

The Syntax of English and Danish Finite Verbs and Optimality Theory

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Based on an analysis of the different positions of the finite main verb in English and Danish (and some additional related languages) in terms of V° -to- I° movement (cf. Pollock 1989), the paper starts by linking these positional differences to the presence (or absence) of inflection for person in all verbal tenses (cf. Vikner 1997).

It is then shown that modern English is not just different from Danish but actually unique in that there are two different types of finite verbs that have different syntax, and also that the two verb types should be taken to be thematic and non-thematic verbs, rather than main and auxiliary verbs (cf. Roberts 1985).

The rest of the paper will give a comprehensive analysis of the complex syntax of these two types of English finite verbs (also as compared to finite verbs in Danish) in terms of violable (and potentially conflicting) constraints, in particular the following three:

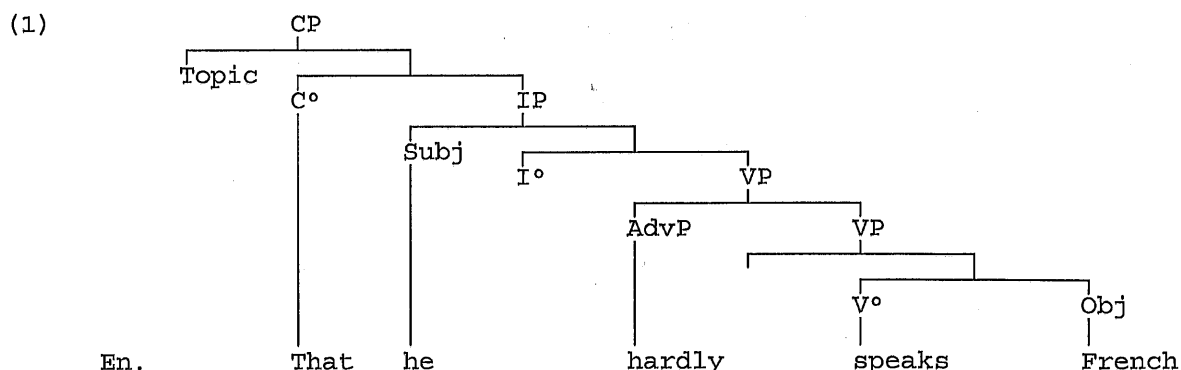
- **Verb-in- V°** (all verbs should be base-generated in V°),
- **Pred-Right** (V° and Adj° should be to the right of their XP-sisters)
- **Head Movement Constraint** (HMC, heads may not 'skip' other heads when they move, e.g. verbs should not skip over negation on their way to I° or C°)

As in Vikner (2001b), it will be argued that whereas *do*-insertion in negated clauses results from the **HMC** being less violable than **Verb-in- V°** , *do*-insertion in interrogative clauses results from the **Pred-Right** being less violable than **Verb-in- V°** , and therefore there could be a language with *do*-insertion in one but not the other case. This is supported by the diachronic developments from Middle English to modern English, where *do*-insertion in questions seems to slightly predate *do*-insertion in negated clauses.

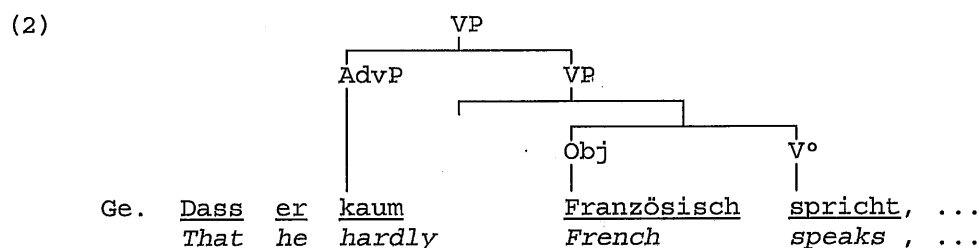
The previous stage, Middle English, and the subsequent loss of V° -to- I° movement (which as stated above was linked to developments in the inflectional system) will be accounted for in terms of a different constraint, **Check Person Inflection**.

