Obligatory (non)parasitic gaps

Bartosz Wiland
Adam Mickiewicz University, Poznań
15 Jan 2005

Abstract: The paper advocates the idea that at least in English, obligatory gaps are used in the positions in which either an R-expression or an overt pronoun would produce a constraint violation. Thus, in order to satisfy conditions on interpretation, the computational system (CS) renders the derivation to converge at LF. In the case of crossed-over coindexed expressions the strategy for the CS is to reconstruct the nonpronominal item into a pronominal one and subsequently delete it once it is accessible as a bound variable. The analysis additionally shows that the actual gap is not a parasitic gap.

Key words: parasitic gaps, cross-over, vehicle change, linked pronouns, bound variables, insulation effect

Introduction

In the discussion it is argued that what originally has been called an obligatory parasitic gap is actually not a real parasitic gap. First, it will be observed that even earlier accounts of gaps in subject islands suggested that the computational system (CS) allowed for gapping in order to secure the interpretation observing all constraints on derivation. Then it is shown that the application of Kennedy's (1997) island and strong crossover tests as well as Condition B test point to the fact that in the relevant positions parasitic gaps do not exist and, consequently, the idea of obligatory gaps as instances of deleted pronouns under bound variable analysis is advocated.

1. Obligatory gaps: the crossover constraint and linked pronouns.

1.1. The crossover constraint

Since Engdahl (1983) it has been claimed that P-gaps can be classified into two types:

(1) Optional parasitic gaps:
   a. follow the trace
   b. mostly occur in adverbial and complement clauses
   c. are in almost free variation with unstressed personal pronouns, which are understood to be coreferential to or bound by the filler

(2) Obligatory parasitic gaps:
   a. precede the trace
   b. primarily occur in gerunds and noun complements
   c. cannot be normally replaced by a coreferential pronoun without a significant loss of acceptability

According to the survey results given in Engdahl (1983), at least 65% of respondents marked sentences with obligatory P-gaps as more natural than their versions with pronouns[1]. The sample sentence is given below:

(3) a. Which boy$_1$ did Mary's talking to *pg* bother t most?
b. *?Which boy$_1$ did Mary's talking to him$_1$ bother t most?

The original explanation for the impossibility to replace a P-gap with a pronoun in gaps preceding the trace was that a pronoun cannot be bound by a wh-element which crossed it over. The following example shows the violation of Postal's Crossover constraint (Postal 1971):

(4) Who$_1$ does she$_{*1/2}$ think t$_1$ called yesterday?

Sentences with a gap, on the other hand, assure that the listener does not go beyond the very sentence to locate the referent, as a P-gap is interpreted as coindexed with a moved element of the same sentence. Engdahl (1983) maintains that in this way, the intentional interpretation of the sentence is secured, yet there is a way of obtaining the same interpretation with a coindexed pronoun:

(5) a. *Who$_1$ does she$_1$ think t$_1$ called yesterday?
b. Who$_1$ thinks she$_1$ called yesterday?

(5a) is ruled out as it violates Postal's crossover constraint (Postal 1971) as well as the leftmost constraint (Jacobson 1977), according to which a wh-phrase cannot bind the crossed-over pronoun. In obligatory parasitic gap constructions, as in (3a), using a gap is a way of avoiding the constraint violation (Engdahl 1983), and securing the desired interpretation at the same time.

An independent argument in favor of the general strong tendency of avoiding coreferential (or linked) overt pronouns in main clauses comes from early sentence

---

[1] Engdahl's (1983) analysis is based on the poll results of the survey carried out at Stanford University in 1981: five sets of sentences with either a parasitic gap or a pronoun were presented to the group of 28 subjects. The preference was indicated as given below (Nb.: (iv) and (v) investigate the preference for obligatory P-gaps):

(i) a. This is the kind of food$_i$ you must cook t before you eat pg [15]
b. This is the kind of food$_i$ you must cook t before you eat it$_i$ [13]
(ii) a. Which girl$_i$ did you send a picture of t to t? [19]
b. Which girl$_i$ did you send a picture of her$_i$ to t? [13]
c. Which girl$_i$ did you send a picture of t to her$_i$? [2]
(iii) a. Susan always files t without reading t properly, [$_{NPi}$ all the memos from the lowlevel administration.] [12]
b. Susan always files t without reading them$_i$ properly, [$_{NPi}$ all the memos from the low-level administration.] [16]
(iv) a. Which boy$_i$ did Mary's talking to pg bother t most? [15]
b. Which boy$_i$ did Mary's talking to him$_1$ bother t most? [8]
(v) a. Which student$_i$ did your attempt to talk to pg scare t to death? [17]
b. Which student$_i$ did your attempt to talk to him$_i$ scare t to death? [8]

