The Comp-Trace Effect and Contextuality of the EPP

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The paper aims to broaden the scope of the *that-t* effect and localize the culprit for its existence, which will lead to fine-tuning the position of various subject and wh-phrases, and a new contextual conception of the EPP that will be put into a broader perspective regarding a more general move toward contextuality in syntax. To address these issues, the paper will explore low left periphery as well as the possibility of multiple subject positions. In this respect, it will be argued that w*ho* in (1b) is lower than *who* in (1a) but higher than *Amy* in (1c). Quirky subjects, on the other hand, will be argued to be lower than *Amy*, with a new generalization proposed regarding their crosslinguistic availability.

(1) a. I wonder **who** Amy met   b. I wonder **who** left   c. I think **Amy** left

From this perspective, the paper will address the issue of the proper analysis of a number of other constructions, including Japanese raising-to-object, French ECM, Germanic V-2 clauses, existential constructions (a non-uniform analysis will be argued for *there*), locative inversion and clausal subjects.

1. The Comp-trace effect

Let us first consider the Comp-trace effect (CTE). In one family of analyses, the embedded clause in (3) is truncated/smaller than in (2) (see e.g. Bošković 1997, Rizzi 2006, Chomsky 2015 for different ways of implementing this). The goal of this section is twofold: to argue for this overall approach, where null C can crucially induce CTE, and to expand the empirical domain of CTE with several phenomena that were not previously treated this way, which will provide a new perspective on them.

(2) *Who do you think that left Mary?   (3) Who do you think left Mary?

One such case concerns the ban on scrambling *ga*-marked subjects from Japanese *to*-clauses (4), noted by Saito (1985),[1] who also notes objects and adjuncts can move from such clauses. This is exactly the pattern of English CTE. Given the parallelism, I suggest we are dealing with the same phenomenon.

(4) *Sono hon-ga$_i$ John-ga [t$_i$ yoku ureteiru to] omotteiru.
    that book$_{nom}$ John$_{nom}$ well selling that think
    'John thinks that that book is selling well.'   (Saito 1985:193)

While standard Japanese disallows C-drop, there are dialects that allow it. We may then expect (4) to improve under C-drop in those dialects, this being a hallmark of CTE. This is indeed the case.

(5) Sono hon-ga$_i$ John-ga [t$_i$ yoo uretoru] omootoru.
    that book$_{nom}$ John$_{nom}$ well selling think   (Hiroshima dialect, H. Oda)

A potential issue for the CTE account is raised by the fact that ECM is allowed out of *to*-clauses.

(6) John-ga Bill-o$_i$/*ga$_i$ orokanimo [t$_i$ tensai da to] omotteiru (7) John-ga Bill-o/ga tensai da to omotteiru
    John$_{nom}$ Bill$_{acc/nom}$ stupidly   genius is that think   John$_{nom}$ Bill$_{acc/nom}$ genius is that think
    'John stupidly believes that Bill is a genius.'   (Tanaka 2002)

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[1]Some such cases improve with a big pause after the scrambled subject (Mihara 1994). I assume they involve a *pro* resumptive (they are in fact island-insensitive and better with an overt resumptive than scrambling generally is). The pause and the processing issues Mihara (1994) discusses can be taken to be involved in association with *pro*.

Bill-o in (6) precedes a matrix adverb, which means it moves into the matrix clause. If (4) involves CTE, why doesn't CTE arise with subject movement across the same C in (6)? While the exact account of Japanese raising-to-object (RTO) is debated, a number of authors (Taguchi 2015, Saito 2018, Yoo 2018) have provided evidence that the RTO DP (RtoP) is base-generated in embedded SpecCP (based on reconstruction, locality effects, indexical shifting…). While these authors conclude RtoP is base-generated at the left periphery they do not explain why this is the case, why the movement derivation is blocked. The CTE account, where *to* blocks subject movement, just like English *that*, explains that. The movement derivation involves movement of RtoP across *to*. Left-periphery base-generation voids the effect since on this derivation RtoP does not cross *to*. RTO then does not argue against the CTE account of the ban on scrambling *ga*-subjects, it in fact provides evidence for it (more on RTO below).

