English hyperraising it seems is mediated by the θ-criterion[*]

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1 Introduction

1.1 Today's goal

- Today's talk focuses on sentences like "Mei it seems is happy", which I argue bear the empirical characteristics of A-movement out of a finite CP (hyperraising)

- I then explore the consequences of this proposal for current theories of A-movement

    - For example, the possiblity of subject-to-subject raising out of an embedded finite CP in English would require us to revisit the Activity Condition, the Ban on Improper Movement, and the Phase Impenetrability Condition

- I ultimately conclude in support of an analysis that does not rely on Activity or the Ban on Improper Movement to mediate hyperraising, and suggest instead that classic (failed) hyperraising sentences like "Mei seems is happy" are ruled out by the Theta-Criterion

1.2 Roadmap

- My analysis in a nutshell (and also a roadmap for this talk):

    - 1) **The basic facts**: "Mei it seems is happy" is in fact a case of A-movement out of a finite CP, and not just an instantiation of a parenthetical, or of A'-movement, or of a base generated topic

    - 2) **Weird properties**: why are there two preverbal DPs and why is an *it* necessary? My answer: *seems* has a P(ERCEPTUAL)–SOURCE theta-role to assign to its external argument exactly when it embeds a finite CP, and *it* absorbs this theta-role. tl;dr two different arguments for two different theta-roles.

    - 3) **A sample derivation**.

– 4) **Minimality effects?** The locality profile of English hyperraising and possible analyses.

– 5) **Conclusion** / situating these results within the bigger picture.

1.3 Background

• Hyperraising, or raising out of a finite CP, is generally assumed to be illicit in English on the basis of the following contrast between (1) and (2):

(1)   Mei seems [$_{TP}$ ~~Mei~~ to be happy].

(2)   *Mei seems [$_{CP}$ (that) ~~Mei~~ is happy].

• The standard syntactic analyses deal with this using a number of constraints/conditions, including Activity, the PIC, and the Ban on Improper Movement, although various efforts have been made to unify analyses of hyperraising with as few conditions stipulated as possible (Keine [2018], Zyman [2023])

– **Activity** Chomsky [2001] case assignment renders an argument inactive for further A-relations; this means 'Mei' can A-move in (1) can raise if it's the subject of a non-case–assigning (i.e. infinitival) TP, but not in (2) where finite embedded T already assigned case to it

– **Phase Impenetrability** (Chomsky [2000] The Phase Impenetrability Condition (PIC) renders everything but the edge of a phase inaccessible to operations outside of the phase, like movement to a matrix subject position. Assuming the CP in (2) is a phase, then 'Mei' can't raise out of it unless it proceeds through the edge

– **Ban on Improper Movement** (Chomsky et al. [1973]): movement from an A' position to an A position is banned, so A-movement can't proceed through the CP edge under the assumption that Spec,CP is an A' position

• These considerations notwithstanding, a construction like 'Mei it seems is happy' looks like it could involve a long-distance A-dependency across a finite CP boundary.

2   The empirical profile of English hyperraising

• The sentences we are interested in include the following:

(3)   Mei it seems [$_{CP}$ ~~Mei~~ is happy].

(4)   **He** it seems [$_{CP}$ ~~he~~ is being pitched as the moderately sane face of the Tory Party].   (web)

(5)   So many people it seems [$_{CP}$ like ~~so many people~~ are condemning the RF for something that they didn't have a part in].   (web)

(6)   These people it seems [$_{CP}$ as though ~~these people~~ have been eaten as we eat chicken].   (web)

• The raised DP can be an R-expression like *Mei* (3), a pronoun like *he* (4), or a quantified DP like *so many people* (5).

• The embedded clause can be introduced by a null complementizer (3–4), *like*, or *as though*, but *that* results in ungrammaticality:

(7)   *Mei it seems that is happy.

- Finally, an *it* between the raised DP and the matrix verb is obligatory:

  (8)   Mei *(it) seems is happy.

