

Formel lingvistisk analyse - Generativ syntaks og verbets positioner

(Blok 6 = anden halvdel af "De formelle lingvister har ordet")

Sprogvidenskabelige Forskningstraditioner, Sprogvidensk. Forskerskole Øst, 14.11.2007

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"Wer fremde Sprachen nicht kennt, weiß nichts von seiner eigenen"

(Goethe, Maximen und Reflexionen)

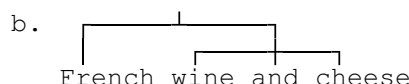
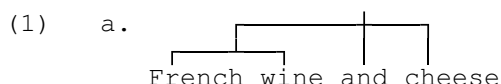
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1. Introduction

1.1 Constituents

constituent: Any of the parts that make up a whole (Longman Dictionary of Contemporary English)

constituency: Relation, especially in syntax, between a unit which is part of a larger unit and the whole of which it is part. E.g. the adjective phrase *very friendly* is a constituent of the noun phrase *very friendly people*. (Oxford Concise Dictionary of Linguistics)

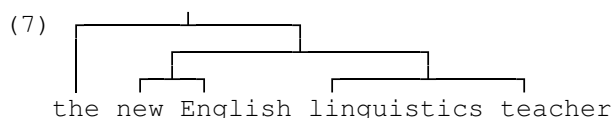
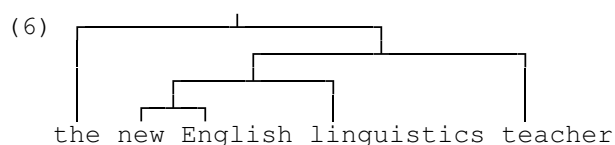
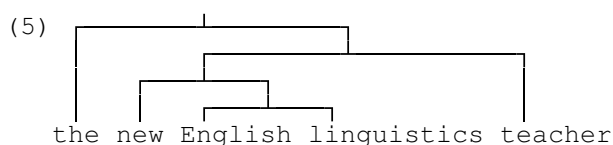
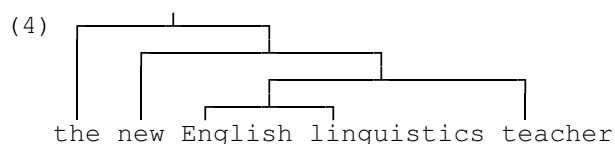
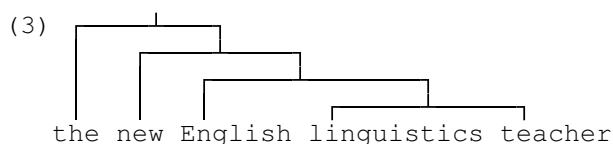


Is *French wine* a constituent in (1a)? In (1b)? Is *wine and cheese* a constituent in (1a)? In (1b)?

Can this be related to a difference in interpretation? In other words, if (2) was a sign at a formal dinner, would it be clear which kind of cheese might or might not be served?

(2) French wine and cheese will be served in the lounge

While there are (at least theoretically) two different possible constituent structures of the noun phrase (NP) *French wine and cheese*, there could be up to five different constituent structures of the NP *the new English linguistics teacher*:



Are there really five different interpretations?
What are they? (and what about Danish?)

EXERCISE 1:

Try the same with the following NPs. Which of (3)-(7) is the most plausible constituent structure for (8a)/(8b)/(8c)/(8d)?

- (8)
- a. European parliament election
 - b. German department word processor
 - c. local education committee membership
 - d. local election campaign organiser
-

1.2 Constituency tests

How can you tell whether or not two or more words constitute a unit or not? By means of constituency tests. Only constituents pass constituency tests, even though not all constituents pass all constituency tests. There are five main types of tests: Movement, substitution, deletion, coordination, and interruption.

- (9) a. En. [The Queen of England] [bought [a new hat]] [in Paris]
b. Da. [Dronningen af England] [købte [en ny hat]] [i Paris]

1.2.1 Movement

Fronting (or Topicalisation)

[xx] ____
└──────────┘

- (10) a. [In Paris], the Queen of England bought a new hat ____
b. ?[A new hat], the Queen of England bought ____ in Paris
c. *[A new], the Queen of England bought ____ hat in Paris
d. *[In], the Queen of England bought a new hat ____ Paris
- (11) a. [I Paris] købte dronningen af England en ny hat ____
b. [En ny hat] købte dronningen af England ____ i Paris
c. *[En ny] købte dronningen af England ____ hat i Paris
d. *[I] købte dronningen af England en ny hat ____ Paris

Clefting

It is [xx] (that) ____
└──────────┘

- (12) a. It was [in Paris] that the Queen of England bought a new hat ____
b. It was [a new hat] that the Queen of England bought ____ in Paris
c. It was [the Queen of England] who ____ bought a new hat in Paris
d. *It was [the Queen of] who ____ England bought a new hat in Paris
e. *It was [bought] that the Queen of England ____ a new hat in Paris
- (13) a. Det var [i Paris] dronningen af England købte en ny hat ____
b. Det var [en ny hat] dronningen af England købte ____ i Paris
c. Det var [dronningen af England] der ____ købte en ny hat i Paris
d. *Det var [dronningen af] der ____ England købte en ny hat i Paris
e. *Det var [købte] at dronningen af England ____ en ny hat i Paris


Pseudo-clefting

What ____ is [xx]
└──────────┘

- (14) a. What the Queen of England did ____ in Paris was [buy a new hat]
b. What the Queen of England did ____ was [buy a new hat in Paris]
c. What the Queen of England bought ____ in Paris was [a new hat]
d. Where the Queen of England bought a new hat ____ was [in Paris]
e. *What the Queen of England bought ____ hat in Paris was [a new]
f. *Where the Queen of England bought a new hat ____ Paris was [in]
- (15) a. Det dronningen af England gjorde ____ i Paris var [at købe en ny hat]
b. Det dronningen af England gjorde ____ var [at købe en ny hat i Paris]
c. Det dronningen af England købte ____ i Paris var [en ny hat]
d. Der hvor dronningen af England købte en ny hat ____ var [i Paris]
e. *Det dronningen af England købte ____ hat i Paris var [en ny]
f. *Der hvor dronningen af England købte en ny hat ____ Paris var [i]

Passivisation


X V-ed something → Something was V-ed ____ (by someone)



- (16) a. [A new hat] was bought ____ in Paris (by the Queen of England)
b. *[Hat] was bought a new ____ in Paris (by the Queen of England)
- (17) a. [En ny hat] blev købt ____ i Paris (af dronningen af England)
b. *[Hat] blev købt en ny ____ i Paris (af dronningen af England)

Heavy NP shift

.... ____ [xx]



- (18) a. *The Queen bought _____ in Paris [a new hat]
b. The Queen bought _____ in Paris [a brand new hat created by Dior]
- (19) a. *Dronningen købte _____ i Paris [en ny hat]
b. Dronningen købte _____ i Paris [en helt ny hat designet af Dior]

1.2.2 Substitution

by a pronoun:

- (20) a. [The Queen of England] [bought [a new hat]] [in Paris]
b. [She] [bought [a new hat]] [in Paris]
c. [The Queen of England] [bought [it]] [in Paris]
d. [The Queen of England] [bought [a new hat]] [there]
e. [The Queen of England] [did it/did so] [in Paris]
f. *[She] England] [bought [a new hat]] [in Paris]
g. *[The Queen of England] [bought [an it]] [in Paris]
h. *[The Queen of England] [bought [a new hat]] [there Paris]
- (21) a. [Dronningen af England] [købte [en ny hat]] [i Paris]
b. [Hun] [købte [en ny hat]] [i Paris]
c. [Dronningen af England] [købte [den]] [i Paris]
d. [Dronningen af England] [købte [en ny hat]] [der]
e. [Dronningen af England] [gjorde det] [i Paris]
f. *[Hun] England] [købte [en ny hat]] [i Paris]
g. *[Dronningen af England] [købte [en den]] [i Paris]
h. *[Dronningen af England] [købte [en ny hat]] [der Paris]

or by a *wh*-element (which then has to be moved to the left edge of the sentence, otherwise the result is a so-called echo-question):

- (22) a. ... that [the Queen of England] [bought [a new hat]] [in Paris]
b. Who [_____] [bought [a new hat]] [in Paris] ?
c. What did [the Queen of England] [buy [_____]] [in Paris] ?
d. Where did [the Queen of England] [buy [a new hat]] [_____] ?
e. *Who [_____ of England] [bought [a new hat]] [in Paris] ?
f. *What did [the Queen of England] [buy [_____ hat]] [in Paris] ?
g. *Where did [the Queen of England] [buy [a new hat]] [___ Paris] ?
- (23) a. ... at [dronningen af England] [købte [en ny hat]] [i Paris]
b. Hvem købte [_____] [en ny hat]] [i Paris] ?
c. Hvad købte [dronningen af England] [_____]] [i Paris] ?
d. Hvor købte [dronningen af England] [en ny hat]] [_____] ?
e. *Hvem købte [_____ af England] [en ny hat]] [i Paris] ?
f. *Hvad købte [dronningen af England] [_____ hat]] [i Paris] ?
g. *Hvor købte [dronningen af England] [en ny hat]] [___ Paris] ?

Vikner: Generativ syntaks og verbets positioner, 14.11.2007, p. 4

1.3 Subcategorisation

Not all XPs (maximal projections) may be deleted:

- (24) En. a. ... that the professor of physics sold her books in London
b. ... that the professor of physics sold her books
c. *... that the professor of physics sold in London
- Da. d. ... at professoren i fysik solgte sine bøger i London
e. ... at professoren i fysik solgte sine bøger
f. *... at professoren i fysik solgte i London

Some but not all PPs may be left out:

- (25) En. a. ... that the professor of physics worked in her office all night
b. ... that the professor of physics worked all night
- Da. c. ... at professoren i fysik arbejdede på sit kontor hele natten
d. ... at professoren i fysik arbejdede hele natten
- (26) En. a. ... that the professor of physics gave her books to the library
b. *... that the professor of physics gave her books
- Da. c. ... at professoren i fysik gav sine bøger til biblioteket
d. *... at professoren i fysik gav sine bøger

It depends on the verb:

sell/sælge requires an NP,
work/arbejde does not require anything,
give/give requires both an NP and a PP (or two NPs).

sell/sælge is a (mono-)transitive verb, *work/arbejde* an intransitive verb, and *give* is a ditransitive verb:

- | | | | |
|------|---------------------|-------------------------------|-------------------|
| (27) | <i>sell/sælge</i> | V, [___ NP] | (mono-)transitive |
| | <i>work/arbejde</i> | V, [___] | intransitive |
| | <i>give/give</i> | V, [___ NP PP], [___ NP NP] | ditransitive |

Because this is a way of defining subcategories of the category verb these "requirements" posed by the verb are called the **subcategorisation** of the verb.

The subject is not relevant here, because all verbs require a subject, and this property therefore cannot be used when classifying verb types. The elements relevant for subcategorisation all occur inside the VP.

in London in (24) and *in her office* in (25) are **adjuncts** (and may be left out), whereas *to the library* in (26) is an **argument** (it is required by the meaning of the main verb and may therefore not be left out), cf. the following section. All three are prepositional phrases.

There are also other subcategorisation types than the ones above:

- (28) *live/bø* V, [__ PP]
- (29) En. a. *... that the professor of physics lives
 b. ... that the professor of physics lives in Boston
Da. c. *... at professoren i fysik bor
 d. ... at professoren i fysik bor i Boston
- (30) *hear/høre* V, [__ NP], [__ S]
- (31) En. a. Henry heard a strange noise
 b. Henry heard that Fred liked linguistics
Da. c. Henrik hørte en mærkelig lyd
 d. Henrik hørte at Fred godt kunne lide lingvistik

1.4 Arguments versus adjuncts

- (32) En. a. The professor gave the book to the library
 b. The professor read the book in her office

to the library in (32a) is an argument, whereas *in her office* in (32b) is an adjunct.

Arguments are the elements that are assigned thematic roles (e.g. **agent**, **patient/theme**, **experiencer**, **beneficiary**, ...). They typically have the grammatical role of subject, direct object, or indirect object.

Adjuncts are the elements that "provide information about **time**, **manner**, **reason**, **place**, **modality**, and so on" (Haegeman & Guéron 1999:29).

- (33) A traditional distinction is drawn between **arguments** (which are expressions which typically denote the participants in the activity or event described by the verb) and **adjuncts** (which are expressions providing additional information about the relevant activity/event, e.g. its location, the time at which it took place, the manner in which it took place, etc.).
Radford (1997:142)

In other words, the difference is in the strength of the thematic link to the main verb:

- **Arguments** are very closely linked to the verb. This is also why arguments are not optional (in general). Arguments get their meaning from the main verb, cf. that whether a particular argument like *the student* is an agent, a patient/theme, an experiencer, or a beneficiary depends on the main verb and the position of the argument in relation to this verb.
- **Adjuncts** are less closely linked to the verb, this is also why they are always optional. Adjuncts do not get their meaning directly from the main verb, cf. that whether a particular adjunct like *in the office* is an adjunct of time, of manner, of reason, of place, or of modality depends much less on the verb than on the content of the adjunct itself (see also Huddleston & Pullum 2005:66).

1.5 Thematic roles and thematic grids

- (34) En. a. ... that the professor sold the books in London
 b. *... that the books sold the professor in London

This is the difference between AGENT and THEME (often called "PATIENT")

- (35) En. a. ... that the professor sold the books in London
 AGENT THEME
 b. *... that the books sold the professor in London
 THEME AGENT

There are also many other thematic roles (also called "Theta-roles" or "Θ-roles"): EXPERIENCER, BENEFICIARY, GOAL, SOURCE, POSITION, ...:

- (36) En. a. The books have not been sold yet
 THEME
 b. The professor works in Boston
 AGENT POSITION
 c. The professor was pleased with her students
 EXPERIENCER THEME
 d. The professor gave the student the books
 AGENT BENEFICIARY THEME
 e. The journalist was sent from Rome to Paris
 THEME SOURCE GOAL

The thematic grid, *dramatis personae* (also called "Theta-grid" or "Θ-grid"):

- (37) a. *sell* V AGENT THEME
 NP NP
 professor books
 b. *give* V AGENT THEME BENEFICIARY
 NP NP NP
 professor books student

cf.

