1 Background

A. Data

- We've seen plenty of **raising**:
  
  (1) a. Mary seems to have got the right answer.
      b. Close tabs seem to have been kept on Mary.
      c. The students seem to have all got good grades.

  (2) Close tabs seem [ ___ to have been kept on Mary ]

- And of **ECM** too:
  
  (3) a. Mary expects Susan to have got the right answer.
      b. Susan expects close tabs to have been kept on Mary.
      c. Susan believes Mary *with all her heart* to have arrived late.

  (4) *Representation of (3c)*

B. Analysis: raising and ECM involve **movement into the matrix clause**

- Twin reasons for movement: **Case in the DP** and **EPP**

  (5) a. In raising (see (1)), there clearly is movement. Given (3c), we could formulate the following working hypothesis:

      Both ECM and raising involve movement triggered by EPP.

  b. **Case in the DP**
• How the derivation goes

(6) a. *Raising*  
    b. *ECM*

2 Hyper-raising

A. Some languages display constructions that are similar to English raising and ECM.

(7) **Brazilian Portuguese**

a. Parece [ que os alunos vão fazer pão ].
    seems [ that the students will make bread ]
    ‘It seems that the students will make bread.’

b. Os alunos parecem [ que vão fazer pão ].
    the students seem [ that will make bread ]
    Lit.: ‘The students seem that will make bread.’

• Other languages: Haitian Creole, Lubukusu, Zulu

(8) **Romanian**

a. Știu copiii [ că Ion lâcomește la mâncare ].
    know the.children [ that Ion is greedy at food ]
    ‘The children know that Ion is greedy with food.’

b. [π] știu copiii [ pe Ion, că lâcomește la mâncare ].
    CL,ACC know the.children DOM Ion [ that is greedy at food ]
    Lit.: ‘The children know Ion to be greedy with food.’

c. Am simțit pe Maria din nou [ că nu vrea să răspundă ].
    I have felt DOM Maria of again [ that not wants answer ]
    ‘I felt yet again that Maria did not want to answer.’

• Other languages: Buryat, Nez Perce, Janitzio P’urhepecha, Sakha
(8b’)  I lorem ipsum dolor sit amet, consectetur adipiscing elit. 

Lit.: ‘The children know Ion to be greedy with food.’

*Îl* is an accusative clitic. In a language like Romanian (and, e.g., Spanish), there can be clitics that are co-indexed with some argument DP (here, *Ion*).

► In Romanian, the clitic has to match the Case of the DP it refers back to.
► Here, the clitic is **accusative**, suggesting that *Ion* is also accusative.

**DOM** stands for **differential object marking**.

► Some languages (e.g., Spanish, Turkish) have more than one morphology for objects.
► The criterion can be semantic (e.g., one marking for [+human] and another for [−human]).
► Here, *Ion* is preceded by the **DOM** marker *pe*, again suggesting that it is an object.

B. **First-pass description of these constructions**

(7b’) *Os alunos parecem* [que vão fazer pão].

Lit.: ‘The students seem that will make bread.’

(8b’) *Îl știu copii dom Ion*[ că lăcomește la mâncare].

Lit.: ‘The children know Ion to be greedy with food.’

- A DP *(the students in (7b) and *Ion* in (8b)) is interpreted as the subject of the embedded clause.
- Nevertheless, it is pronounced somewhere in the matrix clause.

## 2.1 How are these constructions derived?

A. There is some faint suggestion from linear order that these constructions are derived by movement.

- *The students* and *Ion* are interpreted in the embedded clause because they were generated there.
- But they are pronounced in the matrix clause because of movement.

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(9) The students seem [ that ___ will make bread ]
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(10) The children know pe Ion [ that ___ is greedy with food ]
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### Hypothesis #1

The sentences in (7b) and (8b) are derived by movement.

B. But linear order alone isn’t a compelling argument. Recall the following contrast:

(11) a. Susan believes Mary to always arrive on time.
    b. Susan convinced Mary to always arrive on time.
(12)  a. ______________________________________________________________________

   b. ______________________________________________________________________

(13) In (11b), Mary is interpreted as the subject of the embedded clause because...

C. Furthermore, Brazilian Portuguese and Romanian (and the other languages mentioned above) are pro-drop languages.

   • Very roughly, this means that the subject position doesn't have to be filled by anything pronounced.

   (7a') pro_{expl} parece [ que os alunos vão fazer pão ].
   Lit.: ‘The students seem that will make bread.’

