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 C0 runs into immediate problems – how does this feature not crash the derivation of (2), where it is unchecked? Saying that the “right kind” of C0 is chosen in each case simply relegates the aforementioned look-ahead problem to the numerator.

In (3), I propose a novel approach to syntactic movement. As a first example, consider this: if all the features on a given head X0 have been checked, then XP will constitute a perfect domain if and only if there are no unchecked features within X0’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 H0 can ever be checked is by entering into an agreement relation with some c-commanded Z0, which shares the F feature.

2. General Patterns: Let Z0 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 H0 is merged that carries a matching instance of F. The agreement relation established between H0 and Z0 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 H0 and Z0 will then be relatively distant, as in (7).

Finally, suppose there are no maximal projections at all between H0 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 H0). Hence, (3b) bars movement of ZP to SpecHP.

Head-movement of Z0 to H0, 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 Z0-to-H0 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 T0 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 T0 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 V0-to-T0 head-movement. The result is an Irish-type clausal structure (12).

If, however, nom is on C0 and not T0 (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, V0-to-T0 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 C0 (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 C0 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 C0.
(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) \[ XP[ZP[ZP[ZX^0[F]]_1[X^0 t]} \]

(6) \[ H^0[F] [XP[ZP[ZP[X^0[F]]_1[X^0 t}} \]

(7) \[ H^0[F] [XP[X^0[G\neq F][ZP[ZP[ZP[X^0[F]]_1[X^0 t}} \]

(8) \[ H^0[F] [ZP[ZP[ZP[ZP[ZP[X^0[F]]_1[X^0 t}} \]

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

(10) (⊕ denotes Merge)
   a. V^0⟨tense⟩⊕DP⟨Case⟩ → [VP V^0⟨tense⟩ DP⟨Case⟩] 
   b. T^0⟨tense⟩⊕[VP V⟨tense⟩ DP⟨Case⟩] → [TP T^0⟨tense⟩ ⟨nom⟩ [VP V⟨tense⟩ DP⟨Case⟩]]

(11) [TP T^0⟨tense⟩ [VP V⟨tense⟩ DP]]

(12) [TP T^0+V^0_1 [VP t_1 DP]]

(13) [TP T^0+V^0_1 [VP t_1 DP⟨Case⟩]]

(14) [TP DP^2⟨Case⟩ T^0+V^0_1 [VP t_1 t_2]]

(15) C^0⟨nom⟩ ⊕ [TP DP^2⟨Case⟩[wh] T^0+V^0_1 [VP t_1 t_2]] → [CP C^0 [TP DP^2⟨wh⟩ T^0+V^0_1 [VP t_1 t_2]]]

(16) [CP DP^2⟨wh⟩ C^0 [TP t_2 T^0+V^0_1 [VP t_1 t_2]]]

Selected References


