LING 325 – Spring 05
Jonathan Bobaljik
Handout 2: Copies, Merger, Adjacency

1. RECAP:

Puzzle: The Obj > Neg order is taken as movement of the object (Object Shift)

Object shift is obligatory, but only up to H.G.
- When OS is possible, failure to shift = *(or a different interp)
- When OS is not possible, failure to shift = OK.

Whatever forces overt movement/shift is a violable constraint.

Proposal: syntax : interpretation = 1 : 1 OS always happens with shiftable objects
the violable condition is in the mapping to PF, shift is not always visible.

HG derives from a requirement that the verb stem and the Infl head be adjacent, in a manner to be made precise.

(1) a. V+Infl ... Obj OK
    b. Infl ... Obj ... V *

Analysis is a direct extension of an independent analysis: do-support via Affix-Hopping.

Key assumption: inflection (even when Ø) is syntactically represented as a distinct head.

\[ \text{play-ed} = [\text{IP} \ [\text{PAST}] \ldots \ [\text{VP} \ [\text{V} \ '\text{PLAY} \ ]]] \]

Morphology is the realization of syntactic structure

2. DO-SUPPORT VIA AFFIX HOPPING

(2) a. Sam will eat Spam
    b. Sam may eat Spam.
    c. Sam eats Spam [PRES + eat = eats]

(3) a. Sam will not eat Spam
    b. Sam may not eat Spam.
    c. *Sam eats not Spam
    d. *Sam not eats Spam.
    e. Sam does not eat Spam.
(4)  a. What **will** Sam t\textsubscript{INFL} eat?
b. When/where/why/how **will** Sam t\textsubscript{INFL} eat Spam?
c. Who **will** t\textsubscript{SUBJ} INFL eat Spam? (assume Infl \rightarrow C in subject questions)

(5)  a. What **does** Sam eat?
b. When/where/why/how **does** Sam eat Spam?
c. Who eats Spam? (* Who does eat Spam?)

(6)  a. [IP Sam [\textunderscore{}s] [VP left on Thursday ]] even though [IP Pat [\textunderscore{}s] [VP left on Thursday ] too].
b. Sam left on Thursday even though Pat did too.
c. *Sam left on Thursday even though Pat \textunderscore{}s too.

(7)  a. [IP Sam [\textunderscore{}s] [VP eat\textunderscore{}Spam ]].
b. O -------------- O \leftarrow Affix Hopping (Morph Merger)
c. Sam eats Spam.

(8)  a. [IP Sam [\textunderscore{}s] not [VP eat\textunderscore{}ham ]].
b. O ----* -------- O \leftarrow Adjacency Disrupted
c. \emptyset \rightarrow do \leftarrow do- insertion
d. Sam does not eat ham.

Note relevance of post-syntactic morphology (affix hopping / merger).  
Affixal Infl must be adjacent to verb(al stem)  
No general requirement that (finite) Infl be adjacent to V, e.g., if modals in Infl.
Stray Affix Filter is not syntactic (see Koopman 1984)

If verbs are inserted fully inflected, and merely “check” in situ, then no reason to believe that PF-adjacency is relevant (or, feature-checking is not syntactic, but happens at “PF”, cf. Ackema & Neeleman 2003). cp. B ošković 2001: 2 kinds of “affixes”—true affixes (lexicalist) and clitic-like: enforce adjacency).

Note also: morphological content of heads is features, not phonological entities  
their realization depends on the morphological (not syntactic) properties of English verbs  (e.g., suppletion is possible, all inflectional morphology in English is suffixal; complementarity of person and tense, etc)

suppletion: [PAST] + go = went

Outstanding Issue:

Adverbs appear to be ignored:

(9)  a. Sam will quickly/never eat (up) his peas.
b. Sam [INFL] quickly/never ate (up) his peas.
c. Sam ate (*quickly/never) (up) his peas.
Adverbs are syntactically present (NPI):

(10) Sam never ate up any peas.

