

## Revisiting Postal's DOC: can we predict ECM from root meanings?

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I will present a novel generalization about the availability of ECM in English infinitivals, suggesting a (*very* preliminary) avenue for explaining a paradigm first discovered by Postal (1974). English licenses ECM on infinitive subjects in (1), and the expected pattern of further raising is observed in (1b) as result. However, Postal noticed certain predicates that allow, for instance, passive raising (2a) but prohibit the source of such an operation, disallowing ECM (2b). The generalization is that these 'DOC' (derived object constraint) verbs do not ECM overt embedded subjects, but do allow traces of movement in that position, not just of passive raising, but *wh*-movement (2c), and complex NP shift (2d), among other movement operations:

(1) ECM infinitives

- a. Melvin believed/considered/held/understood **Bill to be a liar**.
- b. **Bill** was believed/considered/held/understood **e to be a liar**.

(2) DOC-class infinitives (adapted from Postal (1974))

- a. **Bill<sub>e</sub>** was said/wagered/alleged/thought/assumed **e to be a liar**.
- b. \*John said/wagered/alleged/thought/assumed **Bill to be a liar**.
- c. **The person<sub>e</sub>** John said/wagered/claimed/thought/assumed **e to be a liar** was in fact telling the truth.
- c. John said/wagered/claimed/thought/assumed **e to be a liar** [any person who disagreed with him]<sub>e</sub>.

Since in general objects *are* licensed with DOC verbs (cf. *John said mean things*), the DOC paradigm presents a real puzzle in requiring the offending term to vacate its embedded position. However, it turns out that the availability of licensing an embedded subject correlates with a verb's ability to select certain non-clausal internal arguments – just those nominal arguments that denote the kind of objects that the embedded infinitival denotes in these cases. The noun phrases *proposition*, *notion*, *idea*, *theorem*, *nonsense* all denote the kinds of things (i.e. propositional content) that whole clauses denote when they serve as complements to the class of (realis or veridical) attitude predicates, of which (1) and (2) belong (Bach 1977). However, regular ECM verbs (3) pattern differently from DOC-verbs (4) in selecting for such internal arguments.

(3) Melvin believes the proposition/notion/idea/nonsense/theorem (that Iran is supplying weapons to insurgents).

(4) \*Melvin said/wagered/claimed/thought/assumed the proposition/notion/idea/nonsense/theorem (that Iran is supplying weapons to insurgents).

Now, the infinitival complements in (1/3) and (2/4) are all 'propositional infinitives' (Pesetsky 1992, Wurmbrand 2006). However, the ECM predicates take the nominal correlates of propositions as internal arguments, while the DOC verbs do not, and this correlates with the former's ability to ECM. These considerations lead to the following informal generalization:

(5) A verbal predicate licenses ECM on an embedded subject of an infinitival if that infinitival denotes the kind of meaning that the root predicate selects.

(I will also support the generalization in (5) with ECM patterns in direct perception reports.) Of course, DOC verbs do seem to select for propositional meanings when the complement is a clause. I will suggest that the two types of (infinitival) complements

require different internal structure: roughly, ECM verbs can serve as attitude verbs because they provide propositional content alone (see Hacquard 2006), allowing for sisters that simply denote properties of situations. The DOC verbs, I contend, do not themselves constitute attitude verbs that are associated with propositional content, and so their use as epistemic verbs requires functional material in the embedded clause to provide the modal base. I will then sketch a very tentative way of capturing the generalization in (5), motivated by this semantic difference, giving the embedded infinitivals in (1) and (2) slight different structures. Infinitival complements to ECM verbs will merge in a position which makes its subject available for structural licensing by the matrix predicate, while the infinitival complements of DOC verbs will involve a larger structure blocking transparent structural licensing of the embedded subject. I will then turn to possible explanations for the availability of A-bar traces in the subject of DOC complements. I will compare this approach to Pesetsky's (correct) observation that ECM depends on the agentivity of the embedding predicate, and Bošković's (1997) implementation of this correlation. Lastly, I will contend with apparent counter-examples to the DOC class (noted by Bošković 1997) who argues that pronouns can be ECM'd in DOC infinitives, presenting the contrast in (6):

- (6) a. Mary alleged him to have kissed Jane. (Bošković 1997)  
 b. \*Mary alleged that man to have kissed Jane. (Bošković 1997)

(6a) is, according to my intuitions, only marginally better than (6b). However, ECM is licensed (whether on a pronoun or lexical NP) with many DOC verbs (7). ECM is possible as long as the subordinate predicate is evaluative (8), a contrast found under the verb *consider* as well (Heycock 199x, Lasersohn 2007) (9):

- (7) My grandfather thought/said/claimed/knew his sons to be incapable of finding a steady job, but he turned out to be proved wrong.  
 (8) a. #John thought/said/claimed licorice to contain sugar.  
 b. John thought/said/claimed licorice to be tasty.  
 (9) a. #John considers the licorice to contain sugar. (Lasersohn (2007): (6-7))  
 b. John considers the licorice to be tasty.

These contrasts serve to show that ECM may be possible with DOC verbs but the nature of the complement is different (perhaps involving less structure or fewer arguments, see Lasersohn 2007)).