HÁSKÓLI ÍSLANDS

Hugvísindasvið

The Relation of the Decline of Inflectional Morphology to the Loss of Verb Raising in English.

B.A. Essay

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Abstract

This essay discusses the part inflectional morphology had in the loss of verb raising in English over a period ranging from Middle English to Modern English. The connection between rich morphology and verb raising is initially assumed to function along Rohrbacher's Rich Agreement Hypothesis, which receives both support and contradiction from observations in theoretical syntax and from a variety of languages including ME and ModE and a selection of Germanic languages. The concluding evidence whether loss of morphology was the cause of the loss of verb raising in English comes from Ellegård´s quantitative study over the productivity of do-support in ME prose.

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The Relation of the Decline of Inflectional Morphology to the Loss of Verb Raising in English.

1. Introduction

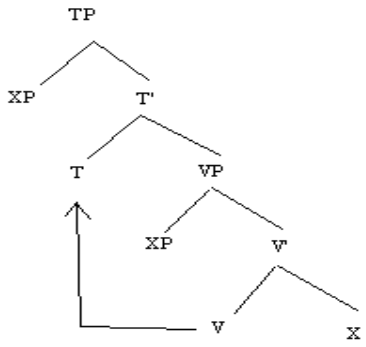
This text looks into the relation of the decline of inflectional morphology and verb raising over two periods of history in the English Language. From Middle English to Modern English two notable changes occur: the language loses its rich inflectional agreement and subsequently its V2 word order. Chapter 2 I will observe the original state of two ME variants, Northern and Southern, with a look into the state of verb movement in ME before the loss verb raising. On Chapter 3 I will focus on the theoretical extent a change in morphology resonates in syntax concerning verb raising operations. The foundation for discussion comes from Rohrbacher's Rich Agreement Hypothesis (1994) which claims that a causal link exists between a language's rich agreement morphology and its capability for verb raising. This is the starting point for observations concerning on how the changes in inflectional morphology could have affected the verb movement change from ME to ModE. Furthermore, as the loss of verb movement capabilities took ModE away from the V2 word order, I will observe both the vestigial remnants echoing the languages V2 origins as well as some of the innovative syntactic mechanics ModE in place of verb raising. The current use of modals and the do-support can be traced to the erosion of morphology. While the development and origins of modals and periphrastic *do* will not be discussed in detail, observation on their behaviour shows that these auxiliary operations prevent verb raising when used. Examples from other Germanic languages, German, Sweden and Icelandic will be used to further test the assumed connection of verb movement and rich agreement. The case of Sweden provides critical info on the extent we can assume in inflectionality affecting verb movement. As a language with a V2 word order yet poor inflectional morphology, it imposes an important caveat to the extent we can believe inflectionality being the primary source for causing verb movement in a language. The

possibility of poor inflectionality alone not imposing restrictions on verb raising in combination with the presence of an auxiliary system that does, establishes the basis for discussion for the final chapter which looks diachronically for the reasons for why English lost its verb raising. The productivity of do-support over the critical years when English lost its verb raising will be used to track the development of the shift in verb movement. The source for the observations is the quantative data from Ellegård (1953) which studies the productivity of do-support in ME prose. The thesis of the essay is that the source verb raising in ME was rich inflectional morphology, where as the loss of verb raising was enabled by the loss of morphology but ultimately the trigger that made English lose verb raising was in the rise of auxiliary operations.

1.1 Assumptions

At the core of this essay is the syntactical phenomenon of verb movement, both V-to-T and V-T-C operations and the extent morphology can affect said verb raising operations. Before proceeding into the discussion on the morphology-verb raising relations I will first take a moment to discuss the syntactic operation in question as well as the framework I will adhere to in showcasing the operation. In the Minimalist framework the verb movement operation of V-to-T is effectively a head movement operation. In (1) the movement in question can be seen as the V head of V´ moving upwards into the T head of T´ position.

(1)



The cyclic nature of the movement operation is caused by the Head Movement Constraint, worded by Radford as (2008):

> (2) Movement from one head position to another is a local operation which is only possible between a given head and the next highest head in the structure.

The cause for this movement in the languages I study in this essay can be traced to originate from the strong agreement feature in the goal movement position. The said agreement strength feature then stems from the morphological qualities of the language, in particular the strong subject-verb agreement imposed by a rich inflectional agreement system. The definitions of richness along with examples will be delivered in chapter 3.1. This upwards movement phenomenon and the cause behind is central in defining ME, a verb second language which, as its name-sake, requires the verb move upwards to take the verb-second position. The V2 movement and the function and location of the strong feature is the subject of chapter 2.

A mirroring movement operation is found in Modern English which is generally unable to conduct verb raising (excluding a few V2 vestigial remnants observed more closely later). In Modern English the verb remains in situ, but rather the affix containing tense moves downwards from T position to adjoin in the V, in an operation identified as Tense Lowering. ModE lacks the strong feature that triggers movement in ME. Affix lowering operations are bound by tenets of locality, phrased by Santorini & Kroch (2007) as:

> (3) "When a head A lowers onto a head B, A and B must be in a **local** relation in the sense that no projection of a head distinct from A and B **intervenes** on the path of branches that connects A and B."

Locality principle plays a significant role behind the necessity of do-support (3.3.1), one of the mechanisms Modern English uses to operate without the benefit verb raising.

Concerning the syntactic framework itself, the T position has seen a number of interpretations over the years and in this work I will be quoting authors of which some use a framework that condone to the Split Infl. Hypothesis of Pollock's (1989) and some whom follow to the later recommendation of Chomsky's (1995) to dismiss the variety of positions used after Pollock's hypothesis and use a singular T position. Instead of a mixture of varying frameworks I will use a framework which relies on a feature based syntax expressing a singular T position along Chomsky's (1995) proposition.

The general diagnostic for identifying an occurred movement into T will be the one stated by Vikner (1995):

> (4) "[V-to-T movement] has taken place if the finite verb precedes a medial adverbial (taken to be adjoined to the VP) or a negation, and it has not taken place if the finite verb occurs right of such elements".