*Put this aside for now, simply stipulate invisibility, and return in section 4*

3. SHIFTED OBJECTS BLOCK MERGER

- When the verb doesn’t raise out of VP, (non-adjoined) material may not intervene between Infl and V”.

English = do-support
Scandinavian = condition on OS: HG

(11) *Det är troligt [ att [IP de -te deni [VP läs- tracei. ]] it is probable [ that they +PST it read
[Adjacency disrupted: O----- * -------------- O]

Why not do-support?

A ‘cheaper’ alternative: pronounce the object in unshifted position [see section 5]

(12) Det är troligt [ att [IP de -te [ läs- den ]] it is probable that they +PST read it
[Merger successful: O----------------------- O]

Why is this possible, if OS is (ever) obligatory?

Suggestion: OS happens, but when HG (adjacency) is at stake, the lower copy is pronounced:

(13) a. *Det är troligt [ att [IP de -te den [VP läs- den ]] it is probable that they +PST it read it
[Merger successful: O----------------------- O]

b. *Det är troligt [ att [IP de -te deni [VP läs- deni. ]] it is probable that they +PST it read it
[Adjacency disrupted: O----- * -------------- O]

Exactly as in English: adverbs are invisible (from handout 1)

(14) a. Jag tvivlar på [CP att [IP han [VP verkligen läste boken]]. Sw. I doubt on that he really read book-the
‘I doubt that he really read the book.’

b. *Jag tvivlar på [CP att [IP han läste [VP verkligen boken]]].
I doubt on that he read really book-the
‘I doubt that he really read the book.’

NB. If it is assumed that the adverbs can attach to I’, then the evidence for the absence of verb raising in these languages is considerably diminished; the evidence for the absence of verb raising is position following these adverbs.
Unlike English: sentential negation must be treated as an adverb (adjoined to VP) rather than as a head/Spec of NegP. Merger succeeds across negation:

(15) … at han ikke købte bogen. (Danish)  
    that he did not buy the book.  
    ‘… that he did not buy the book.’  
    (Platzack 1986, p. 209)

Various differences b/w English not and Scandinavian negative adverbs, incl. topicalizability:

(16) Inte var det Selma SW  
    Not was it Selma  
    ‘It was NOT Selma’  
    (Sells 2001, 29)

The HG Puzzle:

Obligatoriness in non-HG contexts: Shift and non-shift are interpreted differently  
HG:  
    = Shift is obligatory for a particular interpretation  
    merger requires adjacency (inviolable)  
Economy (‘up to’): Pronounce shifted copy unless another Spell-Out  
    consideration (inviolable) gets in the way.

Extra assumption for compound tenses: [PARTICIPLE] is affixal → adjacency  
    OS position between Part and Verb  
(also for infinitives?)

(17) a. Hann hefur [VP lesið bókina]  
    He has read the book.'  
    (Icelandic)

b. *Hann hefur bókina, [VP lesið ti]  
    ‘He has read the book.’

(18) *[
      [CP/IP] Hann hefur [ParP -ið [APOP bokina, [VP les- bokina. ]]]
    He has PRT read
    [Adjacency disrupted: O ------------*-------------O]

3.1 The key independent evidence (why do things this way?): headedness

No HG effects in OV languages (German, Dutch, etc)

(19) a. …dat veel mensen dat boek, gisteren ti gekocht hebben  
    ‘… that many people that book yesterday bought have’  
    (Dutch)

b. Heuer hat er den Zaun, sorgfältig ti gestrichen.  
    ‘This year has he the fence carefully painted’  
    (German)

Aside: questions arise about distinguishing scrambling vs. OS in Germanic.

FQ licensing as an OS diagnostic (assume OS = A-movement, Scr = A’-Movement)
(20)  a. The runners seem to themselves to be moving very slowly.
    b. The lions might all seem (to you) to have large teeth.
    c. The lions might all have been seen by the tourists.

(21)  a. *[NP the professors who Taylor will have all met before the end of term]
    b. *These professors, Taylor will have all met before the end of term.
    c. *Which professors will Taylor have all met before the end of term?
    d. *Which professors did Taylor say all (that) Mary met before the end of term?