- c. *Carmen* Opera Carmen Don José Escamillo
 MEZZO-SOPRANO TENOR BARITONE
 Agnes Baltsa José Carreras José van Dam
 d. *The Spy* Thriller James Bond Stromberg Jaws
Who HERO EVIL MASTERMIND EVIL HENCHMAN
Loved Me Sean Connery Curd Jürgens Richard Kiel

This gives us a way of illustrating why the number of roles and the number of arguments (i.e. the number of "actors") always have to be the same:

- (38) En. a. *The professor saw the student the book
 b. The professor saw the book
 c. *The professor saw

(39)

a.	see	V	AGENT NP professor	THEME NP book	■■■■■ ■■■■■
b.	see	V	AGENT NP professor	THEME NP book	
c.	see	V	AGENT NP professor	THEME NP ■■■■■	

- (40) En. a. The professor gave the student the book
 b. *The professor gave the book
 c. *The professor gave the student
 d. *The professor gave

(41)

a.	give	V	AGENT NP professor	THEME NP book	BENEFICIARY NP student
b.	give	V	AGENT NP professor	THEME NP book	BENEFICIARY NP ■■■■■
c.	give	V	AGENT NP professor	THEME NP ■■■■■	BENEFICIARY NP student
d.	give	V	AGENT NP professor	THEME NP ■■■■■	BENEFICIARY NP ■■■■■

This relation (between the number of thematic roles and the number of arguments) is known as the **theta criterion** (Chomsky 1981:36, (4)):

- (42) **Theta criterion**
 a. Every argument is assigned one and only one thematic role
 b. Every thematic role is assigned to one and only one argument

2. The phrase structure of VP

It is possible to refer to a preceding VP without repeating it word for word:

- (43) En. a. Henry will buy presents in Paris tomorrow and
Joe will do so _____, too
- b. Henry will buy presents in Paris tomorrow and
Joe will do so _____ next week
- c. Henry will buy presents in Paris tomorrow and
Joe will do so _____ in Bolton next week
- d. *Henry will buy presents in Paris tomorrow and
Joe will do so books in Bolton next week
- (44) Da. a. Henrik vil købe julegaver i Paris i morgen og
det vil Joachim _____ også
- b. Henrik vil købe julegaver i Paris i morgen og
det vil Joachim _____ i næste uge
- c. Henrik vil købe julegaver i Paris i morgen og
det vil Joachim _____ i Møgeltønder i næste uge
- d. *Henrik vil købe julegaver i Paris i morgen og
det vil Joachim _____ bøger i Møgeltønder i næste uge

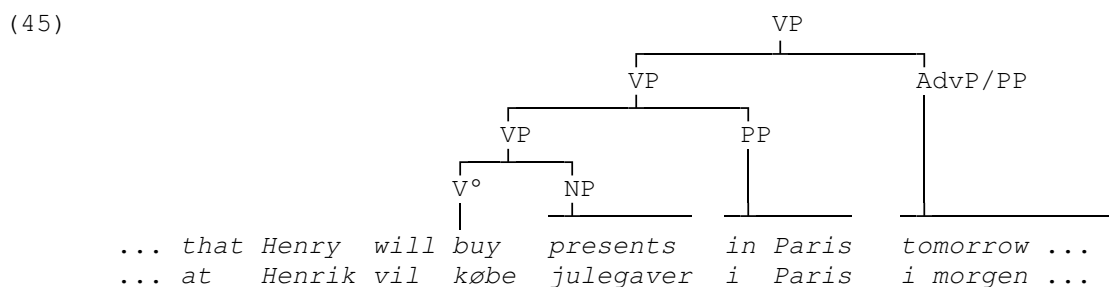
do so / *det (gøre det)* can replace the following:

- | | |
|------------------|---|
| 1. V°-NP-PP-AdvP | (43a): <i>buy presents in Paris tomorrow</i> |
| 2. V°-NP-PP | (43b): <i>buy presents in Paris</i> |
| 3. V°-NP | (43c): <i>buy presents</i> |
| 1. V°-NP-PP-PP | (44a): <i>købe julegaver i Paris i morgen</i> |
| 2. V°-NP-PP | (44b): <i>købe julegaver i Paris</i> |
| 3. V°-NP | (44c): <i>købe julegaver</i> |

but not just:

- | | |
|-------|--------------------|
| 4. V° | (43d): <i>buy</i> |
| 4. V° | (44d): <i>købe</i> |

How can it be illustrated in the three structure that three different constituents may be replaced by one and the same element? By assuming that the three constituents are of the same category, namely VP:

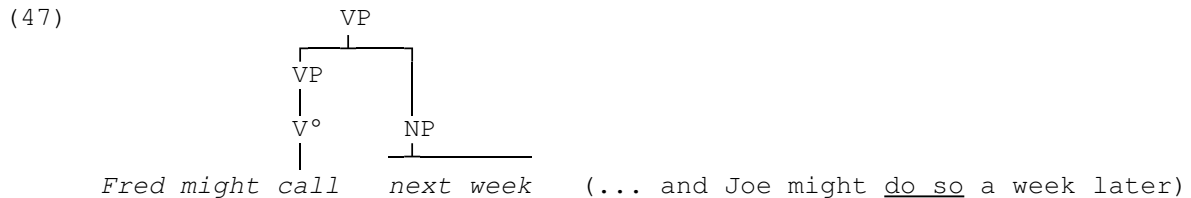
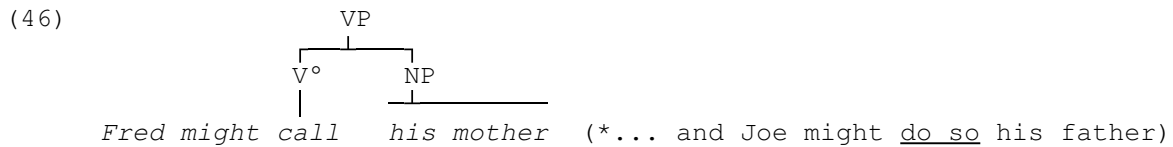


There are two different ways of formulating what went wrong in (43d):

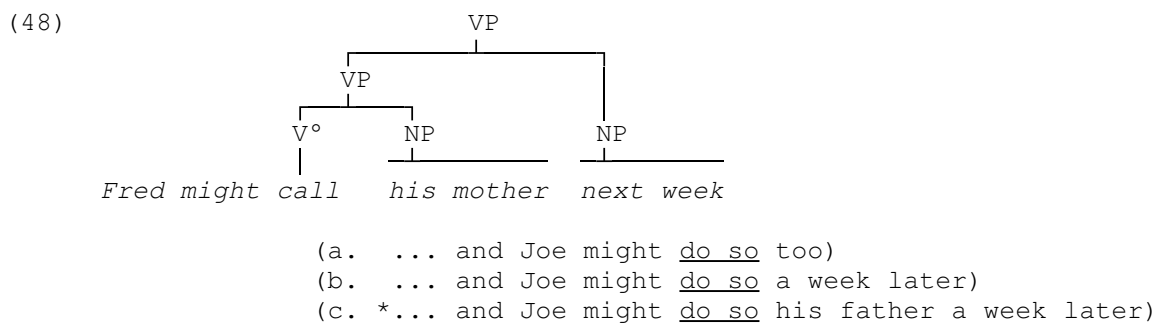
(I) *do so* must substitute at least the verb and the following object (if there is one)

(II) *do so* must substitute at least the verb and the following NP (if there is one)

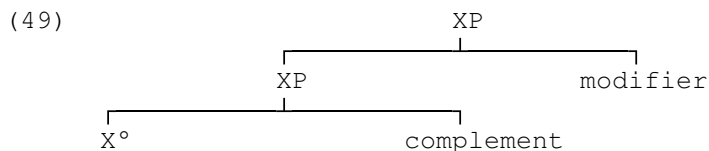
If (I) is right, then there should be a difference between the following two structures, but if (II) is right, then there shouldn't be any difference:



In other words, if *his mother* is present, it **IS** part of the VP, but if *next week* is present, it is **NOT** part of the VP. This captures that when both are present, *his mother* must precede *next week*, and also that *do so* may replace either *call his mother* or *call his mother next week*, but not just *call*:



As seen above, the following structure is assumed where XP may occur more than once:



In English and Danish, the order verb-complement is the only possible order:

- (50) En. a. Joe has bought a new watch
 b. *Joe has a new watch bought

- (51) Da. a. Joachim har købt et nyt ur
 b. *Joachim har et nyt ur købt

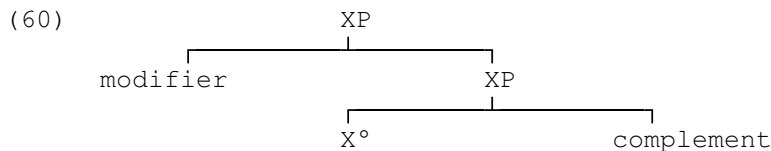
- (52) En. a. Fred will write a letter
 b. *Fred will a letter write

- (53) Da. a. Frederik vil skrive et brev
 b. *Frederik vil et brev skrive

The order between modifiers and the VP may vary:

- (54) En. a. Joe will buy a new watch there
 b. *Joe will there buy a new watch
- (55) Da. a. Joachim vil købe et nyt ur derinde
 b. *Joachim vil derinde købe et nyt ur
- (56) En. a. *Joe will buy a new watch hardly
 b. Joe will hardly buy a new watch
- (57) Da. a. *Joachim vil købe et nyt ur næppe
 b. Joachim vil næppe købe et nyt ur
- (58) En. a. Joe will buy a new watch soon
 b. Joe will soon buy a new watch
- (59) Da. a. Joachim vil købe et nyt ur snart
 b. Joachim vil snart købe et nyt ur

Whether a modifier may precede or follow the VP seems to depend on which semantic class the modifier belongs to. E.g. locations seem to have to follow the VP. Danish and English VPs thus allow both (49) and (60):



Although English and Danish do not allow the order complement-verb, this does not mean that this order is universally excluded. It is perfectly possible e.g. in German:

- (61) Ge. a. *... dass Joachim gekauft eine neue Uhr hat (= (50))
 b. ... dass Joachim eine neue Uhr gekauft hat
- (62) Ge. a. *... dass Friedrich schreiben einen Brief wird (= (52))
 b. ... dass Friedrich einen Brief schreiben wird

or in Korean:

- (63) Ko a. *Insu-nùn sa -ass -da sae sigye hana-lùl
Insu-TOP buy-PRET-DECL new watch a -ACC
 b. Insu-nùn sae sigye hana-lùl sa -ass -da
Insu-TOP new watch a -ACC buy-PRET-DECL
 (*Insu bought a new watch*)
- (64) Ko. a. *Youngsooki-nùn ssùl -gòbni-da p'yònchi hant'ong-ùl
Youngsook -TOP write-FUT -DECL letter a -ACC
 b. Youngsooki-nùn p'yònchi hant'ong-ùl ssùl -gòbni-da
Youngsook -TOP letter a -ACC write-FUT -DECL
 (*Youngsook will write a letter*)

EXERCISE 2:

Are the following languages V-O or O-V: French, Frisian, Hindi, Icelandic, Japanese, Turkish, Welsh, and Yiddish?

(65) Fr. a. Le garçon a lu le livre
The boy has read the book

- b. *Le garçon a le livre lu
c. *Le garçon le livre lu a

(66) Fs. a. (Aukje siet te eameljen) wylst Brechtsje it wurk die
Aukje sat to gossip while Brechtsje the work did

- b. Wy wienen klear nei't wy ús lessen leard hienen
We were ready after-that we our lessons learned had

(from Tiersma 1985:122)

(67) Hi. a. kitaab paRhnaa anu-ko pasand hai
Book read Anu-DAT pleasant is
(Reading books pleases Anu)

- b. *paRhnaa kitaab anu-ko pasand hai
Read book Anu-DAT pleasant is

(68) Ic. a. ... að strákurinn hefur lesið bókina
... that boy-the has read book-the
(... that the boy has read the book)

- b. *... að strákurinn hefur bókina lesið
c. *... að strákurinn bókina lesið hefur

(69) Ja. a. Junko-ga hon-o yonda
Junko.NOM book.ACC read
(Junko read the book)

- b. *Junko-ga yonda hon-o
c. *Yonda Junko-ga hon-o

(70) Tu. Halil kIzI gördü
Halil the-girl saw
(Halil saw the girl)

(from Underhill 1976:47)

(71) We. 'Roedd Siôn yn darllen y llyfr
Was John PROG read the book
(John was reading the book)

(from Sadler 1988:5, (5))

(72) Yi. ... az dos yingl hot geleyent a bukh
... that the boy has read a book

3. The phrase structure of NP

First, an important revision: Articles (etc.) are not seen as part of the NP (noun phrase) anymore. Instead, what was earlier seen as an NP is now seen as a DP (determiner phrase). (Abney 1987, Giorgi & Longobardi 1991, Haegeman & Guéron 1999:406-422, and others).

BEFORE:

- (73) a. [_{NP} these green chairs]
(74) a. [_{NP} the chairs from France]

NOW:

- b. [_{DP} these [_{NP} green chairs]]
b. [_{DP} the [_{NP} chairs from France]]

The minimal NP thus consists of the head (N°) and its complement(s). Modifiers may be adjoined to the left or to the right.

The article is the head of its own projection (DP, i.e. determiner phrase), which dominates D° and its complement (NP). Other examples of D° are demonstratives, e.g. *this*, and possessives, e.g. *my*. Under a DP-analysis, the demonstrative pronoun *this* and the demonstrative article pronoun *this* are thus both D°s. The same goes for other pronoun/article pairs like Danish *det/det*, German *das/das* or French *la/la*.

Here we will focus on the NP. Let us begin with the difference between the two. An NP, (75a) & (76a), and a DP, (75b) & (76b), do not occur under the same circumstances:

- (75) En. a. Nice man though he is, my uncle can be a little boring
b. *A nice man though he is, my uncle can be a little boring
- (76) En. a. *I met nice man
b. I met a nice man
- (77) Da. a. Stor dyreven som han var, den lille Emil, lukkede han katten ud
b. *En stor dyreven som han var, den lille Emil, lukkede han katten ud
- (78) Da. a. *Ida kender dyreven
b. Ida kender en dyreven

Which constituents are coordinated in (79a)/(80a)?
In (79b)/(80b)? In (79c)/(80c)? And in (79d)/(80d)?

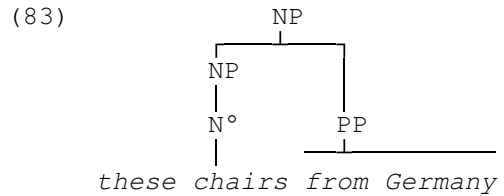
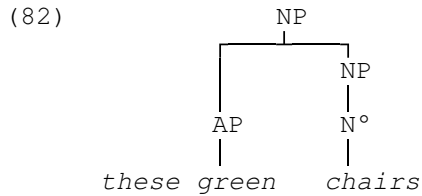
- (79) En. a. These nice German tables and chairs
b. These nice German tables and French chairs
c. These nice German tables and horrible French chairs
d. These nice German tables and those horrible French chairs
- (80) Da. a. De pæne tyske borde og stole
b. De pæne tyske borde og franske stole
c. De pæne tyske borde og rædselsfulde franske stole
d. De her pæne tyske borde og de der rædselsfulde franske stole

English has an element that may be substituted for NP: *one*.

Vikner: *Generativ syntaks og verbets positioner*, 14.11.2007, p. 13

- (81) En. a. These chairs from Germany are cheaper than
the ones over there
- b. These chairs from Germany are cheaper than
the ones from France over there

How can we capture the fact that two different constituents may be replaced by one and the same element? By assuming that the two constituents are of the same category, namely NP:

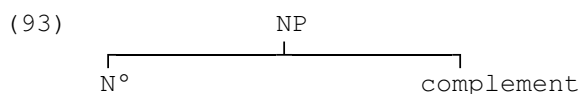


What does (84) tell us about *of linguistics* in *teacher of linguistics*, cf. the discussion of (46) and (47) above? Is *of linguistics* it a complement or a modifier? How can this contribute to an explanation of the differences in (85) and (86)?

- (84) En. a. The teacher of linguistics with an American accent knows
more about German than the one with a Danish accent
- b. *The teacher of linguistics knows more about German
than the one of physics
- (85) En. a. A teacher of linguistics with an American accent
- b. *A teacher with an American accent of linguistics
- (86) En. a. *The translation of Dickens was published before the one of Darwin
- b. The translation by Smith was published before the one by Jones

The comparison of English and Danish VPs to German VPs showed a fundamental difference with respect to the order of head and complement. As far as NPs are concerned, there would seem to be no such fundamental difference, the complement follows N° in all three languages:

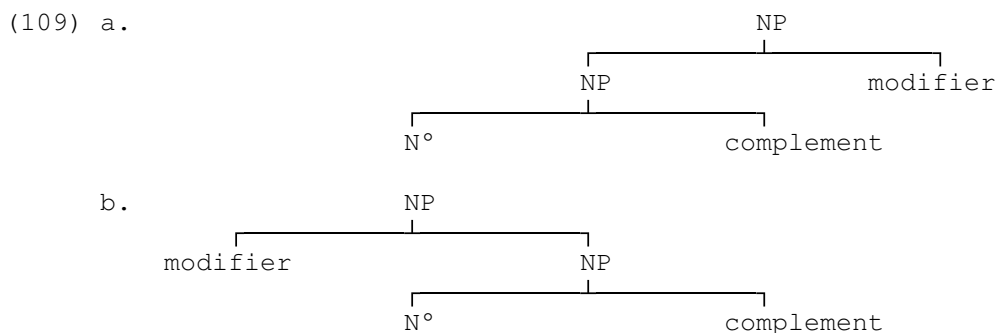
- (87) En. a. The brutal destruction of the city
- b. *The brutal of the city destruction
- (88) Da. a. Den brutale ødelæggelse af byen
- b. *Den brutale af byen ødelæggelse
- (89) Ge. a. Die brutale Zerstörung der Stadt
- b. *Die brutale der Stadt Zerstörung
-
- (90) En. a. The nice description of the city
- b. *The nice of the city description
- (91) Da. a. Den pæne omtale af byen
- b. *Den pæne af byen omtale
- (92) Ge. a. Die schöne Beschreibung der Stadt
- b. *Die schöne der Stadt Beschreibung



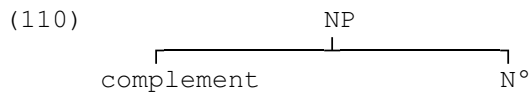
The distribution of modifiers is almost the same in English, Danish and German: PPs and relative clauses follow the NP they modify, adjectives and participles precede their NP.

"Complex" participles show some amount of variation, they cannot precede their NP in English and Danish.

