

On the EPP

I. Background

- (1) $S \rightarrow NP \text{ Aux VP}$
 (2) $VP \rightarrow V NP$
 $VP \rightarrow V$ Chomsky (1965)
- (3) 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)
 <Interestingly, unlike (1), which is a property of deep structure, this is specifically a surface structure constraint. More on that later.>
- (4) 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)
- (5)a It seems that John is here
 b *Seems that John is here
- (6) 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]
- (7) 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]
- (8) Fukui and Speas (1986) (later 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)). (5)b is out because Infl is unable to assign/check its Case. The EPP is redundant.
- (9) Or is the ICF redundant?
 a. Is the ICF independently motivated?
 b. Is the EPP independently motivated?
- (10) Central examples like (5)b are actually uninformative. True, they display redundancy, but they don't tell us how the redundancy ought to be eliminated.
- (11) *Mary is believed [__ is intelligent]

- (12) "... 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)
- (13) 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)
- (14) "... 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 (1995, p.16)
- (15) "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)
- (16) All of these accounts demand that a Case assigner (checker) actually assign (check) its Case, thus, they assume the ICF.
- (17) However, as observed by Nevins (2004), the Phase Impenetrability Condition will independently block the illicit movement.
- (18) *Eddie seems [to _] [that California is in political trouble]
- (19) 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:
- (20) *Eddie was said [to _] [that California is in trouble]
- (21) On a pseudopassive derivation, the Case assigning property of the preposition should be 'absorbed'. It is reasonable to conjecture that whatever rules out (20) could also rule out (18).
- (22) 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.
- (23) 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).
- (24) *the belief [to seem [Peter is ill]]
- (25) *[To seem [Peter is ill]] is widely believed

(26) *John has conjectured [to seem [Peter is ill]]

Boskovic (1997)

II. ECM configurations and the EPP

- (27) Standard ECM constructions, on their standard analysis, initially look like powerful evidence for the EPP, until we recall the Postal and Lasnik-Saito arguments that the ECM subject is not in Spec of the lower clause, but rather is in Spec of Agr_O in the higher clause, arguably a canonical accusative Case position.
- (28) ON THE OTHER HAND, as discussed in Lasnik (2001b), there is considerable evidence that the ECM subject need not raise, i.e., that it can remain in Spec of IP (since it is not in its base thematic position). That is, ECM constructions do after all provide an argument for the EPP.

III. Binding theoretic evidence for the EPP?

- (29) John was believed to have been killed
- (30) John INFL be believed [_S t' INFL have been killed t]
- (31) "In the case of sentence (29), we are led by the projection principle [sic] to assume that the rule Move- α applies twice, leaving the two traces t and t', successively." Chomsky (1981, p.44)
- (32) they are likely [t' to appear to each other [t to be happy]]
- (33) "The GF- $\bar{\theta}$ filled by medial traces such as t' in (30) may ... be relevant to LF; for example in the sentence (32), ... where the medial trace serves as the antecedent of each other, which requires an antecedent in the same clause in such sentences in accordance with binding theory ..." Chomsky (1981, pp.44-45)
- (34) It actually isn't completely clear that the antecedent must be in the same clause, given the binding theory in Chomsky (1981), or those in Chomsky (1973) and Chomsky (1986) for that matter. It depends on exactly what counts as an Accessible Subject, and on precisely how 'substitution' works (i.e., must the target position exist prior to the movement?).
- (35) The 'Governing Category' for Condition A is based on 'clause-mate'. Lasnik (2002b), Postal (1974)
- (36)a Jack made himself out to be immoral
b ?*Jack made out himself to be immoral
- (37)a They made each other out to be honest
b ?*They made out each other to be honest
- (38) ?Jack called up himself
- (39) ?They called up each other

