Handout 4: Locality theory in Minimalism (II)

1. Problems of recent MP accounts of locality

1.1. Nunes and Uriagereka

- Propose a restricted view of cyclicity in which all specifiers and adjuncts are essentially islands for extraction.
- Specifiers and adjuncts must be spelled out and made to become a lexical item, in order to satisfy the (modified version of) Kayne's LCA.
- When derivation reaches a higher level, the contents of subjects and adjuncts are inaccessible post-SO.
- Problem (a): Some cases of sub-extraction from subjects are acceptable.

(1)   Who did John see a picture of __ in the kitchen?
(2)   Which room did John see a picture of Bill in __ ?

Barrie (2007): If the PP *in the kitchen* is a complement, then (1) should be out (because *a picture of who* would be a lexical item); if the PP is an adjunct or spec of a functional category, then (2) should be out (because the PP would be a lexical item). But both are good. [A possible counter-argument to Berrie is that, perhaps, both phrase structures are possible.   Larson (1988) and Cinque (1997)].

- Problem (b): Does not allow for cross-linguistic variations of subject sub-extraction (Japanese, Russian, etc.): no similar story parallel to those proposed earlier is available since LCA (as modified) would require subjects (as well as adjuncts) to be spelled out and turned "lexical". (Stepanov 2007)

1.2. Stepanov (2007)

- Account in a nutshell:
  - Subject Condition: Moved constituents do not allow sub-extraction.
  - Adjunct Condition: the Late Adjunction Hypothesis (cf. Ishii 1997)

- Empirical Problem: (Rezac 2006, Barrie 2007)

(3)   a. What were there [several books about __]$_i$ stolen t_i from the library?
        b. Who were there [naked pictures of ___]$_I$ printed t_i in the newspaper?
        c. Which kind did they make [a play about t] into a movie?
        d. Which king was there [a play about t] made into a movie?
        e. *Which king was [a play about t_i] made into a movie?

        Cf. Chomsky 2005/2008: derived subjects allow sub-extraction.

- Conceptual problem: whence Freezing? (not a 'virtual conceptual necessity'!)

2. Barrie (2007) based on cyclic linearization

Cyclic Linearization (Fox and Pesetsky 2006, Pesetsky and Fox 2003)

- Core idea: Linear order established at one stage cannot be altered at a later stage.
- Linearization domains: vP (VP) or CP
- Once a linearization domain is built, ordering statements are recorded.

(4) a. $[_{VP}$ A B C] $\rightarrow$ <A, B>, <A, C>, <B, C>

- Subsequent operations may move elements, as long as previous ordering relations are not contradicted.

   b. $[_{CP}$ A D $[_{VP}$ t_A B C]]   (ok)

   c. $[_{CP}$ A D B $[_{VP}$ t_A t_B C]]   (ok)

   d. $[_{CP}$ B D A $[_{VP}$ t_A t_B C]]   (crash): <B,A> contradicts <A,B>

- Subject condition: contradicting ordering statements.
- Phrasal adjuncts: allow extractions, vP edge being a possible escape hatch.
- Clausal adjuncts: CP has an operator filling Spec, preventing an escape hatch. Thus clausal Adjunct Condition is assimilated to Wh-island Condition.

- Conceptual problem: why the linearization rigidity principle?

- Empirical problems:

   - Crucially, DP is not a phase and does not allow edge movement (so as to obtain Subject Condition effects for *a picture of who*, etc.
   - Then, there is no way to block adjunct condition violation of *Which table did he buy the books on ___?*
   - Sentential subjects like *that John kissed who* does not have a filled Spec, CP; so there should be an escape hatch which makes extraction possible (actually impossible).

3. Chomsky 2005, 2008 "On phases"

3.1. Some general considerations

- Adopting the P&P framework, I will assume that one element of parameter-setting is assembly of features into lexical items (LIs), which we can take to be atoms for further computation and the locus of parameters, sweeping many complicated and important questions under the rug.

