Covert Across-The-Board Movement revisited Marie-Christine Meyer and Uli Sauerland (ZAS)

The simultaneous movement of two elements out of a coordinated structure (so-called ATBmovement; Williams 1978) is usually assumed to happen overtly, and never at LF (Bošković & Franks 2000). In contrast to the syntactic arguments that have been put forward against LF-ATB, covert ATB may turn out to be indispensable from a semantic point of view. Thus, the majority of analyses of Free Choice disjunction rely on a narrow-scope LF to derive the FC reading (s. Meyer 2016). Thus, while the FC reading is available in (1-a), it disappears in (1-b), where *either* indicates widest scope for disjunction, as shown (Fox 2007, Larson 1985):

- (1) a. Mary may have ice-cream or cake (\checkmark FC, \checkmark narrow-scope LF: $\diamond \gg \lor$)
 - b. Either Mary may have ice-cream or cake (*FC, only available LF: $\lor \gg \diamondsuit$)

Further arguments that FC has to be derived from a narrow scope LF $\diamond \gg \lor$ are given in Fox (2007); for instance, the scalar implicature that Mary may not have two desserts for (1) can only be derived from a narrow-scope structure (i.e., $\neg(\diamond [A \text{ and } B])$, but not $\neg(\diamond A \text{ and } \diamond B)$. Importantly, however, a narrow-scope LF for FC and pseudo-FC sentences like (2) (s. Zimmermann 2000, Simons 2005, Alonso-Ovalle 2006; parallel for epistemic modals) requires a mechanism like covert ATB, as claimed by Simons' proposal (3):

- (2)a. John may sing or he may dance
basic meaning: \diamond sing $\lor \diamond$ dance
FC reading: \diamond sing $\land \diamond$ danceb. John must sing or he must dance
basic: \Box sing $\lor \Box$ dance
pseudo-FC: \Box (sing \lor dance)& $\neg\Box$ sing & $\neg\Box$ dance
- (3) Simons' Covert ATB: John \square_{must} [John must sing or he must dance]

We argue that Simons' proposal, as it stands, over-generates wide-scope readings, and establish generalization (4):

(4) **Finite Modal Generalization (FMG)**: The only elements that can scope out of a coordination when occurring in both con-juncts are finite modals

Evidence for FMG 1 A surface wide-scope disjunction [*Mod* A or *Mod* B] is predicted to lack a FC reading if *Mod* is a non-auxiliary modal expression in English; this prediction is borne out (cf. (2)-a):

- (5) a. It's ok for John to sing or it's ok for John to dance (*FC, \checkmark Uncertainty)
 - b. John is allowed to sing or he is allowed to dance (*FC, \checkmark Uncertainty)

Looking at sentences that are parallel to Simons' (2)-b, we see again that the reading derived from covert ATB (LF: \Box [A or B]) disappears, in line with the FMG:

a. John is required to sing or he is required to dance (* pseudo-FC, ✓ Uncertainty)
b. John has an obligation to sing or he has an obligation to dance (ibid.)

Evidence for FMG 2 As predicted by the FMG, negation can never scope above a coordination if it occurs in both disjuncts. For instance, (7) can have the implicature that it's not the case that John didn't sing and didn't dance ($\sim \neg(\neg sing \land \neg dance) = (sing \lor dance)$). The only reading that is compatible with this implicature corresponds to a $\lor \gg \neg$ LF; the LF corresponding to covert ATB of negation ($\neg \gg \lor -$ John neither sang, nor danced) is not attested:

(7) John didn't sing or he didn't dance (* \neg [sing or dance]), \checkmark [\neg sing or \neg dance])

As expected, the FMG holds true also when a modal co-occurs with negation:

(8) Mary cannot sing or she cannot dance (* $\neg \diamondsuit$ [sing or dance], $\checkmark [\neg \diamondsuit$ sing or $\neg \diamondsuit$ dance])

