A-reconstruction – problems and mysteries

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(1) Two women seem to be expected to dance with every senator.  ambiguous

a. 1st reading: There are two women who are expected to dance with every senator.
b. 2nd reading: It is expected that every senator will dance with (possibly different) two women.

In principle, you could imagine two ways to obtain inverse scope in (b): Either lower two women (reconstruction) or raise every senator. In practice, only the first option exists (perhaps because QR is clause-bound). How do we know?

(2) The trapping effect

Two women seem to each other to be expected to dance with every senator.

Unlike (1), this sentence is unambiguous – only reading (1a) exists.

If reconstruction is the only option, we understand this fact. Reconstruction places two women in its base position (only when two quantifiers are clause-mates can they take ambiguous scope). That position is too low to bind the reciprocal in the matrix clause. If QR could raise every senator above two women, we should have been able to get the inverse scope without sacrificing binding.

⇒ Condition A and scope relations are established at a single level (otherwise, we could satisfy inverse scope at LF and binding at SS in the example above). This is Lebeaux’s Single Tree Condition (there is just one interpretive interface).

(3) More evidence against long QR

Mary seems to two women to be expected to dance with every senator.

Unambiguous: Only 2x >> ∀y.

The lack of inverse scope shows that it is in virtue of the A-chain in (1) that every senator obtains wider scope than two women. Since two women does not form a chain in the above example, inverse scope is not observed.
A second argument

(4) Anaphors inside moved NPs can be bound from at their base position.

a. Each other’s presents please the two children.
   b. Each other’s presents are expected to please the two children.
   c. ?* The presents are expected by each other’s parents to please the two boys.

(a) shows that psych-verbs allow backward binding within the same clause. (b) shows that A-reconstruction can feed binding. (c) shows, like (3), that long QR cannot place the two boys in a position high enough to bind the reciprocal in the matrix clause.

(5) Same with variable binding:

a. His mother pleases every man.
   b. [His mother] seems to please every man.
   c. * Mary seems to his mother to please every man.

A third (Lebeaux’s fourth) argument

(6) Long distance control by deeply embedded arguments.

a. [PRO seeing Claire] seems to be expected to make Mark happy.
   b. [PRO seeing Claire] made Mark happy.

The idea is that PRO can only be controlled by a clausemate of the gerund. But is it so? Lebeaux (1984) himself gave examples like (c), and (d) shows that PRO in this position can be controlled from discourse.

c. [PRO hiding the money] showed that Mark was guilty.
   d. Mary was disappointed. [PRO helping her best friend] wasn’t appreciated.

Lebeaux cites another argument based on linked readings of two arbitrary PROs. Overall, the case for A-reconstruction is compelling.

(7) Crucially, A-reconstruction is optional. If it were obligatory, (a) would violate both conditions A and C at LF.
a. John₁ seems to himself₁ t₁ to be a genius.

**A puzzle:** Why is A-bar reconstruction obligatory? In fact, why do the two types of reconstruction differ in this regard?

b. * Which remarks about Bill₁ did he₁ ignore?

cf. c. Which remarks about him₁ did Bill₁ ignore?

(8) At this stage, Lebeaux laboriously shows that abandoning the Single Tree Condition overgenerates non-existing readings. This could consist in either letting some interpretive conditions apply at one level (e.g., SS) and others at another level (e.g., LF); or in complicating the definition of c-command to allow binding through traces. Either option is not restrictive enough.

(9) The following conditions/processes all apply at LF:

a. Fixing the relative scope of quantifiers.

b. Variable binding.

c. Binding condition A.

d. Idiom interpretation.

By contrast, negative conditions (binding B and C) apply everywhere.

**Condition C applies everywhere**

(If any stage in the derivation of a sentence S violates condition C, S is ungrammatical).

(10) **Evidence:** Contexts where A-reconstruction – shown to exist – could undo the configuration which violates condition C, in fact remain ungrammatical.

a. * He₁ seems to John’s₁ mother t₁ to be expected t₁ to win.

Possible LF: e seems to John’s₁ mother e to be expected he₁ to win.

b. * He₁ seems to every man₁ t₁ to be quite wonderful.

Possible LF: e seems to every man₁ he₁ to be quite wonderful.

**No WCO** c. [His₁ mother]₂ seems to every man₁ t₂ to be quite wonderful.
Actually, in order to rule out Strong Crossover in (b) as a violation of condition C, it is necessary to force QR \textit{before} reconstruction of the pronoun. It’s unclear why this should be so.

(11) Lebeaux doesn’t consider Condition B, but the facts are the same. The following example, from Chomsky (1995), shows that reconstruction can’t undo a condition B violation:

a. * John₁ expected him₁ to seem to me t₁ to be intelligent.