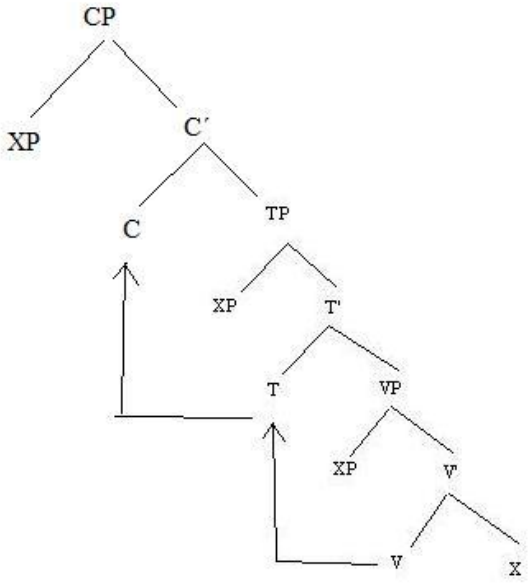
The variety of examples used in the essay will be picked to accommodate such functional items as to make the identification of instances of verb raising possible. The examples will generally show either topical inversion or the presence of an adverb or both to enable the identification of verb raising.

2. ME and V2

In comparing V-to-T movement from Middle English to Modern English we are also looking at the central operation that defines the structure of the two languages. The word order is inseparably linked to the language's mode of verb movement; the so-called V2 languages move their verbs into a verb second position whereas ModE does not raise V except in a few vestigial instances of V2 behaviour (chapter 3.3). Kroch & Taylor (1997) identify two different strains of V2 occurring in ME, one in the South noted as the IP-V2 variant, similar in function as we will find in Icelandic (chapter 3.4.2) where V-to-T movement can occur also in sub-clauses, and the

Northern V2, a CP-V2 variant, where the V2 phenomenon will generally only occur in main clauses. The differences and behaviour of the two variants will be looked at more closely through the examples from living languages. For now I will focus on the syntactic differences between the Middle English's V2 to Modern English's SVO structure. The V2 phenomenon is effectively a structural demand, not a default word order. As mentioned earlier, even ModE can exhibit V2-like structures, but it can do so optionally (Kroch & Santorini 2007). In V2 the verb moves through T to C position in a main clause to take the namesake verb-second position after the subject.

(5) V-to-T-to-C movement of V2.



The movement in (5) occurs in cyclic fashion, with either the topic or subject residing in XP of CP, the verb moving through T to the end location in C'.

In a finite main clause in Modern English the verb remains in situ. The capability for verb raising is a central requirement for the existence of V2 word order, as without the necessary verb raising operation the verb cannot move through T into the required C position. In the chain of interrelated changes that occurred in English from the loss of inflectional richness to the loss

verb raising, the word order of English changed to accommodate the shift in syntax and morphology. Without yet touching directly the main subject of morphology and syntax, the introduction of the original state of the language will establish a basis against which to reflect the on the changes in ModE.

Concerning the identification of the strains of V2 movement found in Middle English, it must be noted that the one used here is very general. Bech (2003) marks, that with closer inspection, the Middle English language, particularly in its earlier forms was not consistently V2. Rather the language expressed deviance from V2 with varying instances of non-V2 constructions occurring in early prose. So perhaps the most correct analysis of Middle English would rather be that it is a language with strong V2 tendencies. However for the purposes of this essay a simplified and streamlined analysis of ME is enough to work on.

2.1 CP-V2, Northern Middle English

Kroch & Taylor (1997) generally identifies the CP-V2 word order with such Germanic languages as German, Dutch and Mainland Scandinavian. As the name implies, the CP-V2 word order is distinguished by the property of the "movement of the tensed verb to the Comp position and concomitant movement of some maximal projection to the specifier of CP". So CP-V2 allows and requires a topical phrase to accompany the verb which raises to Comp position. The V2, verb second constraint, occurs in main clauses with finite verbs.

The frame provided is markedly similar to the formation of WH-questions in Modern English.

The following examples show the use of V2 in German in finite declarative sentences, 6. a. exhibits subject initial structure, 6. b. has topical inversion.

(6) a. Wir **besuchen** nicht meinen Opa in Berlin

We're going to visit our Grandfather in Berlin.

b. Nach Dresden **fahre** ich morgen.

To Dresden, I travel tomorrow.

As comparison, here's a example of the vestigial V2 structure from Modern English from a WH-question:

(7) a. Where **are** you going on your summer vacation?

Vestigial remnants reveal Modern English's roots, a trait I will return to.

In subclauses, the CP position is occupied by a complement, disallowing the movement of the verb to C. Thus in subclauses the CP-V2 word order would be:

(8) ... complementizer, subject, adverbial, VP, *verb* (Vikner, 1995).

Practical application in a subclause in German:

(9) a. Er sagt, dass die Kinder diesen Film gestern gesehen **haben.**

He says that the children this film yesterday seen have.

2.2 IP-V2, Southern Middle English

According to A. Kroch (1997) IP-V2 is a word order type we can find in Icelandic and Yiddish. IP-V2 differs from CP-V2 in its behaviour in subclauses, as CP-V2 type cannot exhibit V2 in subclauses as the C position in a subclause is occupied by the complementizer. In IP-V2 the topic appears in the TP-Spec position followed by the verb in the T position followed by the subject. In IP-V2 subclauses verb rising occurs as V-to-T movement, forming a subclause word order of:

(10) ... complementizer, topic, *verb* (in T position), subject, adverbial, VP (Vikner, 1995)

Taking an example from Icelandic:

(11)...ad bjór **hefur** Þorgrímur aldrei drukkið.

...that Thorgrimur has never drank beer.

Another type of subclause structure occurs with the subject following the complementizer:

(12) ... complementizer, subject, *verb* [in T position], adverbial, VP (Vikner 1995).

With another example from Icelandic:

(13) ...að Þorgrimur **hefur** aldrei drukkið bjór.

A similar construction could be found in ME prose of Southern origin, the example here is from Kroch & Taylor (1997)-

*(14) ...þæt eallum folce **sy** gedemed beforan ðe.*

*...that all people **be** judged before thee.*

3. Relation of Inflectional Morphology to Verb Raising

Rohrbacher (1994) claims in his study on Germanic languages that Rich Agreement causes V-to-T movement. His observations on the effects of inflectional agreement over verb movement are expressed in the Rich Agreement Hypothesis which will provide the basis for discussion in this chapter. In discussing and observing the validity of the hypothesis over Modern English and Middle English I will first lay the foundation in establishing and defining the "richness" and "poorness" of both languages in chapter 3.1. In 3.2, I will look at the syntactic dimension of morphological richness' effect on verb movement. The lack of, or presence of strong verb-subject agreement in a language is the central feature originating from morphological richness that defines a language's verb raising capabilities. For Middle English, and a selection of other Germanic languages the causality is evident.

