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The height of *let alone* in English: Evidence from inversion and contrastive topics.

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1. Introduction

This paper presents an analysis of the *let alone* structure in English (Fillmore et al., 1988). Concentrating on inversion structures, I further develop the stripping ellipsis analysis presented in Harris (2016) with two additional claims. First, the maximal height of the fragment following *let alone* is lower than sentential negation. Second, contrastively marked subjects occupy a low topic position above vP (Belletti, 2004), thereby offering novel evidence for discourse functional elements between vP and TP. I conclude with a brief discussion of the subclausal syntax below *let alone* in ellipsis and inversion environments. We begin with a brief introduction to the *let alone* construction.

2. Properties of *let alone* structures

The *let alone* construction belongs to a family of what have been called *focus-sensitive coordination* structures, which also include *much less* and some uses of *never mind*, that exhibit a complex constellation of syntactic, semantic, pragmatic, and prosodic properties (Fillmore et al., 1988; Hulsey, 2008; Toosarvandani, 2010), summarized in (1).¹

- (1) Basic properties of *let alone*
 - I. Coordinates or compares elements in contrastive focus;
 - II. Presupposes a relationship between items in contrastive focus along some contextually salient scale;
 - III. Exhibits complex licensing behavior, including explicit and implicit negation, biased questions, etc;
 - IV. Hosts stripping ellipsis.

First, at least two elements in *let alone* structures are marked with (contrastive) pitch accent (SMALL CAPS). As I will adopt an ellipsis approach for most cases, the fragment following *let alone* is to be understood as the remnant of ellipsis, and may be paired with a correlate in the antecedent clause. While it is common to find examples with only contrastively focused material in the remnant (2a), non-contrastively marked, given information may also be included as long as the remnant also contains a contrastively marked element (2b–c).

- (2) a. John didn't eat DINNER, let alone DESSERT
correlate remnant
- b. John didn't eat DINNER, let alone eat DESSERT
correlate remnant
- c. John didn't EAT dinner, let alone MAKE it
correlate remnant

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¹ Some speakers accept or even prefer a positive use of *let alone*, which does not require negation and presents an afterthought, rather than a scalar comparison (Cappelle et al., 2015). I assume that the difference is dialectal (Fillmore et al., 1988; Toosarvandani, 2009), as such cases are relatively rare in corpora (Harris & Carlson, 2016).

The pitch accent requirement was corroborated in Harris & Carlson's (2018) corpus study of radio interviews, where every correlate and remnant in an FSC bore pitch accent, usually an L+H* contrastive accent (79% on correlates and 73% on remnants). Further, the location of pitch accent serves to partially resolve ambiguous correlate-remnant pairings (Harris & Carlson, 2018).

Second, items in contrastive focus are interpreted with respect to a contextually salient scale, evoking a *scalar model* (Fillmore et al., 1988). In (2a-b), not eating dinner contextually implies not eating dessert, perhaps on a pragmatic scale where dessert is only eaten if dinner has been eaten first. In (2c), not eating dinner would be understood as implying not making dinner in some particular context, though the implication does not hold in general. Other examples appear to involve likelihood of occurrence or surprise. Crucially, the scales are often *ad hoc*, and need not represent conventionally encoded scalar relationships.

Third, the licensing of *let alone* is complex. In general, *let alone* is licensed in a range of negative environments, including sentential negation (3a) and negative adverbs (3b), as well as implicit negation (3c-d). A few prototypical examples from Fillmore et al. (1988) are provided below.

- (3)
- a. He didn't reach DENVER, let alone CHICAGO
 - b. I barely got up in time for LUNCH, let alone BREAKFAST
 - c. I'm too tired to GET UP, let alone GO RUNNING with you
 - d. He failed to reach the SIXTH GRADE, let alone get a BACHELORS

Let alone is also licensed in questions biased towards a negative expectation (4a), which might be uttered if the speaker is surprised to learn that the addressee has purchased front row seats to a Barry Manilow concert, a singer they consider unpopular. In contrast, positively biased cases appear to prohibit *let alone*, as shown in (4b) by the polar question with a positive bias (e.g., Büring & Gunlogson, 2000; Sudo, 2013), despite the overt negation. Although we will concentrate primarily on cases of sentential negation, *let alone* in questions will be relevant in later discussion.