processing analyses. While embedded clauses are interpreted in a shallow manner, matrix clauses receive a full interpretation. In full clausal interpretations, all referring expressions are assigned their referents, which also include pronouns (Bever and Townsend 1979). Additionally, Engdahl (1983) points to the fact that the shallow interpretation of subordinate clauses where the assignment of referents to pronouns is postponed supports the observation that in natural languages backward anaphora is licit in embedded clauses. The immediate interpretation of matrix pronouns is, in turn, consistent with the fact that pronouns c-commanding or almost c-commanding other NPs or DPs occur in main clauses (Lasnik 1976, Reinhart 1983).

1.2. Linked pronouns

Consider the following example of Weak Cross Over effect:

(6) Who wonders what who stole?

In order to satisfy WCO effect, Hornstein (1995, 2001) proposes that:

(7) Wh *in situ* is interpreted functionally like bound pronouns (Hornstein 1995)
(8) A pronoun cannot be linked to a wh-t/variable to its right (Hornstein 2001)

In concert with (7) and (8), the only acceptable reading is the one in (9a):

(9) a. Who_1 wonders [what_2 [pron_2] bought t_1]
b. *Who_1 wonders [what_2 [pron_2] bought t_2]

(9b) has the trace, t_2, to the right of the bound pronoun, which according to the assumption in (8) violates WCO, and hence this reading is ruled out.

Note that Postal's crossover constraint and the leftmost constraint outlined in section 1.1. dismiss sentences like in (3) or (5) on the basis of wh-movement implications. Adopting the WCO strategy given in (8), the conclusion is that a linked pronoun does not tolerate a kin copy to its right.

Consider examples with a linked pronoun:

(10) a. *Who_1 did he_1 say t_1 was afraid of ghosts?
b. Who_1 t_1 said he_1 was afraid of ghosts?
(11) a. *Who_1 did she_1 think t_1 had locked the door?
b. Who_1 t_1 thought she_1 had locked the door?

(10b) and (11b) are favored over their counterparts for economy reasons: shorter move applies. There is a difference in the application of shorter move in (10) and (11) and the Superiority Effect (6). Lasnik and Saito (1992) report on the double meaning of questions like (6) due to the fact that wh-elements need not be coindexed. Here, the pronouns are linked.[2,3]

---

[2] Lasnik and Saito (1992) discuss the possible ambiguous reading of sentences like (4), repeated below:

(i) Who wonders what who stole?

Constructions with obligatory P-gaps parallel with the above derivations. In the approach developed here, an obligatory P-gap is a way-out strategy that secures grammaticality.

(12) a. Which boy$_1$ did Mary's talking to *pg*$_1$ bother t$_1$ most?
b. *Which boy$_1$ did Mary's talking to him$_1$ bother t$_1$ most?
c. Which boy$_1$ did Mary's talking to him$_2$ bother t$_1$ most?
d. *Which boy$_1$ did Mary's talking to *pg*$_1$ bother him$_1$ most?

A P-gap is always linked, but neither a gap nor a pronoun-t need observe the rule in (8). (12b) is ungrammatical as it violates (8): the pronoun in the noun complement is linked to wh-t to its right. (12a) is grammatical as the linked pronoun is deleted. (12c) remains grammatical as the pronoun is unlinked and does not violate (8).

2. Vehicle change

2.1. Apparent parasitic gaps (Kennedy 1997)

While P-gap constructions are sensitive to islands, Kim and Lyle (1995, 1996) point out that constructions with an (apparent) parasitic gap do not show island violations once the gap is contained in a deleted VP. The following set of examples comes from Kennedy (1997: 697-698); the (b) examples are perfectly grammatical when a P-gap is in the deleted VPs; the brackets mark extraction islands:

(13) Wh-island:
b. *Which article$_1$ did you read t$_1$ after Jim asked [who would be willing to summarize *pg*$_1$]?
c. Which article did you read after Jim asked [who would be willing to {. . .}]?

(14) Adjunct island:
a. *Which movie$_1$ did you see t$_1$ because Polly was so excited [after going to *pg*$_1$]?
b. Which movie did you see because Polly was so excited [after she did {. . .}]?