For Modern English, lacking in inflectional richness and consequently in verb raising, I dedicate a small chapter for observing a number of interesting phenomenon that either remain in the language as vestigial remnants of verb raising or which came to be as a result of the loss of verb raising. The discussion on do-support will establish a bridge to subsequent discussion to the causes of the loss of verb raising in English. With *be* and *have* verbs we have two examples of

verbs that exhibit verb raising when used as main verbs. Where *be* will be found to conform into the Rich Agreement Hypothesis, *have* provides a first instance in this text where poor inflectional paradigm can exhibit verb raising.

Chapter 3.4 widens the scope with a look into other languages where verb raising is productive. German and Icelandic provide examples of languages where Rohrbacher's hypothesis meets its mark. However Swedish represents another example where the causality of rich agreement to verb raising falls apart. Swedish is poorly inflectional, yet has V2. The second chapter is rounded out in 3.5 with discussion on the theoretical evidence of the link between agreement and verb raising and how it extends into ModE and ME so far.

3.1 Inflectional Richness in ME and ModE

The concepts of "rich" and "poor" inflectional morphology are terms I will return to successively over the next parts of the work. It comes then as a solid starting point to define what is meant when the "richness" of inflectional morphology is discussed. The degree for distinction between "rich" and "poor" inflection –rich enough to lead into V-to-T movement- in a language will be the one proposed by Rohrbacher (1999);

> (15) "A language has V to I raising if its regular verbs distinguish the forms for first and second person in at least one number of one tense from each other, as well as from the forms for 'third' person in that tense/number combination and from the form for the infinitive." (116-117)

According to Rohrbacher's definition Modern English is inflectionally poor.

(16) Modern English

	Present	Past
1. person sg.	talk	talk-ed
2. person sg.	talk	talk-ed

3. person sg.	talk-s	talk-ed
1. person pl.	talk	talk-ed
2. person pl.	talk	talk-ed
3. person pl.	talk	talk-ed

The verbs in present tense only have markers according to person in 3rd person sg. whereas the verbs in past only inflect for tense. The markers appear in complementary distribution, with the past form verbs omitting the 3rd person agreement marker. Reflecting on Rohrbacker's definition, we can identify ModE as a language of poor inflectional morphology. As a comparison the following table provides a view into the inflectional range of ME. (Midlands dialect, Fisiak 1968:66-69)

(17) Midlands Dialect

	Present (Strong)	Past (Strong)	Present (Weak)	Past (Weak)
1. person sg.	-e	-	-e	-(e)
2. person sg.	-es(t)	-e	-es(t)	-est
3. person sg.	-eþ/-es	-	-eþ/-es	-(e)
1. person pl.	-e(n)	-e(n)	-e(n)	-e
2. person pl.	-e(n)	-e(n)	-e(n)	-e
3. person pl.	-e(n)	-e(n)	-e(n)	-e

The Midlands dialect of ME fulfils Rohrbacher's criteria for rich inflection. The markers exhibit agreement in both person and tense, furthermore the 1st and 2nd person sg. is distinct. In both present and past, ME has agreement in both person and tense. The significance of these inflectional qualities are in the liabilities they confer into syntax concerning the accessibility of V into T position. As will be elaborated on in 3.2, both the lack of agreement and the complementary distribution of Modern English become the factors that result in the language's

lack of verb raising. A final example from Icelandic similarly shows a language expressing inflectional richness and will be returned to in the succeeding sections as a point of comparison of a language with V-to-T movement.

(18) Icelandic

	Present	Past
1. person sg.	borð-a	borð-aði
2. person sg.	borð-ar	borð-aðir
3. person sg.	borð-ar	borð-aði
1. person pl.	borð-um	borð-uð
2. person pl.	borð-ið	borð-um
3. person pl.	borð-a	borð-uðu

Similarly to ME, Icelandic verb morphology shows agreement both in tense and person and qualifies as a "rich" inflectional language in terms of Rohrbacher's demands. Concluding 3.1, we can assume Middle English is rich in its agreement, whereas Modern English is poor.

3.2 Effect of Inflectional Richness on Verb Movement in ME and ModE

In Lightfoot's (1991, 263) view it is the strong subject-verb agreement introduced by rich inflectional morphology that is the necessary condition for V-to-T movement. The strong subject-verb agreement is the trigger for the movement operation; it creates a strong agreement feature in the syntax that the V must check by moving upwards into a position that will satisfy the demands of the agreement feature. Focusing the discussion to the comparative look of ME and ModE in their verb movement behaviour, the statement of rich agreement being the source of V-to-T becomes central. The rich inflectional quality of ME was established in 2.1, as well as the exhibited V2 properties of the language, namely movement from V-to-T-to-C in main

clauses. What is left then is to link the causality of the two, the rich agreement of ME into its verb raising behaviour.

Koeneman (2000) elaborates on the syntactic demands of rich agreement languages: "Rich Agreement languages need to project AgrP in overt syntax." As the syntactic framework I use does not use the AgrP or its intermediate projection, Koeneman's observation effectively translates into the Rich Agreement language projecting a strong agreement feature in T (the successor of the AgrP position). In the case of richly inflectional Middle English the verb then needs to move to satisfy this agreement feature, the agreement to person and number as demanded by morphology. In this view, morphology is responsible for the movement as the state of the morphological agreement is reflected in the features of syntax.

Returning then to data from 3.1, I noted that in ME the subject-verb agreement is found in person and number, leading us to assume ME as a rich agreement language exhibits the discussed causality of rich inflectional morphology on syntax. ModE, with its weak subject-verb agreement, does not require similar adjacency of verb and subject in its syntax. The poor inflectional morphology of ModE does not impose a strong agreement feature in the T position for the verb to check. However as noted in 2.1, Modern English has its agreement appear in complementary fashion; either in person (3^{rd} psn. sg. –s) or in tense (past plural –ed). It is not possible for a sentence to contain stray affixes in the spell-out, so in ModE the stray affixes then move to the V position to adjoin into the verb stem. The necessity of the affix to join the stem is identified by Lasnik (1981) as the Stray Affix Filter, and is a necessary part of the tense lowering operation that defines verb movement in Modern English.

