Historical Changes of Word Order and Word Stress in English: An Introduction

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ABSTRACT.   The shift from object-verb to verb-object order in the history of English has been attributed to the loss of morphological case or the influence of Scandinavian languages.   However, these ideas are controversial, and the reason for the word order shift is still unclear.   This paper presents a new hypothesis that the word order shift is triggered by the loanwords from French that have right-edge stress, which is different from Germanic word-initial stress.   Typologically, lefthand word-stress matches head-final order including OV, while righthand word-stress matches head-initial order including VO.   It is argued that this tendency also holds in historical linguistics.   The Romance Stress Rule introduced in ME works as a filter at the interface between syntax and phonology to give VO order in linearization.   This explanation supports the Inertial Theory by Longobardi (2001), which argues that syntactic change should not arise, unless it can be shown to be caused by other types of change (phonological changes and semantic changes).

Keywords: loanwords, head-directionality, linearization, interface, Inertial Theory

1. Introduction

One of the most notable changes in the history of English language is its basic word order, especially the shift from object-verb (OV) to verb-object (VO).   Although the change itself has long been studied by a number of philologists and linguists, the reason or trigger for the change has not been made clear.   As a possible explanation, it has been proposed that the loss of case morphology made the subject (nominative) and object (accusative) forms the same, and so to avoid confusing subjects and objects English developed fixed SVO word

order. However, this functional explanation does not explain why English became SVO instead of SOV, which can also disambiguate subject and object by their relative positions in a clause.

In this paper, I propose a new hypothesis that the historical change of word order (from OV to VO) was triggered by word-stress shift from word-initial stress to right-hand stress, which was brought about by borrowing French words in ME. I argue that a phrase (e.g. verb phrase) is linearized in head-final order (e.g. OV) only if the word-stress location is left-hand in the language. Head-complement orders and word-stress location are related typologically and historically.

Section 2 reviews the previous studies on the cause of the word order shift. In section 3, I show that word order is correlated to word-stress location in the present world's languages. I argue that this typological correlation between syntax and phonology may well hold in historical changes in languages. In section 4, I propose a new hypothesis that the word order shift is triggered by the change of word-stress location from OE to ME. Section 5 discusses the mechanism of the correlation between word order and word stress. Section 6 outlines the method of study. Section 7 concludes the discussion.

2. The cause of the word order change

2.1. The loss of case morphology

In this section, I briefly review some previous studies on the cause of the shift: the loss of case morphology and the influence of Scandinavian languages. In the tradition of generative syntax, the word order change in English has been attributed to the change of parametric value in the order of head and complement. Kemenade (1987) argues that the value of head parameter changed from head-final (OV) to head-initial (VO) in ME. In order to explain the VO orders in OE and OV orders in ME, Pintzuk (1991) proposes the dual base hypothesis: English has both VO and OV orders in the base component. These studies simply postulate the parametric value(s) for historical periods, and do not give any explanation for the reason why the parameter value changed or why the head-initial value became dominant. Recently, Tanaka (2014) gives an interesting analysis based on the idea of cyclic linearization (Fox and Pesetsky (2005)), but does not explain the reason for the word order change.

Based on the antisymmetric theory of syntax by Kayne (1994), Roberts (1997) proposes that the loss of case morphology triggered the shift from OV to VO in English. Specifically,

he argues that the morphological change stops the movement of complement (O) to the specifier position of a higher functional head (AgrO) than the verb (V).   In his theory, rich case morphology is connected to the movement of object.   However, the difference between English, Dutch and Icelandic is a difficult problem for the idea of a connection between Case morphology and movement, as Roberts himself mentions.   Dutch has lost Case morphology as much as English but has kept OV order.   Icelandic has Case morphology but has changed from OV order to VO order.   McFadden (2005) criticizes Roberts' (1997) explanation quite exhaustively in terms of generative syntax.   Pintzuk (2002) also argues against the connection between the loss of morphology and word order change, based on historical data.[1]

However, it should be noted that the connection between case morphology and verb-final word order has often been claimed in language typology.   For example, Greenberg (1963: 96) proposes the generalization in (1) as his universal #41.

