Multiple Copy Spell-out in Seereer: Implications for Intermediate Movement*

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1 Introduction

• **Question:** What drives successive cyclic movement?

(1) \([\text{CP } \text{What do you think } [\text{CP } \text{John bought } \text{what} ]?]\)

• There are two styles of analysis in the literature:
  - Terminal movement and intermediate movement are derived in the same way (Chomsky 1995; McCloskey 2002; Abels 2012; van Urk and Richards 2013).
  - Intermediate movement is triggered by a different mechanism than terminal movement (Heck and Müller 2000; Chomsky 2000; Boskovský 2007).

• This talk examines data from long distance \(wh\)-dependencies in Seereer, a language in which successive cyclic movement leaves two kinds of marks on the clause:
  - Each verb along the path of the dependency bears **special morphology**.
  - A **pronoun** reflecting the \(\varepsilon\)-features of the moved \(wh\)-phrase appears at the edge of each embedded clause.

(2) \(\text{What do you think Yande said Jegaan saw ?}^{2}\)

Seereer resembles languages that show morphological reflexes of successive cyclic movement, such as Irish (McCloskey 2002), Kinande (Schneider-Zioga 2009), or Chamorro (Chung 1994) and languages that show repetition in \(\tilde{A}\)-chains, such as German (Felsel 2004), Dutch (Barbiers et al. 2009), or Passamaquoddy (Bruening 2006).

I argue that these two phenomena provide evidence that **intermediate movement is just like terminal movement**. To capture this, I propose the following:

- Both terminal movement and intermediate movement are **feature-driven** (Chomsky 1995; McCloskey 2002; Abels 2012).
- Each round of movement to the edge of a CP **creates a distinct \(\tilde{A}\)-chain**; this is what allows multiple copy spell-out.

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*I thank Line Mikkelsen and Peter Jenks for insightful comments, guidance, and discussion on this project, as well as my consultant El Hadji Malick Loum for sharing his language with me. All data in this paper were gathered during the 2012-2013 UC Berkeley Field Methods class and subsequent follow up work with John Merrill in 2013-2014. Abbreviations: AGR = agreement; AUX = auxiliary; CL = class; DET = determiner; DV = default vowel; EXT = extraction suffix; FUT = future; IMPF = imperfective; INF = infinitive; LEP = left edge pronoun; OBJ = object; PL = plural; PST = past; RELFL = reflexive; REL = relative; SBJ = subject; SG = singular; 1 = first person; 2 = second person; 3 = third person.*
2 Verbal Morphology and Ā-movement in Seereer

- Seereer verbal morphology is sensitive as to whether or not Ā-movement has occurred.
- Verbs in declarative clauses take the final suffix -a, as in (3). Verbs in wh-questions take the final suffix -u, as in (4):

(3) **Declarative**

<table>
<thead>
<tr>
<th>Jegaan</th>
<th>a-jaw-[a]</th>
<th>maalo</th>
<th>fe</th>
<th>Jegaan</th>
<th>a-jaw-[a]</th>
<th>maalo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jegaan</td>
<td>3-cook-DV</td>
<td>rice</td>
<td>DET</td>
<td>Jegaan</td>
<td>3-cook-DV</td>
<td>rice</td>
</tr>
</tbody>
</table>

‘Jegaan cooked rice.’

(4) **Wh-question**

<table>
<thead>
<tr>
<th>Xar</th>
<th>Jegaan</th>
<th>a-jaw-[u]</th>
<th>___</th>
</tr>
</thead>
<tbody>
<tr>
<td>what</td>
<td>Jegaan</td>
<td>3-cook-EXT</td>
<td>___</td>
</tr>
</tbody>
</table>

‘What did Jegaan cook?’