However the conclusion that rich morphology creates verb raising via assignment of strong features does require some additional observation concerning the possibility that verb raising can occur even if there is no rich inflectional agreement demands on the behalf of morphology. For example Swedish, (observed in detail in 3.4.3) would be one such language;

another would be Middle English after losing its inflectional richness yet clinging on to verb raising. Concerning the answer to this, one must then envision a situation where the users of the language continue to use the old word order even though the morphological qualities of the language would no longer impose the movement demands for the verb to satisfy the aforementioned agreement features. For explaining the phenomenon one would have to ask what is the evidence for children, the learners of a language with verb raising to not use verb raising. If the source of their language are speakers who use verb raising, though morphologically imposed agreement requirements would no longer require them to, unless there is evidence for the new generation of speakers against the use of verb raising the verb movement phenomenon would not decline.

That said the loss of the demands from morphological agreement will open the language for innovation concerning verb movement, a possibility supported by the historical development of modals and do-support. Both of these operations that occupy the T position became to be in the syntactic atmosphere postdating the loss of inflectional richness, where the demands of morphological agreement over syntax were lost and the verb's movement was no longer obligatory. With the possibility of an occupied T position potential future speakers of the language would then begin to accumulate evidence that would point against the availability of verb raising.

3.3 Consequences of the Loss of Verb Raising in ModE

The loss of rich agreement resulted in the loss of the strong agreement feature that required verb raising in ME. In Modern English the verb generally remains in situ, with affixes for tense and person moving down from T position to adjoin into the verb in V. However there are exceptions, for instance negation that blocks the downward movement of the tense affix. The movement of the affix is blocked by the intervening head as per the rules of Cyclity noted in (3).

To counteract the inhibition set by the syntax, Modern English uses the crutch of do-support (3.3.1). Another common inhabitant of the T position in Modern English are modal verbs (3.3.2) which exhibit similar behaviour as the auxiliary do-support in syntax. Both auxiliaries raise to C in direct questions in a display reminiscent of V2 vestigial behaviour. Lastly, there are the *be* verb (3.3.3) and *have* verb (3.3.4) which exhibit verb raising when used as a main verb. In *be* can be found a distinct inflectional paradigm that measures up to the "richness" degree as provided by Rohrbacher (15), however the analysis of *have* will provide a first problem for the assumed causality of rich agreement and verb raising.

3.3.1 Do-support

As a tense lowering language, Modern English runs into trouble in instances where adjacency from T to V is blocked by an intervening head. As per Lasnik's Stray Affix Filter, the possible stray tense affix cannot merely remain in the T without a stem. The problem is identified in the minimalist framework with the downward movement of the affix being subject to demands of locality, worded by Santorini & Kroch (2007) as:

> (19) "When a head A lowers onto a head B, A and B must be in a **local** relation in the sense that no projection of a head distinct from A and B **intervenes** on the path of branches that connects A and B."

Thus in instances of negation the affix cannot lower itself in ModE as the head of NegP intervenes the route of the tense affix on the way from T to V. To overcome the constraint ModE uses periphrastic do, namely do-support, to allow for the expression of tense in sentences which have an intervening head between T and V positions that would block the affix expressing tense from moving to the required position. The lack of grammaticality of (20, b & e) shows the inability of ModE syntax to create grammatical finite negative declarative sentences without the crutch of do-support.

(20) a. I **eat** ice cream.

b. I not **eat** ice cream.*

c. I **do** not **eat** ice cream.

d. Clive **ran** a mile.

e. Clive not **ran** a mile.*

f. Clive **did** not **run** a mile.

In (20) a. & d. the tense affix can freely move from the T position to the V. In (20)f. the [+past] feature of the tense position remains in the T position and adjoins into the periphrastic do.

Negative imperatives similarly require do-support:

(21) a. "**Do** not **vex** his presence"

The following sample, from Early ModE would be ungrammatical in ModE.

b. "**Vex** not his prescience" Antony and Cleopatra Act I Scene I, Shakespeare

In the case of questions in ModE, do moves from T to C.

(22) a. **Did** you **run** away from home ?

b. **Do** you **have** any money left ?

Santorini & Kroch (2007) notes that the movement pattern of do in direct questions is a vestige of V2 in Modern English. The word order is the same as one would find in a direct question of a V2 language.

As we look more closely into the diachronic development of the disappearance of V-to-T in English in chapter 4, the appearance and productivity of do-support in ME prose is one good indicator of the decreasing appearance of verb raising to T in the language. As we notice from the examples, the periphrastic do usually either occupies the T position or the C position thus preventing possible verb raising from occurring. While this is not an issue in Modern English, in Middle English the entry of do-support caused a situation where only one of the

operations was possible, do-support or verb raising. With the productivity of one the other would cease to be. In this sense, as a force that prevents verb raising, the behaviour of do-support establishes important data for the discussion on the historical development of the language into obligatory do-support. As will be discovered, do-support is a central trigger into the decline of verb raising: the fact that *do* occupies T-position (C in direct questions) is a negative cue for new learners of English looking for the possibilities for verb raising.

3.3.2 Modal Verbs

Modal verbs are another functional element which express themselves in the T position in ModE. Unlike *do*, modals express mood in the T position and their historical origin differs from that of periphrastic *do*. Roberts (1985) shows that originally modals were alike to lexical verbs, assigning theta roles and taking direct objects. The notion of modals originally being main verbs is seconded by Visser (1973). The following are examples of Middle English modals used as main verbs:

(23) a. for all the power thai mocht

for all the power at their command.

(1470 Henry, Wallace iii 396: Lightfoot (1979: 101)).

b. Ich hit wulle heortlicher

I want it very much.

(c. 1225 Ancrene Wisse 199, 23 (ed. Tolkien)).

c. God grante I mot wel achieve

God grant that I'll be able to achieve it.

(c. 1390 Gower Conf. Am. I, 6 i: V 1689).