1. The syntax of finite main verbs

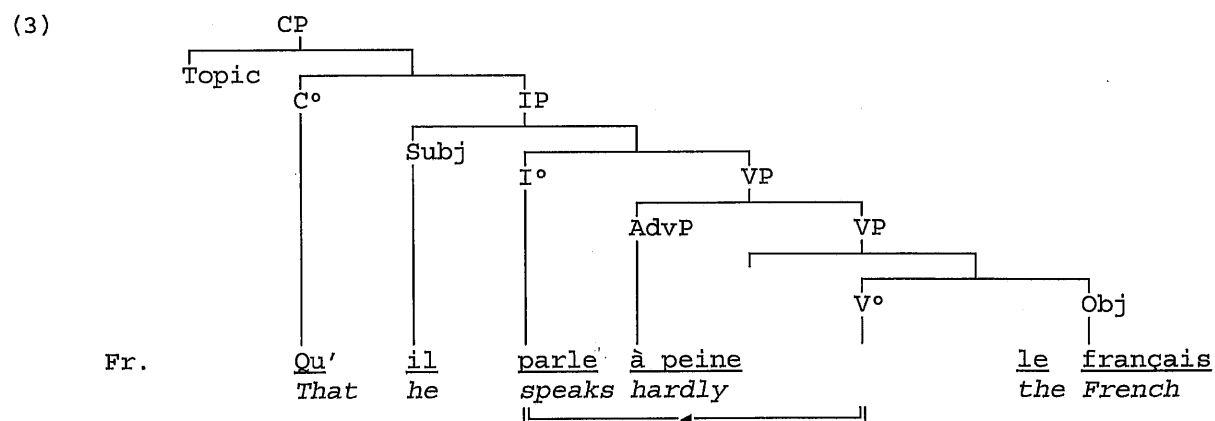
A typical embedded sentence like (1) shows that English is a VO-language (VO = verb-object) and that it does not have V°-to-I° movement:



That English is a **VO-language** can be seen by comparing the English *hardly speaks French* to the German *kaum Französisch spricht* 'hardly French speaks', German being an OV-language:



That English is a VO-language **without V°-to-I° movement** can be seen by comparing the English *hardly speaks French* to the French *parle à peine le français* 'speaks hardly French'. English and French are both VO-languages, but French has V°-to-I° movement:



Middle English is like French, not like modern English, in this respect. Compare Middle English *talkyd neuer* to what the word order would have been in modern English, *never talked*:

- (4) a. ME. He swore that he talkyd neuer t wyth no man ...
 b. En. He swore that he never talked to anybody ...
 ((4a): 1460 William Paston I, *Letter to John Paston I*, 02.05.1460, Davis 1971:164)

In other words, in French and in Middle English, the finite verb is base-generated in one position, to the immediate left of the object, and then moved across the sentence adverbial into another position, to the immediate right of the subject.

Chomsky (1995:222) says about the ability of constituents to move in the syntax: "*Minimalist assumptions suggest that this property should be reduced to morphology-driven movement.*" This was the objective of Vikner (1997), where finite verb movement was linked to verbal inflectional morphology:

- (5) An SVO-language has V°-to-I° movement if and only if person morphology is found in all tenses. (Vikner 1997:207, (23))

The generalisation in (5) accounts for the above difference in the positions of finite main verbs, assuming a clause structure as in (1) and (3) above.

Among all the Romance and Germanic VO-languages, the only languages where inflectional differences for person are not found in every tense are modern English (including early modern English) and four modern Scandinavian languages: Danish, Faroese, Norwegian, and Swedish, cf. (8) and (9) below. (The Norwegian and Swedish paradigms are identical to the Danish one in (9).)

These five languages are also the only VO-languages without V°-to-I° movement, cf. (6) and (7) below. (Norwegian and Swedish examples would be completely parallel to the Danish one in (7b).)

Furthermore, these five languages all have in common that they only recently lost V°-to-I° movement, i.e. they have all undergone the change from *talkyd neuer* to *never talked*. In English, this change took place in the 15th and 16th centuries.

■ Which languages have V°-to-I° movement?

Icelandic, Yiddish, and French all have V°-to-I° movement:

(6)

	C°	IPsp	I°	AdvP	V°	DP	
a. En.	*That	John	eats	often	_____	tomatoes	(surprises most people)
b. Da.	*At	Johan	spiser	ofte	_____	tomater	(overrasker de fleste)
c. Fa.	*At	Jón	etur	ofta	_____	tomatir	(kemur óvart á tey flestu)
d. Ic.	Að	Jón	borðar	oft	_____	tómata	(kemur flestum á óvart)
e. Yi.	Az	Jonas	est	oft	_____	pomidorn	(iz a khidesh far alenen)
f. Fr.	Que	Jean	mange	souvent	_____	des tomates	(surprend tout le monde)

English, Danish, and Faroese (and also Norwegian and Swedish) all lack V°-to-I° movement:

(7)

	C°	IPsp	I°	AdvP	V°	DP	
a. En.	That	John		often	eats	tomatoes	(surprises most people)
b. Da.	At	Johan		ofte	spiser	tomater	(overrasker de fleste)
c. Fa.	At	Jón		ofta	etur	tomatir	(kemur óvart á tey flestu)
d. Ic.	*Að	Jón		oft	borðar	tómata	(kemur flestum á óvart)
e. Yi.	*Az	Jonas		oft	est	pomidorn	(iz a khidesh far alenen)
f. Fr.	*Que	Jean		souvent	mange	des tomates	(surprend tout le monde)

■ Which languages have person morphology in all tenses?