- (4) *Biased questions*
- a. *Negative bias*
Who(-the-hell) still attends Barry MANILOW concerts, let alone buys front row SEATS?
 - b. *Positive bias*
* Isn't JOHN coming / * Is JOHN not coming, let alone SUE?

Lastly, *let alone* licenses ellipsis in the second conjunct. Without rehearsing all of the evidence here, *let alone* patterns with gapping and stripping ellipsis in multiple respects. First, *let alone* ellipsis obeys Hankamer's (1971) constraint, in which an embedded verb cannot be gapped (5b). Second, while inflected verb forms are grammatical with ordinary coordination (6a), they are dispreferred with gapping under negation (6b) and *let alone* (6c), suggesting a low v/VP gapping source for examples like (6c); see Siegel (1987). Both observations are due to Hulsey (2008).²

- (5) *No ellipsis in embedded constituents*
- a. Peter hasn't eaten his apple slices, let alone SALLY – her green BEANS
 - b. * Peter hasn't eaten his apple slices, let alone the babysitter said [_{CP} that SALLY – her green BEANS]
- (6) *Finite tense strongly preferred*
- a. John drinks milk or Mary \emptyset / eats veal
 - b. John doesn't drink milk, or Mary \emptyset / eat / ??eats veal
 - c. John doesn't drink milk, let alone MARY \emptyset / eat / ??eats VEAL

² Another way in which *let alone* ellipsis patterns with clausal ellipsis is that it permits sprouting (Harris, 2016), in which there is no overt correlate in the antecedent clause (Chung et al., 1995).

To account for these observations, Harris (2016) proposed a move-and-delete style analysis of *let alone* ellipsis, in which the fragment corresponds to a remnant that has moved out of the ellipsis site (rendered as $\langle \cdot \rangle$) into focus positions (FocP*), following accounts developed for other forms of ellipsis, (e.g., Merchant, 2001, 2005; Frazier et al., 2012; Sailor & Thoms, 2013).

- (7) John didn't eat CAVIAR, let alone $[_{\text{FocPESCARGOT}}]_1 \langle \text{John eat } t_1 \rangle$
-

Cases of multiple constituents are analyzed as separate movements to iterated FocPs:

- (8) J. didn't eat CAVIAR with KETCHUP, let alone $[_{\text{FocPESCARGOT}}]_1 [_{\text{FocPwith MAYO}}]_2 \langle \text{J. eat } t_1 t_2 \rangle$
-

Harris (2016) assumed that *let alone* coordinated CP or vP constituents and required ellipsis in the second conjunct. Here, these assumptions are refined in light of additional data and a previously unexplored distributional gap. The remainder of this paper focuses on defending two main claims. The first claim is that *let alone* maximally coordinates below sentential negation (NegP / Σ P), and does not necessarily require ellipsis in inversion cases. The second is that the remnant in certain *let alone* structures may be interpreted as a contrastive topic below the TP. If correct, these two claims support the idea that remnants of ellipsis may occupy a low focus position between vP and TP, sometimes designated the English “middle field”, compatible with existing accounts of focus-inversion structures (Belletti, 2004; Culicover & Winkler, 2008), as well as various approaches to ellipsis (Jayaseelan, 2001; Thoms, 2016; Lacerda, 2021).

2.1. A distributional gap

The first piece of the puzzle concerns the height of the *let alone*. As illustrated by the double object sentence (9), multiple types of fragments may follow *let alone*, including: a direct object DP (9a), a goal DP (9b), and a VP (9c). In contrast, a TP conjunct with a tensed verb (9d) is seemingly ungrammatical, despite the fact that the nearly identical sentence with inversion is acceptable, if somewhat archaic (9e). As will be discussed below, *let alone* may appear with a *that*-clause provided that the fragment is embedded under an elided predicate.