2.1   Against a parenthetical analysis

- A first-pass analysis of (3–6 could be that *it seems/appears* is a parenthetical inserted in the middle of a single TP like 'Mei is happy'

- Indeed, there's a possible parse of (3–2) where *it seems* is offset before & after by a pause and can be placed in various positions, including sentence-finally:

  (9)   Mei, it seems, is happy.
  (10)   Mei is happy, it seems.

- But this analysis fails to fully capture the construction. *It seems* may be accompanied by *as though* (11), or by matrix subject–bound NPIs (11-12), which unlike true parentheticals Ross [1984] can't be sentence-final:

  (11)   The police (✓it seems as though) have a new sheriff in town, (*it seems as though). (**web**)
  (12)   **Only he** (✓it **ever** seemed) was being pitched as the face of the party, (*it **ever** seemed).

2.2   Against base-generation

- Base generated topics in English bear default case, ACC (Parrott [2006], Radford [2018]), as in (13). By contrast, the raised DP in the hypothesized hyperraising construction bears NOM (14):

  (13)   Him/*he, he's a great guy.
  (14)   He/*him it seems is being pitched as the moderately sane face of the Tory Party.

2.3   Evidence for movement

- **The moved DP obeys islands**:

  (15)   **Ed** it seems you think ~~Ed~~ is boring.   (No island)
  (16)   ?***Ed** it seems you wonders whether ~~Ed~~ is boring.   (*wh*-island)
  (17)   ***Ed** it seems Mei hates the way ~~Ed~~ is a loser.   (Complex NP island)

- **The moved DP can strand quantifiers**:

  (18)   The boys it seems **both** ~~the boys~~ went home.
  (19)   The kids it seems **all** ~~the kids~~ know what they're doing.

2.4 Hallmarks of A-movement

- Two diagnostics that favor an A-movement analysis include an absence of Weak Crossover (WCO) effects and the ability to feed new binding possibilities (Postal [1971], Wasow [1972], and much subsequent work; see Van Urk [2015] for contemporary overview)

- Lack of WCO:

  (20) Every dad$_i$ it seems to his$_i$ kids ~~every dad~~ is terrible at telling jokes.

  (21) Some students$_i$ it seems to their$_i$ professors have never really bounced back from the pandemic.

- New NPI binding possibilties:

  (22) *It ever seemed only Mei cares about the assignment.

  (23) Only Mei it ever seemed ~~only Mei~~ cares about the assignment.

- New configurations for principles A and B [n.b. the judgments here are less crisp, but a contrast between A & B is clear to everyone I've consulted]:

  (24) Mei$_i$ it seemed to herself$_i$ ~~Mei~~ was at rock bottom.

  (25) Mei$_i$ it seemed to her$_{*i/j}$ ~~Mei~~ was at rock bottom.

- So let's conclude for now: we're dealing with movement out of the embedded CP, and this movement acts like A-movement.

3 *It, seems* and the θ-criterion

- A puzzling property of English hyperraising is the obligatory presence of *it* between the raised DP & raising verb, as in *Mei *(it) seems is a genius*.

- My solution to this puzzle has two parts: first, I argue that *it* is actually referential and denotes a P(erceptual)-source, and then I argue that *seems* has a P-source theta-role to assign when it embeds a CP.

3.1 *It* is referential

- First, I'll show that R(aising)-*it* is not a true expletive, but rather denotes a p(erceptual)-source for evidence concerning the embedded proposition[1].

  - R-*it* can occur with the control verb *want* (26) and be quantified (27); contrast this with expletive *there* (29):

  (26) *Looking in mirror*: **It** almost wants to seem like a few pounds came off.   ([web](web))

  (27) I have the same feeling towards [Andrew] Tate.. remember when he says he is the first angel and the last man? Entrusted by God? All knowing? **It all** seems like he is trying to be a new prophet.   ([web](web)))

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[1]Compare to recent arguments that weather-*it* denotes a source, e.g. Krejci [2014], Levin and Krejci [2019]

(28) He left the royal family by choice. Now **it all** seems $\varnothing_C$ he wants to feel relevant again.