(1)   If in a language the verb follows the nominal subject and the nominal object as the dominant order, the language almost always has a case system.

This can be formalized schematically as SOV or OSV → case system (cf. #8 in The Universals Archive by Frans Plank (http://typo.uni-konstanz.de/archive/intro/index.php)). Baker (1996: 505) points out that overt case morphology is more common in verb-final languages than in verb-initial and polysynthetic languages.

Here I show search results from the The World Atlas of Language Structures (WALS) Online (http://wals.info) combining two features: #83A Order of Object and Verb and #49A Number of Cases in Table 1.

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[1]   In their theory based on a local licensing condition at the PF-interface, Pysz and Wiland (2012) also argue that VO order was necessitated by the loss of morphological case on nominals.

Table 1: Number of languages with VO/OV order and cases

#	VO (total 110)	#	OV (total 121)	#	No dominant order (t. 18)
74	No case	25	6-7 cases	3	No case
9	2 cases	20	No case	3	10 or more cases
8	6-7 cases	18	8-9 cases	2	Concrete cases only
5	Concrete cases only	16	Concrete cases only	2	8-9 cases
5	10 or more cases	13	2 cases	2	6-7 cases
4	4 cases	13	10 or more cases	2	5 cases
2	5 cases	8	5 cases	2	4 cases
2	3 cases	5	3 cases	2	3 cases
1	8-9 cases	3	4 cases	0	2 cases

This chart shows that a large proportion of VO languages have no case (67.3%) while the proportion of OV languages with no case is less than one fifth (16.5%). However, we should be careful about the result because the data in Table 1 deals with the number of languages and not the number of genera (cf. Dryer (1992)). It is clear that we need to explore statistical analysis of the data, but I will leave the matter open here.

Note also that Biberauer and Roberts (2005, 2008) explain the syntactic changes including the shift from OV to VO in terms of the change in EPP parameters, which they do not try to connect with the loss of case morphology. They do not assume the movement of object to AgrO-Spec position, which was widely assumed in the pre-minimalist syntax in the 1990s, but rather assume VP movement and the optional stranding. Since they do not discuss the cause of these movement operations, the trigger for the word order change is not clear.

It is interesting to note that Lieber (1992) argues that synthetic compounds (e.g. *thirst quencher*) in English have kept the historical OV order in English. She argues that theta was assigned to the left of the verb in the OE period, which was lost in the ME period. She does not give any reason for the directional change of the theta-assignment. The OV order in synthetic compounds in English is an interesting problem, but I will not discuss it here.

2.2. The influence of Scandinavian languages

Trips (2002) argues for the influence of Scandinavian languages on the word order change in English. However, Trips discusses object shift, scrambling, the verb-second constraint and stylistic fronting, but not the change from OV to VO. As Cloutier (2005)

argues, it is not clear how these syntactic phenomena in Scandinavian languages lead to the loss of OV order in English.   Thus, the Scandinavian influence on word order change in English is a possible hypothesis, but remains to be proved.

Having said this, I would like to note the data provided by Pintzuk (2002: 287). Pintzuk shows the Table 2 and argues that the increase of VO order already started in the Old English period.

Table 2: The effect of date of composition on the position of DP objects in clauses with auxiliary verbs

Date	Preverbal	Postverbal	Total	% postverbal
Before 950	380	144	524	27.5%
After 950	210	197	407	48.4%
Total	590	341	931	36.6%

Pintzuk argues that the frequency of postverbal DPs increases from the early texts to the later ones even in OE periods.   However, we cannot be sure about her conclusion because she does not give any details of her analysis: there is no data source and no exact period of time shown.   The increase might be due to the genres of the texts and other factors.   If the data in Table 2 are valid, we can try to explore the possibility of Scandinavian influence on English word order change.   In order to see whether this line of research is on track or not, we need to analyze the word order data from the OE period more in detail.

