

Small Clauses and Sentential *Not*

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It has been pointed out in the literature that sentential *not* cannot occur in the so-called small clauses (cf. Higginbotham (1983) and Hayashi (1988)). For example, the *not*'s in the following sentences cannot be interpreted as sentential but contrastive or emphatic:

- (1) a. He considers her not angry at Bob.
- b. I believe him not a hard-worker.

In Miyagawa (1990) I argue that the category of a small clause is clausal, an IP (cf. Hornstein and Lightfoot (1987) and others). If it is the case, the above examples appear to be problematic because sentential *not* can occur in ordinary clauses. Here I will provide an account for this fact without renouncing the IP analysis of small clauses.

It is clear that sentential *not* has an operator-like property in that it takes scope over a proposition. So it is natural to treat it as a sort of a quantifier, which is also an operator taking scope over a proposition. Quantifiers in the subject position of small clauses cannot scope over the embedded propositions, as in (2), which is cited from Stowell (1987):

- (2) John proved two assumptions false.

To account for this fact, Stowell proposes a scope principle and movement of the head of a small clause at LF. Adopting the essential system of his analysis, we assume that Infl, the head of a small clause, moves to the higher verb at LF, which results in the impossibility of the narrow scope construal of the quantifier in (2). If this is correct, it follows straightforwardly that sentential *not* in a small clause cannot take scope over the small clause because of

movement of the head of the small clause. Thus the *not* in (1) cannot be interpreted as sentential.

The IP analysis can account for another fact about quantifiers. In the following sentence, the quantifier, which is embedded deeply in a small clause, can have the narrow reading:

- (3) John considers Mary angry at someone/everyone.

This fact seems to be contradictory to the fact noted above. The IP analysis, however, can give an account for it by adopting the so-called Internal Subject Hypothesis, which assumes that the subject of a small clause originates in a predicate internal position. Then the S-structure of (3) is (4):

- (4) John considers [_{IP} Mary_i Infl [_{AP} t_i angry at someone/everyone]]

In this construction the AP is a proposition since it consists of a subject and a predicate, and it may be a scope domain of quantifiers. At LF the quantifier can take scope over the AP without violating Stowell's Scope Principle since it is the Infl, but not the head *angry*, that moves to the higher verb. Therefore the LF structure of (4) is (5), when the quantifier has the narrow scope reading:

- (5) John considers+Infl_j [_{IP} Mary_i t_j [_{AP} someone_k [_{AP} t_i angry at t_k]]]

(It is assumed here that a quantifier adjoins to a proposition XP and takes scope over it.) In Stowell's analysis, where it is assumed that a small clause is the maximal projection of its predicate, for example an AP in (4), the fact above cannot be explained. Because the head *angry* moves to the higher position at LF, his analysis predicts incorrectly that *someone/everyone* cannot take scope over the small clause for the same reason as in the case of (2).