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Building (Proper) Improper Movement Structures

[Intro] Obata and Epstein (2008) analyze improper movement (imp-mvt) (→1a) as an Agree failure phenomenon, by proposing feature splitting structure building, whereby features of a category are decomposed into proper subsets independently affected by Internal merge. Feature split can be induced from Chomsky's (2005) feature inheritance system and Richards' (2007) value-transfer simultaneity. In (1b), after T inherits [uPhi] from C, T phi-agrees with "who" at Spec-v and values its [uCase]. Then, EF on T and on C each attracts "who" simultaneously to SpecT and SpecC. If "A-movement is IM (internal merge) contingent on probe by uninterpretable INFL features, while A'-movement is IM driven by EF (Chomsky, 2007)", then T in fact attracts [phi]/[Case] of "who" while C attracts only [Q] of "who" which did not participate in Agree with T (= feature split). Thus, in (1c) "who" at SpecCP1 loses [phi], and bears only [Q]. Assuming PIC, [uPhi] on matrix T finds no phi-matching goal and remains unvalued, causing crash (w/o appeal to a problematic Activity Condition, cf. Nevins, 2003). ***Prediction*****: imp-mvt allowed if matrix T can find a phi-matching goal at the edge.** We argue it does, in *tough*-constructions generated not by a construction specific null Op, (enriching the lexicon) but by literal "improper" movement (Epstein 1989, Brody 1993, Hornstein 2001) of the surface *tough*-Subj via edge-CP. The "impropriety" however is 'legitimized', since [phi] is transported to embedded SpecC (i.e. [phi] on *tough*-mover is not split off, unlike in (1), thus permitting visible Agree with matrix T (→2)).

[*Tough* vs. Raising] Besides the "licit improper movement", *tough*-constructions exhibit: (i) finiteness sensitivity (→3), (ii) Case-revision (→4) and (iii) selectional restrictions (→5). As for (ii), the *tough* Subj. in (4) starts from the compl of "kick", which "should" assign Acc to it, yet it must be realized as "he" in SpecT. HOW? We propose 2 types of V features (inherited from v in Non-raising constructions) corresponding to the 2 T types (inherited from C): namely, FiniteT (bearing [uphi], inherited from C →6a), and ControlT (bearing only [uCase]) lacking overt subj. Agree (→6b). Suppose there are similarly 2 different types of V. V1 ([phi] bearer) assigns Acc to "her" (→7a). V2 ([uCase] bearer), like controlT, values null Case. Thus in (7b), Obj. "he/im" is initially valued null Case. When this phase is transferred, there is no crash, since Case *is* valued. However, the phonetic features of he/im are underspecified as null Case lacks [Phon]. The pronoun (like any overt NP/DP) cannot remain with null Case. By moving to the edge **with** its phi-features, and phi-agreeing with matrix T, [Phon] on "he/im" is finally specified as "he", which is legible at PF. If Obj does not bear [Phon] to begin with, it can stay in situ (→8) (with PROarb distribution partly constrained by semantics/pragmatics *John likes). (4a) is derived as in (9): the embedded V has only [uCase] (=V2), so assigns null Case (→9a). Then, V naturally attracts only [Case] on "he/im" with which it agreed, while C attracts [Op] **as well as** [phi] of he/im to the edge (→9b). Then, $T_{[uCase]}$ agrees with PRO and attracts it (→9c/d). Also, EF on C attracts "he/im" (still bearing [phi]) to specC. [uPhi] on matrix T now phi-agrees with "he/im". Notice that "he/im" still has [phi], contra "who" in (1d), so [uPhi] on T is valued and [phon] on "he/im" are specified as "He" (→9e). The derivation converges. Meanwhile, (4c) is derivable **only if** the embedded V is V1, which assigns Acc. If V2 is taken as in (9/4a), "he/im" is assigned null Case. But matrix T agrees with "it", so [Phon] on "he/im" is never specified, causing PF-crash. The point is that (4a)/(4c) do not share the same lexical array. The embedded V has different properties in the 2 cases overcoming the apparent (Case conflict) contradiction in *tough*. Regarding (5), if V1 is chosen for the embedded V, [uPhi] on matrix T is never valued, like in (1), regardless of finiteness. If V2 is chosen, "John" moves with [Phi] and intervenes between T and "Mary". When the embedded finite T phi-Agrees with "Mary" in (5b), [phi] on "John" causes intervention effects and crash (→10). But if the embedded T is ControlT as in (5a), only Case is valued (no phi-Agree). Since [Case] on "John" is already split off, the intervention issue does not matter. The derivation converges. As for (3), if the lowest T is finite (→11b/3b), [Phi]/[Case] naturally move to SpecT and so only [Op] goes to SpecC i.e."John" loses [Phi] for phi-Agree with lowest T, so [uPhi] on matrix T remains unvalued. But if the lowest T is raisingT (→11a/3a), T has only EF (C being absent), so features on "John"--including phi--are all attracted. "Believe" (V2) assigns null Case whose [Phon] is specified by matrix T as a result of phi-Agree. This explains why *tough-movement* is possible only with infinitive complements. Finally we show that English *tough* appears identical to Lusaamia wh-mv(→12) exhibiting 'upstairs' T-agree and, we argue, also derived "improperly".

