Introduction to Syntax: 24.951
Recitation #1

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Today’s topics and goals

• Brief introduction to islands and interrogative sentences in English.
• Condition C and Weak Crossover effects in English interrogative sentences.
• Interrogative sentences in Mongolian.
• Puzzle: properties of interrogative sentences in Mongolian and their Condition C and Weak Crossover properties.
Pesetsky (2013): movement can be blocked by interveners.

- Domination interveners
- C-command interveners

(1) \ldots interveners

  a. He wondered [who \_ \_ had read what].
  b. * He wondered [what who had read \_].

(2) \ldots interveners

  * What did she yell at us [because he had put \_ \_ under the bed]?
Pesetsky (2013): movement can be blocked by interveners.

- Domination interveners
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(1) . . . intervene

a. He wondered [who __ had read what].

b. * He wondered [what who had read __].

(2) . . . intervene

* What did she yell at us [because he had put __ under the bed]?
Pesetsky (2013): movement can be blocked by interveners.
  ▶ Domination interveners
  ▶ C-command interveners

(1) **C-command intervener**
  a. He wondered [who ___ had read what].
  b. * He wondered [what who had read __].

(2) ... **intervener**

* What did she yell at us [because he had put ___ under the bed]?
Island and interrogative sentences in English

• Pesetsky (2013): movement can be blocked by interveners.
  ▶ Domination interveners
  ▶ C-command interveners

(1) C-command intervener
   a. He wondered [who ___ had read what].
   b. * He wondered [what who had read __].

(2) Domination intervener
   * What did she yell at us [because he had put ___ under the bed]?
C-command intervener

He wondered …

(3) CP
   /  
  DP   C’
     /  
    who C TP
       / 
      … VP
         /  
        V   DP
           /  
          read what

(4) CP
   /  
  DP   C’
     /  
    what C TP
       / 
      … VP
         /  
        V   read

who
• Working definition of c-command intervention:

    (5) If the target position $\alpha$ c-commands $X$ and $X$ commands $Y$, $X$ and $Y$ being valid candidates to move to $\alpha$, move $X$ / $X$ blocks the movement of $Y$.

• (5) can be restated in terms of a locality restriction: for a given operation, apply it to the closest valid element (even if there is another element that is equally valid, though farther away).
• Working definition of c-command intervention:

  (5) If the target position $\alpha$ c-commands X and X commands Y, X and Y being valid candidates to move to $\alpha$, move X / X blocks the movement of Y.

• (5) can be restated in terms of a **locality** restriction: for a given operation, apply it to the **closest** valid element (even if there is another element that is equally valid, though farther away).
(6) $\gamma$ blocks movement from $\beta$ to $\alpha$ if $\gamma$ dominates $\beta$ but not $\alpha$ [and $\gamma$ is defined as an island].

(2')

```
    . . .
   /   \
___α   . . .
   |  /   \γ
   | /     
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   . . . . . .
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   | | |     |
   | | |     |
   | | |     |
   | | |     |
   | | |     |
   | | |     |
   |___β___ . . .
```
(6) \( \gamma \) blocks movement from \( \beta \) to \( \alpha \) if \( \gamma \) dominates \( \beta \) but not \( \alpha \) [and \( \gamma \) is defined as an island].
(6) $\gamma$ blocks movement from $\beta$ to $\alpha$ if $\gamma$ dominates $\beta$ but not $\alpha$ [and $\gamma$ is defined as an island].
(2) * What did she yell at us [because he had put __ under the bed]?

(7)
Some more islands:

(8)  a. *What did she ask us [whether he had put ___ under the bed]?

   b. *What will if Ashley buys ___ Sindhu be happy?

   i. If Ashley buys the new book, Sindhu will be happy.

   ii. *What will if Ashley buys ___ Sindhu be happy?
Takeaway and looking forward

• Movement, including *Wh*-movement, obeys islands / domination intervention. Thus, it can be used as a diagnostic for movement.

• Coming up: movement can also be diagnosed with Condition C and Weak Crossover effects.