Another new case I argue involves CTE is ECM in French. Note first that Bošković (2007) provides evidence that ECM constructions crosslinguistically must involve movement to the case-licensing SpecvP: languages can differ regarding whether the movement is overt or covert but the movement must occcur. Given that ECM must involve movement, (8) involves subject movement out of the infinitive (for evidence that this infinitive is a CP, see Hout 1981, Pesetsky 1992, Bošković 1997).[2]

(8) *Pierre a   cru   Marie avoir   acheté des fraises.
     Pierre has believed Marie to-have bought   strawberries

The hall-mark of the truncation account of CTE is that making the clause smaller voids CTE. This is what happens with French ECM: reducing the infinitive to a small clause makes ECM possible.

(9) Pierre a   jugé   Paul coupable.
     Pierre has judged Paul guilty

Based on English, Rizzi (2006) suggests clause reduction occurs only with subject wh-movement (so in (3) but not *I said she left*), without providing evidence for this. (10)-(11) do provide relevant evidence (this could be taken to suggest a rescue-by-PF deletion account of CTE, see Bošković 2011).

(10) a. *They believed, and Mary claimed, John would murder Peter.
      b. *Mary believed John bought a car and Peter John sold a house.
      c. Who did they believe, and Mary claim, would murder Peter?
      d. ?Who did Mary believe bought a car and Peter sold a house?
(11) a. ?Who do you believe sincerely likes Natasha?
      b. *What do you believe sincerely Natasha likes?   (Bošković and Lasnik 2003)

(10a,b) are standardly ruled out by licensing conditions on null C. (10c,d) then provide evidence that when subject wh-moves, the clause is smaller than CP. Moreover, (11) indicates that only subject wh-movement results in a smaller clause, not wh-movement in general. Importantly, subject wh-movement also makes ECM possible in French. The parallelism provides evidence for a uniform treatment of French ECM and English CTE: in both, subject wh-movement makes the clause smaller, voiding CTE.

(12) Paul, que$_i$ Pierre a   cru   t$_i$ avoir   acheté des fraises.
      Paul, who Pierre has believed   to-have bought strawberries   (French)

Also relevant here is interaction between C-drop and RTO in Japanese. Overt movement of RtoP to the matrix discussed above (see (6)) is optional, RtoP can stay in the embedded clause (Taguchi 2015 argues it then moves to the matrix in LF). An argument for this is provided by multiple clefts (Hiraiwa 2001). Clefted phrases in such clefts must come from the same clause. RtoP can be clefted with either matrix or embedded phrases (only the latter is possible with nominative subjects), which shows that it can stay in the embedded or move to the matrix clause. Interestingly, under C-drop RtoP can only be

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[2]See Kayne (1980) for an explanation of some superficial exceptions to the ban on raising from the infinitives in question (note that A-movement across CP is in principle possible, see e.g. Obata 2010).

clefted with matrix phrases, not embedded ones. Given that RtoP is located in the embedded clause SpecCP when it stays in the embedded clause, this provides evidence that voiding CTE indeed requires a smaller clause: RtoP cannot stay in the embedded clause SpecCP since the CP itself is missing.

(13) a. [Washi-ga [t_i t_j kuwashii *(**to**)] omootoru-n]-wa **Miki-o**$_i$ **gengogaku-ni**$_j$ ja.
    I$_{MALE \cdot NOM}$ familiar   C   think-C-TOP   Miki$_{ACC}$ linguistics$_{DAT}$ copula
    'It is Miki, with linguistics that I think is familiar.'   (Hiroshima dialect, H. Oda)
   b. cf. [t_i [t_j Gengogaku-ni kuwashii (**to**)] omootoru-n]-wa **washi-ga**$_i$ **Miki-o**$_j$ ja.

It seems plausible that the embedded SpecCP requirement is there because RtoP must be at the embedded clause edge if it does not move into the matrix. In the presence of *to*, base-generation in that position is necessary due to CTE. With C-drop, since CTE is not an issue SpecCP base-generation isn't required. But why can't RtoP stay in SpecIP under C-drop? Given that there is no clause reduction if there is no subject movement, RtoP cannot stay in embedded SpecIP even under C-drop since it would then not be located at the embedded clause edge (C-dropped clause is an IP only if the subject moves).[3]

2. Who left?

A smaller clause is thus needed to void the Comp-trace effect (CTE), which indicates that null C induces CTE (this is good news if CTE is a syntactic effect, the syntax should not know whether the C is null or not). This, however, raises an issue: Why doesn't CTE arise with subject questions like (14), which should involve movement crossing C (the C is null but that does not matter)?

