

What is the EPP?

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I. Background

- (1) Any sentence other than an imperative in which there is an S that does not contain a subject in surface structure is ungrammatical.
 Perlmutter (1971, p.100)
- (2) The Extended Projection Principle (EPP) (there called by Chomsky 'principle P') "is the structural requirement that certain configurations ... must have subjects..." Chomsky (1981, p.27)
- (3)a. It seems that John is here
 b. *Seems that John is here
- (4) This did not 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]
- (5) Chomsky (1982) introduced 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]
- (6) Fukui and Speas (1986) (recently followed by Epstein and Seely (1999), among others) propose that the effects of the EPP follow from a more general requirement, that a Case assigner must assign/check its Case (now sometimes called the Inverse Case Filter (ICF)). (3)b is out because Infl is unable to assign/check its Case. The EPP is redundant.
- (7) Or is the ICF redundant?
 a. Is the ICF independently motivated?
 b. Is the EPP independently motivated?
- (8) Central examples like (3) are actually uninformative. True, they display redundancy, but they don't tell us how the redundancy ought to be eliminated.
- (9) *Mary is believed [__ is intelligent]
- (10) "... movement is a kind of 'last resort.' An NP is moved only when this is required ... in order to escape a violation of some principle [such as] the Case filter ..." Chomsky (1986, p. 143)
 We must "prevent a nominal phrase that has already satisfied the Case Filter from raising further to do so again in a higher position."
 Chomsky (1995, p.280)
- (11) "... a visible Case feature ... makes [a] feature bundle or constituent available for 'A-movement'. Once Case is checked off, no further [A-]movement is possible." Lasnik (1995a, p.16)
- (12) "If uninterpretable features serve to implement operations, we expect that it is structural Case that enables the closest goal G to select P(G) to satisfy EPP by Merge. Thus, if structural Case has already been checked (deleted), the phrase P(G) is "frozen in place," unable to move further to satisfy EPP in a higher position. More generally, uninterpretable features render the goal active, able to implement an

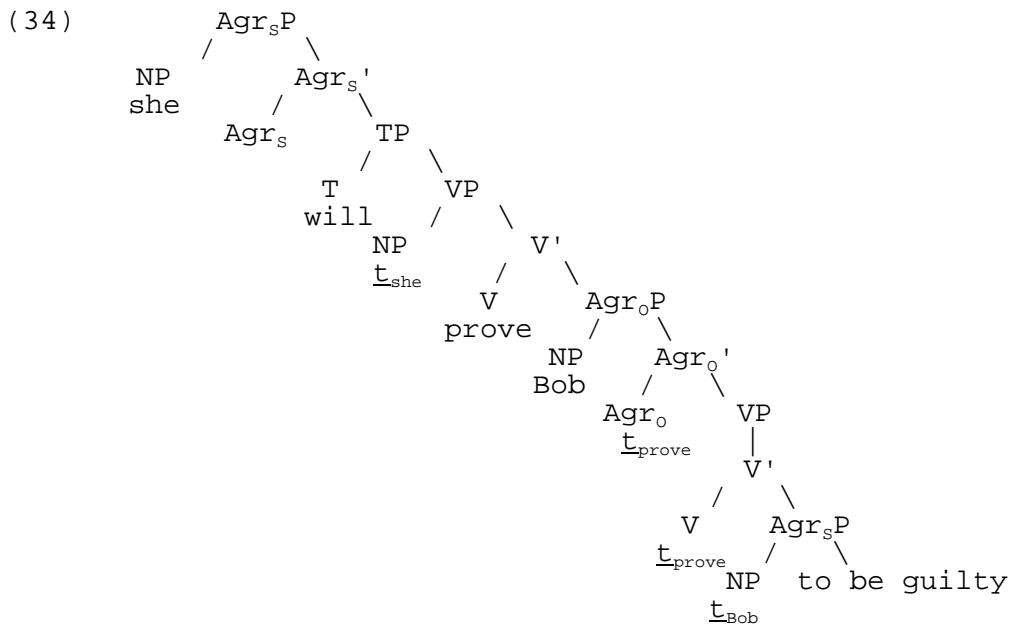
operation: to select a phrase for Merge (pied-piping) or to delete the probe." Chomsky (2000, p.123)