Both *who* of the matrix Comp and the *what* of the embedded Spec-CP can be paired with the subject who of the embedded clause. In the latter case, to avoid the Superiority violation, the only acceptable reading is that of *'A wonders what B stole, and C wonders what D stole'*. Irrespectively of the reading, the wh-element seeks the shorter route to C^0.

[3] While there are two syntactic ways of asking questions with linked and unlinked pronouns, respectively:

(ii) a. Who$_1$ thinks she$_1$ called yesterday?
b. Who$_1$ does she$_2$ think t$_1$ called yesterday?

there is no such possibility while dealing with two who-elements, hence WCO Effect. Hornstein's (2001) rule given in (7) tackles the interpretation that does not stem from the word order.

(15) Complex NP island:
   a. *Dick Dale$_1$, who we attempt to emulate t_1 despite the admonitions of [many people who say we shouldn't try to sound like pg_1], is performing tonight at the Catalyst.
   b. Dick Dale$_1$, who we attempt to emulate t_1 despite the admonitions of [many people who say we shouldn't {. . .}], is performing tonight at the Catalyst.

(16) Coordinate structure:
   a. *Which books$_1$ did you read t_1 after learning that Erik [read pg_1 and found them$_1$ interesting]?
   b. Which books did you read after learning that Erik [did {. . .} and found them interesting]?

Kennedy (1997) proves that sentences with deleted VPs do not contain P-gaps at all and therefore do not show Subjacency effects. Instead, they contain pronouns that are interpreted as bound variables. Elided VPs have been claimed to have a full syntactic structure at LF (e.g. Lasnik 1995a, 1995b, 1997). To account for the fact that sentences with elided VPs do not show Subjacency effects and are consequently claimed not to have P-gaps, Kennedy (1997) adopts vehicle change by Fiengo and May (1994), where it is claimed that reconstruction phenomena include nondistinct features. In the case of apparent P-gap in deleted VPs, it operates in the way that coindexed elements differ in the value of the pronominal feature:

(17) Vehicle change (Fiengo and May 1994: 218, Kennedy 1997, ex. 13):
   $X_{[+pro]i}$ is a reconstruction of $Y_{[-pro]i}$.

Fiengo and May (1994) prove that deletions licensed by vehicle change are sensitive to Condition B (the underlined part is the LF representation of the deleted VP):

(18) The headmistress suspended Michael$_1$ because he$_1$ wanted her to {suspend him$_1$}.
(19) *The headmistress suspended Michael$_1$ because he$_1$ couldn't {suspend him$_1$}.

While (18) is grammatical and observes both Condition B and C, (19) violates Condition B (and observes Condition C). Kennedy (1997) concludes from these facts that Condition B effects are a test to check if the deletion involves vehicle change. Moreover, as all operations and structures based on Ā-movement, including P-gaps, are sensitive to strong crossover (Cinque 1990, Williams 1990), then sentences with elided VPs that contain pronouns licensed by vehicle change should not show SCO effects (and should observe Condition B). And so, the following (a) examples with the pronoun instead of a P-gap do not show strong crossover effects, while their (b) counterparts with P-gap constructions do (example (22) is Kennedy's (1997) example (27)).

(20) a. Which deputy$_1$ did Kelly vote for t_1 because he$_1$ asked her to {vote for him$_1$}?
   b. *Which deputy$_1$ did Kelly vote for because he$_1$ asked her to support pg_1?
(21) a. Who$_1$ did Michael visit t_1 after she$_1$ asked him to {visit her$_1$}?
   b. *Who$_1$ did Michael visit after she$_1$ asked him to come to pg_1?
(22) a. Who$_1$ did you nominate t_1 without him$_1$ knowing that you did {nominate him$_1$}?
   b. *Who$_1$ did you nominate without him$_1$ knowing that you supported pg_1?

Kennedy (1997) concludes that sentences with VP-deletions contain "nonparasitic" gaps, which are actually pronouns licensed by vehicle change.

2.2. Further evidence for the island and strong cross-over tests

Consider examples of subject parasitic gaps from Engdahl (1985: 41):

(23) a. ?a person who$_1$ you admire t_1 because you know close friends of pg_1
b. *a person who$_1$ you admire t_1 because close friends of pg_1 become famous
c. ?a person who$_1$ you admire t_1 because close friends of pg_1 seem to {admire pg_1}

(23c) becomes acceptable as the P-gap is contained inside the elided VP. Postal (2001a) observes that what in (23c) is a missing parasitic gap, would be treated as nonparasitic gap by Kennedy (where the pronoun in the deletion site is interpreted as a bound variable):