(Examples taken from Roberts 1985)

What then led to the current situation with modals being merely functional units conveying mood in the T position is analyzed by Roberts to being caused by the erosion of phonetic expression of the original modals as caused by the loss of inflectional expression. The birth of modals will not be discussed in further depth here, but the significance of modals concerning this essay is in discovering the extent morphology led the development of verb movement is that the modals evolved into another functionary that occupied the T position. Priming again chapter 4 which will focus on the diachronic evidence, modals are another negative cue for possible new learners trying to discover whether English would be a verb raising or tense lowering language. In their modern use, the modals are functional auxiliaries which occupy the T position in declaratives:

(24) a. John **should** not attempt to break the record.

b. I **might** go out tonight.

Modals move from T-to-C in interrogatives.

(25) a. **Shall** we leave tomorrow?

b. **May** I remove you from the list?

Similarly as observed from do-support, modals in direct question express vestigial V2 behaviour.

3.3.3 Be-verb

A final observation on the state of V-to-T in Modern English as well as a chance to test the practical applicability of the Rich Agreement Hypothesis on a singular instance of rich agreement comes with the study of the behaviour of be-verb in Modern English. While *be* can used as an auxiliary, the curious nature of *be* is revealed in a context where the verb is used as a main verb. The *be*-verb is a strange remnant in Modern English, a verb that uniquely retains its inflectional qualities.

(26) Modern English Be-verb

	Present	Past
1st. person sg.	am	was
2nd person sg.	are	were
3rd person sg.	is	was
1st person pl.	are	were
2nd person pl.	are	were
3rd person pl.	are	were

As it is clear from (26), be-verb fulfils the "richness" criterion set by Rohrbacher for distinguishing whether verbal inflectionality is sufficient to cause V-to-T movement (with distinguished forms in first and second person). This sets the verb apart from the generally poorly inflectional Modern English verb base. In light of Rohrbacher's claims on the capability of verbs with sufficient richness to allow V-to-T movement; it is in our interest to observe be-verb's behaviour more closely. The verb being rich in inflection, logic follows that it should also have V-to-T possible. As it is a comparison between a be-verb as a main verb and a "regular" poorly inflectional ModE "talk" verb (table 16) in a finite phrase expressing negation gives proof of the verb raising ability of *be*.

(27) a. He **is** not from Iceland.

b. *He **talks** not of Iceland.

c. He **does** not **talk** of Iceland.

d. I **am** not happy.

e. *I **talk** not happily.

f. I **do** not **talk** happily.

When “be” works as the main verb in a sentence, it can move to the T position in front of the negation (27,a,c), where as the T-position for “talk” in (27,b,d) is ungrammatical. For a verb to appear in conjunction with a negation and remain in the V position in ModE without causing an ungrammatical sentence, the phrase requires do-support.

3.3.4 Have-verb

The use of have-verb as a main verb as used in British English provides a problem to the applicability of the Rich Agreement Hypothesis in its strong form. The paradigm of have-verb’s inflectionality does not fulfil the richness criteria (15).

(28) Have-verb

	Present	Past
1st. person sg.	have	had
2nd person sg.	have	had
3rd person sg.	has	had
1st person pl.	have	had
2nd person pl.	have	had
3rd person pl.	have	had

Yet *have,* when used as a main verb in British English can raise. (Examples from Pollock 1989.)

(29) a. John **hasn’t** any money.

b. John **hasn’t** a car.

The behaviour of *have,* when viewed with the morphological richness-verb rising causality in mind, is problematic. Omitting lengthier discussion on the reasons why have-verb can exhibit raising, the lack of rich agreement of the verb combined with its capability to raise does indicate

that verb raising is not tied rich morphology. This notion will be returned to at length in chapter 3.4.3 concerning Swedish and in chapter 4.

3.4 Relation of Inflectional Morphology to Verb Movement in Other Germanic Languages

A look into verb movement in other languages provides a point of comparison to ME and ModE in how inflectional qualities can relate to the possibility of verb raising. As was noted, the two strains of Middle English, Southern and Northern, have rough modern counterparts in terms of word order. Following Kroch's classifications, the Northern ME dialect is identified as a V2-CP language, a word order type similar to that in Swedish. Icelandic provides a good example of a V2-IP word order which is similar to the word order of Southern ME. In Swedish comes an interesting challenge into the validity of the Rich Agreement Hypothesis. Swedish, as well as other mainland Scandinavian languages expressed poorly inflectional morphology with V2 word order.

3.4.1 German

German language works well with the established notion that a language with rich agreement also has V-to-T movement. German is of the V2-CP variety, a V2 language that does not exhibit V-to-C in subclauses. In terms of inflection, German does fulfil the "richness" criteria set by Rohrbacher (15).

(30) German, kommen – to come

	Present	Past
1st. person sg.	komm-e	kam
2nd person sg.	komm-st	kam-st
3rd person sg.	komm-t	kam
1st person pl.	komm-en	kam-en

2nd person pl.	komm-t	kam-t
3rd person pl.	komm-en	kam-en

German CP-V2 is generally seen to exhibit similar verb movement tendencies as the southern strand of Middle English (Kroch & Taylor 1997). The liabilities of the strong verb-subject agreement stemming from morphological agreement qualities echo in the syntax as expected; German has verb raising as a part of V2. However the plain V-to-T-to-C movement depicted in chapter 2 concerning V2 takes a slightly modified form in German as the language can be either be considered having T-final or T-initial. I will not comment on the discussion concerning the headness of German, but assume the stance which believes German to have T-final. In this case the order of movement would occur then from V-to-(final)T-to-C. The position of the German T is noted by Santorini & Kroch (2007) to be problematic due to the lack of modals in German which would provide evidence on the position of the T. Nevertheless, for the purposes of providing a connection between morphological richness and verb raising German is a functional example.

(31) a. Sie **wahrtet** nicht auf die bus.

*She's not **waiting** for the bus.*

b. in Frankfurt **wohnt** Mein Vater.

*In Frankfurt, my father **resides**.*

(Examples courtesy of about.com)

In subclauses German does not raise verbs, the verb remains in the VP position, or alternatively, accepting the possibility of T-final, the following examples actually provide examples where the is V-to-(final)T occurring.

(32) a. Ich weiß nicht, wann er heute **ankommt**.

*I don't know when he **arrives** today.*

b. Das ist die Dame, die wir gestern gesehen **haben**.

*That is the lady whom we **saw** yesterday*

(about.com)

For purposes of showing the connection of agreement and verb movement, German is a model language for fitting into the Rich Agreement Hypothesis.