- (13) All of these accounts demand that a Case assigner (checker) actually assign (check) its Case, thus, they assume the ICF.
- (14) However, as observed by Nevins (2004), the Phase Impenetrability Condition will independently block the illicit movement.
- (15) *Eddie seems [to __] [that California is in political trouble]
- (16) No obvious solution to this one, but Nevins (2004), attributing the observation to Brent DeChene, presents other rather similar instances of impossible A-movement, but where ICF would not help:
- (17) *Eddie was said [to __] [that California is in trouble]
- (18) On a pseudopassive derivation, the Case assigning property of the preposition should be 'absorbed'. It is reasonable to conjecture that whatever rules out (17) could also rule out (15).
- (19) *Mary loves here/there
- (20)a Mary loves it here/there
- b Mary loves this/that place Boskovic (2002)
- (21) A new argument for the ICF: Boskovic reasons that (19) are perfectly coherent (as demonstrated by (20)), and are bad just because *here* and *there* can't bear Case.
- (22)a Mary found/discussed this place
- b *Mary found/discussed here
- c (*)Mary found/discussed it here
- (23)a I talked about this place
- b *I talked about here
- c (*)I talked about it here
- (24)a I love it when you sing
- b I love when you sing (Lydia Grebenyova p.c.)
- (25) Thus, independent motivation for the ICF is much less clear than might have been expected.
- (26) Note also that under an Agree-based theory of Case, the ICF could never actually force movement of a DP to the Spec of a Case-licensing head, since first, Agree could take place before movement, and second, Agree could not take place after movement.
- (27) There are situations where neither θ -theory nor Case theory demands 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).
- (28) *the belief [to seem [Peter is ill]]
- (29) *[To seem [Peter is ill]] is widely believed
- (30) *John has conjectured [to seem [Peter is ill]] Boskovic (1997)

II. ECM configurations and the EPP

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

(33) 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 Agr₀, arguably a canonical accusative Case position. The matrix verb then must have raised still higher, as in the analysis of Koizumi (1993), Koizumi (1995):



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

(36) The DA proved [two men to have been at the scene of the crime] during each other's trials

(37) The DA proved [no suspect_i to have been at the scene of the crime] during his_i trial

(38) The DA proved [noone to have been at the scene] during any of the trials

(39)?*The DA proved [that two men were at the scene of the crime] during each other's trials

(40)?*The DA proved [that no suspect_i was at the scene of the crime] during his_i trial

(41)?*The DA proved [that noone was guilty] during any of the trials

(42) The DA accused two men during each other's trials

(43) The DA discredited no suspect_i during his_i trial

(44) The DA cross-examined none of the witnesses during any of the trials

(45) 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.

(46) 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.

(47) Mary made John out to be a fool

(48) Mary made out that John is a fool

(49) Mary made out John to be a fool Kayne (1985), Johnson (1991)

(50) 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:

- (51)a. (it seems that) everyone isn't there yet
 b. everyone seems [t not to be there yet]
- (52) Chomsky (p.327) argues as follows: "Negation can have wide scope over the Q in [(51)a]... but not in [(51)b]", concluding that "...reconstruction in the A-chain does not take place, so it appears."
- (53) 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 (54).
- (54) The mathematician made every even number out not to be the sum of two primes
- (55) The alternative word order for (54), with every even number unraised, does allow narrow scope for the universal:
- (56) The mathematician made out every even number not to be the sum of two primes
- (57) I expected [everyone not to be there yet] Chomsky (1995)
- (58) I believe everyone not to have arrived yet
- (59) I proved every Mersenne number not to be prime

IV. Binding theoretic evidence for the EPP

- (60) The 'Governing Category' for Condition A is based on 'clause-mate'.
 Lasnik (2002b), Postal (1974)
- (61)a Jack made himself out to be immoral
 b ?*Jack made out himself to be immoral
- (62)a They made each other out to be honest
 b ?*They made out each other to be honest
- (63) ?Jack called up himself
- (64) ?They called up each other
- (65) 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)]
- (66) This argues, contra Fukui and Speas (1986) and Epstein and Seely (1999), that A-movement is successive cyclic.
- (67) The 'Governing Category' for Condition B is based on 'clause-mate'.
 Lasnik (2002a) [But see Fiengo and May (1994) for an alternative take.]
- (68) *John_i injured him_i
- (69) *John_i believes him_i to be a genius
- (70) *Mary injured him_i and John_i did too
- (71) ?Mary believes him_i to be a genius and John_i does too
- (72) How can VP deletion repair a Condition B violation?
- (73) 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))
- (74) Weak pronouns must cliticize onto the verb. Oehrle (1976)
- (75) The detective brought him in
- (76) *The detective brought in him Chomsky (1955)
- (77) Failure to cliticize in (71) is repaired by ellipsis.
- (78) In (70), on the other hand, the pronoun and its antecedents are clause-mates independent of cliticization.