- (94) En. a. The students with long hair voted for Blair
b. *The with long hair students voted for Blair
- (95) Da. a. De der studerende med langt hår stemte på Nyrup
b. *De der med langt hår studerende stemte på Nyrup
- (96) Ge. a. Die Studenten mit langen Haaren wählten Schröder
b. *Die mit langen Haaren Studenten wählten Schröder
-
- (97) En. a. My brothers in Bolton voted for Blair
b. *My in Bolton brothers voted for Blair
- (98) Da. a. Mine brødre i Århus stemte på Nyrup
b. *Mine i Århus brødre stemte på Nyrup
- (99) Ge. a. Meine Brüder in Stuttgart wählten Schröder
b. *Meine in Stuttgart Brüder wählten Schröder
-
- (100) En. a. My brothers who live in Bolton voted for Blair
b. *My who live in Bolton brothers voted for Blair
- (101) Da. a. Mine brødre der bor i Århus, stemte på Nyrup
b. *Mine der bor i Århus brødre stemte på Nyrup
- (102) Ge. a. Meine Brüder, die in Stuttgart wohnen, wählten Schröder
b. *Meine, die in Stuttgart wohnen, Brüder wählten Schröder
-
- (103) En. a. *My brothers nice/working/retired voted for Blair
b. My nice/working/retired brothers voted for Blair
- (104) Da. a. *Mine brødre flinke/arbejdende/pensionerede stemte på Nyrup
b. Mine flinke/arbejdende/pensionerede brødre stemte på Nyrup
- (105) Ge. a. *Meine Brüder netten/arbeitenden/pensionierten wählten Schröder
b. Meine netten/arbeitenden/pensionierten Brüder wählten Schröder
-
- (106) En. a. My brothers living in Bolton voted for Blair
b. *My living in Bolton brothers voted for Blair
- (107) Da. a. *Mine brødre i Århus boende stemte på Nyrup
b. ??Mine i Århus boende brødre stemte på Nyrup
- (108) Ge. a. *Meine Brüder in Stuttgart wohnenden wählten Schröder
b. Meine in Stuttgart wohnenden Brüder wählten Schröder



Although English, Danish and German all have the order N°-complement, this order is not universal. Also here Korean is different, the noun must follow its complement, (110), jf. (111)-(112):



(111) Ko. a. Kù tosi-ùi p'akoe
 DEF town-GEN destruction
 (The destruction of the town)

b. *P'akoe kù tosi-ùi
 Destruction DEF town-GEN

(112) Ko. a. Kù sako -ùi myosa
 DEF accident-GEN description
 (The description of the accident)

b. *Myosa kù sako -ùi
 Description DEF accident-GEN

EXERCISE 3:

Are the following languages N°-complement or complement-N°: French, Hindi, Icelandic, Japanese, Turkish and Welsh?

(113) Fr. a. La destruction de la ville a été annoncée hier
 The destruction of the town has been announced yesterday
 (The destruction of the town was announced yesterday)

b. *De la ville la destruction a été annoncée hier
 Of the town the destruction has been announced yesterday

(114) Hi. a. ghaTnaa kaa varnan
 Accident GEN description
 (The description of the accident)

b. *varnan ghaTnaa kaa
 description accident GEN

(115) Ic. a. ... að eyðilegging bæjarins var tilkynnt í gær
 ... that destruction town-the's was announced yesterday
 (... that the destruction of the town was announced yesterday)

b. *... að bæjarins eyðilegging var tilkynnt í gær
 ... that town-the's destruction was announced yesterday

(116) Ic. a. ... að lýsingin á slysin var mjög nákvæm
 ... that description-the of accident-the was very precise
 (... that the description of the accident was very precise)

b. *... að á slysin lýsingin var mjög nákvæm
 ... that of accident-the description-the was very precise

(117) Ja. a. Machi-no hookai
 Town -of destruction
 (The destruction of the town)

b. *Hookai machi-no
 Destruction town -of

(118) Ja. a. Jiko -no setsumei
 Accident-of description
 (The description of the accident)

b. *Setsumei jiko -no
 Description accident-of

(119) Tu. a. Köy -ün harap olma -sI
 Village-GEN destruction-POSS
 (The destruction of the village)

b. *Harap olma -sI köy -ün
 Destruction-POSS village-GEN

(120) Tu. a. Kaza -nIn yazIlma -sI
 Ulykke-GEN description-POSS
 (The description of the accident)

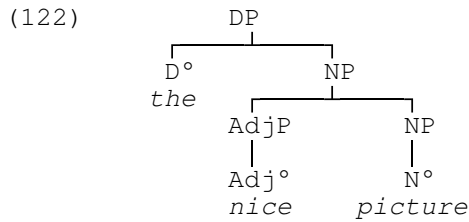
b. *YazIlma -sI kaza -nIn
 Description-POSS ulykke-GEN

(121) We. Y disgrifiad o'r ddamwain
 The description of-the accident

(from Sadler 1988:99)

4. The phrase structure of DP

As was said on p. 13 above, the article is here seen the head of its own projection (DP, i.e. determiner phrase), which dominates D° and its complement (NP). Other examples of D° are demonstratives, e.g. *this*, and possessives, e.g. *my*.



ONE argument for making a distinction between DP and NP is that NPs, (75a) & (76a), and DPs, (75b) & (76b), do not occur under the same circumstances:

- (123) En. a. Nice man though he is, my uncle can be a little boring
 b. *A nice man though he is, my uncle can be a little boring

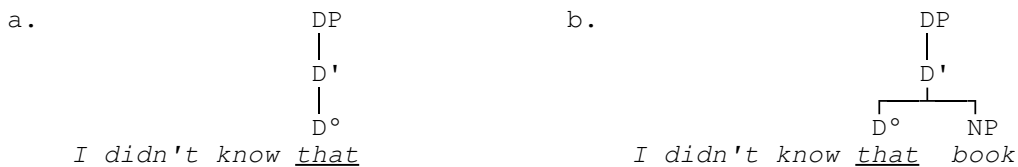
- (124) En. a. *I met nice man
 b. I met a nice man

- (125) En. a. *I found your uncle nice man
 b. I found your uncle a nice man

It should be admitted, however, that it only happens very rarely that an NP is not part of a DP.

A **SECOND** argument for making a distinction between DP and NP is that this allows us to analyse pronouns as a kind of determiners:

(126) new DP-analysis:

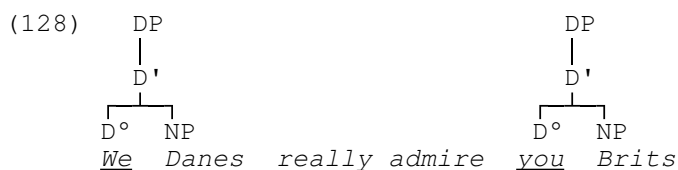


(127) old discarded NP-analysis:



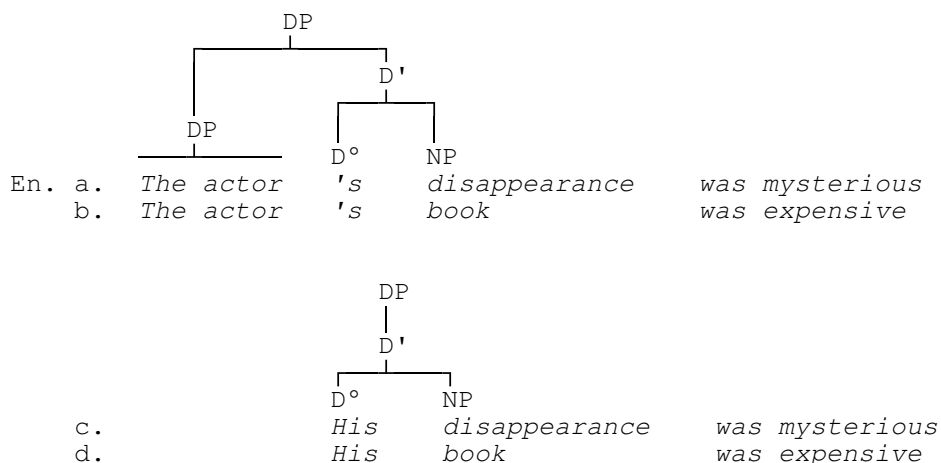
Taking pronouns to be D°s (with no sisters) gives a better account of a large number of elements across languages that occur both as articles/demonstratives and as pronouns: Not just English *this book* and *this*, but also e.g. Danish *den bog* and *den*, German *das Buch* and *das*, and French *le livre* and *le*.

This also allows a straight-forward analysis of cases where other pronouns seem to occur as determiners:



A **THIRD** argument in favour of the DP-analysis is that it makes the following analysis of possessive constructions possible, where *the actor* is in the so-called specifier position of DP, cf. that it is in some sense a subject.

(129)



This analysis has two advantages:

1. It predicts that possessor phrases and articles do not cooccur, because both *'s* and *the* have to be in D°.

- (130) En. a. **The actor's the disappearance was mysterious*
 b. **The actor's the book was expensive*

2. And it predicts that *'s* occurs not on the noun in the possessor DP (as it would if it was a real case ending) but after the entire possessor DP:

- (131) En. a. **The little [_{N°} girl's] next door bicycle*
 b. [_{DP} *The little girl next door*]'s bicycle

- (132) En. a. **The [_{N°} Queen's] of England new hat*
 b. [_{DP} *The Queen of England*]'s new hat

- (133) En. a. **In a [_{N°} year's] or so time*
 b. In [_{DP} *a year or so*]'s time

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 (2500 Google hits, Nov. 2005)

- (134) Da. a. **[_{N°} Deres] der ikke kom egen skyld*
 b. [_{DP} *De der ikke kom*]'s egen skyld
Those who not arrived's own fault

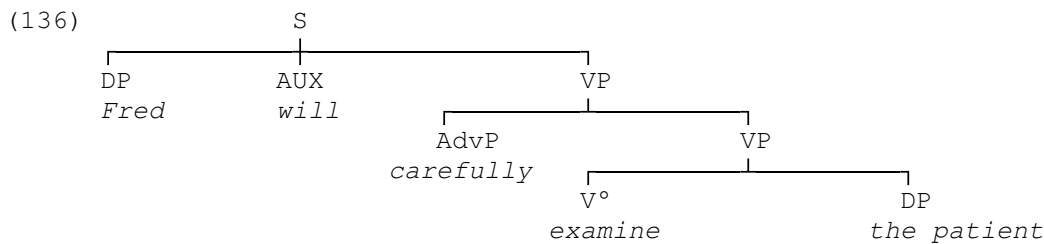
5. The phrase structure of IP and V°-to-I° movement

5.1 The structure of S: S becomes IP and AUX becomes I°

Now that we have looked at some of the building blocks (VP, DP, NP), we are ready to consider the whole clause. In the following clause, we already know the structure of VP, including that the AdvP *carefully* is adjoined to VP. We also know that *Fred* is the subject, that *will* is an auxiliary, and that the whole is a clause (preliminarily labelled "S"):

(135) En. [S Fred will [VP [AdvP carefully] [VP examine the patient]]]

Assumptions from the 1970es (see e.g. Haegeman & Guéron 1999:82, (150c)) would suggest the following structure:



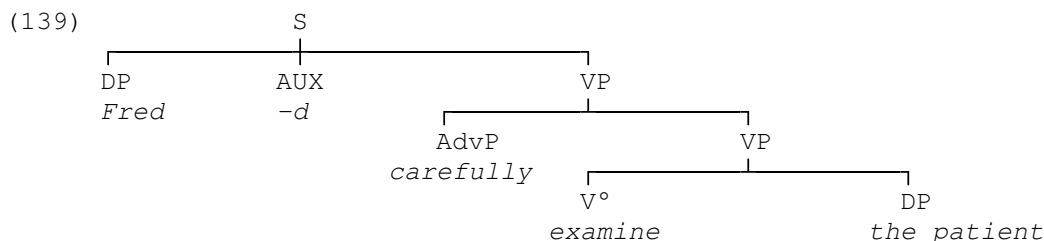
One argument for the existence of the higher VP in (136) comes from pseudo-clefting:

(137) En. What Fred will do is [VP carefully examine the patient]

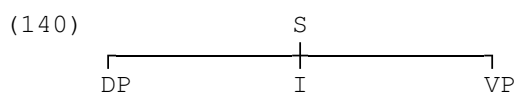
Consider now sentences with a finite main verb

(138) En. a. [S Fred [VP [AdvP carefully] [VP examined the patient]]]
b. What Fred did was [VP carefully examine the patient]

Whereas (138a) has a subject position and a VP just like (136), it would seem that there is no reason to assume the existence of an AUX-node. However, if we consider (138b), which is a pseudo-cleft of (138a), the finite verb *examined* would seem to be split up into two parts, *did* and *examine*. This would suggest the following structure for (138a) (see also Haegeman & Guéron (1999:82, (150d)):



Given that AUX is now taken to contain not only auxiliaries but also inflectional verbal morphology, AUX is relabelled as INFL (for "inflection"), and abbreviated as "I":



(141)

IP

DP I° VP

(142)

```
graph TD
    IP --> DP
    IP --> I_prime[I']
    I_prime --> T_deg[T°]
    I_prime --> VP
```

(143)

En. a. Fred will carefully examined the patient
b. Fred will carefully examine the patient

Vikner: Generativ syntaks og verbets positioner, 14.11.2007, p. 20

5.2 V°-to-I° movement

It is possible to make a distinction between two types of X° elements. **Lexical** elements are e.g. N°, V°, P°, Adj° (i.e. nouns, verbs, preposition, and adjectives). **Functional** elements are e.g. inflectional endings or articles, conjunctions, etc. The difference is very close to the traditional one between lexical and grammatical morphemes.

The constituent that we call a word often contains two parts, a stem and an ending:

(145) a. **(Modern) English**

Stem	Ending
<i>hear-</i>	<i>-s</i>
	<i>-d</i>
	<i>-ing</i>

b. **Middle English** (14th & 15th cent.)

Stem	Ending
<i>her-</i>	<i>-est</i> (2sg pres)
	<i>-eth</i> (3sg pres)
	<i>-en</i> (Pl pres)
	<i>-de</i> (1/3sg past)
	<i>-dest</i> (2sg past)
	<i>-den</i> (Pl past)
	<i>-d</i> (Past part.)
	<i>-ing</i> (Pres. part)

c. **French**

Stem	Ending
<i>entend-</i>	<i>-(s)</i> (Sg pres)
	<i>-ons</i> (1pl pres)
	<i>-ez</i> (2pl pres)
	<i>-ent</i> (3pl pres)
	<i>-ait</i> (2/3sg past)
	<i>-ions</i> (1pl past)
	<i>-iez</i> (2pl past)
	<i>-rai</i> (1sg fut)
	<i>-ra</i> (2/3sg fut)
	<i>-rons</i> (1/3pl fut)
	<i>-rez</i> (2pl fut)
	<i>-ant</i> (Pres part)
	<i>-u</i> (Past part)
	<i>-re</i> (Infinitive), ...

hear- is a verb stem and conveys an activity or a state, in this case the activity of auditory perception. *-s* on the other hand is an inflectional ending and conveys only "grammatical" information like [\pm past], [α person], [\pm plural] etc., in this case [- past], [3rd person], [- plural]. The view that a verb like *hears* consists of a lexical morpheme *hear-* and a grammatical morpheme *-s* is reflected in (one kind of) generative syntax by the assumption that it is not the word *hears* but only the verb stem *hear-* which is base-generated under V°. The grammatical morpheme *-s* is base-generated under a different node, namely I° (for *inflection*). By a(n abstract) movement either of V° (*hear-*) or of I° (*-s*), I° and V° meet and merge into one word.

There are also empirical reasons to assume that a finite verb consists of different elements, one which is base-generated in I° and another which is base-generated in V°. If one compares English and French, as it was done originally in e.g. Emonds (1978) and Pollock (1989), the differences in the position of the finite verb can be described as follows: In French (and in Middle English and Icelandic), the finite verb is in I°, in modern English (and in Danish) it is in V°.