- (9) John won't buy his co-worker a sandwich, let alone ...
- a. $[_{\text{DP}} \text{ a whole meal}]$
 - b. $[_{\text{DP}} \text{ her mother}]$
 - c. $[_{\text{VP}} \text{ buy her mother a whole meal}]$
 - d. * $[_{\text{TP}} \text{ he (would) buy her mother a whole meal}]$
 - e. $[_{\text{XP}} \text{ would he buy her mother a whole meal}]$

This distribution is not expected under an account in which *let alone* is a simple coordinator, along the lines of *and*, which permits coordination of all but the higher XP conjunct:

- (10) John would buy his co-worker a sandwich and ...
- a. $[_{\text{DP}} \text{ a whole meal}], \text{ too}$
 - b. $[_{\text{DP}} \text{ her mother}], \text{ too}$
 - c. $[_{\text{VP}} \text{ buy her mother a whole meal}], \text{ too}$
 - d. $[_{\text{TP}} \text{ he would buy her mother a whole meal}], \text{ too}$
 - e. * $[_{\text{XP}} \text{ would he buy her mother a whole meal}], \text{ too}$

At first glance, the (9e/10e) examples seem to be instances of Subject-Auxiliary Inversion (SAI), in which the auxiliary has moved from T^0 to C^0 (Williams, 1974; Chomsky, 1986; Pollock, 1989). It would therefore be reasonable to assume that the category of XP in (9e) and (10e) should be identified as CP. However, I will propose that *let alone* maximally coordinates structures *below* negation, and hence below TP, at least when *let alone* is licensed by sentential negation in the antecedent clause.

(11) **Claim 1:** *Let alone* maximally coordinates below sentential negation (NegP / Σ P).

It has also been observed that the *let alone* structure licenses ellipsis (Fillmore et al., 1988; Hulsey, 2008; Toosarvandani, 2010; Harris, 2016). The second claim addresses the interpretation of remnants to ellipsis structures, as in the gapping / stripping sentences in (12).

- (12) a. MARY didn't date BILL, let alone SUE — HENRY
b. # MARY didn't date BILL, let alone she — HENRY
- (13) a. MARY didn't date BILL, let alone did SUE date HENRY
b. MARY didn't date BILL, let alone did she date HENRY

In particular, subject remnants like SUE in *let alone* ellipsis pattern as a contrastive topic (CT). Contrastive accent marking on subjects appears to be required in ellipsis (12a vs. b), but not for an unelided source (13). However, CTs are usually placed in an expanded left-periphery above CP (Rizzi, 1997). An important consequence of the proposal is that focus and topics must also be permitted between vP and TP (Belletti, 2004). The basic claim is defended in the latter portion of the paper.

(14) **Claim 2:** Subjects with contrastive accent in *let alone* ellipsis occupy a low contrastive topic position between vP and TP.

The remainder of the paper is organized around providing evidence supporting these claims and offering a sketch of the basic syntax for *let alone* structures with inversion and ellipsis.

3. Coordination height

As mentioned above, *let alone* appears with many different kinds of fragments. The issue addressed here is why *let alone* is incompatible with a full, matrix TP (15a), yet permits inversion (15b–c).

- (15) John wouldn't eat caviar, let alone ...
- a. * he (would) eat ESCARGOT
b. would he eat ESCARGOT
c. would SUE (eat) ESCARGOT

In SAI, auxiliaries raise from T^0 to C^0 over the subject position in Spec TP. While such an approach may be correct for questions, exclamations, and other root phenomena, I propose that in the case of *let alone* as in (15a) above, there is no raising to subject position and that the inversion is only apparent (similar to Culicover & Winkler, 2008). The auxiliary is instead realized below TP. The subject is situated within its base generated position in Spec of vP (15b) or moved to a contrastive topic phrase below AuxP when contrastively accented (15c). Four arguments are provided below in favor of this account.

3.1. Restrictions on tense and negation

If *let alone* could host conjuncts with negation, TP, or higher, it should be acceptable with tensed verbs and negation, contra (16).