(14) Who left?

It is sometimes assumed *who* is in SpecIP here. There is strong evidence against this: *hell* phrases, which modify only wh-moved DPs, can modify subject wh-phrases ((15), Pesetsky 1987). Also, the possibility of inverse scope in (16a) shows that object *everyone* can scope over a quantifier in SpecIP. Its impossibility in (16b) then indicates that *who* is not located in SpecIP in (16b) (Mizuguchi 2014).

(15) a. *Who bought what the hell?   b. What the hell did she buy?   c. Who the hell bought it?
(16) a. Someone loves everyone.   b. Who loves everyone?

There is also evidence that subject wh-movement does not pass through SpecIP. Consider (17).

(17) a. Who was arrested all in Duke Street?   b. *They were arrested all last night.
    c. What$_i$ did he say all t_i that he wanted?   (West Ulster English (WVU), McCloskey 2000)

Unlike St. English, WUE allows Q-float with wh-movement (17c); it is also possible in (17a). Still, like St. English, WUE disallows (17b): subject in SpecIP cannot float a quantifier postverbally here. This rules out the derivation where *who* in (17a) moves to SpecCP via SpecIP since *all* would then float under movement to SpecIP. This is disallowed ((17b); this also rules out *who* staying in SpecIP).
    Another, new argument to this effect concerns aux(iliary) contraction. It is well-known that aux-contraction is not possible when the aux is followed by a wh-trace (e.g. Kaisse 1983; in work in preparation I show that this holds when the auxiliary and the wh-trace are located in the same phase).

(18) a. I know where$_i$ John is t_i (tonight).   b. *I know where$_i$ John's t_i (tonight).

The fact that aux-contraction is allowed in (19) then indicates that wh-movement in (19) does not proceed via SpecIP, leaving a wh-trace in that position.[4]

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[3]An issue arises what kind of subject movement licenses clause reduction. Wh-movement apparently can. The same holds for scrambling ((5); RtoP movement from (6) has also been argued to involve scrambling (which explains its optionality), see Hiraiwa 2001, Taguchi 2015). ECM movement, on the other hand, apparently cannot license it.
[4]No *do*-support does not mean no inversion in subject questions. *Do*-support is a last resort operation to support T-affix when there is a PF-realized element between T and V. There is no such element in *who talked* (who C+T talk).

(19) Who's arriving tonight?

I conclude, then, that *who* does not pass through SpecIP in (14) (for more evidence, see Bošković in press, Messick 2020). Regarding the CTE issue, I argue the reason why CTE does not arise in (14) is that while *who* does undergo wh-movement, it moves to a lower position than SpecCP; i.e. I argue that there are two wh-positions, a higher one and a lower one, where the lower wh-position is occupied by wh-moved subjects. One argument that wh-moved subjects and objects do not move to the same position concerns Kaisse's (1983) observation that there is a one-word host restriction on contracted auxiliaries hosted by moved wh-phrases ((20a vs 20b)) but, crucially, only with non-subject wh-phrases (20c)/(21). I take this to indicate that the wh-phrases/auxiliaries are not in the same position in non-subject (20b)/(21a) and subject (20c)/(21b) questions (recall subject wh-phrases do undergo wh-movement.)[5]

(20) a. What's Mary buying?   b. *Whose food's the dog eating? c. Whose food's burning?
(21) a. *Which man's she the fondest of?   b. Which man's leaving first?   (Kaisse 1983)

Another argument comes from interaction with topicalization: (22) shows only the landing site of non-subject wh-movement is above the topic, which means wh-moved subjects are lower than objects.

(22) a. ?Mary wonders which book, for Kim, Peter should buy.
    b. *Mary wonders which student, for Kim, should buy that book.

Interaction with polarity adverbs in (23) also suggests different landing sites for non-subject and subject wh-movement.

(23) a. *What under no circumstances should Ann ever buy?
     b. Who under no circumstances should ever hire Peter?