(24) *a person who$_1$ you admire t_1 because close friends of pg_1 seem to {admire him$_1$}

The problem Postal (2001: 404-405) points to is that (23c) is acceptable, while (24) is not. In (24), the licenser (L-gap) is too remote from the parasitic gap, which makes the entire P-gap construction illegitimate.[4] In (23c) on the other hand, the object parasitic gap is an L-gap for the subject-internal P-gap, which makes the construction legitimate, thus, at least acceptable. Postal concludes that even though the above paradigm supported by the analysis based on the anti-c-command condition provides the evidence for the thesis that there are no instances of missing P-gaps in English (and in any other natural languages), Kennedy's island test and the strong crossover test can prove otherwise. The tests show that neutral missing P-gap constructions (NMP-gap cases) do not contain missing P-gaps, while subject missing P-gap cases (SMP-gaps whose L-gap is missing within a deleted VP) do, as NMP-gap constructions do not show island violations, whereas SMP-gap structures do (see the examples of contrasting pairs under (13)-(16)). It is on this basis that Kennedy (1997) claims that a NMP-gap construction does not contain a parasitic gap. Postal's observation, however, is that when we apply the same tests to SMP-gap cases (where the sentences with VP deletions are correct and

[4] Structurally, the construction in (24) is problematic with regard to the anti-c-command constraint on parasitic gap licensing and earlier accounts of P-gaps. For example, Longobardi (1985) employs Kayne's (1984) Connectedness Condition to show that at least two coindexed parasitic variables are bound by a single operator.

(i) Connectedness Condition (Kayne 1984)
Given a maximal set of empty categories $\beta_1, \ldots, \beta_n$, each locally bound by the same antecedent α in a tree T, the union formed by the g-projection sets of every β by the antecedent α must form a subtree of T.

This is in concert with Engdahl's (1983) initial observation that licensing variables cannot c-command parasitic gaps: once it happens, the operator that c-commands the licenser becomes a non-local binder.

their counterparts with a P-gap are not), we have a different result as both sentences show island violations (the examples come from Postal 2001: 406-407):

(25) Complex NP island:
   a. *[Which author]$_1$ did they defend t_1 despite the fact that friends of pg_1 didn't want to defend pg_1?
   b. *[Which author]$_1$ did they defend t_1 despite the fact that friends of pg_1 didn't want to?

Note the contrast between the ungrammatical SMP-gap construction in (25) and the grammatical NMP-gap structure in (26):

(26) Which author$_1$ did they defend t_1 despite the fact that Sally didn't want to?

(27) Coordinate structure island:
   a. *That the report which$_1$ Arlene copied t_1 after critics of pg_1 read pg_1 and found it_1 interesting.
   b. *That the report which$_1$ Arlene copied t_1 after critics of pg_1 did and found it_1 interesting.

Again, compare the ungrammatical SMP-gap construction in (27) with the grammatical NMP-gap structure under (28):

(28) That the report which$_1$ Arlene read t_1 after Nick did and found it_1 interesting.

(29) Wh-island:
   a. *the one who$_1$ they hired t_1 after friends of pg_1 said it was unknown why Myron wouldn't hire pg_1
   b. *the one who$_1$ they hired t_1 after friends of pg_1 said it was unknown why Myron wouldn't pg_1

The example in (29) once again contrasts with the otherwise grammatical NMP-gap construction in (30):

(30) the woman who$_1$ they hired t_1 after saying it was unknown why Myron wouldn't

Postal's (2001) application of the strong cross over test shows the similar results. As it was pointed to in the previous subsection, standard parasitic gaps show strong cross over effects and Kennedy's SCO test proves that NMP-gap structures do not (as in (20)-(22)). This test when applied to SMP-gaps shows that they do show strong cross over effects:

(31) a. *[Which candidate]$_1$ did the Smiths vote for t_1 because neighbors of pg_1 said he_1 could convince the Republicans to vote for pg_1 ?
   b. *[Which candidate]$_1$ did the Smiths vote for t_1 because neighbors of pg_1 said he_1 could convince the Republicans to?

As expected, an NMP-gap construction does not show strong cross over effects:

(32) [Which candidate]$_1$ did the Smiths$_2$ vote for t_1 because they$_{2/3}$ said he$_1$ could convince the Republicans to?

Postal (2001) concludes that Kennedy's tests support his thesis that (in elided VPs) NMP-gap cases do not involve parasitic gaps (they are other words 'nonparasitic'), but at the same time the very tests show that subject-missing parasitic gap constructions (SMP-gaps) are instances of true parasitic gaps. Postal's application of the island and the strong crossover test independently shows how representative the tests are and, consequently, directs toward the reconstruction/vehicle change approach to nonparasitic cases.