- (16) a. * John wouldn't eat caviar, let alone [_{TP} he { would eat / wouldn't eat / eats } ESCARGOT]
b. * John would not eat caviar, let alone [_{NegP} not eat ESCARGOT]

For illustration, I adopt an analysis in which Tense heads T^0 in English are specified for Tense (PAST, PRESENT, etc.) and select the appropriate tensed form of the lexical verb, which remains in VP. The preference for a nonfinite tense form in (6) vs. (16a) can be explained if, in the absence of a T^0 , the default, nonfinite form is selected, as it does not violate agreement with the subject. The prohibition against negation in the fragment in (16b) further suggests that *let alone* selects for material below sentential negation, assumed to be situated below TP in a NegP or Σ P (e.g., Laka, 1990).³ Supporting evidence comes from a close comparison of pseudogapping against other forms of ellipsis.

³ Fillmore et al. (1988) provide the following example in which tense and negation can appear in the second

3.2. Pseudogapping

Pseudogapping is a form of ellipsis in which not all elements from the non-finite verb phrase are deleted (Sag, 1976). Pseudogapping occurs most often with *but* (17) and comparatives (18), when the conjuncts stand in some kind of contrastive relation (Levin, 1979; Hoeksema, 2006).

- (17) a. John would eat caviar, but I won't eat escargot
 b. John would eat caviar, but I won't \langle eat \rangle escargot
- (18) a. John would eat more caviar than I would eat escargot
 b. John would eat more caviar than I would \langle eat \rangle escargot

As noted, *let alone* hosts gapping (19a) and stripping (19b) ellipsis. However, pseudo-gapping appears to be prohibited from *let alone* environments, regardless of whether the subject is contrastive (19d) or not (19c).

- (19) John didn't / wouldn't eat CAVIAR, let alone
- a. SUE – ESCARGOT (Gapping)
- b. ESCARGOT (Stripping)
- c. * he did / would ESCARGOT (Pseudogapping)
- d. * SUE did / would ESCARGOT (Pseudogapping with contrastive subject)

Although implementations of pseudogapping vary widely, in most move-and-delete approaches, an entire TP must be available to host the subject. The subject raises to Spec TP to satisfy the EPP and the remnant of ellipsis raises to a position above VP, which is then deleted (Lasnik, 1999; Jayaseelan, 2001; Thoms, 2016). In these accounts, the object moves to a position below the auxiliary, e.g., a FocP, thereby escaping VP ellipsis. Only crucial movement relations are shown in (20).

- (20) a. John would eat caviar, but I won't \langle eat \rangle escargot
 b. John would eat caviar, but $[_{TP} I_1 [_{T^0} \text{won't}_2 [_{AuxP} t_2 [_{FocP} \text{ESCARGOT}_3 \langle [_{VP} t_1 \text{eat } t_3] \rangle]]]]]$
-

If Claim 1 is correct, the prohibition on pseudogapping with *let alone* can be explained as *let alone* fragments simply lack the position for the subject in TP (21a). Moreover, ellipsis is permitted as long as the subject remains low, below an auxiliary (21b). Although a dedicated AuxP projection is assumed below as an illustration, a similar structure could be proposed with multiple VPs instead of AuxP.

- (21) John wouldn't eat CAVIAR, let alone ...
- a. * $[_{TP} \text{he}_1 [_{T^0} \text{would}_2 [_{AuxP} t_2 [_{FocP} \text{ESCARGOT}_3 \langle [_{VP} t_1 \text{eat } t_3] \rangle]]]]]$
-
- b. $[_{AuxP} \text{would} [_{VP} \text{he} [_{FocP} \text{ESCARGOT}_3 \langle [_{VP} \text{eat } t_3] \rangle]]]]$

In addition, the verb forms *have* and *do* are lexically ambiguous between main verb and auxiliary uses. In American English, main verb uses do not invert (22) and do not appear above negation (23); the examples below are from Carnie (2021).

- (22) a. * Has Calvin a bowl?
 b. * Did Calvin his homework?

conjunct of *let alone*. They argue that such cases are licensed when the negation is implicit or pragmatic, e.g., in *dissolved*. However, I find this example to be stilted at best, and suspect that it may have been accommodated or repaired, possibly as an example of positive *let alone*.