(8)	English (20th C.)	Early modern English (16th C.)	Middle English (14/15th C.)	French (20th C.)
Infinitive	hear	hear(en)	here(n)	entendre
Imperative				
Singular	hear	hear	her(e)	entends
Plural	hear	hear	hereth	entendez
Participles				
Present	hearing	hearing	hering	entendant
Past	heard	heard	herd	entendu
Present				
1 st singular	I hear	I hear	I here	j' entends
2 nd singular	you hear	thou hearst	thou herest	tu entends
3 rd singular	he hears	he heareth	he hereth	il entend
1 st plural	we hear	we hear(en)	we here(n)	nous entendons
2 nd plural	you hear	you hear(en)	ye here(n)	vous entendez
3 rd plural	they hear	they hear(en)	þei here(n)	ils entendent
Different forms	2	3	4	4 (1s=2s=3s)
Past				
1 st singular	hear-d	hear-d	her-d-e	entend-ais
2 nd singular	hear-d	hear-d-[st]	her-d-est	entend-ais
3 rd singular	hear-d	hear-d	her-d-e	entend-ait
1 st plural	hear-d	hear-d-(en)	her-d-e(n)	entend-i-ons
2 nd plural	hear-d	hear-d-(en)	her-d-e(n)	entend-i-ez
3 rd plural	hear-d	hear-d-(en)	her-d-e(n)	entend-aient
Different forms	1	2	3	3 (1/2s=3s=3p)

(9)	Danish	Faroese	Yiddish	Icelandic
Infinitive	høre	hoyra	hern	heyra
Imperative				
Singular	hør	hoyr	her	heyri
Plural	hør	hoyr(ið)	hert	heyrið
Participles				
Present	hørende	hoyrandi	herndik	heyrandi
Past	hørt	hoyrt	gehert	heyrt
Present				
1 st singular	jeg hører	eg hoyri	ikh her	ég heyri
2 nd singular	du hører	tú hoyrir	du herst	pú heyrir
3 rd singular	han hører	hann hoyrir	er hert	hann heyrir
1 st plural	vi hører	vit hoyra	mir hern	við heyrum
2 nd plural	I hører	tit hoyra	ir hert	pið heyrið
3 rd plural	de hører	tey hoyra	zey hern	þeir heyra
Different forms	1	3	4	5
Past				
1 st singular	hør-te	hoyr-d-i	---	heyrið-i
2 nd singular	hør-te	hoyr-d-i	---	heyrið-ir
3 rd singular	hør-te	hoyr-d-i	---	heyrið-i
1 st plural	hør-te	hoyr-d-u	---	heyrið-um
2 nd plural	hør-te	hoyr-d-u	---	heyrið-uð
3 rd plural	hør-te	hoyr-d-u	---	heyrið-u
Different forms	1	2	0	5

2. Main verb syntax versus auxiliary verb syntax

When compared even to languages which are very close either typologically (e.g. Danish) or diachronically (e.g. Middle English), it becomes apparent that one property of English syntax is really unique, namely the fact that there are syntactic differences between finite auxiliary verbs and finite main verbs. Auxiliary verbs are those which take a VP as complement (as opposed to main verbs, which have an NP, a PP, or a CP as complement or have no complement at all).

In all the other Romance and Germanic languages, finite auxiliary verbs and finite main verbs behave alike. Consider auxiliary *have* and main verb *have*.

In Middle English (as in French), finite *have* occurs in I°, i.e. before the sentence adverbial *never*, regardless of whether it is an auxiliary, (10a), or a main verb, (10b):

- (10) ME. a. $\begin{array}{ccc} \text{C}^\circ & \text{I}^\circ & \text{V}^\circ \\ \text{Yf } y & \text{hadde} & \text{neuer} \end{array}$ sayd to þe but þis folowand techinge ...
 If I had never said to you but this following teaching ...
 (= If I had never told you anything but the following ...)
 (around 1400-1450, Anonymous (trsl.), *The Governance of Lordschipes*, Steele 1898:53)
- b. $\begin{array}{ccc} \text{I}^\circ & & \text{V}^\circ \\ I & \text{had} & \text{neuer} \end{array}$ more nede off mony than now
 I had never more need of money than now
 (1475, John Paston II, *Letter to John Paston III*, 06.11.1473, Davis 1971:469)

In Danish, finite *have* occurs in V°, i.e. after the sentence adverbial *aldrig* 'never', regardless of whether *have* is an auxiliary, (11a), or a main verb, (11c):

- (11) Da. a. $\begin{array}{ccc} \text{C}^\circ & \text{I}^\circ & \text{V}^\circ \\ \dots & \text{hvis } jeg & \text{aldrig } \text{havde} \end{array}$ sagt det til dig (Aux *have*)
 ... if I never had said it to you
- b. *... hvis jeg havde aldrig sagt det til dig
- c. ... fordi jeg aldrig havde brug for penge (Main *have*)
 ... because I never had need for money
- d. *... fordi jeg havde aldrig brug for penge

In modern English, finite auxiliary *have* occurs in I°, i.e. before the sentence adverbial *never*, whereas finite main verb *have* occurs in V°, i.e. after *never*.