3. Vehicle change and pronoun deletion in subject islands

In section 1 it has been proposed that what we have so far called 'obligatory P-gaps' act as deleted pronouns in the syntactic 'way-out' strategy. Adopting vehicle change, we may now widen the spectrum of the analysis and proceed to other cases of gaps in subject islands. Consider the following:

(33) a. My attempt to talk to Jack$_1$ scared him$_1$.
b. *My attempt to talk to him$_1$ scared Jack$_1$.
(34) a. *Which student$_1$ did your attempt to talk to Jack$_1$ scare t_1 ?
b. ?Which student$_1$ did your attempt to talk to him$_1$ scare t_1 ?[5]
c. Which student$_1$ did your attempt to talk to ___$_1$ scare t_1 ?

We assume (33a) to be the representation at LF. In (34a) the wh-movement produces ungrammaticality. As the coreference between a pronoun and an R-expression is unacceptable due to Condition B (cf. (33b)), also Condition C disallows coreference between two c-commanding R-expressions:

(35) a. *[Jessica]$_1$ thinks that we despise [Jessica's brother]$_1$.
b. *?[Jessica's neighbours]$_1$ think that we despise [Jessica's brother]$_1$.

Hence, the coreference in (34a) between the c-commanding copy {*which student*} and the coindexed *Jack* produces ungrammaticality. At LF the vehicle change operation of $X_{[+pro]i}$ being a reconstruction of $Y_{[-pro]i}$ shifts an R-expression into a pronoun and we end up with an intermediate structure (34b). The construction does not show strong crossover effect and is sensitive to Condition B, which is a positive test for vehicle change (cf. Kennedy 1997)[6], whereas 'normal' P-gap constructions do show strong crossover effect (Williams 1990, Munn 2001):

(36) a. *Whose$_1$ brother did they talk to t_2 after he$_1$ saw pg_2?
b. *Whose$_1$ brother did they talk to t_2 and he always despises pg_2?
c. *Whose$_1$ brother did they talk to t_2 before he$_1$ thought that Jeff saw pg_2?

---

[5] The example (22b) was marked as 'most natural' by 32% of respondents in the study carried out at Stanford University in January 1981 (Engdahl 1983).

[6] Here, the strong crossover test is actually inferior to Condition B test, as it is the whole subject not the pronoun itself that c-commands the trace of the operator, however, the two are coindexed (cf. insulation effect facts in section 4).

Once the intermediate step (34b) has been obtained via vehicle change, in the final step (34c) the pronoun is deleted as it is interpreted as a bound variable.[7] Note that when the (undeleted) pronoun is noncoreferential, the sentence is grammatical:

(37) Which student$_1$ did your attempt to talk to him$_2$ scare t$_1$?

The derivation is sensitive to Condition B and does not show strong crossover effects, which are diagnostics for vehicle change. This indirectly shows that the reconstruction/vehicle change operation is not limited to VPs (which should not come as unexpected provided that the rule in (17) is complete, nor was it ever claimed in Fiengo and May 1994).

4. Insulation effect

In explaining the phenomenon of ('nonparasitic') gaps in subject islands we have adopted Kennedy's (1997) argument that gaps sensitive to Condition B must be treated as pronouns. Apparently, there exist sentences with subject/Genitive islands containing a coindexed pronoun that are acceptable:

(38) *?Which boy$_1$ did [Betty's talking to his$_1$ brother] excite?
(39) ?Which boy$_1$ did [Betty's talking to Lucy [about him$_1$]] excite?
(40) ?Which actress$_1$ did [the director's discussing with Robert deNiro [about her$_1$]] nobilitate?

This fact can be explained on the basis that complex Genitive constructions contain the possessive that is not in the most local domain of the antecedent, which ameliorates Condition B effects. For instance, Witkoś (2002) shows how Condition B effects in Polish can be weakened when there is a complex possessive specifier:

(41) Witkoś (2002: 316)
a. Piotr$_1$ widział swojego$_1$/*jego$_1$ brata.
Piotr-NOM saw self his brother-ACC
'Piotr saw his brother.'
b. Piotr$_1$ znalazł [książkę swojej$_1$/?jego$_1$ mamy].
Piotr-NOM found book-ACC self his mother-GEN
'Piotr found his mother's book.'

