Derivation by Phase

1. The Rules So Far:

**Agree**

For a probe and a goal to Agree:
- probe and goal must both be active (=have uninterpretable features)
- the goal must be the closest instance of the Agreeing feature to the probe

Having two constraints leaves open the possibility of defective intervention effects: a close, inactive Goal blocking a lower, active Goal from agreeing with a Probe.

- A feature is uninterpretable iff it is also unvalued.
  
  **Advantage:** The syntax can detect an uninterpretable feature by simple inspection of its value.

- Agree deletes features $\phi$ on $\alpha$ iff $\bar{\beta}$ is $\phi$-complete: $T_{def}$ is $\phi$-incomplete, for example.

**Move**

- Move = Agree + Determine Pied-Piping + Merge:
  Some features (like EPP) aren’t satisfied by Agree alone, and force Move

(1) [Susan $T_{compl}$ seems [ __ T_{def} to be sleepy __ ]]  

Move (1): $T_{def}$ has $\phi$-features, Susan has Case-features, both Active: they Agree. Susan’s $\phi$-features are complete, so $T_{def}$’s $\phi$-features delete. $T_{def}$’s features are incomplete, so Susan’s Case feature remains.EPP forces actual movement to Spec, TP

Move (2): mutual annihilation: $T_{compl}$ has complete $\phi$-features, as does Susan, so both lose their uninterpretable features and become inactive.

[T has no Case feature, but Susan's can still be deleted, via Match of the $\phi$-features. No, this doesn't follow from anything...]

Alternative approach to (1) (with two independent parts?)

**currently:**

C selects $T_{compl}$; V selects $T_{def}$

**alternatively:**

C is $\phi$-complete: $T$ is $\phi$-complete only when necessary. (p.8)

“necessary”=in order to delete uninterpretable $\phi$ on a selector.

C $T_{compl}$ : $V_{compl}$ : $V_{compl}$ --- Burzio’s Generalization

[$\phi^*$ with EA has some $uF$ satisfiable only by the VP that it embeds.]

Selection (partly) reduces to conditions on deleting uninterpretable features and if C:$T$ :: $V$:V, then T is maybe (like V) sort of substantive rather than functional?

EPP=$\phi$-completeness -> no successive-cyclic movement to Spec of defective T, just Agree.

**Strong Phases:** $\nu^*P$ (transitive $\nu P$)

- maybe DP
- maybe PP?

"propositional" categories

- Phases are the functionally headed XP’s (if T is a substantive, i.e. lexical (N-like), head).
- Non-phases can’t be extracted stranding their functional head.
- Phases furnish reconstruction sites for scope and binding.

2. Phases and Cyclic Spell-Out

**PIC:** for HP a strong phase dominated by a strong phase ZP;

the domain of H is not accessible to operations at ZP, but only H and its edge

**Maximize matching effects:**


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1 This handout is Norvin’s, edited here and there, except for the last section.

2 **domain of $H$** = what H c-commands.
2. [ C  
   \( be likely \) [there to arrive a man]]

   • T, there Agree in [person]
     \([u \text{ person}]\) deletes on there, but T remains untouched
     (because there’s \( \phi \)-set is defective)
   
   • EPP forces raising of there to Spec TP
   
   • T, a man Agree in \( q \)-features
     \( a \text{ man’s} \) Case feature deletes, T’s \( \phi \)-features delete

Why couldn’t a man satisfy the EPP-feature of T?

(3) *\([ C  
   \( be likely \) [there to arrive a man]]\)

**Answer:** Violates “Maximize Matching”: there may Agree with T first, and may check EPP. By MM, since it may, it must. (EPP is a feature, sort of like any other, soft of, sort of...)

Why doesn’t there block Agree of T with a man?

Because it moves to Spec TP, and:

(4) • Only the head of an A-chain is visible for the MLC

3. And of course you’ve been wondering about...³

(5) \([ C  
   \( seem \) [there to have been [caught several fish]]])

   • In Icelandic (but not Romance, Mainland Scandinavian), caught agrees with several fish — in Case as well as in number and gender. No person agreement!
   
   • The \( uq \)-features of caught are matched with [and are expected to delete under] Agree with fish. Because caught is \( q \)-incomplete (no [Person]), it does not delete Case on fish (much less value it), despite Agree.

   **Problem:** What about the Case feature of caught? It can’t delete under Match with Case on fish because fish’s Case feature isn’t valued yet! Yet morphologically it will show the same case as fish.

   **Idea!** It only looks like caught and fish agree in Case. Actually, each is having Case valued independently by T.
   
   Step 1: T probes there, which is \( q \)-incomplete, leaving T unsatisfied.
   
   Step 2: T probes caught, valuing its Case feature (nominative). But caught is \( q \)-incomplete (lacks [Person]), so T is still unsatisfied.
   
   Step 3: T probes fish, valuing its Case feature (nominative). At last, T has found a \( q \)-complete element, and lives happily ever after.

But wait a minute! Didn’t the \( q \)-features of caught disappear under Match with fish. Why is caught an acceptable Goal for the \( uq \)-features of T?

**Answer:**

(6) **deletion/erasure distinction**

Features get deleted (marked for deletion) but don’t actually get erased until Spell-Out.

**A general alternative:** Frampton, Gutman, Legate, Yang -- an HPSG-like mechanism of unification ensures that whatever happens to the feature set of caught will affect the feature set of fish, and conversely.

4. Th/Ex Education⁴

(7) **Puzzling word orders**

a. *There came several angry men into the room*
   
   b. There came into the room several angry men
   
   c. *There was placed a large book on the table*
   
   d. There was placed on the table a large book
   
   e. There was a large book placed on the table
   
   f. *There entered a strange man the room*
   
   g. There entered the room a strange man

True in English, but the facts are the opposite in Icelandic, for instance...