2.3. The Inertial Theory and the minimalist program

Since the analyses based on the loss of case morphology and the Scandinavian influence are controversial, it is worth trying to find other causes for the word order change in English. According to the minimalist idea of grammar, Longobaldi (2001) proposes the Inertial Theory of diachronic syntax, which claims that syntax changes only when forced to by changes in the phonology, the semantics or the lexicon, in other words, by interface or grammar-external pressures (cf. Keenan (2002)).   Following this theory, I propose a hypothesis that phonological change triggered the syntactic change in English: borrowing of French words induced the change of word-stress location from Germanic word-initial stress to Romance right-edge stress, which in turn triggered the change from OV to VO order in English.[2]

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[2] One might argue that English just imitated the French word order (VO) in the ME period. However, this idea does not match the Inertial Theory of syntactic change (Longobaldi 2001) in that

This hypothesis matches the minimalist program in the sense that the word order is a matter of linearization at the syntax-phonology (PF) interface, and not of the syntactic computation itself. Moreover, this approach does not rely on formal features such as abstract Case feature (cf. Roberts (1997)), strong features and EPP feature triggering syntactic movement or licensing. Thus, this hypothesis matches a recent guideline of generative grammar, by seeking a theory without formal features (Richards (2010, 2016), Boeckx (2014)).

3. The correlation between word order and word stress
3.1. Synchronic and typological correlation

In this section, I demonstrate the correlation between syntax and phonology, specifically the order between head and complement, and word-stress location in present-day languages. I argue that the typological correlation between word order and word-stress location suggests that the word order change from OV to VO in English is triggered by the change of word-stress location.

The correlation between word order and word stress has been pointed out in the literature. Bally (1944) argues that German is an anticipatory language while French is a progressive language: German has OV order and word-initial stress while French has VO and word-final stress. Donegan and Stampe (1983) investigate two subfamilies of Austro-Asiatic languages, Munda and Mon-Khmer, and argue that Munda languages have OV and word-initial stress while Mon-Khmer languages have VO and word-final stress. For the detail of these studies see Plank (1998), who summarizes the literature of holistic typology focusing on the correlation between subcomponents of grammar including the correlation between morphosyntax and phonology.

These studies of holistic typology have shown that specific (subfamilies of) languages have a correlation between word order and stress. Using the data in Dryer and Haspelmath (2008, 2011), Tokizaki (2011) and Tokizaki and Kuwana (2013a) argue that this correlation widely holds in the world's languages. The languages with left-hand stress tend to have head-final word order (e.g. OV) while the languages with right-hand stress tend to have head-initial order (e.g. VO).

In the next section, I argue that the synchronic and typological correlation between word order and word stress also holds for diachronic change in the same language(s).

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analogy is not a change in the phonology, the semantics or the lexicon.

Specifically, using Bally's (1944) terms, English changed from an anticipatory language to a progressive language: from word-initial stress and head-final order to right-edge stress and head-initial word order.

3.2. Diachronic correlation

In this section, I argue that the correlation between stress location and word order can also be seen in the diachronic change in a (family of) language(s).   First, Ge'ez, an ancient Semitic language in Ethiopia, had VO order, and its modern descendent Amharic has OV order. The word-stress location in Ge'ez is right-edge (ultimate or penultimate) as in (2) while that in Amharic is right-oriented (ultimate, penultimate or antepenultimate) as in (3).[3]

(2) a. *nəgus*   'king'

    b. *nəgus-ä*   'king-Acc'

(3) a. *səga*   'flesh'

    b. *samuna*   'soap'

Note that the right-oriented stress system in effect produces word-initial stress as shown in (3). Then, we can say that the stress location moved leftward from Ge'ez to Amharic.   I argue that the change from Ge'ez (right-edge; VO) to Amharic (right-oriented; OV) is the opposite of the change from OE (initial; OV) to ME (right-edge; VO).

The historical change in English is somewhat similar to that of Romance languages. Classical Latin had (mainly) OV order (Dryer 2005: 331) and a right-oriented stress system (Goedemans and van der Hulst 2005), which changed into VO order and right-edge stress in modern Romance languages.   The stress moved rightward and the word order shifted to VO.

