# On Repair by Ellipsis
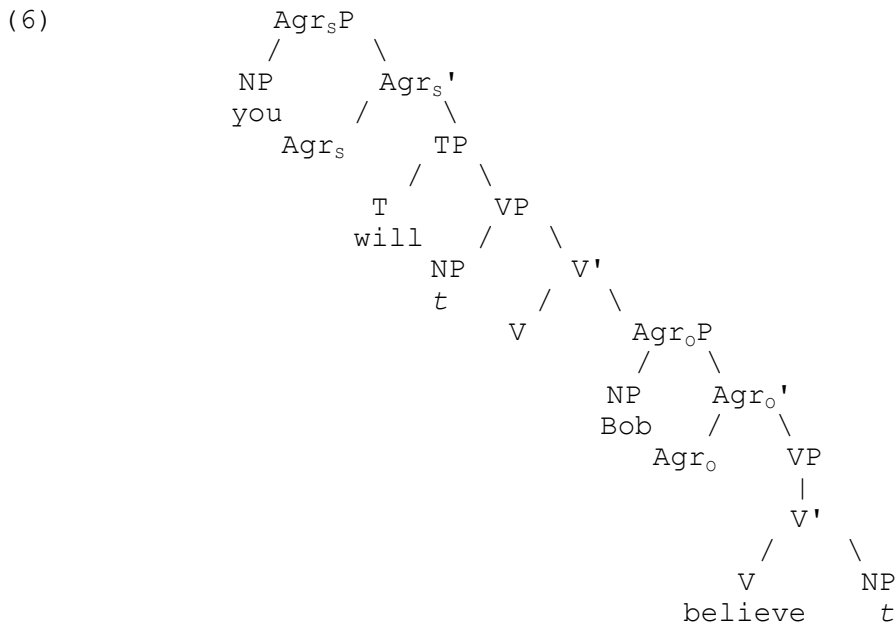
Howard Lasnik
University of Maryland
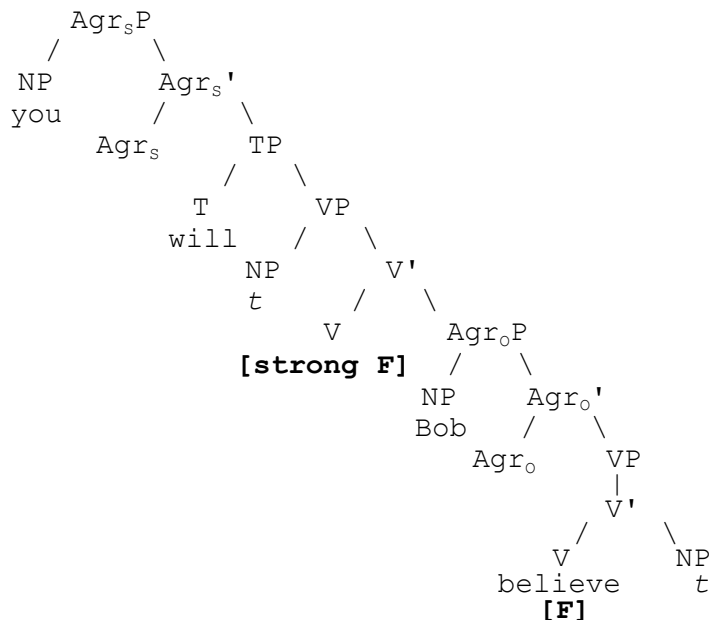
## I. Pseudogapping

(1) a If you don't believe me, you will ∅ the weatherman
    b I rolled up a newspaper, and Lynn did ∅ a magazine
    c Kathy likes astronomy, but she doesn't ∅ meteorology      Levin
      (1978)

(2) a The DA proved Jones guilty and the Assistant DA will ~~prove~~ Smith
      ~~guilty~~
    b ?John gave Bill a lot of money, and Mary will ~~give~~ Susan ~~a lot of money~~