(29) a. *__There__ wanted to arrive plenty of people.
b. *__There all__ arrived plenty of people.

3.2 CP-embedding *seems* has a theta-role to assign its external argument

- Now we're faced with the question of why a referential *it* is necessary with hyperraising *seems* but not in ordinary raising constructions:

(30) a. John (*it) seems to be happy. (ordinary raising)

b. John *(it) seems is happy. (hyperraising)

- I argue that the presence of R-*it* in hyperraising sentences is required in order to absorb a P(ERCEPTUAL)-SOURCE θ-role assigned by CP-embedding *seems* to its external argument

- Otherwise, the raised subject (e.g. *Mei*) is forced to bear two θ-roles in violation of the θ-criterion.

- This is because *seems* has an external P-SOURCE θ-role to assign to its external argument exactly when it embeds a CP.

  – Consider the contrast below, adapted from Asudeh et al. [2006]

  – Imagine Ed is not in his kitchen, but you see pots and pans are on the stove with food simmering in them. You may felicitously utter (31a), but not (b):

  (31) (a) Ed seems [$_{TP}$ to be cooking]. / (b) #Ed seems [$_{CP}$ (like/as though) he's cooking].

  – Ordinary raising *Seems* in (31a) imposes no thematic requirement on its subject

  – Hyperraising *Seems* in (31b) requires that its subject be the perceptual source of evidence for the embedded proposition (Landau 2011), ruling out a context where Ed himself is not perceived

  – A similar contrast holds in Spanish.

  – The following contrast, adapted from Ausín & Depiante (to appear), holds in a context where the speaker is looking at a family picture in which she herself does not appear (and thus cannot corresponding to a PERCEPTUAL SOURCE):

  (32) Yo   parece/#parezco   que no   estoy en esta foto.
       1SG.NOM seem.3SG/#seem-1SG that NEG am   in this photo
       "I seem that I'm not in the photo."

  – As inanimate subject pronouns are always null in Spanish, (32) is consistent with a P-SOURCE-denoting argument like English *it* occupying a slot between *Yo* and *parece* ('seems').

  – This shows up in English as R-*it*, and in Spanish as *pro* with 3SG agreement on the verb.

  – A final piece of evidence in favor of a thematic difference between CP-embedding and TP-embedding seems is that the former can alternate with a rich class of perceptual verbs while the latter cannot:

  (33) a. It {seems / sounds / smells / feels} like John is here. (CP-embedding seems)

  b. John {seems / *sounds / *smells / *feels} to be here. (TP-embedding *seems*)

3.2.1 A note on null subjects

- If my analysis is on the right track, it also explains the fact that the majority of previously described hyperraising languages **permit null subjects** to some degree (e.g. in Bantu [Carstens and Diercks [2013], Halpert [2019]], Mongolian [Fong [2019]], Nez Perce [Deal [2017]], Romance [Fernández-Salgueiro [2005], Nunes [2008, 2019]]; see also Ura [1994] for a typological overview)

- Any language with null subjects might in principle license a string like the following:

  (34)   *Mei* pro_{P-SOURCE} *seems is a genius*
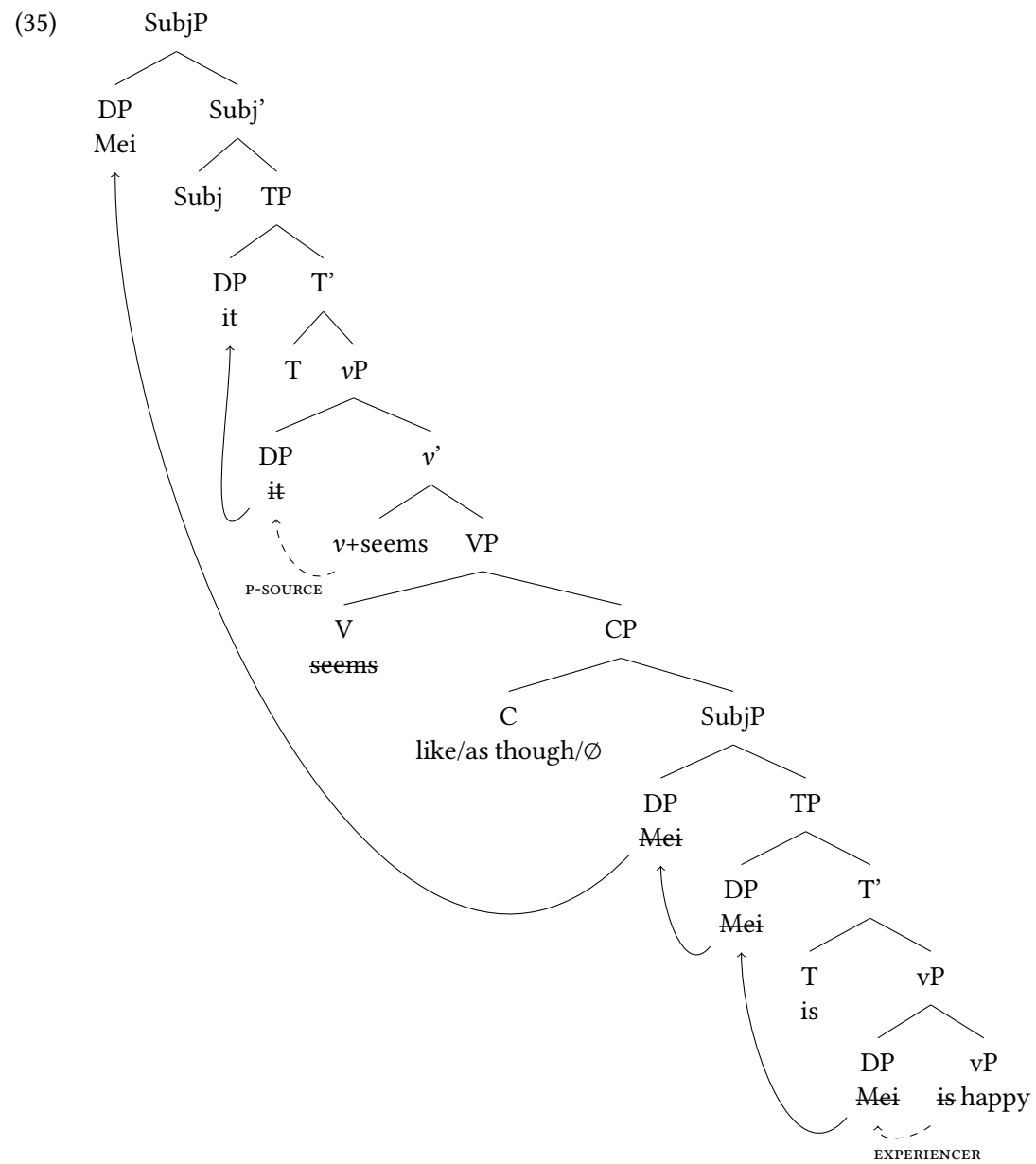
3.3 Interim summary

- 'Mei seems is happy' is illicit because (i) English doesn't allow null subjects and (ii) we only have one external argument (Mei) in this sentence despite having two predicates that assign theta-roles to external arguments (*seems* and *is happy*)

- We need another (overt) subject to absorb the extra theta-role, hence *it* is required

4   A sample derivation

4.1   Where to fit two preverbal DPs?

- For English & Spanish, my analysis involves two preverbal arguments.

- Following Cardinaletti [2004] and many others, I assume a second A-position above Spec,TP, namely Spec,Subj: Subj° attracts R-expressions & strong pronouns while Spec,TP hosts expletives & weak pronouns.

- In (2/3)-type hyperraising sentences ('Mei it seems is happy'), the P-SOURCE-denoting argument (*it*, or Spanish *pro*) is base-merged in Spec,vP in the matrix clause where it is assigned a P-SOURCE θ-role, then moves to Spec,TP.

