

Intervention in *Tough* Constructions

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This talk presents evidence that *tough* constructions (1b) display “defective intervention” effects in the sense of Chomsky 2000 (2). Specifically, I show that an intervening experiencer adjoined to the matrix adjective blocks movement to the subject position of the higher clause. This effect provides a strong argument in favor of analyses of *tough* constructions in which the matrix subject is derived by A-movement. The effect is mysterious under analyses in which the matrix subject is base-generated.

Evidence for Intervention Effects: It has often been noted that the *for*-DP sequence (the “*for*-phrase”) in the English *tough* paradigm is potentially ambiguous between a PP experiencer of the matrix adjective (3a,b) and a complementizer-subject sequence in the embedded clause (3c,d). To demonstrate that *tough* movement is blocked when it would cross an intervening experiencer in the matrix clause, we examine cases that disambiguate the *tough* paradigm in favor of the first structure, and show that in such cases the non-movement (expletive) construction is available, but the *tough* construction is not.

The first piece of evidence comes from English. The aforementioned ambiguity arises only because the preposition used to introduce experiencers is homophonous with the complementizer *for*. Less frequently, however, the preposition *to* may be used to introduce experiencers. Since *to* is not homophonous with a complementizer, the sequence *to*-DP is unambiguously a PP, and the experiencer contained in it should block *tough* movement. This is indeed the case: *to*-phrases are compatible with the expletive construction (4a,5a,6a,7a) but incompatible with the movement construction (4b,5b,6b,7b).

The same effect is observed when we turn to languages in which the preposition used to introduce experiencers is never homophonous with a complementizer. For instance, in the French (8,9) and Italian (10,11) examples, the *pour/per*-DP sequences are unambiguously PPs, so we predict that the DPs they contain should act as interveners to *tough*-movement. This prediction is confirmed by the data, which show that the experiencer is available in the expletive construction, but not the *tough* construction. As expected, when the PP is adjoined higher than the landing site of *tough*-movement, the DP experiencer it contains is too high to act as an intervener, and result is acceptable (12).

Quantifiers within the *for*-phrase provide another diagnostic. If the *for*-phrase can be a PP adjoined to the matrix adjective, we expect a quantifier contained in it to be able to scope above the matrix adjective (13). Turning to the *tough* paradigm, we see that in the expletive construction, a quantifier within the *for*-phrase takes either wide or narrow scope, suggesting that both the [_{PP} *for* QP] and the [_{CP} *for* QP...] options are available (14a). In the *tough*-construction, a quantifier within the *for*-phrase does not take wide scope, suggesting that only the [_{CP} *for* QP...] option is available (14b).

Finally, I address the issue of multiple *for*-phrases in the *tough* paradigm. When there are two *for*-phrases, one must be analyzed as a PP, and this PP should block *tough*-movement. We thus predict that the movement construction, but not the expletive construction, should be incompatible with two *for*-phrases. This is in fact the case (15), as noted by Chomsky (1973).

Consequences: movement to Spec,TP is implicated. The existence of intervention effects narrows the set of plausible analyses of *tough* constructions. Since the explanation for defective intervention relies on movement, the effect is accounted for by analyses that derive the matrix subject by movement, but is unexpected on analyses that base-generate the matrix subject in the highest clause (e.g., the null operator analysis of Chomsky (1977, 1981) or the object deletion analyses of Lasnik & Fiengo (1974) and Akmajian (1972)). Furthermore, among movement analyses, the data favor those that posit *two* movement steps (A-bar then A; Brody 1993, Hornstein 2000, Hicks 2003) over those that posit one (Rosenbaum 1967, Postal 1971). The two-step analyses are supported by a revealing contrast in long-distance *tough* movement: only experiencers in the highest clause induce intervention effects (16); experiencers in intermediate clauses do not (17). This suggests that the movement responsible for the intervention effect (A-mvt) crosses only the highest clause. I show that these data follow from a development Hicks’ (2003) analysis that retains his circumvention of the improper movement ban, but reanalyzes the *for*-phrase as a C+subject sequence in the lower clause (18). A complex phrase containing both *John* and a null element, merged as the object in the embedded clause, moves to Spec,CP. Next, *John* then raises alone to the higher Spec,TP. The initial move to Spec,CP rules out embedded-clause arguments as interveners, since they are below the goal probed by the matrix T, unlike experiencers of the matrix adjective (19).