(3)  You might not believe me but you will Bob

(4)  NP-raising to Spec of $Agr_O$ ('Object Shift') is overt in English.
     [Koizumi (1993), Koizumi (1995), developing ideas of Johnson
     (1991)]
(5)  Pseudogapping as overt raising to Spec of $Agr_O$ followed by
     deletion of VP.  [Lasnik (1995a)]

(6)
```
              Agr_S P
              /      \
          NP          Agr_S'
          you        /      \
              Agr_S       TP
                         /  \
                      T      VP
                    will    /   \
                         NP       V'
                          t      /  \
                              V      Agr_O P
                                    /      \
                                  NP        Agr_O'
                                  Bob      /      \
                                      Agr_O        VP
                                                   |
                                                   V'
                                                  /  \
                                                V      NP
                                            believe    t
```

(7)  *You will Bob believe

(8)
```
                    Agr_sP
                   /      \
                 NP        Agr_s'
                 you      /     \
                       Agr_s     TP
                              /     \
                            T        VP
                          will     /    \
                                 NP       V'
                                 t       /   \
                                       V      Agr_oP
                               [strong F]    /    \
                                           NP      Agr_o'
                                           Bob    /     \
                                               Agr_o      VP
                                                          |
                                                          V'
                                                        /    \
                                                      V       NP
                                                   believe     t
                                                     [F]
```

(9)   Once the matching feature of the lower lexical V is attracted,
      the lower V becomes defective.  A PF crash will be avoided if
      either pied-piping or deletion of a category containing the lower
      V (VP Deletion = Pseudogapping in the relevant instances) takes
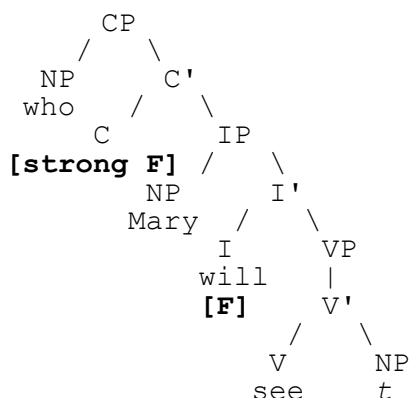      place.  [Lasnik (1999), developing an idea of Ochi (1999)]

## II. Sluicing 1 [Infl raising]

(10)  Sluicing - WH-Movement followed by deletion of IP (abstracting
      away from 'split Infl' details).  [Saito and Murasugi (1990),
      Lobeck (1990)]

(11)  Speaker A:  Mary will see someone.
      Speaker B:  I wonder who ~~Mary will see~~.

(12)  Speaker A:  Mary will see someone.
      Speaker B:  Who ~~Mary will see~~?

(13)
```
                   CP
                  /   \
                NP      C'
               who     /   \
                     C       IP
            [strong F]  /      \
                      NP        I'
                      Mary     /   \
                            I      VP
                          will     |
                           [F]     V'
                                 /    \
                               V       NP
                              see       t
```
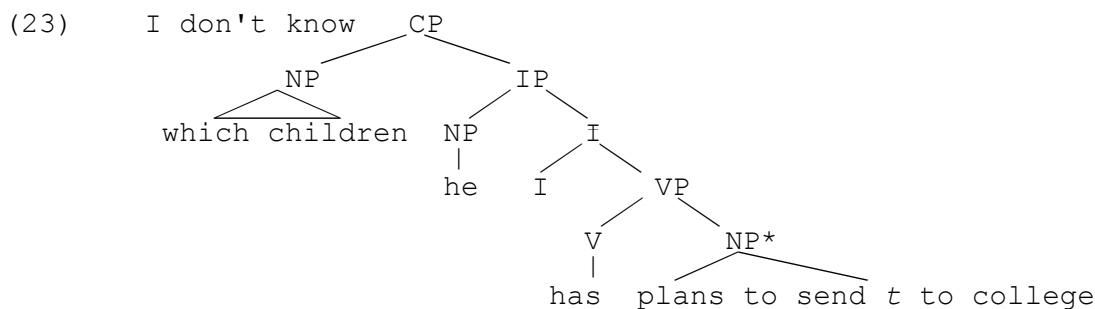
(14)  *Who Mary will see?
(15)   Who will Mary see?

