveys by Jespersen (1938: 87)[15] and Koszul (1937)[16] show that few French words had entered English even as late as a century after the Norman Conquest. Following Nakao

(1972: 426-7),[5] who summarizes their joint research, we show the historical change in the intake of French loanwords as below.

Figure 2. Intake of French loanwords from 1000 to 1900
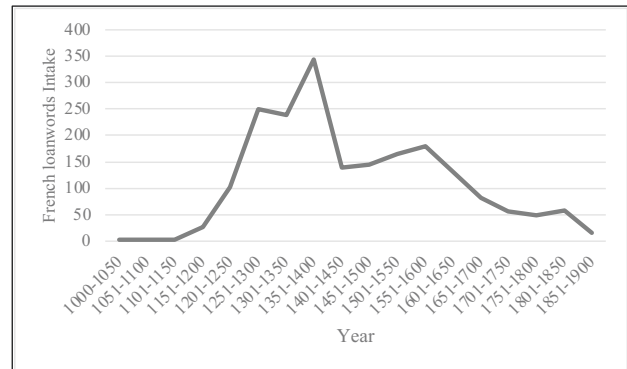
(cf. Nakao 1972: 426-7)[5]

It is highly questionable whether the impact that French loanwords had upon English could have prompted the replacement of the Germanic Stress Rule with the Romance Stress Rule before the fourteenth century. Was the shift from an SOV pattern to an SVO pattern solely driven by the intake of French loanwords after the Norman Conquest? Second, some researchers argue that Middle English inherited some of the general principles governing Old English stress, although others consider, with Halle and Keyser (1971),[17] whose work was a milestone in the study of English historical phonology, that the Germanic Stress Rule was displaced by the Romance Stress Rule after Norman Conquest. Minkova (2007: 173),[18] for example, indicates that the English stress pattern began to shift in favor of non-Germanic patterns during the Renaissance, when a great number of words were borrowed from Latin. When did English transform from a left-branching language to a right-branching one?

It seems that we must await further studies of both Old English word order and Middle English word stress. However, the second question might be solvable, and we might be able to support Osawa's theory on stress change and word order shift if we ascribe the stress change to the leveling of inflectional endings, that is, to the contact between Old English and Old Norse.

4．Stress retraction in Middle English

Let us return to the examples in （2）, reproduced in （4）.

(4) a. bóc 'book'   círps 'curly'   fon 'take'
         ǽcer 'field'   átol 'terrible'
         ádesa 'hatchet' ǽþele 'noble'
     b. begángan 'visit' oþgán 'escape'
     cf. bígènga 'inhabitant' úþgènge 'alien'

$$\text{(Nakao 1985: 474–5)}^{13)}$$

As seen in section 3, Proto-Germanic developed a stress accent that fell on the first syllable of words. Old English preserves this stress accent, and all words manifest root-initial stress. No less important is the fact that primary stress always goes to the initial syllable and secondary stress falls on the penultimate syllable when there are two stressed syllables in a word. According to Campbell (1959/1991: 34–5),[19] heavy stem-final syllables and heavy derivational syllables receive secondary stress after a heavy syllable or its equivalent when followed by an unaccented syllable through the addition of an inflectional ending. Some examples of double-stressed words drawn from Nakao (1985: 476–8)[13] are given in （5）.

(5) a. Héngèstes < Héngest 'Hengest's'
         ǽghwèlcne < ǽghwelc 'each'
     b. rǽdèlsas   < rǽdels 'riddle'
         ǽþelìnges < ǽþeling 'prince
     cf. cýninges   < cýning 'king'
         wésende   < wésan 'be'

Note also that neither stem-final heavy syllables in （5a） nor heavy derivational suffixes in （5b） receive stress in the word-final position, regardless of whether they are preceded by a heavy syllable or its equivalent. Old English has a strong tendency to avoid final stress.

According to Nakao (1972: 455–6),[5] the general principles that govern Old English stress assignment were inherited by Middle English, but the scope of their application was quite limited, as many words became monosyllabic at the beginning of Middle English where the final -*e* was ignored. Here follow some examples of the stress patterning of simple words, suffixed words, and prefixed words of native origin.

(6) a. níht   mýlke   fóurty
     b. wómanhòod   fréndshìpe   wísdòm
     c. bilývef   orsáke

$$\text{(Nakao 1972: 455–6)}^{5)}$$

The only syllable of a root receives stress by default, which obscures the tendency to avoid final stress. In addition, there is no environment for the Germanic Stress Rule, although metrical subordination continues to be realized in the same manner as in Old English. It is still too early, of course, to conclude that the contact between Old English and Old Norse has transformed English from a language with initial stress to one with final stress. However, it is quite probable that the SVO pattern was chosen as a result of the stress assignment rules for Old English, which were no longer active in the period of transition from Old to Middle English.

Nakao (1978),[20] who conducted a detailed study of the prosodic phonology of Late Middle English, provides an extensive body of examples regarding stress pattern in that period and also provides a precise explanation for the observed patterns within the framework of the generative phonology developed by Chomsky and Halle (1968),[12] Halle and Keyser (1971),[17] and Ross (1972).[21] As noted in section 2, in Middle English, one and the same word may manifest final or initial stress at different times. Halle and Keyser (1971: 101–2)[17] postulate that the Middle English inherited the Initial Stress Rule, as seen in （7）, from Old English and the Romance Stress Rule, as seen in （8）, from Norman French.