Consider finally the following table of verbal inflection in three different stages of English and in French. What varies between the forms is only the functional elements (the inflectional endings), not the lexical ones, (the verb stem):

(146)	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 Plural	hear hear	hear hear	her (e) hereth	entends entendez
Participles Present Past	hearing heard	hearing heard	hering herd	entendant entendu
Present 1 st singular 2 nd singular 3 rd singular 1 st plural 2 nd plural 3 rd plural	I hear you hear he hears we hear you hear they hear	I hear thou hearst he heareth we hear (en) you hear (en) they hear (en)	I here thou herest he hereth we here (n) ye here (n) þei here (n)	j' entends tu entends il entend nous entendons vous entendez ils entendent
Different forms	2	3	4	4 (1s=2s=3s)
Past 1 st singular 2 nd singular 3 rd singular 1 st plural 2 nd plural 3 rd plural	hear-d hear-d hear-d hear-d hear-d hear-d	hear-d hear-d-st hear-d hear-d- (en) hear-d- (en) hear-d- (en)	her-d-e her-d-est her-d-e her-d-e (n) her-d-e (n) her-d-e (n)	entend-ais entend-ais entend-ait entend-i-ons entend-i-ez entend-aient
Different forms	1	2	3	3 (1/2s=3s=3p)

5.3 French

Consider the following French examples:

- (147) Fr. a. Frédéric parle français
Frédéric speaks French
- b. Frédéric a parlé français
Frédéric has spoken French
- c. Frédéric veut parler français
Frédéric wants (to) speak French

To find out the exact position of the finite verb, the same examples may be used if another element is inserted between the subject and the object, i.e. in the area which is occupied only by the verb forms in (147a-c): The negation *pas*, a quantifier (*tous* 'all') which refers to the subject, or the adverbial *à peine* 'hardly'. (Please refer to (147b-c) to infer the missing glosses).

- (148) Fr. a. Frédéric ne parle pas français
 Frédéric speaks not French (Frédéric does not speak French)
- b. Frédéric n'a pas parlé français
 c. Frédéric ne veut pas parler français
- (149) Fr. a. Les garçons parlent tous français
 The boys speak all French (The boys all speak French)
- b. Les garçons ont tous parlé français
 c. Les garçons veulent tous parler français
- (150) Fr. a. Nous parlons à peine français
 We speak hardly French (We hardly speak French)
- b. Nous avons à peine parlé français
 c. Nous voulons à peine parler français

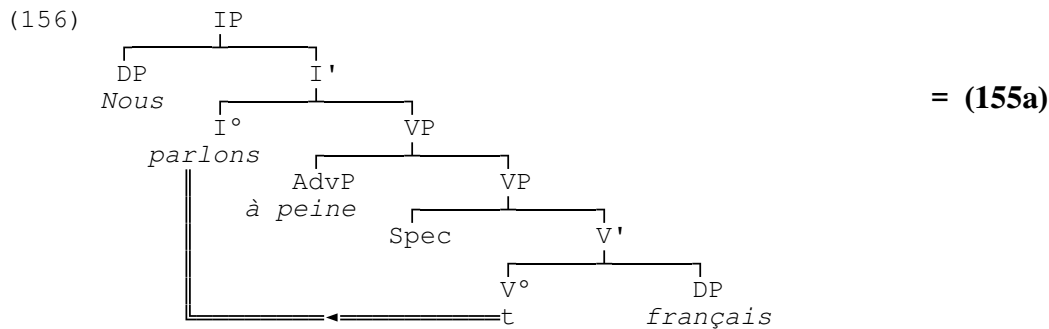
Based on these examples, the following generalisations can be made (if we either disregard the negation particle *ne* or take it to be part of the verb):

- (151) i. The finite verb follows the subject immediately.
 ii. The object follows the non-finite verb form immediately.

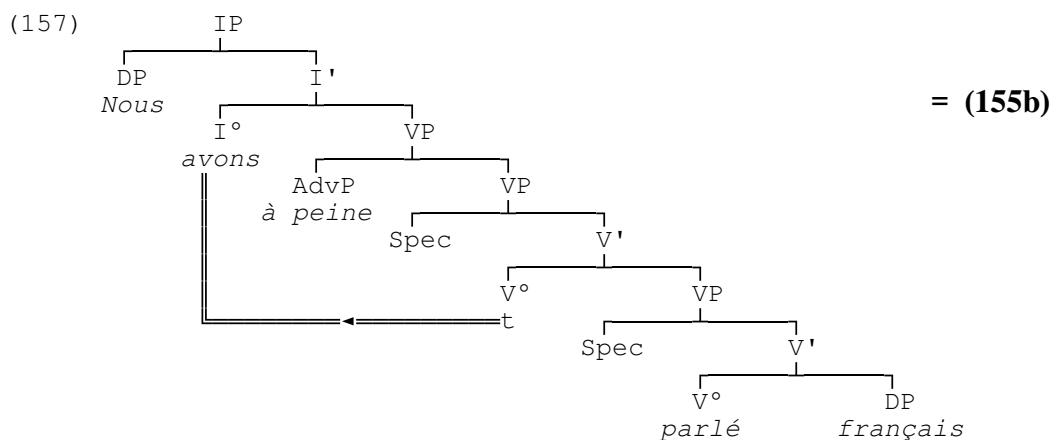
(151ii) is exactly what you would expect from an SVO language like French. However, in (148a), (149a), and (150a), the elements *pas*, *tous* and *à peine* occur between the main verb and its complement, even though these elements are not part of the VP, which only consists of the verb and its complement. The verb forms *parle*, *parlent* and *parlons* are both main verb and finite verb (the verb form which is inflected for tense, person and number). The elements *pas*, *tous* and *à peine* occur immediately left of the VP. The finite verbs occur in **one** position (immediately following the subject), but they ought to also occur in a **different** position (immediately in front of the object). In order to have the structure comply with **both** of these two requirements, it is assumed that the verb stem has moved from V° to I°. This movement then leaves a trace (*t*) in V°.

		<u>DP</u>	(<u>ne</u>)	<u>I°</u>	(<u>modif.</u>)	(<u>V°</u>)	<u>V°</u>	<u>DP</u>
(152)	Fr. a.	Frédéric		parle		t		français
	b.	Frédéric		a		t	parlé	français
	c.	Frédéric		veut		t	parler	français
(153)	Fr. a.	Frédéric	ne	parle	pas		t	français
	b.	Frédéric	n'	a	pas	t	parlé	français
	c.	Frédéric	ne	veut	pas	t	parler	français
(154)	Fr. a.	Les garçons		parlent	tous		t	français
	b.	Les garçons		ont	tous	t	parlé	français
	c.	Les garçons		veulent	tous	t	parler	français
(155)	Fr. a.	Nous		parlons	à peine		t	français
	b.	Nous		avons	à peine	t	parlé	français
	c.	Nous		voulons	à peine	t	parler	français

If we assume that the elements *pas*, *tous* and *à peine* are left-adjoined modifiers of VP, then (155a) may be analysed as follows:



Also finite auxiliaries, as in (152b,c)-(155b,c), consist of a verb stem and an inflectional ending. The participle *parlé* and the infinitive *parler* are base-generated in V° and remain there. The verb stem of the auxiliary is base-generated in its own V° and moves from there to the I°-position:



The difference is thus that it is only the stem of a finite verb that moves from V° to I°, as opposed to the stem of a non-finite verb. This is something that (French-speaking) children know before the age of 2 years and 3 months, even if they do not have finite verbs in all main clauses. In her research into the language of four French-speaking children, Pierce (1992:65-66) found a very convincing correlation between the verb form (finite or non-finite) and the position of the verb (left or right of the negation):

(158)

	finite verb	infinitive
... Verb - <i>pas</i> ...	216	2
... <i>pas</i> - Verb ...	9	122

(159) Fr. a. Ça tourne pas (Philippe, 2;1;3)
 It turns not

b. Pas rouler en vélo (Philippe, 2;2;1)
 Not drive in bicycle

5.4 Middle English

Let us now turn to Middle English, which has an obvious problem compared to French: There are no longer any native speakers, and so we can neither ask anyone if they can say such and such in Middle English, nor can we observe how children acquire the language.

Although the examples are not parallel to each other in the way that the French ones above were, it is still possible to see what the situation in Middle English is like compared to that of French as exemplified in (148), (149), and (150) above.

As with French *pas*, the Middle English negation, *not*, has to follow the finite verb, but precede non-finite verb forms:

- (160) En. a. ... and ther-for I spak not to hym ther-of
... and therefore I spoke not to him about it
(1460, Margaret Paston, *Letter to John Paston I*, 21.10.1460, Davis 1971:259)
- b. ... and at Mydsomer i vndrestonde he had not payed Townesende, ...
... and at midsummer I understood he had not paid Townshend, ...
(1471, John Paston II, *Letter to John Paston III*, 15.09.1471, Davis 1971:440)
- c. ... but he myght not speke wyth hym
... but he could not speak to him
(1465, Margaret Paston, *Letter to John Paston I*, 27.09.1465, Davis 1971:321)

(Here we encounter a very common phenomena in the verbal inflectional system of the Germanic languages: strong (or irregular) verbs. Whereas it might seem unproblematic to say that in French the verb stem *parl-* is generated in V° and the ending *-ais* in I°, and the finite verb *parlais* (1.sg.impf of *parler* 'speak') is the result of the movement of *parl-* from V° to I°. However, when strong verbs are considered, as with the difference in modern English between *I speak* and *I spoke* or the corresponding difference in Middle English between *I speke* and *I spak(e)*, it may be necessary to consider the content of I° in a more abstract fashion, i.e. to interpret the idea that the endings *-s* or *-ed* are base-generated in I° as a metaphor for abstract morphosyntactic features like [\pm past], [α person], [\pm plural] being generated in I° and then "checked" against the actual form of the inflected verb.)

As with French *tous*, the Middle English quantifier *all* has to follow the finite verb, but precede non-finite verb forms when it refers to the subject:

- (161) En. a. And soo they swore all sauf John Paston and John Damme
And so they swore all except John Paston and John Damme
(1466, Agnes Paston, *Part of draft will 1466 (?)*, Davis 1971:48)
- b. Sethyn whan they haue all consaillet ...
Then when they have all deliberated ...
(1422, James Yonge (trsl.), *The Gouvernance of Prynces*, Steele 1898:209)
- c. ... or ells, if [we] walde flee, we schulde all perische ...
... or else, if we tried to escape, we should all perish ...
(1494 Anonymous, *Life of Alexander*, Westlake 1913:40)

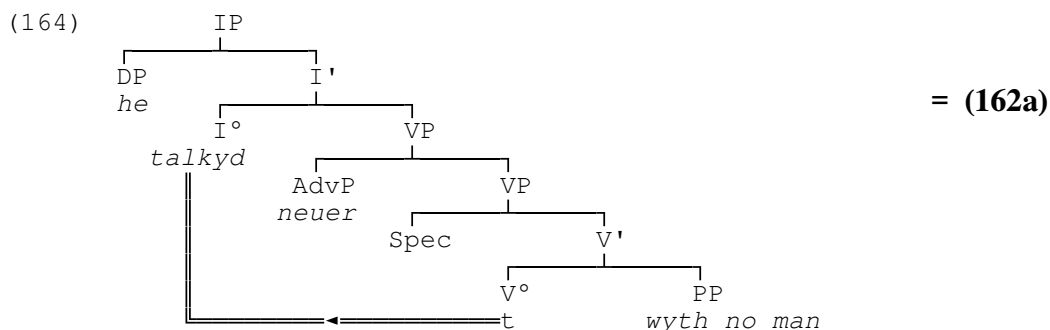
Finally, instead of the adverbial *hardly*, which would seem to be very rare, I have had to take a different adverb which also may not occur at the end of the clause, namely *never*. As with French *à peine* 'hardly', the Middle English adverbial *neuer* 'never' has to follow the finite verb, but precede non-finite verb forms:

- (162) En. a. ... and he swore that he talkyd neuer wyth no man ...
 ... and he swore that he talked never with any man ...
 (1460 William Paston I, *Letter to John Paston I*, 02.05.1460, Davis 1971:164)
- b. I had leuer ye had neuer know þe lond
 I would rather that you had never known the land
 (1471, Margaret Paston, *Letter to John Paston III*, 07.12.1471 (?), Davis 1971:361)
- c. He ferythe lesse that he schall neuer come home; but ...
 He fears less that he shall never come home; but ...
 (1488, William Paston III, *Letter to John Paston III*, 13.05.1488, Davis 1971:656)

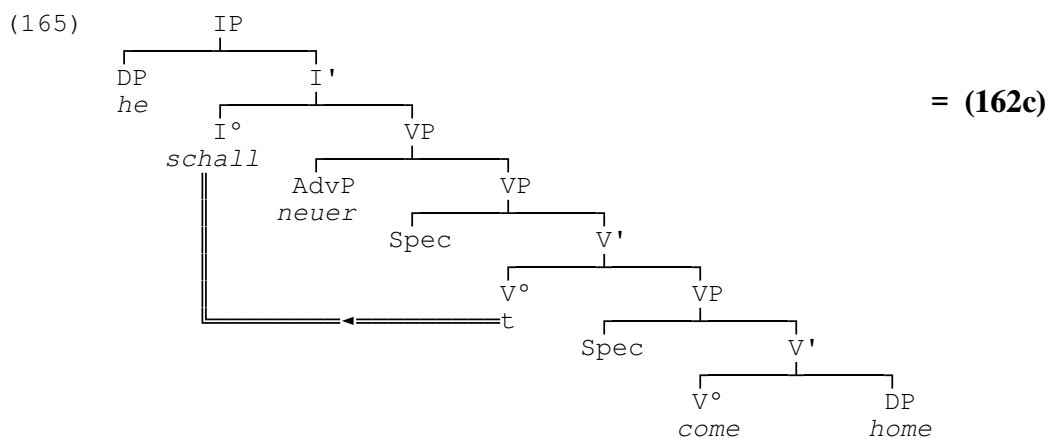
This means that the generalisations in (151) are also valid for the Middle English data:

- (163) i. The finite verb follows the subject immediately.
 ii. The object follows the non-finite verb form immediately.

This again means that the analysis of French above is also valid for Middle English, assuming that *not*, *all* and *neuer* are left-adjoined modifiers of VP. (162a) may thus be analysed as follows:



and (162b) as follows:



In both modern French and Middle English, it would thus seem that the (stem of a) finite verb moves from V° to I°, whereas (the stem of) a non-finite verb remains in V°.

5.5 Modern English

5.5.1 The general picture

Examples like the ones in French and Middle English also occur in modern English but with certain important differences. In modern English, not all finite verbs occur in I°, but only the modal verbs, the auxiliaries *be*, *have*, *do*, and the main verb *be*, cf. section 4.2 below. This is clear from a comparison of the word order in sentences with simple tenses and the word order in sentences with compound tenses. What is important is the placement of the finite verb relative to various adverbial expressions:

- (166) En. a. Fred speaks English
b. Fred has spoken English (since he was a child)
c. Fred is speaking English (right now)
d. Fred will speak English (when he visits New Zealand)
- (167) En. a. Fred does not speak English
b. Fred has not spoken English
c. Fred is not speaking English
d. Fred will not speak English
- (168) En. a. The boys all speak English
b. The boys have all spoken English
c. The boys are all speaking English
d. The boys will all speak English
- (169) En. a. We hardly speak English
b. We have hardly spoken English
c. We are hardly speaking English
d. We will hardly speak English

(166b,c,d)-(169b,c,d) exactly follow the pattern from the corresponding French and Middle English examples. The elements *not*, *all* and *hardly* immediately follow the finite verb. The non-finite forms *spoken*, *speaking* and *speak* seem to occur in their base positions, and form a VP together with their complement, *English*.

As opposed to French and Middle English, however, this would also seem to be the case for the finite verbs in (168a) and (169a): Although the finite auxiliaries move from their base positions in V° across *not*, *all* and *hardly* to I°, modern English finite main verbs would seem to remain in VP.

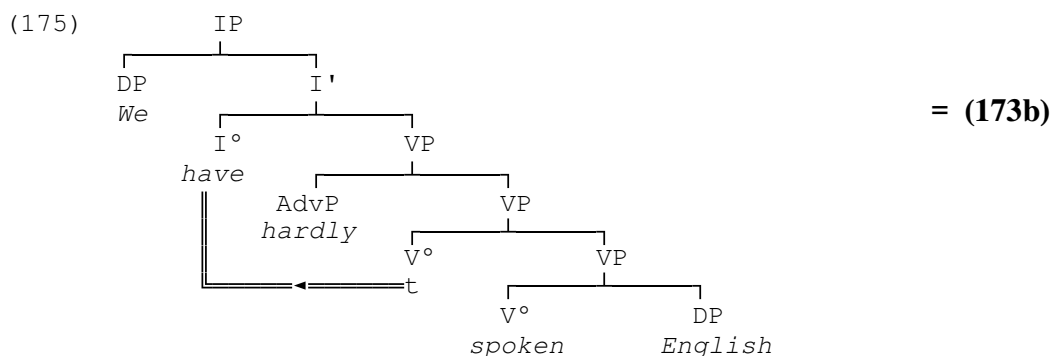
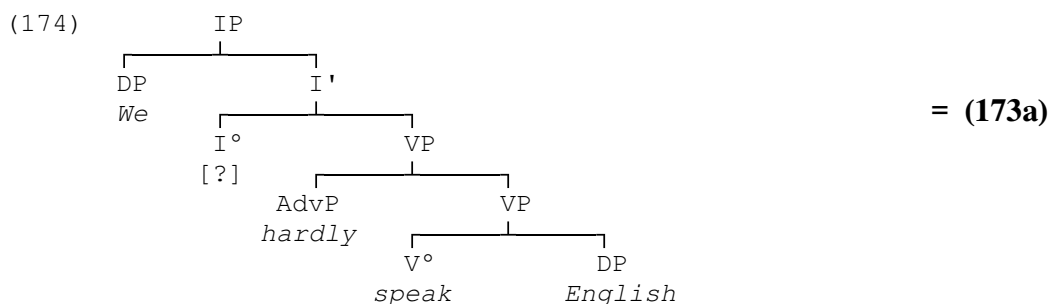
Furthermore, the presence of *not* triggers the insertion of a 'periphrastic' *do*, which then causes the main verb in such cases to remain in the VP, and occur in the infinitive.

