On the Extended Projection Principle

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The 'Extended Projection Principle' (EPP) has been a pervasive topic of research and a pervasive mystery since it was first formulated by Chomsky (1981). That initial formulation is not precise, but its intention is clear enough: The EPP (here called by Chomsky 'principle P') "is the structural requirement that certain configurations ... must have subjects..." [p.27] Over the years since, its existence as an independent constraint has often been called into question, on the grounds that it is redundant with other principles, especially those concerning Case (by Fukui and Speas (1986) for example), or that it is literally unformulable given other theoretical desiderata (Epstein and Seely (1999)). I will review those arguments. I will also survey a range of phenomena involving infinitival constructions that provide strong empirical evidence for the EPP. In particular, I will show that in ECM constructions, while the ECM subject sometimes raises overtly to a canonical Case position (Spec of Agr_o), it also sometimes remains in embedded subject position, a position that it is in solely to satisfy the EPP (Lasnik (2001b)). The next question is just how the EPP is to be formulated. Alexiadou and Anagnostopoulou (1998) argue that there are actually two different kinds of languages with respect to the EPP, those (like Greek) where X^0 movement suffices versus those where only an XP can satisfy the EPP. I will examine English, a language of the second type,
with an eye towards determining whether EPP is a matter of strong feature checking, as in Chomsky (1995), or the requirement that certain functional heads require a specifier, as in Chomsky's original version and the more recent one in Chomsky (2000). This question turns out to be surprisingly intricate, with arguments for the strong feature version (Merchant (2001), and against it (Lasnik (2001a)).

I. Background

The original motivation for the Extended Projection Principle (EPP), though not yet called that, came from pairs of examples like those in (1), discussed by Chomsky (1981).

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

In other circumstances, the ungrammaticality of a sentence with no subject could be attributed to the θ-criterion, as in (2).

(2) a. John solved the problem
    b. *Solved the problem

In (2)b, solve has failed to assign its agent θ-role, so the example is straightforwardly ruled out. But the ungrammaticality of (1)b does not follow from θ-theory, since in this example, the predicate has no subject θ-role to assign, yet a subject, pleonastic in this instance, 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]

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

Given that finite Infl is a Case 'assigner' (nominative Case), Fukui and Speas (1986) proposed that the effects of the EPP actually follow from a more general requirement that a Case assigner must assign its Case. (1)b is out because Infl is unable to assign its Case. They further proposed that in Exceptional Case Marking (ECM) configurations also, Case requirements demand a subject. Consider infinitival versions of (1)a,b:

(3) a. Mary believes [it to seem that John is here]
    b. *Mary believes [   to seem that John is here]

Plausibly, here it is the Case requirement of believe that demands the presence of a subject in the embedded clause. Note, incidentally, that under the VP-internal subject hypothesis, which Fukui and Speas argue for, even examples with a thematic subject require discussion. The question is why (2)a does not surface as

(4) *[[IP [VP John solved the problem]]]

We can tell that it does not if we look at a slightly more
complicated version:

(5) John has carefully solved the problem
(6) *Has carefully John solved the problem

Or similarly for an infinitival:

(7) *Mary believes [ to have John solved the problem]

In both situations, a Case assigner, Infl or believe will fail to govern John unless the latter raises to Spec of IP, hence will fail to assign its Case. Thus, here too there is an EPP effect, but no clear need for the EPP itself.

But 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). Consider the following examples, based on ones discussed by Boskovic (1997).

(8) *the belief [ to seem [Peter is ill]]
(9) *John has conjectured [ to seem [Peter is ill]]

In (8), we have an infinitival complement to the noun belief. Given that nouns have no Case feature to assign (or at least need not have such a feature), a subject of the infinitival is not demanded by any Case requirement. In fact, this is directly evidenced by a version of (8), but with a pleonastic subject:

(10) *the belief [it to seem [Peter is ill]]
Presumably (10) violates the Case Filter, indicating that subject of the infinitival complement of belief is not a position where Case is licensed. Thus, the only obvious explanation for (8) must rely on the EPP: The infinitival clause lacks a subject. One might object that for some independent reason, belief (and nouns in general) simply cannot take an infinitival complement of the non-Control type. Descriptively, it is certainly true that nouns never take such complements. But in the absence of a better account of the fact, it seems most principled to rely on the combination of the Case Filter and the EPP.