Another interesting example is the historical development of some Slavic languages. Common Slavic changed into a number of languages including Sorbian (West Slavic; Germany) and Polish (West Slavic; Poland).   Sorbian has OV and initial stress while Polish has VO and penultimate stress. The bidirectional development processes strongly support the notion that the correlation between stress and word order holds historically as well as typologically.

These examples show that the change of word-stress location went together with word order change.   In section 4.2 I will argue that the stress change is the cause of the word order

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[3] 'Right-edge stress' and 'right-oriented stress' are the terms used by Goedemans and van der Hulst (2005).

change and not vice versa.

4. The change of word-stress and word order in ME

4.1. The change of word-stress location

The stress system of English, which originally had the Germanic Stress Rule (GSR) assigning stress to the first syllable of the root, was influenced in the ME period by Romance Stress Rule (RSR) assigning stress to a right-hand syllable of the word (ultimate, penultimate, antepenultimate) based on the syllable weight (cf. Halle and Keyser (1971)).   Although the Romance effects on the English native stress system is complicated as Minkova (2007: 169) illustrates, the change of stress location can generally be described as from the root-initial to right-hand position of a word.

The cause of this stress change can be attributed to the Norman Conquest in 1066. According to Baugh and Cable (2013: 174), approximately 10,000 words of Romance origin were borrowed between 1066 and about 1500 (cf. Minkova 2007: 169).   In Figure 2 in section 4.2 below, I will show French loanword data from Baugh and Cable (2013).

It is important to note here that Dutch neither had the Norman Conquest nor borrowed so many Romance words as English (cf. Haspelmath and Tadmor (2009)).   Considering the fact that Dutch has lost as much case morphology as English but still keeps OV order, we cannot attribute the word order change in English from OV to VO to the loss of case morphology.   It is promising to pursue the stress change rather than the loss of case morphology as the main cause of word order change in English.

4.2. The period of word order change and borrowing from French

So far, I have argued that word order correlates with word-stress location historically as well as typologically, and that the change of word-stress location in ME should be attributed to the borrowing of French words after the Norman Conquest.   Now the question is whether the change of stress-location triggered the word order change or the other way around.   I argue that the stress change is the cause of the word order change in the history of English.

In order to solve the chicken and egg problem, we need to show that stress shift occurred before word order change in the history of English.   Here, I try to show the chronological order of the stress change and the word order change by comparing the amount of borrowed words from French and the percentage of VO order in each period of time.

It is well known that the shift from OV to VO is a gradual change.   According to Fries

(1940), the gradual shift from OV to VO is shown in Figure 1.

Figure 1: The percentage of OV and VO order

	c1000	c1100	c1200	c1300	c1400	c1500
Acc. O-V	52.5	n.d.	53.7	40	14.2	1.87
V-Acc. O	47.5	n.d.	46.3	60	85.7	98.13

This figure shows that the word order change started after 1200 and was completed by 1500.

Note here that in order to try to explain the gradual change as well as the existence of VO order in OE, Pintzuk (1991 et seq.) proposes the dual base hypothesis to the effect that OE already had the VO order as well as OV as the base structure.   Although she argues against Roberts' (1997) idea that the loss of case morphology triggered the word change, she does not propose any alternative idea as the cause of the word order change.

Let us now turn to the amount of French loanwords at different periods in English.   As we have seen above, according to Baugh and Cable (2013: 174), approximately 10,000 words of Romance origin were borrowed between 1066 and about 1500 (cf. Minkova 2007: 169). Moreover, citing Jespersen's (1982: 94) statistics, Baugh and Cable (2013: 173) show the amount of words borrowed from French, as in Figure 2.