As is clear from (146) above, the inflectional endings in modern English are less varied and less frequent than in French and in Middle English.

The most extreme case of this are the modal verbs (*will*, *would*, *must*, *can*, *could*, *should*, *shall*, *may*, *might*), which never inflect for number or person at all, and also never occur in any non-finite form. It is often claimed that they do not have actual tense forms either, cf. that the difference between *Fred may speak English* and *Fred might speak English* is very different from the one between *Fred speaks English* and *Fred spoke English* or the one between *Fred has spoken English* and *Fred had spoken English*. In the same vein, it is frequently assumed that the modern English modal verbs do not project a VP but are inserted directly under I°, which is again taken to explain why there is no room for any morphosyntactic features in I° with modal verbs.

The modern English examples above may be analysed as follows:

		<u>DP</u>	<u>I°</u>	<u>AdvP</u>	<u>(V°)</u>	<u>V°</u>	<u>DP</u>
(170)	En.	a. Fred				speaks	English
		b. Fred	has		t	spoken	English
		c. Fred	is		t	speaking	English
		d. Fred	will			speak	English
(171)	En.	a. Fred	does not			speak	English
		b. Fred	has not		t	spoken	English
		c. Fred	is not		t	speaking	English
		d. Fred	will not			speak	English
(172)	En.	a. The boys	all			speak	English
		b. The boys	have all		t	spoken	English
		c. The boys	are all		t	speaking	English
		d. The boys	will all			speak	English
(173)	En.	a. We	hardly			speak	English
		b. We	have hardly	t		spoken	English
		c. We	are hardly	t		speaking	English
		d. We	will hardly			speak	English



We still need an explanation of how the verb stem and the morphosyntactic features in I° in (170a), (172a) and (173a) may merge to one word if the verb never leaves VP. Various possibilities are considered in the literature:

ONE option is that the elements which are base-generated in I° move down into V° (Haegeman & Guéron 1999:87, 307). The problem with this is that almost all other cases of syntactic movement are upwards in the tree, not downwards, in such a way that the landing position c-commands the base position, not vice versa, as would be the case here.

ANOTHER option is that the modern English verb does not need to move to I° at all, because the inflectional morphology is so "weak".

A **THIRD** option is that the movement from V° to I° that we posited for French and Middle English also takes place in Modern English, but on a more abstract syntactic level (LF, which stands for logical form) which has no direct consequences for the word order (Haegeman & Guéron 1999:560-566).

5.5.2 *have, be* and *do* in more detail

The auxiliaries *have* and *be* clearly occur in I° when they are finite

- | | | | <u>I°</u> | | <u>V°</u> | |
|-------|-----|----|-----------|-------------|-----------|------------------|
| (176) | En. | a. | Fred | <u>has</u> | hardly | spoken English |
| | | b. | The boys | <u>have</u> | all | spoken English |
| | | c. | Fred | <u>has</u> | not | spoken English |
| (177) | En. | a. | Fred | <u>is</u> | hardly | speaking English |
| | | b. | The boys | <u>are</u> | all | speaking English |
| | | c. | Fred | <u>is</u> | not | speaking English |

Notice that when these auxiliaries are not finite, they occur in V°:

- | | | | <u>I°</u> | | <u>V°</u> | <u>V°</u> | |
|-------|-----|----|-----------|--------|-------------|-----------|---------|
| (178) | En. | a. | Fred will | hardly | <u>have</u> | spoken | English |
| | | b. | Fred will | hardly | <u>be</u> | speaking | English |

The main verb *be* also occurs in I°:

- | | | | <u>I°</u> | | <u>V°</u> | |
|-------|-----|----|-----------|------------|-----------|-------------|
| (179) | En. | a. | Fred | <u>is</u> | hardly | intelligent |
| | | b. | The boys | <u>are</u> | all | intelligent |
| | | c. | Fred | <u>is</u> | not | intelligent |

This is not the case with the main verbs *do* and *have*, they have to be in V°:

- | | | | <u>I°</u> | | <u>V°</u> | |
|-------|-----|----|-----------|-------------|--------------------|-------------------------------|
| (180) | En. | a. | *Fred | <u>does</u> | hardly | the dishes |
| | | b. | *The boys | <u>do</u> | all | the dishes |
| | | c. | *Fred | <u>does</u> | not | the dishes |
| | | d. | *Fred | <u>has</u> | hardly | problems with his computer |
| | | e. | *The boys | <u>have</u> | all | problems with their computers |
| | | f. | *Fred | <u>has</u> | not | problems with his computer |
| (181) | En. | a. | Fred | | hardly <u>does</u> | the dishes |
| | | b. | The boys | | all <u>do</u> | the dishes |
| | | c. | Fred | <u>does</u> | not <u>do</u> | the dishes |
| | | d. | Fred | | hardly <u>has</u> | problems with his computer |
| | | e. | The boys | | all <u>have</u> | problems with their computers |
| | | f. | Fred | <u>does</u> | not <u>have</u> | problems with his computer |

That the finite main verb *have* has to be in V° is a relatively recent innovation, cf. the following two examples from Sherlock Holmes (written around 1900 by Arthur Conan Doyle):

- | | | | | | | |
|-------|-----|----|----------------------|-------------|---------------|---------------------|
| (182) | En. | a. | These clever fellows | <u>have</u> | <u>always</u> | a touch of madness |
| | | b. | You | <u>have</u> | <u>not</u> | a pistol, have you? |

The full picture is as follows:

(183) "**Auxiliary**" syntax

(verb occurs in I°)

Auxiliaries: *be*, *have*, *do*, and modals

Main verbs: *be*

(184) "**Main verb**" syntax

(verb occurs in V° only, never in I°)

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* (= light *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*, 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 e.g. Bybee (2003a, 2003b:620-621). 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°. 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*.

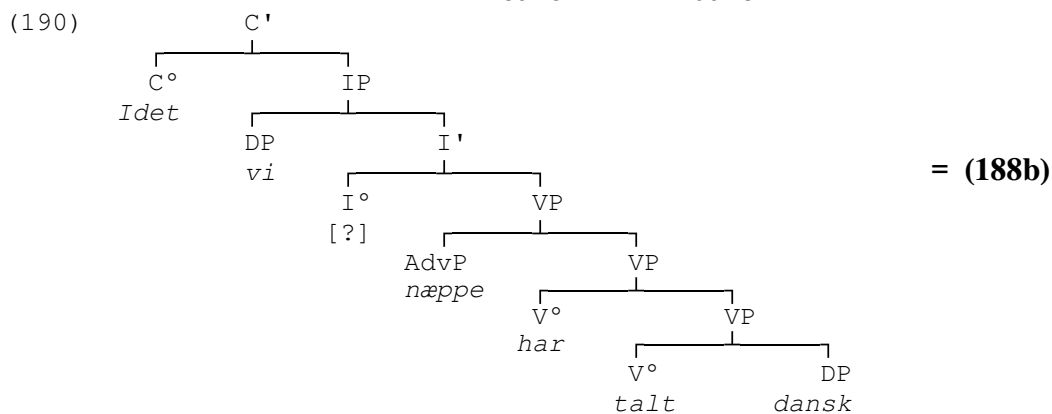
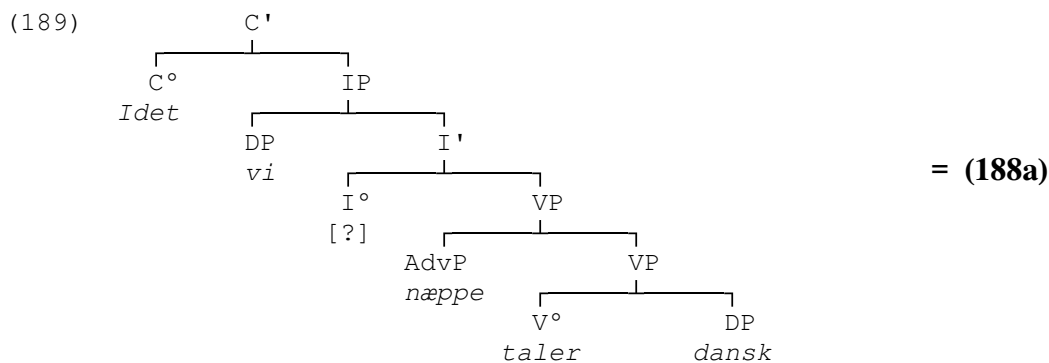
5.6 Danish

Consider now Danish versions of the examples we have examined in French, Middle English and modern English.

All the Danish examples here are embedded clauses, main clauses will be discussed in sections 6.1-6.3 below.

		<u>C°</u>	<u>DP</u>		<u>I°</u>	<u>AdvP</u>	(<u>V°</u>)	<u>V°</u>		<u>DP</u>
(185)	Da. a.	Idet	Frederik					taler	dansk , ...	
		As	Frederik					speaks	Danish, ...	
	b.	Idet	Frederik				har	talt	dansk , ...	
		As	Frederik				has	spoken	Danish, ...	
	c.	Idet	Frederik				vil	tale	dansk , ...	
		As	Frederik				will	speak	Danish, ...	
(186)	Da. a.	Idet	Frederik	ikke				taler	dansk , ...	
		As	Frederik	not				speaks	Danish, ...	
	b.	Idet	Frederik	ikke	har			talt	dansk , ...	
	c.	Idet	Frederik	ikke	vil			tale	dansk , ...	
(187)	Da. a.	Idet	drengene	alle				taler	dansk , ...	
		As	boys-the	all				speaks	Danish, ...	
	b.	Idet	drengene	alle	har			talt	dansk , ...	
	c.	Idet	drengene	alle	vil			tale	dansk , ...	
(188)	Da. a.	Idet	vi	næppe				taler	dansk , ...	
		As	we	hardly				speak	Danish, ...	
	b.	Idet	vi	næppe	har			talt	dansk , ...	
	c.	Idet	vi	næppe	vil			tale	dansk , ...	

These above examples show that no Danish finite verbs undergo V°-to-I° movement (at least not in embedded clauses):



As argued in Vikner (1997, 2005a), V°-to-I° movement was lost around 1500-1550, and therefore the finite verb is placed differently in embedded clauses from before and after this period:

- (191) Da. Æn beriar man threl for bondæns øghæn. tha bõtæ han
But hits a man a slave for peasant-the's eyes, then pays he
- bondæn tolf øræ foræ um thrællæn takær ey atær gen
peasant-the twelve øre therefore if slave-the attacks not back again
- "Men slår en mand en træl for øjenene af bonden, da skal han bøde tolv øre derfor til bonden, hvis trællen ikke sætter sig til modværge"
 "But if a man beats a slave in front of the peasant, then he should pay a fine of twelve øre for this to the peasant, if the slave did not fight back"
 (ca. 1300, *Valdemars sjællandske lov, yngre redaktion*, chap. 86, Uldaler & Wellejus 1968:54, l. 21-22)
- (192) Da. Æn sittær han hemmæ vtæn laghæ forfall æth orlof. gialdæ
But sits he home without legal reason or excuse, he should-pay
- kunung af hwar garth thær han hauær een thrithings hafnæ,
to king for each farm that he owns one soldier's fee
- æth wæræ innæ bondæ. of han wil æi gialdæ sum sauth ær.
or he should-be villein if he will not pay as said is
- "Men sidder han hjemme uden lovligt forfald eller orlov, da skal han betale kongen tredingshavne (ledingsafgift) af hver gård han har eller være innebonde (hoveribonde) hvis han ikke vil betale som det er sagt"
 "But if he sits at home without legal reason or excuse, then he should pay the king one soldier's fee for each farm that he owns or he should be indentured if he will not pay as required"
 (ca. 1325, *Jyske lov*, 3rd book, chap. 7, Uldaler & Wellejus 1968:92, l. 17-19)
- (193) Da. Som en Spyflue icke springer vdi den gryde som er hed,
As a blowfly not jumps into the pot which is hot,
- men flyer derfra, saa flyer oc Dieffuelen fra de hierter
but flees therefrom, thus flees also devil-the from the hearts
- som daglige brende, ved en Christelig Bøn og tacksigelse.
that daily burn in a christian prayer and thanksgiving
 (1572, Niels Hemmingsen *Om Ecteskab*, DSST = Ruus et al. 2001, ecteskab.sgm, p. 215)
- (194) Seer til at i icke forskyde Gud\$ stemme og Sententz
See to that you not disown God's voice and wisdom
- men at i vdi alle maade skicke eder dereffter, saa
but that you in all ways behave yourselves thereafter, in so
- fremt som i icke ville falde under Gud\$ heffn og straff
far as you not will fall under God's revenge and punishment
 (1572, Niels Hemmingsen *Om Ecteskab*, DSST = Ruus et al. 2001, ecteskab.sgm, p. 393)

The difference between (191)/(192) and (193)/(194) may be analysed so that the finite verb in embedded clauses occurred in I° before 1500-1550, but in V° after 1500-1550:

(195)	C°	IPsp	I°	Neg	V°	...	
a.	um	thrællæn	takar	ey		atær gen	= (191)
b.	of	han	wil	æi		gialdæ sum sauth ær	= (192)
c.	Som	en Spyflue		icke	springer	vdi den gryde ...	= (193)
d.	som	i		icke	ville	falde under ...	= (194)

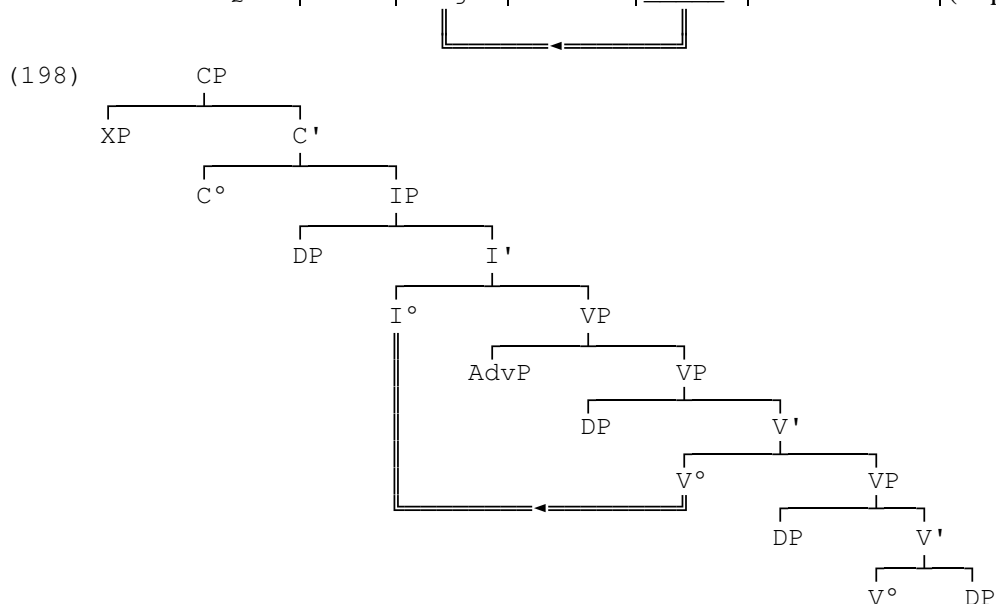
5.7 Overview: The Germanic SVO-Languages

To give a complete overview, I will here discuss the general situation in the Germanic SVO-languages very briefly.

V°-to-I° movement moves the finite verb to a position immediately after the subject, preceding any adverbials. Purely descriptively, the question is whether the finite verb precedes or follows any adverbials or negations (i.e. elements in the "a"-position in Diderichsen's 1962 field analysis, cf. section 5.8 and Jørgensen & Vikner 2007).

