

# Squibs and Discussion

BINDING EFFECTS WITH COVERT  
MOVEMENT

*Philip Branigan*  
*Memorial University of  
Newfoundland*

Recent studies of the effects of covert A-movement on binding relations have tended to support the idea that covert movement—whatever its nature—does not produce any change in the possible binding relations at the LF interface. Only movement of full phrases, visible in the overt syntax, produces binding-theoretic effects. Here I provide evidence from locative inversion in embedded exceptional-Case-marking (ECM) complements that shows that this idea cannot be maintained and that covert movement does affect binding relations.

The core cases for evaluating covert movement effects involve the surprising height effects found in some ECM complement clauses, as discovered by Lasnik and Saito (1991).

- (1) Perry proved [Jill and Tony to have lied] during each other's trials.

In these critical cases the subject of an ECM complement binds an anaphor contained in the matrix clause, which it does not c-command from the [Spec, I] position within the embedded clause. Such binding is impossible when there is no covert movement of the subject, as in finite complement clauses like the one in (2).

- (2) \*Perry proved that [Jill and Tony lied] during each other's trials.

Under the approach taken in Branigan 1992, the binding effect in (2) results from covert movement of the ECM subject to a higher position in the matrix clause. The movement itself is necessary so that the matrix verb can check Case on the subject of the complement clause. In Chomsky's (1995) approach, the formal features of the ECM subject raise to adjoin to the matrix verb, leaving the bulk of the DP in its surface position. In both approaches some part of the subject is raised to a position where it c-commands the bound anaphor, and as a result, a binding configuration is established that is illegitimate prior to some type of movement.

Thanks to Doug Wharram for pointing out the theoretical significance of some of the data. Thanks to two anonymous *LI* reviewers for commentary and suggestions. All errors, oversights, and theoretical clumsiness remain my own intellectual property.

The alternative approach presented by Lasnik and Saito (1991), Johnson (1991), Ura (1993), Bošković (1997b), and Lasnik (1996) requires that ECM subjects undergo overt phrasal movement to a position where they may c-command other constituents of the matrix VP. The surface word order is then derived by moving the verb to a still higher position, where it precedes the shifted ECM subject.

- (3) Perry proved [ $\text{them}_i$  [ $_{\text{VP}} e$  [ $_{\text{IP}} t_i$  to have lied] during each other $_i$ 's trials]].

The overt movement approaches offer an account of the ungrammaticality of sentences like (4a), which contrasts with the grammatical (4b), as observed by Lasnik and Saito (1991).

- (4) a. \*Perry proved [there to have been framed two suspects $_i$ ] during each other $_i$ 's trials.  
 b. Perry proved [two suspects $_i$  to have been framed  $t_i$ ] during each other $_i$ 's trials.

Under the assumption that covert expletive replacement raises the associate phrase *two suspects* to the position of *there* in (4a) and that expletive replacement is followed by further covert movement to the Case-checking position in the matrix clause, the LF representations of (4a) and (4b) should be essentially equivalent. If so, then the grammaticality contrast in (4) cannot be explained on the basis of the LF representation. However, if ECM subjects are raised into the matrix clause in the overt syntax, then the necessary distinction can be derived by postulating that covert movement does not affect binding relations.

For many speakers of English, locative inversion is possible in embedded contexts, and given the right context, locative inversion is acceptable in embedded ECM complement clauses (Bresnan 1994). With such embedded clauses, it turns out that the inverted subject can bind an anaphor contained in the matrix VP.

- (5) a. The photos [ $_{\text{VP}}$  showed [ $_{\text{IP}}$  behind this very hedge to have been hiding Jill and Tony $_i$ ] during each other $_i$ 's trials].  
 b. Pam proved [ $_{\text{IP}}$  in this bed to have slept Washington and Lincoln $_i$ ] in each other $_i$ 's biographies.

When locative inversion occurs in finite complements, no similar binding is possible.

- (6) a. ??The photos [ $_{\text{VP}}$  showed that [ $_{\text{IP}}$  behind this very hedge had been hiding Jill and Tony $_i$ ] during each other $_i$ 's trials].  
 b. ??Pam proved that [ $_{\text{IP}}$  in this bed had slept Washington and Lincoln $_i$ ] in each other $_i$ 's biographies.