(16)  Assume that matrix interrogative C contains the relevant strong
      feature, with the matching feature of Infl raising overtly to
      check it.  This leaves behind a phonologically defective Infl,
      which will cause a PF crash unless either pied-piping or deletion
      of a category containing that Infl (Sluicing) takes place.

## III. Sluicing 2 [Island violations]

(17)    I believe that he bit someone, but they don't know who (I
        believe that he bit)
(18)a  *I believe the claim that he bit someone, but they don't know
        who I believe the claim that he bit  [Complex NP Constraint,
        noun complement]
    b  (??)I believe the claim that he bit someone, but they don't know
        who
(19)a  *Irv and someone were dancing together, but I don't know who Irv
        and were dancing together  [Coordinate Structure Constraint]
    b  (??)Irv and someone were dancing together, but I don't know who
(20)a  *She kissed a man who bit one of my friends, but Tom doesn't
        realize which one of my friends she kissed a man who bit
        [Complex NP Constraint, relative clause]
    b (??)She kissed a man who bit one of my friends, but Tom doesn't
        realize which one of my friends
(21)a  *That he'll hire someone is possible, but I won't divulge who
        that he'll hire is possible  [Sentential Subject Constraint]
    b  (??)That he'll hire someone is possible, but I won't divulge who
                                    All above from Ross (1969)

(22)a  (*)I don't know which children he has plans to send to college
    b  He has plans to send some of his children to college, but I
        don't know which ones    Chomsky (1972)

(23)    I don't know    CP
                        /  \
                     NP      IP
                    /  \    /  \
            which children NP    I
                           |    /  \
                           he  I    VP
                               |   /  \
                               V      NP*
                               |     /  \
                              has  plans to send *t* to college

(24)    Chomsky suggests that * (# in Chomsky's presentation) is
        assigned to an island when it is crossed by a movement operation
        (the complex NP in (23)).  An output condition forbidding * in
        surface structures accounts for the deviance of standard island
        violations.
(25)    If a later operation (Sluicing in this case) deletes a category
        containing the *-marked item, the derivation is salvaged.
(26)    For Chomsky (1972) the condition banning * applies at surface
        structure.  The results are the same if, instead, it is a PF
        condition, as suggested by Lasnik (1995b), Lasnik (2001a).

**IV. The Case Filter**
  **A.  Amelioration of a constraint on Japanese _ga_/_no_ conversion**
                                                    Saito (2001)
(27)    Taroo-ga  / -no  itta tokoro
            -NOM    -GEN went place
        'the place where Taroo went'

(28)    A Case-marked object blocks _ga_/_no_ conversion.

(29)    Taroo-ga /*-no  hon -o   katta  mise
            -NOM/ -GEN book-ACC bought shop
        'the shop where Taroo bought a book'

(30) An object relative gap does not block _ga_/_no_ conversion.

(31)    Taroo-ga /-no  _e_ katta hon
            -NOM -GEN   bought book
        'the book that Taroo bought'

(32) A null object does not block <u>ga</u>/<u>no</u> conversion.

(33) Hanako-ga /*-no Ziroo-o  tureteiku tokoro-wa  Nagoya-zyoo -desu
          -NOM  -GEN    ACC take     place -TOP Nagoya Castle is
     'The place that Hanako is taking Ziroo is the Nagoya Castle.'