(9) raises similar difficulties for any attempt to dispense with the EPP. There is no obvious a priori bar to conjecture taking an infinitival complement. The fact that a version of (9) but with a pleonastic subject is bad indicates that conjecture does not have a Case feature to discharge.

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

The unacceptability of (9) itself thus implicates the EPP, as there are no relevant Case or θ-theoretic violations in the example.
II. An argument against the EPP

Epstein and Seely (1999) develop an extensive argument to the effect that there is no successive cyclic A-movement, and, thus, no EPP requirement for the kinds of infinitival Infl's we are concerned with here. (Another logical possibility, explored by Boskovic (2002), is that there is successive cyclic A-movement, but driven by something other than the EPP. I will not be able to examine that line of analysis here.) In passing, noting that the EPP is often redundant with Case and Agreement requirements, Epstein and Seely adopt the basic position of Fukui and Speas (though without explicit mention of them), that A-movement is strictly to satisfy some Case (or agreement) requirement. Since non-finite Infl (of the non-Control variety) has neither Case nor agreement features, there will never be movement to the Spec of such an Infl. This will clearly be the consequence for classic subject raising. But it will also follow for ECM configurations under the assumption that there is no Case checking by a verb under 'government'. This entails, correctly in some cases as we will see, that the exceptionally Case-marked subject in an ECM construction is actually not in Spec of infinitival IP, but rather, in the Spec of some higher (Agreement) head. Note already that this approach provides no obvious answer to the problem raised by (8) and (9). A related consequence, discussed in some detail by Epstein and Seely, is that there is no successive cyclic A-movement. Rather, A-movement is always in one fell swoop. I will return to this issue later.

In addition to the redundancy mentioned just above, Epstein
and Seely 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. The occurrences at issue here are then intermediate projections of I, I-bars, since we are considering movement through Specs of IP. But it is widely assumed that syntactic operations can't target intermediate projections, thus, it is reasonable (though not exactly necessary) to assume that principles cannot either. Therefore the needed chain links can't exist, so the EPP must not be valid.

There is actually very little evidence in the literature that intermediate projections cannot be targeted by operations (mildly surprising for something so widely believed), but I have no particular reason to doubt the claim, so I will assume that it is correct. Note that even so, as hinted above, it does not immediately follow that such projections are truly invisible for all purposes. Further, even if intermediate projections are not available for any purposes, thus possibly rendering Chomsky's definition of 'occurrence' unstatable, an alternative definition in terms of 'motherhood' instead of 'sisterhood' seems equally capable of characterizing what Chomsky set out to characterize. And 'motherhood' raises no issues at all of intermediate projections. Finally, and most importantly from our perspective, even if chains as representational objects are ultimately eliminated (for Epstein's and Seely's reasons or others), the EPP itself is still perfectly statable in derivational terms. That is, at the derivational point where a head, say Infl, is merged into the structure, the resulting
configuration is, by definition, a maximal projection. Under the plausible assumption (virtually the null hypothesis) that the EPP must be satisfied immediately (by internal or external Merge), no reference to intermediate projections is ever necessary. And note that there is good reason to think that if the EPP is valid, the right formulation is, indeed, a derivational one. Since the EPP imposes a demand on overt syntax, it must be either a phonetic requirement or a derivational one. But since the EPP can be satisfied by items with no phonetic content whatsoever (PRO, pro), it would be hard to make sense of a phonetic EPP. There is no such difficulty with a derivational formulation.

III. ECM configurations and the EPP

Standard ECM constructions, on their standard analysis, look like straightforward evidence for the EPP. Bob in (12) clearly has not remained predicate internal, so it has been standard to assume that it is in Spec of the embedded clause.

(12) She will prove [Bob to be [t guilty]]

If, as suggested by Chomsky (1991), the accusative Case position for an ECM subject (or an object), is Spec of Agr₀ in the matrix clause, and raising to that position is covert, the overt movement to Spec of the infinitival IP is not driven by any Case requirement. Thus, the EPP is implicated.

