Anatomy of Tough Movement
keywords: tough construction, late merger, copy theory

A Puzzle: In the tough construction (TC), expletive there cannot be a TC subject, as in (1)a. Under the assumption that the TC subject moves from the infinitival clause to the matrix clause, this fact follows straightforwardly: there cannot satisfy the Case assignment requirement of the matrix T because it has already received Case from the v, as illustrated in (1)b (see e.g., Hartman to appear and Hicks 2009 for other arguments for a movement analysis). The question is why the same problem does not arise in cases where non-expletive DPs are TC subjects, as in (2).

(1) a. *There is hard to believe to have been a crime committed. (Chomsky 1981:309)
    b. *[T[Case] [there1 [hard to [v[Case] believe [there1 to have been a crime committed]]]]]

(2) The man is tough to please.

I claim that what lies behind the contrast between (1)a and (2) is that the movement chain of the subject is formed by using an independently motivated process of late merger proposed by Takahashi and Hulsey (T&H) (2009) in (2), but not in (1)a. I also argue that this analysis captures otherwise puzzling properties of tough movement.

Proposal: T&H argue that the restrictor of a determiner (D) can be late merged with the D (wholesale late merger (WLM)). Capitalizing on WLM, I claim that in the derivation postulated for (2), the Case assignment requirement of the v in the infinitival clause is satisfied by the D the, which is base-generated in the complement of V, as in (3)a, and that of the matrix T is satisfied by the noun (N) man, which is merged with the D in a position that is structurally higher than the v, but lower than the matrix T (e.g., in the AP-adjoined position), as in (3)b (see T&H 2009 for arguments for the idea that both Ds and Ns need Case). As shown in (3)c, the lower copy of the is converted into an object that receives the same semantic interpretation as an individual variable by Fox’s (2002) Trace Conversion in (4).

(3) a. [v[Case] [please [the]]]
    b. [T[Case] [(the [man])1 [tough [PRO to [v[Case] [please [the1]]]]]]]
    c. [[(the [man]) λx. is tough to please [the x]]

(4) Trace Conversion (adapted from Fox 2002:67)

Variable Insertion: Det (Pred) → Det [(Pred) λy(y = x)]
Determiner Replacement: Det [(Pred) λy(y = x)] → the [(Pred) λy(y = x)]

I argue that WLM is not possible in (1) because there is a D and it does not involve an NP
complement as its restrictor (see Chomsky 1995 for related idea). In contrast to there, pronouns and proper names can be TC subjects. I suggest that this is because they are indeed DPs that consist of a D and an N (see Elbourne 2005 for relevant discussion).

(Anti-)reconstruction Effects: Movement of a TC subject shows (anti-)reconstruction effects, as in (5), which appears to indicate that it sometimes leaves behind a copy and sometimes a trace. The proposed analysis can explain this property under the copy theory of movement. In (5)b, the restrictor of the D is merged with the D in a position above the pronoun, as in (6), and hence Condition C is not violated. In (5)a, the restrictor of the D is merged with the D in some position below the quantifier.

(5) a. The argument that hisi student cheated is difficult for [every professor], to dispute. 
    b. The argument that Johni is incompetent is difficult for himi to dispute. 
       (cf., *It is difficult for him, to dispute the argument that Johni is incompetent.)

(6) [[the [argument that Johni is incompetent]]i [difficult for himi to dispute [the]]i]

Conclusion and Further Consequence: I claimed that the formation of a movement chain of the TC subject must involve WLM. As a further consequence, I suggest that the applicability of WLM plays an essential role in explaining the fact that movement of the TC subject shows both A- and A'-movement properties: it does not show a WCO effect, as in (7)a, but it can license a parasitic gap, as in (7)b. I argue that together with Ruys’ (2000) and Sauerland’s (1998, 2004) analyses of WCO, the proposed analysis can account for this property of tough movement without making direct reference to the A/A'-distinction.

(7) a. [No man]i is easy (for me) to imagine hisi mother liking. 
    b. The book is hard to buy without reading pg. 
       (cf., *It is difficult for him, to dispute the argument that Johni is incompetent.)

Selected References