Head Movement and More on Clausal Syntax
(Handout 4; Seminar English Syntax; Andrew McIntyre)

1. Two types of movement
   - Phrasal movement: movement of a complete phrase. E.g. topicalisation:
     (1) [as Such disruptions], we don't need it.
   - Movement of words (called head movement, head-to-head movement as all words are heads of phrases and since when heads move, they move to another head position). E.g.
     (2) Has, she, t, left?

The symbol t (trace) marks the earlier position of the moved item. The subscript i indicating that the trace is identical to other items marked with i. (This identity relation is called coindexation). There are various different ways of indicating coindexation:

(3) a. Has, she, t, [VP t, read it]?
   b. Has, she, t, [VP t, read it]?
   c. Has she t, [VP t, read it]?
   d. Has she t, [VP t, read it]?

We now discuss head movement. Other discussions: Radford (1997:ch.6), Carnie (2007:ch.9)

2. Subject-Auxiliary Inversion as I-to-C Movement
   - Yes-no questions are formed by inverting the subject and auxiliary (including dummy-do):
     (4) She should go → Should she go?
     (5) She likes it → She does like it → Does she like it?
   - 'Inversion' as movement from Infl to Comp (I-to-C movement):
     (6) C
        CP
        IP
        I
        VP
        a. will, she, t, t, t, buy a car?
        b. does, she, t, t, eat cakes?

   - Inverted verbs and complementisers compete for the same position:
     (7) He asked 'will she leave' → He asked 'did she leave'
     (8) He asked if she will leave → He asked whether she left
     (9) *He asked if will she leave

   - Iillocutionary force distinctions (e.g. the question-statement contrast) involve C, since C’s job is to relate IP to a larger discourse. Questions demand that the discourse be continued with an answer. Moving I to C is an instruction to the hearer to tell the speaker whether the proposition expressed by IP is true or not.

   - Many other languages have question particles in C:
     (10) [cr [a Ben]] [t tua d sil]]?  'Did the people come?'

   - What other languages signal with question particles, English signals by moving I to C.

3. The Head Movement Constraint and the position of verbs
   (12) Head Movement Constraint (HMC): The only place a head H can move to is the position occupied by the head which selects IP as its complement.

Consequence: a verb cannot move to C unless it moves to I first. The HMC doesn’t forbid this type of stepwise (successive cyclic) movement. The next sections illustrate this.

3.1. Lexical verbs in English Questions
Lexical verbs don’t move to Comp, but require do-support:
(13) *Smokes she?  *Went she?  *Eats she cakes?
(14) Does she smoke?  Did she go? Does she eat cakes?

(15)

a. will, she, t, t, go home?
   b. *went, she, t, t, home? (violates HMC in (12))
   c. *went, she, t, t, home?
   d. did, she, t, t, go home?

The Head Movement Constraint predicts that moving from V to Comp must involve moving to Infl first. But English lexical verbs don’t move to Infl. Since the Comp position must be filled by movement of a lower head, the dummy auxiliary do is inserted under Infl, so that movement from Infl to Comp is possible. Hence the do-support in questions.

3.2. Verb movement in Early Modern English
Up to the Early Modern English period (e.g. Shakespeare, King James Bible, into the 17th century), lexical verbs were able to undergo inversion:

(16) Lovest thou me? Saw you my master? Know you not the cause?

Assuming that inversion was movement to C just as it is in Modern English, the HMC predicts that lexical verbs moved to I in Early Modern English.

(17)

C
CP
IP
I
VP
a. is, I, can go?
   b. is, you, should eat it?
   c. is, Ben, did go?

There is independent evidence that lexical verbs moved to I in earlier English. We know that the negative particle (not) occupies a position on the left edge of the VP, i.e. one between I and V. This is true of both Modern English and earlier English. In Early Modern English, not appears after the lexical verb, suggesting that V moved past not:

(18) CURRENT ENGLISH:  He [I, did] not [V, hear] her plea.
(19) EARLY MODERN ENGLISH:  He [I, heard], not [V, t], her plea.

3.3. Verb movement in French
French is like Early Modern English in that lexical verbs move to I. The position of the verb relative to the adverb souvent 'often' (which is adjoined to the left of VP) is evidence for this.

Head movement and more on clausal syntax

(20)

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IP

I' VP

more detailed structure of VP as in (17)
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a. Tu lis souvent t1 t2 le journal
b. *You read often t1 t2 the paper (French word order, bad in English)
c. You e often t1 read the paper (English word order, bad in French)

- Since the verb moves to Infl, it can move to C in questions without flouting the HMC:

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(CP)

IP

I' VP

more detailed structure of VP as in (17)
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a. Lis-tu souvent t1 t2 le journal?

3.4. Multiple auxiliaries in English

- To understand the next point, we need to note that the earlier assumption that auxiliaries start in Infl was an oversimplification, since we can have more than one auxiliary:

(22) She could have been being treated by a decent doctor if she’d had better insurance.

- The cluster of auxiliaries is not a single head, seeing it can be broken up by adverbs:

(23) She could probably have been being treated by a decent doctor.

- Each auxiliary seems to form a constituent with the material after it. These constituents can undergo ellipsis, just like VP ellipsis:

(24) They said she could have been being treated by a decent doctor, but I didn’t think...

a. ...she could have been being treated by a doctor
b. ...she could have been being treated by a doctor

c. ...she could have been being treated by a doctor

- To explain these facts, many linguists assume that each auxiliary is a verb forming a VP with its complement. The highest auxiliary moves to Infl (and then to Comp in questions):

(25)

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(CP)

IP

I' VP
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a. Could she t1 t2 have been being treated t3?