The A/A’ distinction is repeated, where testable (i.e., unambiguous), in all languages I’ve seen except for the Irish dialect of English, as reported by McCloskey 2000.

Scandinavian = VO

(22)  a. Strákana var allra getið í ræðunni. ‘The boys were all mentioned in the speech.’ (passive, Sigurðsson 1991:331)
    b. Mina kamrater ska alla verka konstiga. ‘My friends will all seem (to be) strange.’ (raising, Swedish, Bobaljik 1995)

(23)  A’-movement does not license a floating quantifier

a. * [NP bækurnar sem Jón keypti ekki allar] ... Icelandic
    books.the which J. bought not all
    (the books, which Jon didn’t buy all of) (relativization, Déprez 1989:202)

b. * Dessa flaskor vin har min kamrat alla druckit.
    these bottles wine has my friend all drunk
    (My friend has drunk all these bottles of wine.) topicalization (V2), Swedish

c. * Vilka flaskor vin har min kamrat alla druckit?
    these bottles wine has my friend all drunk
    (Which bottles of wine has my friend drunk all of ) wh-question, Swedish

OS patterns with passive, raising and against relativization, topicalization (V2), and wh:

    I read them [VP not all ]
    ‘I didn’t read all of them.’ (Norwegian, Déprez 1989:197)

b. Pað borðuðu margir strákar bjúgun [VP ekki [VP öll ]] there ate many boys the sausages not all
    ‘Many boys didn’t eat (all of) the sausages.’ (Icelandic, Bobaljik & Jonas 1996)
OV Germanic:

(25) a. Welche Würste hat der Peter (*alle) bezweifelt ob der Hund gegessen hat?  
which sausages has the Peter all doubted if the dog eaten has  
‘Which sausages did Peter doubt whether the dog has eaten all (of)?’  
(German)

b. De dronken taalkundiger heeft Freek (*allemaal) gezegd dat Marie uitlachte.  
the drunk linguists has Freek all said that Marie made fun of  
‘Freek said that Marie made fun of all the drunk linguists.’  
(Dutch)

Important: No McCloskey effects, stranding in intermediate trace position (Spec,CP) is sharply ungrammatical.

(26) a. Welche Würste hat der Peter gesagt [CP (*alle) daß der Hund gegessen hat]?  
which sausages has the Peter said all that the dog eaten has  
‘Which sausages did Peter say that the dog has eaten all (of)?’  
(German)

b. Welche Würste hat der Peter gesagt [CP (*alle) hat der Hund gegessen]?  
which sausages has the Peter said all has the dog eaten  
‘Which sausages did Peter say that the dog has eaten all (of)?’  
(German)

Object Movement does license FQs:

(27) a. Die Männer haben die Würste nicht alle probiert.  
the men have the sausages not all tried.  
‘The people have not eaten all the sausages.’  
(German)

b. Marie heeft de dronken taalkundigen allemaal uitgelachen.  
M. has the drunk linguists all made fun of  
‘Marie has made fun of all the drunk linguists.’  
(Dutch)

Other arguments for OS status of movement in OV: Binding, WCO etc, for Dutch, Afrikaans: limitation to DPs, no PPs etc; order preservation—no movement across the subject, higher arguments. (See Zwart 1993, Bobaljik 1995, for an overview: Thráinsson 2001; contrasting view: Vikner to appear)

Note: In German, Scrambling (A’) is robustly attested alongside Object Shift, and it is argued that there is a step of short A-movement involved in the longer A’-movement (Wyngaerd 1989, Mahajan 1990)

The typology of object movement types is far from settled, but to the extent that there is OS in OV Germanic (esp. relevant, Dutch, which is much more restricted than German), there is no evidence of an HG restriction.