(7)   Initial Stress Rule （ISR）

$$\begin{bmatrix} -\text{stress} \\ V \end{bmatrix} \rightarrow [1 \text{ stress}] \; / \; [(X \text{ \#}) \, C_0 \, \_Y]$$

(8)   Romance Stress Rule （RSR）

$$V \rightarrow [1 \text{ stress}] \; / \; \left[X\_C_0 \left(\left(\begin{bmatrix} -\text{tns} \\ V \end{bmatrix} C_0^1 \right) \begin{bmatrix} -\text{tns} \\ V \end{bmatrix} C_0 \right) \right]$$

The application of the above rules produces the stress doublets shown below.

Figure 3.

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divers
  1          ISR
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Figure 4.

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divers(e)
  1          RSR
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Nakao (1978)[20] casts doubt on the traditional view that final stress is of French origin, but initial stress is of native origin. In that publication, Nakao presents a strong argument that both initial and final, or penultimate, syllables are simultaneously stressed at the phonetic level. According to Nakao (1972: 456–7),[5] French loanwords originally had stress on one of the last two syllables, and after it was retracted leftward, secondary stress survived there. The English stress system, as illustrated by Nakao (1985: 488–9),[13] indicates that secondary stress is deleted in Modern English. This development in stress patterning is exemplified below, where we assume, with Pope (1934/66: 437–438),[22] that Anglo-Norman words have already lost their final unstressed vowel.

(9) honóur   > hónòur   > hónor   'honor'

    natúre   > nátùr   > nátur   'nature'

    advèrsité > advérsitè > advérsity 'adversity'

    astrònomíe > astrónomìe > astrónomy 'astronomy'

                                  Nakao (1972: 456–7) [5]

Final stress is allowed in Middle English, and main stress is not assigned to the initial syllable but is retracted one or two syllables to the left of originally stressed syllable.

Here, it is important that the primary stress of these double-stressed words is not initial stress but retracted stress. Nakao regards the modified versions of Romance Stress Rule and the independently motivated Stress Retraction Rule as central rules and explains stress contours of such double-stressed words by the sequential application of the two rules. The later rule is formally stated as (10).**

(10)   Stress Retraction Rule (SRR)

$$V \rightarrow [1 \text{ stress}] \Big/ \left[\begin{Bmatrix} X\_ \\ C_0\_X = \end{Bmatrix} C_0(VC_0) \begin{bmatrix} 1 \text{ stress} \\ V \end{bmatrix} C_0(E)\right]$$

(Nakao 1978: 161)[20]

This rule retracts primary stress from the word-final syllable by one or two syllables to the left. While the Stress Retraction Rule for Old English retracts stress on the root-initial syllable to the first syllable of the prefixed word or compound word, the Stress Retraction Rule for Middle English covers the stress patterning of both lexical category words and complex words. Derivations of some representative examples follow.

Figure 5.

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honour
    1          RSR
 1  2          SRR
```

Figure 6.

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astronomie
        1          RSR
    1   2          SRR
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Nakao's study makes it clear that Late Middle English did not inherit the Initial Stress Rule for Old English. Instead, it was the Stress Retraction Rule that Old English handed down to Late Middle English.

5．Conclusion

Following Nakao, Tanaka (2014)[23] points out that Middle English did not inherit the principle of initial stress from Old English, but it did inherit the principle of leftward main stress, which in turn triggered the shift from isochronic to isosyllabic rhythm. If we recall that the contact between Old English and Old Norse rapidly and drastically neutralized inflectional endings and obscured the role played by the principle of initial stress, it appears highly probable that English no longer places stress on the initial syllable by the beginning of the Middle English period. That is, English language might have shifted from having a left-prominent and morphologically governed stress pattern to one with a right-to-left phonologically governed stress pattern during the transitional period from Old English to Middle English, although the language had to wait for the surface manifestation of the Romance Stress Rule until the Renaissance. It is thus of great importance to examine when English word order began to shift from an SOV pattern to an SVO pattern, in connection with the contact between Old English and Old Norse, as well as the contact between Old English and Norman French.

This paper discusses why, how, and when the word order of the English language shifted from an SOV pattern to an SVO pattern with special consideration for the loss of

inflectional endings and a change in stress assignment rules. There are several ways to consider the problem, and we developed our argument by balancing natural phonological processes and contact-induced innovations. The contact between Old Norse and Old English neutralized inflectional endings, which were gradually being simplified by that time due to their phonological weakness during a short period; the neutralization of inflectional endings then provided the creation of stress change and the need to fix the word order, so English came to exhibit a fixed SVO pattern, as it was no longer a language with word-initial stress.

What makes this problem so difficult is the fact that the inflectional endings survived during the period of Middle English, although they were greatly simplified compared to those of Old English. Language changes because it belongs to groups of people, who change. Both language-internal factors and language contact factors play an equally important role in language change, but sometimes one of the factors produces a rapid and drastic change. In general, the leveling of inflection began in the middle of the eleventh century and continued, step by step, until the middle of the thirteenth century, but this might not be the case, at least in northern parts of Britain, where speakers of Old Norse and of Old English lived together. We depend for the solution of this problem on our further study of Middle English dialects and Early Middle English word stress.

Acknowledgments

Notes

* Following Ono and Nakao (1980: 493), I made some modifications to correct numerical errors by Brown (1970: 89).

** The symbol E stands for final <e>, which is phonetically realized as [ə].

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