- (12) En. a. $\begin{array}{ccc} \text{C}^\circ & \text{I}^\circ & \text{V}^\circ \\ ? \dots & \text{if } I & \text{never had} \end{array}$ said that to you (Aux *have*)
 b. ... if I had never said that to you
- c. ... because I never had any need for money (Main *have*)
 d. *... because I had never any need for money

Two other differences between finite auxiliaries and finite main verbs in modern English correlate with this one. One difference is that auxiliary *have* may precede *not*, whereas main verb *have* needs *do*-support in a negated clause:

- (13) En. a. *... that we ^{C°}did not ^{I°}have ^{V°}seen the film (Aux *have*)
 b. ... that we had not seen the film
 c. ... that we did not have a fight last night (Main *have*)
 d. *... that we had not a fight last night

The other difference is that auxiliary *have* may precede the subject in questions (and in other V2-contexts), whereas main verb *have* needs *do*-support also here:

- (14) En. a. *Why ^{C°}do you ^{I°}actually ^{V°}have asked me? (Aux *have*)
 b. Why have you actually asked me?
 c. Why did you actually have a fight? (Main *have*)
 d. *why had you actually a fight?

When other English verbs are examined, the full picture is as follows:

- (15) "Auxiliary" syntax
 (verb occurs in I°, and may also occur in C° in e.g. questions)
 Auxiliaries: *be*, *have*, *do*, and modals
 Main verbs: *be*
- (16) "Main verb" syntax
 (verb occurs in V° only, never in I° or in C°)
 Auxiliaries: -
 Main verbs: *have*, *do*, and all other main verbs

(Auxiliary *be* is found with progressive and passive, whereas main verb *be* is found e.g. in *John is never ill*. Auxiliary *do* is found e.g. with negated main verbs or in questions, whereas main verb *do* is found e.g. in *John never does his homework*.)

The relevant difference is not one of auxiliaries versus main verbs, as seen by the behaviour of main verb *be*, which behaves unlike other main verbs but like the auxiliaries (always precedes sentence adverbials, precedes *not*, precedes the subject e.g. in questions, and does not allow *do*-insertion).

I also strongly doubt that the relevant difference is one between high frequency verbs versus verbs of lower frequency, as suggested by Bybee (2003). Although some of the verbs with "auxiliary" syntax (e.g. main and aux *be* or aux *have*) are likely to have a very high frequency, I find it difficult to believe that also relatively rarely used modal verbs, e.g. *ought*, should have a higher frequency than even the most commonly used verbs with "main verb" syntax (e.g. main *have* or *say*, *know*, *believe*).

Instead, I would like to follow Roberts (1985:30), Scholten (1988:160), and Pollock (1989:385), who suggest that in English, only verbs that do not assign thematic roles may occur in I°. (Examples of thematic roles are agent, patient, goal, experiencer, theme, ...). This gives the right prediction concerning main verb *be*, which presumably does not assign a thematic role (in e.g. *John is ill*, if there is a thematic role here at all, it is presumably assigned by *ill*). Main verb *be* here differs from main verb *have* and *do*, but resembles auxiliary *have*, *be* and *do*.

3. Constraints

I would like to propose an analysis within Optimality Theory, in terms of violable constraints, based on Grimshaw (1997) and Vikner (2001a,b). Language differences are accounted for as differences between which of these violable constraints take precedence over others (constraints are ranked in relation to each other).

Many of the underlying assumptions and many of the constraints are found also in Government and Binding Theory (e.g. Chomsky 1986) and the Minimalist Program (e.g. Chomsky 1995).

The following four constraints are assumed to play the same role (i.e. to have the same ranking) in all the VO-languages discussed here:

- (17)
- All thematic verbs are inserted under V° , to make the assignment of the thematic roles possible. There is no such requirement on non-thematic verbs.
 - When something moves into CP-spec, the finite verb moves into C° . This is V2, cf. Vikner (1995) and references there.
 - **Head-Left**: All X° s are to the left of their XP-sisters (Grimshaw 1999). This is violated in German VPs, cf. (2) above.
 - **Check person inflection**: Requires all finite sentences to contain in I° a finite verb with person differences in all tenses. This is what forces V° -to- I° movement. It is based on Vikner (1997), see also Rohrbacher (1999). Note that this constraint is necessarily violated in languages like modern English and modern Danish, because none of their finite verbs display person differences in all tenses. This constraint is also violated e.g. in German, cf. Vikner (2001a, in press).

