

## Reconstruction Reconsidered

Traditionally, the questions posed by sentences (1)-(4) are discussed in terms of a syntactic process called reconstruction (Chomsky (1995), Huang (1993), Heycock (1995)). Advocates of reconstruction propose that the raised constituents in these examples may be “reconstructed” into their co-indexed trace positions at LF.

1. [Which pictures of himself<sub>i/j</sub>]<sub>k</sub> did John<sub>i</sub> think t<sub>k</sub> that Bill<sub>j</sub> admired t<sub>k</sub>?
2. [How proud of herself<sub>\*i/j</sub>]<sub>k</sub> did Alice<sub>i</sub> think t<sub>k</sub> that Barbara<sub>j</sub> should be t<sub>k</sub>?
3. [Which allegations about John<sub>i</sub>]<sub>k</sub> do you think t<sub>k</sub> he<sub>i</sub> will deny t<sub>k</sub>?
4. [How proud of John<sub>\*i</sub>]<sub>k</sub> do you think t<sub>k</sub> he<sub>i</sub> is t<sub>k</sub>?

For sentence (1) the question of how a surface anaphor with no potential antecedents c-commanding it at surface structure doesn't disobey Principle A of binding theory, is answered with this reconstruction account. Reconstruction allows the wh-phrase to lower into either trace position at LF, licensing both indexing possibilities. For sentence (3) this option is not used and the R-expression obeys Principle C of binding theory.

Sentences (2) and (4), which unlike sentences (1) and (3) involve predicate raising behave differently. In sentence (2) reconstruction can explain how the anaphor doesn't disobey Principle A, but it doesn't explain why only one trace position is available for reconstruction. For a sentence like (4) it is unclear why the NP must be reconstructed, while in (3) it isn't obligatory.

When discussing reconstruction in terms of copy theory (Chomsky (1993)), the process is not about lowering NPs into trace positions at LF, but about binding overt NPs and non-overt NP copies at LF. It may sound as if we are exchanging one way of talking about the same phenomenon for another, but it is argued that reconstruction is less desirable because it forces a discussion of why reconstruction is sometimes obligatory and sometimes not for sentences of the same type. That is, why in a sentence like (1) must the NP “reconstruct”, while in a sentence of the same type, say (3), the NP can't “reconstruct”? The reconstruction framework has the added burden of explaining how whichever trace position is selected in an example like (1) happens to be selected.

In terms of copy theory then, the questions raised by sentences (1)-(4) are as follows.

- (a) Which copy of an NP does Binding Theory apply to? The answer needs to explain how sentences of the same type (e.g. (1) and (3)) can seem to vary in this regard.
- (b) How does the anaphor in sentence (1) have the ability to be bound by either of the NPs with only a copy of the NP in the theta-position and at the matrix CP-level? That is, how can *John* bind the anaphor *himself* without the intermediate-NP-lowering possibility?
- (c) Why in the predicate raising examples of (2) and (4) does it seem that the theta-copy of the NP must obey the binding theory?

I argue for the following answers to these questions.

For question (a) I argue that binding theory needs to only be satisfied by one of the NP “copies” at LF. Sentence (1), with an anaphor at the CP-level, precludes the possibility that only the CP-level “copy” needs to be bound. While sentence (3), with a covert R-expression in the theta-position, precludes the possibility that only the theta-position “copy” needs to be bound. These two examples taken together suggests that having both the CP-level and theta-position “copy” respect Binding Theory is also an unreasonable proposal. By the process of elimination, we are left with the conclusion that Binding Theory only needs to be satisfied by one of the “copies” of an NP. The word copy appears in quotes throughout because there is in fact only one NP in copy theory; it occurs in two positions (“copy” is just short hand for “position at which the NP occurs”). Maintaining this perspective the more precise answer to question (a) is that Binding Theory needs to only satisfied in one of an NP's positions.