		C°	IPsp	I°	AdvP	V°	DP	
(196)	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 xidesh far alemen)
	f. Fr.	*Que	Jean		souvent	mange	des tomates	(surprend tout le monde)

(197)	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 xidesh far alemen)
	f. Fr.	Que	Jean	mange	souvent		des tomates	(surprend tout le monde)



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, 1999), where finite verb movement was linked to verbal inflectional morphology:

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

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. (146) above and (200) below. (The Norwegian and Swedish paradigms are identical to the Danish one in (200).)

These five are also the only VO-languages without V°-to-I° movement, cf. (196) and (197) above. 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.

(200)		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	þú 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

Consider also the following examples from Icelandic, Yiddish, French, and Middle English:

	C°	IPsp	I°	AdvP	V°	V°	DP	
(201) Ic.	a. *Að	Jón		oft	hafi	borðað	tómata	...
	b. Að	Jón	hafi	oft	_____	borðað	tómata	...
	c. *Að	Jón	hafi borðað	oft	_____	_____	tómata	...
	d. *Að	Jón	_____	oft	hafi	_____	tómata	...
(202) Yi.	a. *Az	Jonas		oft	hot	gegesn	pomidorn	...
	b. Az	Jonas	hot	oft	_____	gegesn	pomidorn	...
	c. ??Az	Jonas	hot gegesn	oft	_____	_____	pomidorn	...
	d. *Az	Jonas	_____	oft	hot	_____	pomidorn	...
(203) Fr.	a. *Que	Jean		souvent	ait	mangé	des tomates	...
	b. Que	Jean	ait	souvent	_____	mangé	des tomates	...
	c. *Que	Jean	ait mangé	souvent	_____	_____	des tomates	...
	d. *Que	Jean	_____	souvent	ait	_____	des tomates	...
	That	John	(has) (eaten)	often	(has)	(eaten)	tomatoes	
(204) ME.		IPsp	I°	AdvP	V°	V°	...	
	a. *I			now	haue	shewid	the my law and my feyth	
	b. I		haue	now	_____	shewid	the my law and my feyth	
	c. *I		haue shewid	now	_____	_____	the my law and my feyth	
	d. *I		_____	now	haue	_____	the my law and my feyth	
	I	(have) (shown)	now	(have)	(shown)	you my law and my faith		

(1422, James Yonge (trl.), *The Gouvernance of Prynces*, Steele 1898:165)

(201a,b), (202a,b), (203a,b), and (204a,b) show (again) that Icelandic, Yiddish, French and Middle English have V°-to-I° movement and cannot leave the finite verb in V°. (201c), (202c), (203c), and (204c) show that only **one** verb may take part in a V°-to-I° movement. Finally, (201d), (202d), (203d), and (204d) show that only a **finite** verb may take part in a V°-to-I° movement.

EXERCISE 4:

This exercise is about the syntax in *yes/no*-questions in French and (modern) English. I will limit myself to examples where the subject is a pronoun:

- (205) Fr. a. Nous avons parlé français
 b. Avons-nous parlé français?

- (206) En. a. We have spoken English
 b. Have we spoken English ?

In both cases the declarative clauses in (205a) and (206a) may be considered the basis for the *yes/no*-questions in (205b) and (206b), so that the verb *avons/have* is moved to a position to the left of the subject.

Now compare more examples of the same type from the two languages. How can the differences between French and (modern) English be described, in the light of the analysis suggested above?

- (207) Fr. a. Nous parlons français
 b. Parlons- nous français?

- (208) En. a. We speak English
 b. *Speak we English ?

- (209) Fr. a. Nous voulons parler français
 b. Voulons-nous parler français?

- (210) En. a. We want to speak English
 b. *Want we to speak English ?

- (211) En. a. We are speaking English
 b. Are we speaking English?

- (212) En. a. We speak English
 b. Do we speak English?

- (213) Fr. a. Elle est malade
 b. Est-elle malade?

- (214) En. a. She is ill
 b. Is she ill ?
-

5.8 Brief comparison with Diderichsen

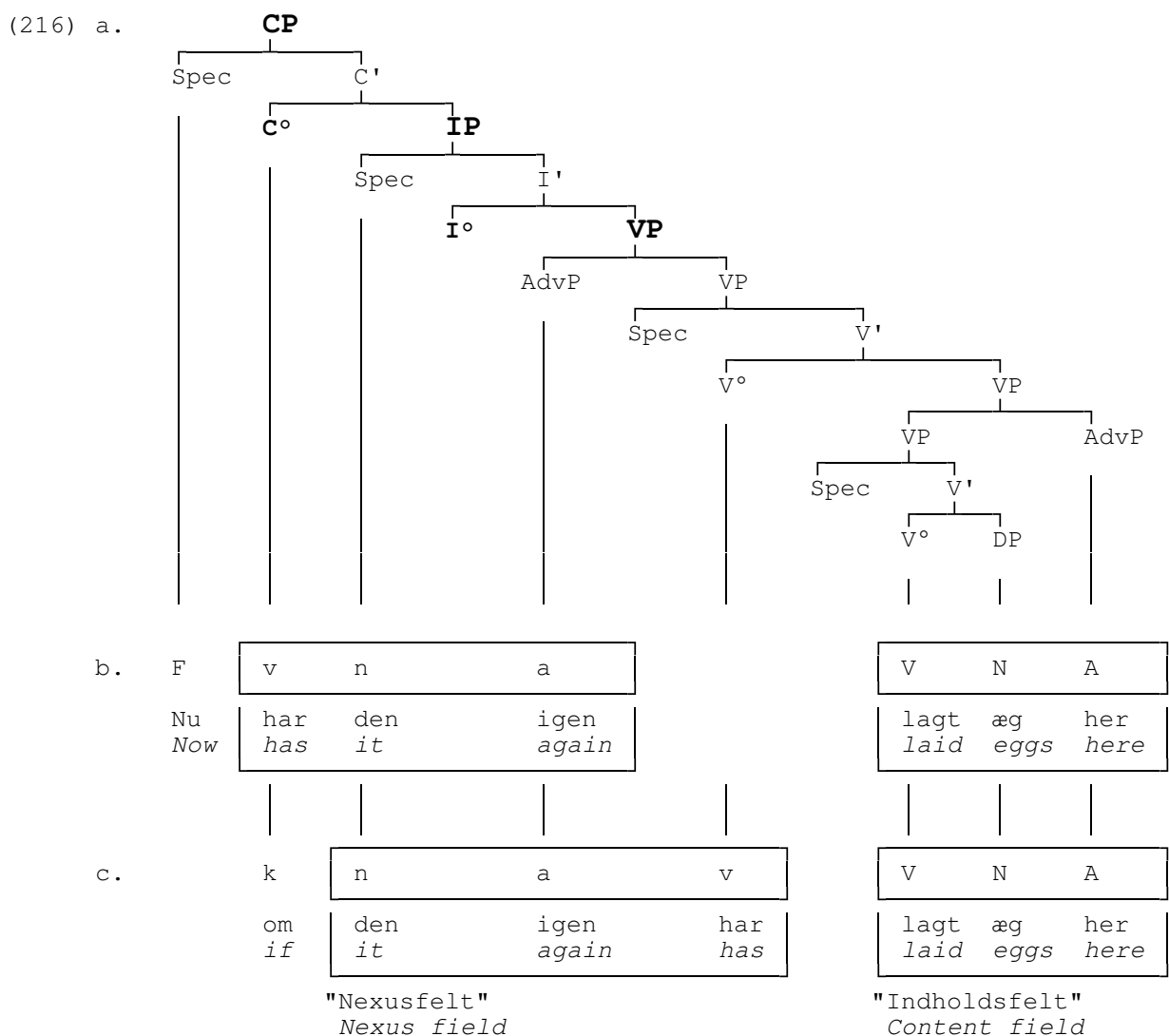
In the present somewhat simplified generative analysis, the structure of a sentence is as follows:

- (215) A clause is a CP,
the complement of its head (= C°) is an IP, and
the complement of the IP's head (= I°) is a VP.

(VP thus corresponds to Diderichsen's 1962 "indholdsfelt",
IP thus corresponds to BOTH Diderichsen's 1962 "nexusfelt" AND "indholdsfelt")

All verbs have their own VP. Adverbials (etc.) may be adjoined both on the left side and on the right side of a VP.

The structure in (216a) may thus be compared to the Diderichsen model for modern Danish (etc.) as illustrated in (216b) for main clauses and in (216c) for embedded clauses (Diderichsen 1962:162, 186, cf. also Hansen 1980:44, 72-74, Heltoft 1986, Allan et al. 1995:491-498, Jørgensen 2000:63-78, Tøgeby 2003:56, 72, 97-99):



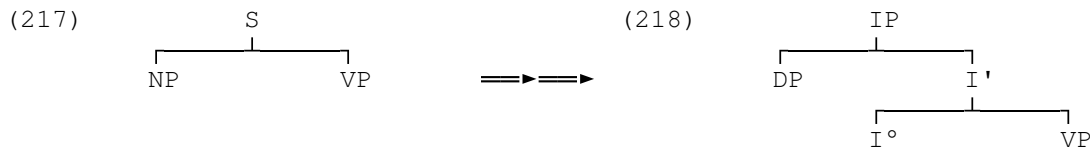
(This collapsing of the Diderichsen model for the main clause with the one for the embedded clause was introduced by Platzack 1985).

(On compatibilities and incompatibilities between formal and functional linguistics, see also Vikner 2004 and Jørgensen & Vikner 2007).

6. The phrase structure of CP and V2

6.1 Embedded clauses

In section 4 above we saw that the analysis of the sentence from the 1960es, (217), could be replaced by (218).

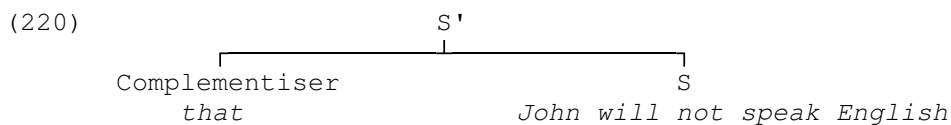


This reanalysis results in a new position, I°, which was used to account for various differences between English and French (and between embedded clauses in Danish and Icelandic). Another advantage is that the sentence now has the same basic structure as NP, VP, PP and AdjP: Every constituent is now either a head itself or has a head (i.e. it is a projection of a head). The sentence (IP) is now a projection of the head (I°) in which the finite inflection is base-generated.

Consider now sentences that are larger than IP, e.g. embedded clauses:

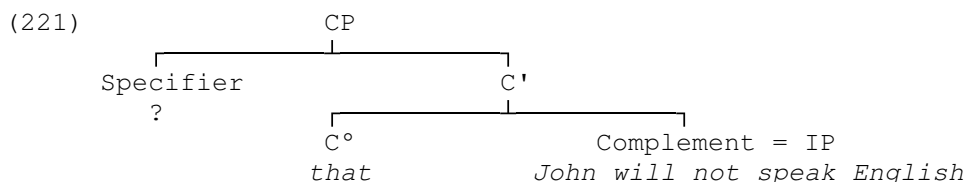
- (219) En. a. [John will not speak English]
 b. Mary thinks that [John will not speak English]

Based on the observation that the addition of e.g. the subordinating conjunction *that* to a main clause like (219a) turned it into a potential embedded clause like (219b), i.e. into something that may be the complement of a verb (e.g. *know*, *believe*, *think*), the following analysis of (219b) was suggested in the 1970es:



The constituent which is now the complement of the matrix verb was called S', i.e. a "higher" version of S.

Just as with (217), the analysis of (220) may be changed so that it conforms to the basic structure. In (220), S' is a projection of something (i.e. S), which is not a head, and there is a head (i.e. the complementiser), which does not have any higher projections. It was therefore suggested that S' is a projection of the complementiser: CP (Complementiser Phrase). The result is the following:



This structure thus results in two positions at the beginning of the (embedded) clause: **CP-Spec** and **C°**. Although English, standard Danish, and standard German embedded clauses never have these two positions filled at the same time, this situation obtains in other Germanic and Romance variants, e.g. Middle English (ME.), Middle Danish (MD.), colloquial Danish (Da.), Bavarian German (Ba.), Bern Swiss German (SG.), Flemish (Fl.), West Flemish (WF.), Québec French (QF.), and the northern Italian dialect from Bergamo (Be.):

		CP-Spec	C°	IP
(222) ME.	Only the sight of hire <i>Only the sight of her</i>	<u>whom</u> <i>who</i>	<u>that</u> <i>that</i>	I serve <i>I serve</i>
(223) ME.	I thanke yowe for þe lettüre <i>I thank you for the</i> letter	<u>which</u> <i>which</i>	<u>that</u> <i>that</i>	ye sende me be John Bekurton <i>you sent me by John B.</i>
(224) MD.	I [...] vide aldrig <i>You know never</i>	<u>naar</u> <i>when</i>	<u>at</u> <i>that</i>	fremmede fiender offfuerfalde oß <i>foreign enemies</i> attack us
(225) Da.	Han turde ikke sige <i>He dared not say</i>	<u>hvorfor</u> <i>why</i>	<u>at</u> <i>that</i>	han selv havde været på politistationen <i>he self had been on</i> police-station-the
(226) Ba.	I woaß ned <i>I know not</i>	<u>wann</u> <i>when</i>	<u>daß</u> <i>that</i>	da Xavea kummt <i>the Xaver comes</i>
(227) SG.	I ha ne gfragt <i>I have hime asked</i>	<u>wo</u> <i>where</i>	<u>dass</u> <i>that</i>	er wohnt <i>he lives</i>
(228) Fl.	Ik weet niet <i>I know not</i>	<u>wie</u> <i>who</i>	<u>dat</u> <i>that</i>	Jan gezien heeft <i>Jan seen has</i>
(229) WF.	Kweten niet <i>I-know not</i>	<u>wannièr</u> <i>when</i>	<u>da</u> <i>that</i>	Valère goa werekommen <i>Valère will again-come</i>
(230) QF.	Je me demande <i>I me ask</i>	<u>quoi</u> <i>what</i>	<u>que</u> <i>that</i>	tu fais <i>you do</i>
(231) Be.	Ga dumande <i>(I) him ask</i>	<u>cusé</u> <i>what</i>	<u>che</u> <i>that</i>	'l fa <i>he does</i>

(222) = 1392, Geoffrey Chaucer, *The Knight's Tale*, line 1231, Lightfoot (1979:321, (53b))

(223) = 1477, Margery Paston, *Letter to John Paston III, Feb. 1477*, Davis (1971:663)

(224) = 1543, Peder Palladius, *En Visitatz Bog*, Jacobsen (1925:124), Mikkelsen (1911:504)

(225) = 1990, Henning Bergenholtz' Corpus DK87-90

(226) = Bayer (1984:24, (3a))

(227) = Penner & Bader (1995:128, (13a))

(228) = Haegeman (1994:382, (16b))

(229) = Haegeman (1992:57, (33a))

(230) = Koopman (1983:389)

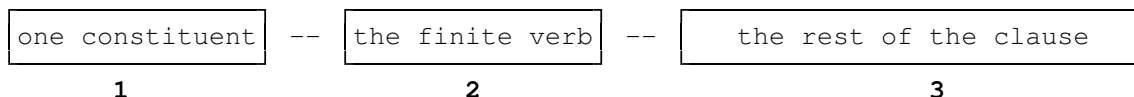
(231) = Federica Venier, p.c.

6.2 Verb second

It might seem now that we have an asymmetry on our hands: Embedded clauses are CPs, main clauses though are only IPs. This is not always the case, however: In all Germanic languages with the single exception of Modern English, i.e. including Old English (OE.) there are clear indications that also main clauses are CPs.

The reason is that in main clauses, both the finite verb and a maximal projection may precede the subject. This is often referred to as "verb second" (V2), because the finite verb always occupies the second position in the clause (CP-Spec = 1st position and C° = 2nd position):

(232) Verb second = V2:



It might seem as if also in English and French the finite verb always occupies the second position:

- (233) a. Da. Peter har sandsynligvis læst denne bog
 b. Ic. Pétur hefur sennilega lesið þessa bók
 c. Ge. Peter hat wahrscheinlich dieses Buch gelesen
 d. En. Peter has probably read this book
 e. Fr. Il a probablement lu ce livre

This is an illusion, though, which only occurs when we consider subject-initial main clauses with a finite auxiliary verb. It is actually only the Germanic languages (except modern English) which are "real" V2 languages:

	CP-Spec	C°	IP
(234) a. Da.	Hvad for en bog	<u>har</u>	Peter læst ?
b. Ic.	Hvaða bók	<u>hefur</u>	Pétur lesið ?
c. Ge.	Welches Buch	<u>hat</u>	Peter gelesen?
d. En.	Which book	<u>has</u>	Peter read ?
e. Fr.	Quel livre	<u>a-t-</u>	il lu ?
		←	
(235) a. Da.	Den her bog	<u>har</u>	Peter læst
b. Ic.	Þessa bók	<u>hefur</u>	Pétur lesið
c. Ge.	Dieses Buch	<u>hat</u>	Peter gelesen
d. En.	*This book	<u>has</u>	Peter read
e. Fr.	*Ce livre	<u>a-t-</u>	il lu
		←	
(236) a. Da.	Nu	<u>har</u>	Peter læst den her bog
b. Ic.	Nú	<u>hefur</u>	Pétur lesið þessa bók
c. Ge.	Jetzt	<u>hat</u>	Peter dieses Buch gelesen
d. En.	*Now	<u>has</u>	Peter read this book
e. Fr.	*Maintenant	<u>a-t-</u>	il lu ce livre
		←	

Rizzi (1996:64) refers to modern English and modern French as languages with "residual V2", because "real" V2 was fairly widespread in Old English, (237a) & (238a), and Old French, (239), less so in Middle English, (240), and Middle French, (241), and it is fairly limited in modern English and modern French (where it mainly occurs in main clause questions like (234)).