Evidence for FMG 3 German has modal verbs that are not auxiliaries; the FMG predicts that when these occur in non-finite form, they cannot obtain wide-scope over a disjunction via covert ATB. This prediction is also borne out:

(9) Hans soll singen müssen oder tanzen müssen Hans REP3SG sing-INF must-INF or dance-INF must-INF *Reportedly, Hans must sing or he must dance** pseudo-FC reading: REP □ [sing or dance]&¬□ sing&¬□dance;
✓ uncertainty reading: REPORT [□ sing or □ dance]

Accounting for the FMG Hulsey (2006) argues that gapped modals as in (10-a) give rise to scope-ambiguities; the parallel construction with negation doesn't exhibit the same ambiguity (Johnson 2014):

(10) a. The Sox must beat the Yankees, or the Angels lose to the Mariners $(\lor \gg \Box, \Box \gg \lor)$ b. Kim didn't play bingo, and Sandy sit at home all evening $(\neg \gg \lor, *\lor \gg \neg)$

We propose that the $\Box \gg \lor$ reading of (10-a) is derived from overt ATB of the modal, building on proposals by Lechner (2006) and Iatridou & Zeijlstra (2013), who provide independent evidence for the movement of finite modals. Thus, we argue for the null hypothesis that the independently attested movement of *must*, *may* etc. is not subject to further restrictions which would prevent (c)overt ATB movement. Under this proposal non-finite modal expressions as in (5), (6) are *ipso facto* excluded from movement, accounting for the missing FC readings with *it is ok, allowed, required* etc. shown above. What remains to be accounted for is the possibility for the modal to be pronounced again in the second disjunct (indicated here by underlining):

(11) John \diamond_{may} [John may sing or he may dance]

(11) represents our analysis of seemingly wide-scope FC disjunctions like (2) (movement of the subject is forced by independent conditions on linearization). In other words, seemingly wide-scope FC as in (2) is analyzed as (11) where the ATB-moved modal is pronounced again in the second disjunct. Importantly, this analysis seems to violate (12):

(12) If an item is pronounced in one position, it must not be pronounced in another position (e.g., Johnson 2012)

We maintain (12) and argue that pronouncing the modal in the second disjunct is licensed via Richards' (1998) Principle of Minimal Compliance (PMC), which translates as follows for our purposes :

(13) **Principle of Minimal Compliance** For any dependency D that obeys (12), any elements that are relevant for determining whether D obeys (12) can be ignored when checking whether another dependency D' obeys (12)

For (11) it follows that once the head and tail of the dependency in the first disjunct is checked for (12) (and found to obey it), the head *may* can be ignored when checking whether *may* in the second disjunct obeys (12), thus licensing its pronunciation.

Our proposal makes further testable predictions: In sentences with three coordinated clauses, the pronunciation of the modal is predicted to be optionally licensed in either the 2nd or the 3rd disjunct; this is what we observe (similarly with *must*):

- (14) a. John may sing or Bill whistle or they may dance
 - b. John may sing or he may whistle or dance

In sum we offer new evidence for, and give substance to, the controversial assumption that covert ATB-movement exists, and propose an explicit account of (seemingly) wide-scope FC disjunctions based on independently needed syntactic mechanisms.

Selected References Bošković & Franks (2000) *Syntax* 3, 107-128. den Dikken (2006) *NLLT* 24. Meyer (2016) *Free Choice Disjunction* Ms., Hebrew U. Fox (2007) *Free Choice and the Theory of Scalar Implicature*, in Sauerland&Stateva

(eds.). Simons (2005) *NLS* 13(3). Hulsey (2006) *NELS* 37. Johnson (2014) *Gapping* Ms., UMass Amherst. Lechner (2006) *An interpretive effect of head movement*, in Frascarelli, M. (ed.). Iatridou & Zeijlstra (2013) *Ling Inquiry* 44(4). Richards (1998) *LI* 29(4). Johnson (2012) *Lingua* 122(6).