- Wh-questions also involve fronting of the wh-phrase to the left of an overt subject. Subject fronting is string vacuous.
- The final suffix -u also appears in focus clauses, (5a), and relative clauses, (5b):

(5) a. **Focus Clause**

<table>
<thead>
<tr>
<th>maalo</th>
<th>Mataar</th>
<th>a-jaw-[u]</th>
<th>___</th>
</tr>
</thead>
<tbody>
<tr>
<td>rice</td>
<td>Mataar</td>
<td>3-cook-EXT</td>
<td>___</td>
</tr>
</tbody>
</table>

‘Mataar cooked RICEFOC.’

b. **Relative Clause**

<table>
<thead>
<tr>
<th>maalo</th>
<th>Mataar</th>
<th>a-ci’-[uu]</th>
<th>n-a</th>
<th>Mataar</th>
<th>a-ci’-[uu]</th>
<th>n-a</th>
</tr>
</thead>
<tbody>
<tr>
<td>rice</td>
<td>DET</td>
<td>3-cook-EXT-3OBJ-REL</td>
<td>___</td>
<td>Mataar</td>
<td>3-cook-EXT-3OBJ-REL</td>
<td>___</td>
</tr>
</tbody>
</table>

‘the rice that Mataar gave him’

**Generalization:** The suffix -u appears in cases of Ā-movement.

- I will refer to this suffix as **extraction morphology** (glossed EXT).
- Because the suffix is sensitive to Ā-movement, I propose that the final suffixes are located in the C-layer, specifically Rizzi’s (1997) Fin⁰. The verb undergoes head movement to Fin⁰:

(6) **Final Suffixes Occupy Fin⁰**

\[
\text{FinP} \quad \begin{array}{c} V + \text{Fin}^0 \ \text{TP} \\ -a \ DV / -u \ EXT \end{array}
\]

- An argument for V-to-C movement comes from the fact that a final suffix is blocked when there is a higher auxiliary in the clause:

(7) a. **Progressive Aux**

<table>
<thead>
<tr>
<th>Jegaan</th>
<th>a-xe</th>
<th>ret-aa-(*a)</th>
<th>Dakar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jegaan</td>
<td>3-AUX</td>
<td>go-IMPF-DV</td>
<td>Dakar</td>
</tr>
</tbody>
</table>

‘Jegaan is going to Dakar.’

b. **Future Aux**

<table>
<thead>
<tr>
<th>Jegaan</th>
<th>x-an</th>
<th>a</th>
<th>ret-(*a)</th>
<th>Dakar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jegaan</td>
<td>FUT</td>
<td>3</td>
<td>go-DV</td>
<td>Dakar</td>
</tr>
</tbody>
</table>

‘Jegaan will go to Dakar.’

- I assume that the highest verbal element moves to Fin⁰. When a lexical verb moves, the final suffix surfaces. Auxiliaries have special agreement paradigms, and therefore no final suffix appears.

\[\text{In (5b), } -u \text{ is lengthened due to a regular morphophonological rule triggered by the relative suffix -(n)a. I assume -(n)a instantiates a Force head which lowers to Fin.}\]
• The morphological expression of subject-verb agreement is also sensitive to extraction in Seereer:
  – Final suffixes have special forms for 1SG and 2SG subjects.
  – Subject extraction suppresses subject $\varphi$-agreement ('Anti-Agreement'; Ouhalla 1993).

\[
\begin{array}{|c|c|}
\hline
\text{SINGULAR} & \text{PLURAL} \\
\hline
1 & V-aam \quad i-V_m-a \\
2 & V-a \quad nu-V_m-a \\
3 & a-V-a \quad a-V_m-a \\
\hline
\end{array}
\]

\[
\begin{array}{|c|c|}
\hline
\text{SINGULAR} & \text{PLURAL} \\
\hline
1 & V-um \quad i-V_m-u \\
2 & V-o \quad nu-V_m-u \\
3 & a-V-u \quad a-V_m-u \\
\hline
\end{array}
\]

• To capture the fact that the final suffixes in Fin$^0$ interact with $\varphi$-agreement, I propose the following:

Fin$^0$ is the C-level phase head in Seereer and it carries both an unvalued OP-feature which derives A-movement (McCloskey 2002) and unvalued $\varphi$-features which derive subject agreement and subject movement.

• Since Fin$^0$ has two movement inducing probes, it can project two specifiers. Examples (10) and (11) show how this works for non-subject and subject wh-questions, respectively.