	CP-Spec	C°	IP
(237) a. OE.	Hine	bebyrigde	se biscop of Ceastre (ca. 1140, <i>the Peterborough Chronicles</i> , Shores 1971:91)
b. En.	*This man	buried	the bishop of Chester (if <i>bishop</i> = AGENT)
c. En.	This man		the bishop of Chester buried
d. Ge.	Ihn	beerdigte	der Bischof von Chester
e. Ge.	*Ihn		der Bischof von Chester beerdigte
f. Da.	Ham	begravede	biskoppen af Chester
g. Da.	*Ham		biskoppen af Chester begravede
h. Ic.	Hana	jarðaði	biskupinn yfir Chester
i. Ic.	*Hana		biskupinn yfir Chester jarðaði
(238) a. OE.	Æfter him	com	se abbot of Clunni (ca. 1140, <i>the Peterborough Chronicles</i> , Shores 1971:118)
b. En.	*After him	came	the abbot of Cluny
c. En.	After him		the abbot of Cluny came
d. Ge.	Nach ihm	kam	der Abt von Cluny
e. Ge.	*Nach ihm		der Abt von Cluny kam
f. Da.	Efter ham	kom	abbeden af Cluny
g. Da.	*Efter ham		abbeden af Cluny kom
h. Ic.	Eftir hann	kom	ábótinn í Cluny
i. Ic.	*Eftir hann		ábótinn í Cluny kom
(239) OF.	Longuement <i>Long</i>	resgarda <i>watched</i>	Perceval l' ome qui ou lit seoit <i>Percival the man who on bed sat</i> (ca. 1225, <i>La Queste del Saint Graal</i> , Vance 1995:174)
(240) ME.	Than <i>Then</i>	hath <i>has</i>	Januarie 31 daies, Februarie 28, ... <i>January 31 days, February 28, ...</i> (1392, Geoffrey Chaucer, <i>A Treatise on the Astrolabe</i> , Part I; Paragraph 10)
(241) MF.	Si <i>Thus</i>	suis <i>am</i>	je aussi bien armé ... <i>I as well armed ...</i> (ca. 1456, <i>Jehan de Saintré</i> , Vance 1989:160)

The idea is that the finite verb in V2 (main) clauses occupies the same position that the complementiser (e.g. *that*, *if*, *because*) occupies in an embedded clause, namely C°:

	CP-Spec	C°	IP
(242) En. a.	...	<u>that</u>	the children have not seen this film
b.	Only this film	<u>have</u>	the children ____ not seen ____
(243) Da. a.	...	<u>at</u>	børnene har set denne film
b.	Denne film	<u>har</u>	børnene ____ set ____
(244) Ic. a.	...	<u>að</u>	börnin hafa séð þessa mynd
b.	Þessa mynd	<u>hafa</u>	börnin ____ séð ____
(245) Ge. a.	...	<u>dass</u>	die Kinder diesen Film gesehen haben
b.	Diesen Film	<u>haben</u>	die Kinder ____ gesehen ____

A further indication that the finite verb in main clauses occupies the same position as the complementiser does in embedded clauses may be found in conditional clauses, where the subject is preceded either by a complementiser or by the finite verb, but not by both:

(246) Da. Hun så på ham, ...
She looked at him, ...

	C°	IP
a.	... som <u>om</u>	han <u>havde</u> begået en stor forbrydelse
b.	... som <u>havde</u>	han _____ begået en stor forbrydelse
c.	*... som <u>om</u> <u>havde</u>	han _____ begået en stor forbrydelse
d.	*... som <u>havde</u> <u>om</u>	han _____ begået en stor forbrydelse
	... as if/had	he (had) committed a great crime

(247) Ge. Sie schaute ihn an, ...
She looked him at, ...

	C°	IP
a.	... als <u>ob</u>	er ein großes Verbrechen begangen <u>hätte</u>
b.	... als <u>hätte</u>	er ein großes Verbrechen begangen _____
c.	*... als <u>ob</u> <u>hätte</u>	er ein großes Verbrechen begangen _____
d.	*... als <u>hätte</u> <u>ob</u>	er ein großes Verbrechen begangen _____
	... as if/had	he a great crime committed (had)

	C°	IP
(248) a. En.	<u>If</u>	I <u>had</u> had more time, ...
b. Da.	<u>Hvis</u>	jeg <u>havde</u> haft mere tid, ...
c. Ic.	<u>Ef</u>	ég <u>hefði</u> haft meiri tíma, ...
d. Ge.	<u>Wenn</u>	ich _____ mehr Zeit gehabt <u>hätte</u> , ...
(249) a. En.	<u>Had</u>	I _____ had more time, ...
b. Da.	<u>Havde</u>	jeg _____ haft mere tid, ...
c. Ic.	<u>Hefði</u>	ég _____ haft meiri tíma, ...
d. Ge.	<u>Hätte</u>	ich _____ mehr Zeit gehabt _____, ...
(250) a. En.	* <u>If</u> <u>had</u>	I _____ had more time, ...
b. Da.	* <u>Hvis</u> <u>havde</u>	jeg _____ haft mere tid, ...
c. Ic.	* <u>Ef</u> <u>hefði</u>	ég _____ haft meiri tíma, ...
d. Ge.	* <u>Wenn</u> <u>hätte</u>	ich _____ mehr Zeit gehabt _____, ...
(251) a. En.	* <u>Had</u> <u>if</u>	I _____ had more time, ...
b. Da.	* <u>Havde</u> <u>hvis</u>	jeg _____ haft mere tid, ...
c. Ic.	* <u>Hefði</u> <u>ef</u>	ég _____ haft meiri tíma, ...
d. Ge.	* <u>Hätte</u> <u>wenn</u>	ich _____ mehr Zeit gehabt _____, ...

... I would have made an even longer hand-out
 ... ville jeg have lavet et endnu længere hand-out
 ... myndi ég hafa gert ennþá lengri úthendu
 ... hätte ich ein noch längeres Thesenpapier gemacht

(242b) and (248a)/(249a)/(250a)/(251a) show that English also has V2 under certain circumstances, e.g. also in questions (cf. also (234d) above):

	CP-Spec	C°	IP
(252) a. En.	What	have	the children ____ seen ?
b. En.	*What		the children have seen ?
c. Da.	Hvad	har	børnene ____ set ?
d. Ic.	Hvað	hafa	börnin ____ séð ?
e. Ge.	Was	haben	die Kinder ____ gesehen ?
(253) a. En.	Why	have	the children ____ seen the film ?
b. En.	*Why		the children have seen the film ?
c. Da.	Hvorfor	har	børnene ____ set filmen ?
d. Ic.	Af hverju	hafa	börnin ____ séð myndina ?
e. Ge.	Warum	haben	die Kinder den Film gesehen ____ ?

...and with topicalised negative elements:

	CP-Spec	C°	IP
(254) a. En.	Never	have	the children ____ seen such a bad film
b. En.	*Never		the children have seen such a bad film
c. Da.	Aldrig	har	børnene ____ set sådan en dårlig film
d. Ic.	Aldrei	hafa	börnin ____ séð svona slæma mynd
e. Ge.	Nie	haben	die Kinder so einen schlechten Film gesehen ____
	CP-Spec	C°	IP
(255) a. En.	Only in America	could	such a thing ____ happen
b. En.	*Only in America		such a thing could happen
c. Da.	Kun i Amerika	kunne	sáðan noget ____ ske
d. Ic.	Aðeins í Bandaríkjunum	gæti	eitthvað svona ____ gerst
e. Ge.	Nur in Amerika	könnte	so etwas ____ passieren ____

In English, V2 requires that CP-spec contains either a negative element or a *wh*-element.

In the other Germanic languages, V2 is not constrained in any such way.

6.3 Main clause yes/no-questions

In all the Germanic languages, main clause *yes/no*-questions are V1 ("verb first"), i.e. they have the finite verb in clause-initial position. If we assume that the empty CP-Spec contains an invisible *wh*-element (a so-called empty operator), these examples are parallel to the examples in the previous section, i.e. they are really "V2" rather than "V1":

	CP-Sp	C°	IP
(256) a. En.	[_{WH} ____]	Have	you ever seen such a bad film?
b. Da.	[_{WH} ____]	Har	du nogensinde set sådan en dårlig film?
c. Ic.	[_{WH} ____]	Hefur	þú nokkurn tíma séð svona slæma mynd?
d. Ge.	[_{WH} ____]	Hast	du jemals so einen schlechten Film gesehen?

Assuming an empty *wh*-element in CP-spec in (256) might seem to be just a trick (a so-called *ad hoc* assumption) to save the analysis of the previous section that all main clauses in the Germanic languages (except English) are V2.

At least two things point to this assumption not being *ad hoc* (cf. Vikner 2007:471-474):

- I. It correctly predicts that verb-initial main clauses have to be interpreted as *yes/no*-questions.
- II. It accounts for the link noted in the second half of Greenberg's (1963:83) "Universal 11":

(257) Universal 11

- a. Inversion of statement order [in interrogative word questions] so that verb precedes subject occurs only in languages where the question word or phrase is normally initial.
- b. **This same inversion occurs in yes-no questions only if it also occurs in interrogative word questions.**

"Translation" (using terms used earlier in this hand-out):

- a. Subject-verb inversion occurs in *wh*-questions only if the language has clause-initial *wh*-elements.
- b. Subject-verb inversion occurs in *yes/no*-questions only if it occurs in *wh*-questions.

Inference:

Subject-verb inversion occurs in *yes/no*-questions only if the language has clause-initial *wh*-elements.

To see what Greenberg means exactly, let us take a step back. It is assumed here that languages may differ with respect to the following two things:

1. They may or may not have clause-initial *wh*-elements (e.g. English does, Turkish does not):

- (258) a. En. What had Harry read? *wh*-elements clause initial
- b. Tu. Hasan ne oku- du ? *wh*-elements not necessarily clause initial
Hasan what read-PAST?
'What did Hasan read?' Kornfilt (1997:10, (36))

2. They may or may not have subject-verb inversion in *yes/no*-questions (e.g. English does, Turkish does not):

- (259) a. En. Has Alfred gone to the cinema? Subject-verb inversion in *yes/no*-questions
- b. Tu. Ahmet sinema-ya git-ti mi? No subject-verb inversion in *yes/no*-questions
Ahmet cinema-DAT go -PAST Q ?
'Did Ahmet go to the cinema?' Kornfilt (1997:5, (11))

If these two different properties could combine freely, we would expect languages of all four possible types - i.e. (258a) + (259a), (258b) + (259b), (258a) + (259b), as well as (258b) + (259a). This is not the case, however. As Greenberg observed in (257) above, a language has subject-verb inversion *yes/no*-questions, (259a), only if it has clause-initial *wh*-elements, (258a).

This is where the potentially *ad hoc* assumption from (256) comes in, i.e. the assumption of an empty *wh*-element in the initial position of main clause *yes/no*-questions.

Under this assumption, *yes/no*-questions with subject-verb inversion as in (259a) are parallel to questions with clause-initial *wh*-elements, (258a), in that in both types the initial element is a *wh*-element. The observation that (259a) only occurs in languages that also have (258a) is thus accounted for, as both are examples of the same structure, clause-initial *wh*-elements. It is therefore also to be expected that a language which does not have initial *wh*-elements, like Turkish in (258b), will not have subject-verb inversion in *yes/no*-questions either, (259b).

7. Functional heads and their projections (summary)

7.1 Introduction

There are at least three kinds of functional heads, I° , C° and D° :

	Specifier (of IP)	Functional head (I°)	Complement (VP)
(260) a. En.	Peter	has	read the book
b. Fr.	Pierre	a	lu le livre

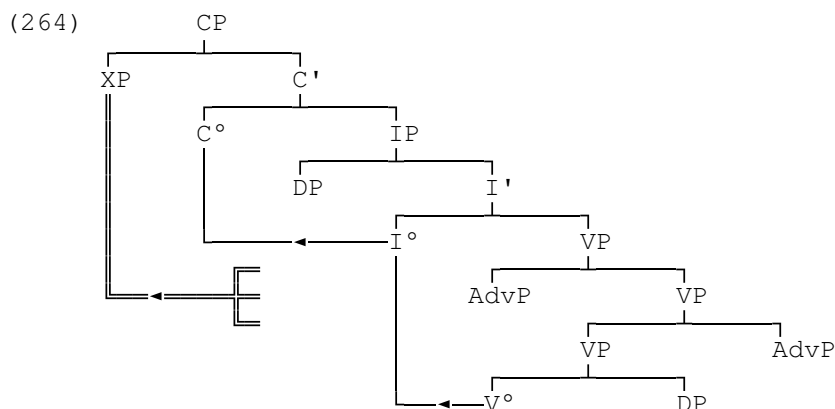
	Specifier (of CP)	Functional head (C°)	Complement (IP)
(261) a. Ge.	Vielleicht	liest	Peter das Buch
b. Da.	Måske	læser	Peter bogen

	Specifier (of DP)	Functional head (D°)	Complement (NP)
(262) a. En.	Peter	's	car
b. Da.	Per	-s	bil
c. WJ.	Per	si	bil
d. No.	Per	sin	bil
e. Ge.	Dem Peter	sein	Auto

The order head-complement or complement-head varies from language to language and from category to category. The ordering of the specifier on the other hand is fixed, they seem to always precede X-bar.

(265)-(268) below show which verb positions are found in the four SVO-languages Danish, Icelandic, English and French. Four assumptions are made:

- (263) a. that all four languages have a tree like (264) as the basic structure, i.e. that an adverbial like *never/aldrig/aldrei/jamais* is left-adjoined to the VP,
 b. that a time adverbial like *in the morning/om morgenen/á morgnana/le matin* is right-adjoined to the VP,
 c. that the finite verb may move to I° or alternatively through I° to C° , and
 d. that some maximal projection occurs in CP-Spec under certain circumstances.



7.2 English

(265) En.	CP-Spec	C°	IP-Sp	I°	Adv	V°	Obj	Adv
	(I didn't know ...)							
a.	...	that	Peter		never	drinks	coffee	in the morning
b.	*...	that	Peter	drinks	never	_____	coffee	in the morning
c.		Does	Peter	_____	never	drink	coffee	in the morning?
d.	*Why		Peter		never	drinks	coffee	in the morning?
e.	*Why		Peter	drinks	never	_____	coffee	in the morning?
f.	Why	does	Peter	_____	never	drink	coffee	in the morning?
g.	In the morning		Peter		never	drinks	coffee	_____
h.	*In the morning		Peter	drinks	never	_____	coffee	_____
i.	*In the morning	does	Peter	_____	never	drink	coffee	_____
m.			Peter		never	drinks	coffee	in the morning
n.	*		Peter	drinks	never	_____	coffee	in the morning
p.	*Peter	does	_____	_____	never	drink	coffee	in the morning

EXERCISE 5:

1a. Is English a language with V°-to-I°-Movement (of main verbs) ?

Yes [] or No []

1b. This can be told from the following difference(s):

(265__) vs. (265__) / (265__) vs. (265__) / (265__) vs. (265__) /
(265__) vs. (265__)

2a. Is English a "real" V2 language?

