# The EPP and Repair by Ellipsis
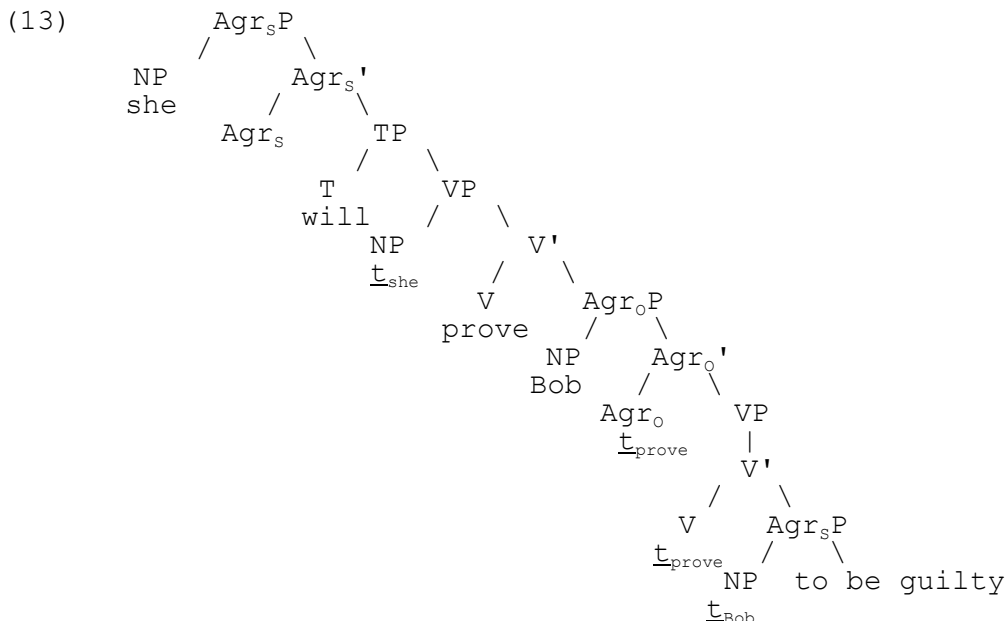
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## I. Background

(1) The Extended Projection Principle (EPP) (here called by Chomsky
    'principle P') "is the structural requirement that certain
    configurations ... must have subjects..." Chomsky (1981, p.27)

(2) a.  It seems that John is here
    b. *Seems that John is here

(3) This does not entirely follow from θ-theory, since even when the
    predicate has no subject θ-role to assign, a subject must nonetheless
    be present, at least in one class of languages.  "...the subject of a
    clause is obligatory in English and similar languages." [p.40]

(4) Chomsky (1982) introduces the name 'Extended Projection Principle',
    since the requirement goes beyond anything demanded by the Projection
    Principle, "which states informally that the θ-marking properties of
    each lexical item must be represented categorially at each syntactic
    level...". [p.8]

(5) Given that finite Infl is a Case 'assigner' (nominative Case), Fukui
    and Speas (1986) propose that the effects of the EPP actually follow
    from a more general requirement that a Case assigner must assign its
    Case.  (2)b is out because Infl is unable to assign its Case.

(6) But there are situations where neither θ-theory nor Case theory demand
    a subject, yet one is apparently still required (even if the result is
    ungrammatical; i.e., with or without a (pleonastic) subject, the
    sentences are bad).

(7)  *the belief [   to seem [Peter is ill]]
(8)  *[   To seem [Peter is ill]] is widely believed
(9)  *John has conjectured [   to seem [Peter is ill]]   Boskovic (1997)

## II. ECM configurations and the EPP

(10) Standard ECM constructions, on their standard analysis, initially look
     like powerful evidence for the EPP:
(11) She will prove [Bob to be [t guilty]]