**Non-subject wh-movement**

a. Subject DP moves to inner Spec-FinP to satisfy [u$\varphi$].
b. Wh-phrase moves to outer Spec-FinP to satisfy [uOP].
c. Assume no tucking in of an $\bar{A}$-operator inside an A-position.

**Subject wh-movement**

a. Subject DP satisfies both [u$\varphi$] and [uOP] on Fin$^0$.
b. Only one Spec-FinP.

c. When uOP on Fin$^0$ is valued, the extraction paradigm is used. When uOP remains unvalued, the declarative paradigm is used. I follow Preminger (2011) in positing that the OP-probe is allowed to fail, and therefore this feature can always be present on the CP phase head.

**Upshot:** Wh-movement to Spec-FinP is feature-driven. Whether or not the feature that derives movement is satisfied has morphological consequences.

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2In (8) and (9), V$M$ represents a verb stem that has undergone plural initial consonant mutation.

3For reasons of space and time, I do not propose an analysis of anti-agreement here.
3 Long Distance Wh-Movement in Seereer

- Long distance wh-movement in Seereer is characterized by two important properties:
  - Each verb along the path of the dependency bears extraction morphology.
  - A pronoun reflecting the φ-features of the moved wh-phrase appears at the edge of each embedded clause.

(12) \[ \text{xar} \text{, foog-o } [\text{CP } \text{yee} \text{, ten}_3 \text{Jegaan a-jik-u } \_\_] \]
    What think-2SG.EXT C 3SG Jegaan 3-buy-EXT

‘What do you think Jegaan bought _?’

(13) \[ \text{aniin} \text{, foog-o } [\text{CP } \text{yee} \text{, den}_3 \text{Jegaan a-lay-u } [\text{CP } \text{yee} \text{, den}_3 \text{ga’-u } \text{Jegaan}] \]
    Who.PL think-2SG.EXT C 3PL Jegaan 3-say-EXT C 3PL see-EXT Jegaan

‘Who all do you think Yande said _ saw Jegaan?’

- I refer to the pronoun present in these clauses as a left edge pronoun (abbreviated LEP).
- LEPs occur with all wh-phrases in Seereer in cases of long distance extraction. I limit myself to cases of argument extraction in this talk.
- Both extraction morphology and the LEP are obligatory. Omission of either results in ungrammaticality:

(14) a. \[ \text{xar} \text{, foog-o } [\text{CP } \text{yee} \text{, ten}_3 \text{Jegaan a-jik-u } \_\_] \]
    What think-2SG.EXT C 3SG Jegaan 3-buy-EXT

Intended: ‘What do you think Jegaan bought _?’ No pronoun

b. \[ \text{xar} \text{, foog-o } [\text{CP } \text{yee} \text{, ten}_3 \text{Jegaan a-jik-} \_\_ \text{a}_3 \text{buy-DV} \]
    What think-2SG.EXT C 3SG Jegaan 3-buy-DV

Intended ‘What do you think Jegaan bought _?’ Suffix -a

- The pattern is schematized in (15):

(15) The Pattern of Long Distance Wh-movement
    \[ [\text{CP } \text{WH}_i \ldots \text{V-}u \ldots [\text{CP } \text{LEP}_i \ldots \text{V-}u \ldots ]] \]

- The position of LEPs in embedded clauses is fixed. As seen in (16), they must always surface in the left periphery of the embedded clause, following an overt complementizer:

(16) a. \[ \text{xar} \text{, xalaat-o } [\text{CP } \text{yee} \text{, ten}_3 \text{Jegaan a-ga’-u } \_\_] \]
    What think-2SG.EXT C LEP 3-see-EXT

‘What do you think Jegaan saw?’

b. \[ \text{xar} \text{, xalaat-o } [\text{CP } \text{yee} \text{, ten}_3 \text{Jegaan a-ga’-u } \_\_] \]
    What think-2SG.EXT C LEP 3-see-EXT

c. \[ \text{xar} \text{, xalaat-o } [\text{CP } \text{yee} \text{, Jegaan a-ga’-u } \text{ten}_3 ] \]
    What think-2SG.EXT C Jegaan 3-see-EXT LEP

