ON THE LACK OF INTERVENTION EFFECTS IN AMHARIC
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1. Background: Intervention effects

- Intervention effects arise when a quantificational or focusing element, labeled the intervener, precedes a wh-phrase in a wh-question, leading to degradedness.

- The core set of crosslinguistically stable interveners consists of the focusing operators equivalent to English only, even, and also, as well as NPIs (Kim 2002, Beck 2006). Certain quantificational elements and disjunctive NPs can also be interveners.

(1) a. *Minsu-man nuku-lûl po-ass-ni?
   Minsu-only who-ACC see-PAST-Q
b. nuku-lûl Minsu-man po-ass-ni?
   who-ACC Minsu-only see-PAST-Q
   ‘Who did only Minsu see?’ (Korean; Beck 2006:3)

(2) a. *amuto muôs-ûl ilk-chi anh-ass-ni?
   anyone what-ACC read-CHI not.do-PAST-Q
b. muôs-ûl amuto ilk-chi anh-ass-ni?
   what-ACC anyone read-CHI not.do-PAST-Q
   ‘What did no one read?’ (Korean; Beck 2006:4)

(3) a. ??’nukuna-ka ônû kyosu-lûl chonkyôngha-ni?
   everyone-NOM which professor-ACC respect-Q
b. ônû kyosu-lûl nukuna-ka chonkyôngha-ni?
   which professor-ACC everyone-NOM respect-Q
   ‘For which x, x a professor: everyone respects x?’ (Korean; Beck 2006:4)

(4) a. ??’[John-ka Bill]-ga nani-o yon-da-no?
   John-or Bill-NOM what-ACC read-past-Q?
b. nani-o [John-ka Bill]-ga yon-da-no?
   what-ACC John-or Bill-NOM read-past-Q
   ‘What did John or Bill read?’ (Japanese; Tomioka 2007b:1571)

- Crucially, the order in the (a) versions is the a priori expected one, since these are SOV wh-in-situ languages. The effects are eliminated if the wh-phrase is scrambled over the intervener, as in the (b) versions.


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• **Goal:** Argue for a non-structural approach to intervention effects, given novel data from Amharic, in which these effects (almost) never arise.

• **Outline:**
  - Existing analyses of intervention effects
  - The lack of intervention effects in Amharic
  - Attempting to apply a structural analysis
  - A non-structural explanation
  - Conclusions and remaining issues

2. **Existing analyses of intervention effects**

- Typically divided into syntactic, semantic, and pragmatic accounts. Alternatively:

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Structural/Hierarchical</th>
<th>Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cause</strong></td>
<td><strong>Kim (2005), Beck (2006)</strong></td>
<td><strong>Grohmann (2006)</strong></td>
</tr>
<tr>
<td><strong>Wh-phrase</strong></td>
<td></td>
<td><strong>Tomioka (2007a,b)</strong></td>
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<tr>
<td><strong>Intervener</strong></td>
<td></td>
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Table 1: Classes of Approaches to Intervention Effects

- Pesetsky (2000): A semantic restriction on a quantifier (including *wh*) may not be separated from that quantifier by a scope-bearing element (p. 67).

<table>
<thead>
<tr>
<th><strong>Feature Movement</strong></th>
<th><strong>Covert Phrasal Movement</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>– Doesn’t license ACD</td>
<td>– Licenses ACD</td>
</tr>
<tr>
<td>– No Superiority effects</td>
<td>– Superiority effects</td>
</tr>
<tr>
<td>– Intervention effects</td>
<td>– No intervention effects</td>
</tr>
<tr>
<td>– No Subjacency effects</td>
<td>– Subjacency effects</td>
</tr>
<tr>
<td>– Obey Attract Closest</td>
<td>– Obey Attract Closest</td>
</tr>
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</table>

Table 2: Properties of Feature Movement vs. LF Phrasal Movement (Pesetsky 2000)

- Predictions: A configuration that lacks intervention effects (1) licenses *wh*-phrases through covert phrasal movement; (2) will exhibit Superiority effects; (3) will not allow *wh*-phrases inside islands.
- No clear definition of the set of interveners
- Tsai (1994), Reinhart (1998), a.o.: in-situ *wh*-phrases do not move