3.4.2 Icelandic

The next Germanic language, Icelandic is similarly a V2 language. Icelandic is of the IP-V2 type, in general terms deviating from the CP-V2 type in that it has V-to-T movement appearing in both main clauses and subordinate clauses. A preview of Icelandic inflectionality was given in chapter 3.1 (18), where Rohrbacher's richness criteria was seen to be fulfilled. With Icelandic the connection between agreement and verb movement is evident along the line of Rich Agreement Hypothesis.

Icelandic main clauses have the archetypal V2 word order. (31) a. has subject first and b. has topic inversion.

(33) a. Tannlæknirinn minn **er** ekki mjög yndæl kona.

*My dentist **is** not a very nice woman*

b. Á morgun borðum við slátur.

Tomorrow, we eat slaughter.

Icelandic subclauses have V-to-T movement aswell:

(34) a. Það er rétt, að á morgun fer ég ekki heim.

It is correct, that tomorrow I don't go back home.

3.4.3 Swedish

Where both Icelandic and German are excellent and straightforward examples of how rich agreement appears in conjunction with verb movement, Swedish is an interesting language in that it does not have rich morphological inflectionality, yet is generally analyzed as a V2-CP language.

(35) Swedish, betalar – to pay

	Present	Past
1st. person sg.	betalar	betalade
2nd person sg.	betalar	betalade
3rd person sg.	betalar	betalade
1st person pl.	betalar	betalade
2nd person pl.	betalar	betalade
3rd person pl.	betalar	betalade

The table (35) shows that Swedish does not fulfil the richness criteria of Rohrbacher's (15). The verbs do not show agreement to person or number. Yet, Swedish syntax does use V2 type verb movement in main clauses:

(36) a. Imorgon **spelar** vi inte fotboll.

Tomorrow, we will not play football.

b. På fredag **går** vi inte ut.

On Friday, we won't go out.

What we have then is a language that does not have the causality between rich agreement and verb movement. The claim of the Rich Agreement Hypothesis however is not refuted by the presence of poor inflectionality and verb raising in Swedish, as the wording of the hypothesis does not exclude the possibility that verb raising would not occur even if the rich morphological

agreement is lacking. Furthermore, Swedish verbal morphology did evolve, and eventually decline, from a source language that had rich agreement into the poorly inflectional verb paradigm now present in Modern Swedish. Haugan's (2000) study into Old Norse grammar notes that verb agreement in Old Norse was sensitive to person features. Haugan provides the following table on Old Norse inflectional endings:

(37) Old Norse inflectional endings for indicatives.

	strong verbs, and weak verbs of the *ja*-class	weak verbs of the _-class*	weak verbs of the *ija*- and the _-class	strong verbs	weak verbs
1st. person sg.	-	-a	-i	-	-a
2nd person sg.	-r	-ar	-ir	-t	-ir
3rd person sg.	-r	-ar	-ir	-	-i
1st person pl.	-um	-um	-um	-um	-um
2nd person pl.	-*ið*	-*ið*	-*ið*	-u*ð*	-u*ð*
3rd person pl.	-a	-a	-a	-u	-u

Old Norse is general viewed as a V2 language. So the original form of Swedish, Old Norse, certainly fits into the expectation of rich agreement expressing V-to-T movement. The state of Swedish is evidence of the fact that poor inflectional morphology can still exhibit and sustain verb raising.

While the parallel of Old Norse and Swedish with Middle English and Modern English is not exact, it provides an interesting perspective to return to in the discussion over the nature and development of the relation of morphology and verb movement in English that will follow shortly in chapter 4.

3.5 Conclusion on the Connection Between Inflectional Morphology and Syntax

The Rich Agreement Hypothesis of Rohrbacher with the elaboration from Lightfoot and Koeneman viewed in chapter 3.2 does present a basis in support of the claim that rich morphology is a valid source for causing verb movement in syntax. The inflectional morphology dictates the strength of features in syntax whether the morphology has agreement to person or not. The agreement features echoing in syntax then dictate whether it is necessary or not for the verb to move to fulfil the requirements of agreement. What can be assumed then is that rich agreement does lead into verb raising.

The practical proof supports the above observation. The richly inflectional ME exhibits verb raising, the poorly inflectional ModE does not. Isolating the paradigm of *be* from ModE and observing its behaviour gives another example that ties neatly into the Rich Agreement Hypothesis. The Germanic language examples, Germanic and Icelandic similarly have rich agreement with verb raising. The examples provide nothing contrary to the assumption that a language that has rich agreement also has verb raising.

However, from observations on the behaviour of *have* and of the whole of Swedish we have simultaneous implication into the assumption to how morphological agreement can affect verb movement. In both instances poor inflectional morphology still allows for verb raising. This implies that the established conditional of rich agreement begetting verb raising cannot be inverted to poor inflectional agreement not allowing verb raising. Verb raising can exist without rich agreement, but this would then raise questions like why would some languages (Swedish) with poor agreement retain verb raising while others (ModE) would not. The observation on Swedish' originally having rich agreement from Old Norse does tie the origins of Modern Swedish' verb raising diachronically into the Rich Agreement Hypothesis, but does little to answer the question raised earlier on cause for the difference of verb movement in ModE and Swedish. The observations on the operations replacing verb raising in ModE hinted at the

answer; possible invention of auxiliary systems could lead into the omission of verb raising. How such an event would have underwent in English is the topic for the next chapter.

In concluding the third chapter, one can state that rich agreement does cause verb raising, but the lack of rich agreement alone does not force a loss of verb raising in language.

4. Diachronic View into the Loss of Verb Raising in English

The discussion on whether morphology was the source of change in verb movement in English will now be rounded with a diachronic view into the decline of verb raising. The previous chapter, which looked at the effects of morphology on verb raising with focus on theoretical side, ended in support of the view that rich morphology requires verb movement and poor morphology does not, though the latter can still exhibit verb movement. In other words; Lightfoot (1995) observes that the "lack of strong subject-verb agreement cannot be a sufficient condition for absence of V-to-I, but it may be a necessary condition." As was noted with Swedish, the connection between verb raising and rich agreement is not necessarily in uniform one-to-one relation. For English the change in morphology was effectively complete by 1400, however it wasn't until the early 17th century that V-to-T finally disappeared from the language (Roberts 1993). Certainly the loss of morphology first followed by V-to-T operations second is the order one would assume to be reasonable under the theoretical assumptions from chapter 3: morphology affecting syntax, not the other way around. As was further noted from the case of Swedish, that poor inflectional morphology does not necessarily actively cause any change in verb movement, I have to turn elsewhere than morphology for the actual trigger that caused English to change. Lightfoot (1995) argues that the entry of the periphrastic do, a measure to counter the loss of inflectionality, begun to advance the decline of verb raising operations in Middle English syntax.

