Why A-movement does not license parasitic gaps

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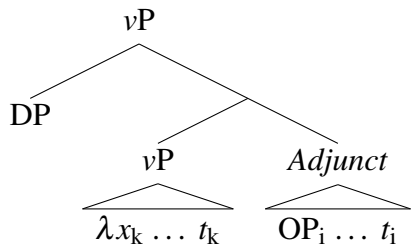
1. Summary. A well-known difference between A- and Ā-movement is that only instances of Ā-movement are capable of licensing parasitic gaps (1a–b).

(1)a. What did Kim file __ [after grabbing __]? b. *The paper was filed __ [after grabbing __].

This paper argues that (1a–b) follows from Nissenbaum's (2000) theory of parasitic gaps and the idea that Ā-movement involves abstraction over *choice functions*, and not individuals, as proposed by Sauerland (1998) for Weak Crossover. I show that this also explains Pylkkänen's (2008) observation that depictives are licensed like parasitic gaps, but with opposite requirements: depictives are licensed by A-movement or from base positions, but not by Ā-movement.

2. Nissenbaum (2000). Nissenbaum proposes that parasitic gaps appear because intermediate successive-cyclic movement to the edge of *v*P and null operator movement inside an adjunct each trigger λ-abstraction over individuals. The resulting predicates are conjoined to form a single predicate (2), via Predicate Modification.

(2)



Two problems arise under this analysis, however: 1) operator gap adjuncts should be able to combine with argument-introducing heads, and license an operator gap from thematic positions as well, and 2) intermediate A-movement should be able to license parasitic gaps too. To deal with these issues, Nissenbaum suggests that there is no intermediate A-movement and that the relevant adjuncts can only attach to maximal projections (see also Nissenbaum and Schwarz 2011).

3. Pylkkänen (2008) on depictives. Depictives can describe subjects as well as direct objects, but cannot modify indirect objects or complements of prepositions (3a–b).

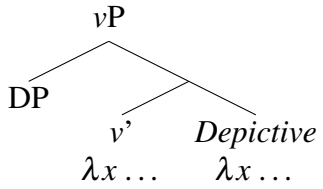
(3)a. Sam_i gave Ted_k coffee $\text{drunk}_{i/*k}$. b. Sam_i danced with Ted_k $\text{drunk}_{i/*k}$.

Pylkkänen (2008) observes that A-movement of these DPs (4a), including intermediate A-movement (4c), allows for depictives to be licensed, but not Ā-movement (4b).

(4)a. Ted_k was danced with __ drunk_k. b. *Who_k did Sam dance with __ drunk_k?
c. Ted_k turned out [$_{\text{TP}}$ __ to have been told __ all the secrets drunk_k].

Following Geuder (2000), Pylkkänen analyzes depictives as <e,st> predicates, which attach to V or *v*' and form a conjoined predicate via Predicate Modification (see also Bruening 2015). If A-movement involves an intermediate movement step to *v*P (*cf.* Legate 2003), triggering abstraction over individuals, A-movement can license depictives in the same configuration. As Pylkkänen points out, this analysis of depictives is analogous to Nissenbaum's treatment of parasitic gaps, However, the elements that license depictives are the *inverse* of those that license parasitic gaps. A solution might be to posit different landing sites for intermediate A- and Ā-movement. But, as Pylkkänen notes, parasitic gaps can be licensed *inside of a depictive* (6).

(5)



(6) Which country did he die for __ [still loyal to __]? (Pylkkänen 2008:40)

I will show that such examples obey the same constraints as other parasitic gaps. (6) then makes clear that parasitic gaps and depictives do not differ in constraints on attachment, and must be able to be licensed in the same position. (The same point can be made with adjunct control, which has a similar distribution to depictives, if adjunct control is given a predicative analysis (Landau 2013:sec. 6.2).) I propose that A- and Ā-movement involve the *same* step of intermediate movement, to the *v*P edge, and that there are no syntactic constraints on whether adjuncts can attach to maximal or intermediate projections. Instead, I suggest that what distinguishes A- and Ā-movement is that they create ***different predicates***, specifically because A-movement triggers λ-abstraction over individuals, while Ā-movement abstracts over *choice functions*.