- (1) A. Did the most recent research confirm the Macro-Penutian hypothesis?
 B. The latest results dissolved PENUTIAN, let alone didn't support MACRO-PENUTIAN

- (23) a. * Calvin has not any catnip
 b. * Angus did not his homework

The account therefore also predicts that only auxiliary uses are acceptable in inverted *let alone* structures, assuming that auxiliaries may remain beneath TP. The prediction appears to be borne out:

- (24) a. *Main verb*: * John doesn't have one pencil, let alone has he two
 b. *Auxiliary*: John hasn't written one essay, let alone has he (written) two
- (25) a. *Main verb*: * John barely did his homework, let alone did he his chores
 b. *Auxiliary*: John didn't finish his homework, let alone did he (finish) his chores

I now turn to a related prediction that coordination of matrix questions is prohibited under *let alone*.

3.3. Matrix questions

As discussed, *let alone* is licensed in matrix questions that are biased towards a negative response when containing a contrastive remnant (26a). However, the second conjunct cannot be a full matrix question (26b), even though an embedded complement is completely acceptable (26c). Note that (26b) should be read with the prosody of a single utterance, not as two successive questions, which would substantially improve the judgment.

- (26) a. Who(-the-hell) still attends Barry MANILOW concerts, let alone buys front row SEATS?
 b. * Who(-the-hell) still attends Barry MANILOW concerts, let alone who(-the-hell) still buys front row SEATS?
 c. I don't know who(-the-hell) still attends Barry MANILOW concerts, let alone who(-the-hell) still buys front row SEATS

I assume that in (26c) the entire second conjunct is a remnant moved from the complement of its embedding verb, which has been elided. The pattern is explained if *let alone* lacks a matrix CP to host the *wh*-element.

3.4. Distribution of modals

The final piece of evidence considered here is the distribution of modal auxiliaries in *let alone* structures. I focus on the epistemic vs. root modality distinction. Epistemic modals are concerned with what an attitude holder knows about the world, the epistemic base. In contrast, root modals concern the circumstances of the speaker's world, and include deontic, bouletic, and teleological, information. The two modals are thought to occupy different structural positions. In his hierarchy of functional categories, Cinque (1999) proposed that epistemic modals are situated above TP, whereas root modals appear below TP. A simplified version of the proposal is presented below:

- (27) $\text{ModP}_{\text{Epi}} > \text{TP} > \text{AspectP} > \text{ModP}_{\text{Root}} > \text{vP}$

I assume that *might* is an unambiguous epistemic modal, whereas *should*, like other root modals, has both an epistemic and a deontic interpretation.

The proposal makes two key predictions. First, ambiguous modals should be acceptable in inversion contexts with *let alone* in a deontic, or any other circumstantial, context (28).

- (28) *Ambiguous modal in deontic context*
 [_{Context} John, an avid cook, has just had a bad accident and has been ordered to recover in the hospital. I've been asked if John is making his usual weekend roast in the kitchen.]
- a. According to his doctor, John should not be home, let alone in the kitchen
 b. According to his doctor, John should not be home, let alone should he be in the kitchen

The second prediction is that modals should not be licensed in epistemic contexts, either for an unambiguous epistemic modal like *might* (29a) or for an ambiguous modal biased towards an epistemic interpretation (29b). Crucially, an epistemic modal is perfectly acceptable in the matrix clause, as shown in the (i) examples of (29), as there is a position above TP in the antecedent clause. A syntactic clash is predicted only when the epistemic modal is placed in the second conjunct of *let alone*, which lacks the appropriate position in the clause.

(29) *Epistemic context*

[_{Context} John, an avid cook, has just had a bad accident and I think he might be recovering in the hospital. I've been asked if John is making his usual weekend roast in the kitchen.]

a. *Unambiguous epistemic modal: might*

- i. For all I know, John might not be home, let alone in the kitchen
- ii. * For all I know, John might not be home, let alone might he be in the kitchen

b. *Ambiguous modal: should*

- i. For all I know, John should not be home, let alone in the kitchen
- ii. # For all I know, John should not be home, let alone should he be in the kitchen

Though the judgments may be subtle, the finding that that deontic (28), but not epistemic (29), modals are available in the second conjunct of *let alone* is clear evidence for the first main claim that *let alone* must coordinate below negation. I now turn to data suggesting that there is a low contrastive topic position in English, before further speculating on the narrow syntax of the *let alone* structure.

