

## Coargumenthood and the Processing of Reflexives

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The sensitivity of the parser to structural constraints on pronoun resolution during sentence comprehension has been widely debated [1, 4, 6, 7]. Principle A of binding theory [2] predicts that anaphors must be bound within their local domain, such that the reflexive in (i) must refer to ‘the soldier’ and not any other referent in the discourse. One proposal [6] has been that binding theory accessible antecedents (e.g. the soldier) are considered as antecedents of a reflexive at a point in time before inaccessible ones (e.g. Jonathan/Jennifer). However, while this defeasible filter hypothesis was proposed to account for the processing of reflexives in contexts such as (i), where the reflexive and antecedent are coarguments of the same predicate, it is unclear whether it also applies to reflexive-antecedent relations in non-coargument contexts. Such contexts include picture noun phrases (PNPs) and possessed picture noun phrases (PPNPs), as in (ii/iii), and it has recently been claimed that inaccessible antecedents can have early effects on processing in such contexts [3, 5].

We examined the processing of reflexives in these different syntactic contexts in three experiments in each of which 28 different native English speakers read 32 critical and 64 filler texts while their eye-movements were monitored. Critical texts contained one accessible and one inaccessible antecedent, and gender congruence (match vs. mismatch) between the reflexive and both antecedents was manipulated in a 2x2 design. Congruence between the reflexive and inaccessible antecedent used proper names (Jonathan/Jennifer) and pre-tested gender stereotypes for the accessible antecedent (the soldier... himself/herself). Experiment 1 tested coargument reflexives (i), while Experiments 2 and 3 tested PNP and PNP environments (ii and iii).

Results from each experiment indicated the same relative time-course of antecedent effects, in that comparatively earlier reading time measures were longer when the accessible antecedent mismatched the stereotypical gender of the reflexive compared to when they matched, while inaccessible antecedent effects were in comparison delayed. However, whereas stereotypical gender mismatches incurred reliably longer regression path times at the reflexive in (i) and (iii), this accessible antecedent effect was delayed until the spillover region, and during rereading of the reflexive, in (ii). Between-experiment analyses indicated that these interactions between the accessible antecedent and syntactic context were reliable.

These data extend previous findings that binding theory accessible antecedents only are initially considered as antecedents of a reflexive during early processing stages [6]. The between-experiment analyses indicate rapid binding between a reflexive and local subject in coargument contexts. The antecedent search in PNP but not PNP contexts appears to be similarly constrained (cf. [3, 5]).

Jonathan/Jennifer was walking through the military barracks...

- (i) He/She heard that the soldier had positioned himself/herself in the middle of the mess hall.
- (ii) He/She heard that the soldier had a picture of himself/herself in the middle of the mess hall.
- (iii) He/She heard about the soldier’s picture of himself/herself in the middle of the mess hall.

## References:

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