But Lasnik and Saito (1991), following Postal (1974), argue that the ECM subject has overtly raised to Spec of Agr₀ in the
higher clause. (13) illustrates this within the 'split VP' phrase structure framework of Koizumi (1993), Koizumi (1995), where the NP raises to Spec of Agr₀ and the V raises to the higher 'shell' V-head position.

(13) AgrₛP
    / \        
   NP     Agrₛ'
    she    / \          
    Agrₛ   TP          
    / \              
   T   VP
   will/ \             
   NP     V'
   t⁻she/ \               
   V   Agr₀P
   prove/ \                   
   NP   Agr₀'
   Bob/ \                      
   Agr₀  VP
   t⁻prove/ \                 
   V   AgrₛP
   t⁻prove/ \               
   NP  to be guilty
   t⁻Bob

The evidence for raising involved anaphor binding, bound variable anaphora, and negative polarity item licensing. Crucial was the contrast between infinitival complements in (14)-(16) and their finite counterparts:

(14) The DA proved [two men to have been at the scene of the crime] during each other's trials
(15) The DA proved [no suspectᵢ to have been at the scene of the crime] during hisᵢ trial
(16) The DA proved [noone to have been at the scene] during any of the trials

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

(18) *The DA proved [that no suspect\textsubscript{1} was at the scene of the crime] during his\textsubscript{1} trial

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

Also crucial was the contrast with existential counterparts, with their assumed covert relationship between \underline{there} and its 'associate':

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

(21) *The DA proved [there to have been no suspect\textsubscript{1} at the scene of the crime] during his\textsubscript{1} trial

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

But then, we no longer have an argument for the EPP, as the ECM DPs are in Spec of Agr\textsubscript{0} not in Spec of IP, and they might never have been in Spec of IP at any stage of the derivation.

On the other hand, there is considerable evidence that ECM subjects do not always raise into the higher clause, therefore that they are sometimes in Spec of IP. To the extent that this is true, ECM constructions do after all provide an argument for the EPP. Kayne (1985) first discussed a very interesting verb-
particle construction, later analyzed by Johnson (1991) in terms relevant to the present discussion. Johnson provided an insightful account of examples like (23) involving overt raising of the ECM subject John.

(23) Mary made John out to be a fool

Both Kayne and Johnson convincingly treat (23) as an infinitival counterpart of (24).

(24) Mary made out that John is a fool

Very plausibly, John in (23) has overtly raised to Spec of Agr$_0$. Now consider that for many speakers, the raising seen in (23) is optional. For those speakers, (25) is an acceptable alternative to (23).

(25) Mary made out John to be a fool

In (25), John has obviously raised out of its initial predicate internal position, but presumably not to Spec of Agr$_0$. It is reasonable to conclude that the position it raised to is the 'EPP position' in the infinitival clause.

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. Chomsky presents the following paradigm:
(26) a. (it seems that) everyone isn't there yet  
    b. everyone seems [t not to be there yet]

Chomsky (p.327) argues as follows: "Negation can have wide scope over the Q[uantifier] in [(26)a]... but not in [(26)b]", concluding that "...reconstruction in the A-chain does not take place, so it appears." The generalization seems to be that a universal quantifier in subject position of a clause can be interpreted inside the scope of clausal negation in that clause, but cannot be 'reconstructed' to that position if it has A-moved away.

Turning to ECM type infinitival complements, when the word order makes it clear that a universal ECM subject has raised, that subject predictably cannot be interpreted inside the scope of negation in the complement clause, as seen in (27).

(27) The mathematician made every even number out not to be the sum of two primes

The only reading is the highly implausible one where the mathematician was engaged in the futile activity of trying to falsely convince someone that no even number is the sum of two primes (and not the far more plausible one where she is merely trying to convince someone that Goldbach's conjecture is false). Thus, even with strong pragmatic bias towards wide scope for the negation, it still isn't available, consistent with the raising analysis combined with Chomsky's claim. The alternative word order for (27), with every even number unraised, does allow narrow scope for the universal, for most of those speakers who
accept the word order in the first place:

(28) The mathematician made out every even number not to be the sum of two primes

The subject of the complement thus must be in the lower clause in (28); this provides very strong evidence for the EPP. Note that if the correct generalization is as Chomsky formulated it, that a subject universal quantifier can be understood inside the scope of clausal negation only if it has not raised away from subject (= Spec of IP position), then it cannot be that in (28) every even number has raised, with out raising still higher. Every even number must then be in Spec of IP.