- (40) 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)]
- (41) This argues, contra Fukui and Speas (1986) and Epstein and Seely (1999), that A-movement is successive cyclic.
- (42) The ‘Governing Category’ for Condition B is based on ‘clause-mate’ Lasnik (2002a)
- (43) *John_i injured him_i
- (44) *John_i believes him_i to be a genius
- (45) *Mary injured him_i and John_i did too
- (46) ?Mary believes him_i to be a genius and John_i does too
- (47) How can VP deletion repair a Condition B violation?
- (48) 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))
- (49) Weak pronouns must cliticize onto the verb. Oehrle (1976)
- (50) The detective brought him in
- (51) *The detective brought in him Chomsky (1955)
- (52) Failure to cliticize in (46) is repaired by ellipsis.
- (53) In (45), on the other hand, the pronoun and its antecedents are clause-mates independent of cliticization.
- (54) ?*John_i injured him_i and Bill
- (55) ?John_i believes him_i and Bill to be geniuses
- (56) ()John_i made him_i and Bill out to be geniuses
- (57) ()John_i made out him_i and Bill to be geniuses
- (58) Now given that Condition B relies on a clause-mate characterization of GC, the following example, the Condition B version of (40), argues for successive cyclic A-movement, hence for the EPP:
- (59) John_i appears (to Mary) [to seem to him_i [to be the best candidate]]
- (60) 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 (46) above, is the following:

(61) ??Mary believes John_i to be a genius and he_i does too

Compare:

(62) *He_i believes John_i to be a genius

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

(64)a *Mary injured John_i and he_i did too

b *He_i injured John_i

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

(66)a Mary thinks John_i is a genius and he_i does too

b *He_i thinks John_i is a genius

(67) 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.

(68) We now have a handle on the parallelism between Condition B and apparent Condition C in ellipsis contexts - (46) vs. (61). 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.

(69) 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).

(70) *He_i said that I should show Susan John_i

(71) Mary said that I should show Susan John, but he didn't say that I should show Susan John/him

(72) *(He didn't say that) I should show Susan him

(73) 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).

(74) 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.

(75) (72) then violates this PF requirement, and VP ellipsis deletes the PF violation.

- (76) Mary showed Susan Bill_i even though he_i didn't want her to.
(Jason Merchant, attributed to Chris Potts)
- (77) *He_i didn't want Mary to show Susan Bill_i
- (78) *He didn't want Mary to show Susan him
- (79) *Mary showed Susan him

IV. Repair of EPP violations?

Perlmutter (1971) pp. 110-112 on repair of his version of the EPP (1) above. [We would now say it's a Comp-trace violation that is being repaired, a phenomenon Merchant looked at much later.]

- (80) *Sarah worked for six months in order for someone to be able to buy a car, but I don't know who Sarah worked for six months in order (for) to be able to buy a car.
- (81) Sarah worked for six months in order for someone to be able to buy a car, but I don't know who.
- (82) "If the ungrammaticality of *(78) is due to a transformational constraint, subsequent application of Sluicing will make no difference; the derivation is blocked once and for all at the stage at which *(78) is produced. If, on the other hand, *(78) is ungrammatical because of a surface structure constraint, subsequent application of Sluicing can produce a grammatical sentence ..."

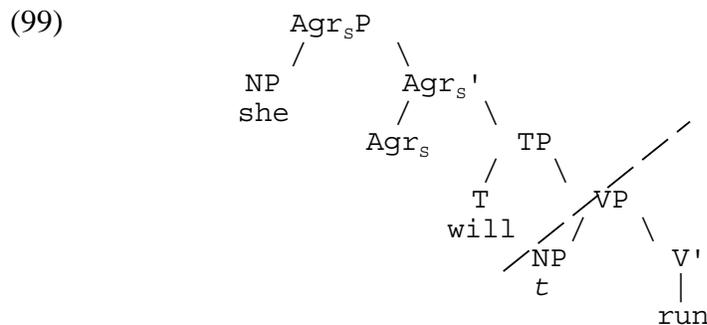
Merchant (2001) pp. 187-193

- (83) *Which Marx brother did she say that [[a biography of _] is going to be published this year]
- (84) *Which Marx brother did she say that [[a biography of _] will appear this year]
- (85) A biography of one of the Marx brothers is going to be published this year - guess which!
- (86) A biography of one of the Marx brothers will appear this year - guess which!
- (87) *Which Marx brother did she say that [a biographer of _] worked for her
- (88) A biographer of one of the Marx brothers worked for her, but I don't remember which
- (89) 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:
- (90) *Which candidate were [posters of *t*] all over town
- (91) Which candidate were there [posters of *t*] all over town
- (92) *Which candidate did they say [to get *t* to agree to a debate] was hard
- (93) Which candidate did they say it was hard [to get *t* to agree to a debate]
- (94) Guess [which Marx brother]₂ [_{IP} _ is [_{VP} going to be published [a biography of *t*₂]]]
- (95) *Guess [which Marx brother]₂ [_{IP} _ is [_{VP} going to be published [a biography of *t*₂]]]