Principle C violations also occur in this type of construction. Pronouns do not undergo locative inversion, but epithets do. With epithets as subjects of noninverted ECM complements, a name cannot appear as part of a subsequent adverbial phrase. The same is true of ECM

complements that undergo locative inversion. Such epithets cannot be coreferential with an R-expression contained in a matrix clause VP adjunct.

- (7) a. \*The evidence proved [<sub>IP</sub>[<sub>DP</sub> the son of a bitch]<sub>i</sub>] to have crouched under the desk] after John<sub>i</sub>'s mother had testified.  
 b. \*The evidence proved [<sub>IP</sub> under the desk to have crouched [<sub>DP</sub> the son of a bitch]<sub>i</sub>] after John<sub>i</sub>'s mother had testified.

A covert movement account of these facts is straightforward. A derivation in which locative inversion occurs evidently provides some way for the preposed locative to satisfy the Extended Projection Principle (EPP) in place of the subject DP. (It is immaterial for present purposes exactly how the locative PP can preempt the subject in this way; compatible approaches include those of Branigan (1992), Pesetsky (1994), and Collins (1996), among others.) The inverted ECM subject of the embedded clause has Case features that must be checked for the derivation to converge. These features cannot be checked in the embedded clause, so they must be checked in the matrix clause, just as a noninverted ECM subject is checked by the matrix verb. Covert movement of the subject DP into the matrix clause, or (covert) movement of its features, allows checking to take place. As a result of covert movement, either the phrase itself, or its features, end up in a position where they c-command other constituents of the matrix VP, as in (8).

- (8) a. the photos [Jill and Tony<sub>i</sub> [<sub>VP</sub> showed [<sub>IP</sub> behind this very hedge to have been hiding  $t_i$ ] during each other<sub>i</sub>'s trials]]  
 b. the photos [<sub>VP</sub> FF(Jill-and-Tony)<sub>i</sub>-showed [<sub>IP</sub> behind this very hedge to have been hiding Jill and Tony<sub>i</sub>] during each other<sub>i</sub>'s trials]

Binding relations then reflect the covert movement.

In contrast, an approach to these data involving overt movement faces seemingly intractable problems. In order for the inverted subject to c-command material in the matrix VP, it would need to raise to a position in the matrix clause. In order to capture the word order, then, the remainder of the ECM complement would necessarily raise past the shifted subject to a higher position in the matrix clause, and then the verb would have to raise past the shifted IP.

- (9) the photos [<sub>F</sub> showed [[<sub>IP</sub> behind this very hedge to have been hiding  $t_i$ ] [Jill and Tony<sub>i</sub> [<sub>e</sub>  $t$ ] during each other<sub>i</sub>'s trials]]]

Such a derivation is scarcely plausible. ECM complements typically cannot shift in their entirety, and they cannot shift to a preverbal position when locative inversion is not at issue.

- (10) the photos [<sub>F</sub> showed [[<sub>IP</sub>  $t_i$  to have been hiding behind this very hedge] [Jill and Tony<sub>i</sub> [<sub>e</sub>  $t$ ] during each other<sub>i</sub>'s trials]]]

What is more, such an approach requires that the subject be removed from the infinitival clause to establish the correct c-command relations. But a simple conjunction test indicates that the subject remains within its IP throughout the overt syntax.

- (11) The evidence showed [<sub>IP</sub> behind this hedge to have been hiding Jack] and [<sub>IP</sub> behind that hedge to have been hiding Jill] during their respective trials.

Conjunction here must involve full IPs, so that the participation of the subjects *Jack* and *Jill* in the conjunction indicates that they occupy a position internal to infinitival IP in the locative inversion structures.

An anonymous reviewer points out that (11) also undermines Bošković's (1997a) argument for overt movement in ECM. Bošković observes that sentences like (12) are problematic for a covert movement approach because the subjects of both of the conjoined IPs must have Case checked by a single matrix verb.

- (12) The jury declared [Jack to be guilty] and [Jill to be innocent].

