

Workshop on Reconstruction Effects in Relative Clauses

Any theory of the syntax/semantics interface has to deal with cases of apparent mismatches between the syntactic structure of a construction and its semantic interpretation. One type of these mismatches are so-called *reconstruction effects* which involve syntactic surface structures of the form [... α ... [... β ...]], where α c-commands β , but in interpretation α depends on β . There are two major strategies to deal with these cases: One is to enrich the syntactic component of the grammar (e.g. by assuming a separate level of syntactic representation, typically called *Logical Form*, as the input to semantic interpretation). The other is to enrich the semantic component to make it deliver correct interpretations for surface syntactic structures (e.g. by assuming type-shifting operations on meanings).

One goal of the workshop is to compare approaches from both traditions. A systematic comparison of their empirical coverage and the naturalness of their proposed solutions requires a common set of data against which the theories are evaluated. The workshop focuses on reconstruction effects in relative clauses. The following paragraphs will sketch a couple of relevant phenomena. Example sentences are presented in a uniform format to facilitate comparison of the constructions, but the indication of gaps/traces/copies by ‘_’ and co-indexations should be understood as purely descriptive devices without any theoretical implications.

Reconstruction effects arise in a variety of linguistic constructions (see e.g. Sportiche (2006) for a systematic overview). A first class of reconstruction effects involves cases of semantic binding where the bindee is not in the c-command domain of the binder in the surface syntactic structure. The general configuration is indicated in (1) and illustrated by simple examples from German involving topicalization (2a) and scrambling (2b) (discussed e.g. in Frey (1993), Sternefeld (1997) and Lechner (1998)).

- (1) [... bindee₁ ...]₂ [... binder₁ ... [... _₂ ...]]
- (2) a. [Seine₁ Mutter]₂ liebt jeder₁ _₂
his mother loves everybody
‘Everybody loves his mother’
- b. dass [seine₁ Mutter]₂ jeder₁ _₂ liebt
that his mother everybody loves
‘that everybody loves his mother’

Other instantiations of this schema are interrogatives with fronted pronoun-containing *wh*-phrases like (3a) and, of special interest to the workshop, parallel examples involving relative clauses like (3b), where a quantified expression inside a relative clause apparently binds a pronoun in the external head of the relative clause.

- (3) a. [Which of his₁ relatives]₂ does every man₁ love the most _₂?
- b. The [relative of his₁]₂ [that every man₁ likes _₂ the most] is his₁ mother

Both examples are taken from Jacobson (2002a,b, 2004) who also discusses more complex cases involving stacked relative clauses where a quantifier in one relative clause binds a pronoun in the other. She shows that binder and bindee can occur in either order (cf. (4a) and (4b)) and that even both binding patterns are possible within a single sentence (cf. (4c)) – a challenging configuration for syntactic theories of reconstruction.

- (4) a. The woman₍₂₎ [that he₁ loves ₂ the most] [that every man₁ invited ₂] is his₁ mother
 b. The woman₍₂₎ [that every man₁ loves ₂] [that he₁ invited ₂] is his₁ mother
 c. The paper₍₃₎ [that every student₁ handed in ₃ to her₂]
 [that every phonology professor₂ most praised him₁ for ₃]
 is the one that he₁ handed in to her₂ the first week of class

On the other hand, there is a second class of reconstruction effects, often used by proponents of syntactic accounts of reconstruction in support of their theories, that involves the interaction of reconstruction and principles of Binding Theory. For instance, Fox (1999) argues that scope reconstruction (here diagnosed by variable binding) feeds Condition C, as illustrated in the set of examples in (5). Many phenomena from this class are challenging for current semantic accounts of reconstruction.

- (5) a. [Which of the books that he₁ asked Ms. Brown₂ for]₃
 did every student₁ ₃ get from her₂ ₃?
 b. * [Which of the books that he₁ asked Ms. Brown₂ for]₃
 did she₂ ₃ give every student₁ ₃?
 c. [Which of the books that he₁ asked her₂ for]₃
 did Ms. Brown₂ ₃ give every student₁ ₃?

A third class of reconstruction effects concerns the interaction of multiple scope-bearing elements. A typical example are quantifier scope ambiguities where the inverse scope reading can be derived by reconstruction of one of the quantifiers. This is illustrated in (6), where the raised DP can take scope below the modal predicate; von Stechow & Heim (2010) compare syntactic and semantic accounts of reconstruction for these cases and Ruys & Winter (2011) give an impression of how extensive and diverse the list of relevant phenomena in this class is.

- (6) [Someone from New York]₁ is likely ₁ to win the lottery

A special group of scope-related phenomena arise with externally-headed relative clause constructions where (parts of) the relative head seem to scope below certain elements within the relative clause. Krifka & Grosu (2007) discuss one type of relative clause with this property, illustrated in (7), and show how a surface interpretation analysis composed of independently motivated parts can derive correct interpretations of these constructions.

- (7) The [gifted mathematician]₁ [that Bill claims to be ₁] should be able to solve this equation

Another type of relative clause that seems to allow for reconstruction of the relative head is exemplified by (8) from Bhatt (2002). The superlative operator in the relative head can scope above or below *John said*. This has been taken as evidence for a syntactic account of reconstruction that allows to interpret a copy of the relative head in any of the positions generated by successive cyclic head raising, indicated by co-indexation in (8).

- (8) The [longest book]₁ [₁ that John said [₁ that Tolstoy wrote ₁]] is *War and Peace*

However, the proposed syntactic analyses are not without problems: They require certain ad-hoc assumptions to get the semantics right and run the danger of overgenerating readings. In particular, Heycock (2005) notes restrictions on the availability of “reconstruction” readings and offers an alternative analysis compatible with principles of surface interpretation.

A fourth class of potential reconstruction effects are cases involving idioms. The basic idea is that, if the chunks of an idiom need to form a syntactic unit when they are handed to the semantics, examples like (9) from Schachter (1973) require syntactic reconstruction.

(9) The [headway]₁ [that we made _1] was satisfactory

In order for this argument to go through, idiom-chunks must not be interpretable in isolation. But this has been questioned for at least certain types of idioms (cf. *idiomatically combining expressions* in Nunberg et al. (1994)).

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