(12) The argument from psych verbs is based on the false idea that they necessarily involve reconstruction.

a. * Himself₁ pleases John₁.
b. Each other’s₁ parents please the two boys₁.

Lebeaux argues that (b) must involve reconstruction of the subject to a position lower than the experiencer. This must be also available in (a); the fact that the latter is still bad proves that the SS-violation of condition C cannot be undone by reconstruction (hence, Condition C applies everywhere).

But the assumption that (b) must involve reconstruction is false; in fact, backward binding tells us nothing about structure, and falls outside sentence grammar (involving \textit{logophoricity}; see my first handout). Without this assumption, it may well be that condition C is violated only at LF in (a), and doesn’t apply “everywhere”.

\textbf{Comparison with A-bar reconstruction}

(13) \textbf{A-bar reconstruction}

Condition A and variable binding (the “positive” conditions) can be satisfied by any position in the chain.

a. John wondered \([ [\text{which picture of himself₁} ]₂ \text{Bill₁ said } ]₂ \text{that Steve liked } t₂ ]]\)?
b. \([\text{Which of his₁ parents} ]₂ \text{did Freud say } ]₂ \text{that a man₁ loved best } t₂ ])\?

Condition C (the “negative” condition) is violated if any chain position violates it.
c. * Which remarks about Bill\textsubscript{1} did he\textsubscript{1} ignore?
d. * [Whose hurting John\textsubscript{1}]\textsubscript{2} did he\textsubscript{1} persuade Bill of t\textsubscript{2}?

**A-reconstruction: reminder**

As in A-bar chains, Condition A and variable binding can be satisfied by any position in the A-chain.

e. [Each other’s\textsubscript{1} parents]\textsubscript{2} are expected t\textsubscript{2} to seem to the boys\textsubscript{1} t\textsubscript{2} to be quite wonderful.
f. [Pictures of his\textsubscript{1} father in his youth]\textsubscript{2} are known t\textsubscript{2} to seem to every man\textsubscript{1} t\textsubscript{2} to be quite wonderful.

However, unlike A-bar chains, the low (reconstructed) position in A-chains does not violate condition C.

g. John\textsubscript{1} seems to himself\textsubscript{1} t\textsubscript{1} to like cheese.
h. [John’s\textsubscript{1} mother]\textsubscript{2} seems to him\textsubscript{1} t\textsubscript{2} to be wonderful.

(14) **Stating the puzzle**

We have incontrovertible evidence that A-reconstruction exists. We also have such evidence that Condition C does not tolerate a bound R-expression in any position in A-bar chains. Why, then, does it tolerate this in A-chains?

**A-bar chain: (13c)**
a. * Which remarks about Bill\textsubscript{1} did he\textsubscript{1} ignore which remarks about Bill\textsubscript{4}?

**A-chain: (13f)**
b. John’s\textsubscript{1} mother seems to him\textsubscript{1} John’s\textsubscript{1} mother to be wonderful.

**Note:** I use the copy notation instead of Lebeaux’s derivational notation. There is reason to do that, but for now, we can state the problem in 3 different ways; notice that each formulation points to a different type of answer.

i) Why are early violations of condition C lethal in A-bar chains but not in A-chains?

ii) Why is reconstruction (lowering) obligatory in A-bar chains but not in A-chains?

iii) Why are low copies necessarily visible in A-bar chains but not in A-chains?
Lebeaux’s reasoning will follow (i).

**Late insertion of lexical arguments**

The logic of the problem is similar to that of the argument/adjunct asymmetry in reconstruction, discussed by Lebeaux (1988, 1991).

\[(15) \quad \text{a. } * \text{Whose claim that } John_1 \text{ stole the money did } he_1 \text{ reject?} \\
\quad \text{b. } \text{Whose claim that } John_1 \text{ had heard before did } he_1 \text{ reject?} \]

The argument clause in (a) must be merged at the base position, so the name it contains is bound by the pronoun. The adjunct clause in (b) can be merged after \(wh\)-movement, so the name it contains is never bound.

Lebeaux’s intuition is that just like late merger of adjuncts explains their invisibility to condition C in A-bar chains (“optional reconstruction”), so can late merger of lexical arguments explain their invisibility to condition C in A-chains.

