I. Introduction to American Sign Language Syntax
   1. A brief note on phonology: signs have 5 parameters
   2. Handshape, movement, palm orientation, hand location, and nonmanual
   3. ASL is underlying SVO; topic prominent, pro-drop
   4. Non-manual markers are critical: mark topicalization, negation, polar questions, rhetorical questions, wh-questions
   5. How to notate a 3-D language in a 2-D world

(0)
   a. __________ nonmanual
      ENGLISH GLOSS OF SIGNS
      ‘English translation’
   b. __________ wh
      LIKE CHOCOLATE WHO
      ‘Who likes chocolate?’

II. Introduction (to this talk)
   1. Traditional movement of wh-NPs in SVO languages: fronted to spec-CP.
      An example in English:

(1) Who loves Gwen?
The leftward movement of the *wh*-NP, as shown here in the movement of *who*, is from spec-TP to its surface position in spec-CP.

- This leftward movement is speculated to be an aspect of Universal Grammar (Kayne 1994, as cited in NKMBL 2000).

2. Problem: some ASL *wh*-NPs are located at the rightward periphery, not the left.

If ASL were head-final, this would be the posited location of spec-CP; however, it’s head-initial. How to explain the rightward *wh*-NPs?

a. 3 possible positions for the *wh*-NP:
   i. left periphery/ *in-situ* (I will argue it is *in-situ*)
   ii. right periphery
   iii. doubled: left and right periphery

3. The presence or absence of the nonmanual + *wh* marker further complicates things

   a. *in-situ*

   (2) __________ *wh*
   WHO LIKE BOB
   ‘Who likes Bob?’

   (3) *__ *wh*
   WHO LIKE BOB
   ‘Who likes Bob?’

   b. right periphery

   (4) __________ *wh*
   LIKE BOB WHO
   ‘Who likes Bob?’

   (5) __________ *wh*
   LIKE BOB WHO
   ‘Who likes Bob?’

In contrast to the canonical form, + *wh*-m spread over the entire sentence in the right-peripheral form is optional; it is only obligatory in co-articulation with the *wh*-NP itself.

Therefore, any analysis of the right-periphery *wh*-NP problem in ASL must account not only for the movement of the *wh*-NP itself, but also the fact that + *wh*-m spread is optional in the right-periphery (sentences (4) and (5)) but obligatory in the canonical (sentences (2) and (3)).
III. Approach and Numeration

I propose that the traditional analysis of universal leftward movement is insufficient in addressing both the right-periphery and optional +wh-m spread issues at hand. Instead I will argue that we must consider an alternative analysis that allows for rightward wh-movement to a right-periphery spec-CP.

In order to evaluate these hypotheses, I will employ a MP analysis. The numeration of *Who likes Bob?* consists of the following items, with the most salient in bold.

<table>
<thead>
<tr>
<th>Bob</th>
<th>CAT</th>
<th>[N]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INFL</td>
<td>[uCase:_]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>who</th>
<th>CAT</th>
<th>[N] wh*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INFL</td>
<td>[uCase:_]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>like</th>
<th>CAT</th>
<th>[V*]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INFL</td>
<td>[uInfl:]</td>
</tr>
<tr>
<td></td>
<td>SEL</td>
<td>[uN] θ- PATIENT</td>
</tr>
</tbody>
</table>

IV. Traditional Leftward Analysis

1. Petronio and Martin’s (1997) analysis using leftward spec-CP
   a. Based on doubled wh-questions

(6) \[ \text{wh} \]

\[ \text{WHO LIKE BOB WHO} \]

‘Who likes Bob?’

b. They argue these consist of leftward movement (first WHO) and a second base-generated double with +focus, generated at C:
c. In PM’s analysis, rightward-periphery sentences like (4) and (5) constitute cases in which the *wh*-NP in spec-CP becomes a null element.

d. Additional evidence: implied *wh*-NPs

\[(7) \quad \begin{array}{c}
p & \text{NAME} \\
& \text{‘What’s your name?’} \\
\end{array}\]

2. Issues with this analysis
   a. Never explain why the +focus is only on the right double
   b. How to account for optional vs. obligatory +wh-m spread?
      If right-periphery constructions are just like the doubled constructions, we should see the same pattern of +wh-m spread. However:

\[(8) \quad \begin{array}{c}
* & \text{WHO} & \text{LIKE} & \text{BOB} & \text{WHO} \\
& \text{‘Who likes Bob?’} \\
\end{array}\]

\[(9) \quad \begin{array}{c}
* & \text{WHO} & \text{LIKE} & \text{BOB} & \text{WHO} \\
& \text{‘Who likes Bob?’} \\
\end{array}\]

Instead of optional +wh-m spread, as in the right-periphery, spread here is obligatory. c.f. (6)

I propose an alternative account in which the *wh*-NP moves to a rightward spec-CP. This account will not require the existence of the null *wh*-NP and account for sentences such as (7), and it will address the issue of the obligatory +wh-m spread.
IV. Alternative Rightward Analysis

1. Canonical form, as in (2), with spec-CP to the right:

![Tree Diagram]

Why does the wh-NP only move to spec-TP remain in-situ instead of moving to spec-CP? Here I have introduced a new lexical item, wh-m, with the following feature structure:

| wh-m | CAT    | [wh] |

This corresponds to the non-manual facial marker +wh-m. If this item has the category feature wh, then it checks uwh* on C. Because wh-m is base-generated at spec-CP, it Agrees with C’s SEL: uwh* feature. This Agreement fulfills C’s need to have its uwh* checked, and thus C never triggers movement of who to spec-CP as occurs in wh-movement.