(34) Hanako-ga / -no    <u>e</u>   tureteiku tokoro-wa  Nagoya-zyoo -desu
          -NOM  -GEN       take     place -TOP Nagoya Castle is
     'The place that Hanako is taking (him) is the Nagoya Castle.'

(35)  If relative gaps can be null pronouns, as argued for by
       Perlmutter (1972), Murasugi (1991), then these two instances are
       one.
(36)  Now suppose these null pronouns are actually the results of
       ellipsis.  Then if the blocking effect is the result of
       accusative Case checking, failure to check can be repaired by
       deletion.

## B. A kind of exceptional Case marking normally available only under A'-movement

(37)  *I alleged John to be a fool

(38)   Verbs of this class cannot normally license 'exceptional' Case

(39)  ?John, I alleged to be a fool
(40)  ?Who did you allege to be a fool

(41)   But they can under A'-movement (as first discussed by Kayne).

(42)  John, I alleged to be a fool.  *Mary alleged John to be a fool
       too.
(43)  John, I alleged to be a fool.  ?*Mary alleged him to be a fool
       too.

(44)  John, I alleged to be a fool.  Mary did ~~[allege John to be a fool]~~ too.
(45)  <u>John</u> in (44) should be in violation of the Case Filter, but it is
       fine, evidently repaired by deletion.  This, along with Saito's
       analysis above, suggests the early version (Chomsky (1980)) of
       Case theory, where the Case Filter reflects a morpho-
       phonological requirement.

## V. Exceptional Case Marking (ECM) configurations and Condition B

(46)  *John$_i$ injured him$_i$
(47)  *John$_i$ believes him$_i$ to be a genius

(48)  *Mary injured him$_i$ and John$_i$ did too
(49)  ?Mary believes him$_i$ to be a genius and John$_i$ does too

(50)   Suppose Postal (1966), Postal (1974) was right (contra Chomsky
       (1973)) that the relevant structural configuration for such
       obviation is based on the notion clause-mate.  (For related
       discussion, see Lasnik (2002).)

(51)   Weak pronouns must cliticize onto the verb.
(52)   The detective brought him in
(53)  *The detective brought in him       Chomsky (1955)

(54)   Failure to cliticize in (49) is repaired by ellipsis.
(55)   In (48), on the other hand, the pronoun and its antecedents are
       clause-mates independent of cliticization.

(56) Potential problem, pointed out by Tom Roeper: In just those VP ellipsis situations where Condition B effects are ameliorated, so are Condition C effects. But this is unexpected since Condition C involves no locality, clause-mate or otherwise. A relevant example, parallel to (49) above, is the following:

(57) ??Mary believes John$_i$ to be a genius and he$_i$ does too

Compare:

(58) *He$_i$ believes John$_i$ to be a genius

(59) And even though Condition C involves no locality, once again, we find amelioration only in non-local domain:

(60)a *Mary injured John$_i$ and he$_i$ did too
   b *He$_i$ injured John$_i$

(61) Perhaps this is not really so surprising, as Condition C effects often disappear under ellipsis. Another example is:

(62)a Mary thinks John$_i$ is a genius and he$_i$ does too
   b *He$_i$ thinks John$_i$ is a genius

(63) It was facts like this that provided much of the motivation for the 'Vehicle Change' of Fiengo and May (1994). Fiengo and May show how + and -pronominal correlates can be equated for the purposes of ellipsis. Thus a name [-a, -p] and corresponding pronoun [-a,+p] count as identical. Fiengo and May's treatment is in terms of an LF copying theory of ellipsis, but nothing crucial changes if the equivalence is stated in terms of identity deletion.
(64) We now have a handle on the parallelism between Condition B and apparent Condition C in ellipsis contexts - (49) vs. (57). Even in the latter circumstance, the subject of the infinitival clause could actually be the pronoun *him*. The two examples then become identical for our purposes: it is failure of *him* to cliticize that is remediated by deletion.