- Finally, the raised subject raises from embedded Spec,Subj to matrix Spec,Subj.

4.2 A tree

(35)

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                        SubjP
                       /     \
                     DP       Subj'
                     Mei      /    \
                           Subj    TP
                                  /  \
                                DP    T'
                                it    / \
                                     T   vP
                                        /  \
                                      DP    v'
                                      it   /  \
                                      P-SOURCE v+seems  VP
                                                       /   \
                                                      V     CP
                                                   seems   /  \
                                                          C    SubjP
                                                   like/as though/∅  /  \
                                                                    DP   TP
                                                                    Mei  /  \
                                                                       DP    T'
                                                                       Mei   / \
                                                                            T   vP
                                                                            is  / \
                                                                              DP  vP
                                                                              Mei is happy
                                                                              EXPERIENCER
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5 Minimality?

5.1 The problem

- *Mei* in *Mei it seems is happy* crosses over an intervening DP *it* in the course of the derivation

- Finally, the embedded CP itself may count as an intervener since CPs are possible subjects/A-movers (Carstens and Diercks [2013], Halpert [2019], Hedde Zeijlstra's talk yesterday)

5.2 Solution: A closer look at the alleged interveners

- In our sample derivation of 'Mei it seems [$_{CP}$ ~~Mei~~ is happy]', we ran into two possible Minimality violations: crossing *it*, and moving out of the embedding CP

- A closer look at both of these will alleviate our concerns (hopefully)

5.2.1 *It* is a weak pronoun

- Although I argued that *it* in 'Mei it seems is happy' is referential, it's still a weak pronoun

- English *it* (regardless of referentiality) shows signs of semantic and syntactic deficiency w.r.t. other anaphoric expressions in English

- For example, *it* can't occur in fragments or be topicalized:

  (36) A: What did you buy? B: {That. / *It.}

  (37) A: {That/*It}, I like.

- I adopt the view that *it* is structurally deficient, e.g. a φP rather than a full-fledged DP in Déchaine and Wiltschko [2002] terms; see Branan and New [2021] for more discussion of *it*

- As is familiar from, e.g., French dative experiencers, a structurally weak form like a clitic doesn't intervene for raising where a full DP like *Marie* does:

  (38) Jean (^{OK}lui)   semble (*a Marie/elle) [$_{TP}$ ~~Jean~~ avoir   du talent].
        Jean 3SG.DAT seems (*to Marie)   [$_{TP}$ ~~Jean~~ have-INF of talent].
        "John seems to Marie/her to have talent."   McGinnis [1998]

- Similarly, at least some people (including me) can utter either a generic DP like *things* or *it* to denote the P-source in (39), but *things* blocks hyperraising (40):

  (39) {✓Things seem / ✓It seems} like Mei is happy.

  (40) Mei {?*things seem / ✓it seems } like is happy.

5.2.2 CP intervention?

- Given evidence for minimality based approaches to CP phasality/barrierhood shown in Carstens and Diercks [2013], Halpert [2019], a.o. we need to consider the intervener status of CP [$_{CP}$ {like/as though/Ø} is happy] in 'Mei it seems is happy'

- Fortunately for us, only *that*-headed CPs seem to bear φ-features in English; they can be subjects, and for some speakers trigger plural agreement:

  (41) [$_{CP}$ That John is happy] is obvious.

  (42) [$_{CP}$ That John is happy] and [$_{CP}$ that it's a nice day outside] are obvious.

- Bare CPs on the other hand, have been argued not to have any nominal structure and cannot raise to subject position (Davies and Dubinsky [2009], Hartman [2012], Moulton [2015] see also discussion in Halpert [2019])

- Since *like-* and *as though-CPs* also can't raise to subject, a similar argument can be extended to them:

- (43) [$_{CP}$?*{Like / as though} he's going to be on time is how we should act / is obvious / … .

