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Resultatives and the Alignment of Arguments
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In this joint research, we will examine some phenomena which show that the Larsonian VP-shell structure provides an insightful account for resultative constructions. In what follows, we mainly restrict ourselves to the transitive resultative construction (TRC) with a resultative PP, as exemplified in (1):

(1) John threw the men into a panic.

We assume that (1) has the following structure in accordance with the VP-shell hypothesis, in which the verb threw in its original position (indicated by \( t \)) and the PP into a panic make up a constituent (namely, \( V' \)), which in turn assigns a \( \theta \)-role to the object the men compositionally.

(2) John \( [v_p \ \text{threw}_1 [v_p \ \text{the men}_1 [v' [v_1 \ t_1] [pp \ \text{into a panic}]]]] \)

We do not adopt some other proposals, eg. the small clause (SC) analysis in Kayne [3] and the ternary analysis in Carrier & Randall (C & R) [1], for reasons discussed below. As for the former, we basically accept the argument against it in [1]. See [1], for detailed discussion. In addition, it can be shown that the following examples are not compatible with the SC analysis.

(3) a. I drugged [John and Mary], into a frenzy about themselves.
    b. [Tom and Nancy], thought that I drugged [John and Mary], into a frenzy about themselves.
    c. [Tom and Nancy], wondered [into how much of a frenzy about themselves you had drugged [John and Mary],.

It is a well-known fact that, when a constituent which contains a reflexive is preposed, the reflexive in question may show ambiguity as to which NP it can select as its antecedent. (3c) has this ambiguity, in which the reflexive themselves can corefer either with Tom and Nancy or John and Mary. On the contrary, when the predicate phrase in a small clause is preposed, it does not yield this kind of ambiguity. This fact is exemplified in the following sentences (see Huang [2], for discussion):

(4) a. [John and Mary], thought that I considered [Tom and Nancy], angry about themselves.
b. [John and Mary], wondered [how angry about themselves, I considered [Tom and Nancy].]

Consequently, the fact that the TRC differs from a small clause in binding property suggests that the SC analysis is not consistent with the TRC.

It should be noted that the ternary analysis in (1) may also explain the above fact. Even if so, however, we cannot maintain their proposal since there are some examples for which their theory does not provide an appropriate account. First, the following examples cast doubt on their analysis of the TRC, with respect to $\theta$-role assignment:

(5) a. *Television had thrown the film industry.
    b. Television had thrown the film industry into a panic.

   (cf. John had threw the men.)

In view of the difference in grammaticality between (5a) and (5b), we conclude that the presence of the resultative phrase is crucial for the verb throw to take the NP the film industry as its object. Furthermore, it seems to be plausible to introduce here a mechanism for $\theta$-role assignment parallel to the one with which Larson [4] proposes for the to-dative construction in terms of the VP-shell hypothesis; thus, we assume that the verb and the resultative phrase compositionally assign a $\theta$-role to the object. If throw in (5b) undertakes $\theta$-role assignment independently of into a panic, we predict that this sort of $\theta$-role assignment is possible regardless of the resultative phrase, contrary to the fact, as shown in (5a). C & R’s theory fails to account for this fact, however, since they assume the following structure for the mechanism of $\theta$-role assignment in the TRC, in which a verb and a resultative phrase assign their $\theta$-roles independently:

(6)  

Secondly and more definitively, we take up the facts concerning scope interaction between two adverbs, which turn out to provide further support for our analysis. Observe the following paradigms, reminiscent of Pesetsky’s [5] argument:

(7) a. John threw the men into a panic intentionally twice.  intentional < twice
    b. John threw the men into a panic twice intentionally.
(8) a. John threw the men twice intentionally into a panic. twice > intentionally
b. John threw the men intentionally twice into a panic.  intentionally > twice

As shown in these examples, when two adverbs occur on the right of the resultative phrase as in (7), adverb on the right takes wide scope over one on the left, while the opposite scope relation is observed when they occur on the left of the resultative phrase as in (8). We assume the structures in (9a) and (9b) for (7) and (8), respectively, making crucial use of the VP-shell:

(9) a. John $\{v_p \text{ threw } \{v_p \text{ the men } \{v \text{ into a panic } \{v \text{ Adv}_1 \{v \text{ Adv}_2 \{v \text{ t } \} \} \} \} \} \}

b. John $\{v_p \text{ threw } \{v_p \text{ the men } \{v \text{ Adv}_1 \{v \text{ Adv}_2 \{v \text{ t } \} \} \} \} \}

These facts of scope relation suggest that our analysis is on the right track: following the assumption that c-command determines scope relations, our analysis correctly predicts that the outer one of the two adverbs (i.e. Adv$_2$ in (9a) and Adv$_1$ in (9b)) takes wide scope over the other. C & R's ternary analysis, however, cannot provide an appropriate means to account for the scopal fact in (8), even though their analysis is compatible with the fact given in (7). Specifically, it is totally uncertain where the adverbs in question should be located in the phrase structure given in their analysis. This in turn provides no basis to account for the scopal fact.

So far, we have looked over some evidence which shows our approach is plausible. For lack of space, we cannot deal with cross-linguistic facts which may also confirm our conclusion. As for this matter, let us briefly refer to Neeleman & Weerman [5] and Takezawa [7], among others. The former points out that in Dutch a verb and a resultative phrase, making up a constituent, may undergo some syntactic operation, and the latter deals with the related issues in Japanese which, with further elaboration, lead us to a similar conclusion.

REFERENCES