The following three constraints are assumed to play different roles (i.e. to be ranked differently) in English and in the other VO-languages discussed here. These constraints are the ones responsible for the unique syntax of English auxiliary verbs:

- (18)
- **Verb-in- V°** : Verbs should be inserted under V° . As stated above, this is necessarily the case for thematic verbs, and therefore the ranking of this constraint will only affect non-thematic verbs.
 - **Pred-Right**: All predicate X° s, i.e. all elements inserted under V° or under Adj° , are to the right of their XP-sisters (cf. German verbs). Conflicts with **Head-Left**.
 - **HMC** (= the Head Movement Constraint, Travis 1984:131): Verbs should not move across sentential negation. The idea is that both verbs and sentential negation are heads (X° -categories), and that these cannot move across each other. Because the sentential negation is placed between I° and V° , this constraint is violated by V° -to- I° movement in negated clauses. In Vikner (2001a), I extend this to also cover the link between I° and V° in those cases where the finite verb remains in V° .

4. Accounting for the variation

4.1 The position of finite thematic verbs

The basic difference between Middle English on one hand and modern English and modern Danish on the other concerns V°-to-I° movement and verbal inflection. Middle English has V°-to-I° movement with all verbs, whereas modern English and modern Danish do not:

- (19) a. ME. He swore that he talkyd neuer t wyth no man ... (= (4a))
 b. En. He swore that he never talked to anybody ...
 c. Da. Han svor at han aldrig talte med nogen ...

The relevant conflict here is between the constraints **Check person inflection** and **Pred-Right**. The difference between the languages arises even though **Check person inflection** is ranked above (= takes precedence over) **Pred-Right** in all three languages.

In Middle English, the two options are V°-to-I° movement of a verb that has person in all tenses, (20a), or no V°-to-I° movement at all, (20b). **Check person inflection** prefers the former:

(20)

MIDDLE ENGLISH	Check person inflection	Pred-Right
►► a. <i>talkyd</i> neuer t		**
b. <i>neuer talkyd</i>	*!	*

(= (19a))

(►► marks the optimal candidate, which corresponds to a grammatical sentence. * marks a constraint violation, and *! marks a fatal constraint violation.)

In modern English and modern Danish, on the other hand, the two options are V°-to-I° movement of a verb that does not have person in all tenses, (21a), vs. no V°-to-I° movement at all, (21b). Both violate **Check person inflection** and the decision is therefore up to **Pred-Right**. **Pred-Right** is violated only once when the verb remains in V°, (21b), but twice when the verb is inserted under V° and then moved into I°, (21a), and so the optimal candidate is (21b):

(21)

MODERN ENGLISH & MODERN DANISH	Check person inflection	Pred-Right
a. <i>talked</i> never t	*	**!
►► b. <i>never talked</i>	*	*

(= (19b,c))

Because thematic verbs must be inserted under V°, the only way for them to occur in I° is to undergo V°-to-I° movement. For non-thematic verbs, an alternative way is also available: Insertion directly under I°, without going via V°.

4.2 The position of finite non-thematic verbs

The next difference to be derived is one between Middle and modern English on one hand and modern Danish on the other, concerning the placement of finite non-thematic verbs. In Middle and modern English they are in I°, in Danish in V°:

- (22) a. En. ... if I had never said that to you (= (12b) above)
 b. Da. ... hvis jeg aldrig havde sagt det til dig (= (11a) above)
 c. ME. Yf y hadde neuer sayd to þe but ... (= (10a) above)
 If I had never said to you but ...

The relevant conflict here is between the constraints **Pred-Right** and **Verb-in-V°**. Recall that **Pred-Right** only applies to verbs inserted under V°. It is therefore necessary to consider a candidate with *had* inserted directly under I° ((23a), where only *said* violates **Pred-Right** but *had* violates **Verb-in-V°**), as well as a candidate with *had* inserted under V° and then moved into I° ((23b), which has two more violations of **Pred-Right** than (23a) but no violations of **Verb-in-V°**), and finally also a candidate in which the verb is inserted under V° and stays there ((23c), which only has one more violation of **Pred-Right** than (23a)).

In modern English, **Pred-Right** takes precedence over **Verb-in-V°**:

(23)

MODERN ENGLISH	Check p.inf.	Pred- Right	Verb- in-V°
►► a. <i>had never said</i>	*	*	*
b. <i>had never t said</i>	*	***!	
c. <i>never had said</i>	*	**!	