Consider also Igbo (24), where only wh-moved objects are followed by overt C (glossed as FOC by Amaechi and Georgi 2019), which again suggests that they move higher than wh-subjects.[6]

(24) a. Ònyé *(kà) Òbí hùrù n'-áhíá?   b. Ònyé (*kà)   hùrù Ádá n'- áhíá?
        who   FOC Obi saw P-market   who (*FOC) saw Ada P-market
        'Who did Obi see at the market?'   'Who saw Ada at the market?' (Amaechi and Georgi 2019)

The above data thus indicate that there are two wh-positions, a higher one and a lower one, where the lower wh-position is occupied by wh-moved subjects. More precisely, it is occupied by locally-moved wh-subjects. Long-distance moved subjects pattern with objects: thus, (25) patterns with (20b)/(21a), not (20c)/(21b), which indicates only <u>local</u> subject wh-movement goes to the lower position.[7]

(25) *Which man's Peter claiming will leave first?

Recall now that the "truncation" analysis of (3) implies that a null C can induce CTE, as would be expected under a syntactic account of CTE. Bošković (2016a) in fact argues for a null-C-inducing-CTE account of (26), which shows the familiar local subject vs objects and adjuncts asymmetry.

(26) a. What is it likely John will read t?   b. How is it likely [John fixed the car t]?
     c. *Who is it likely t will read the book? d. Who is it likely (that) John thinks t will read the book?

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[5]T. Messick (p.c) notes *hell* phrases are exceptional (*what the hell's he talking about*) and that what may be relevant here is Merchant's (2002) claim that *the hell* is a complex head with *what* (this does not affect the above point).
[6]See Pesetsky (2021) that there is wh-movement in (24b) (contra Amaechi & Georgi; their data are consistent with wh-movement to a lower position). Bùlì, where wh-moved objects and subjects occur with different particles, may also argue the two have different landing sites since the subject particle is lower (Sulemana 2017, Pesetsky 2021).
[7]Amaechi & Georgi (2019) show Igbo long-distance wh-moved subjects pattern with objects (24) in preceding C. Note also that *??I wonder which student, for Kim, Mary said should buy that book* is better than (22b). The short /long-distance contrast is even clearer with (23b) vs *who under no circumstances should Ann ever say stole it*.

This has raised the question why CTE does not arise in *who left.* In light of the above discussion, the reason why CTE does not arise in *who left* is rather straightforward: the landing site of subject wh-movement here is lower than the CTE inducing head. (This is not the case with long-distance subject wh-movement, which, however, is not sensitive to CTE anyway, cf. *who do you think that he said left.*)

As for why the lower wh-position is confined to subjects, I suggest that this is a mixed A/A' position on the border of the traditional A and A' fields: it is the landing site of wh-movement but also the position where the EPP is satisfied. This explains the otherwise puzzling voiding of the EPP in (17a) (if *who* had to move via SpecIP *all* would be floated from the same position in (17a-b)). The EPP is satisfied here: it is satisfied in the lower wh-position, a mixed A/A' position confined to locally A'-moved subjects. (This differs from Branigan's 1992 claim that all subjects are in an A'-position.)

This may also help us capture the long-standing intuition (e.g. Chomsky 1986) that extraction from subject wh-islands is less degraded than from non-subject wh-islands (cf. ?*What do you wonder who bought* vs ??*what do you wonder how she bought*)*:* given that the issue here is wh-movement to an A'-position across an A'-Spec (Rizzi 1990), what may matter is that in the former the crossed position is not a pure A'-position, while in the latter it is. (It's a you-get-to-have-your-cake-and-eat-it situation—under the current analysis there is subject wh-movement but it is not pure A'-movement).

Focalized subjects also move there (optionally—focus-movement is not obligatory in English), not surprising given that focus and wh-elements often pattern together for movement. The *only*-licenser c-commands the NPI in both (27a) and (27b); this means *only* cannot license the NPI from a purely A-position. (27c) can then be captured if the focalized subject moves to the mixed A/A' position.