- **SMT**: It has been a useful guide for research to consider an extremely far-reaching thesis – the "strong minimalist thesis" SMT – which holds that language is an optimal solution to interface conditions that FL must satisfy; that is, language is an optimal way to link sound and meaning, where these notions are given a technical sense in terms of the interface systems that enter into the use and interpretation of expressions generated by an I-language.

- Suppose we assume SMT to be true, and see how far we can go towards accommodating properties of language, identifying places in the argument where assumptions are introduced that require independent research, and where the quest fails, for now at least.

- **NTC:** A natural requirement for efficient computation is a "no-tampering condition" **NTC**: Merge of X and Y leaves the two SOs unchanged. If so, then Merge of X and Y can be taken to yield the set {X, Y}, the simplest possibility worth considering. Merge cannot break up X or Y, or add new features to them. Therefore Merge is invariably "to the edge" and we also try to establish the "inclusiveness principle," dispensing with bar-levels, traces, indices and similar descriptive technology introduced in the course of derivation of an expression. It seems that this desideratum of efficient computation can also be met within narrow syntax at least, with apparent departures that have a principled explanation; and that it sometimes even yields superior empirical results, in one well-studied case, with regard to reconstruction effects. Consequences of the NTC:
  - Target extension, or strict cyclicity
  - But the needed simultaneous operation from C (edge and phi-features) proposed below may be a problem as violation of target extension
  - Maybe also copy-theory of movement (no traces)
  - No indices
  - Perhaps also other ingredients of the inclusiveness condition

- A more complex alternative, consistent with NTC, is that Merge forms the pair <X, Y>. The underlying issue is whether linear order plays a role in narrow syntax and mapping to C-I, or whether it is restricted to the phonological component, motivated by interface conditions at SM.

3.2. The CED: Adjuncts

- Adjunct Condition: "Consider the CED effects discovered by Huang (1982), involving XP-YP structures with island violations under the wrong choice. The adjunct-island sub-case follows if an adjunct is not in the search domain of the probe. That in turn follows from the approach to adjuncts in Chomsky (2004), taking them to be entered into the derivation by pair-Merge instead of set-Merge to capture the fundamental asymmetry of adjunction, then simplified to set-Merge at the point of Transfer, thus permitting phonetic linearization and yielding "late-insertion" effects at the semantic interface."

- Adjuncts not in the search domain, because an adjunct comes in by pair-merge, and it is stipulated that pair-merged elements are inaccessible for syntactic computation.
- Then after Spell out, a process of "SIMPLIFY" will turn pair-merge objects into set-merge objects, thus opening up the adjuncts for phonetic linearization, and for interpretation of bound-variables into adjuncts (*Everyone left without saying goodbye to his host*).

3.3. The CED: Subject Condition

(5)   PP extraction from object
- i. it was the CAR (not the TRUCK) of which [they found the (driver, picture)]
- ii. of which car did [they find the (driver, picture)?

(6)   PP extraction from external argument subject (deep subject)
- i *it was the CAR (not the TRUCK) of which [the (driver) caused a scandal]
- ii *of which car did [the (driver, picture) cause a scandal]

(7)   PP extraction from derived subject (or directly from deep object)
- (i) it was the CAR (not the TRUCK) of which [the (driver) was found]
- (ii) of which car was [the (driver, picture) awarded a prize]

- The relevant base structures of (7) are as in (8):

(8)
- (i) C [T [v [V [the (driver, picture) of which]]]]
- (ii) C [T [$_\alpha$ [the (driver, picture) of which] [v* [V XP]]]]

In (i), v is unaccusative/passive, so that only (ii) but not (i) has the internal phase α. We now have the right distinction, though it remains to explain it.