(12) But Lasnik and Saito (1991), following Postal (1974), argue that the
     ECM subject has raised into the higher clause, suggesting that it is
     in Spec of $Agr_o$, arguably a canonical accusative Case position.  The
     matrix verb then must have raised still higher, as in the analysis of
     Koizumi (1993), Koizumi (1995):

```
(13)           Agr_SP
            /       \
         NP          Agr_S'
        she        /      \
              Agr_S        TP
                    /        \
                 T            VP
                will        /    \
                       NP        V'
                       t_she   /    \
                            V        Agr_OP
                          prove    /     \
                               NP        Agr_O'
                               Bob      /     \
                                   Agr_O        VP
                                   t_prove      |
                                                V'
                                              /    \
                                           V        Agr_SP
                                        t_prove    /     \
                                                NP   to be guilty
                                                t_Bob
```

(14) The evidence for raising involves anaphor binding, bound variable
     anaphora, and negative polarity item licensing:

(15) The DA proved [two men to have been at the scene of the crime] during
     each other's trials
(16) The DA proved [no suspect$_i$ to have been at the scene of the crime]
     during his$_i$ trial
(17) The DA proved [noone to have been at the scene] during any of the
     trials

(18)?*The DA proved [that two men were at the scene of the crime] during
     each other's trials
(19)?*The DA proved [that no suspect$_i$ was at the scene of the crime] during
     his$_i$ trial
(20)?*The DA proved [that noone was guilty] during any of the trials

(21) The DA accused two men during each other's trials
(22) The DA discredited no suspect$_i$ during his$_i$ trial
(23) The DA cross-examined none of the witnesses during any of the trials

(24) But then, we no longer have an obvious argument for the EPP, as the
     ECM DPs are not in Spec of IP, and they might never have even passed
     through that position.

(25) ON THE OTHER HAND, there is considerable evidence that the ECM subject
     need not raise, i.e., that it can remain in Spec of IP.  That is, ECM
     constructions do after all provide an argument for the EPP.

(26)  Mary made John out to be a fool
(27)  Mary made out that John is a fool
(28)  Mary made out John to be a fool      Kayne (1985), Johnson (1991)

(29) An observation about scope that Zubizarreta (1982) attributes to
     Chomsky, and that is discussed again by Chomsky (1995) provides
     further evidence for the optionality of object shift with ECM
     subjects:
(30)a.  (it seems that) everyone isn't there yet
    b.  everyone seems [t not to be there yet]
(31) Chomsky (p.327) argues as follows: "Negation can have wide scope over
     the Q in [(30)a]... but not in [(30)b]", concluding that
     "...reconstruction in the A-chain does not take place, so it appears."

(32) When the word order makes it clear that a universal ECM subject has
     raised, that subject cannot be interpreted inside the scope of
     negation in the complement clause, as seen in (33).
(33) The mathematician made every even number out not to be the sum of two
     primes
(34) The alternative word order for (33), with every even number unraised,
     does allow narrow scope for the universal:
(35) The mathematician made out every even number not to be the sum of two
     primes

(36)  I expected [everyone not to be there yet]   Chomsky (1995)
(37)  I believe everyone not to have arrived yet
(38)  I proved every Mersenne number not to be prime

(39) Note that if the ECM subject has to be 'high' in order to license some
     element in the higher clause, then the lower reading for that ECM
     subject becomes impossible:
(40) The DA proved every defendant not to be credible during his$_i$ trial

## III. Binding theoretic evidence for the EPP

(41) The 'Governing Category' for Condition A is based on 'clause-mate'.
        Lasnik (2002b)
(42)a.  Jack made himself out to be immoral
    b.?*Jack made out himself to be immoral
(43)a.  They made each other out to be honest
    b.?*They made out each other to be honest

(44) ?Jack called up himself
(45) ?They called up each other

(46) John appears to Mary to seem to himself/*herself to be the best
     candidate   [pointed out to me in this connection by Adolfo Ausín;
     also attributed to Danny Fox, via David Pesetsky, in Castillo et al.
     (1999)]

(47) The 'Governing Category' for Condition B is based on 'clause-mate'.
  Lasnik (2002a) [But see Fiengo and May (1994) for an alternative take.]