(= (22a))

In Danish, it is the opposite, **Verb-in-V°** takes precedence over **Pred-Right**:

(24)

MODERN DANISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>havde aldrig sagt</i>	*	*!	*
b. <i>havde aldrig t sagt</i>	*		***!
►► c. <i>aldrig havde sagt</i>	*		**

(= (22b))

In Middle English, the constraint ranking is the same as Danish, the difference being the same as in (20) above, i.e. that **Check person inflection** is only violated by the candidate where the verb is not in I°:

(25)

MIDDLE ENGLISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>had neuer sayd</i>		*!	*
►► b. <i>had neuer t sayd</i>			***
c. <i>neuer had sayd</i>	*!		**

(= (22c))

4.3 The position of finite verbs in questions

The very same difference in constraint ranking also accounts for another syntactic difference between English, Danish and Middle English, concerning verb movement in questions. In English questions with finite thematic verbs, *do* is inserted in I° and moved to C°, whereas in Danish and Middle English questions, the thematic verb itself moves via I° into C°:

- (26) a. En. What does it t really mean ?
 b. En. *What means it t really ?
 c. Da. *Hvad gør det t egentlig betyde ? (≈ (26a))
 d. Da. Hvad betyder det t egentlig t ? (≈ (26b))
 e. ME. What menep it t t
 bat my dayes sall be so schortte?
 What means it that my days shall be so short ?
 (1494, Anonymous, *Life of Alexander*, Westlake 1913:109)

The cost of *do*-insertion is a violation of **Verb-in-V°**, but on the benefit side there is only one violation of **Pred-Right**, caused by the main verb in V°, (27a). Movement of the thematic verb via I° into C° does not violate **Verb-in-V°**, but it violates **Pred-Right** three times, in V°, in I°, and in C°, (27b). The ranking of these two constraints is therefore crucial:

(27)

MODERN ENGLISH	Check p.inf.	Pred- Right	Verb- in-V°
►► a. <i>does it t really mean</i>	*	*	*
b. <i>means it t really t</i>	*	***	

(28)

MODERN DANISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>gør det t egentlig betyde</i>	*	*!	*
►► b. <i>betyder det t egentlig t</i>	*		***

Here there is no difference between Danish and Middle English. In Middle English, neither candidate violates **Check person inflection** because both candidates have a verb in I°:

(29)

MIDDLE ENGLISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>does it t mene</i>		*!	*
►► b. <i>menep it t t</i>			***

In questions with non-thematic verbs, none of the three languages have **do**-insertion:

- (30)
- | | | <u>C°</u> | | <u>I°</u> | | <u>V°</u> | <u>V°</u> | | |
|-------------------|--------------------------------|-----------|-----|-----------|----------|-------------|-----------|-------------|-----------|
| a. En. *Why | <u>do</u> | | you | t | actually | <u>have</u> | asked | me? | |
| b. En. Why | <u>have</u> | | you | t | actually | | asked | me? | |
| c. Da. *Hvorfor | <u>gør</u> | I | t | | egentlig | <u>have</u> | spurgt | mig? | (≈ (30a)) |
| d. Da. Hvorfor | <u>har</u> | I | t | | egentlig | t | spurgt | mig? | (≈ (30b)) |
| e. ME. Whare-tyll | <u>haue</u> | ye | t | | | t | askyd | me þerof ? | |
| | Where-till | have | you | | | | asked | me thereof? | |
| | (Why did you ask me about it?) | | | | | | | | |
- (around 1400-1450, Anonymous (trsl.), *The Governance of Lordschipes*, Steele 1898:113)

Even in modern English, there is nothing to be gained by **do**-insertion here. It does not minimise the violations of **Pred-Right**, because non-thematic **have** may itself be inserted under **I°**, so that only the main verb **seen** violates **Pred-Right**, (31b), whereas **do**-insertion in **I°** would force non-thematic **have** to be inserted under a **V°** and then there would be two violations of **Pred-Right**, (31a). Insertion of non-thematic **have** under a **V°** and subsequent movement to **I°** and **C°** would violate **Pred-Right** even more, (31c):

(31)

MODERN ENGLISH	Check p.inf.	Pred- Right	Verb- in-V°
a. <i>do you t actually have asked</i>	*	***!	*
►► b. <i>have you t actually asked</i>	*	*	*
c. <i>have you t actually t asked</i>	*	***!***	

In Danish, the candidate with insertion of all verbs under a **V°**, (32c), wins, because of the high ranking of **Verb-in-V°**:

(32)