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(1) a. *Who seems is smart? ([$_{CP2}$ who seems [$_{CP1}$ _is smart]])
b. [$_{CP1}$ C$_{EF}$ T$_{EF[uphi]}$ [$_{vP}$ who$_{[Q][phi][uCase]}$ [$_{VP}$ is smart]]]
Phi-Agree
c. [$_{CP1}$ who$_{[Q]}$ C$_{EF}$ [<who$_{[phi][Case]}$> T$_{EF[uphi]}$ [$_{vP}$ <who$_{[Q][phi][uCase]}$> [$_{VP}$ is smart]]]
feature split
d. MATRIX: [$_{CP2}$ C$_{EF}$ T$_{EF[uphi]}$ seems [$_{CP1}$ who$_{[Q]}$ [$_{TP}$ …]]
Failure of Phi-Agree

(2) a. John is easy to please. / They are easy to please.
b. *John are easy to please. / *They is easy to please.

(3) a. John is easy for Mary to believe to be smart. (Stowell, 1985)
b. *John is easy for Mary to believe is smart.

(4) a. He is easy to please.
b. *Him is easy to please.
c. It is easy to please him.

(5) a. John is hard to please. b. *John is hard that Mary pleases.

(6) a. Finite T$_{[uphi]}$: Phi-agreement & Case assignment (→John ***likes*** dogs.)
b. Control T$_{[uCase]}$: No phi-agreement but Case-assignment
(→John tried PRO to ***like*** dogs.)

(7) a. V1$_{[uPhi]}$: John likes ***him***.
b. V2$_{[uCase]}$: ***He*** is easy to please <***he/im***>.→ Case-revision with tough movement

(8) John is eager to please PRO$_{arb}$ (Chomsky, 1965)

(9) The derivation of *tough*/(4a):
a. [$_{vP}$ PRO v [$_{VP}$ please(V$_{[uCase]}$) he/im$_{[phi][uCase][Op]}$]
Case-Agree
b. [$_{vP}$ he/im$_{[phi][Op]}$ [$_{vP}$ PRO v [$_{VP}$ <he/im$_{[Case]}$> [$_{VP}$ please(V$_{[uCase]}$) he/im]
feature-split
c. [$_{CP}$ C [$_{TP}$ T$_{[uCase]}$ [$_{vP}$ he/im$_{[phi][Op]}$ [PRO$_{[uCase]}$ [$_{VP}$ . . .]]]]]
Case-Agree
d. [$_{CP}$he/im$_{[phi][Op]}$ C [$_{TP}$PRO T$_{[uCase]}$ [$_{vP}$<he/im$_{[phi][Op]}$> [<PRO$_{[uCase]}$> [$_{VP}$ . . .]]]]]
IM
e. [$_{TP}$ **He**$_{[phi]}$ T$_{[uPhi]}$ is easy [$_{CP}$ <he/im$_{[phi][Op]}$> [$_{TP}$ . . .] = CONVERGENT
Phi-Agree&IM

(10) Embedded: [$_{CP}$ C [$_{TP}$ T$_{[uPhi]}$ [$_{vP}$ John$_{\mathbf{[PHI]}[Op]}$ [$_{vP}$ Mary$_{[Phi][uCase]}$ [$_{VP}$ . . .]]]]]
Intervention Effect

(11) John is easy for Mary to believe **<u>(a) to be smart / (b) *is smart</u>**.
a. T[---] John$_{[phi][Case][Op]}$ b. T[uPhi] John$_{[phi][Case][Op]}$

(12) Carstens (2008): Lussamia (SA = Subj. Agreement, Arabic numerals = noun class)
a. Bi-bonekhana Ouma a-bwereo
8SA-appear <u>Ouma</u> ***3SA***-leave ("It appears that Ouma left")
b. Ouma a-bonekhana a-bwereo
<u>Ouma</u> ***3SA***-appear ***3SA***-leave ("Ouma appears as if he left")

[Selected References]: Brody (1993) Theta-theory and arguments. LI 24:1-23.
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