(48)  *John$_i$ injured him$_i$
(49)  *John$_i$ believes him$_i$ to be a genius

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

(52) 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
     (2002b))

(53)  Weak pronouns must cliticize onto the verb.   Oehrle (1976)
(54)  The detective brought him in
(55) *The detective brought in him        Chomsky (1955)

(56)  Failure to cliticize in (51) is repaired by ellipsis.
(57)  In (50), on the other hand, the pronoun and its antecedents are
      clause-mates independent of cliticization.

(58) *John$_i$ is believed [   to seem to him$_i$ [   to be a genius]]

## IV. Repair of EPP violations?   Merchant (2001, pp. 185-193)

(59)*Which Marx brother did she say that [[a biography of _] is going to be
     published this year]

(60) *Which Marx brother did she say that [[a biography of _] will appear this year]

(61) A biography of one of the Marx brothers is going to be published this year - guess which!
(62) A biography of one of the Marx brothers will appear this year - guess which!

(63) *Which Marx brother did she say that [a biographer of _] worked for her
(64) A biographer of one of the Marx brothers worked for her, but I don't remember which

(65) Subject position is an island.  But there is a potential source for the sluices where the extraction is not out of 'subject position', roughly as in:

(66) *Which candidate were [posters of $t$] all over town
(67) Which candidate were there [posters of $t$] all over town

(68) *Which candidate did they say [to get $t$ to agree to a debate] was hard
(69) Which candidate did they say it was hard [to get $t$ to agree to a debate]

(70)  Guess [which Marx brother]$_2$ ~~[$_{IP}$ _ is [$_{VP}$ going to be published [a biography of $t_2$]]]~~

(71) *Guess [which Marx brother]$_2$ [$_{IP}$ _ is [$_{VP}$ going to be published [a biography of $t_2$]]]

(72) (71) violates the EPP, so why is (70) good?  Infl has a strong EPP feature, where 'strong' means uninterpretable at the PF interface. If, as a result of deletion, the strong feature does not reach the PF interface, then the absence of checking movement should not matter. According to Merchant, that's what happens in the Sluicing examples.

(73) On the other hand, Merchant (based on Ross (1969)) also presents considerable evidence that certain island violations (his 'PF islands) can be repaired by ellipsis.  One of his PF islands is actually the subject island.  So are we dealing with EPP repair or with island repair?

(74) [Every biography of one of the Marx brothers]$_1$ seemed to its$_1$ author to be definitive, but I don't remember which (Marx brother)

(75) Here, there must have been raising in the sluice in order for the bound pronoun to be licensed.
(76) Merchant suggests that phrasal A-movement takes place in covert syntax.  Thus, EPP, an overt requirement, would have been violated, had deletion not removed the offending item (Infl on this account).

BUT

(77) a. Some applicants$_i$ seem to each other$_i$ to be eligible for the job
     b. *There seem to each other$_i$ to be some applicants$_i$ eligible for the job
                         den Dikken (1995)

(78)  Merchant acknowledges this sort of potential difficulty, but claims that the relation between <u>there</u> and its associate is not one of covert phrasal movement, but rather, possibly (formal) feature movement and thus irrelevant to binding and scope. This is, in fact, exactly the proposal of Lasnik (1995a), Lasnik (1995b) for such constructions.

BUT

(79) a. The DA made every defendant$_1$ out to be guilty during his$_1$ trial
     b. *The DA made out every defendant$_1$ to be guilty during his$_1$ trial
         Lasnik (2001b), Lasnik and Park (In press)

(80) John-ga   subete-no gakusei-o$_i$  soitu-no$_i$ sensei-ni      syookaisita
         -Nom  all-gen   student-acc he-gen    teacher-dat   introduced
     'John introduced every student$_i$ to his$_i$ teacher

(81) *John-ga   soitu-no sensei-ni     subete-no gakusei-o    syookaisita
          -Nom  he-gen   teacher-dat all-gen    student-acc introduced

(82) Short scrambling is (or can be) A-movement. If there were covert A-
     scrambling, then (81) should be as good as (80).  Takano (1998)

(83) Thus, there is good reason to believe that subject island violations
     can be repaired by ellipsis (and, hence, no reason yet to assume that
     EPP violations can be).