• Coming up later: the same effects in Mongolian.
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• Coming up: movement can also be diagnosed with Condition C and Weak Crossover effects.
• Coming up later: the same effects in Mongolian.
To recall: Condition C effects

\[ (9) \]

\( a. \) * He\(_k\) will probably mention my proof that John\(_k\) deserved to share the prize.

\( b. \) * [Whose proof that John\(_k\) deserved to share the prize] do you think he\(_k\) will mention?

Q Why is (9b) an argument that *Whose proof that John deserved to share the prize* moves to the position where it is?

Q Why is Condition C an “everywhere” condition?
(9) a. * He$_k$ will probably mention my proof that John$_k$ deserved to share the prize.

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    b.  * [Whose proof that John\(_k\) deserved to share the prize] do you think he\(_k\) will mention?

Q Why is (9b) an argument that Whose proof that John deserved to share the prize moves to the position where it is?

Q Why is Condition C an “everywhere” condition?

(10) do you think he\(_k\) will mention [whose proof that John\(_k\) . . . ]?
(11)  a. Which mother loves her child?
b. Which child does his mother love?
(11)  a. Which mother\textsubscript{k} loves her\textsubscript{k} child?
   b. Which child does his mother love?
(11)  

a. Which mother$_k$ loves her$_k$ child?  
b. Which child$_k$ does his$_{k/j}$ mother love?
(11)  

a. Which mother$_k$ loves her$_k$ child?

b. Which child$_k$ does his$_{k/j}$ mother love?

Q Could (11b) be analogized to a Condition C effect?
(11) a. Which mother$_k$ loves her$_k$ child?
   b. Which child$_k$ does his$_{k/j}$ mother love?

Q Could (11b) be analogized to a Condition C effect?
   ▶ No, it’s a different phenomenon, called **Weak Crossover**.
Informal description of a Weak Crossover violation: don’t Wh-move a YP<sub>k</sub> across an XP that contains a pronoun<sub>k</sub>.

(12) No weak crossover violation

a. Which mother<sub>k</sub> loves her<sub>k</sub> child?

b. \[
\begin{array}{c}
\text{CP} \\
\text{YP}<sub>k</sub> \\
\text{C'} \\
\text{C} & \cdots & \langle \text{YP}<sub>k</sub> \rangle \\
\text{XP} \\
\text{her}<sub>k</sub>
\end{array}
\]

(13) Yes weak crossover violation

a. Which child<sub>k</sub> does his*<sub>k/j</sub> mother love?

b. \[
\begin{array}{c}
\text{CP} \\
\text{YP}<sub>k</sub> \\
\text{C'} \\
\text{C} & \cdots \\
\langle \text{YP}<sub>k</sub> \rangle \\
\text{XP} \\
\text{his}<sub>k</sub> \\
\text{her}<sub>k</sub>
\end{array}
\]
Takeaway and looking forward

- *Wh*-movement in English obeys islandhood/domination intervention.
- It exhibits Condition C effects, which diagnoses .
- It also exhibits Weak Crossover effects (don’t *Wh*-move a YP across an XP that contains a pronoun).
- Weak Crossover can also be used as a diagnostic for domination.
- Next: how these diagnostics apply to Mongolian.
Takeaway and looking forward

- *Wh*-movement in English obeys islandhood/domination intervention.
- It exhibits Condition C effects, which diagnoses . . . .
- It also exhibits Weak Crossover effects (don’t *Wh*-move a YP$_k$ across an XP that contains a pronoun$_k$).
  - Weak Crossover can also be used as a diagnostic for movement.
- Next: how these diagnostics apply to Mongolian.
• *Wh*-movement in English obeys islandhood/domination intervention.
• It exhibits Condition C effects, which diagnoses the $\beta$ position/the position the *Wh*-phrase moves from.
• It also exhibits Weak Crossover effects (don’t *Wh*-move a YP$_k$ across an XP that contains a pronoun$_k$).
  ▶ Weak Crossover can also be used as a diagnostic for movement.
• Next: how these diagnostics apply to Mongolian.
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• It exhibits Condition C effects, which diagnoses.
• It also exhibits Weak Crossover effects (don’t *Wh*-move a YP$_k$ across an XP that contains a pronoun$_k$).
  ▶ Weak Crossover can also be used as a diagnostic for movement.
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Takeaway and looking forward

