## **Heidi Harley -** *University of Arizona* **Tough-movement is even tougher than we thought**

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Since at least the publication of Lasnik and Fiengo 1974, the hypothesis that sentences like (1a) and (1b) are both derived from the same source (1c), one by raising, one by expletive insertion, has been at least implausible, if not always considered falsified outright:

- (1) a. The tenure committee is tough to please.
  - b. It is tough to please the tenure committee.
    - is tough to please the tenure committee.

I'd like to add a nail to the coffin by pointing out that the sentence in (2) *also* demonstrates that *tough*-movement isn't, if the conclusions of Lasnik and Saito 1992:141 about the binding of NP-traces are correct:

(2) How tough to please is the tenure committee?

Lasnik and Saito point out examples first adduced by Kroch and Joshi 1985 which demonstrate that reconstruction-type binding of NP-traces, unlike anaphor binding, is impossible:

- (3) a. \*[how likely  $t_1$  to be a riot]<sub>2</sub> is there<sub>1</sub>  $t_2$ ?
  - a'. Compare: "There is likely to be a riot"
  - b. \*[how likely  $t_1$  to be taken of John] is advantage  $t_2$ ?
  - b'. Compare: "Advantage is likely to be taken of John"

They attribute the ungrammaticality of (3a,b) in contrast to (3a',b') to a violation of the Proper Binding Condition of Fiengo 1977: the traces in the wh-phrases are not properly bound by their antecedents. (They propose that the grammaticality of "How likely to win is John?" in fact is because *likely*-infinitive structures have two potential realizations: one raising, and one control. The sentences in (3a,b) exhibit the raising structure, controlled for by the expletive (3a) and idiom (3b); the grammatical "How likely to win is John" has the control structure.)

The argument should then be clear: if (2) has the structure in (4a), the NP-trace of the putatively *tough*-moved subject will not be properly bound, and (2) should be ungrammatical. If, on the other hand, (2) has the structure in (4b), no binding

problems will ensue, as other types of anaphora are not subject to the Proper Binding Condition.

- (4) a. [How tough to please  $t_1$ ]<sub>2</sub> is the tenure committee  $t_1$ ?
  - b. [How tough to please  $e_1$ ]<sub>2</sub> is the tenure committee<sub>1</sub>  $t_2$ ?

## **References**

Fiengo, R. (1977). "On Trace Theory," Linguistic Inquiry 8:1, 35-62.

Kroch, A. and A. Joshi (1985), "The Linguistic Relevance of Tree Adjoining Grammar," Department of Computer and Information Science, University of Pennsylvania.

Lasnik, H. and R. Fiengo (1974). "Complement Object Deletion," *Linguistic Inquiry* 5:4, 535-572.

Lasnik, H. and M. Saito (1992). *Move-alpha: Conditions on its Application and Output*, Current Studies in Linguistics 22.