**V. Failure of repair of EPP violations?**  [Based on Lasnik (2001a)]

(84) Certain heads have  a strong feature, demanding overt movement for
     checking.    Chomsky (1995)
(85) Certain heads require Spec's.   Chomsky (2000), Chomsky (1981)
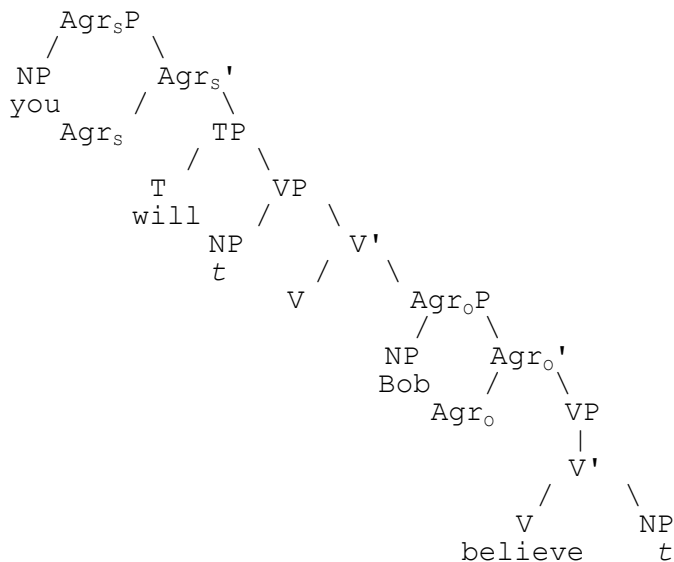
(86) Lasnik (2001a), Lasnik (2002c) shows that apparent failure to move in
     order to check a strong feature can be repaired by ellipsis.
     Pseudogapping provides one instance:

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

(88) NP-raising to Spec of Agr$_O$ ('Object Shift') is overt in English.
     [Koizumi (1993), Koizumi (1995), developing ideas of Johnson (1991)]
(89) Pseudogapping as overt raising to Spec of Agr$_O$ followed by deletion of
     VP.                 Lasnik (1995c)

(90)
```
               Agr_sP
              /     \
            NP       Agr_s'
            you     /    \
              Agr_s     TP
                      /   \
                    T      VP
                  will    /   \
                       NP       V'
                       t      /   \
                            V        Agr_oP
                                    /    \
                                  NP      Agr_o'
                                  Bob    /   \
                                     Agr_o     VP
                                               |
                                               V'
                                             /    \
                                           V       NP
                                        believe     t
```
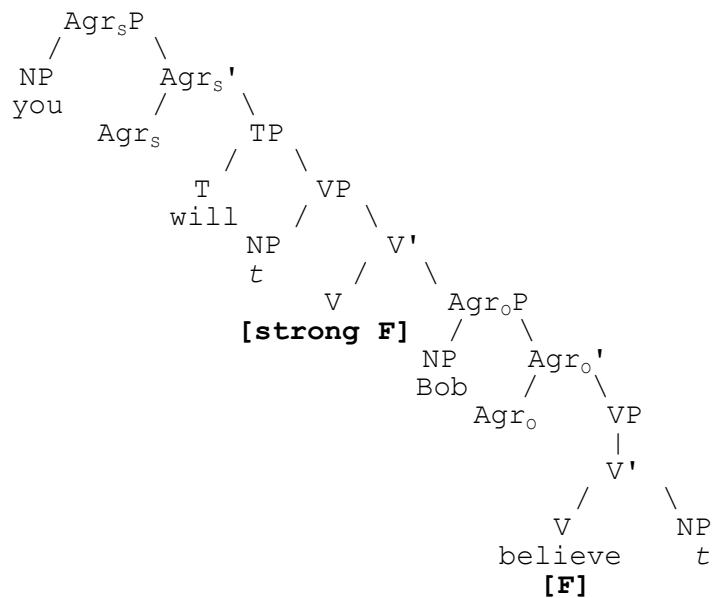
(91)*You will Bob believe