Figure 2

1050	.2	1301–1350	108	1601–1650	61
1051–1100	.0	1351–1400	198	1651–1700	37
1101–1150	.2	1401–1450	.74	1701–1750	33
1151–1200	.7	1451–1500	.90	1751–1800	26
1201–1250	35	1501–1550	.62	1801–1850	46
1251–1300	99	1551–1600	.95	1851–1900	25

Now we can compare the period of word order change with the amount of borrowed words from French.   I calculated the cumulative number of borrowed words for each period of time. In order to make the comparison clear, I calculated the percentage of loanwords (%word) in English at each period by hypothetically setting the total amount of the borrowed words in 1000 (0) as 47.5 % (the percentage of VO order in 1000) and the total amount of the borrowed words in 1500 (442.74) as 98.13 % (the percentage of VO order in 1500).

Figure 3

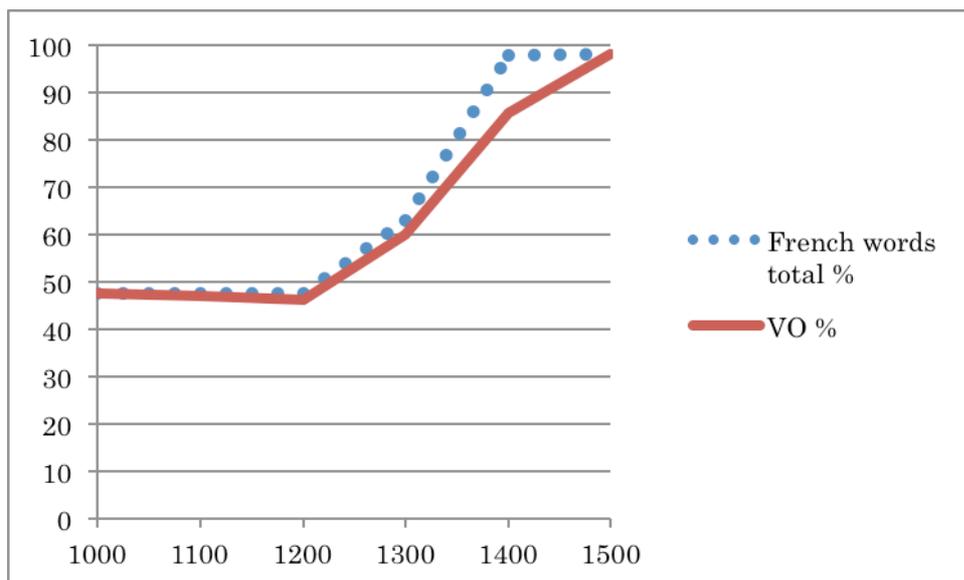| year	words total	%word	VO%
1000	0	47.5	47.5
1050	.2	47.52	
1051–1100	.2	47.52	
1101–1150	.4	47.55	
1151–1200	1.1	47.63	46.3
1201–1250	36.1	51.63	
1251–1300	135.1	62.95	60.0
1301–1350	243.1	75.30	
1351–1400	441.1	97.94	85.7
1401–1450	441.84	98.03	
1451–1500	442.74	98.13	98.13

Figure 4

Figure 3 and Figure 4 show that the number of words borrowed from French increased ahead of the VO order, especially between 1300 and 1500.   The fact that borrowing words appears to precede word order change matches our hypothesis that borrowing words from French changed the stress-location, which in turn triggered word order change.   The time lag between the increase of loanwords and that of VO may show that it took some time for the English grammar to change from OV to VO in order to solve the conflict between Romance word-stress location (right-edge) and Germanic word order (OV), as I will argue in section 5.

The proposed hypothesis based on the increase in borrowed French words matches the fact that the word order change was gradual and not sudden.   Thus, I conclude that the change of word-stress location induced by the increase of French loanwords triggered the change from OV to VO in ME.[4]

5. The mechanism of the correlation between word order and word stress

In this section, I briefly explain why the stress shift triggers word order change, in other words, why the stress location correlates with word order.   Following a minimalist idea of grammar (Chomsky 1995, 2012), I assume that a head and its complement (e.g. verb and object) have no linear order in the syntactic computation.   Then, head and complement have to be linearized at the interface between syntax and phonological component (PF).   I argue that the constituent consisting of head and complement in either head-initial or head-final order must meet the conditions in PF including the stress pattern of the language.