For more familiar sorts of ECM constructions, Chomsky (1995), giving the following example, already indicated that in that circumstance, a universal in subject position can take scope below complement clause negation:

(29) I expected [everyone not to be there yet]

Some further representative examples, with the same behavior (for the large majority of speakers I have consulted), are as follows:

(30) I believe everyone not to have arrived yet
(31) I proved every Mersenne number not to be prime

In accord with Chomsky’s generalization, passive-raising versions of all these kinds of examples preclude the reading
with the universal inside the scope of negation:

(32) Every even number was made out not to be the sum of two primes
(33) Everyone was expected not to be there yet
(34) Every Mersenne number was proved not to be prime (Wildly false on its only reading)

IV. Binding theoretic evidence for the EPP

Using the make-out construction as a probe, in Lasnik (2002a) I argue that the 'Governing Category' for Binding Condition A is based on the notion 'clause-mate'. An anaphor on the upstream side of out is much better than one on the downstream side, with antecedent in the matrix clause:

(35) a. Jack made himself out to be honest
    b. *Jack made out himself to be honest
(36) a. They made each other out to be dishonest
    b. *They made out each other to be dishonest

It must be acknowledged that verb-particle-NP order with reflexives and reciprocals is somewhat degraded even with only one clause, as in (37)-(38), but not to the extent seen in ECM instances like (35)-(36).

(37) *Jack called up himself
(38) *They called up each other

Given the clause-mate requirement on anaphors, examples like the following, pointed out to me in this connection by Adolfo Ausín
(also attributed to Danny Fox, via David Pesetsky, in Castillo et al. (1999)), argue for the EPP:

(39) John appears to Mary [ to seem to himself/*herself [ to be the best candidate]]

Absent the EPP, there would be no reason for John to have moved through the Spec of the intermediate IP. But then himself would incorrectly be predicted to violate Condition A, and, on fairly standard assumptions, herself to be acceptable.

A similar, though more indirect, argument can be constructed based on Condition B. Examples (40)-(41) display standard Condition B effects.

(40) *John injured him
(41) *John believes him to be a genius

These contrast with (42)-(43), where the antecedent is more distant in relevant respects.

(42) John believes Mary to admire him
(43) John believes that he is a genius

As would be expected, (40) remains unacceptable under VP ellipsis:

(44) *Mary injured him and John did too

What is not expected is that (41) is substantially improved under VP ellipsis:

(45) ?Mary believes him to be a genius and John does too
How is it that deletion, a PF process, remediates a presumably semantic violation? Suppose that in addition to their properties with respect to anaphora, the pronouns under consideration also have a morpho-syntactic requirement, in particular that as weak pronouns they must cliticize onto the verb, as suggested by Oehrle (1976), based on data like that presented by Chomsky (1955):

(46) The detective brought John in
(47) The detective brought in John
(48) The detective brought him in
(49) *The detective brought in him

If the relevant structural configuration for Condition B is based on the notion clause-mate, an account of the ellipsis paradigm presents itself. In particular, one might hypothesize that it is not actually the Condition B violation (presumably an LF effect) in (41) that is repaired by ellipsis in (45). Rather, it is failure to cliticize (a PF violation) that is repaired (by PF deletion). And without cliticization, the pronoun can remain in the lower clause (if, as argued by Lasnik (1999a) and Lasnik (2001b), 'subject raising' in these constructions is generally optional). On the other hand, in (44), the pronoun and its antecedent are clause-mates independent of cliticization, so there is no possibility of 'repair' of the Condition B violation by ellipsis.

Given the clause-mate character of Condition B, (50) constitutes evidence for the EPP, as John must have moved through the intermediate Spec of IP to yield the observed
Two further comments are in order about the phenomenon of VP ellipsis 'repairing' Condition B violations. First, the cliticization process itself is presumably a PF one. But then in the LF of (41), it would seem that him could still be in the lower clause. I speculate that the PF merger process at work here demands not just linear adjacency, but a sort of structural adjacency as well. Thus, even though syntactic raising of the ECM subject is in principle optional, if it did not take place, him in an example like (41) would wind up violating its PF requirement.