(65) There are contexts where pronouns are disallowed, yet we still get apparent Condition C amelioration (a phenomenon noticed by Christopher Potts, and brought to my attention by Jason Merchant). The following is an example (though not of precisely a type discussed by Potts).
(66) *He$_i$ said that I should show Susan John$_i$
(67) Mary said that I should show Susan John, but he didn't ~~say that I should show Susan John/him~~
(68) *(He didn't say that) I should show Susan him

(69) Potts's point was that vehicle change won't account for the Condition C amelioration this time, since a pronoun in place of the name is still bad (though for other reasons).
(70) In this instance, the other reasons could be exactly what I appealed to earlier - the clitic nature of weak accusative pronouns. In that case, vehicle change would give the desired result.
(71) (68) then violates this PF requirement, and VP ellipsis deletes the PF violation.

(72) Mary showed Susan Bill$_i$ even though he$_i$ didn't want her to.
                    (Jason Merchant, attributed to Chris Potts)
(73) *He$_i$ didn't want Mary to show Susan Bill$_i$
(74) *He$_i$ didn't want Mary to show Susan him

(75)  *Mary showed Susan him

## VI. Failure of repair: Island violations - VP ellipsis

(76)   *They want to hire someone who speaks a Balkan language, but I
      don't know which they do [~~VP~~ ~~want to hire someone who speaks~~ *t*]
                                              Merchant (2001)
(77)  Compare (78), which also involves a relative clause island:
(78)    They want to hire someone who speaks a Balkan language, but I
      don't know which (Balkan language) [~~IP~~ ~~they want to hire someone~~
      ~~who speaks~~ *t*]                    Merchant (2001)

(79)   It appears that a certain senator will resign, but which senator
      [~~it appears that~~ *t* ~~will resign~~] is still a secret   [adapted from
      Merchant]

(80)   Sally asked if somebody was going to fail Syntax One, but I can't
      remember who [~~Sally asked if~~ *t* ~~was going to fail Syntax One~~]
      Merchant, from Chung et al. (1995)

(81)   She said that a biography of one of the Marx brothers is going to
      be published this year, but I don't remember which [~~she said that~~
      ~~a biography of~~ *t* ~~is going to be published this year~~]   [adapted
      from Merchant]

(82)  *It appears that a certain senator will resign, but which senator
      it does [~~appear that~~ *t* ~~will resign~~] is still a secret
      [that-trace]
(83)  *Sally asked if somebody was going to fail Syntax One, but I can't
      remember who she did [~~ask if~~ *t* ~~was going to fail Syntax One~~]
      [if-trace]
(84)   *She said that a biography of one of the Marx brothers is going
      to be published this year, but I don't remember which she did
      [~~say that a biography of~~ *t* ~~is going to be published this year~~]
      [subject condition]

(85)    But now notice that parallel 'failure of repair' obtains even
      when there was no violation in the first place.  [Lasnik (2001b)]

(86)    Extraction out of an embedded clause is typically fine and
      Sluicing is just as good, but VPE is bad:

(87)  They said they heard about a Balkan language, but I don't know
      which Balkan language they said they heard about
(88)  They said they heard about a Balkan language, but I don't know
      which Balkan language
(89)  *They said they heard about a Balkan language, but I don't know
      which Balkan language they did

(90)    Similarly for extraction out of an object NP:

(91)  They heard a lecture about a Balkan language, but I don't know
      which Balkan language they heard a lecture about
(92)  They heard a lecture about a Balkan language, but I don't know
      which Balkan language
(93)  *They heard a lecture about a Balkan language, but I don't know
      which Balkan language they did

(94)    Even short movement of a direct object shows rather similar
      behavior:

(95) They studied a Balkan language but I don't know which Balkan language they studied

(96) They studied a Balkan language but I don't know which Balkan language

(97) ??They studied a Balkan language but I don't know which Balkan language they did


(98)  Is VPE blocked when Sluicing is available (Sort of 'Delete as much as you can')?