(14) It seems that the students will make bread.

(15) A Maria_{1} disse [ que pro_{1} vai fazer bolo ].
   ‘Maria said that she will make bread.’

D. Considering:

   • what we concluded in (13)
   • the fact that Brazilian Portuguese and Romanian are pro-drop languages,

the sentences (7b, 8b) could be represented as follows:

(16)  a. ______________________________________________________________________

       b. ______________________________________________________________________

Hypothesis #2

2.2 Deciding between the two hypotheses

A. Diagnostic: ______________________

(17) Brazilian Portuguese

   a. Parece [ que a vaca foi pro brejo ].
   seems [ that the cow went to the swamp ]
   ‘It seems that things went bad.’
b. A vaca parece [ que foi pro brejo ].
   the cow seems [ that went to the swamp ]
   'It seems that things went bad.'

• Unexpected data:

(18) Romanian
   a. Cred [ că ii sărit muștarul ].
      I believe [ that on.him jumped mustard ]
      'I believe that he will lose his temper.'
   b. * Cred muștarul [ că ii sărit ].
      I believe mustard [ that on.him jumped ]
      Intended: 'I believe that he will lose his temper.'

   ○ There might be independent reason why (18b) is ungrammatical.
   ○ Consider the English sentence I saw [ that John was cooking ].
   ○ The Romanian sentence I saw pe John [ that was cooking ] requires a different context to be felicitous.
   ○ Maybe the “special meaning” of these constructions is causing (18b) to be ungrammatical.

B. Diagnostic: __________________________

(19) Brazilian Portuguese
   a. Parece [ que todos os meninos já chegaram ].
      seems [ that all the boys already arrived ]
      'It seems that all the boys have already arrived.'
   b. Os meninos parecem [ que já chegaram todos ].
      the boys seem [ that already arrived all ]
      Lit.: 'The boys seem that all have already arrived.'

(20) Romanian
   a. Am văzut eu [ că ezita cam toți studenti să voteze ]
      have seen I [ that hesitate most all students vote ]
      'I notice that most all students are hesitant to vote.'
   b. I-am văzut eu pe studenti [ că ezita cam toți să voteze ].
      CL.ACC have seen I DOM students [ that hesitate most all vote ]
      'I notice that most all students are hesitant to vote.'

Which hypothesis would you be inclined towards?

2.3 Why do we care?

A. It seems then that we do have evidence for our initial hypothesis:

   (9') The students seem [ that ______ will make bread ]

   (10') The children know pe Ion [ that ______ is greedy with food ]
• This makes the Brazilian Portuguese and Romanian sentences very similar to the raising and ECM sentences in the beginning.

(2') Close tabs seem [ _____ to have been kept on Mary ]

(4') Susan believes Mary with all her heart [ _____ to have arrived late ]

• But the sentences in Brazilian Portuguese and Romanian and those in English are not completely identical.

(21) Difference
  i. English:

  ii. Brazilian Portuguese and Romanian:

(22) This is called **hyper-raising**: __________________________
  i. Raising ↔
  ii. ECM ↔

B. Why would we care about hyper-raising?

• Recall our analysis in (5): raising and ECM were a joint of consequence EPP in the target and Case in the DP undergoing raising or ECM.

• Under this analysis, moving the embedded subject was *necessary* for the syntactic derivation.
  ○ Without movement, there wouldn't be Case for the subject of the embedded clause.

• With an additional assumption, we could also explain why both types of hyper-raising are forbidden in a language like English.

(23) a. * The students seem that will make bread.
    b. * The children know him that is greedy with food.

• Candidates for what can explain the ungrammaticality of the sentences in (23):

(24) a. A restriction on where movement can depart from:

b. A restriction on Case assignment:

C. Which restriction to choose?

• Either of them could do the job to explain the ungrammaticality in (23).

• Here: we will stick to the restriction on movement (24a).

• I think the Case restriction in (24b) is superfluous. Consider **case-stacking** in Korean:

    'John believes that Chelswu has lots of money.'
Dative comes from the embedded clause; Korean is one of these languages where possessive constructions look like *To me is money.*

Accusative comes from the matrix clause, via hyper-raising to object (the tests we applied here can be extended to Korean as well).

It is possible that DPs may get more than one Case, so I won't worry too much about (24b).