For question (b) I argue that an independently motivated operation called vehicle change, allows, in sentences like (1), for a matrix subject to bind an embedded anaphor without an

intermediate trace lowering possibility. Vehicle change is the variable realization of NPs at LF. Variable realization is the altering of nominal features while maintaining the NP's index. Fiengo and May (1994) use vehicle change to explain how at LF certain antecedent-contained deletion sentences are grammatical. Sentences (5) and (6) have respective LF representations in (7) and (8).

- (5) Mary introduced John<sub>1</sub> to everyone that he<sub>1</sub> wanted her to  
 (6) \*Mary introduced John<sub>1</sub> to everyone the she wanted him<sub>1</sub> to.  
 (7) Everyone that he<sub>1</sub> wanted her to **introduce John<sub>1</sub> to t**, Mary introduced John<sub>1</sub> to t.  
 (8) \*Everyone that she wanted him<sub>1</sub> to **introduce John<sub>1</sub> to t**, Mary introduced to John<sub>1</sub> to t.

Both (5) and (6) should be ungrammatical. The LF representation of (7) shows the R-expression *John* co-indexed with the pronoun *he* and not free; just as in the LF representation of (8) the R-expression *John* is co-indexed with *him* and not free. With vehicle change though the reconstructed NP *John* can be realized as its pronominal correlate *he*. Now applying binding theory *he* is properly free in its governing category. Observe that changing the pronominal status of *John* in (8) the NP is still not properly free (here *him* is in the NPs governing category). Using vehicle change on a sentence like (1), the answer to how the matrix subject could serve as an antecedent to a reconstructed NP is available. The anaphor *himself* can undergo vehicle change and the pronominal representation of the anaphor can be properly free and still have an antecedent that is co-referent.

- (9) [Which pictures of himself<sub>i/j</sub>] did John<sub>i</sub> think that Bill<sub>j</sub> admired [which pictures of himself<sub>i/j</sub>]?  
 (10) [Which pictures of himself<sub>i</sub>] did John<sub>i</sub> think that Bill<sub>j</sub> admired [which pictures of him<sub>i</sub><sup>Vehicle Changed</sup>]?

Finally to answer question (c) I use an observation made by Heycock (1995) that predicate raising constructions are not the only sentence type with stricter indexing possibilities than argument raising constructions; sentences with raised arguments in quantity phrases do too.

- (11) \*[How many of the children<sub>i</sub>]<sub>k</sub> do they<sub>i</sub> think I hate t<sub>k</sub>?

Heycock observes that in predicate raising and quantity raising examples what is being quantified over is not extensional (e.g. pictures, individuals, etc.) but amounts of an argument, or degrees of a predicate. This difference in what is being quantified over leads to a difference in the LF representation of these quantifiers. In argument raising examples that don't involve issues of quantity, a copy of the argument is needed to know what is being quantified over at LF. In predicate raising or quantity raising sentences, only the degree or amount phrase needs to remain at LF. Dobrovie-Sorin (1992) argue for the following representation for these constructions.

- (12) \*[How many of]<sub>k</sub> do they<sub>i</sub> think I hate [t<sub>k</sub> the children<sub>i</sub>]?

Without this CP-level NP, there are stricter indexing possibilities than argument raising constructions. Binding Theory only applies to the NP that is present at LF: the theta-position NP. The lack of a CP-level NP also makes vehicle change not an option (there needs to be "copies" of an NP for vehicle change to take place) for the theta-level NP. This explains why the matrix subject cannot be properly co-indexed with the embedded NP in a sentence like (2).

**References:** Chomsky, N. 1993. A minimalist program for linguistic theory. In K. Hale and S.J Keyser, eds., *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*. MIT Press. Dobrovie-Sorin, Carmen. 1992. *The syntax of Romanian: Comparative Studies in Romance*. Dordrecht: Foris. Fiengo, R & May, R. 1994. *Indices and Identity*. MIT Press. Heycock, Caroline. 1995. Asymmetries in reconstruction. *Linguistic Inquiry* 26: 547-570. Huang, C.T. 1993. Reconstruction and the structure of VP: Some theoretical consequences. *Linguistic Inquiry* 24: 103-138.