

Covert movement licenses parasitic gaps

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In her seminal work on the licensing of parasitic gaps, Engdahl (1983) notes that in-situ *wh*-phrases in English do not appear to be able to license parasitic gaps, illustrated by the context in (1).

- (1) a. Which article_i did you file without reading _____i?
 b. * Who filed which article_i without reading _____i?

In other words, it appears to be the case that covertly moved *wh*-phrases are unable to license parasitic gaps, in contrast to overtly moved *wh*-phrases. In this talk, we provide novel evidence from Bùlì, a Gur language spoken in northern Ghana, which are a counterexample to Engdahl's generalization.

Bùlì *wh*-phrases undergo covert movement: First, we must establish that in-situ *wh*-phrases in Bùlì may move covertly. As we see in (2), *wh*-phrases may remain in-situ. However, it appears to be the case that in-situ *wh*-phrases, such as those in (2c), undergo covert movement to a position comparable to the overtly fronted phrase in (2b). We provide three arguments that this is the case.

- (2) a. Bi:ka dig lammu b. ka bwa ati bi:ka digi: c. Bi:ka dig ka bwa:
 child cooked meat KA what ATI child cook child cooked KA what
 'The child cooked meat' 'What did the child cook?' 'What did the child cook?'

In-situ *wh*-phrases in Bùlì are not subject to semantic intervention effects, demonstrated in (3). Given an analysis of such effects like that in Beck (2006), Cable (2010), and Kotek (2014), the absence of such an effect is explained straightforwardly if the *wh*-phrase moves covertly to a position outside the scope of the focus operator.

- (3) a. Bi:ka mɛ dig ka bwa: b. Bi:ka ŋini dig ka bwa:
 child also cooked KA what child only cooked KA what
 'What did the child also cook?' 'What did the child only cook?'

Movement in Bùlì is subject to island effects, as demonstrated by the ungrammaticality of (4b). As we see in (4c), an in-situ *wh*-phrase also may not appear inside an island, which receives a simple explanation if in-situ *wh*-phrases undergo covert movement and such movement is island sensitive.

- (4) a. Bi:ka aya:li nurpok wai ali da gbanka la
 child.DEF likes woman who ALI bought book DET
 'The child love the woman who bought the book.'
 b. * ka bwa ati bi:ka aya:li nurpok wai ali da ____ la:
 KA what ATI child.DEF likes woman who ALI bought ____ DET
 'What does the child like the woman who bought?'
 c. * Bi:ka aya:li nurpok wai ali da ka bwa la:
 child.DEF likes woman who ALI bought KA what DET
 'What does the child like the woman who bought?'

Finally, both overt and covert movement of *wh*-phrases in Bùlì feeds anaphor binding. As we see in (5a-b), an anaphor in an NP must be bound locally. However, an anaphor in a *wh*-phrase may be bound non-locally, (5c-d), suggesting that the *wh*-phrase has moved to a position where the subject may bind the anaphor.

- (5) a. Ajohn we:ni ayin ba nya ba-dek foto
 J. said that they saw themselves picture
 'John said that they saw a picture of themselves'
 b. * Ajohn we:ni ayin ba nya wa-dek foto
 J. said that they saw himself picture
 'John said that they saw a picture of himself'
 c. ka wa-dek foto kuna: ati Ajohn we:ni ayin ba nya ____
 KA himself picture which ATI J. said that they saw ____
 'Which picture of himself did John say they saw?'
 d. Ajohn we:ni ayin ba nya ka wa-dek foto kuna:
 J. said that they saw KA himself picture which
 'Which picture of himself did John say they saw?'

Parasitic gaps in Bùlì: Bùlì does not allow topic drop or *pro* in object position, as indicated by (6).

- (6) a. AJohn ka:si gbanka
 J. destroyed book
 ‘John destroyed the book’
- b. *AJohn ka:si _____
 J. destroyed _____
 ‘John destroyed it/*pro*’

As we see in (7), Bùlì has a set of adjunct phrases comparable to English *without*-adjuncts. These adjuncts are islands for *wh*-movement, (7b), and do not normally license a gap in object position, (7c).

- (7) a. AJohn fali foto ali an karimi gbank a
 J. filed photo without read book neg
 ‘John filed the photo without reading a book.’
- b. *ka bwa ati AJohn fali foto ali an karimi _____ ya
 KA what ATI J. filed photo without read neg
 ‘What did John file the photo without reading?’
- c. *AJohn fali foto ali an karimi _____ ya
 J. filed photo without read neg
 ‘John filed the photo without reading (the photo).’

Interestingly, as we see in (8), when a *wh*-phrase is in object position in the main clause, a gap in object position is licensed in the adjunct clause. This is true regardless of whether the *wh*-phrase has moved, as in (8a), or when it is in-situ, as in (8b). In-situ *wh*-phrases in Bùlì undergo covert movement, consistent with the facts established, and license parasitic gaps, providing a clear counterexample to Engdahl’s generalization.

- (8) a. Ka gbaŋ kana_i ati AJohn fa:li ______i ali an karimi ______i ya
 KA book which ATI J. filed _____ without reading _____ neg
 ‘Which book did John file without reading?’
- b. AJohn fa:li ka gbaŋ kana_i ali an karimi ______i ya
 J. filed KA book which without reading _____ neg
 ‘Which book did John file without reading?’

Parasitic gaps in Bùlì otherwise follow the distribution of parasitic gaps in more familiar languages, in that *wh*-subjects do not license parasitic gaps, as shown in (9).

- (9) a. Ka wana ali fa:li gbanka
 KA who ALI filed book
 ‘Who filed the book?’
- b. *Ka wana ali fa:li gbanka ali ge AJohn an tu _____ ya
 KA who ALI filed book.DEF without J. neg meet _____ neg
 ‘Intended: Who filed the book without John meeting _____’

Proposed analysis: The facts in Bùlì suggest that covert movement is able to license parasitic gaps, at least in principle. Nissenbaum (2001) develops a theory of parasitic gap licensing in which adjuncts that contain parasitic gaps must be merged countercyclically, to a position immediately below their licenser. This sort of analysis, crucially, makes no distinction between overt and covert movement with respect to parasitic gap licensing. Under such an approach, the order of operations needed for Bùlì, schematized in (10), is allowed—Nissenbaum resorts to a language-specific restriction to rule out that order of operations for English, allowing only the order of operations schematized in (11). We suggest that Bùlì is simply a language that lacks this restriction—as a result, covert *wh*-movement may license parasitic gaps in Bùlì, as expected, given the system developed in Nissenbaum (2001).

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| <p>(10) Bùlì order of operations
 Spell-out
 Move
 Merge adjunct</p> | <p>(11) English order of operations
 Move
 Merge adjunct
 Spell-out</p> |
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