- Wh-movement in English obeys islandhood/domination intervention.
- It exhibits Condition C effects, which diagnoses .
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  - Weak Crossover can also be used as a diagnostic for movement.
- Next: how these diagnostics apply to Mongolian.
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• It exhibits Condition C effects, which diagnoses.
• It also exhibits Weak Crossover effects (don’t *Wh*-move a YP$_k$ across an XP that contains a pronoun$_k$).
  ▶ **Weak Crossover can also be used as a diagnostic for movement.**
• Next: how these diagnostics apply to Mongolian.
Basics of interrogative sentences in Mongolian:

(14) Bat yu id-sen be?
    Bat what eat-pst Q
    ‘What did Bat eat?’

Baseline, non-interrogative example:

(15) Bat ene nom-iig unsh-san.
    Bat this book-ACC read-pst
    ‘Bat read this book.’

Q Bearing in mind the English sentences we just saw, what is the contrast between (14) and (15) telling us?
Interrogative sentences in Mongolian

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    Bat this book-ACC read-pst
    ‘Bat read this book.’

Q Bearing in mind the English sentences we just saw, what is the contrast between (14) and (15) telling us?

▶ Unlike what happens in English, Wh-phrases in Mongolian are pronounced in the same position as their non-interrogative counterparts.
• Given the comparison between English and Mongolian, we could hypothesize that difference between them has to do with movement.

• Which hypotheses would you formulate to account for this difference?
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Which hypotheses would you formulate to account for this difference?

(16)  

a. **No movement hypothesis**

In Mongolian, Wh-phrases do not move, unlike what happens in English.

b. **“Special” movement hypothesis**

In Mongolian, Wh-phrases move, but this movement is silent, unlike what happens in English.
• How would you test each hypothesis?

(17)  a. **No movement hypothesis**

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b. **“Special” movement hypothesis**

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- No island, Condition C, and WCO effect.

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▶ No island, Condition C, and WCO effect.

b. **“Special” movement hypothesis**

In Mongolian, *Wh*-phrases move, but this movement is silent, unlike what happens in English.

▶ Yes island, Condition C, and WCO effect.
happy-N.PST
‘If Odgerel invites a magician to the party, Och will be happy.’

b. * Odgerel khen-iig ur-val {be}, Och bayrla-na Odgerel who-ACC invite-COND {Q} Och happy-N.PST {be}? {Q}
Int.: ‘Who is the person such that, if Odgerel invites that person, Och be happy?’

• Which hypothesis do these data support?
(18)  a.  Odgerel üdeshiilich-d ilbechin  ur-val,  Och
     Odgerel party-DAT  magician invite-COND  Och
     bayrla-na.
     happy-N.PST
     ‘If Odgerel invites a magician to the party, Och will be
     happy.’

   b.  *Odgerel khen-iig  ur-val  {be},  Och bayrla-na
        Odgerel who-ACC  invite-COND  {Q}  Och happy-N.PST
        {be}?
        {Q}
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‘If Odgerel invites a magician to the party, Och will be happy.’

b. *Odgerel khen-iig ur-val {be}, Och bayrla-na Odgerel who-ACC invite-COND {Q} Och happy-N.PST {be}? {Q}
Int.: ‘Who is the person such that, if Odgerel invites that person, Och be happy?’

- Which hypothesis do these data support?
  - Special movement hypothesis.
(19)  a. Och buuz id-sen eseh-iig Bold assu-san.
Och buuz eat-pst whether-ACC Bold ask-pst
‘Bold asked whether Och ate buuz.’

b. * Och \textbf{yu} id-sen eseh-iig Bold assu-san be?
Och what eat-pst whether-ACC Bold ask-pst \textbf{q}
Lit.: ‘What did Bold ask whether Och ate?’