Second, Tom Roeper (personal communication) observes that in just those VP ellipsis situations where Condition B effects are ameliorated, so are Condition C effects. This is surprising since Condition C involves no locality, clause-mate or otherwise. A relevant example, parallel to (45) above, is the following:

(51) ??Mary believes Johni to be a genius and he does too

Compare:

(52) *He believes Johni to be a genius

Also compare:
To begin to deal with this phenomenon, I first observe that Condition C effects often disappear under ellipsis. Another example is:

(54) a. Mary thinks John$_1$ is a genius and he$_1$ does too
    b. *He$_1$ thinks John$_1$ is a genius

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. We now have a handle on the parallelism between Condition B and apparent Condition C in ellipsis contexts - (45) vs. (51). 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.
V. Repair of EPP violations?

Merchant (1999, pp. 220-230) argues that EPP violations can be repaired by ellipsis, and concludes that the EPP is the requirement that a strong feature be checked to avoid a PF violation, as suggested by Chomsky (1995). Ellipsis (PF deletion) can repair the otherwise defective PF structure that would result from failure to check the EPP feature. Merchant observes that Sluicing appears to remedy Subject Condition violations:

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

(57) A biography of one of the Marx brothers is going to be published this year – guess which!
(58) A biography of one of the Marx brothers will appear this year – guess which!

He then proposes that there is a potential source for the sluices where the extraction is not out of 'subject position', roughly as in the following:

(59) *Which candidate were [posters of t] all over town
(60) Which candidate were there [posters of t] all over town

(61) *Which candidate did they say [to get t to agree to a debate] was hard
(62) Which candidate did they say it was hard [to get t to agree to a debate]

The analogous derivation for (57) is schematized in (63).

(63) Guess [which Marx brother]$_2$ [IP _ is [VP going to be published [a biography of t$_2$]]]

(64) *Guess [which Marx brother]$_2$ [IP _ is [VP going to be published [a biography of t$_2$]]]

(64) violates the EPP, so why is (63) good? Inf 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. On the other hand, Merchant (based on Ross (1969)) also presents considerable evidence that a variety of island violations (his 'PF islands') can be repaired by ellipsis. One of his PF islands is actually the subject island. So far, then, there is no compelling argument one way or the other for whether ellipsis can repair EPP violations.

Lasnik and Park (2002) present evidence that the surviving wh-phrases of the sluices are, in fact, launched from inside derived Spec IP positions rather than from inside base positions of 'subjects'. The following is representative:
(65) [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)

Extraction of the surviving wh-phrase in (65) should represent a weak crossover violation (WCO), which incorrectly predicts that the example is ungrammatical. Merchant addressed this problem by suggesting that phrasal A-movement takes place in covert syntax. This covert A-movement hypothesis, however, predicts that in the make-out ECM construction, 'high' binding should be possible even with the make-out-NP order. As shown by Lasnik (2001b), this is incorrect. (66) illustrates this for WCO, the very phenomenon at issue here. In these examples, during his trial is to be construed in the matrix clause. Under that construal, in (66)a, but not in (66)b, every defendant can bind his.

(66) 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)

Similarly, a negative ECM subject to the left of out seems much more comfortable with an NPI in the matrix clause than does one to the right of out:

(67) a. The lawyer made no witnesses out to be idiots during any of the trials
    b. ?*The lawyer made out no witnesses to be idiots during any of the trials
And, while judgments are subtle, there are similar effects with anaphor binding and with binding of a pronoun by a negative quantifier:

(68) a. The DA made the defendants out to be guilty during each other's trials
b. ?*The DA made out the defendants to be guilty during each other's trials

(69) a. The DA made no suspect\textsubscript{i} out to have been at the scene of the crime during his\textsubscript{i} trial
b. ?*The DA made out no suspect\textsubscript{i} to have been at the scene of the crime during his\textsubscript{i} trial

If covert A-movement were available, all of the (b) examples should be just as good as the corresponding (a) examples. Thus, in the Sluicing clause of (65), the subject must have raised overtly. This does not, of course, establish that EPP violations cannot be repaired. But since there is now clear evidence that Subject Condition violations can be repaired, there is as yet no reason to assume that EPP violations can be. In the final section, we will see evidence that they cannot.

