

Unbounded Successive-Cyclic Rightward Movement

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1. Introduction. The existence of rightward movement faces at least two serious challenges. First, Ross (1967) argued that it is subject to stricter locality conditions than, for instance, wh-movement. Second, Akmajian (1975) argued that rightward movement is not obviously successive-cyclic in the way that wh-movement is often taken to be (cf. Chomsky 1977). This paper argues that rightward DP-movement actually displays both of these properties given appropriate licensing conditions. In particular, rightward movement can apply successive-cyclically in a potentially unbounded fashion when licensed by a parasitic gap as in (1), adapted from Engdahl (1983).

(1) John offended *e* by not recognizing *pg* immediately – my favorite uncle from Cleveland.

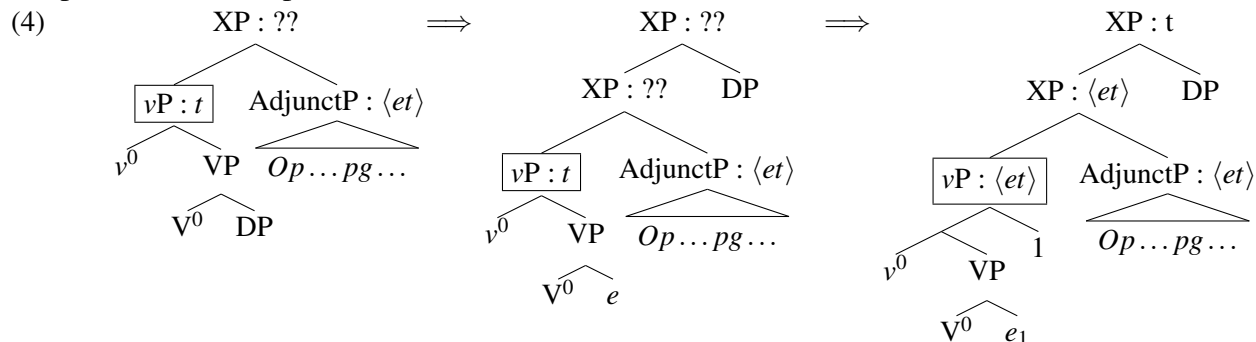
2. The Nature of the Displacement Operation. Based on the presence of derived island effects (Wexler & Culicover 1980) and non-sensitivity to the Right Edge Restriction Wilder (Wilder 1999), the paper argues that structures like (1) are not derived via Right Node Raising (cf. Postal 1994, a.o.), but by rightward DP-movement. Starting from the observation by (Larson 1989) that a parasitic gap is obligatory when a DP is displaced rightward over an adjunct clause (2), the movement operation is suggested to be licensed by the parasitic gap.

(2) Sam stole *e* because Kim wouldn't buy [*pg*/*anything] for him – an autographed picture of Jonathan Frakes.

Diagnostics including VP-ellipsis, VP-fronting, and a form of antecedent-contained deletion suggest that only adjunct clauses adjoined above the locus of typical focus-driven Heavy-NP Shift at the edge of vP require the parasitic gap. Thus, the parasitic gap in (1) and (2) is licensing additional movement beyond Heavy-NP Shift in violation of the Right Roof Constraint (3).

(3) **RIGHT ROOF CONSTRAINT** (adapted from McCloskey 1999)
Rightward movement may move a DP to the right edge of the vP that most immediately contains X, but no further.

3. Type-Driven Rightward Movement. The paper proposes a theory for the derivation of rightward DP-movement and parasitic gaps that achieves the representation for parasitic gap licensing proposed in Nissenbaum (2000) but allows a parasitic gap to license movement beyond vP according to local economy considerations. The parasitic gap domain is a null-operator structure, and thus a $\langle et \rangle$ predicate, which is merged cyclically to the type t matrix clause. Rightward movement is allowed because it converts the matrix clause to a derived predicate, which allows it to compose via predicate conjunction with the parasitic gap domain. This repair strategy is made possible by a logical extension of the operation Merge based on the ideas that Merge can be counter-cyclic (Lebeaux 1988, a.o.) and should be decomposed into a number of smaller operations (Hornstein 2009). I propose a sub-type of Merge called *Mixed Merge*, which has been decomposed into the steps in (4).