  - Interveners come with the focus operator ~ in the sense of Rooth (1992).
  - *Wh*-phrases lack an ordinary semantic value; when ~ applies to the *wh*-phrase, the resulting value is undefined and ungrammaticality results.
  - "... a *wh*-phrase may never have a focus-sensitive operator other than the Q operator as its closest c-commanding potential binder." (p. 46)
  - Do all interveners give rise to focus-affected readings?
• Tomioka (2007a, b): Structural approaches do not capture a number of properties:
  1. Interspeaker variability in judgments
  2. Distinctions within the class of interveners
  3. Difficulties in defining a property which uniquely identifies interveners
  4. Weakening of the effect when the intervener is embedded or not a subject

  – Intervention effects are the result of a mismatch between the properties of interveners and the informational articulation of *wh*-questions.

  LINK FOCUS TAIL

  – Interveners cannot be links because they are anti-topic items (ATIs), and cannot be tails because tails must be phonologically reduced.

(6) *[…]Int… [Wh] …B…]
  LINK FOCUS TAIL

  – Scrambling places ATIs in the phonologically reduced part of the sentence.

(7) [[Wh]t …Int… tI …B…]
  FOCUS TAIL

3. The lack of intervention effects in Amharic

• Amharic is an SOV and *wh*-in-situ language.

• Contra the descriptive generalization whereby intervention effects are universal (Beck 2006), Amharic does not exhibit degradedness when a quantificational or focusing element c-commands a nominal (8), adverbial (9), or d-linked *wh*-phrase (10).1,2,3.

(8) a. haile bəčča mən anäbbäb-ä?
   Haile only what.read.PER-3MS
   'What did only Haile read?'

b. mən haile bəčča anäbbäb-ä?
   'What did only Haile read?'

(9) a. haile bəčča lāmən ya-n mās'ḥaf anäbbäb-ä?
   Haile only why that-ACC book read.PER-3MS
   'Why did only Haile read that book?'

b. lāmən haile bəčča ya-n mās'ḥaf anäbbäb-ä?
   'Why did only Haile read that book?'

(10) a. haile bəčča yätənñaw-ən mās'ḥaf anäbbäb-ä?
   Haile only which-ACC book read.PER-3MS
   'Which book did only Haile read?'

   b. yätənñaw-ən mās'ḥaf haile bəčča anäbbäb-ä?

1 Some languages exhibit distinctions among these categories (see Ko 2005, Soh 2005, Tomioka 2006).
2 Abbreviations used for Amharic: ACC = accusative, AUX = auxiliary, DEF = definite, F = feminine, FOC = focus, IMP = imperfect, M = masculine, NEG = negation, subscribed O = object, P = prepositional suffix, PER = perfect, PL = plural, POSS = possessive, REL = relative marker, S = singular, TOP = topic.
3 The transcription is as follows: č, k', p', s' and t' are ejective stops; ŋ is the palatal nasal; superscribed w represents labial secondary articulation; ş is a high central vowel and ā is a mid-central vowel.
• This is true of (almost) all potential interveners, including the core set of bočça 'only', dāgmo / -mm 'also' and änkan 'even', quantificational elements like hullumm 'everyone', and disjunctive NPs (see Eilam 2009 for full list).

• In the above examples, the (a) versions with the *wh*-phrase in situ are preferred, on a par with run-of-the-mill *wh*-questions. There is one class of interveners for which judgments are less clear: some speakers prefer a *wh*-phrase to remain in situ following an NPI (11a), while others prefer it scrambled above the NPI (11b).

\begin{equation}
\begin{aligned}
(11) & \text{a. } \text{mann}ømm mùñ \text{ al-anänbbäb-ä-mm?} \\
& \text{ anyone what NEG-read.PER-3MS-NEG}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
& \text{b. } \text{mùñ mann}ømm \text{ al-anänbbäb-ä-mm?} \\
& \text{'What did no one read?'}
\end{aligned}
\end{equation}

• What could explain the exceptionality of Amharic?
  – Sensitivity to intervention effects is a parameterized feature: NO.
  – The semantics of Amharic *wh*-phrases and/or focus: NO (cf. Higginbotham 1985).
  – Amharic clausal structure: Amharic interveners, like subjects in general, are above the Q operator in C^0, so that the latter is the closest c-commanding potential binder to the *wh*-phrase (cf. Pesetsky 2000, Beck 2006).
  – Amharic information structure and/or prosody (cf. Tomioka 2007a,b).