4. Low subject position and contrastive topic

We have now seen multiple examples in which a subject in Spec TP is prohibited with *let alone*. However, there have also been examples of subjects in lower positions beneath an auxiliary or a modal.

(30) John / JOHN wouldn't eat CAVIAR, let alone ...

- a. would he eat ESCARGOT (Non-contrastive subject)
- b. would SUE eat ESCARGOT (Contrastive topic without gapping)
- c. would SUE – ESCARGOT (Contrastive topic with gapping)

In general, sentence topics identify what a sentence is about (e.g., Reinhart, 1982). Contrastive topics (CTs), however, indicate that there is some other pertinent individual who is, or should be, under discussion, thereby giving rise to a non-exhaustive alternative proposition or question (Büring, 2014). CTs in English are marked with a contrastive L+H* prosodic contour. Common uses of CTs include answers to pair-list questions, partial topics, and shifted topics:

(31) *Pair list answer*

- A. Which guests brought what?
- B. FRED_{CT} brought the BEANS_F (and MARY_{CT} brought the SALSA_F)

(32) *Partial answer*

- A. Where do your siblings live?
- B. My SISTER_{CT} lives in FRANCE_F

(33) *Topic shift*

- A. Where does your sister live?
- B. My SISTER_{CT} lives in FRANCE_F (but my BROTHER_{CT} lives in LOS ANGELES_F)

For example, contrastive accent on FRED_{CT} indicates that there is another individual (e.g., Mary) who might also be under discussion. While example (33) is similar to (32), the effect of CT marking in (33) indicates that another, perhaps more relevant, topic can be discussed, e.g., if speaker B thinks A really wants to know about their brother.

CTs in *let alone* follow a similar pattern (34). As a response to (A), the first conjunct provides an over-answer to the question by evoking a contextually salient *ad hoc* scale that my sister is a worse cook than my brother. As a response to (A'), the reply is infelicitous, as my brother is not pertinent to the QUD (though such replies may be acceptable for speakers with an aside interpretation of *let alone*).

- (34) A. Do your siblings cook? / A'. # Does your sister cook?
 B. MY SISTER_{CT} doesn't cook, let alone MY BROTHER_{CT}

In Cinque (1999), contrastive topic and focus phrases reside above CP in the extended left periphery. However, Belletti (2004) and others have since argued for low topic and focus phrases internal to the IP in Romance. Arguments for clause-internal topic and focus projections have subsequently been made for other varieties of Italian (e.g., Garzonio, 2006; Poletto, 2006), as well for a range of other languages (e.g., Jarrah & Abusalim, 2021; Paul, 2005). Although the kinds of topics in clause-internal positions appear to differ across languages, a common argument in favor of the position comes from focus-inversion structures, where the subject cannot raise past some element below TP (e.g., an adverbial).

The data above suggest that English too admits a low topic position, which can (or must) be interpreted as contrastive. As non-contrastive subjects are permitted in case of inversion, the subject stays low, possibly in-situ within the vP, without triggering ellipsis (35a). For CT interpretations, the subject moves to the low CT position, independently of whether ellipsis occurs (35b–c). I remain agnostic with respect to whether the ellipsis occurs at vP or VP in (35c).

- (35) John / JOHN wouldn't eat CAVIAR, let alone ...
- a. would he eat ESCARGOT (Non-contrastive subject)
 [AuxP would [vP he eat ESCARGOT]]
 - b. would SUE eat ESCARGOT (Contrastive topic without gapping)
 [AuxP would [TopP SUE₁ [vP t₁ eat ESCARGOT]]]
 - c. would SUE – ESCARGOT (Contrastive topic with gapping)
 [AuxP would [TopP SUE₁ [FocP ESCARGOT₂ [vP ⟨t₁ eat t₂ ⟩]]]]

The account can also capture the fact that gapping is only licensed when the subject is contrastive. As discussed, remnants in *let alone* ellipsis may contain given information, as long as the remnant contains a focus, *escargot* in (36a). When the subject also bears focus, it may move to a CTP above FocP (36b). However, fronting the entire vP with a non-contrastive subject to FocP is illicit as it would create a vacuous effect for interpretation, and so fails, by hypothesis, to license ellipsis (36c).