2. Further evidence that the wh-NP remains in-situ:

(10) wh

JOHN BUY WHAT YESTERDAY

‘What did John buy yesterday?’
In (10), *what* clearly remains *in-situ* as opposed to occurring initially, demonstrating that this is a viable position for *wh*-NPs. Without evidence to the contrary, it is therefore logical to maintain that *wh*-NPs do not front to an initial position but rather remain *in-situ*, thus allowing for the possibility of another lexeme to check *uwh on C. Additionally, without another item to check *uwh on C, it is unclear how to account for these *in-situ* varieties.

3. Right periphery form, as in (3)

In this numeration, there is no *wh*-m available to check *uwh on C, so movement is triggered on *wh*-NP.

a. Provides evidence for rightward position of C
i. For C to trigger rightward movement, it must itself be on the right of the clausal spine
ii. Agreement can’t cross the clausal spine; if it were on the left the *uwh and *wh features could not agree
iii. Explains the location of C in the canonical derivation
b. *Wh*-m still performed due to cat feature [wh]

4. Obligatory vs. optional *wh*-m spread
a. When two +wh items are present:
   i. Obligatory spread between shared +wh features: from upper +wh item down to lower +wh item
   ii. Occurs in *in-situ* constructions: *wh*-m lexeme in spec-CP, c-commands *wh*-NP in spec-TP
   iii. Also occurs in doubled constructions: one base-generated *wh*-NP in spec-CP, one in spec-TP
iv. Speculation: shared semantics across the clause translates to obligatory spread
b. When one +wh item is present:
i. Spread is optional, not obligatory.
ii. Occurs in right periphery constructions: one moved wh-NP in spec-CP
iii. No other +wh item to share semantics with; +wh-m is local
iv. Speculation: the locality of the +wh-m is a visual instantiation of the feature checking that occurs between CAT [wh*] on wh-NP and SEL [uwh*] on C.
c. Drawing on NKMBL\(^1\): when feature-checking is local, co-articulation of the non-manual marker and the lexical item signed is local as well.
i. Amendment: when the semantics are local, then the co-articulation is local; when the semantics are spread across the phrase, then the co-articulation is spread across the phrase.

The critical difference: *in-situ* and doubled constructions have a wh-m *lexical item*, located at a rightward spec-CP; right periphery constructions have a *checked feature* between C and wh-NP at spec-CP.

\(^1\) NKMBL have argued this locality of co-articulation explains the optionality of spread in other non-manual markers as well, although they have not stipulated this difference between lexemes and feature as I have done.
5. Explaining “null” *wh*-NPs
In the case of the “covert” *what* in *What’s your name?*, *what* is not a null element but rather realized in the *wh-m* lexeme.


V. Other Types of Questions

1. Polar interrogatives
   a. May contain a manual sign, “QMwg” (NKMBL)
   b. Have the distribution of optional vs. obligatory non-manual marker spread as *wh*-questions
      i. right periphery (optional spread)

(11) ___________________  y-n
    GWEN LIKE BOB QMwg
    ‘Does Gwen like Bob?’

(12) ___________________  y-n
    GWEN LIKE BOB QMwg
    ‘Does Gwen like Bob?’

   ii. doubled (obligatory spread)

(13) * y-n ___________________  y-n
    QMwg GWEN LIKE BOB QMwg
    ‘Does Gwen like Bob?’

(14) ___________________  y-n
    QMwg GWEN LIKE BOB QMwg
    ‘Does Gwen like Bob?’
III. in-situ (obligatory spread)
NKMBL provide no elicited examples, but claim that the distribution follows the predicted pattern:

(15) * y-n
QMwg GWEN LIKE BOB
‘Does Gwen like Bob?’

(16) y-n
QMwg GWEN LIKE BOB
‘Does Gwen like Bob?’

c. This could potentially explain the optionality of the QMwg sign; perhaps the +y-n lexeme is fulfilling the role of the QMwg much as the the wh-m lexeme fills that of a wh-NP.

2. Rhetorical questions: according to NLMBK, they also follow the same distribution of nonmanual marker spread.

3. The fact that all question constructions follow the same pattern of non-manual marking provides further support for the theory that grammaticalized non-manual markers can be fully instantiated lexemes.

VI. Conclusions

1. The alternative hypothesis of rightward wh-movement successfully accounts for:
   a. obligatory +wh-m spread in in-situ constructions
   b. optional +wh-m spread in right periphery and doubled constructions

2. Addition of a lexical item wh-m:
   a. its presence or absence dictates whether or not the wh-NP moves rightward
   b. leads to the possibility that other grammaticalized non-manual markers, including the y-n marker and rhetorical-q marker, may also be lexemes
   c. causes us to differentiate between non-manual lexical items and visual feature checking

3. Visual feature checking
   a. In spoken languages, we cannot “see” feature checking occurring. Due to the visual modality of signed languages and the fact that non-manual phonemes can co-occur with signed phonemes, ASL exhibits the unusual behavior of overtly conveying the otherwise “hidden” feature-checking system.
   b. Paralleling the +wh feature checking demonstrated here, it is possible that the y-n marker similarly reflects an overt realization of the +interr feature checking system found in polar interrogative constructions.

VII. Thank you and have a great spring break!
References


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