4. Attempting to apply a structural analysis

4.1 Evidence for a structural analysis

• Recall the predictions from Pesetsky (2000): A configuration that lacks intervention effects (1) licenses *wh*-phrases through covert phrasal movement; (2) will exhibit Superiority effects; (3) will not allow *wh*-phrases inside islands.
  – Not covert phrasal movement: Amharic *wh*-phrases in situ are acceptable inside islands. Thus, under Pesetsky's theory, *wh*-phrases in Amharic remain below the intervener at LF, and are licensed through feature movement.

\begin{equation}
\begin{aligned}
(12) & \text{a. } \text{haile astämari-w lâ-man yä-sät’t'-ä-w-øn mäs'haf anänbbäb-ä?} \\
& \text{ Haile teacher-DEF to-who REL-give.PER-3MS-DEF-ACC book read.PER-3MS}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
& \text{ 'Who is the person } x \text{ such that Haile read the book that the teacher gave to } x'?
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
& \text{b. } *lâ-man haile astämari-w yä-sät’t'-ä-w-øn mäs'haf anänbbäb-ä? \\
& \text{ to-who Haile teacher-DEF REL-give.PER-3MS-DEF-ACC book read.PER-3MS}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
& \text{ 'Who is the person } x \text{ such that Haile read the book that the teacher gave to } x'?
\end{aligned}
\end{equation}

• Beck (2006): "... a *wh*-phrase may never have a focus-sensitive operator other than the Q operator as its closest c-commanding potential binder." (p. 46)

• Under Pesetsky or Beck, Amharic should only be able to evade intervention effects if potential interveners don't intervene, because they are above the Q operator in C^0.
Evidence for the C domain position of clause-initial elements, including interveners:

1. Amharic is a null subject language with obligatory subject agreement affixes:

(13) sak'-äčē.
   laugh.PER-3FS
   'She laughed.'

(14) aster doro-wa-n arräd-*(äčē).
   Esther hen-DEF-ACC butcher.PER-3FS
   'Esther butchered the hen.'
   Following Alexiadou and Anagnostopoulou (1998) and many others, one can assume that agreement is pronominal in null subject languages, indicating that the subject is not in SpecIP, but rather adjoined in a higher position in the C domain.

2. Adverb positioning
   - Sentential adverbs, adjoined to IP (e.g., Jonas & Bobaljik 1993), can follow the subject:

(15) polis-u düggənnätu leba-w-an yaz-ä.
   police-DEF fortunately thief-DEF-ACC catch.PER-3MS
   'Fortunately, the police caught the thief.'
   (cf. The police, fortunately, caught the thief)

(16) manənm mànaləbatə màs'haf-u-n al-anäbbäb-ä-mm.
   anyone probably book-DEF-ACC NEG-read.PER-3MS-NEG
   'Probably, no one read the book.'
   (cf. ??No one probably read the book)

3. String-vacuous clitic-left-dislocation (CLLD)
   - A clause-internal phrase moves to an A'-position in the C domain, often without any necessary surface reflex: it can remain below the subject (cf. Simpson & Bhattacharya 2003 for a similar proposal regarding "masked" movement).

(17) a. yonas anbäsa-w-an gäddäl-ä.
   Jonas lion-DEF-ACC kill.PER-3MS
   'Jonas killed the lion.'

b. yonas anbäsa-w-an gäddäl-ä-w.
   Jonas lion-DEF-ACC kill.PER-3MS-3MS₀
   'Jonas killed the lion.'
   (Demeke 2003:66)
   - Object marking (OM) as in (17b) is restricted as expected if the NP referred to is a topic, and hence in the C domain, where discourse dependencies are licensed:
     1. Nonreferential pronouns and wh-words are incompatible with OM. Referentiality is an obligatory property of topics (Reinhart 1981), while wh-words, being inherently focused, cannot also serve as topics (Polinsky & Potsdam 2001).