- (36) John wouldn't eat caviar, let alone ...
- a. [FocP [vP eat ESCARGOT]]
 - b. [CTP SUE [FocP (eat) ESCARGOT]]
 - c. * [FocP [vP he eat ESCARGOT]]

I have presented evidence indicating that (i) *let alone* coordinates items below negation and (ii) that contrastive subjects may occupy a position between vP and TP in *let alone* structures. I now address a few remaining issues.

5. Alternatives, speculations, and remaining issues

The first issue concerns the syntactic category of *let alone* itself. Fillmore et al. (1988) proposed that *let alone* is a kind of pragmatically licensed negative polarity item. The constraint on coordination height would follow directly from the assumption that *let alone* is a negative head, perhaps occupying or selecting for ΣP (Laka, 1990). Recall that Claim 1 states that *let alone* can *maximally* coordinate up to sentential negation without making any claims on its *minimal* size. On the simplest analysis, *let alone* always heads the same type of structure. However, *let alone* may also be licensed by other, though not all, forms of negation; it remains to be seen if a wider range of cases support a sentential negation analysis, or if *let alone* may be coordinated at varying positions parallel to the location of the negative element in

the antecedent clause. In addition, it may also be the case that sentence-medial uses of *let alone* directly coordinate the fragment without ellipsis (see Toosarvandani, 2010 for discussion and Harris & Carlson, 2016 for experimental evidence that sentence-final uses are preferred).

Second, the relation of *let alone* to other cases of inversion has yet to be fully explored. For example, comparatives are also known to optionally license inversion (37). Merchant (2003) notes that when there is inversion in the comparative, VP ellipsis is obligatory (37b). Under his account, eliding the highest VP rescues the structure from a violation of the Empty Category Principle by removing an improperly governed trace at Phonological Form.

- (37) a. John will run faster [_{CP} than Mary will (run)]
b. John will run faster [_{CP} than will Mary (*run)]

Assuming that comparatives associate with CPs, an alternative analysis of *let alone* as CP coordination might be possible. In this approach, *let alone* could select for a CP and, as a negative element, obligatorily trigger SAI in a fashion similar to sentence-initial negative adverbs like *never* or *not only*.

This alternative would account for the ungrammaticality of (38a) as a failure to invert when required, as in **Never I would lie*. However, *let alone* differs from comparatives in that ellipsis is optional, not required, in clauses with inverted subjects (38b).

- (38) a. * JOHN won't run, let alone MARY will (run)
b. JOHN won't run, let alone will MARY (run)

Crucial to Merchant's (2003) account is the idea that VPE can target either VP without inversion (39a), but must target the highest VP when inversion has occurred (39b). A different distribution appears to hold for *let alone*, in which eliding either VP is acceptable (40), at least according to my judgments.

- (39) John has been awarded more accolades than ...
a. his father (has / has been)
b. has his father (*been)
- (40) JOHN hasn't been awarded any accolades, let alone has HIS FATHER (been)

In any event, although there is a certain intuitive similarity with comparatives, a unified account would be hard pressed to explain why inversion would require ellipsis with one structure, but not the other. This, among other topics, is left for future research.

6. Conclusion

The *let alone* structure offers a rich testing ground for exploring the interface of syntax, semantics, pragmatics, and prosody. In this paper, I have argued that the syntax of *let alone* is limited to subclausal structures with evidence centering on inverted sentences. Along the way, I have argued for a low contrastive topic position between vP and TP, making English on par with a diverse set of languages (e.g., Belletti, 2004; Jayaseelan, 2001; Lacerda, 2021). It remains to be seen whether evidence for a low topic position in English can be adduced by other means or if its presence can be inferred only by close examination of *let alone*.

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