- Now the Head Movement Constraint correctly predicts that only the highest auxiliary can appear at the front of the sentence in questions:

(26) a. Could, they t1 have been being treated?

b. *Have, they could t1 been being treated? [cf. Have, they t1 been being treated?]

c. *Be, they could have t1 being treated? [cf. Were, they t1 being treated?]
The Head Movement Constraint predicts that movement of features only occurs between a head and the head of its complement. Thus, anything which moves between V and Infl would have to move via Neg first. If it can’t move to Neg, then it can’t move any further.

As a last resort, dummy-do is inserted in I to allow expression of inflectional features.

5.2. More on Neg

What was said about negation only applies to what is called clausal negation or sentential negation. In cases of constituent negation, there’s no need for do-support. (In Minimalist syntax, unnecessary operations induce ungrammaticality.)

(31) a. She never found her keys. b. She did never find her keys (never = not ever)
(32) a. She found no keys. b. She did find no keys
(33) a. They in no wise fulfilled the requirements. b. They did in no wise fulfill the requirements.


Here, not negates only, not VP. not only is a constituent:

(35) [AdvP Not only] do dishwashers save time, they also clean plates better.

None of these cases involve the Neg head seen in the last section. Rather, they involve negation inside VP adjuncts (never, not only) or negation inside a DP (no keys). So there’s no Neg head blocking movement of features from V to Infl.

The Neg head is probably best seen as concerned with polarity rather than just negation, since the colloquial affirmative particles so and no also require do-support.

(36) Speaker 1: Basil did not do that. Speaker 2: He did do that!

5.3. Negation in questions: Not vs. n’t

(37) a. He did not go there b. He didn’t go there
(38) a. *Did he not go there? b. Did he n’t go there?

N’t is a clitic, i.e. must form a phonological unit with the auxiliary. When aux moves to C, n’t must therefore move with it.

In can’t, don’t, won’t, a special phonological form replaces the unit aux+clitic.

Not isn’t a clitic, so there is no reason to move it with aux to the C position.

Sentences like didn’t he go indicate that the do-support we see in questions must involve insertion of do in Infl before moving the verb. (I.e. do is not inserted directly in C.)

C. Draw trees for the following, assuming the NegP view of sentence structure.
1. (Early Modern English): They know not the answer.
2. I did not notice the person with the explosives until it was too late.
3. Did you not say that Egbert can defuse bombs? 4. Didn’t Egbert read the instructions?
5. Won’t the insurance company pay for this? 6. They’ll never rebuild it.
8. I don’t need two houses.

6. The structure of German clauses

6.1. Basic facts about German word order

- German complementisers (dass, weil, da, bevor, obwohl, zumal) force verb-final order:
  (39) …dass ich das Buch gelesen habe / …weil ich arbeite
- Main clauses have verb-second (V2) order: precisely one constituent (not necessarily a subject) appears before the inflected V:

6.2. Analyses

- Common assumption: German VP and IP are head-final. Evidence for this (among more seen below) comes from citation forms, VP topicalisation:
  c. Manchmal wirft Otto Rechnungen in den Müll.
  d. In den Müll wirft Otto manchmal sogar Rechnungen.
  (41) a. Ich hätte das besser erklären können sollen. [inflected V in 2nd position]
  b. Er will das besser erklärt haben.

- A common analysis is (43), which has the same structure as its English translation except that German VP and IP are head-final and in that German lexical verbs move to I. (Some linguists argue that German lacks I; we discuss this in class.)

- Subordinate clauses with complementisers have the same structure as English, except VP and IP are head-final, and German has V-to-I movement (if I exists, a debated question we discuss in class):

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- (44)c,e illustrates VP topicalisation (VP fronting). C must be occupied by an inflected V, a constraint which can be satisfied by tuu in colloquial German (cf. English do-support in VP topicalisations like He said he’d win the race, and [VP win the race] he did). The word order in the fronted VP is further evidence that German VPs are head-final.

- More evidence that V moves from final position in German is furnished by particle verbs like (45). These often have unpredictable meanings and are arguably a type of compound verb because they can be parts of other words (unaufhörlich, anfänglich, Hinrichtung). In V2 contexts, V separates from the particle, and the particle stays adjacent to the original position of V. This analysis makes sense of the fact that the element most closely related to the verb remains at the end of the sentence even if V is in 2nd position.

7. Residual V2 in English

Old English had V2, but it later disappeared. Current English has a few relics of it:

- a. [At no time/Not once/Only once/Only then] did they help me. [negative inversion]
- b. Not only did they not help me, they also set fire to my house.

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F. German is called a ‘free word order language’ because DP and other elements in VP can move left to a position between C and VP (this is called scrambling). Scrambling is common with pronouns and definite DPs (fitting the tendency that old information starts as a compound verb (see above (45)). Treat an as a complementizer and zu as an element which acts as a prefix on the moved verb.)

G. German can you name a difference in interpretation seen in the pairs of sentences below? (2 is from Early Modern English, which still had scrambling like German.)

1. a. Er hat wieder ein Buch gelesen. b. Er hat ein Buch wieder gelesen.
   1a. He loves her not. b. He loves not her.

H. Try to state rules describing what can be left out in the following elliptical constructions:

1. Versteh’ ich nicht. / Schmeckt gut.
   Ich bin jetzt dran. Also, ist grün, hat vier Beine und hüpft. [in guessing game]
   Ja, würd’ ich machen. / *Ja, morgen würde machen.

2. Sehnsucht nach London? / Want another beer?

3. Ever been to London? / Want another beer?

4. Ball treten ‘I [will/want to] kick the ball, Someone should kick the ball, etc.’