(99)   Someone solved the problem.
     Who (?did)?


(100)   Is a VPE site precluded from containing a WH trace?

(101)   I know what I like and what I don't   Merchant (2001) [See Fiengo and May (1994) for similar examples.]


**B. Towards a Solution**  [This section is based on joint work with Danny Fox, Fox and Lasnik (2003).]

(102)   Fred said that Mary talked to a certain girl, but I don't know which girl <~~Fred said that Mary talked to t~~>

(103)   The Parallelism required for ellipsis is satisfied since the variables in the antecedent and the elided clause are bound by parallel operators and from parallel positions.

(104)   Now notice that in the structure, there are no intermediate traces in the elided portion (in angle brackets), indicating that there were no intermediate landing sites in the movement.

(105)   If there had been successive movement, under plausible assumptions the relevant portions of the antecedent and the ellipsis site would not be parallel, and this would prevent ellipsis.

(106)   But why is there no 'repair' with VPE?

(107)   VPE involves deletion of a smaller constituent than the clause that is elided in sluicing (VP vs. TP):

(108)   which girl  [$_{TP}$ he T [$_{AspP}$ did <$_{VP}$ ~~say that I talked to g(girl)~~>]]

(109)   *Fred said that Mary talked to a certain girl, but I don't know which girl he did

(110)   The unacceptability of VPE follows if we assume that one of the two remaining maximal projections, AspP or TP, is an 'island' that must be circumvented by adjunction or repaired by deletion. [This roughly follows the claim of Chomsky (1986) that all XPs are potential barriers.]  Since the island is not deleted, the escape hatch is required, and a violation of Parallelism is unavoidable, assuming that movement is not allowed to proceed in one long 'island-violating' step followed by short successive steps.  (Metaphorically, when you enter the subway, you must choose the express or the local.)

(111)   An interesting consequence of this line of analysis: Movement must not be allowed to proceed in one long 'island-violating' step followed by short successive steps. If this were allowed, the ellipsis site could lack any intermediate traces, making it parallel to its antecedent. And the undeleted portion could be free of *s.

(112)  Metaphorically, when you enter the subway, once you have chosen the express, you can't switch to a local train at a local stop.

(113) Since this account of the contrast between VPE and sluicing
      relies crucially on the fact that there is movement in the elided
      constituent but not in the antecedent constituent, a prediction
      is that if the antecedent clause is replaced with a clause that
      involves movement, both VPE and sluicing would be possible.

(114)a  I know which book John said that Mary read, but YOU don't know
        which one
     b ?I know which book John said that Mary read, but YOU don't know
        which one he did.

Compare:
(115)a  I know that John said that Mary read a certain book, but I
        don't know which one.
     b  *I know that John said that Mary read a certain book, but I
        don't know which one he did.