MODERN DANISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>gør du t egentlig have spurgt</i>	*	*!	**
b. <i>har du t egentlig spurgt</i>	*	*!	*
►► c. <i>har du t egentlig t spurgt</i>	*		****

Here again there is no difference between Danish and Middle English. In Middle English, none of the candidates violate **Check person inflection** because all candidates have a verb trace in **I°**:

(33)

MIDDLE ENGLISH	Check p.inf.	Verb- in-V°	Pred- Right
a. <i>do ye t haue askyd</i>		*!	**
b. <i>haue ye t askyd</i>		*!	*
►► c. <i>haue ye t t askyd</i>			****

4.4 The position of finite verbs in negated clauses

Consider now the three-way difference concerning negated clauses. In modern English negated clauses, *do* is inserted in I°, in Danish there is neither *do*-insertion nor V°-to-I° movement, and in Middle English, there is no *do*-insertion but there is V°-to-I° movement:

- (34)
- | | | C° | | I° | | V° | | | |
|--------|------|---------|-----|---------------|------|---------------|-----|--------------|-----------|
| a. En. | ... | because | you | <u>did</u> | not | <u>talk</u> | to | him | |
| b. En. | *... | because | you | <u>talked</u> | not | t | to | him | |
| c. En. | *... | because | you | | not | <u>talked</u> | to | him | |
| d. Da. | *... | fordi | du | <u>gjorde</u> | ikke | <u>tale</u> | til | ham | (≈ (34a)) |
| e. Da. | *... | fordi | du | <u>talte</u> | ikke | t | til | ham | (≈ (34b)) |
| f. Da. | ... | fordi | du | | ikke | <u>talte</u> | til | ham | (≈ (34c)) |
| g. ME. | ... | | I | <u>spak</u> | not | t | to | hym ther-of | |
| | ... | | I | <u>spoke</u> | not | | to | him about it | |
- (1460, Margaret Paston, *Letter to John Paston I*, 21.10.1460, Davis 1971:259)

The conflict here is between **Verb-in-V°** on one hand and **HMC** and **Pred-Right** on the other. Recall that **HMC** is violated not only by a finite verb moving from V° across negation into I°, but also by a link from I° across negation down into V°. (The underlying assumption is that all languages have to have some kind of link between I° and the finite verb). As usual, the candidate with *do*-insertion violates **Verb-in-V°**, but it does not violate **HMC**, because there is no link across negation, (35a). Both candidates without *do*-insertion do not violate **Verb-in-V°**, but they do violate **HMC**, because they both have a link across negation, (35b,c).

In English, **Pred-Right** and **HMC** takes precedence over **Verb-in-V°**:

(35)

MODERN ENGLISH	Check p.inf.	Pred- Right	HMC	Verb- in-V°
▶▶ a. <i>did not talk</i>	*	*		*
b. <i>talked not t</i>	*	***!	*	
c. <i>not talked</i>	*	*	*!	

In Danish, **Verb-in-V°** takes precedence over **Pred-Right** and **HMC**, causing (36a) to be ruled out. **Pred-Right** then settles the competition between (36b,c) in favour of (36c):

(36)

MODERN DANISH	Check p.inf.	Verb- in-V°	Pred- Right	HMC
a. <i>gjorde ikke tale</i>	*	*!	*	
b. <i>talte ikke t</i>	*		***!	*
▶▶ c. <i>ikke talte</i>	*		*	*

Again there is no ranking difference between Danish and Middle English. In Middle English, however, the candidates with a verb in I° do not violate **Check person inflection**, ruling out (37c) right away. **Verb-in-V°** then settles the competition between (37a,b) in favour of (37b):

(37)

MIDDLE ENGLISH	Check p.inf.	Verb- in-V°	Pred- Right	HMC
a. <i>did not speke</i>		*!	*	
▶▶ b. <i>spak not t</i>			**	*
c. <i>not spak</i>	*!		*	*

(English negated clauses with non-thematic verbs do not have *do*-insertion: Non-thematic verbs are themselves inserted under I° and thus already avoid any violations of the HMC. If *do* is inserted in such a construction, the non-thematic verb is forced to appear under V°, causing an extra **Pred-Right** violation, cf. (31a) above).

5. Early Modern English

As seen above, there are three constraints that are ranked differently in modern English and modern Danish: **Verb-in-V°**, **Pred-Right**, and **HMC**. In English, **Verb-in-V°** is ranked below the other two constraints, whereas in Danish, **Verb-in-V°** is ranked above the other two:

- (38) a. **Pred-Right** >> **HMC** >> **Verb-in-V°** (modern English)
 b. **Verb-in-V°** >> **Pred-Right** >> **HMC** (modern Danish)

The fact that two different constraints conflict with **Verb-in-V°** means that *do*-insertion in questions, section 4.3, is in principle independent of *do*-insertion in negated clauses, section 4.4. Seeing as English has *do*-insertion in both cases and all the other Germanic and Romance languages have *do*-insertion in neither case, this might appear to be too powerful an account, i.e. to provide unnecessary options.