The operation that establishes a sisterhood relation between syntactic objects cyclically combines a copy of the DP with the matrix clause to extend the tree. However, the operation that inserts a binder index after movement applies counter-cyclically to change the vP node into the needed *<et>* derived predicate. Thus, this movement, like quantifier raising, is type-driven.

4. Consequences and Predictions. This analysis straightforwardly accounts for instances of a parasitic gap in an adjunct not in the same clause where the rightward moved DP originates (5).

- (5) Tim thinks [that Pam already bought *e*] because he knows she loved *pg* thoroughly – the documentary about Bengal tigers.

This fact, in conjunction with the more basic obviation of the Right Roof Constraint like in (2), suggests that rightward DP-movement is not subject to unique locality conditions and is potentially unbounded, just like wh-movement, when the appropriate licensing conditions are present.

It is also possible for a parasitic gap to simultaneously appear in an adjunct clause below and in an adjunct clause above negation (6).

- (6) Sam didn't buy *e* before tasting *pg* because he didn't like *pg* last time – the German potato salad at this deli.
“Because Sam didn't like the potato salad last time, it's not the case that he bought it before he tasted it.”

Given the analysis being proposed, the displaced DP must have ultimately moved beyond the vP and above negation. But it also must have moved cyclically through a position above each adjunct in order to repair the type mismatch between the parasitic gap domain and the matrix clause.

As a final point, it was noted above that this system allows the rightward movement to be licensed by a local economy constraint on movement. This is a desirable property of the current analysis that the paper argues is absent from the pure late-merge analysis in Nissenbaum (2000). As Nissenbaum notes, a parasitic gap is required in every adjunct clause that the DP moves past. This is also true when the adjuncts are adjoined to different domains in (7) below, just as above.

- (7) Sam didn't buy *e* before tasting [*pg*/*the sample] because he didn't like *pg* last time – the German potato salad at this deli.
“Because Sam didn't like the potato salad last time, it's not the case that he bought it before he tasted the sample.”

If a global economy constraint licensed this movement, one would predict that a single parasitic gap in the higher adjunct should be enough to license the rightward displacement in (7).

5. Conclusion. To conclude, this paper not only supports the existence of rightward movement, but demonstrates its potential unboundedness (a result reached independently for Right Node Raising constructions by Sabbagh 2007) and its successive-cyclic application. These supposed differences between rightward DP-movement and wh-movement, then, are only apparent. The remainder of the paper spells out the claim that the true difference between rightward DP-movement beyond typical Heavy-NP Shift and wh-movement lies purely in their licensing conditions.

References. Akmajian, A. 1975. *LI* 6:115–129. Chomsky, N. 1977. In *Formal Syntax*. Engdahl, E. 1983. *Linguistics and Philosophy* 6:5–34. Hornstein, N. 2009. *A Theory of Syntax: Minimal Operations and Universal Grammar*. Larson, R. 1989. In *Lexicon Project Working Papers, Volume 27*. Lebeaux, D. 1988. Doctoral Dissertation, UMass, Amherst, MA. McCloskey, J. 1999. *Syntax* 2:189–209. Nissenbaum, J. 2000. Doctoral Dissertation, MIT, Cambridge, MA. Postal, P. 1994. *LI* 25:63–117. Ross, J.R. 1967. Doctoral Dissertation, MIT, Cambridge, MA. Sabbagh, J. 2007. *NLLT* 25:349–401. Wexler, K. & P. Culicover. 1980. *Formal Principles of Language Acquisition*. Wilder, C. 1999. In *Proceedings of WCCFL 18*.