The merger account explains this absence, if it’s real.
4. ADVERBS

Approaches:

4.1 Adverbs may (exceptionally) occupy a high position (Lasnik, Ochii, Bošković)

(28) a. Sam never will eat (up) his peas. : there is an I’-adjointed position
    b. Sam never eats up his peas. ≠ merger across adverb, just higher adjunction

Lasnik’s evidence for “exceptional” placement:

(29) a. John {*completely} will {completely} lose his mind.
    b. Peter partially lost his mind, and John completely did.

NB: completely can precede an unstressed auxiliary, at least when contrastively focused:

(30) a. … it completely has lost the look of bone armor
    b. The film takes us on an artistic and scientific journey from [a] woman who completely has lost the sense of touch…
    c. The rest of the band is still pretty good, but Steve Howe completely has lost all semblance of balls.

etc. Googled (02/05); all sound completely natural to me.

(31) a. Sam carefully will eat up his peas ≠ Sam will carefully eat up his peas.
    b. Sam carefully ate up his peas. (not restricted to “high” reading)

If adverb interpretation is compositional, then “exceptionality” requires special interpretive rules (semantics) that refer to merger environments: an adverb adjoined to I’ may take scope/modification as if adjoined to VP, but only if adjunction to VP is blocked at PF.

Won’t extend to wh-cases unless one adopts no-I-to-C-movement analysis for wh-subjects, or C’-adjointed position, which is otherwise impossible.

(32) a. *Who probably has John seen?  * Adjunction to C’
    b. *Who probably did John see?  * Adjunction to C’
    c. Who probably saw Bill?  No higher position than aux (in C) available.
4.2 Adjuncts are linearized differently (Bobaljik 2002) < Fox and Pesetsky, cf. LCA &c.

As with OS: interpretation of syntactic structure is straightforward. VP-adverbs are VP-adverbs, but their position may be masked by post-syntactic (spell-out) procedures.

**Linearization** as part of spell-out:

(33) \[ \text{[CP} \downarrow \text{IP]} \quad \text{=} \rightarrow \quad \text{or} \quad \leftarrow \text{‘precedes’ or ‘follows’} \]
\[ \text{[IP} \downarrow \text{DP}_1 \downarrow \text{I’]} \]
\[ \text{[I’} \downarrow \text{Infl} \downarrow \text{VP]} \]
\[ \text{[VP} \downarrow \text{DP}_2 \]

(34) a. …that Sam will eat Spam. \[\text{[Spec \rightarrow Head; Head \rightarrow Compl]}\]

b. …dass Rex Wurstsemmeln essen wird. \[\text{[CP, DP: as English]}\]

‘…that Rex will eat wurstsemmels.’ \[\text{[IP, VP: Spec, Compl \rightarrow Head]}\]

What does X \rightarrow YP mean?

Fox & Pesetsky: … “precedes the first terminal node in YP”

alternative: … “precedes first / all terminal nodes dominated by YP”

adjuncts escape domination:

(35) a. \[\text{IP} \quad \text{b. [IP} \downarrow \text{DP}_1 \downarrow \text{I’} \quad \text{c. i. [IP} \downarrow \text{DP}_1 \rightarrow \text{I’} \]
\[ \text{[I’} \downarrow \text{Infl} \downarrow \text{VP]} \]
\[ \text{[VP} \downarrow \text{DP}_2 \]
\[ \text{ADV} \quad \text{VP} \]
\[ \text{V} \quad \text{DP}_2 \]
\[ \text{D} \quad \text{N} \]

(36) a. \[\text{D} \quad \text{I} \quad \text{ADV} \quad \text{V} \quad \text{D} \quad \text{N} \]
\[\text{Sam will never eat the meat}\]

b. \[\text{D} \quad \text{ADV} \quad \text{I} \quad \text{V} \quad \text{D} \quad \text{N}\]

c. \[\text{D} \quad \text{ADV} \quad \text{I} \quad \text{V} \quad \text{ADV} \quad \text{D} \quad \text{N} \quad *(35c.iii)\]

Avoids interpretation problem (28c) (in part): adverb may be VP-adjoined in syntax, but may precede Infl at PF

(37) a. \[\text{D} \quad \text{I} \quad \text{ADV} \quad \text{V} \quad \text{D} \quad \text{N} \]
\[\text{Sam [PRES] never eat the meat Adjacency disrupted * Merger}\]

b. \[\text{D} \quad \text{ADV} \quad \text{I} \quad \text{V} \quad \text{D} \quad \text{N} \]
\[\text{Sam never [PRES] eat the meat Merger OK}\]

‘Sam never eats meat’
Observation: Adjoined elements seem to be ‘ignored’ for PF-merger. They’re not being ignored, they’re simply less rigidly constrained @linearization.