He then provides an elegant solution for the problem in which overt movement of the ECM subjects combines with across-the-board movement of the matrix verb. However, the same problem arises with example (11), because again there are two subjects that must have Case checked and there is only one matrix verb to check them. And since the subjects are clearly inside the conjoined complement clauses, Bošković's solution cannot be extended to cover this case. Conjunction is then equally problematic for covert movement and overt movement approaches.

The conclusions we can draw from these data are limited in certain respects. Nothing in the locative inversion data indicates that overt movement of ECM subjects is never possible. All that the data demonstrate is that such movement is not always necessary in ECM complements. In the case where overt movement does not take place, we still find binding relations that elsewhere indicate that some form of movement has occurred. Overt movement is evidently not necessary to establish changes in binding relations. Covert movement suffices.

### References

- Bošković, Željko. 1997a. Coordination, object shift, and V-movement. *Linguistic Inquiry* 28:357–365.
- Bošković, Željko. 1997b. *The syntax of nonfinite complementation: An economy approach*. Cambridge, Mass.: MIT Press.
- Branigan, Philip. 1992. Subjects and complementizers. Doctoral dissertation, MIT, Cambridge, Mass.
- Bresnan, Joan. 1994. Locative inversion and the architecture of Universal Grammar. *Language* 70:72–131.

- Chomsky, Noam. 1995. Categories and transformations. In *The Minimalist Program*, 219–394. Cambridge, Mass.: MIT Press.
- Collins, Chris. 1996. *Local economy*. Cambridge, Mass.: MIT Press.
- Johnson, Kyle. 1991. Object positions. *Natural Language & Linguistic Theory* 9:577–636.
- Lasnik, Howard. 1996. On certain structural aspects of anaphora. Paper presented on the Internet during the online conference on Geometric and Thematic Structure in Binding, October 31, 1996. [Available at <http://linguist.emich.edu/linconf/lasnik/>]
- Lasnik, Howard, and Mamoru Saito. 1991. On the subject of infinitives. In *CLS 27. Part 1, The General Session*, 324–343. Chicago Linguistic Society, University of Chicago, Chicago, Ill.
- Pesetsky, David. 1994. Some long-lost relatives of Burzio's Generalization. Paper presented at the Conference on Burzio's Generalization, Rijksuniversiteit te Utrecht.
- Ura, Hiroyuki. 1993. On feature-checking for *wh*-traces. In *MIT working papers in linguistics 18: Papers on Case and agreement I*, 241–280. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.

INDEFINITE PRONOUNS AND OVERT  
N-RAISING  
Hideki Kishimoto  
Hyogo University of Teacher  
Education

## 1 Introduction

In English the semantically light verbs *have* and *be* may undergo V-to-T raising overtly, whereas other verbs stay in V-head position in overt syntax.<sup>1</sup> If, as is often discussed, nominal and clausal structures are analogical (e.g., Abney 1987), we expect that English may sometimes implement overt N-raising to a higher projection. In the literature, however, little attention has been paid to the possibility of overt N-raising in English. Longobardi (1994) and Cinque (1995), who argue for the presence of overt N-raising in Romance languages like Italian, deny the possibility that English has any overt N-raising at all.

Their conclusion about English N-raising may be too strong, however. In this squib I will argue that English implements overt N-raising in certain circumstances. I will demonstrate that although most nouns do not undergo N-raising, there is a class of nouns that are susceptible to overt head raising in a way similar to the semantically light verbs *have* and *be*, and further, that overt N-raising shares essential properties with overt V-raising. I will argue that overt N-raising is implemented to check a formal feature residing in Number Phrase—located between DP and NP—in a way comparable to overt V-to-T raising.

I would like to thank Mark Campana, Yoshiki Ogawa, Frank Owens, Albert Chick, and two anonymous reviewers for comments and suggestions. I am solely responsible for any remaining inadequacies and errors.

<sup>1</sup> Throughout the discussion I assume that clausal structures have a CP-TP-VP sequence (without VP-recursion). If any version of VP-recursion is assumed, *VP* here should refer to the highest VP structure; for Chomsky (1995), this would be *vP*.