4. Choice functions and Ā-movement. Following Sauerland (1998), Ruys (2000), and Abels and Martí (2010, 2011), I propose that Ā-movement involves abstraction over *choice functions*. In this approach, all quantifiers quantify over choice functions. *Wh*-phrases, for instance, are existential quantifiers over choice functions (*cf.* Reinhart 1998). To interpret Ā-movement chains in this way, two operations are necessary: 1) (distributed) deletion of the NP restrictor in the higher copy, and 2) replacement of the quantifier *which* in the lower copy with a choice function variable. This syntax and the associated LF are represented in (7).

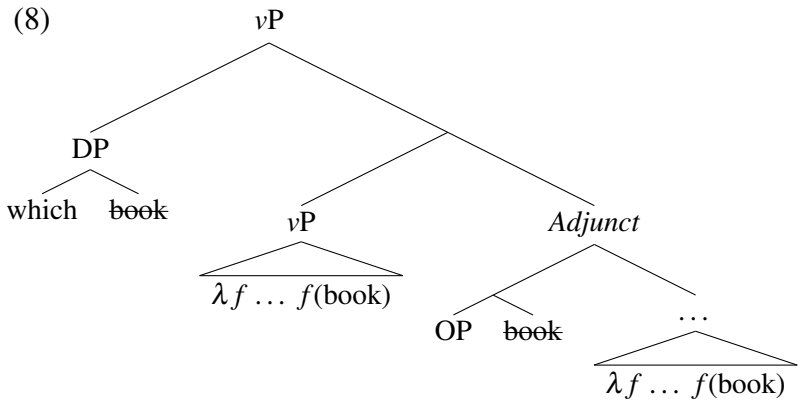
(7) [which ~~book~~] λf. do you like [f book] **LF:** $\lambda p.\exists f.(p = \lambda w.$you like f(book) in w)

Such an account has advantages in dealing with split scope and conservativity (Abels and Martí 2010, 2011), as well as Weak Crossover. If pronouns are always individuals, then Ā-movement cannot bind pronouns: it involves abstraction of the *wrong type* (Sauerland 1998; Ruys 2000). (See Ruys 2004 for how this approach can handle Weakest Crossover effects.)

5. A choice function analysis of parasitic gaps. If the choice function approach to Ā-movement is correct, then A- and Ā-movement trigger different types of abstraction and so create different predicates. Since conjunction requires predicates of the same type, Predicate Modification should only be possible with one in any configuration, but never both.

For parasitic gaps, I propose that operator movement, like other instances of Ā-movement, creates abstraction over choice functions. The resulting predicate can be conjoined with a predicate created by intermediate Ā-movement (8), just as in Nissenbaum (2000). (Deletion of the NP *book* applies in the intermediate *wh*-copy at the *v*P edge. The occurrence of *which* will end up replaced by a choice function variable bound by the copy in Spec-CP.) I also posit an NP restrictor that moves along with the null operator OP and undergoes deletion under *matching*. The *wh*-phrase and null operator must have the same restrictor to ensure that the choice function picks out the same individual. Deletion under matching I adopt from the analysis of matching relative clauses (e.g. Carlson 1977; Sauerland 1998). In accordance with this, like matching relative clauses, parasitic gaps lack reconstruction effects for Condition A, as in the examples in (9a–b), and also for Condition C and variable binding, as extensively discussed by Nissenbaum (2000:Ch. 2, sec. 1.2).

(8)



(9)a. Which pictures of himself$_i$ did John$_i$ sell __ [before Mary had a chance to look at __]?

b. *Which pictures of himself$_i$ did Mary sell __ [before John$_i$ had a chance to look at __]?

6. Recap. A-movement does not license parasitic gaps because it triggers abstraction over individuals, and so creates a different predicate than operator movement. Instead, predicates formed by A-movement can conjoin only with predicates that are not the result of Ā-movement, such as depictives (and possibly controlled adjuncts). In addition, such adjuncts should always be able to conjoin also with argument-introducing heads, just as observed. We then have a principled reason why the positions created by A-movement pattern with thematic positions, and Ā-positions do not. Finally, I will show that this proposal easily accommodates examples like (6), and may shed light on the difference between A- and Ā-movement with regard to reconstruction for Condition C as well as the ban on improper movement.

7. Selected references: Nissenbaum, J. 2000. *Investigations of covert phrase movement*. ○ Pylkkänen, L. 2008. *Introducing arguments*. ○ Sauerland, U. 1998. *The meaning of chains*.