4.1 Fall of Verb Raising and Rise of Do-Support

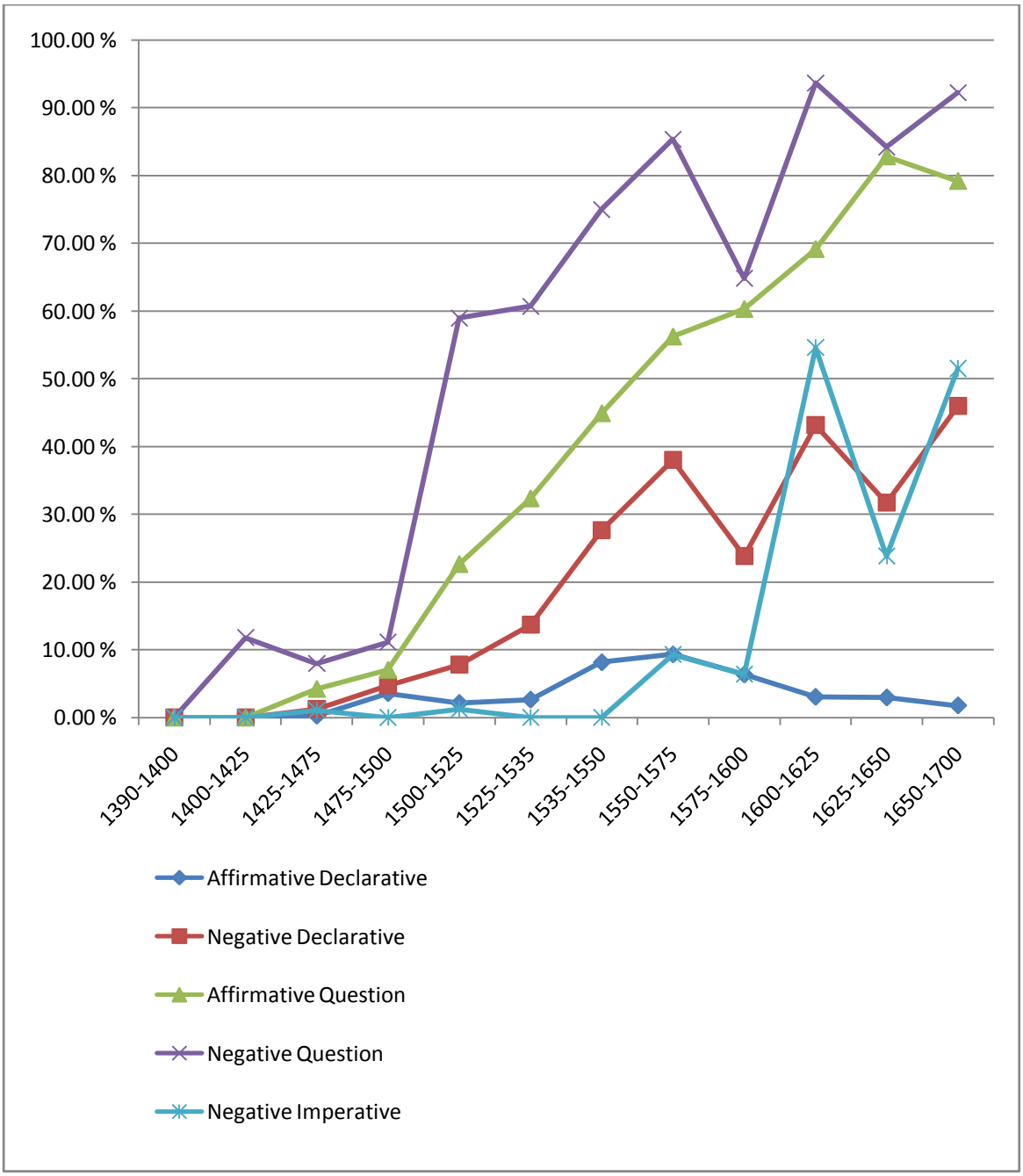
As the study of the development of English morphology itself is beyond the focus of this essay, I will provide a superficial outline as background for the closer discussion on the loss of verb raising during the critical transitional phase in Middle English. In the chain of interconnected changes that led to the loss of verb raising in English, the first altercation occurred in the assumed initiator of the syntactic change: morphology. For the purposes of this essay the central historical date is the approximation 1400, when the inflectional morphology had reached the state where strong agreement was no longer present. As discussed in chapter 3.2, without rich agreement it was no longer necessary to maintain the verb-subject agreement via upward verb movement in syntax. However as also noted, poor inflectional agreement alone will not force change into verb movement either. The lengthy time period from the loss of inflectional richness to the loss of verb raising would suggest that for a certain length of time English language had weak morphological agreement yet had verb raising occur, a situation that would mirror the current state of Swedish in terms of inflectionality-verb raising relation.

In the time period between when English lost its morphological richness and when verb raising fell out of use there is one notable operation that rose in productivity simultaneously as verb raising operations began to decline. Do-support started to occur in increasing frequency after the 15th century.

The virtue of do-support as a focus in a diachronic study of the loss of verb raising is twofold, firstly its presence in historical texts marks the omission of older constructions that would have used verb raising. As observed in chapter 3.3.1, do-support is and became a necessary crutch for English to maintain grammatical word order in direct questions and negative declaratives and imperatives when the verb does not raise from V. The detailed work of Ellegård (1953) will be used for its data on the frequency of the presence of periphrastic do in historical

texts. Secondly, do-support is not only an indicator for the loss of verb raising, but it might also be the cause that accelerated the loss of verb raising in the language. I will address first the diachronic development of do-support's frequency in English. Ellegård's data is harvested from a multitude of prose of the Middle English era, presented here in a diagram.

(38) Frequency of do-support.



