Perfect Domains

1. Two Movement Puzzles: In this paper, I address two issues. First, the distribution of syntactic movement, as opposed to long-distance agreement without movement. Second, the question of perspective: whether movement is driven by the element that moves (*push-movement*; term from van Riemsdijk, 1997), or by the landing-site or some element adjacent to it (*pull-movement*).

The 1990's saw a shift from push-movement to pull-movement as the prevalent perspective in generative syntax. However, recent work shows that allowing exclusively for pull-movement is problematic (e.g., van Craenenbroeck, 2006; Platzack, 1996; van Riemsdijk, 1997). Consider wh-movement out of embedded declaratives, as in (1): we know that *who* moves through the embedded SpecCP; but why does it move out of the embedded clause in the first place? Claiming that *who* moves out so it can check the matrix Q-feature amounts to computational look-ahead. Positing an active feature on the embedded C^0 runs into immediate problems – how does this feature not crash the derivation of (2), where it is unchecked? Saying that the "right kind" of C^0 is chosen in each case simply relegates the aforementioned look-ahead problem to the numeration.

In (3), I propose a novel approach to syntactic movement. As a first example, consider this: if all the features on a given head X^0 have been checked, then XP will constitute a perfect domain if and only if there are no unchecked features within X^0's complement. Therefore, an immediate corollary of (3b) is *Expel*, as in (4). Another consequence is that movement is never a feature-checking mechanism. The only way a feature *F* on some head H^0 can ever be checked is by entering into an agreement relation with some c-commanded Z^0, which shares the *F* feature.

2. General Patterns: Let Z^0 be a head with a syntactically active feature *F*. Suppose that a higher XP has had its last remaining feature(s) checked. *Expel* mandates that ZP would have to be relocated into SpecXP, as in (5). Now suppose a head H^0 is merged that carries a matching instance of *F*. The agreement relation established between H^0 and Z^0 would then be quite local, as in (6).

If, on the other hand, XP has unchecked features, (3b) dictates that ZP must stay in place. The agreement relation between H^0 and Z^0 will then be relatively distant, as in (7).

Finally, suppose there are no maximal projections at all between H^0 and ZP, as in (8). Assuming this is the root of the derivation, the only maximal projection dominating ZP is HP, which cannot be turned into a perfect domain (because of *F* on H^0). Hence, (3b) bars movement of ZP to SpecHP.

Head-movement of Z^0 to H^0, however, would remove the unchecked instance of *F* from within ZP. (3b) thus predicts that such head-movement must occur. Notice, this is the only configuration examined so far in which Z^0-to-H^0 head-movement would not violate the HMC (Travis, 1984).

3. Predictions: As shown above, the degree of locality involved in a feature-checking relation will be determined by the existence of unchecked features between the relevant heads. Consider the derivation of a clause anchored by an unaccusative verb, in (10).

If T^0 is equipped with nom (nominative), then (10b) represents a configuration like (7) with respect to $nom/Case$ (where the "intervening" feature *G* is $tense$), and therefore, long-distance agreement between T^0 and the DP will arise, canceling the $nom/Case$ features (see (11)).

This configuration, in turn, represents a maximal locality configuration, as in (8), with respect to $tense$ – yielding V^0-to-T^0 head-movement. The result is an Irish-type clausal structure (12).

If, however, nom is on C^0 and not T^0 (as argued for English/French by Pesetsky and Torrego, 2001, 2004), there is no way to check $Case$ on the DP in (10b). On the other hand, V^0-to-T^0 head-movement due to $tense$ will still apply (as above), yielding (13). TP can now be made into a perfect domain, by *Expel* of the DP, as in (14) (giving rise to the EPP-effect). $Case$ on the DP will be checked at the next step, upon merger of C^0 (see below for an example). We thus account for the distribution of syntactic movement vs. long-distance agreement in this case.

Consider a modification of (14), where DP is a wh-element. Suppose declarative C^0 is merged, as in (15). CP can now become a perfect domain, by *Expel* of the wh-DP, as in (16) (*Expel* would not be necessary, and hence it would be disallowed, if the DP did not have a wh-feature). We thus derive movement out of declarative CPs, without postulating an ad-hoc "driving force" on C^0.

(1) Who did Mary think arrived?

(2) Mary thinks (that) John arrived.

(3) a. *Perfect Domain*: Any maximal projection XP, in which all unchecked features (if any) are contained within SpecXP.
b. The *Perfect Domains Hypothesis*: Movement takes place **if and only if** it will turn an XP into a perfect domain.

(4) Corollary 1 (*Expel*): Upon the last active feature(s) of X^0 being checked, any active features dominated by X' will be relocated to the edge (specifier) of XP.

(5) $[_{XP}\ [_{ZP}\ Z^0{}_{[F]}\ ]_1\ [_{X'}\ X^0\ t_1\ ]\ ]$

(6) $[\ H^0{}_{[F]}\ [_{XP}\ [_{ZP}\ Z^0{}_{[F]}\ ]_1\ [_{X'}\ X^0\ t_1\ ]\ ]\ ]$

(7) $[\ H^0{}_{[F]}\ [_{XP}\ X^0{}_{[G \neq F]}\ [_{ZP}\ Z^0{}_{[F]}\ ]\ ]\ ]$

(8) $[\ H^0{}_{[F]}\ [_{ZP}\ Z^0{}_{[F]}\ ]\ ]$

(9) Corollary 2 (*Head-Expel*): In a configuration such as (8), head-movement of Z^0 to H^0 is obligatory.

(10) ($\oplus$ denotes *Merge*)
a. $V^0\left\langle \substack{tense \\ \theta-theme} \right\rangle \oplus DP\langle Case \rangle \longrightarrow [_{VP}\ V^0\langle tense \rangle\ DP\langle Case \rangle]$
b. $T^0\left\langle \substack{tense \\ (nom)} \right\rangle \oplus [_{VP}\ V\langle tense \rangle\ DP\langle Case \rangle] \longrightarrow [_{TP}\ T^0\left\langle \substack{tense \\ (nom)} \right\rangle [_{VP}\ V\langle tense \rangle\ DP\langle Case \rangle]]$

(11) $[_{TP}\ T^0\langle tense \rangle\ [_{VP}\ V\langle tense \rangle\ DP]]$

(12) $[_{TP}\ T^0{+}V^0{}_1\ [_{VP}\ t_1\ DP]]$

(13) $[_{TP}\ T^0{+}V^0{}_1\ [_{VP}\ t_1\ DP\langle Case \rangle]]$

(14) $[_{TP}\ DP_2\langle Case \rangle\ T^0{+}V^0{}_1\ [_{VP}\ t_1\ t_2]]$

(15) $C^0\langle nom \rangle \oplus [_{TP}\ DP_2\left\langle \substack{Case \\ wh} \right\rangle T^0{+}V^0{}_1\ [_{VP}\ t_1\ t_2]] \longrightarrow [_{CP}\ C^0\ [_{TP}\ DP_2\langle wh \rangle\ T^0{+}V^0{}_1\ [_{VP}\ t_1\ t_2]]]$

(16) $[_{CP}\ DP_2\langle wh \rangle\ C^0\ [_{TP}\ t_2\ T^0{+}V^0{}_1\ [_{VP}\ t_1\ t_2]]]$

Selected References

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