### 3 Analysis

- Hyper-raising (to subject or object) involves movement.
- Goal: provide an analysis of hyper-raising
- Why: because general grammatical principles (e.g., (24a)) predict that these constructions should be impossible.

### 3.1 A-moving out of a CP

A. Not all movement is blocked from a finite CP.

\[(26)\]

- A way to formalize this type of movement: **features**

\[(27)\]

B. **Proposal:** extension to hyper-raising

In languages that allow for hyper-raising, there are \(\phi\)-features in the C of the embedded clause, triggering movement of a DP to its edge.

- Illustrating with hyper-raising to subject in Brazilian Portuguese (the same applies to hyper-raising to object in Romanian):

\[(7b')\] **Os alunos** parecem [ que vão fazer pão ].
the students seem [ that will make bread ]

Lit.: ‘The students seem that will make bread.’
- The features in C are supposed to enable the A-movement of the embedded subject out of the finite CP. From there, it moves into the matrix clause (not depicted).
  - This is pretty much that same in successive cyclic Wh-movement, for which we have evidence of intermediate movement to [Spec, CP].

3.2 Consequence of the analysis: restrictiveness

A. Hyper-raising is a restricted phenomenon in two ways.

(i) It is not allowed in all languages. While Brazilian Portuguese and Romanian allows for it, English doesn't.

(ii) In the languages that do allow for hyper-raising, not all predicates allow for it.

(29) Brazilian Portuguese

a. Calhou [que o João fez pão demais].
   turned.out [that the João did bread too.much]
   'It turned out that João made too much bread.'

b. *O João calhou [que ___ fez pão demais].
   the João turned.out [that ___ did bread too.much]
   'It turned out that João made too much bread.'

(30) Romanian

a. Consider [că Ion e băiat deștept].
   I.consider [that Ion is boy smart]
   'I consider Ion to be a smart guy.'

b. *Îl consider pe Ion [că e băiat deștept].
   CL.ACC I.consider DOM Ion [that is boy smart]
   'I consider Ion to be a smart guy.'
B. Selection-based proposal:  

The possibility of hyper-raising is tied to selection. A predicate (e.g., *parecer* ‘seem’ in Brazilian Portuguese) may or may not be compatible with a CP whose head is looking for φ-features.

(i) Languages that do not allow for hyper-raising (e.g., English): predicates simply cannot combine with a CP that is looking for φ-features.

(ii) Languages that do allow for hyper-raising, but not for all predicates (Brazilian Portuguese and Romanian): some predicates, but not all, can combine with a CP that is looking for φ-features.

C. This is similar to selection of interrogative clauses

(31) a. Mary wonders [ what Susan read ].
    b. * Mary concluded [ what Susan read ].
       (cf. Mary concluded [ that Susan read *A Handmaid’s Tale* ].)

D. Disclaimer

- All I am claiming is that the proposal provides a way to formalize the double restrictiveness problem.
- In fact, a flaw in the analysis is that it is not predictive, i.e., I can’t tell ahead of time which languages or predicates within language allow for hyper-raising.

3.3 Consequence of the analysis: hyper-hyper-raising

A. Rough summary of van Urk (2015)

- Syntactic positions can be defined in terms of their features (and not as inherently A or A.)
- A consequence of this featural view of syntactic positions is that there can be composite probes (A/Ā). This is illustrated by Dinka, where movement can have overt properties of both A- and Ā-movement.

(32) a. Pāal à-ÉEmè Āyen cuīin ______
    knife is.eating Āyen.gen food
    ‘With a knife, Ayen is eating food.’

b. Cuīin à-yàa tàak [CP kè cÉEm Āyen ______]
    food I think [ that eat Āyen.gen ______]
    ‘The food, I think that Ayen is eating.’

  ○ What (32) is showing us:

(33) a. Yiin ə-cíi mòc tīiN.
    you has you man.gen see
    ‘You, the man has seen.’

b. Mīir à-caa tīiN.
    giraffe I haveSG see
    ‘A giraffe, I have seen.’

c. MiÉEr áa-càa kè tīiN.
    giraffes I havePL they see
    ‘Giraffes, I have seen.’

1 This idea is due to David Pesetsky (p.c.).
What (33) is showing us:

B. The proposal here is to derive hyper-raising by postulating \( \varphi \)-features in C.

If we assume that van Urk (2015) is correct (and the analysis for Dinka is pretty compelling), we expect there to be *hyper-raising that is triggered by a composite A/\( \overline{A} \)-probe*.