4.3 Irish (McCloskey 1996)

(38) a. VSO V [_{VP S t O}] 

b. landing site of V-movement is Infl.

(39) C + Infl/Verb form a phonological unit:

Creidim [ gu-r fhill sé ar an bhaile ].
I-believe COMP-PAST return he on the home
‘I believe that he returned home.’

(40) IP adjuncts (McCloskey 1992)

a. She promised when she got home [_{CP that she would read Marx’s “Kapital”}] 

b. She promised [_{CP that when she got home} she would read Marx’s “Kapital” ] 

c. She promised [_{CP that she would read Marx’s “Kapital”} when she got home ]

when she got home modifies

a: matrix event - time of promising

b: embedded event - time of reading

c: ambiguous

(41) a. Deiridís an chéad Nollaig eile go dtiocfacdh sé aníos
they-used-to-say the first Christmas other COMP would-come he up
‘They used to say that next Christmas he would come up.’

cf. * They used to say next Christmas that he would come up.

b. Bhí sé ráite nuair a thógann na sagairt an mhóid
was it said when C take the priests the oath

dheireanach go gcuirtear an machine orthu.
lit: last COMP put[impers] the on-them

‘It was said that when the priests take the final oath, the machine is applied to them’
lit: ... said [ when ... oath ] that-is-applied ...

Parallel to OS / do-support: adjunct is syntactically IP-adjoined, but linearly precedes C°,

McCloskey: C° lowers to verb for affixation reasons = merger, across adjunct.

Key evidence that this is not high adjunct placement: NPI licensing by C°[+NEG]

(42) Char labhair duine ar bith liom.
NEG-PAST speak person “any” with-me.
‘Nobody spoke to me.’ lit: Didn’t speak any person with me.
IP-adjoined topics are c-commanded by C°, even though they precede C°

(43)  

a.  [ Greim ar bith ] ní fhuil sé a ithe.  
   bite anyNPI NEG is he eat [PROG]  
   ‘Not a bite is he eating.’ (cf. * Any bite isn’t he eating)

b.  [ Pingin rua ] char chaith mé ar an bhád.  
   penny redNPI NEG spend I on the boat  
   ‘Not a red cent did I spend on the boat.’ (cf. * A red penny I didn’t spend on the boat)

(44)  

[IP Bó amháin [IP i mbliana [ char dhíol mé t  
   cow one.single this year NEG-PAST sell I  
   ‘Not one single cow did I sell this year.’ (Cf. * A single cow didn’t I sell this year.)

Conclusion: The linearization mechanism derives the observation that adverbs/adjuncts may appear to be exceptionally high (on the basis of precedence relations) while remaining where they are “supposed to be” for syntactic / c-command purposes.

4.4 Housekeeping:

How free are adjuncts?

X → YP = X precedes all terminal elements dominated by YP  
Adjuncts may float to the left of the next head, but no further.
Works for all cases except the C-I-V merger in subject questions, IF I → C

X → YP = X precedes the first terminal element dominated by YP  
Will allow adjuncts significant freedom of ordering, in one direction

Additional constraints:

• “economy”? interpret precedence as immediate precedence to the extent possible.  
  = Lasnik’s “exceptionally”.

[<VP> Adv → VP] will prefer immediate precede VP, but tolerate float.  
(not clear that this can be adequately formalized)

• interaction with prosodic information: focus as linear requirement…?

