

Deducing improper movement from phase based C-to-T phi transfer

(Keywords: the C-to-T phi-feature inheritance system, improper movement, Phase-based approach)

[Intro]: We seek to reveal and address empirical and theoretical consequences stemming from Chomsky's (2005:OP) C-to-T phi-feature inheritance (hereon CTI) analysis. We claim: [1] Simultaneous attraction as a consequence of CTI "splits" the features on a wh-phrase: [Case]/[Phi] moves to Spec-T and [Q] to Spec-C, [2] [1] makes it possible to rule out improper movement (IM) without appealing to the activity condition (see Nevins 2005 for arguments against activity and for a different approach to IM). **[C-TI]** Since OP, it has been assumed that T does not bear its (phi, and perhaps other) features intrinsically but inherits them from C. This radically changes a derivation like (1). The derivation under the traditional view is shown in (2). In OP, by contrast, since T lacks inherent [phi], but inherits these features from C, T cannot function as a probe until C is introduced by Ext Merge. In addition, C and T (the latter bearing inherited [phi]) separately attract elements from a single position simultaneously, so that (1) is generated as in (3). In previous analyses, the copies of "who" in Spec-C and in Spec-T are related by Int Merger/movement (2) but in OP, there is no movement from Spec-T to Spec-C. **[Feature split]** One unclear issue is how features on "who" are copied under "simultaneous" attraction. There seem to be 2 possibilities: One is (4) where every feature on "who" is copied to Spec-C and to Spec-T while the other is (5) where the features are split into the two positions. Possibility 1 does not go through in that valued [uCase] on Spec-C would escape from the spell-out domain and becomes indistinguishable (in the eyes of transfer) from [iF], causing crash of the derivation at the next phase in accordance with Richards (2007) (see also Epstein and Seely, 2002). Possibility 2 does not confront this problem, but a question is why [Case]/[Phi] goes to Spec-T, not to Spec-C. We claim that the feature split we propose is deducible/in fact forced by Chomsky's (2005/7) A/A'-distinction: "an A'-position is one that [results from] attraction by an edge-feature (EF) of a phase head; hence typically in Spec-C or outer Spec-v*. Others are A-positions (OP:p.16)" Thus position types are defined derivationally, in terms of the operation-type that created the position (see also McCloskey 2002). Thus, an A-position is one that results from attraction by EF under Agree in contrast to A'-movement which is triggered solely by EF. Int-Merge into phi-complete Spec-T does not happen without Agree as a prerequisite. As a consequence of this view, it can be induced that [Case]/[Phi] which participates in T-DP Agreement with T is required to go to Spec-T (cf. Baker, 2008: who argues that Person agreement in Spanish applies between T and Spec-T, not T and Spec-V) but [Q] on phase head C, which is 'unrelated' to T goes to Spec-C as in (5). **[IM Deducd]** We argue that contra standard assumptions, IM is not a unified phenomenon but is correctly classified into two distinct types: Case on a moving element is valued after A'-movement in (6) and before A'-movement in (7). We demonstrate that both types of IM are explanatorily excluded under the phase-based approach and it is especially the latter case that empirically supports the feature split system presented above. The derivation of (7) is shown in (8). When C and T each attract "who₁" simultaneously (→8b), the features on "who₁" are split: [Q] goes to Spec-C and [phi]/[Case] goes to Spec-T In the matrix clause (→8c), assuming PIC, only (the edge) "who₃" in the embedded Spec-C is visible to matrix C-T probing. Notice that "who₃" has only [Q], not [Phi] by virtue of feature split, so that "who₃" is not an appropriate (matching) goal for the probing matrix T precisely because "who₃" lacks [phi]. In contrast, the matrix C can attract "who₃" but [uPhi] on matrix T is never valued, causing crash. This is a direct result of the CTI, coupled with OP under which C and T separately attract different featural subsets, simultaneously from the 'same' launch site. The absence of [phi] on "who₃" makes it impossible for "who₃" to improperly move ("back") into an A-position, (Spec-T). The other type of IM (6) is also excluded straightforwardly: when the derivation reaches the embedded CP in (6), the transferred TP includes unvalued [uCase] on "who_{1/2}" causing crash. **[Consequences]** The system developed excludes IM without appealing to the activity condition, possible problems with which are pointed out in Nevins (2005). Also, the current system lends further support for the CTI system. Moreover, our view of feature-split wh-phrases implies that non-branching lexical wh-phrases are in fact composed of two distinct morphological feature sets: WH on the one-hand and an indefinite QP "something/someone" exactly as Chomsky (1964) proposed. (the parallelism requirement in (9) independently supports this morphological view.) This morpho-phasal analysis of IM is shown to be empirically and explanatorily preferable to previous chain-based, purely representational analyses.

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(1) Who bought the book?

(2) [CP who₃ [TP <who₂> [vP <who₁> bought the book]]]]

(3) [CP who₃ [TP <who₂> [vP <who₁> bought the book]]]]

(4) Possibility 1: [CP who₃[Q][Case][Phi] [TP <who₂[Q][Case][Phi]> [vP <who₁[Case][Phi][Q]> . . .

(5) Possibility 2: [CP who₃[Q] [TP <who₂[Case][Phi]> [vP <who₁[Case][Phi][Q]> . . .

(6) *Who seems that it is likely to win the race? (Saito, 2002)

[CP who₅ [TP <who₄> seems [CP <who₃> that [TP it is likely [TP <who₂> to [vP <who₁> win the race]]]]]]

(7) *Who seems wins the race?

[CP who₅ [TP <who₄> seems [CP <who₃> [TP <who₂> [vP <who₁> win the race]]]]]]

(8) The derivation of (7) based on feature split: *Who seems wins the race?

a. [vP <who₁[Q][Phi][Case]> [vP wins the race]]

b. [CP <who₃[Q]> C [TP <who₂[Phi][Case]> T [vP <who₁[Q][Phi][Case]> [vP . . .]]]]]

c. [CP C_[EF] [TP T_[uPhi] seems [CP <who₃[Q]> [TP . . .]]]]]

(9) a. John bought something, but I don't know what ~~John bought what~~.

(John bought something, but I don't know what [John bought wh+something])

b. *John bought a book, but I don't know what ~~John bought what~~.

(John bought a book, but I don't know what [John bought wh+something].)

c. John bought a book, but I don't know which book ~~John bought which book~~.

(John bought a book, but I don't know which book [John bought wh+book].)

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