(27) a. Only his girlfriend does John give any flowers.   b. *John gives only his girlfriend any flowers.
    c. Only Mary showed any respect for the visitors.   (Branigan 1992:84)

Importantly, the above discussion leads to a new, contextual conception of the EPP, which is on a par with the contextual approach to phases in Bošković (2012, 2013, 2014), where there are phasal domains and the highest projection in a phasal domain is a phase (e.g., DP is a phase in the nominal domain when present; when it's not, a lower projection in the nominal domain is a phase). In particular, there is an EPP domain, with the highest projection in this domain being the locus of the EPP.

3. Subject positions and contextual EPP

So far we have (28) for different (EPP-satisfying) subjects (A/A'P is used for ease of exposition; note that the projection is not always present):

(28) [$_{A/A'P}$ wh-moved subject [$_{IP}$ Amy

I will now explore the possibility of additional subject positions. Consider first Bošković's (2020) argument for a return to split IP: Given that bar-level coordination is disallowed, (29), where the subject is outside of the coordination but the modal is not, provides evidence that the subject and the modal are not in the same phrase, the modal being lower than the phrase whose Spec the subject occupies (this can be captured in early minimalist clause structure, which split IP into AgrsP and TP[8]).

(29) John [travels to Rome tomorrow] and [will fly for Paris on Sunday]

This leaves room for additional subject positions. In this respect, Bošković (2019) and Cardinaletti (2004) argue non-agreeing quirky subjects (31) are lower than agreeing subjects (XP would be AgrsP and YP TP under the AgrsP/TP split—non-agreeing subjects would naturally not be in SpecAgrsP).

(30) [$_{A/A'P}$ wh-moved subject [$_{XP}$ Amy [$_{YP}$ quirky subjects
(31) Mér   er   kalt
    me(D) is cold   (Icelandic)

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[8]The original argument for splitting IP—I is a strange element with two kinds of very different information, tense and agreement (just look at the two semantically)—applies to the current assumption that Tense has φ-features.

Focusing on quirky subjects, there is a poorly understood variation regarding this construction (English e.g. disallows it). One of the reasons is that, as Poole (2015) notes, quirky subjects cross-linguistically do not behave uniformly regarding the classic Zaenen et al (1985) tests. I will take the possibility of binding subject-oriented anaphors as a diagnostic for true quirky subjects. This enables us to finally shed light on what is behind the crosslinguistic variation in question. More precisely, a new generalization then emerges regarding the availability of quirky subject constructions. A typological survey of the literature (see the talk handout for the sources) reveals that quirky subjects are allowed in Icelandic, Faroese, Laz, Kannada, Korean, Malayalam, Spanish, Telugu, Japanese, Tamil, Imbabura, Polish, Georgian, Russian, Basque, Old French, Marathi, Guajarati, and Hindi. What these languages have in common is that they all allow *pro*-drop (full or partial). This then leads to the new generalization in (32) (where binding of subject-oriented anaphors is taken as the relevant diagnostic):

(32) Quirky subjects are allowed only in *pro*-drop languages.

(32) indicates that *pro*-drop is required for quirky subjects. Why is that the case? This can be captured if quirky subjects are not located in the same position as regular subjects (see e.g. (33)). *Pro* is then needed for the regular subject position, hence only *pro*-drop languages allow quirky subjects.[9]

(33) [AgrsP Amy [TP quirky subject

4. Extensions: V-2, Locative Inversion, clausal subjects, and *there*

All this can be extended to a number of constructions, e.g. subject/non-subject V-2 asymmetries. There is a controversy regarding whether subject V-2 clauses (34a) in Germanic are CPs or IPs: they in several respects differ from non-subject V-2 clauses ((34b), see e.g. Zwart 1993), but they are also not exactly the same as regular non-V-2 subject clauses (34c). What this essentially indicates is that the subject in subject V-2 clauses is lower than SpecCP but higher than SpecIP, which can be captured if the subject in such clauses is located in SpecA/A'P (cf. also (27) for focalized subjects in English).

(34) a. Subject V ….   b. [CP Non-subject V [IP …   c. [CP that [IP Subject….V

Consider also Locative Inversion (LI; see Diercks 2017 for a literature overview). LI subjects show a number of subject properties, e.g. subject raising (35c), lack of weak-crossover effects (35a-b).