Cinque (1993) generalizes the stress assignment rules for phrases (Nuclear Stress Rule) and compounds (Compound Stress Rule) into one general rule, which assigns stress to the most deeply embedded element in a morphosyntactic structure.   This generalized rule in effect assigns stress to object rather than verb in a constituent consisting of verb and object because verb is a single word and is non-branching while object may consist of more than one word and be branching.   Thus, the stress patterns of OV and VO sequences are ÓV and VÓ. Assuming that languages with the head-final word order (e.g. OV) are agglutinative (Kayne 1994: 53), an OV sequence behaves as a tightly connected constituent like a compound. Assuming also that the stress location in compounds is similar to that in a simplex word (e.g. German has initial stress in compounds as well as in simplex words), languages with word-initial stress choose OV order for stress conformity at the linearization.   Languages with right-hand stress choose VO order for the same reason.   Thus, word-stress location correlates with word order, as we have seen in section 3.   See Tokizaki (2011) and Tokizaki and Kuwana (2013a) for the details of the mechanism of correlation.

When a language borrows a lot of words from another language with a different stress

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[4] If we can also compare the decrease of case morphology in English with the increase of VO order, we can test the validity of the theory that connects the loss of case morphology and the word order change (e.g. Roberts (1997)).   Unfortunately, it seems to be difficult to decide the degree of richness in case morphology in each period.   See Allen (1999), who claims that the fixing of word order had started before the loss of case morphology started.

location, the conflict between the native stress system and the borrowed stress system arises. English had that situation in ME: native words had word-initial stress while the borrowed words from French had right-hand stress. At this point, there are two ways to resolve this conflict: either to change the stress location of borrowed words according to the native stress system or to take the foreign stress system into the language and keep the original stress location for the loanwords. English had both of these two ways. The stress location of some borrowed words was changed into that of native words (e.g. French *Apríl* changed to *Ápril*); also English introduced the Romance Stress Rule (Halle and Keyser 1971) for some loanwords (e.g. *caléndar* in ME (Minkova 2007: 171)).[5] When a language changes its word-stress location because of some external motivation such as borrowing, conflict arises between stress location and word order. In English, the new stress location that came with the right-oriented system did not match the Germanic OV order, which preferred word-initial stress. The linearization process at the PF-interface gradually changed from OV order to VO order in order to meet the PF requirement for the right-hand stress in phrases as well as in words.

The idea that stress shift triggered word order change in ME also explains why pronouns tended to precede verbs in ME. Nakao (1972: 382) points out that since EME, VO is the dominant order especially in the case that the object is a full noun and not a pronoun. He notes that the verb-pronoun order and the pronoun-verb order occur in equal frequency in *Ormulum.* The persistence of pronoun-verb order can be explained in terms of the new right-edge stress system in ME. Pronouns do not have stress by their nature; the stress pattern Pron-**V** matches the right-edge stress while **NOUN**-V does not (stress shown with boldface). Later in EME, the head-initial order with stress pattern **V**-Pron was preferred probably because the Germanic Stress Rule was still active.

It is interesting to consider why OV order was dominant in subordinate clauses from the OE period. This seems to be similar to modern German where main clauses without auxiliaries have VO order while subordinate clauses have OV order. For this matter, see Tokizaki and Kuwana (2013b). Moreover, quantified objects and negative objects kept OV order for a longer period than other objects (cf. Pintzuk and Taylor (2006), Tanaka (2014)). I speculate that these types of noun phrases may well have focus, which affects the stress pattern of the verb phrase. We need to investigate these points using valid data.

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[5] Lass (2000: 128) points out that some French loanwords in EME (from 1570 to 1784) were pronounced with word-initial stress (e.g. *abbreviation*).

6. French loanwords in ME texts

Finally, let us briefly look at the way French loanwords appeared in texts in the ME period.   Nakajima (1979) discusses the borrowed words from French chronologically.   He points out that Norman French started to appear in texts after the Norman Conquest (1066).[6] Nakajima lists the French words he found in the texts and gives comments on the amount of borrowed words in each text, which are summarized in (4).

