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# Against the Vacuous Movement Hypothesis\*

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In this study, we argue that *wh*-subjects in English move to [Spec, CP], despite some arguments for the *Vacuous Movement Hypothesis* (VMH; George 1980, Chomsky 1986, Agbayani 2006). In the course of the paper, we will examine data discussed in slightly different contexts constitute the argument against the VMH.

## I. The Vacuous Movement Hypothesis

The basic idea of the VMH is that *wh*-movement applies only when it changes the surface order. Compared to the declarative sentence (1), no order change is involved in the English subject question (2), whereas subject-auxiliary inversion and fronting of the *wh*-phrase are involved in the English object question (3).

- |                       |     |
|-----------------------|-----|
| John bought the book. | (1) |
| Who bought the book?  | (2) |
| What did John buy?    | (3) |

Thus, the structure of (2) is analyzed as lacking *wh*-movement, as shown in (4).

[<sub>CP</sub> C [<sub>IP</sub> who bought the book]] (4)

Supporting arguments for the VMH are found in earlier literature (George 1980, Chomsky 1986, Agbayani 2006) and are based on the syntactic behaviors of relatives, clefts, islands, and ellipsis. The argument based on language acquisition also provides a conceptual basis for the VMH. Chomsky (1986) and Agbayani (2006) suggest that phonologically undetectable application of movement cannot be acquired by children.

However, it is also plausible to suppose that the language faculty is designed to block the VMH from the outset so that children are only concerned with whether *wh*-movement applies overtly or covertly. If so, the structure of subject question (2) is something like (5).

[<sub>CP</sub> who C [<sub>IP</sub> t<sub>who</sub> bought the book]] (5)

In this paper, we will provide evidence for the alternative (5).

## II. Evidence against the Vacuous Movement Hypothesis

Suppose that an argument crucially employs the assumptions that only one *wh*-phrase must move to [Spec,CP] in *wh*-questions. If it holds true for *wh*-subjects as well, such an argument can be taken as evidence against the VMH. First, consider the superiority effect in (6).

- a. What<sub>i</sub> did you buy t<sub>i</sub> for whom? (6)
- b. \*Whom<sub>i</sub> did you buy what for t<sub>i</sub>?

Suppose that the condition liable to this effect is something like (7).

*The Superiority Condition* (Chomsky 1973) (7)

- a. No rule can involve X, Y in the structure ... X ... [ ... Z ... WYV ... ] ..., where the rule applies ambiguously to Z and Y and Z “is superior to” Y.
- b. The category A *is superior to* category B if every major category dominating A dominates B as well but not conversely.

And, suppose that the base structure of (6) is like that in (8).

C [<sub>IP</sub> you bought what for whom] (8)

In this structure, *what* is higher than (hence, superior to) *whom*, since the accusative object is structurally higher than the dative object in the dative alternation construction (Barss and Lasnik 1986). Thus, it is prevented by (7) from raising *whom* to C crossing over *what* as in (6b). On the other hand, there is no such intervener between C and *what*. Hence, *what* can move to CP as in (6a). Now, consider (9).

- (9)
- a. Who bought what?
  - b. \*What did who buy?

The contrast in (9) suggests that the ill-formedness of (9b) is also excluded as an effect excluded by (7). In the base structure (10), *who* is higher than *what*.

C [<sub>IP</sub> who bought what] (10)

To exclude (9b) as a violation of (10), there must be a blocking element capable of undergoing *wh*-movement between C and *what*. If we suppose *wh*-movement applies to *who* in (9b), *who* can be such an element; otherwise, *who* cannot function as an intervener and this explanation cannot be obtained.

Next, let us consider the classical subadjacency paradigm (11).

- (11)
- a. \*What<sub>i</sub> do you wonder [<sub>CP</sub> who bought t<sub>i</sub>]?
  - b. Who wonders [<sub>CP</sub> who bought what]?

Richards (2001) proposes that the contrast in (11) is accounted for by assuming the following principle (12).

(12)

*The Principle of Minimal Compliance (PMC)*

- a. If the tree contains a dependency headed by *H* which obeys constraint *C*, any syntactic object *G* which *H* “immediately c-commands” can be ignored for the purposes of determining whether

C is obeyed by other dependencies.

- b. *A immediately c-commands B* iff the lowest node dominating *A* dominates *B* and there is no *C* such that *A* asymmetrically c-commands *C* and *C* asymmetrically c-commands *B*.

According to the PMC, a principle-violating movement is possible only if a principle-observing movement precedes it. Suppose that in-situ *wh*-phrases move to the matrix CP at LF to take appropriate scopes. Then, the movement of *what* crossing the island also takes place in (11b), with the resulting LF structure (13).

[<sub>CP</sub> what<sub>1</sub> who<sub>2</sub> [<sub>IP</sub> t<sub>2</sub> wonders [<sub>CP</sub> who bought t<sub>1</sub>]]? (13)

Since (11a) does not involve any licensing movement preceding an extraction of *what*, the extraction of *what* out of the island is not allowed. On the other hand, if we suppose that *who* moves overtly in (11b), this movement licenses the LF-extraction of *what*.

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