(35) a. Into every dog$_i$'s cage peered its$_i$ owner.   b. cf. *Into every dog$_i$'s cage its$_i$ owner peered.
   c. On the wall$_i$ seemed [t$_i$ to be hanging a picture of John].   (Diercks 2017)

They also show non-subject properties: they block extraction (36) and disallow inversion to C (37).

(36) a. *Which horse do you think that out of the barn ran?
   b. *Who do you think that on this wall hung [a picture of t]?
(37) *Did on the wall hang a picture of John?

All these can be captured under (38), where LI subjects move to a higher subject position than the regular subject position, where the higher position has mixed A/A' properties, hence also blocks A'-movement. (The *pro*-drop issue does not arise with LI under (38), hence LI is allowed in non-*pro*-drop languages; as for inversion, if it is Agrs that undergoes it the intervening A/A'-head would block it.) Note that the higher position (SpecA/A'P) cannot be the Topic position; it must be a distinct position given (35a-b) (also, local subject topicalization is disallowed in English, see Lasnik and Saito 1992).

(38) [A/A'P LI [AgrsP Amy [TP quirky subject

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[9]There is an alternative if in *pro*-drop languages there is no separate AgrsP; rather, T has φ-features (but see fn 8). The suggestion is that quirky subjects cannot go to SpecA/A'P or SpecAgrsP (for relevant, but different, discussion see Citko et al 2018), so only a language without AgrsP can have them and only *pro*-drop languages are like that.

Regarding the domain approach to the EPP, all the projections from (38) belong to the EPP domain: the EPP requirement is satisfied in the highest projection present in Split IP. Furthermore, under the current approach to Split IP/EPP-domain, non-nominative subjects do not move to SpecAgrsP (since the EPP is satisfied in the final position of LI, the LI would not pass through SpecAgrsP).[10]

The above can be extended to clausal subjects, which also show mixed subject properties (Stowell 1981 vs Bošković 1995; (39a) vs (39b)), but cannot be treated as undergoing topicalization from the subject position since local subject topicalization is disallowed. Notice also the locality effect in (40).

(39) a. [That John likes Mary] seems to be surprising.   b. *Is [that John likes Mary] likely?
(40) ?*Peter asked to whom that John likes Mary seems to be surprising.
(41) cf. ?Peter asked to whom that discovery seems to be surprising.

The discussion of LI and clausal subjects can be extended to (at least some) *there*+V constructions.

(42) There arrived a woman at that station.

For most speakers, *there*+V constructions differ rather significantly from *there*+*be*: there is a locality effect, as Hartmann (2011) notes (she shows it's the same as with LI), and inversion is degraded.

(43) ?*How many women do you think that there arrived at that station?
(44) *Who do you think that there appeared a picture of in the Daily Telegraph?
(45) ?*Did there arrive a woman at that station?

There in the *there*+*be* construction does not show these effects (46)-(47).

(46) How many women were there in the garden?
(47) ?Who do you think that there was a picture of on the table?

This can be captured if *there* in (42) is in SpecA/A'P, on a par with LI and clausal subjects. There's a controversy regarding whether subject *there* is nominative (Chomsky 1995 vs Lasnik 1995, Bošković 1997). From the current perspective, where non-nominative subjects cannot be in SpecAgrsP, both sides may be correct, with the different patterns in *there*+*be* and *there*+V constructions attributed to different properties of *there* (*there* is not nominative in the latter; for another perspective, see Hartmann 2011).

There are other phenomena where LI, clausal subjects, and *there*+V pattern together (and differ from *there*+*be*), which further argue for a uniform treatment of these constructions. One is ECM.

(48) ?*You believe under that table to be hiding two kids.
(49) ?*You believe that John likes Mary to be unlikely.
(50) ?*You believe there to have arrived a woman at that station.
(51) You believe there to be five animals in this zoo.

For-infinitives provide another relevant case. *There* in *there*+V and *there*+*be* constructions behaves differently regarding *for*-infinitives, with LI and clausal subjects patterning with the former.

(52) a. I arranged for there to be someone in that station.
    b. *I arranged for there to arrive someone in that station.
(53) a. For there to be someone in that station would be unlikely.
     b. *For there to arrive someone at that station would be unlikely.
(54) a. *I arranged for [under the table] to be hiding two kids.
     b. *For [under the table to be hiding two kids] would be unlikely.