If the argument is late inserted – what moves in an A-chain? \(pro\) (phi-features + index).

\[(16) \quad \text{Derivation} \]
\[
\begin{align*}
\text{a. } & \text{e seems to } himself_1 \text{ } pro_1 \text{ to like cheese.} & A\text{-movement } \Rightarrow \\
\text{b. } & \text{pro}_1 \text{ seems to } himself_1 \text{ } t_1 \text{ to like cheese.} & \text{Lexical insertion } \Rightarrow \\
\text{c. } & \text{John}_1 \text{ seems to } himself_1 \text{ } t_1 \text{ to like cheese.} \\
\end{align*}
\]

*Note:* Lexical insertion may, but need not, apply late. To obtain binding of the base position in a chain, early merger must be chosen.

\[(17) \quad \text{Crucially, late lexical insertion of arguments is barred in A-bar chains.} \]
\[
\begin{align*}
\text{a. } & \text{he}_1 \text{ likes } pro. & \text{Lexical insertion } \Rightarrow \\
\text{b. } & \text{he}_1 \text{ likes which pictures of } John_1. & \text{Condition C } \Rightarrow \\
\text{c. } & * \text{he}_1 \text{ likes which pictures of } John_1. & A\text{-bar movement } \Rightarrow \\
\text{d. } & * \text{Which pictures of } John_1 \text{ does } he_1 \text{ like?}
\end{align*}
\]
Note: We must insert the entire *which pictures of John* in one step. In particular, *John* cannot be inserted after A-bar movement, or we lose the condition C violation. A reasonable way to impose this is by cyclicity.

Therefore, the distinction in A- and A-bar reconstruction (the answer to (14i-iii)) boils down to: Lexical insertion of arguments may apply at any position in an A-chain, but at the lowest position in an A-bar chain. Why? Because A-bar movement cannot apply to pro. WHY?

Given this, no distinction in the actual process of reconstruction is needed between A- and A-bar chains, or anaphors and names – a desireable result.

(18) An intricate prediction

a.  

    [DP … pron₁ … name₂ ]₃ … QP₁ … t’₃ … pron₂ … t₃ …

b.  *

    [DP … pron₁ … name₂ ]₃ … pron₂ … t’₃ … QP₁ … t₃ …

In (a), t’₃ provides a consistent LF position – *pron₁* is bound and *name₂* is free. By contrast, in (b) there is no consistent LF position: In the surface position, *pron₁* is unbound; in t’₃, *name₂* is bound and *pron₁* is unbound; in t₃, *name₂* is again bound.

c.  Her₁ picture of Sting₂ seemed to every fan₁ to be seen by him₂ to be a real intrusion.

d.  * Her₁ picture of Sting₂ seemed to him₂ to be seen by every fan₁ to be a real accomplishment.

In deriving (c), we first move pro to the intermediate position, past the pronoun *him*; only then do we insert *her picture of Sting* – still within the c-command domain of *every fan* but already outside the c-command domain of *him*.

(19) Explaining the big WHY (brief version)

The crucial distinction was between A-movement of *pro* (possible) and A-bar movement of *pro* (impossible). In the rest of the paper, Lebeaux derives this result from the Stray Affix Filter (SAF), which is an “everywhere” negative condition (like condition C). The reasoning is as follows. Case features are affixes, assigned to DPs at case positions. *pro* is caseless. While A-movement may move the caseless *pro* up the tree, the moment it reaches a case position, where the case
affix is inserted, lexical insertion must apply, to avoid a violation of SAF. Consequently, A-bar movement (always proceeding from a case position) will already apply to a lexically filled DP.

(20) **Restating the problems in Copy Theory (A-chains only)**

a. For scope, only one position in a chain is visible at LF:

\[ QP_1 \ldots t_1 \ldots [IP \ldots t_1 \ldots QP_2 \ldots] \]

Possible: \[ QP_2 >> QP_1 \] [caveat: unless \( QP_1 \) is a strong quantifier]

b. For condition A and variable binding, only one position in a chain is visible at LF:

\[ [DP\ anaphor_1/bound\ variable_1]_2 \ldots t_2 \ldots DP_1/QP_1 \ldots t_2 \]

Consequence: (a) and (b) together produce the scope trapping effect:

i. Two women\(_1\) seem to each other\(_1\) \( t_1 \) to be expected \( t_1 \) to dance with every senator. *unambiguous*

c. For condition B, all positions are visible at LF.

i. * John\(_1\) expected [him\(_1\) to seem to me \( t_1 \) to be intelligent]].

ii. * John\(_1\) seems to me \( t_1 \) to be expected [t\(_1\) to like him\(_1\)]].

iii. * He\(_1\) was expected [t\(_1\) to seem to him\(_1\) \( t_1 \) to be intelligent]].

Condition B is violated by the top position of the pronoun in (i), the base position of the binder in (ii) and the intermediate position of the binder in (iii).

d. For condition C, only the top position is visible at LF.

i. [John’s\(_1\) mother\(_2\) seemed to him\(_1\) \( t_2 \) to like rock music].

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