- There are further consequences. One is that T is not the probe that yields A-movement of [*the* (*driver, picture*) *of which*] to the SPEC-T position in (7) before C is merged: if it were, the required distinction would again be effaced before *wh-*movement. Rather, A- as well as A'-movement must be triggered by probes in C: the probe for *wh-* accesses *which* in its base position in (7), raising *of-which* to SPEC-C, while the Agree-probe in C, inherited by T, raises the full DP [*the* (*driver, picture*) *of which*] to SPEC-T, the two operations proceeding in parallel. It follows further that TP is not a phase; rather CP, as already concluded on other grounds. Other considerations converge towards the same conclusion.

(9)   More examples

- [18]

- (i) it is the CAR (not the TRUCK) of which [the (driver, picture) is likely [*t* to [*t* cause a scandal**]**]]
- (ii) of which car is [the (driver, picture) likely [*t* to [*t* cause a scandal**]**]]

- [19]
  - of which car did they believe the (driver, picture) to have caused a scandal

(10)   PP Extraposition (from object only, not from subject)
- [20] *the (driver, picture) is likely to cause a scandal of the car
- [21] *the (driver, picture) caused a scandal of the car
- Why?

Comments

(11)   PP extraction vs. DP extraction
- Of which car was the driver t awarded a prize?
- *Which car was the driver of t awarded a prize?

(12)   Kuno's 1973:
- Of those students, I have seen three.
- Of those students, only three were arrested.
- Of those students, only three received prizes.
- *Those students, I have seen three of.
- *Those students, only three of were arrested.
- *Those students, only three of received prizes.

(13)   Possible alternative? PP extraposition from NP
- A book appeared yesterday by Chomsky.
- A book was published on CED
- A man died from India.
- *A book slandered John by Chomsky.
- *A book impressed John on CED.
- *A man cried from India.

(14)   Potential explanation for the DP-PP contrast in (10):
- Possible analysis of PP extraposition from NP: NP intraposition?
- The alleged good cases may involve simple movement of the extraposed PP from object position.
- But this apparently does not work in view of the examples in (9).
- Hence: it may be due to an independent ban against P-stranding. Reanalysis to avoid P-stranding (Hornstein and Weinberg 1981) is possible only in the environment of a lexical verb. ([believe a picture of] = complex V *believe*

- **BTW:** Chomsky account solves the problem posed by Barrie as shown in (3).

(15) Problem of Chomsky's account:
The **Subject Condition** has not been reduced yet. There is still a need to stipulate that Probe can see a subject or the left edge, but cannot probe inside of a subject or left edge. Again this does not seem to be an optimal feature.

(16) The same account could be achieved by the VP-adjunction hypothesis in the Barriers system, it seems. In the classical GB style, these cases might involve "government under reconstruction".

4. The empirical domain of the ECP, again:
- Overt long extraction asymmetries (subject-object, adjunct-complement)
- Covert asymmetries:
  - ne personne
  - superiority (subject-object, adjunct-complement)
  - cf: some 'pure superiority' effects
- Covert asymmetries: wh-in-situ languages
  - *Who left why? (*why did who leave?)
  - *How did he leave why?
  - *Why did he leave how?
- Extraction out of any island/barrier: subject or adjunct extraction out of any island
  - The contrast in 'strength' of violation between complements and non-complements.
- Weak island violations (some): negative island, non-bridge verb, etc.
  - A note on *where, when, how* and *why* w.r.t. overt vs. covert (cf. Huang 1982; Tsai 1994 i.a.; Caponigro and Pearl 2009)
- Adjunct extraction and predicate clefts in Vata (Koopman 1984)

5. Possible role of a government-like notion in linguistic theory
- Chomsky (2005) Three factors in language design:
  - The genetic endowment specific to language (UG)
  - Experience
  - Principles that are language-independent or even organism-independent.
    - General principles of human cognition
    - General laws of nature—e.g., computational efficiency
- The notions related to government, etc. could be related to "3rd-factor" principles.