(4) French loanwords in ME texts

Late 11C: *Anglo-Saxon Chronicle*: castel 'castle', serfīs 'service', prisūn 'prison', cancelēr 'chancellor', tūr 'tower'

12C: *Peterborough Chronicle* (East Midlands dialect): abbot 'abbot', priōr 'prior', canonie 'canon', cell 'monastic cell', capelein 'chaplain', cūntesse 'countess', emperice 'empress', duc 'duke', cūrt 'court', capitel 'chapter of monks', pais 'peace', tresōr 'treasure', justīs 'justice', privilegie 'privilege', caritēð or caritēd 'charity', nativitēð 'Nativity', processiūn 'procession', standard (flag in Battle of the Standard)

12C: *Ormulum* (East Midlands dialect): only 11 borrowed words from French: castle, crown, prophet, rich, gin 'device', kariteþ, orgel 'pride', etc.

a1200: *Layamon A*: less than 100 French words

1225-40?: *Ancrene Riwle* (South-West, West Midlands dialect) a number of French words, especially religious and moralistic words; strong influence of French in South-West

c1300: *Layamon B*: many native words in *Layamon A* replaced by French words: hertoʒe > cheveteine 'chieftain', milce > grace, griþ/friþ > pais 'peace'

1280s: *Havelok the Dane* (north-east, East Midlands dialect): a number of French words as well as Scandinavian words

1303: *Handlyng Synne* (North-east Midlands): a number of Scandinavian words and common French words of the present day

c1300: *Cursor Mundi* (north England, Northumbrian dialect): a number of Scandinavian words and common French words of the present day

14C: Chaucer: French words make up 10-15 % of his works

The list shows that French loanwords spread from the South-West to the North-East of

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[6] Nakajima also points out that a few French words (e.g. *proud*) had already appeared in English literature.

England by the mid-13th century (Nakajima 1979: 67).

In order to prove the hypothesis proposed here, we can try to investigate the number of French loanwords and the rate of VO order in each text. If we can show that there is a correlation between the amount of French loans and VO order across the texts in ME, it will support our hypothesis that the change of word stress brought by French loanwords triggered the word order change from OV to VO in the ME period.

As a case study of the correlation, Miyashita and Tokizaki (to appear) investigate the *Ancrene Wisse* written in the early 13th century and argue that it contains a higher rate of borrowed words from Old French in VO order than in OV order in the subordinate clauses. I believe that this line of research is promising in clarifying the cause of word order in the history of English.

7. Conclusion

To sum up, I presented a new hypothesis about the cause of the word order change from OV to VO in the history of English. I argued that the change of word-stress location induced by French loanwords after the Norman Conquest changed the word order from the Germanic OV into VO, in order to resolve the conflict between the imported Romance right-edge stress and the initial stress in OV construction.

This hypothesis could be an alternative to the theory based on the loss of case morphology (e.g. Roberts (1997), which has a number of conceptual and empirical problems. This hypothesis, which can be called stress-triggered order change (STOC), does not suffer from these problems, and matches the fact that the increase of French loanwords preceded the increase of VO order.

The parametric approach to word order shift in English (Kemanade 1987) argues that English changed the value of head parameter from head-final in OE to head-initial in ME and later.   The double base hypothesis by Pintzuk (1991 et seq.) claims that the head-initial value already existed in addition to the head-final value in OE.   Compared with these parametric approaches, the claim here is a more natural option.   The order of verb and object is basically OV in OE because the linearization mechanism prefers that order because OV meets the phonological pattern of trochaic in OE.

I would like to stress again that our hypothesis meets the minimalist program of syntax: it goes well with the Inertial Theory of syntactic change, and it needs neither head-directionality parameter nor syntactic formal features such as abstract Case.   English,

which has been studied in depth using written texts and corpora, gives us a good way of studying the correlation between phonology and syntax. I hope that this line of research will clarify the mechanism of linguistic change not only in English but also in other languages in the world.

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