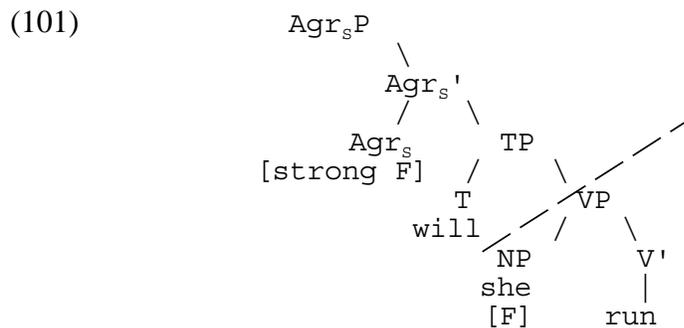
- (96) (95) violates the EPP, so why is (94) good? Infl has a strong EPP feature, where 'strong' means uninterpretable at the PF interface. If, as a result of deletion, the strong feature does not reach the PF interface, then the absence of checking movement should not matter. According to Merchant, that's what happens in the Sluicing examples.

V. The nature of the EPP [Based on Lasnik (2001a)]

- (97) Certain heads have a strong feature, demanding overt movement for checking. Chomsky (1995)
 (98) Certain heads require Spec's. Chomsky (2000), Chomsky (1981)



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



- (102) *Mary said she won't run although will ~~she run~~
- (103) Agr (or T) requires a Spec. It does not suffice to check its 'EPP feature'.
- (104) So can violations of this version of the EPP be repaired? That would actually be consistent with Merchant's discussion, and also with the argument just above (since Infl survives the ellipsis, so the EPP violation persists).
- (105) [Every biography of one of the Marx brothers]₁ seemed to its₁ author to be definitive, but I don't remember which (Marx brother)
- (106) Here, there must have been raising in the sluice in order for the bound pronoun to be licensed. Merchant proposes that the relevant raising is covert.

BUT

- (107)a The DA made every defendant_i out to be guilty during his_i trial
b *The DA made out every defendant_i to be guilty during his_i trial Lasnik (2001b),
Lasnik and Park (2003)
- (108) Covert A-movement should be able to turn (107)b into (107)a in LF.
- (109) Or maybe not. Craenenbroeck (2004) and Craenenbroeck and Dikken (2005) show that under the Lasnik theory of optionality of object shift, (107)b would necessarily lack the Agr_O projection that (107)a would necessarily have (the EPP requirement of Agr_O driving the movement). So the relevant covert movement could not take place.
- (110) 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):
- (111) 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.
- (112) So why is (105) good? Craenenbroeck and Dikken (2005) (continuing to assume that Subject Condition violations cannot be repaired by ellipsis, and EPP violations can) claim that it is QR that is responsible for the binding of *its* in (105).
- (113) 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

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

OR EVEN

(115) *Its_i author completed every book_i rapidly

- (116) 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 A demands A-binding. Yet ...
- (117) Students of a certain linguist seem to themselves to be geniuses, but I won't tell you which linguist
- (118) So if there is no covert A-movement, then it must be that there is overt A-movement in this example, and in (105) as well (given Merchant's argument that A'-movement won't suffice).
- (119) Thus, Subject Condition violations can be repaired. There is then still no evidence that EPP violations can.

- (120) 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
- (121) *John-ga soitu-no sensei-ni subete-no gakusei-o syookaisita
 -Nom he-gen teacher-dat all-gen student-acc introduced
- (122) Short scrambling is (or can be) A-movement. If there were covert A-scrambling, then (121) should be as good as (120). Takano (1998)
- (123) ?*[[otagai_i -no sensei]-ga karera_i-o hihansita] (koto)
 each other-gen teacher-nom them criticized fact
- (124) ?[karera_i-o [[otagai_i -no sensei]-ga t_i hihansita]] (koto)
 them each other-gen teacher-nom criticized fact Saito (1994)
- (125) Covert A-scrambling, if it existed should remedy the Condition A violation.

