Relativizing Time Arguments

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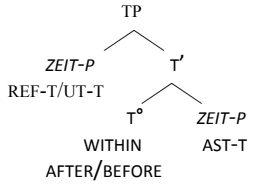
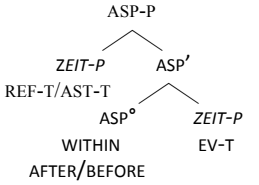
Demirdache & Uribe-Etxebarria (1997, 2000, 2007) argue for a model of temporal interpretation where tenses, aspects and time adverbs are uniformly analyzed as dyadic predicates of spatiotemporal ordering taking time-denoting arguments, projected in the syntax as *Zeit*-phrases (in the sense of Stowell 1993).

On this proposal, tense, aspect and time adverbs are assigned *isomorphic* structural representations. The heads T°, ASP° and P° in (1) each establish ordering relations between their (respective) external and internal time-denoting arguments.

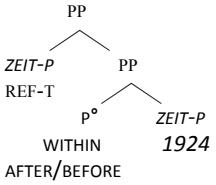
1a. *Syntax of tense*



b. *Syntax of aspect*



c. *Syntax of time adverbs*



The null assumption is that time intervals projected into the syntax as either covert arguments of tenses and aspects, or as overt arguments of temporal prepositions can, just as any regular DP/QP:

i. Enter into scopal or anaphoric dependencies relations with other time arguments
ii. Be restrictively modified

We investigate here the (crosslinguistic) temporal syntax of clausal time adverbs, such as (2). The temporal adjunct clauses in (2) are PPs headed by a spatiotemporal predicate (*before*/*after* or a null spatiotemporal predicate of central coincidence in the case of the *when* clause). These PPs serve to *restrict the reference* of the event-time of the matrix clause, itself projected in the syntax as a temporal DP (ZEIT-P), by establishing an ordering relation between the event-time of the matrix clause (the ZEIT-P denoting the time of Zoey's departure) and the event-time of the adjunct clause (the ZEIT-P denoting the time of Maddi's arrival).

2a. Zoey left before / after / when Maddi arrived
b. [$_{PP}$ [$_{P°}$ before/after] [$_{ZEIT\text{-}P}$ the time [$_{CP}$ $\lambda_{EV\text{-}T}$ [$_{TP}$ UT-T [$_{T°}$ AFTER] [$_{ASP\text{-}P}$ [$_{VP}$ $\boldsymbol{t}_{EV\text{-}T}$ [$_{VP}$ Maddi [$_{VP}$ arrive]]]

We argue that restrictive modification of the matrix EV-T in (2a) is established via ***temporal relativization***, as illustrated in (2b). Roughly, the EV-T of the adjunct clause in (2b) is predicated of the (internal) time argument selected by the temporal connective. Crucially, predication is achieved via *movement* of either a null operator (on a *matching* analysis of temporal relative clauses), a null time-argument (on a *raising*, *head internal* analysis of temporal relatives, see Hulsey & Sauerland 2006), or an overt time argument (*when* in (2a)).

The classic argument for movement in Temporal Adjunct Clauses (TACs) are the Weak island (subjacency) effects discussed by Geis (1970) and Larson (1990). We provide here novel arguments for movement (on our proposal, of a time argument) in TACs: Strong island (CED) effects and (strong) crossover effects. We also provide arguments from scopal interactions and Antecedent Contained Deletion for the proposal that TACs are relativized temporal DPs/ZEIT-Ps that (as such) can undergo phrasal movement to higher scope positions, and for distinguishing a raising, head internal *vs.* matching analysis of temporal relative clauses.