- (79) ?*John_i injured him and Bill_i
- (80) ?John_i believes him_i and Bill to be geniuses
- (81) ()John_i made him_i and Bill out to be geniuses
- (82) ()John_i made out him_i and Bill to be geniuses
- (83) Mary showed Susan Bill_i even though he_i didn't want her to.
(Jason Merchant, attributed to Chris Potts)
- (84) *He_i didn't want Mary to show Susan Bill_i
- (85) *He didn't want Mary to show Susan him
- (86) *Mary showed Susan him

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

- (87) *Which Marx brother did she say that [[a biography of _] is going to be published this year]
- (88) *Which Marx brother did she say that [[a biography of _] will appear this year]
- (89) A biography of one of the Marx brothers is going to be published this year - guess which!
- (90) A biography of one of the Marx brothers will appear this year - guess which!
- (91) *Which Marx brother did she say that [a biographer of _] worked for her
- (92) A biographer of one of the Marx brothers worked for her, but I don't remember which
- (93) 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:
- (94) *Which candidate were [posters of t] all over town
- (95) Which candidate were there [posters of t] all over town
- (96) Guess [which Marx brother]₂ [~~t_{IP} _ is [v_{PF} going to be published [a biography of t₂]]]~~]
- (97) *Guess [which Marx brother]₂ [_{IP} _ is [_{VP} going to be published [a biography of t₂]]]
- (98) (97) violates the EPP, so why is (96) 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.
- (99) 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. Could the subject island be one of these? Or are we dealing with EPP repair?
- (100) [Every biography of one of the Marx brothers]₁ seemed to its₁ author to be definitive, but I don't remember which (Marx brother)
- (101) Here, there must have been raising in the sluice in order for the bound pronoun to be licensed.
- (102) Merchant proposes 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

- (103)a. The DA made every defendant₁ out to be guilty during his₁ trial
b. *The DA made out every defendant₁ to be guilty during his₁ trial
Lasnik (2001b), Lasnik and Park (2003)

- (104) Covert A-movement should be able to turn (103)b into (103)a in LF.
(105) Or maybe not. Craenenbroeck (2004) and Craenenbroeck and Dikken (2005) show that under the Lasnik theory of optionality of object shift, (103)b would necessarily lack the Agr₀ projection that (103)a would necessarily have (the EPP requirement of Agr₀ driving the movement). So the relevant covert movement could not take place.
(106) However, Craenenbroeck and Dikken (2005), while rejecting the Lasnik and Park (2003) argument that there is no covert A-movement still accept its conclusion (on another basis):
(107) If the EPP is a PF requirement (which they assume, following Merchant), then it should never drive covert movement at all. Hence, there is, in fact, no covert A-movement.
(108) So why is (100) good? Craenenbroeck and Dikken (2005) (continuing to assume that Subject Condition violations cannot be repaired by ellipsis) claim that it is QR that is responsible for the binding of *its* in (100).
(109) But Merchant had already convincingly rejected that possibility, pointing out that A'-movement of the quantifier (unlike A-movement) would create a Weak Crossover configuration.

COMPARE

- (110) *It seems to its_i author that every book_i is definitive

OR EVEN

- (111) *Its_i author completed every book_i rapidly
(112) Further, while there may have been doubt about whether A-movement is what is needed to license a bound variable pronoun, there is surely no doubt that Condition demands A-binding. Yet ...
(113) Students of a certain linguist seem to themselves to be geniuses, but I won't tell you which linguist
(114) So if there is no covert A-movement, then it must be that there is overt A-movement in this example, and in (100) as well (given Merchant's argument that A'-movement won't suffice).
(115) Thus, Subject Condition violations can be repaired. There is then still no evidence that EPP violations can.

- (116) 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

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

- (118) Short scrambling is (or can be) A-movement. If there were covert A-scrambling, then (117) should be as good as (116). Takano (1998)

- (119) ?*[[otagai_i -no sensei]-ga karera_i-o hihansita] (koto)
each other-gen teacher-nom them criticized fact

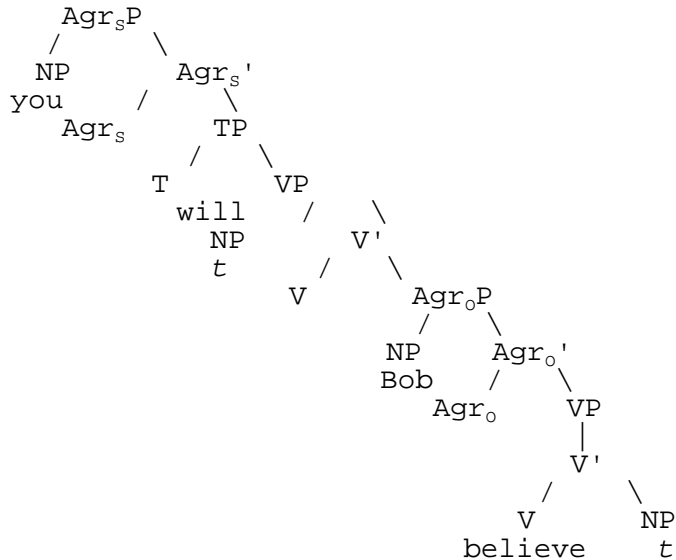
- (120) ?[[karera_i-o [[otagai_i -no sensei]-ga t_i hihansita]] (koto)
them each other-gen teacher-nom criticized fact
Saito (1994)

- (121) Covert A-scrambling, if it existed should remedy the Condition A violation.