(92) In (93), if only the attracted features raise, but the V does not
     raise, a PF crash will ensue (Ochi (1999)), but only if the offending
     item exists at that level.  Deletion provides another way to salvage
     the derivation.  When the lower VP is deleted without the V having
     raised, a PF crash is avoided and the result is acceptable
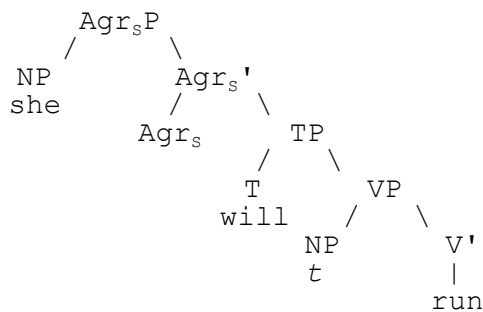     Pseudogapping.

(93)
```
                    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]
```

(94) Once the matching feature of the lower lexical V is attracted, the
     lower V becomes defective (marked *, if you like).  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
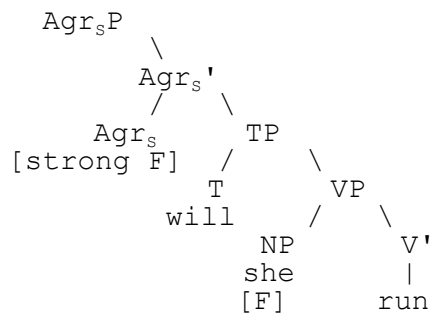     place.  [Lasnik (1999)]

(95) Now suppose that EPP satisfaction were likewise a matter of strong
     feature checking.

(96)
```
                  Agr_sP
                 /      \
               NP        Agr_s'
               she      /     \
                     Agr_s      TP
                             /    \
                            T      VP
                          will    /  \
                                NP    V'
                                t     |
                                     run
```

(97) Mary said she won't run, although she will ~~run~~

(98)
```
             Agr_sP
                  \
                   Agr_s'
                  /     \
              Agr_s      TP
          [strong F]    /    \
                       T      VP
                     will    /  \
                           NP    V'
                           she   |
                           [F]  run
```

(99) *Mary said she won't run, although will ~~she run~~

(100) Agr (or T) requires a Spec.  It does not suffice to check its 'EPP
      feature'.
(101) Further, this need for a Spec is presumably not a phonetic
      requirement, given that various phonetically null elements (pro, PRO)
      can satisfy it. I will immediately return to what kind of requirement
      the EPP actually is.

## VI. An argument against the EPP?

(102) Epstein and Seely (1999) offer a conceptual/technical argument against the EPP: The EPP demands successive cyclic A-movement, thus creating a chain. According to Chomsky (1995), a chain is a set of 'occurrences' where each occurrence is defined in terms of sisterhood. Since an EPP position is a Spec of some X, its sister is X', an intermediate projection of X. But it is widely assumed that syntactic operations can't target intermediate projections. Therefore the needed chain links can't exist, so the EPP must not be valid.

(103) Epstein and Seely assume, completely reasonably, that chains are representational objects, existing at the ends of derivations. At that point, it is certainly true that most of the occurrences constituting a chain are intermediate projections. However, this has no consequences for the EPP per se.

(104) There is no a priori reason to assume that the EPP requirement must be met at the end of the derivation. Rather, it is naturally viewed derivationally (particularly in light of the argument above that the EPP is not a PF requirement). But then, assuming standard bottom-up structure building, at the point where the EPP will be satisfied, the moving DP will be targeting a maximal projection - the entire existing structure. Lasnik (2003)

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