VI. Failure of repair of EPP violations?

Lasnik (2001a) summarizes some phenomena which suggest that failure to perform normally obligatory overt raising can, in fact, be remedied by ellipsis. Similar, but not identical, to Merchant's discussion, I propose there that strong features are
involved, though indirectly. Finally, I show that the EPP does not pattern with these other cases.

In Lasnik (1999b) and Lasnik (2002b), I argue that apparent failure to move in order to check a strong feature can be repaired by ellipsis. Pseudogapping provides one instance. Consider the following representative example:

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

Roughly following Jayaseelan (1990), I analyze this construction as involving raising of the surviving VP element (the direct object in this example) and VP ellipsis of the residual VP. As seen above for ECM constructions, English allows overt NP-raising to Spec of Agrₒ ('Object Shift'). Pseudogapping is then overt raising to Spec of Agrₒ followed by deletion of VP, as proposed by Lasnik (1995). This is illustrated in (71), where Bob has raised out of the lower VP, and that lower VP (marked in outline font) is deleted.
The question now is why verb raising is otherwise obligatory in non-ellipsis sentences such as (72):

(72) a. *You will Bob believe
    b. You will believe Bob

To exclude (72)a, a strong feature forcing the raising of V must be postulated. As mentioned earlier, I assume, following Koizumi (1993;1995), that object raises, and (usually) V raises to a still higher position. Ochi (1999) argues that it is just the matching feature of an item that is 'attracted'. Under Ochi's development of Chomsky's theory of movement, once the matching feature of the lower lexical V is attracted, the lower V becomes phonologically defective. A PF crash will be avoided.
if either pied-piping (i.e., raising of the entire V in this case) or deletion of a category containing the lower (now defective) V (VP Deletion = Pseudogapping in the relevant instances) takes place. Something that is deleted is invisible to the PF interface, so can't cause a crash there.

Now suppose that EPP satisfaction were likewise a matter of strong feature checking, with a strong feature in Infl (say, AgrS) needing a matching feature in a nominal expression. Consider then an example like (73), with an underlying structure roughly as in (74).

(73) Mary said she can't swim, even though she (really) can swim

(74) \[\begin{array}{c}
\text{Agr}_S \text{P} \\
\text{Agr}_S' \\
\text{Agr}_S \text{TP} \\
\text{strong F} \\
\text{T} \\
\text{VP} \\
\text{can} \\
\text{NP} \text{V'} \\
\text{she} \\
\text{[F]} \text{V} \\
\text{swim}
\end{array}\]

When the strong feature of AgrS attracts the matching feature of she, we obtain (75), via standard VP ellipsis, if pied-piping obtains.

(75) Mary said she can't swim, even though she (really) can swim
But, analogous to the alternative ellipsis possibilities seen with Pseudogapping, we might expect to be able just to raise the relevant feature(s) of *she if the residue can be deleted. However, contrary to this expectation, VP ellipsis without pied-piping is impossible for the structure in (74), as seen in (76), where the unraised VP-internal subject is elided along with the rest of the VP.

(76) *Mary said she can't swim, even though (really) can *she swim

The only obvious way to exclude (76) is to demand that the subject raise. And the most straightforward way to guarantee that is to formulate the EPP so that it demands that the functional head of the clause have a specifier, just as in Chomsky (1982) and Chomsky (2000), as opposed to Chomsky (1995). Combining this result with those in previous sections, we arrive at the conclusion that the EPP is, in fact valid, and that, in particular, it is the on-line requirement that certain functional heads have a specifier. Whether these requirements can ultimately be made to follow from deeper or more general principles remains to be determined.

References


Epstein, Samuel D., and T. Daniel Seely. 1999. SPEC-ifying the GF "subject"; eliminating A-chains and the EPP within a


Lasnik, Howard. 2001a. A note on the EPP. Linguistic Inquiry 32:


Oehrle, Richard. 1976. The grammatical status of the English