5. COPIES, FORMALISM

(45)  

a. Assignment of precedence conditions to syntactic nodes  
b. Chain reduction (=trace or copy deletion)  
c. Conversion to linear string of X°’s.  
d. Vocabulary insertion.)

Why don’t traces disrupt merger, adjacency, under “copy theory”?
(46) a. \[\text{IP} \rightarrow \text{I'} \rightarrow \text{VP} \rightarrow \text{V'} \rightarrow \text{DP}_1 \rightarrow \text{D} \rightarrow \text{N}\]  
   b. \[\text{IP} \rightarrow \text{I'} \rightarrow \text{VP} \rightarrow \text{V'} \rightarrow \text{DP}_1 \rightarrow \text{D} \rightarrow \text{N}\]

(47) a. Precedence  
   i. \[[\text{IP} \rightarrow \text{I'}]\]  
   ii. \[[\text{I'} \rightarrow \text{VP}]\]  
   iii. \[[\text{VP} \rightarrow \text{V'}]\]  
   iv. \[[\text{V'} \rightarrow \text{DP}_2]\]  
   v. \[[\text{DP}_2 \rightarrow \text{D} \rightarrow \text{N}]\]  
   b. after Chain Reduction  
   i. \[[\text{IP} \rightarrow \text{I'}]\]  
   ii. \[[\text{I'} \rightarrow \text{VP}]\]  
   iii. \[[\text{VP} \rightarrow \text{V'}]\]  
   iv. \[[\text{V'} \rightarrow \text{DP}_2]\]  
   v. \[[\text{DP}_2 \rightarrow \text{D} \rightarrow \text{N}]\]

Why Chain reduction?  
Otherwise yields contradictory requirements  
\[\text{DP}_1 \rightarrow \text{V} \rightarrow \text{DP}_1\]

(48) a. \[\text{D} \rightarrow \text{I} \rightarrow \text{V} \rightarrow \text{D} \rightarrow \text{N}\]  
   b. \[\text{D} \rightarrow \text{[I+V]} \rightarrow \text{D} \rightarrow \text{N}\]  
   c. Sam likes the meat. 

\textit{do-support} as last resort  
(NLLT ex. (32); etc)

OS as interaction with Chain-Reduction:

(49) a. \[\text{I'} \rightarrow \text{AgrOP} \rightarrow \text{DP}_2 \rightarrow \text{Agr'} \rightarrow \text{VP} \rightarrow \text{D} \rightarrow \text{N}\]  
   b. \[\text{I'} \rightarrow \text{AgrOP} \rightarrow \text{DP}_2 \rightarrow \text{Agr'} \rightarrow \text{VP} \rightarrow \text{D} \rightarrow \text{N}\]

(50) a. higher copy deleted  
   i. \[[\text{I'} \rightarrow \text{AgrOP}]\]  
   ii. \[[\text{Agr'} \rightarrow \text{VP}]\]  
   iii. \[[\text{VP} \rightarrow \text{DP}_2]\]  
   b. lower copy deleted  
   i. \[[\text{I'} \rightarrow \text{AgrOP}]\]  
   ii. \[[\text{Agr'} \rightarrow \text{VP}]\]  
   iii. \[[\text{VP} \rightarrow \text{DP}_2]\]

(51) a. I \[\rightarrow \text{D}_{\text{OBJ}} \rightarrow \text{V}\]  
   b. D_{\text{OBJ}} \[\rightarrow \text{I} \rightarrow \text{V}\]  
   c. I \[\rightarrow \text{V} \rightarrow \text{D}_{\text{OBJ}}\]
Important assumption: resolution via copy choice is better than do-support

Two accounts of preference for higher copy:

**Earliness:** highest, whenever possible
**Matching:** Avoid LF-PF copy-choice mismatch
(In single Output Syntax, can be coded as post-LF Spell-out)
“Green Paint”

One possible advantage of Matching: permits a strongly cyclic theory
(cf. Fox & Nissenbaum 1999)

Postscript: on terms and copies; multi-dominance.