However, when we include not only Middle English but also the stage between Middle English and modern English, Early Modern English (i.e. English 1550-1650), it becomes clear that this extra option is actually not superfluous. Early Modern English is an example of a language which has **Verb-in-V°** ranked below one of the conflicting constraints, **Pred-Right**, but above the other one, **HMC**:

- (39) **Pred-Right** >> **Verb-in-V°** >> **HMC**

This ranking will derive the facts of Early Modern English, where *do*-insertion in questions is far more common than *do*-insertion in negative clauses:

(40)	% <i>do</i>	1475	1500	1525	1535	1550	1575	1600	1625	1650
		1500	1525	1535	1550	1575	1600	1625	1650	1700
	- in questions	6.4	30.3	33.0	45.1	55.8	57.0	64.0	75.0	77.4
	- in negative declaratives	4.8	7.8	13.7	27.9	38.0	23.8	36.7	31.7	46.0

(figures from Rohrbacher 1999:166, Table 4.2, which builds on Kroch 1989:224, table 3, which again builds on Ellegård 1953:161, table 7, 204, table 20)

(An informal way of thinking about this is that the "normal" situation is that **Verb-in-V°** is very highly ranked. The Early Modern English situation might then be the beginning of an erosion, and the modern English situation with its even lower ranking of **Verb-in-V°** is the end point (so far) of this erosion.)

6. Conclusion

I started by suggesting an analysis of the different positions of the finite main verb in English and related languages in terms of V° -to- I° movement. I went on to suggest a link to the presence of inflection for person in all verbal tenses.

In section 2, I pointed out that modern English is unique in that the two different types of finite verbs have different syntax. I argued that the two verb types should be taken to be thematic and non-thematic verbs, rather than main and auxiliary verbs.

In the rest of the paper, I tried to show that it is possible to give a comprehensive analysis of the complex syntax of these two types of English finite verbs in terms of violable constraints, in particular **Verb-in- V°** , **Pred-Right** and **HMC**.

The fact that the constraint with which **Verb-in- V°** conflicts is not the same in the two cases opens the door to the possibility that languages might exist with *do*-insertion in one but not the other case. This is supported by the diachronic developments from Middle English to modern English, where *do*-insertion in questions seems to slightly predate *do*-insertion in negated clauses, as discussed in section 5.

The previous stage, Middle English, and the subsequent loss of V° -to- I° movement (which as stated above was linked to developments in the inflectional system) was accounted for in terms of a different constraint, **Check person inflection**.

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Finally, if time had permitted, some further consequences could have been discussed:

In cases with emphatic stress, *do*-insertion may seem to be possible in an embedded clause, e.g. *I swear that she DID see the film*. The reason why *do*-insertion is not possible in most embedded declarative clauses is that nothing is gained. In emphatic clauses, however, there is something to be gained. Emphasis is taken to be syntactically realised as an empty X° in a position similar to that of sentential negation, i.e. between I° and V° . If this is so, HMC forces *do*-insertion in the same way as in negated clauses.

The analysis presented here rests on the assumption that the basic differences between English and the other languages lie in the ranking of constraints and not in the vocabulary. As stated by Grimshaw (1997:388), it is not the case that English has two verbs *do* (a main verb *do* and a "substitution" *do*) and that other languages only have one *do* each (namely a main verb *do*). One reason why such a view is to be avoided is that it would lead us to expect that languages either have or do not have substitution *do*. This is not the case: Although e.g. Danish, Icelandic, French and German do not have *do*-insertion the way English does, they all have a so-called "verbum vicarium", i.e. a verb that substitutes for other verbs under certain circumstances. Furthermore, these verbs are the straightforward translations of *do*: Danish *gøre*, Icelandic *gera*, French *faire*, German *tun*.

- (41)
- | | | | | | | |
|--------|---------|---------------|---------|-----|----------------|------|
| a. En. | Hold | the pencil | as | I | <u>do</u> | (it) |
| b. Da. | Hold | blyanten | ligesom | jeg | <u>gør</u> | |
| c. Ic. | Haltu á | blýantinum | eins og | ég | <u>geri</u> | |
| d. Fr. | Tiens | le crayon | comme | je | le <u>fais</u> | |
| e. Ge. | Halte | den Bleistift | wie | ich | es <u>tue</u> | |

In other words, this difference between the languages is purely syntactic, not lexical. English merely uses its *do* in more circumstances than Danish, Icelandic, French, and German.