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Examples

- (1) a. It is tough (for Mary) to please John. (“expletive construction”)
 b. John is tough (for Mary) to please. (“*tough* construction”)
- (2) Defective Intervention Constraint (Chomsky 2000):
 $\alpha > \beta > \gamma$ *AGREE ($\alpha \gamma$), α is a probe and β is a matching goal, and β is inactive due to a prior Agree with some other probe.
- (3) a. It is [_{AP} easy [_{PP} for Mary_i][PRO_i to talk to John] b. John is [_{AP} easy [_{PP} for Mary_i][PRO_i to talk to _]
 c. It is easy [_{CP} for Mary to talk to John] d. John is easy [_{CP} for Mary to talk to ___]
- (4) a. It is important (to Mary) to avoid cholesterol. b. Cholesterol is important (*to Mary) to avoid.
- (5) a. It is enjoyable (to John) eat strawberries. b. Strawberries are enjoyable (*to John) to eat.
- (6) a. It is inspiring (to the women) watch old films. b. Old films are inspiring (*to the women) to watch
- (7) a. It is annoying (to those boys) to talk to John. b. John is annoying (*to those boys) to talk to.
- (8) a. Il est difficile (pour les chiens) de voir cette couleur.
 It is difficult for the dogs DE see this color
 b. Cette couleur est difficile (*pour les chiens) a voir.
- (9) a. Il est difficile (pour les estudiants) de comprendre le problem.
 b. Le problem est difficile (*pour les etudiants) a comprendre.
- (10) a. È difficile (per i cani) vedere questi colori.
 b. Questi colori sono difficili (*per i cani) da vedere.
- (11) a. È impossibile (per gli studenti) capire questi problemi.
 is impossible for the students understand these problems.
 b. Questi problemi sono impossibili (*per gli studenti) da capire.
- (12) a. (Per i cani), questi colori sono difficili da vedere, (per i cani).
 b. (Pour les chiens), cette couleur est difficile a voir, (pour les chiens).
- (13) a. It was [_{AP} easy [_{PP} for everyone]] to solve the puzzle.
 b. To arrive on time is [_{AP} important [_{PP} for everyone]].
- (14) a. It is impossible for everyone to fail this test. Imposs. > ∇ ∇ > Imposs.
 b. This test is impossible for everyone to fail. Imposs. > ∇ * ∇ > Imposs.
- (15) a. It is [_{AP} convenient [_{PP} for John] [_{CP} for Mary to bring the wine]].
 b. *The wine is [_{AP} convenient [_{PP} for John] [_{CP} for Mary to bring ___]].
- (16) a. It is important to Mary for it to be easy to avoid cholesterol.
 b. *Cholesterol is important to Mary for it to be easy to avoid ____.
 (...because she’s on a diet and doesn’t want any temptation.)
- (17) a. It is impossible for it to be important to Mary to avoid cholesterol.
 b. Cholesterol is impossible for it to be important to Mary to avoid ____.
 (...because she has no risk of heart disease, and is looking to gain weight.)
- (18) [_{TP} John_j would be [_{AP} tough [_{CP} [_{DP} t_j e]_k for [_{TP} Mary to kiss t_k]]]]
- (19) [_{TP} John_j would be [_{AP} tough [_{PP} for Susan] [_{CP} [_{DP} t_j e]_k for [_{TP} Mary to kiss t_k]]]]

REFERENCES: **Akmajian, A. 1972.** “Getting Tough”. *LI* 3: 373-377. **Brody, M. 1993.** “θ-Theory and Arguments”. *LI* 24.1:1-23. **Chomsky, N. 1977.** “On wh-movement.” In *Formal syntax*, ed. P. Culicover et al., 77–132. New York: Academic Press. **Chomsky, N. 1981.** Lectures on government and binding. Dordrecht: Foris. **Chomsky, N. 2000.** “Minimalist inquiries: the framework”. *Step by step. Essays on minimalist syntax in honor of Howard Lasnik*, ed. by R. Martin et al., 89-155. Cambridge: MIT Press. **Hicks, G. 2003.** “So Easy to Look At, So Hard to Define”: Tough movement in the Minimalist framework. University of York MA thesis. **Hornstein, N. 2001** *Move!: a minimalist theory of construal*. Oxford: Blackwell. **Lasnik, H. and R. Fiengo. 1974.** “Complement Object Deletion.” *LI* 5:535-572. **Postal, P. M. 1971.** *Cross-Over Phenomena*. New York: Holt, Rinehart and Winston. **Rosenbaum, P. S. 1967.** *The Grammar of English Predicate Complement Constructions*. Cambridge: MIT Press.