C. I think this is correct: Passamaquoddy allows for **hyper-raising of a lower argument**.

- Cf. Brazilian Portuguese and Romanian (and the other languages mentioned), where hyper-raising always targets a subject. What condition of A-movement explains this: __________

(34) **Passamaquoddy**

a. \( \text{pro kat}=\text{te } \)’-kocicihtuwon [ tan \( \text{pro oc } \) ’tolikisiqskassin ].
   \( \text{pro NEG know.TI } \) [ how \( \text{pro will get.across } \) ’
   ‘He does not know how he is to get across.’

b. Susehp \( \text{akom } \) [ eli Muwin kisimilat Wiphun ____].
   Susehp knows-pi. snowshoes [ that Muwin gave Wiphun ____ ]
   ‘Susehp knows that Muwin gave Wiphun snowshoes.’

**Agreement in Passamaquoddy**

- The Passamaquoddy verb agrees with several elements in the sentence (and not just the subject, as in English).
- Agreement is also sensitive to the animacy of the element agreed with.
- T\( \text{T} \) is ‘transitive inanimate’. In (34a), T\( \text{T} \) could be seen as either agreement with the embedded clause or as default agreement.
- Compare this with (34b), where the verb agrees with *snowshoes*.

D. Wait a minute! We should check whether hypothesis \#2 (base-generation) can be applied to Passamaquoddy.

(35) a. N-piluwitahama not skitap nipa-kotunke [ eci kukee oliyat Kehlisk ]
   I-suspect that man poaches [ when warden goes Calais-to ]
   ‘I suspect that that man poaches [when the warden goes to Calais].’

b. *N-piluwitahama kukec not skitap nipa-kotunke [ eci ___ oliyat Kehlisk ]
   I-suspect warden that man poaches [ when ____ goes Calais-to ]
   ‘I suspect of the warden that that man poaches [when ____ goes to Calais].’

- What the data in (35) is telling us: ²

E. This variety of hyper-raising is called **hyper-hyper-raising**³

- Passamaquoddy poses the same puzzles that we saw in Brazilian Portuguese and Romanian (i.e., A-movement out of a CP).
- But with an extra **locality** puzzle: it is not the highest DP that moves/hyper-raises.

²NB: the same diagnostic can be applied to hyper-raising in Brazilian Portuguese and Romanian. I suppressed the data because of time and space.
³The term is due to David Pesetsky! Ura (1994) calls this ‘super-raising’. 
F. How this property is captured: a composite A/Axis-probe

- If the highest DP does not have the A/Axis-features that the probe in C is looking for, it will be skipped.
- The postulation of a composite probe then opens up the possibility that a lower argument is targeted for hyper-raising, as long as it contains the features sought for.

(34b’) Susehp ’kosicy-à aköm [ eli Muwin kisi-mil-at Wiphun ___].
Susehp knows-PL snowshoes [ C Muwin gave Wiphun ___]
‘Susehp knows that Muwin gave Wiphun snowshoes.

(36)

• This isn't outlandish. This is exactly what we see in our familiar A-movement.

(37) What did Mary read ___

4 Take-home message

A. Hyper-raising and hyper-hyper-raising are not really special.

- The components of the analysis are supposed to have independent support.
  - φ-features in C, analogous to A/Axis-features
  - Composite probes, extensively argued for by van Urk (2015)
  - Selection
B. What is “special” about hyper-raising is just that it is necessary for there to be a conjunction of components in the same language.

- CPs with A- or A/A-features
- Predicates that can combine with a CP that has these features

Credits

Once again, many thanks to Prof. David Pesetsky for the opportunity of teaching this class! I simplified glosses (sometimes heavily) to make exposition clearer. The hyper-raising data in BP is a combination of my own data and data from Nunes (2008) and Ferreira (2009). The Romanian data is from Alboiu & Hill (2016) (and other papers/handouts by the authors) and from Donca Steriade (p.c.). Hyper-raising to object in Buryat: Bondarenko (2016); in Korean and Japanese: Yoon (2007) (a.o.), Nex Perce: Deal (2016); Janitzio P’urhepecha: Zyman (2016); Sakha: Baker & Vinokurova (2010); Passamaquoddy: Bruening (2002). The Dinka data is from van Urk (2015). The analysis of ECM (and raising) summarized in point 2 of §1 is based on David’s lecture notes little v.

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