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[10]If there is a QP above wh-DPs (see Cable 2010; there may be a similar projection above all phrases undergoing traditional A'-movement, see Yoo 2018), the right generalization may be that non-DP/nominal subjects cannot move to SpecAgrsP (this could in fact be the source of anti-agreement effects in languages that have them; under this suggestion, inherent case, as with quirky subjects, would be associated with a null P, as often assumed).

(55) a. *I arranged for [that John will be fired] to be likely.

   b. *For [that John will be fired to surprise us] is unlikely.

What the facts discussed above show is that SpecA/A'P is associated with a locality effect as well as the impossibility of inversion (to C), ECM, and *for*-infinitives. (Another SpecA/A'P candidate is the subject in Singlish no-agreement constructions (discussed in Lee 2021; he shows it disallows inverse scope, just like LI and wh-subjects, which may then be another property of SpecA/A'P subjects)).

To sum up the discussion of subjects, agreeing/nom subjects (like *Amy*) are in SpecAgrsP, traditional locally A'-moved and non-nom subjects are in the Spec of a higher projection, and quirky subjects are lower than AgrsP (SpecTP).[11] The EPP is satisfied in the highest projection present in this domain.

(56) [$_{A/A'P}$ who/V-2 subj/only-subj/LI/CP-subj/there-V [$_{AgrsP}$ Amy [$_{TP}$ quirky subject

5. Conclusion

I have argued that wh-subjects are lower than wh-non-subjects but still higher than regular subjects:

(57) a. I asked **what** he said vs I wonder **who** left vs I said **he** left   b. **what** > **who** > **he**

The account was extended to a number of cases: Germanic V-2 subjects, focalized subjects, clausal subjects, locative inversion, *there*-V and Singlish no-agreement constructions. Furthermore, I have argued for a contextual approach to the EPP (on a par with the contextual approach to phases), where the highest projection in the EPP domain is the locus of the EPP (on a par with the highest projection in a phasal domain being a phase). The hierarchy of the subject positions discussed is given in (58).

(58) wh(A/A')-moved subjects>regular subjects>quirky subjects

As for Comp-*t* effects (CTE), I have provided evidence for reduced-clause approaches to the lack of CTE in (3)/*who do you think left,* where null C induces CTE, and extended CTE to several phenomena.

While accounting for CTE is beyond the scope of this paper, I will outline a possible analysis.[12] Rizzi (2006) gives a criterial freezing account of CTE where SpecIP is a criterial freezing position (it disallows further movement), with IP missing in (3). I will suggest an alternative, which still involves criterial freezing. In particular, the suggestion is that criterial freezing happens only when C takes IP as complement (regardless of how IP is split; I continue to assume that CP is missing in (3)). Following Chomsky (2008), there is C-I association when C takes IP as its complement, with the φ-features of I originating in C. The suggestion is that agreement/feature-sharing in SpecIP (i.e. the highest projection in the EPP domain), followed by agreement/feature-sharing with the same features in SpecCP[13] is what induces freezing (i.e. what induces it is agreement/feature-sharing in an A'-position, which for subjects that move to SpecCP happens due to the agreement/feature-sharing with the same features in SpecIP). On this account, SpecCP freezes the subject, preventing the required further movement.[14] There is also a slightly different option, where criterial freezing is an A'-property: because an A'-head, C, is the source of the φ-features of I, those φ-features are criterial-freezing (see also Chomsky 2013). On this account, SpecIP freezes the moving subject. I leave exploring these accounts for future research.[15]

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[11]The labels in (56) are (to some extent) used for ease of exposition; what is more important is the hierarchy.

[12]A referee notes that for some speakers, CTE disappears with unaccusatives and passives. It may be that for them, there is actually a null *there* in such cases (since *there* is allowed with unaccusatives and passives). If null *there* behaves like overt *there* a prediction of this account would be that the effect would occur only in *there+be*, not *there*+V constructions; the examples given by the referee are indeed all of the former type—they all involve *be.*

[13]Chomsky (2013) suggests that successive-cyclic movement is driven by the lack of feature-sharing; this, however, is not the case here.

[14]Recall Japanese RtoPs need to move to the higher clause, covertly if not overtly. This requires SpecCP generation.