## References

Chomsky, Noam. 1955. The logical structure of linguistic theory. Ms.
      Harvard University, Cambridge, Mass. and MIT, Cambridge,
      Mass.[Revised 1956 version published in part by Plenum, New York,
      1975; University of Chicago Press, Chicago, 1985]
Chomsky, Noam. 1972. Some empirical issues in the theory of
      transformational grammar. In *Goals of linguistic theory*, ed. Paul
      Stanley Peters. Englewood Cliffs: Prentice-Hall Inc.
Chomsky, Noam. 1973. Conditions on transformations. In *A festschrift
      for Morris Halle*, ed. Stephen Anderson and Paul Kiparsky, 232-
      286. New York: Holt, Rinehart and Winston.
Chomsky, Noam. 1980. On binding. *Linguistic Inquiry* 11: 1-46.
Chomsky, Noam. 1986. *Barriers*. Cambridge, Mass.: MIT Press.
Chung, Sandra, William Ladusaw, and James McCloskey. 1995. Sluicing and
      Logical Form. *Natural Language Semantics* 3: 1-44.
Fiengo, Robert, and Robert May. 1994. *Indices and identity*. Cambridge,
      Mass.: MIT Press.
Fox, Danny, and Howard Lasnik. 2003. Successive cyclic movement and
      island repair: The difference between Sluicing and VP Ellipsis.
      *Linguistic Inquiry* 34: 143-154.
Johnson, Kyle. 1991. Object positions. *Natural Language and Linguistic
      Theory* 9: 577-636.
Koizumi, Masatoshi. 1993. Object agreement phrases and the split VP
      hypothesis. In *Papers on Case and Agreement I: MIT working papers
      in linguistics* 18, 99-148.
Koizumi, Masatoshi. 1995. *Phrase structure in minimalist syntax*.
      Doctoral dissertation, MIT, Cambridge, Mass.
Lasnik, Howard. 1995a. A note on pseudogapping. In *Papers on minimalist
      syntax, MIT working papers in linguistics* 27, 143-163. [Reprinted
      in Howard Lasnik, *Minimalist analysis*, 151-174. Oxford:
      Blackwell, 1999]
Lasnik, Howard. 1995b. Notes on ellipsis. Forschungsschwerpunkt
      Allgemeine Sprachwissenschaft. Berlin.
Lasnik, Howard. 1999. On feature strength: Three minimalist approaches
      to overt movement. *Linguistic Inquiry* 30: 197-217. [Reprinted in
      Howard Lasnik, *Minimalist investigations in linguistic theory*,
      83-102. London; Routledge, 2003]
Lasnik, Howard. 2001a. Derivation and representation in modern
      transformational syntax. In *Handbook of syntactic theory*, ed.
      Mark Baltin and Chris Collins, 62-88. Oxford: Blackwell.
Lasnik, Howard. 2001b. When can you save a structure by destroying it?
      In *Proceedings of the North Eastern Linguistic Society 31* Volume
      two, ed. M. Kim and U. Strauss, 301-320. GLSA.

Lasnik, Howard. 2002. Clause-mate conditions revisited. *Glot International* 6: 94-96.

Levin, Nancy. 1978. Some identity-of-sense deletions puzzle me. Do they you? In *Proceedings of the Fourteenth Annual Meeting of the Chicago Linguistic Society*, 229-240. Chicago Linguistic Society, Chicago University, Chicago, Ill.

Lobeck, Anne. 1990. Functional heads as proper governors. In *Proceedings of North Eastern Linguistic Society 20*, 348-362. GLSA, University of Massachusetts, Amherst.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.

Murasugi, Keiko. 1991. *Noun phrases in Japanese and English*. Doctoral dissertation, University of Connecticut, Storrs.

Ochi, Masao. 1999. Some consequences of Attract F. *Lingua* 109: 81-107.

Perlmutter, David. 1972. Evidence for shadow pronouns in French. In *Chicago which hunt, Chicago Linguistic Society*, ed. et. al. Paul M. Peranteau, 73-105.

Postal, Paul M. 1966. A note on 'understood transitively'. *International Journal of American Linguistics* 32: 90-93.

Postal, Paul M. 1974. *On raising: One rule of English grammar and its theoretical implications*. Cambridge, Mass.: MIT Press.

Ross, John Robert. 1969. Guess who? In *Papers from the Fifth Regional Meeting of the Chicago Linguistic Society*, ed. Robert I. Binnick, Alice Davison, Georgia M. Green, and Jerry L. Morgan, 252-286. Chicago Linguistic Society, University of Chicago, Chicago, Ill.

Saito, Mamoru. 2001. Genitive subjects in Japanese: Implications for the theory of empty pronouns. In *International symposium on non-nominative subjects*, ed. Peri Bhaskararao, 269-279. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa.

Saito, Mamoru, and Keiko Murasugi. 1990. N'-deletion in Japanese. In *University of Connecticut working papers in linguistics* 3, 87-107.