Modal Repair

Investigating two environments where the addition of a modal repairs an otherwise ungrammatical English sentence (epistemic adverbs in I-to-C environments, and negative intervention effects) leads us to conclude that the restriction of a modal can apply to a quantifier from another lexical item, and that the original ungrammaticality was due not to a syntactic movement constraint, but to a problem in the interpretive component.

1. Epistemic adverbs. It has been previously noted (Katz & Postal 1964, Ross 1967, Jackendoff 1972, Bellert 1977, among others) that the epistemic adverbs probably and possibly are ungrammatical in questions (1). Furthermore, Jackendoff (1972) points out that the correct characterization of the environment for ungrammaticality is not questions per se, but environments involving I-to-C movement more generally (2-3). McDowell (1987) proposes that epistemic adverbs are operators that must raise to C at LF, thus competing with other obligatory I-to-C movement. However, the data that I present in (4-5) are problematic for this hypothesis. The fact that the addition of a modal repairs the ungrammaticality of (1) and (3) shows that I-to-C movement does not necessarily compete with epistemic adverbs. Rather, epistemic adverbs may occur in an I-to-C clause, but only if the element moving to C is a modal.

The solution offered here is similar to McDowell’s in that epistemic adverbs need to establish a relationship with C, but in my proposal it is not a movement relationship. I propose instead that epistemic adverbs are quantifiers that do not come with their own restriction. Their restriction must be provided either by a null restriction operator (EPISTEMIC) in C (6), or by the restriction that comes with a syntactic modal. A non-modal I-to-C structure such as (7) is ruled out, either because the quantificational adverb lacks a restriction (7a), because the structure lacks the question operator necessary to trigger I-to-C movement (7b), or because of a stipulation that two null operators (EPISTEMIC and question OP) cannot both be generated in C (7c). (8) shows a modal I-to-C structure, where the adverb gets its restriction from the modal in C. To enable the modal to restrict the adverb’s quantifier rather than its own quantifier, I further propose that (most) modals in English are lexically ambiguous between quantificational and non-quantificational expressions, the latter denoting only a restriction for quantification. It is the non-quantificational modals that participate in modal repair.

2. Intervention effects. Beck (1996) noticed that in German, wh-in-situ and the in situ portion of certain “split” constructions are ungrammatical in the scope of quantifiers, including negation (German data not shown). She claims that the in situ expressions need to raise at LF, and that LF movement cannot cross a quantifier. Pesetsky (2000) points out English examples of Beck’s intervention effects, as in (9-10). He offers an alternative analysis, in which wh-in-situ expressions undergo overt feature movement (without pied-piping), resulting in a quantifier separated from its restriction at LF. This separation, according to Pesetsky, is mediated by a locality constraint: a “scope-bearing element” (such as negation) may not intervene between the quantifier and its restriction. However, the data introduced in (11) are problematic for both Pesetsky and Beck’s accounts. Again, a modal added to the sentences in (10) repairs the ungrammaticality. Therefore it cannot be correct to tie the ungrammaticality of (10) exclusively to the movement (whether overt or covert) of the in situ element across negation. As shown in (11), this movement must in fact be allowed if it crosses a modal as well as negation.

My proposal again appeals to the ability of modals to restrict a quantifier in another lexical item, but in this case the quantifier in question is the existential closure associated with Negation. Assuming Pesetsky’s (2000) LF structure for (10) is essentially correct (i.e., the wh-operator is split from its restriction at LF), the ungrammaticality here results because the in situ restriction applies to existential closure. This causes existential closure to bind the in situ wh-variable, and leaves the wh-operator unrestricted and quantifying vacuously (schematized in 12). A non-quantificational version of a modal can repair this situation (11) by restricting existential closure to world-quantification, freeing up the wh-variable for binding from above Negation (schematized in 13).

Conclusion: This analysis of modal repair indicates that the ungrammaticality in the two phenomena discussed above is not in fact due to illicit syntactic movement as has been previously assumed. Rather, it arises from the (presumably semantic) requirement that all quantifiers be restricted and bind variables, and from a locality requirement on the application of a restriction to a quantifier.
References