Yes [] or No []

2b. This can be told from the following difference(s):

(265__) vs. (265__) / (265__) vs. (265__) / (265__) vs. (265__) /
(265__) vs. (265__)

7.3 Danish

(266) Da.	CP-Spec	C°	IP-Sp	I°	Adv	V°	Obj	Adv
	(Jeg vidste ikke ...)							
a. ...		at	Peter		aldrig	drikker	kaffe	om morgenen
b. *...		at	Peter	drikker	aldrig	_____	kaffe	om morgenen
c.		Drikker	Peter	_____	aldrig	_____	kaffe	om morgenen?
d. *Hvorfor			Peter		aldrig	drikker	kaffe	om morgenen?
e. *Hvorfor			Peter	drikker	aldrig	_____	kaffe	om morgenen?
f. Hvorfor		drikker	Peter	_____	aldrig	_____	kaffe	om morgenen?
g. *Om morgenen			Peter		aldrig	drikker	kaffe	_____
h. *Om morgenen			Peter	drikker	aldrig	_____	kaffe	_____
i. Om morgenen		drikker	Peter	_____	aldrig	_____	kaffe	_____
j. *Kaffe			Peter		aldrig	drikker	_____	om morgenen
k. *Kaffe			Peter	drikker	aldrig	_____	_____	om morgenen
l. Kaffe		drikker	Peter	_____	aldrig	_____	_____	om morgenen
m. *Peter			_____		aldrig	drikker	kaffe	om morgenen
n. *Peter			_____	drikker	aldrig	_____	kaffe	om morgenen
p. Peter		drikker	_____	_____	aldrig	_____	kaffe	om morgenen

EXERCISE 6:

- 1a. Is Danish a language with V°-to-I°-Movement?
Yes [] or No []
 - 1b. This can be told from the following difference(s):
(266__) vs. (266__) / (266__) vs. (266__) / (266__) vs. (266__) /
(266__) vs. (266__)
 - 2a. Is Danish a "real" V2 language?
Yes [] or No []
 - 2b. This can be told from the following difference(s):
(266__) vs. (266__) / (266__) vs. (266__) / (266__) vs. (266__) /
(266__) vs. (266__)
 3. The difference between (266n) and (266p) cannot be directly observed. Why is it nevertheless assumed that (266p) is grammatical and (266n) ungrammatical?
-

7.4 Icelandic

(267) Ic.	CP-Spec	C°	IP-Sp	I°	Adv	V°	Obj	Adv
	(Ég vissi ekki ...)							
a. *...		að	Pétur		aldrei	drekki	kaffi	á morgnana
b. ...		að	Pétur	drekki	aldrei		kaffi	á morgnana
c.		Drekkur	Pétur		aldrei		kaffi	á morgnana?
d. *Af hverju			Pétur		aldrei	drekkur	kaffi	á morgnana?
e. *Af hverju			Pétur	drekkur	aldrei		kaffi	á morgnana?
f. Af hverju		drekkur	Pétur		aldrei		kaffi	á morgnana?
g. *Á morgnana			Pétur		aldrei	drekkur	kaffi	
h. *Á morgnana			Pétur	drekkur	aldrei		kaffi	
i. Á morgnana		drekkur	Pétur		aldrei		kaffi	
j. *Kaffi			Pétur		aldrei	drekkur		á morgnana
k. *Kaffi			Pétur	drekkur	aldrei			á morgnana
l. Kaffi		drekkur	Pétur		aldrei			á morgnana
m. *Pétur					aldrei	drekkur	kaffi	á morgnana
n. *Pétur				drekkur	aldrei		kaffi	á morgnana
p. Pétur		drekkur			aldrei		kaffi	á morgnana

EXERCISE 7:

- 1a. Is Icelandic a language with V°-to-I°-Movement?
Yes [] or No []
 - 1b. This can be told from the following difference(s):
(267__) vs. (267__) / (267__) vs. (267__) / (267__) vs. (267__) /
(267__) vs. (267__)
 - 2a. Is Icelandic a "real" V2 language?
Yes [] or No []
 - 2b. This can be told from the following difference(s):
(267__) vs. (267__) / (267__) vs. (267__) / (267__) vs. (267__) /
(267__) vs. (267__)
 3. The difference between (267n) and (267p) cannot be directly observed. Why is it nevertheless assumed that (267p) is grammatical and (267n) ungrammatical?
-

7.5 French

(268) Fr.	CP-Spec	C°	IP-Sp	I°	Adv	V°	Obj	Adv
		(Je ne savais pas ...)						
a. *...		qu'	il	ne	jamaïs	boit	du café	le matin
b. ...		qu'	il	ne boit	jamaïs	_____	du café	le matin
c.		Ne boit	-il	_____	jamaïs	_____	du café	le matin?
d. *Pourquoi			il	ne	jamaïs	boit	du café	le matin?
e. ?Pourquoi			il	ne boit	jamaïs	_____	du café	le matin?
f. Pourquoi		ne boit	-il	_____	jamaïs	_____	du café	le matin?
g. *Le matin			il	ne	jamaïs	boit	du café	_____
h. Le matin			il	ne boit	jamaïs	_____	du café	_____
i. *Le matin		ne boit	il	_____	jamaïs	_____	du café	_____
m. *			Il	ne	jamaïs	boit	du café	le matin
n.			Il	ne boit	jamaïs	_____	du café	le matin
p. *Il		ne boit	_____	_____	jamaïs	_____	du café	le matin

EXERCISE 8:

1a. Is French a language with V°-to-I°-Movement?

Yes [] or No []

1b. This can be told from the following difference(s):

(268__) vs. (268__) / (268__) vs. (268__) / (268__) vs. (268__) /
(268__) vs. (268__)

2a. Is French a "real" V2 language?

Yes [] or No []

2b. This can be told from the following difference(s):

(268__) vs. (268__) / (268__) vs. (268__) / (268__) vs. (268__) /
(268__) vs. (268__)

7.6 German

German is very different from the four languages discussed above. The basic assumptions made in (263) and (264) have to be changed for the German examples below.

Both adverbials, *nie* 'never' and *morgens* 'in the morning', are adjoined to the left of a VP, and V° follows its complement rather than precedes it.

- (269) De. a. (Ich wußte nicht,) dass Peter morgens nie Kaffee trinkt = (265a), (266a)
b. *(Ich wußte nicht,) dass Peter trinkt morgens nie Kaffee = (265b), (266b)
c. Trinkt Peter morgens nie Kaffee? = (265c), (266c)
d. *Warum Peter morgens nie Kaffee trinkt? = (265d), (266d)
e. *Warum Peter trinkt morgens nie Kaffee? = (265e), (266e)
f. Warum trinkt Peter morgens nie Kaffee? = (265f), (266f)
g. *Morgens Peter nie Kaffee trinkt = (265g), (266g)
h. *Morgens Peter trinkt nie Kaffee = (265h), (266h)
i. Morgens trinkt Peter nie Kaffee = (265i), (266i)
j. *Kaffee Peter morgens nie trinkt = (266j)
k. *Kaffee Peter trinkt morgens nie = (266k)
l. Kaffee trinkt Peter morgens nie = (266l)
m. *Peter morgens nie Kaffee trinkt = (266m)
p. Peter trinkt morgens nie Kaffee = (266p)

That German is a "real" V2 language can be seen from the following differences: (269i) vs. (269g,h) and (269l) vs. (269j,k). These examples also show that the German CP must be the same as the CP in other V2 languages like Danish and Icelandic.

That V° follows its complement in German can actually not be seen from (269), but it is clear from the following example where the main verb is non-finite:

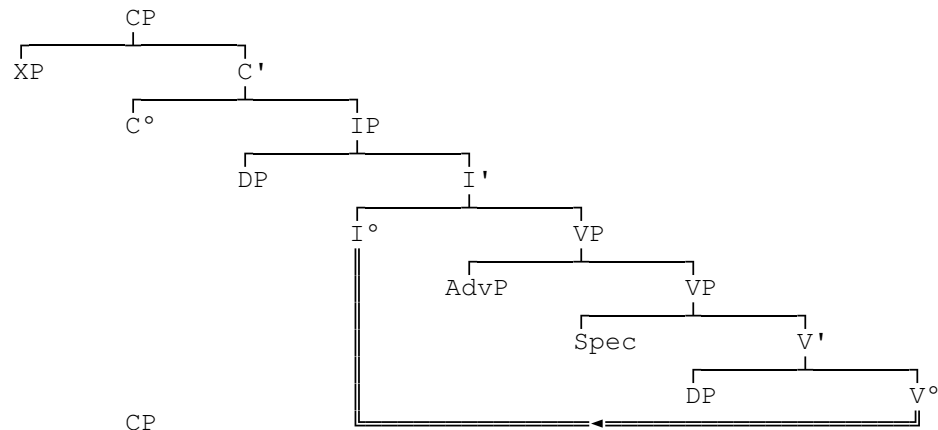
- (270) Ge. a. Hat Peter morgens nie Kaffee getrunken ?
b. *Hat Peter morgens nie getrunken Kaffee ?
Has Peter in-the morning never (Coffee) drunk (Coffee)?

What is far more difficult to determine is whether SOV-languages like German (or Dutch) have V°-to-I° movement. As far as verbal inflection is concerned, the analysis suggested in (199) in section 5.7 above would lead us to expect German (but not Dutch) to have V°-to-I° movement. Although this is what I used to think (Vikner 1995:152-157), I no longer think so, in that I now think that none of the SOV-languages have V°-to-I° movement, not even German (Vikner 2001, 2005b).

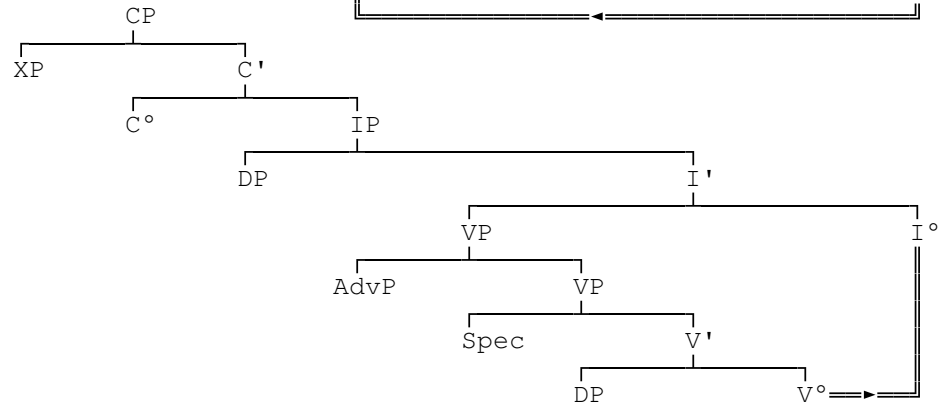
The ill-formedness of (269b), which would have to have the structure (271a) below, could be due to I° being final (as I thought in Vikner 1995:153) and/or it could be due to German not having V°-to-I° movement (as argued in Vikner 2001, 2005b).

The well-formedness of (270b) may either be the result of V°-to-I° movement if I° is final, as in (271b) below, or of lack of V°-to-I° movement, as in either of (271a,b) WITHOUT the arrows.

(271) a.



b.



In other words, if German lacks V° -to- I° movement, we have no evidence of the position of I° in German, and thus it may be that the only difference between German clause structure and that of e.g. English and Danish is the position of V° , following the object in German but preceding the object in English and Danish.

In my view, there are at least two other things that indicate that German (etc.) does not have V° -to- I° movement:

1. (Vikner 2005b)

A number of complex verbs in German and Dutch have a strange distribution. They occur as non-finite verbs in both main and embedded clauses, (272a,b), but as finite verbs, they only occur in embedded clauses, (272c), NOT in main clauses, (272d,e):

(272) Ge. a. Sie will bausparen
 She wants (to) building-save
 (She wants to save with a building society)

b. ... weil sie bausparen will
 ... *because she building-save wants*
 (... because she wants to save with a building society)

c. ... weil sie bauspart
 ... *because she building-saves*
 (... because he saves with a building society)

((272a,c) adapted from Eisenberg 1998:226, 324, (16a))

d. * Spart sie bau ?
 e. * Bauspart sie ?
 (Building-)saves she (building) ?
 (Intended: Does she save with a building society?)

I think that this is best explained if we assume that what (272a-c) have in common is that the verbs here all are in V°, i.e. what these verbs are unable to do is to leave V°. The reason is that they then would have to be treated either as separable ("trennbar") or as non-separable ("nicht-trennbar") verbs, and this special property of these verbs is that they have to fulfill the conditions on verbs of both types.

2. (Vikner 2001:66-99)

There is a lot of variation in the sequence of verbs in embedded clauses like

- (273) a. Du. ... dat hij haar hoort roepen ('... that he her hears shout')
b. Ge. ... dass er sie rufen hört ('... that he her shout hears')

both across nine different Germanic languages/dialects (Dutch, Afrikaans, West Flemish, Frisian, Standard German, Swabian German from Stuttgart, Swiss German from Sankt Gallen, Swiss German from Zürich, and Swiss German from Bern) and across six different constructions (perfect, passive, durative, causative, perception verbs, and modal verbs).

This variation in embedded clauses where one of the two verbs is finite, as in (273a,b), is almost identical to the variation in the sequence of the verbs in main clauses where none of the two verbs in question are finite, (274a,b):

- (274) a. Du. Hij zal haar horen roepen ('He will her hear shout')
b. Ge. Er wird sie rufen hören ('He will her shout hear')

This shows that it makes no significant difference whether the higher of the two verbs concerned is finite, as *hoort/hört* in (273a,b), or non-finite, as *horen/hören* in (274a,b). This again means that in embedded clauses in the nine SOV-Germanic languages, there can be no obligatory movement that involves only finite verbs. This amounts to saying that there is no V°-to-I° movement in the Germanic SOV-languages.

7.7 Summary (of the summary)

Constituents can only move to positions which are not occupied and never have been.
Constituents can only move upwards in the tree, not downwards: A moved constituent must c-command the position it came from.

Two kinds of constituents may move: XP and X° (but not X').

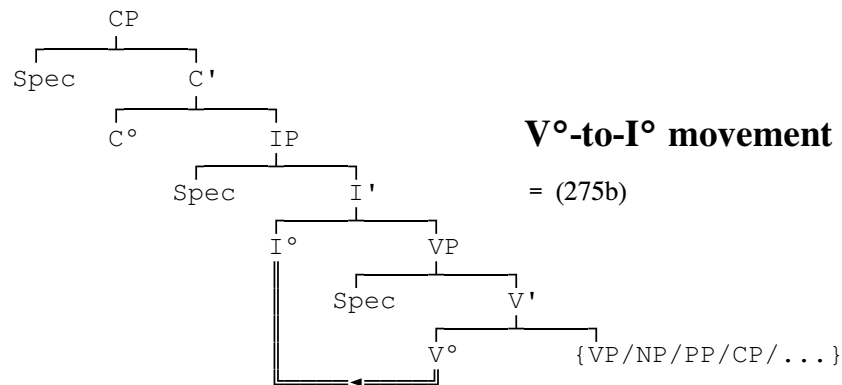
An XP may only move to another XP-position. The landing position cannot be a complement position, again because of the c-command requirement.

An X° may only move to another X°-position. This landing position is necessarily a "functional" X° (C°, I°, or D°), not a lexical one (N°, V°, P°, etc.), because a lexical X° always contains (or has contained) lexical material, and therefore counts as "occupied".

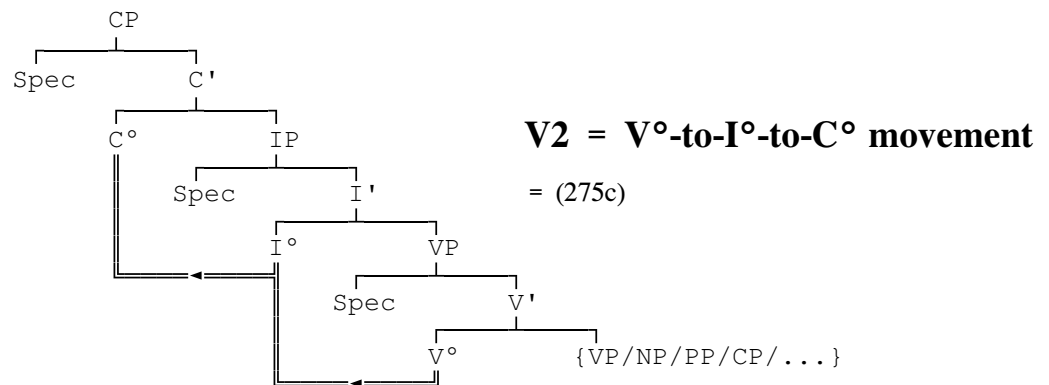
This results in the following three possibilities for the highest verb (i.e. for the finite verb):

- (275) a. The verb remains in V°
 b. **V°-to-I° movement** = The verb moves from V° to I°
 c. **Verb second (V2)** = The verb moves from V° via I° to C°
 (X°-movements cannot skip X°-positions)

(276)



(277)



(278)

	V2	V°-to-I°
a. Danish	+	-
b. Icelandic	+	+
c. German	+	? (difficult to determine)
d. English	-	-
e. French	-	+

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