- I argue that the LEP occupies the same structural position as a wh-phrase, Spec-FinP. The complementizer (y)ee occupies a higher C head, namely Force0:
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(17) **Position of LEP**

```
<table>
<thead>
<tr>
<th>ForceP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force^0 yee</td>
</tr>
<tr>
<td>FinP</td>
</tr>
<tr>
<td>LEP (SUBJ)</td>
</tr>
<tr>
<td>V + -u TP</td>
</tr>
</tbody>
</table>
```

- When the LEP corresponds to an object, it occupies the outer Spec-FinP, as per (10). When it corresponds to a subject, it occupies the only Spec-FinP, as per (11).
- The presence of obligatory extraction morphology in each clause suggests that the LEP reaches its surface position via **movement**.
  - Movement of the LEP values the uOp-features on Fin^0.
  - This results in the local verb having extraction morphology.
- This is shown for a non-subject LEP in (18):

(18) **Non-subject LEP movement**

```
<table>
<thead>
<tr>
<th>ForceP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force^0 (y) yee</td>
</tr>
<tr>
<td>FinP</td>
</tr>
<tr>
<td>LEP [SBJ]</td>
</tr>
<tr>
<td>V + Fin^0 -u TP</td>
</tr>
<tr>
<td>. . . &lt;LEP&gt; . . .</td>
</tr>
</tbody>
</table>
```

**Consequence:** A-movement in the matrix clause and in the embedded clause is **feature-driven**.

- I assume that all CP phase heads carry features that derive A-movement, but that these probes are allowed to fail (Preminger 2011; Abels 2012). This means they can be present even when there is no long distance dependency.

4 **Left Edge Pronouns as Copies**

- **Question:** What is the relationship between the matrix wh-phrase and the LEP?
- **Option 1:** The wh-phrase and the pronoun are linked **directly by movement**, like some analyses of wh-copying by Felser (2004); Barbiers et al. (2009); Schippers (2012).

(19) 

```
[CP WH_i ... V-u ... [CP C LEP_i ... V-u ... <WH_i>]]
```

- **Option 2:** The wh-phrase and the pronoun are **base generated separately** and related indirectly, such as some analyses of wh-scope marking by Dayal (1992); Herburger (1992); Legate (2011).

(20) 

```
[CP WH_i ... V-u ... [<WH_i>] [CP C LEP_i ... V-u ... <LEP_i>]]
```
I argue for Option 1: Seereer left edge pronouns are overtly spelled out copies of the moved wh-phrase.

Arguments for this analysis come from:

- **Islands:** The presence of a LEP inside an island does not alleviate a violation incurred from forming a wh-dependency with a gap inside that island:

  \[
  \begin{array}{ll}
  \text{CP} & \text{ndax } \langle \text{ten}_i \rangle \quad \text{Ami } a-ga'-u \quad \langle \_ \_ \_ \_ \rangle \\
  \text{INT} & \text{LEP } \text{Ami } 3-\text{see-EXT} \\
  \end{array}
  \]

  Intended: ‘What do you know whether Ami saw _?’

- **Reconstruction:** The LEP behaves as if it contains the structure of the moved item:

  \[
  \begin{array}{ll}
  \text{CP} & \text{yee } \langle \text{ten}_k \rangle \quad \text{Yande}_i \quad a-ga'-u \quad \langle \_ \_ \_ \_ \rangle \\
  \text{INT} & \text{C } 3SG \text{ Yande } 3-\text{see-DV} \\
  \end{array}
  \]

  ‘Which picture of herself/themselves do they think Yande saw?’

- **Quantifier Float:** The quantifier fop ‘all’ may float to the position of a LEP:

  \[
  \begin{array}{ll}
  \text{CP} & \text{yee } \langle \text{deno}_i \text{fop} \rangle \quad \text{a-ga'-u } \quad \langle \_ \_ \_ \_ \rangle \\
  \text{INT} & \text{C } 3SG \text{ Yande } 3-\text{see-DV} \\
  \end{array}
  \]

  ‘Who all do you think arrived?’

For more discussion of these facts, see the Appendix.