[related facts discussed by (among others) Anagnostopoulou and Alexiadou]

(8) a. Quand partira \([vP \text{ ton ami }]\) ?
   
   when will-leave your friend
   
   b. *Quand mangera \([vP \text{ Marie sa pomme}]\) ?
   
   when will-eat Marie her apple

--> In a transitive construction, something must escape vP (by magic, if necessary).

"Thematicization/Extraction" (=Th/Ex)

• has no effects on semantics (unlike Object Shift)
   
   --> "operation of the phonological component"
   
   (but one that crucially has effects on the narrow syntax:)

³ Norvin’s joke.

⁴ My joke, not Norvin’s.

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Cite as: David Pesetsky, course materials for 24.952 Advanced Syntax, Spring 2007. MIT OpenCourseWare (http://ocw.mit.edu/), Massachusetts Institute of Technology. Downloaded on [DD Month YYYY].
At the relevant stage of the cycle, the syntactic object $\alpha$ so far constructed is transferred
to the phonological component for application of Th/Ex. The narrow-syntactic
computation then proceeds on course with $\alpha$ unchanged except that the trace of Th/Ex is
phonologically empty even prior to the strong phase level, at which point the position
would have become phonologically empty even if not subject to Th/Ex."

[footnote: "Note that this amounts to highly limited access of narrow syntax to effects of
the phonological component"

Th/Exed NPs can't wh-move, or be extracted from:

(9) a. *How many packages did there arrive in the mail?
    b. *What did there arrive in the mail several packages of __ ?

Not a property of there-associate relations generally:

(10) a. How many packages are there in the room?
    b. What are there [several packages of __] in the room?

But does hold for leftward Th/Ex as well as rightward:

(11) *What are there [books about __] being sold (in Boston these days)

-->Th/Exed NP is inaccessible to Move

It is accessible to Agree (obeys Case Filter).

(12) a. Th/Ex is an operation of the phonological component
    b. Traces are inaccessible to Move (but accessible to some other operations)

Move=Agree + Pied-pipe + Merge.

- PRO, pro can Merge
- traces can Agree (Th/Exed NP obeys Case Filter)
  --> trace cannot Pied-Pipe (PRO, pro are heads)

(13) a. a man [OP to talk to __ ]
    b. *a man [[to OP] to talk __ ]

(14) _How ec's matter to narrow syntax_
    a. Empty Categories disallow Pied-Piping
    b. inactive trace disallows Match (A-traces don't block MLC--see above)

So, output of Th/Ex can't participate in Move, but can Agree, etc.

Rightward Th/Ex doesn't iterate (Right Roof Constraint)
Neither does Leftward Th/Ex:

5. Object Shift: "stopover" positions

- Icelandic has Object Shift, English doesn't....

(15) *There seems a man to be in the room

(16) *The Christmas Trolls ate the pudding not

- ...unless (on various assumptions: phase impenetrability, Cyclicity, etc...) the object
  moves further:

(17) What did the Christmas Trolls not eat ?

[other instances of stopover positions: French participle agreement...]

- Why does English behave this way? Consider an OS configuration for English:

(18) [ T [ the book John v read ___ ]

- the book should block Agree(T, John) (i.e. there should be a defective intervention
  constraint). In fact, in Icelandic, a shifted NOM object can even agree with T.

- ...assume Equidistance is not the way to go:

(19) _Equidistance_
    Terms of the edge of HP are equidistant from probe P

    change to:

(20) _Edge condition_
    The phonological edge of HP is accessible to probe P

[way countercyclic, dude]5

- Move applies freely
- MLC evaluated (representationally!) at strong phase level

So why isn't Icelandic English?

- T can probe further in Icelandic?
- Icelandic has, in addition to OS, Disf (= Th/Ex in English)?
Evidence for Disl:
- OSed pronoun in MSc can’t bind anaphors (Holmberg and Platzack (1995))
- OSed pronouns are above v*P, auxiliaries...
- Icelandic: Jon-DAT find-PL the computers-NOM not ugly-PL

6. Holmberg’s Generalization (sort of)

A paradox of Icelandic object shift

1. Object shift is only available when V has moved out of VP.
2. When object shift is available, its presence/absence is correlated with specificity/non-specificity. In particular, *non-shifted specific and *shifted nonspecific
3. When object shift is unavailable, an unshifted object is compatible with specific or non-specific interpretation.

The motivating force of Chomsky’s analysis of Icelandic

(21) a. The EPP position of v*P is assigned specific interpretation INT.
    b. But v* receives an EPP feature only if that's the only way to assign INT to some argument.

(21b) is meaningful because of (22):

(22) PARAMETER: At the phonological border of v*P, XP is assigned non-specific interpretation INT'.

[phonological border of HP = position not c-commanded by phonological material within HP]

Icelandic: (22) holds

=== Suppose α is a direct object in a verb-initial VP, and the V does not move.
    α may freely be specific or non-specific, since it is not at the phonological border of v*P
    Since OS is not necessary in order to achieve INT, OS is impossible by (21b).

=== Suppose α is a direct object in a verb-initial VP, and the V does move.
    If α does not undergo OS, it receives INT and is non-specific (possibly conflicting with lexical properties, in the case of a definite DP or pronoun).
    If α does undergo OS, it will receive INT, and will be specific. OS is possible, since assignment of EPP to v* is the only way to achieve INT for α, given V-movement and (22).

English/French: (22) does not hold

Since (22) does not hold, both INT and INT’ are available for an unshifted direct object (even when V moves out of VP), so by (21b), v* has no INT-related reason to be assigned an EPP feature. Therefore there is no OS, regardless of interpretation.

OV languages

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