There is a sharp increase from 1500 onward when do-support becomes significantly more productive. Particularly so in negative declaratives, and affirmative and negative questions, sentences which in ModE always require do-support. Since the presence of do-support effectively disallows the possibility for upward verb movement, we can assume the decline of verb raising in English is accelerating in the aforementioned period. The evidence from Ellegård's study prompts an analysis from Roberts (1993) where he beliefs that the 16th century was a "transitional period, where both grammars (the one with main-verb raising and the one without) underlie the behaviour of the speech-community."

The possibility of a "transitional period" occurring with do-support leads us to the actual verb raising denying nature of do-support. As was noted in 3.3.1, the entry of do-support blocks the main verb possibility to enter T (or C position in questions) within a sentence. With do-support becoming prominent in the language, the cues from which a child would deduct whether the language has verb raising or not would become scarce and as the sudden spike in the years between 1550 and 1575 suggests, the shift from verb raising could have possibly occurred within a matter of generations. The idea that children would use the presence of "do" as a cue for word order is in line with Lightfoot's (1995) suggestion that do-support was the decisive factor that pushed the use of verb raising movement into decline. Roberts (1985) sums the significance of do-support eloquently: "[do-support] is important because its frequency greatly decreased the amount of evidence for a morphological agreement system available to learners of the language". This analysis for the possible development of events receives support from recent observations on Belfast English, where some vestigial V2 constructs are currently disappearing in a progressive manner through three generations with three distinct degrees of decline.

It must be said that sentences expressing verb raising did still occur after the 16th century in literature, but whether the use of verb raising was still productive amongst English speakers remains doubtful. Roberts (1993) marks that the use of verb raising in prose retained an

archaic, stylistic function, with such writers as Shakespeare using the older word order for purposes of drama. Thus the data available from texts dating post-16th century are particularly prone to the possible disparity that written text by a learned man would have from the actual spoken language of the commoner.

Echoing Lightfoot's thoughts concerning the loss of verb raising, the loss of morphology is a necessary requirement but not a sufficient one. It was not until the entry of do-support that the ME language began to acquire sufficient evidence against the possibility of verb raising that led to the loss of V-to-T. And the creation of periphrastic do itself is linked to the loss of inflectional agreement as both do-support and modals begun to be used a functional substitutes for inflection (Roberts 1985). Effectively then the loss morphological cues led to the increased adoption of periphrastic do-constructs in the language which in turn accelerated the loss of verb raising operations.

4.2 A View into a Change in Progress

An interesting view into a change in progress was taken in the study by Henry (1997) in which she looked into Belfast English, which arguably still retains V2 in imperatives but is undergoing an evolution where V2 word order is being replaced by word order similar to that of ModE. Her observations provide a valuable hypothetical comparison into the loss of verb raising in ME as it was replaced by do-support. Henry's work observes the change currently underway in V2 imperatives, where the V2 order is becoming rare amongst the younger speakers of the dialect. The attraction of Henry's study is in its current nature, the data harvested from old prose that the study of Ellegård's uses cannot fully reflect or convey the actual evolution of the language amongst speakers. Henry identifies three dialects that roughly settle according to the age groups of the speakers. The first is called the Unrestricted Inversion dialect, used mainly by the eldest speakers and allows a very liberal application of V2 in imperative clauses.

(39) a. Talk you always to your mother.

b. Write you carefully your homework.

These examples of Belfast English from Henry's study have the inversion form clearly visible, with the adverb additionally showing the position of the subject. The next two examples show the alternate position available for the subject.

(40) a. Talk always you to your mother.

b. Write carefully you your homework.

The second is named the Restrictive Inversion dialect, found in use amongst middle-aged and younger adults. In the Restrictive Inversion dialect the use of inversion is found mainly in imperative clauses which use a telic motion verb and in passive imperatives. The third dialect is the no-inversion dialect, which -as the name implies- does not allow for any inversion. The final dialect form is found most often in use by children and youngsters. The three identified dialects construct an interesting view into the change of a single parameter within the space of three generations. Furthermore, all three variants of Belfast English are productive at the same time within the speaking community suggesting the existence of simultaneous subgrammars amongst the speakers.

Returning for a moment to Ellegård's data, the swiftness of the change in the adaption of do-support into Middle English could have well occured in similarly gradual steps. The negative interrogative is the first to have seen a sharp rise in its use after 1500. Direct questions reach a 50% usage of do-support around the middle of 16th century. Negative imperatives begin to see the use of do-support last, at the start of the 17th century. New generations adopt new uses of auxiliary operations, which each omit verb raising. Of course Ellegård's data is from old prose, and covers a vastly larger geographical area of speakers than the smaller speakerbase of Belfast English. The data is general and cannot account for the accurate dates of adaption of do-support by the medieval speaking populace in England. Still, Ellegård's data seen in light of the

gradual development observed in Belfast English does provoke thoughts concerning the development of the change in Middle English. The observed gradualness of change sits well with the earlier remark on the status of do-support as a negative cue for verb raising for children learning the language.

5. Conclusion

The verdict concerning whether the decline of inflectional morphology is responsible for the loss of V-to-T movement in English ends with an unsatisfying yes and a no. Following the discussion on chapter 3 the verdict was positive in the extent that rich inflectional agreement causes verb raising. Basing solely on the theoretical discussion, without rich agreement a language would have no need to raise verbs, yet examples from living languages show that poorly inflectional language can and do raise verbs. The example of Swedish shows that losing morphological agreement is not enough alone to cause a language to lose its verb raising capability. Without appropriate negative clues for new learners of a language to identify a negative verb raising parameter in the language, the abolishment of verb raising, regardless of morphological qualities, will not occur. For English, once inflectional qualities were lost in the language, the decisive factor that begun the change into a non verb raising language was the entry of do-support. The timeline and advance of do-support mirrors the decline of V-to-T operations in a sense. However, the birth of do-support itself can be seen as a causality to the loss of inflectional richness, the auxiliary becoming the periphrastic functionary to sustain the language over its loss of inflection. In light of the evidence discussed the conclusion then is that the decline of inflectional morphology was a decisive factor and a cause for the loss of verb raising in English.

As a final word I acknowledge that there remain some issues concerning even the validity of the assumed causality of morphology into verb raising. While the discussion in this

essay focusing on the loss of morphology in relation to the loss of verb raising in English does give evidence to the link between rich morphology and verb raising, with the possibility that verb raising is retained even after the loss of rich inflectionality, it does not touch the possibility of a situation where there would be no V-to-T in a language that retains rich inflectionality.

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