### 5 Multiple Copy Spell-out and Ā-chains

- **Problem:** Spelling out multiple copies of the same item should be problematic for linearization \(^4\) [Kayne 1994; Nunes 2012]. Why and how do multiple copies surface?

- **Observation:** In Seereer, copies surface only in Spec-FinP, the position that Ā-movement targets in terminal movement. Copies cannot surface in their base generated position:

  \[
  \begin{array}{ll}
  \text{CP} & \text{yee } \langle \text{ten}_i \rangle \quad \text{Jegaan } a-ga'-u \quad \langle \_ \_ \_ \_ \rangle \\
  \text{INT} & \text{C } 3SG \text{ Jegaan } 3-\text{see-DV} \\
  \end{array}
  \]

  ‘What do you think Jegaan saw?’

I propose that copies surface in Spec-FinP because movement to that position is feature-driven. Movement to such positions defines a copy there as the head of a chain.

\[
\begin{array}{ll}
\text{CP} & \text{yee } \langle \text{ten}_i \rangle \quad \text{Jegaan } a-ga'-u \quad \langle \_ \_ \_ \_ \rangle \\
\text{INT} & \text{C } 3SG \text{ Jegaan } 3-\text{see-DV} \\
\end{array}
\]

Intended: ‘What do you think Jegaan saw?’

- I propose that copies surface in Spec-FinP because movement to that position is feature-driven. Movement to such positions defines a copy there as the head of a chain.

\[
\begin{array}{ll}
\text{CP} & \text{yee } \langle \text{ten}_i \rangle \quad \text{Jegaan } a-ga'-u \quad \langle \_ \_ \_ \_ \rangle \\
\text{INT} & \text{C } 3SG \text{ Jegaan } 3-\text{see-DV} \\
\end{array}
\]

Intended: ‘What do you think Jegaan saw?’

- The Chain Head Principle yields two types of chain heads:

  - Those that satisfy \([u\varphi]\) (= Ā-chain head)
  - Those that satisfy \([uOP]\) (= Ā-chain head)

\[^4\text{Problems also arise in the system of Cyclic Linearization developed in Fox and Pesetsky 2006.}\]
• The principle in (25) has a radical consequence:

Successive cyclic Ā-movement generates multiple Ā-chains, each terminating in Spec-CP.

• Thus, terminal movement and intermediate movement are identical: both are feature-driven and each creates a distinct chain.

• Successive cyclic movement is the result of multiple chains being interleaved. Consider what this means for a long distance dependency with two levels of embedding, as in (26a):

(26) a. \[\begin{array}{l}
{xar_i} \\
{\text{what}} \\
{\text{think-2SG.EXT}} \\
{\text{C}} \\
{\text{3SG}} \\
{\text{Yande}} \\
{\text{a-lay-u}} \\
{\text{C}} \\
{\text{3SG}} \\
{\text{Jegaan}} \\
{\text{a-ga'-u}} \\
{\text{__i}}
\end{array}\]

‘What do you think Yande said Jegaan saw __?’

b. \[\begin{array}{l}
{\text{ForceP}} \\
{xar_i} \\
{\ldots} \\
{V+Fin^0} \\
{\text{ForceP}} \\
{\ldots} \\
{\text{FinP}} \\
{\ldots} \\
{V+Fin^0} \\
{\text{ForceP}} \\
{\ldots} \\
{\text{FinP}} \\
{\ldots} \\
{V+Fin^0} \\
{<xar_i>}
\end{array}\]

Because there are multiple chains in (26b), the structure can be linearized with multiple copies. Each chain head can be targeted for spell-out. In other words:

The heads of separate chains are linearized as separate items.

• This idea is independently motivated: chains involving different arguments must be treated separately:

(27) \[[\text{CP What}_k \text{ did } [\text{TP John}_j [I_P <\text{John}_j> \text{ buy } <\text{what}_i>]]]]

• New Problem! Why do the heads of intermediate chains surface in some languages (e.g., Seereer, German) but not in others (e.g., English).