- Now, consider that while bare CPs and (at least for some speakers) *as though*/*like* CPs can be raised out of, *that*-CPs cannot be:

  (44) *Daniel it seems (*that / ✓like) is happy.

- This is consistent with standard A-Minimality effects: when the CP is nominal it intervenes and blocks A-movement, but otherwise it doesn't

5.3 An alternative (if there's time): mixed A/A' properties

- Another solution that obviates A-Minimality effects entirely is to analyze English hyperraising as a mixed A/A' phenomenon

- A'-esque properties: optionality, information structural differences

  (45) (out of the blue) # Mei it seems is happy.

  (46) A: How's Mei doing anyway? B: ✓Mei it seems is happy.

- So maybe *Mei* bears a TOPIC feature, and something like the following holds:

  – Subj probes for φ and TOPIC and requires conjunctive/Boolean satisfaction, (Coon and Bale [2014], Van Urk [2015], Scott [2021], Lohninger et al. [2022], Oxford [2022], Amy Rose Deal's talk @ LTPA yesterday)

- I begin by noting that while 'It seems that Mei is happy' is fine to utter out of the blue, 'Mei it seems is happy' is a bit odd without the right context

- It is fine, however, in a context like the following:

(47) Q: How's Mei doing?
      A: Mei it seems is happy.

- Given these information structural properties, we could propose that the hyperraised argument bears a TOPIC feature.

- Since we have mixed A/A' behavior, we could accordingly posit that SUBJ probes conjunctively for both A-bar features (TOPIC) and A (φ) features.

- Then, intervening non-topics will not create Minimality violations.

- To tell which of the sketched solutions is correct, ideally I could apply tests that can show positive evidence in favor of A'-movement; unfortunately, parasitic gaps won't work because of the anti−c-command requirement Chomsky [1982]

6   Conclusion

- In this talk we've seen that even boring old English has what appears to be A-movement out of a finite clause, contradicting many standard assumptions about English and A-movement in general.

- This is a welcome result, particularly for deactivation analyses of hyperraising

  – Zyman [2023]: "Deactivation analyses boast empirical successes but do not straightforwardly rule out hyperraising in English".
  – Now we don't need or want to rule it out!

6.1   Returning to the status of A-movement constraints

- **Activity**: My results can be taken to support Carstens [2001], Henderson [2006], Halpert [2019], a.o. who suggest Activity is subject to variation or perhaps is generally invalid

  – (However, if you apply a mixed A/A' analyis to English hyperraising, we could still maintain Activity)

- **Phase Impenetrability**: My analysis is consistent with a phase deactivation-based approach (Carstens and Diercks [2013], Halpert [2019], in which a CP is a barrier to A-movement if it counts as a potential intervener for the sake of Minimality; otherwise its status as a barrier is 'deactivated'; we saw that only φ-bearing CPs block hyperraising in English

6.2   The θ-criterion?

- I proposed that the θ-criterion underlies the sort of CP/TP raising asymmetry shown in (30a–b), at least in English and Spanish, where CP-*seems* assigns a θ-role to its subject while TP-*seems* doesn't (31–32).

- Given the obligatory presence of an overt referential argument exactly when there's extra thematic information hanging around, these data also reaffirm the validity of the θ-criterion (cf. Angelopoulos et al. [2020])

- A question to be explored is whether verbs with larger complements tend to have more complex thematic structure more generally, leading to apparent locality effects.

6.3 Is evidentiality required?

- Recent work from Lee and Yip [2020] shows that indirect evidence predicates license hyperraising but direct evidence predicates do not in both Cantonese and Vietnamese, suggesting that there is a type of evidentiality requirement for hyperraising in these languages

- English CP-embedding *seems* is clearly evidential, and other predicates that may plausibly also allow hyperraising like *think* and *say* (e.g. 'Mary I think is happy') also have an evidential flavor

- The next step will be to look for other predicates in English that aren't evidential and see how they pattern w.r.t. hyperraising

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