Parametric Variation and Scrambling in English

In this paper, I argue that English has „silent" scrambling. The argument is based on the proper analysis of the syntax of event-related adverbs. Larson (1988), Stroik (1990) and Pesetsky (1995) have argued that the standard approach to the syntax of adverbs in terms of right-adjunction to VP (or IP) is mistaken since it fails to account for basic c-command relations between them and the arguments of the verb. Typical c-command diagnostics, as NPI-licensing (1a) and quantifier bound pronouns (1b), indicate that postverbal adjuncts are in the c-command domain of postverbal complements. Thus, Larson proposed that event-related adverb(ial)s are part of a (multi-) layered VP-shell as indicated in (2).

The Larsonian approach, however, fails to account for standard constituency tests as VP-fronting. The latter process indicates, contrary to the state of affairs in (2), that the verb and the direct object form a constituent which excludes adjuncts (3b). On the other hand, constituents of Larsonian shells motivated by binding do not permit fronting (3c). Seemingly unmotivated extra movement of adjuncts (out of VP) has to be assumed to derive the facts in (3).

Another problem with the Larsonian approach concerns the anti-c-command requirement in the licensing of parasitic gaps: the trace of the licensing operator may not c-comand the parasitic gap. This derives the descriptive generalisation that objects can license parasitic gaps in adjunct clauses, while subjects fail to do so. Since in the Larsonian approach, both subjects and objects c-command adjuncts, it is unclear how to account for this generalisation.

The Larsonian approach also raises questions about the proper interpretation of event related adverbs. In a Larsonian shell, temporal adverbs are deeper embedded than manner adverbs, as is shown in (4). From a semantic point of view, manner adverbs specify an aspect of only a part of the event, namely the process component of the event, while temporal adverbs situate the entire event with respect to the speaking time. Thus, standard assumptions about the interaction of syntactic structure and semantic interpretation predict that temporal adverbs should attach to the clause higher, not lower as in the Larsonian approach, than manner adverbs.

Finally, it is not clear how to account for the crosslinguistic variation in the positioning of event-related adverbs in the Larsonian approach. In German, event related adverbs occur preverbally in the order Time>Place>Manner, while in English they occur postverbally in the order Manner>Place>Time. Given the semantic considerations above, it seems that the German order is closer to the universal base than the English order. I propose that manner adverbs are base generated in the VP, while Time and Place adverbs are base-generated above VP. Furthermore, I propose that the English order is derived from the German order via successive cyclic intraposition of verbal projections as indicated in (5). (5) accounts for the constituency facts in (3) as well as for the comparative dimension. To account for the facts in (1), I propose that English has (overt) scrambling in which, contrary to German, the lower copy is spelled-out.

I show with German data that scrambling, being an operation of A-movement, creates new binding positions without giving rise to WCO-effects - as is shown in (6), scrambling may move an object across an adverb/adjunct from which position it can bind an anaphor within the adverb/adjunct. Thus, this analysis is superior to an analysis making use of QR. Then, I show that the assumption of silent scrambling can account for all cases of ACD. There are two types of explanations for ACD resolution that posit covert movement: QR and Case movement (to AgrO). QR-based explanations have problems with ACD involving referential expressions like names and Case movement based explanations have problems with NP-contained ACD (cf. Kennedy 1997, Pesetsky 1998). Names and QPs scramble alike in German and I will show that NP-contained ACD is possible in English in exactly those cases in which scrambling out of NP is possible in German.

Given the option of silent scrambling, the question arises whether the standard approach to the syntax of adverbs in English in terms of right-adjunction would be simpler. I will argue that the

approach in terms of intraposition is superior to the standard account since it can account in a straightforward way for a peculiar property of adverbs in VO-languages. Adjuncts that can occur between the subject and the VP in VO-languages are subject to restrictions absent in OV-languages. As is illustrated in (7), the head of the adjunct must not have material to the right.

I propose that these differences between English and German are the result of differing instantiations of the two macroparameters which specify the space of crosslinguistic variation:

A) Each feature may be checked by either XP-movement or X^0-movement

B) In a checking operation either the higher or the lower copy may be spelled out

With respect to A), I assume based on modified Attract Closest that XP-movement is the unmarked option in feature checking. X^0-movement is dependent on special requirements of the attracting head, for instance, on the attracting head being an affix.

With respect to B), I assume that in checking uninterpretable features, the higher copy must be spelled out, since the lower copy with the unchecked uninterpretable feature requires deletion to ensure convergence. In checking an interpretable feature either copy may be spelled out unless the attracting head has a positional feature. A positional feature requires that the attractee is spelled out in the checking domain of the attractor (cf. Pesetsky 1998).

Parameter A) is relevant for the positioning of adverbs. When the English verb undergoes licensing movement, possibly, in order to license event-related adverbs (which are interpreted as predicates on the event variable of the verb) it does so by XP-movement (the unmarked option) which will result in inverted orders. When the German verb undergoes licensing movement, it does so by X^0-movement, followed by remnant XP-preposing (cf. Hinterhölzl 1998, Haegeman 1999), which leaves preexisting orders unchanged.

Paramenter B) is relevant for the instantiation of scrambling. In English, contrary to German, the lower copy is spelled out since this analysis accounts in a simpler fashion for the fact that the basic word order is VO. An analysis of English in which the higher copy were to be spelled out is more complex since it requires the additional assumption of V-to-I (for which there is no evidence). I assume that these choices are fixed by an optimizing learning algorithm in the process of language acquisition.

(1) a. John saw no student in any classroom
b. John visited everyone on his birthday

(2) $[_{VP}$ SU V $[_{VP}$ DO t_V Adjunct]]]

(3) John promised that he would visit them in Vienna on Friday, and ...
a. visit them in Vienna, he did on Friday
b. visit them, he did in Vienna on Friday
c.* them in Vienna on Friday, he visited

(4) $[_{VP}$ John wrote $[_{VP}$ the letter t_V $[_{VP}$ carefully t_V today]]]

(5) a. John visited them in Vienna on Friday
b. $[_{IP}$ $John_i$ [on Friday [in Vienna $[_{VP}$ t_i visited them]]]]
c. $[_{IP}$ John [[[visited them] in Vienna] on Friday]]

(6) a.* weil die Maria an $seinem_i$ Geburtstag $jeden_i$ Freund besuchte
since the Maria on his birhtday every friend visited
b. weil die Maria $jeden_i$ Freund an $seinem_i$ Geburtstag besuchte
since the Maria every friend on his birthday visited

(7) a. John (more) often (* than Peter) read the book
b. Hans hat öfter (als der Peter) das Buch gelesen