VI. An argument against the EPP?

- (126) 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.
- (127) Possible responses:
- (128) 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.
- (129) 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:

- (130) 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.
- (131) 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.
- (132) 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)
- (133) Note that this would entail that EPP violations cannot be repaired, if, as argued in Section V, the EPP is not a matter of strong feature checking.
- (134) The strongest argument against the EPP: It really seems like a stupid constraint. I have no good response to that one, except to observe that some stupid things actually do exist.

References

- Boskovic, Zeljko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge, Mass.: MIT Press.
- Castillo, Juan Carlos, John Drury and Kleanthes K. Grohmann. 1999. Merge over Move and the Extended Projection Principle. In *University of Maryland Working Papers in Linguistics* 8, 66-104. (Mistakenly listed in table of contents as "The Status of the Merge over Move Preference.")
- 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. 1965. *Aspects of the theory of syntax*. Cambridge, Mass.: MIT press.
- 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. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, Noam. 1982. *Some concepts and consequences of the theory of government and binding*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1986. *Knowledge of language*. New York: Praeger.
- Chomsky, Noam. 1995. Categories and transformations. In *The minimalist program*, 219-394. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge, Mass.: MIT Press.
- Craenenbroeck, Jeroen van. 2004. *Ellipsis in Dutch dialects*. Utrecht: LOT.
- Craenenbroeck, Jeroen van and Marcel den Dikken. 2005. Ellipsis and EPP repair. Ms. Catholic University of Brussels and CUNY Graduate Center,
- Epstein, Samuel D. and T. Daniel Seely. 1999. SPEC-ifying the GF "subject"; eliminating A-chains and the EPP within a derivational model. Ms. University of Michigan and Eastern Michigan State University,
- Fiengo, Robert and Robert May. 1994. *Indices and identity*. Cambridge, Mass.: MIT Press.
- Fukui, Naoki and Margaret Speas. 1986. Specifiers and projection. In *MIT working papers in linguistics* 8, 128-172.
- Lasnik, Howard. 1995. Last resort. In *Minimalism and linguistic theory*, ed. Shosuke Haraguchi and Michio Funaki, 1-32. Tokyo: Hituzi Syobo. [Reprinted in Howard Lasnik, *Minimalist analysis*, 120-150. Oxford: Blackwell, 1999].
- Lasnik, Howard. 2001a. A note on the EPP. *Linguistic Inquiry* 32: 356-362.
- Lasnik, Howard. 2001b. Subjects, objects, and the EPP. In *Objects and other subjects*:

- Grammatical functions, functional categories, and configurationality*, ed. William D. Davies and Stanley Dubinsky, 103-121. Dordrecht: Kluwer Academic Publishers.
- Lasnik, Howard. 2002a. Clause-mate conditions. In *Proceeding of the 2002 International Conference on Korean Linguistics*, 386-393. The Association for Korean Linguistics, Seoul.
- Lasnik, Howard. 2002b. Clause-mate conditions revisited. *Glott International* 6: 94-96.
- Lasnik, Howard. 2003. On the Extended Projection Principle. *Studies in Modern Grammar* 31: 1-23.
- Lasnik, Howard and Myung-Kwan Park. 2003. The EPP and the Subject Condition under Sluicing. *Linguistic Inquiry* 34: 649-660.
- Nevins, Andrew. 2004. Derivations without the Activity Condition. Ms. MIT.
- Oehrle, Richard. 1976. *The grammatical status of the English dative alternation*. Doctoral dissertation, MIT, Cambridge, Mass.
- Perlmutter, David. 1971. *Deep and surface constraints in syntax*. New York: Holt, Rinehart and Winston.
- 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.
- Saito, Mamoru. 1994. Improper adjunction. In *MIT Working Papers in Linguistics 24: Formal approaches to Japanese linguistics*, 263-293.
- Takano, Yuji. 1998. Object shift and scrambling. *Natural Language and Linguistic Theory* 16: 817-889.