• Intermediate chain heads differ from the matrix copy and the copy at the foot of the dependency in an important way: they are both the head of one chain, and the tail of another:

(28) \[[\text{CP What}_i \text{ do you think } [\text{CP [what}_i] [\text{Mary said } [\text{CP [what}_i] [\text{John bought what}_i,?] ]]]]

– Copy B is simultaneously the head of Chain 1 and the tail of Chain 2.
– Copy C is simultaneously the head of Chain 2 and the tail of Chain 3.

• This results in a representational ambiguity at the point of spell-out. The interface cannot decide whether to treat intermediate copies as the head of one chain or the tail of another.

• I propose that the interface does not tolerate such ambiguity. However, languages differ in the way they resolve this issue, dictated by a spell-out parameter:

(29) The Heads/Tails Parameter

An item must be unambiguously identified as the head or tail of a chain at the point of spell-out. When an item is ambiguous as to head/tail status, languages resolve this difference in one of two ways:

i. That item is treated as the tail of a chain. (non-wh-copying languages)
ii. That item is treated as the head of a chain. (wh-copying languages)
English has setting (i); Seereer has setting (ii). This results in a structure like (28) being spelled out differently:

(30)  
  a. In both languages, the highest copy (D) will always be spelled out, as it will always be a chain head.  
  b. In both languages, the lowest copy (A) will never be spelled out, as it always be a chain tail.  
  c. In Seereer, intermediate copies (B, C) will always be spelled out because they are treated as heads.  
  d. In English, intermediate copies (B, C) will never be spelled out because they are treated as tails.

The parameter does not dictate how a given copy will be spelled out. It only resolves a representational ambiguity

– We expect languages to differ in the way that multiple copies are realized on the surface (cf. wh-copying languages).  
– Such differences arise from independent properties of different languages’ morphology.  
– This is line with the Minimalist ideal of locating variation in the inventory of lexical items and at the interfaces (in this case, PF), instead of in the operation of the narrow syntax proper.

6 Conclusion

In this talk, I have shown that in Seereer long distance wh-dependencies, intermediate movement looks just like terminal movement:

– Both terminal and intermediate movement trigger extraction morphology on the verb.  
– Both terminal and intermediate movement result in the spelling out of a copy of the moved wh-phrase.


I further proposed that feature-driven movement defines the end of chains. Therefore, each step of movement to a CP phase edge creates a distinct A-chain. It is this property that allows multiple copy spell-out in Seereer to occur (cf. Schippers 2012).

In this system, A-movement of an operator is triggered by purely formal features, thus alleviating the problem of movement to non-interrogative CP phase edges (see also Abels 2012).
References


van Urk, Coppe, and Norvin Richards. 2013. Two components of long-distance extraction: Successive cyclicality in dinka. MS: MIT.
Appendix: Evidence for the Copy Analysis of Left Edge Pronouns

- This Appendix provides more in depth discussion of evidence that left pronouns (LEPs) are copies of a moved wh- phrase.

Argument 1: Islands

- Polar questions, relative clauses, and adjunct clauses all behave as islands for A-movement in Seereer.
- The presence of a LEP inside an island **does not alleviate a violation** incurred from forming a wh-dependency with a gap inside that island.
- Extraction from a embedded polar question with the complementizer ndax is illicit, whether or not a LEP is present.

(31) **Embedded Polar Question**

a. *xar, and-o [CP ndax [ten] Ami a-ga’-u ___] what know-2SG..EXT C\textsubscript{INT} LEP Ami 3-see-EXT

Intended: ‘What do you know whether Ami saw ___?’

b. *xar, and-o [CP ndax [Ø] Ami a-ga’-u ___] what know-2SG..EXT C\textsubscript{INT} Ami 3-see-EXT

Intended: ‘What do you know whether Ami saw ___?’

- Extraction from inside a relative clause is also illicit:

(32) **Relative Clause Island (CNPC)**

a. *an, ga’-o [DP maalo fe [CP [ten] jaw-na]] who see-2SG..EXT rice DET LEP cook-C\textsubscript{REL}

Intended: ‘Who did you see the rice that ___ cooked?’

b. *an, ga’-o [DP maalo fe [CP [Ø] jaw-na]] who see-2SG..EXT rice DET cook-C\textsubscript{REL}

Intended: ‘Who did you see the rice that ___ cooked?’