(18) aster and nəgar ayy-äčē-(*əw).
   Esther something see.PER-3FS-3MS₀
   'Esther saw something.'
   (Amberber 1996:139)
(19) aster mâm ayy-äčč-(*əw)?
    Esther what see.PER-3FS-3MS0
    'What did Esther see?' (Amberber 1996:139)

2. The forms used as reflexive pronouns can only have their nonreflexive
interpretation if referred to by OM. Reflexive pronouns are not possible topics
due to their nonreferentiality (Polinsky & Potsdam 2001).

(20) a. haile ras-u-n ayy-ä.
    Haile head-POSS.3MS-ACC see.PER-3MS
    'Haile saw himself.'

b. haile ras-u-n ayy-ä-w.
    Haile head-POSS.3MS-ACC see.PER-3MS-3MS0
    'Haile saw his head/*himself.'

− In terms of its discourse function, OM seems to be primarily a cataphoric device
  (e.g., Gasser 1983), which is characteristic of topics in the sense of Givón (2001).
− A syntactic reflex of OM can be seen in word order when an OMed phrase
  interacts with a non-subject. Displacement is then not hidden because the latter,
  unlike the subject, is not in the high left periphery.

(21) a. aster bet-u-n bâ-mâät'rägiya-w t'ârräg-äčč.
    Esther house-DEF-ACC with-broom-DEF clean.PER-3FS
    'Esther cleaned the house with the broom.' (Yabe 2007:80)

b. aster <bâ-mâät'rägiya-w> bet-u-n ❁bâ-mâät'rägiya-w> t'ârräg-äčč-abb-ät.
    Esther with-broom-DEF house-DEF-ACC with-broom-DEF clean.PER-3FS-P-3MS0
    'Esther cleaned the house with the broom.'

c. aster <mâät'rägiya-w-ən> bet-u-n ❁mâät'rägiya-w-ən> t'ârrägä-čč-abb-ät.4
    Esther broom-DEF-ACC/TOP house-DEF-ACC broom-DEF-ACC/TOP clean.PER-3FS-P-3MS0
    'Esther cleaned the house with the broom.' (Yabe 2007:82)

− If (21a) is not the base-generated order, but rather the result of scrambling the
direct object: (21b-c) shows that the DO cannot be higher than the adjunct when
the latter is referred to by OM, because CLLD places phrases in the high left
periphery, whereas scrambling does not.
− Scrambling does not enable phrases to precede the subject (22) because it is
  limited to adjunction to IP/VP/AP (cf. Grewendorf & Sternefeld 1990), while
  CLLD derives this order because it is associated with the C domain.

(22) wɔɔšša-w-ən1 aster tî mått-äčč-*(əw).5
    dog-DEF-ACC Esther hit.PER-3FS-3MS0
    'Esther hit the dog.' (Amberber 1996:138)

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4 There is some interspeaker variation regarding (21b): Yabe (2007) says that only for some speakers is the
DO-PP order dispreferred, while Haile (1970) claims that it is ungrammatical. In any case, pace Yabe
(2007), (21c) is not an applicative construction; it does not allow passivization, for example.
5 There is some interspeaker variation in the acceptability of (22) without OM, perhaps suggesting that
some speakers allow scrambling to target CP-adjoined positions.
• If lexical subjects in declarative sentences occupy a CP-joined position in Amharic, we might expect other types of elements to be placed in such a position:

(23) man mäče män gäzz-a?
    when what buy.PER-3MS
    'When did who buy what?'

(24) a. mäče, man tän gäzz-a?
    when who what buy.PER-3MS
    'When did who buy what?'

b. tänant Kassa mäs’haf gäzz-a.
    yesterday Kassa book buy.PER-3MS
    'Yesterday Kassa bought a book.' (Demeke 2003, in Aboh 2007:304)

(24) and other possible permutations of the base order (23) are violations of Superiority. Wh-phrase movement motivated by something other than checking a [+wh] feature (e.g., focus movement; Bošković 2002) disregards Superiority.

• Given that the various permutations allow single-answer readings, we can also conclude that none of the wh-phrases occupy SpecCP (Bošković 2002). Rather, wh-phrases adjoin to CP on a par with lexical NPs in declaratives.