The argument is developed along the lines of Kuno's Insulation Effect against Condition B' (Kuno 1997):

(42) Insulation Effect (Kuno 1997: 12)
The deeper a given non-anaphor is embedded in a larger NP, the more insulated it is from the effect of Principle B'.

The examples in (39) and (40) can be accounted for on the basis of insulation effect.

[7] The pronoun is interpreted as a bound variable; otherwise it would exhibit strong crossover effect. The situation parallels with what we observe in elided VPs with pronouns (Kennedy 1997).

Conclusion

In the approach presented here the obligatory gap is the result of the syntactic way-out strategy that secures grammaticality of a desired interpretation without violating any syntactic constraints, as the offending bound/linked pronoun is being deleted. The so-called "gap" in the relevant positions is only apparent. It is rather a linked pronoun licensed by vehicle change. At the Spell-out, it is a deleted pronoun interpreted as a bound variable.

References:

Bever, T. and D. Townsend. 1979. "Perceptual mechanisms and formal properties of main and subordinate clauses." In *Sentence processing*, ed. W. Cooper and E. Walker, 159-226. Hillsdale, NJ: Lawrence Erlbaum.

Cinque, G. 1990. *Types of Ā-dependencies.* Cambridge, MA: MIT Press.

Engdahl, E. 1983. "Parasitic gaps". *Linguistics and Philosophy* 6: 5-34.

Fiengo, R. and R. May. 1994. *Indices and identity.* Cambridge, MA: MIT Press.

Hornstein, N. 1995. *Logical Form: From GB to Minimalism.* Blackwell, Oxford.

Hornstein, N. 2001. *Move! A Minimalist Theory of Construal*. Blackwell, Oxford.

Jacobson, P. 1977. "The syntax of crossing coreference sentences". Doctoral dissertation. University of California, Berkeley.

Kayne, R. 1984. *Connectedness and binary branching*. Dordrecht: Foris.

Kennedy, C. 1997. "VP-deletion and nonparasitic gaps". *Linguistic Inquiry* 28: 697-707.

Kim, S. and J. Lyle .1995. "Chain composition and Logical Form". Ms. University of Washington, Seattle.

Kim, S. and J. Lyle. 1996. "Parasitic gaps, multiple questions, and VP ellipsis". In *The Proceedings of the Fourteenth West Coast Conference on Formal Linguistics*, ed. J. Camacho, L. Choueiri, and M. Watanabe, 287-301. Stanford, CA: CSLI Publications.

Kuno, S. 1997. "Binding theory and the Minimalist Program". Ms. Harvard University.

Lasnik, H. 1976. "Remarks on coreference." *Linguistic Analysis* 2: 1-22.

Lasnik, H. 1995a. "Verbal Morphology: *Syntactic Structures* Meets the Minimalist Program". In *Evolution and revolution in linguistic theory: Essays in honor of Carlos Otero,* ed. H. Campos and P. Kempchinsky, 251-275. Washington, D.C.: Georgetown University Press.

Lasnik, H. 1995b. “A note on Pseudogapping”. *Papers on Minimalist Syntax: MIT Working Papers in Linguistics* 27: 143-163.

Lasnik, H. 1997. “A gap in an ellipsis paradigm: some theoretical implications”. *Linguistic Analysis* 27: 166-185.

Lasnik, H. and M. Saito. 1992. *Move α.* Cambridge, Mass.: MIT Press.

Longobardi, G. 1985. Connectedness, scope, and c-command. *Linguistic Inquiry* 16: 163-185.

Munn, A. 2001. “Explaining parasitic gap restrictions”. In *Parasitic gaps,* ed. P.W. Culicover and P.M. Postal, 369-392. Cambridge, MA: MIT Press.

Postal, P.M. 1971. *Cross-over phenomena.* New York: Holt, Reinhart, and Winston.

Postal, P.M. 2001. “Missing parasitic gaps”. In *Parasitic gaps,* ed. P.W. Culicover and P.M. Postal, 403-418. Cambridge, MA: MIT Press.

Reinhart, T. 1983. “Coreference and bound anaphora: A restatement of the coreference question.” *Linguistics and Philosophy* 6: 47-88.

Williams, E. 1990. “The ATB theory of parasitic gaps”. *The Linguistic Review* 6: 265-279.

Witkoś, J. 2002. “Wh-movement and anti-reconstruction effects: vehicle change and late merge”. In *Annual Workshop on Formal Approaches to Slavic Linguistics: The Second Ann Arbor Meeting*, ed. J. Toman, 311-34. Michigan Slavic Publication