- And the same is true of adjunct islands:

(33) **Adjunct Islands**


Intended: ‘What did you go to Dakar before Jegaan bought ___?’


Intended: ‘What did you go to Dakar before Jegaan bought ___?’

- Because islands are standardly taken to be domains that block movement, these facts can be taken to support the idea that LEP and the matrix wh-phrase are connected by movement.

- If the matrix wh-phrase and the pronoun were base generated separately, we would not expect these effects to occur, as no island boundary would have been crossed by movement.

- Under the base generated account, we might even expect the presence of a LEP to alleviate island violations, as base generated resumptive pronouns often do (McCloskey 2002; Schneider-Zioga 2009).
6.1 **Argument 2: Reconstruction**

- LEPs behave as if they are copies of the moved *wh*-phrase for purposes of reflexive binding.
- The reflexive complement of the noun *foto* ‘photo, picture’ may be bound by the embedded subject *Yande* but not the matrix 3PL subject (here indicated only by agreement):

\[(34)\]
\[
\begin{align*}
\text{aj-} & \text{nqalaat-a} & \text{[CP yee Yande, a-ga’-a foto xoox um,/#den,]} \\
\text{3-think.PL-DV C Yande 3-see-DV photo REFL 3SG/3PL}
\end{align*}
\]

‘They think Yande saw a picture of herself/*themselves.’

- When the *wh*-phrase is extracted, the binding possibilities for the reflexive expand: binding by the matrix subject is now licit.

\[(35)\]
\[
\begin{align*}
\text{[foto xoox um,/den, num]} & \text{aj-nqalaat-u [CP yee ten, Yande, a-ga’-u --]} \\
\text{photo REFL 3SG/3PL which 3-think.PL-FOC C 3SG Yande 3-see-DV}
\end{align*}
\]

‘Which picture of herself/themselves do they think Yande saw?’

- This expansion of binding possibilities is due to reconstruction to the position of the LEP. I take the binding domain of a reflexive to be the phase ([Lee-Schoenfeld 2008]).
- The LEP at the edge of the embedded CP behaves as if it contains the anaphor:

\[(36)\]
\[
\text{[which photo of self] they know [CP [which photo of self] [ Yande sees [which photo of self] ]
}\]

- Taking reconstruction to straightforwardly follow from movement ([Sportiche 2007]), this points to the LEP being an **overt copy** of the matrix *wh*-phrase.

**Argument 3: Quantifier float**

- The quantifier *fop* may modify *wh*-words. In cases of local *wh*-movement, the quantifier may occur with the modified interrogative or post-verbally at the base of the dependency:

\[(37)\]
\[
\begin{align*}
a. \text{aniin } & \text{fop ngar-u} \\
\text{who.PL all come.PL-EXT}
\end{align*}
\]

‘Who all arrived?’

\[
b. \text{aniin ngar-u } \text{fop} \\
\text{who.PL come.PL-EXT all}
\]

‘Who all arrived?’

- Here I follow the stranding analysis of quantifier float ([Sportiche 1988; Merchant 1996]) in which the quantifier is generated as a constituent with the element it modifies and is subsequently stranded through movement of that element.

\[(38)\]
\[
\text{[DP aniin ] ngaru } \ldots \text{ [CP tDP fop ]} \ldots
\]

- In cases of long distance movement, the quantifier can occur anywhere along the path of the dependency:

\[(39)\]
\[
\begin{align*}
a. \text{aniin, } & \text{[fop] foog-o} \\
\text{who.PL all think-2SG.SBJ.EXT C LEP come.PL-EXT}
\end{align*}
\]

Intended: ‘Who all do you think arrived?’
Thus, the LEP behaves like it is a copy for purposes of quantifier float.

The \textit{wh}-phrase may strand the quantifier when it moves from its base position \textit{or} when it moves from the intermediate position in the embedded Spec-FinP.

Identical facts have been argued to provide evidence for intermediate movement in West Ulster English \cite{McCloskey2000}.

If the \textit{wh}-phrase were generated lower than the LEP, we would no expect the quantifier to be able to float to the lower position of the LEP.