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

- (122) Certain heads have a strong feature, demanding overt movement for checking. Chomsky (1995)
- (123) Certain heads require Spec's. Chomsky (2000), Chomsky (1981)
- (124) 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:
- (125) You might not believe me but you will Bob
- (126) NP-raising to Spec of Agr_o ('Object Shift') is overt in English. [Koizumi (1993), Koizumi (1995), developing ideas of Johnson (1991)]
- (127) Pseudogapping as overt raising to Spec of Agr_o followed by deletion of VP. Lasnik (1995b)

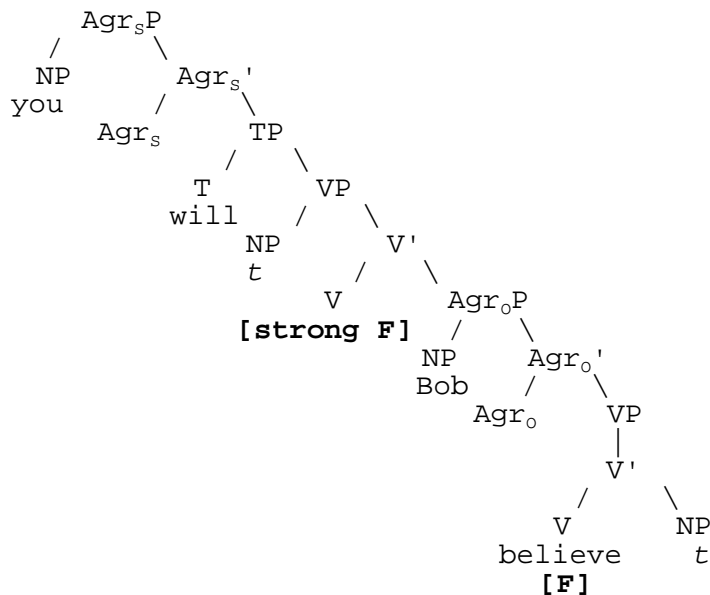
(128)



(129)*You will Bob believe

- (130) In (131), if only the attracted features raise, but the V does not, a PF crash will ensue (Ochi (1999)), but only if the offending item still exists. Deletion provides another way to salvage the derivation. When the lower VP is deleted without the V having raised, a PF crash is avoided.

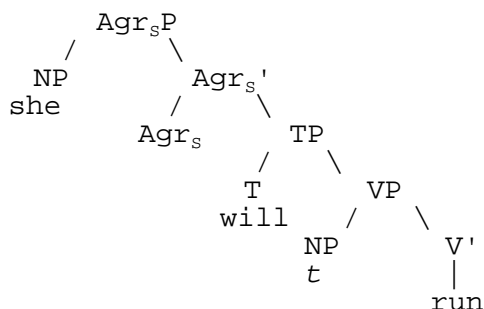
(131)



(132) 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)]

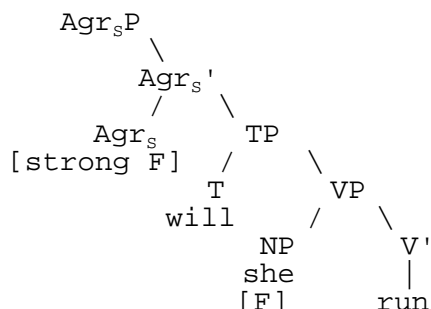
(133) Now suppose that EPP satisfaction were likewise a matter of strong feature checking.

(134)



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

(136)



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

(138) Agr requires a Spec. It does not suffice to check its 'EPP feature'.

(139) Further, there is some reason to believe that this need for a Spec is not a PF requirement, given that various phonetically null elements (pro, PRO) can satisfy it. I will immediately return to what kind of requirement the EPP is.

VII. An argument against the EPP?

(140) 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.

(141) Possible responses:

(142) Is it completely clear that syntactic operations can't target X'? I actually believe that the assumption is correct, but it is interesting to note that very little actual evidence has been offered in the literature.

(143) Why must occurrences be defined in terms of sisterhood? Motherhood would seem to work equally well, and avoid any question of intermediate projections.

Most importantly:

- (144) 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.
- (145) There is no a priori reason to assume that the EPP requirement must be met at the end of the derivation. Rather, it might be viewed derivationally. In fact, this seems natural, given that the only alternatives are an LF constraint or a PF one. Yet semantically null elements (pleonastics) and phonetically null elements (PRO, pro) can satisfy it.
- (146) 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)
- (147) Note that this would entail that EPP violations cannot be repaired, if, as argued in Section VI, the EPP is not a matter of strong feature checking.

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