• Which hypothesis do these data support?
(19) a. Och buuz id-sen eseh-iig Bold assu-san.  
Och buuz eat-pst whether-ACC Bold ask-pst  
‘Bold asked whether Och ate buuz.’

b. * Och **yu** id-sen eseh-iig Bold assu-san be?  
Och what eat-pst whether-ACC Bold ask-pst  Q  
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- Which hypothesis do these data support?
(19)  a. Och buuz id-sen eseh-iig Bold assu-san.
    Och buuz eat-pst whether-acc Bold ask-pst
    ‘Bold asked whether Och ate buuz.’

b. * Och **yu** id-sen eseh-iig Bold assu-san be?
    Och what eat-pst whether-acc Bold ask-pst Q
    Lit.: ‘What did Bold ask whether Och ate?’

- Which hypothesis do these data support?
  - Special movement hypothesis.
(20) Tüünii*i/j eej [ Tuya khen-iig, khar-san gej ] khel-sen
3SG.GEN mother [ Tuya.nom who-ACC see-PST COMP ] say-PST
be?
Q
‘Who does her/his mother said Tuya saw?’

• Which hypothesis do these data support?
(20) Tüüni i*j eej [ Tuya khen-iig*i khar-san gej ] khel-sen
3sg.gen mother [ Tuya.nom who-acc see-pst comp ] say-pst
be?
Q
‘Who does her/his mother said Tuya saw?’

• Which hypothesis do these data support?
(20) Tüüniï*i/j eej [ Tuya khen-iig_i khar-san gej ] khel-sen
3sg.gen mother [ Tuya.nom who-acc see-pst comp ] say-pst be?
Q
‘Who does her/his mother said Tuya saw?’

• Which hypothesis do these data support?
  ➤ Special movement hypothesis.
• *Wh*-phrases in Mongolian are pronounced in the same position where their non-*Wh* counterparts are.

• But: what do the island and Weak Crossover data suggest:
• *Wh*-phrases in Mongolian are pronounced in the same position where their non-*Wh* counterparts are, **unlike** in English.

• But: what do the island and Weak Crossover data suggest:
• Wh--phrases in Mongolian are pronounced in the same position where their non-Wh counterparts are, unlike in English.
• But: what do the island and Weak Crossover data suggest:
Taking stock

- *Wh*-phrases in Mongolian are pronounced in the same position where their non-*Wh* counterparts are, **unlike** in English.
- But: what do the island and Weak Crossover data suggest: these *Wh*-phrases move.
Wh-phrases in Mongolian are pronounced in the same position where their non-Wh counterparts are, unlike in English.

But: what do the island and Weak Crossover data suggest: these Wh-phrases move, like in English.
Taking stock

• *Wh*-phrases in Mongolian are pronounced in the same position where their non-*Wh* counterparts are, **unlike** in English.

• But: what do the island and Weak Crossover data suggest: these *Wh*-phrases move, **like** in English.

▶ **Puzzle:** how to account for the dual movement and non-movement properties of Mongolian interrogative sentences?
The Mongolian data support the Special movement hypothesis.

What is special about this movement:
- Movement happens in interrogative sentences in both English and Mongolian.
- What is “special” in Mongolian: this movement does not have a phonological counterpart, unlike what happens in English.
• The Mongolian data support the Special movement hypothesis.

• What is special about this movement:
  ▶ Movement happens in interrogative sentences in both English and Mongolian.
  ▶ What is “special” in Mongolian: this movement does not have a phonological counterpart, unlike what happens in English.
• How could movement not have a phonological counterpart?

(21) Lexicon

Deep Structure

Surface Structure

PF LF

Alternative: languages differ in what is pronounced (\(\alpha\) or \(\beta\)).

(22) a. who did you see who?  
    b. who did you see who?

    English  
    Mongolian
How could movement not have a phonological counterpart?

(21) Lexicon
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English
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• How could movement not have a phonological counterpart?

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Deep Structure

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PF  LF

• Alternative: languages differ in what is pronounced (α or β).

(22)  a. who did you see?  \hspace{2cm} \text{English}

b. who did you see who?  \hspace{2cm} \text{Mongolian}
• How could movement not have a phonological counterpart?

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(22) a. who did you see?  
   b. did you see who?  

   English

   Mongolian