[15]As for *who do you think that [$_{PolP}$ under no circumstances would leave]*, there are two options: PolP breaks C-I association or it is part of the EPP domain (on the latter, PolP could be similar to the focus projection from (27)), with the adverb satisfying the EPP; even the wh-phrase can move through and satisfy it in SpecPolP if there is no C-Pol association. As for relatives like *the bus (*that) left*, Bošković (2016a) argues that they have the following structures depending on whether *that* is present (relative-movement lands in RelP): [$_{RelP}$[$_{ThatP}$[$_{IP}$ vs [$_{RelP}$[$_{IP}$. Both

I will close with a general discussion of contextuality. Consider locality of movement. In the early bounding approach, the trouble-makers for movement were defined rigidly: NP and IP were bounding nodes regardless of their syntactic context. *Barriers* (Chomsky 1986) were very different but the importance of one difference went unnoticed—the contextuality of *Barriers*. One can't even ask if e.g. CP is a barrier. Its barrier status depends on the syntactic context it occurs in; in *Barriers,* trouble-makers for movement were defined <u>contextually</u>. Chomsky's (2000) early phase approach went back to the bounding approach in that it defined the trouble-makers, i.e. phases, rigidly: CP and vP are phases regardless of their structural position. This was soon followed by various contextual approaches, where whether XP is a phase depends on its syntactic context (as in *Barriers,* in contrast to the bounding/early phase approach), see Bošković (2014) and references therein.[16] Further, Bošković (2016b) argues that just like the phase status of α is affected by the syntactic context in which it occurs, the concept of *phasal edge*, i.e. the status of a Spec regarding the PIC, is affected by the syntactic context in which it occurs (the highest phrase in a phasal domain functions as a phase, and the highest edge in multiple-edge contexts functions as the phasal edge). There has thus been a consistent move toward contextuality in the locality of movement. The contextual approach to the EPP gains theoretical significance within this setting: It shows broader relevance of contextuality, contextuality now also being relevant for the EPP (in the same way as for phases and phasal edges—there is a domain for phases/phasal edges/EPP, the highest phrase in the relevant domain functions as a phase, phasal edge, locus of the EPP effect).

There is more to the contextuality of syntax. Chomsky (2013) argues labeling is also contextual: the same element behaves differently for labeling in different contexts (a phrase behaves differently in phrase-phrase and head-phrase mergers, as well as in different phrase-phrase mergers) and its labeling status changes during the derivation. Bare phrase structure is also very contextual: the phrase status of α depends on the context and also changes during the derivation: thus, what is a maximal projection after a head and a phrase merge becomes an intermediate projection with further merger.

The A/A' distinction is also now contextual. E.g., when movement passes through SpecvP its A/A'-status depends on the nature of the movement: if it is A-movement (the position below and above SpecvP in the chain is an A-position), the SpecvP is an A-position (also if landing site of object shift); if it is A'-movement (wh-movement of adjuncts, long-distance object movement), the SpecvP is an A'-position; we thus need to look at the larger syntactic context to determine the A/A' status of a SpecvP.

Further, Bošković (2015, 2016a, 2018, 2020) provides a uniform account of all island/locality-of-movement effects based on contextual approaches to phases and labeling, where there are no islands as they were traditionally understood—there are no phrases that by their nature, independently of their syntactic context, disallow extraction (extraction is possible from all islands in well-defined contexts).

There has thus been a constant move toward context-sensitivity that permeates many domains, including structure-building, labeling, A/A'-distinction, locality domains (traditional islands as well as the status of phases and their edges), and now also the EPP (its contextuality is the same as the contextuality of phases and phasal edges, being defined in the-highest-phrase-in-the-domain terms).

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accounts of the PolP effect can be extended to this case under Rel-I association and SpecIP freezing (relative *that* would be lower than *that* in (2), it may actually be similar to the lower *that* of Spanish double *that* constructions (see Villa-García 2015)). Alternatively, relative *that* may be a PF realization of the A/A'-head in relatives, subject relative movement stopping there (Norwegian has this pattern in questions; it can also be captured this way).

[16]Bošković (2014) shows its structural sensitivity gives the contextual approach the needed flexibility to capture crosslinguistic variation regarding extraction without parameterizing phasehood (i.e. the computational system).

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