The proposed clausal structure for Amharic allows us to maintain Pesetsky’s (2000) classification of movement types, as well as Beck’s (2006) ideas regarding the definition of interveners, the underlying cause responsible for intervention effects, and the relevance of hierarchical structure for the phenomenon at hand.

4.2 Problems with a structural analysis

1. Amharic also does not show intervention effects when the potential intervener is a non-matrix subject (25) or a non-subject (26):

(25) girma haile bačča mä önänd-anëbbäb-ä y-asäb-all?
    Girma Haile only what that-read.PER-3MS 3MS-think.IMP-AUX.3MS
    'What does Girma think that only Haile read?'

(26) girma lä-haile bačča mä sät't-ä?
    Girma to-Haile only what give.PER-3MS
    'What did Girma give only to Haile?'

• Assuming that multiple elements can adjoin to CP, one could claim that in (25)-(26) both the matrix subject and the potential intervener are above C0.

• This leads to the prediction that adverbs associated with the matrix clause should be able to follow the embedded subject (27). However, the prediction fails (28).
(27)

```
(27)                CP
                     /    \
                   CP     CP
                /       \
              CP     CP
            /       \   
              IP     IP
            /       \   
          CP     CP
         /     \    
        I'     I'
       / \     / \  
      t1 t2 I' I'
     /   \   /   \  
    VP VP VP VP
   /   \ /   \ /   \  
  I' I' I' I'
 / \ / \ / \ / \   
 C0 C0 C0 C0
```

(28) <ahun> haile <ahun> girma <*ahun> tənant mäs’haf-u-n ṣend-anäbbäb-ä
now Haile now Girma now yesterday book-DEF-ACC that-read.PER-3MS
<ahun> y-awk'-all.
now 3MS-know.IMP-AUX.3MS
'Haile now knows that Girma read the book yesterday.'

2. There is interpretational evidence for a high left peripheral "hanging topic" position, but it is orthogonal to the absence of intervention effects:

(29) haile böčča mën anäbbäb-ä? (}=8a)
    Haile only what read.PER-3MS
a. 'What did only Haile read?'
b. 'Only speaking of Haile, what did he read?'
Context: There are four students in the class. All four have read "The Neverending Story" and "Harry Potter", but only Haile has read "The Hobbit".

Q: haile bǝčča mǝn añábbä-ä?
   A1: "The Hobbit"  (✓ reading a)
   A2: "The Neverending Story", "Harry Potter", "The Hobbit".  (✓ reading b)

Q: mǝn haile bǝčča añábbäb-ä?
   A1: "The Hobbit"  (✓ reading a)
   A2: #"The Neverending Story", "Harry Potter", "The Hobbit".  (*reading b)

− The subject must be in SpecIP in (32) in order to capture the interpretive distinction. This is the same position that derives reading (a) in (31), establishing that the hanging topic position is not required to evade intervention effects.

• Only subjects can be hanging topics in the C domain, but they do not have to be.
  − Explains the properties described above, fits in with the well-known correlation between subjunctivity and topichood (e.g., Chafe 1976), and the obligatory status of subject agreement, as opposed to other forms of agreement.
  − The lack of intervention effects is independent of the position of the subject.

5. A non-structural explanation

• Tomioka (2007a,b): intervention effects are the result of a mismatch between the properties of interveners and the informational articulation of wh-questions.

(33) *[…Int… [Wh] …B…]
   LINK FOCUS TAIL

• Amharic prosody and the lack of intervention effects
  − The absence of intervention effects is correlated with prosodic properties which are predicted by Tomioka (2007a,b): Amharic does not seem to exhibit pitch prominence on the associate or on the focus particle.
– Morphosyntactic focus structures in various languages are claimed to be independent of intonational prominence (Drubig 2003).

– Marking the associate of a focus particle in Amharic can be achieved through linear adjacency, even if this involves breaking up constituents.

(36) aster k'ay bęčča shāmiz-očč tō-dārg-all-āčč.
Esther red only shirt-PL 3FS-wear.IMP-AUX-3FS
'Esther only wears [red]_F shirts.'

– In other words, Amharic has as a default the property which other languages derive by scrambling the wh-phrase over the intervener: the positioning of a nontopicalizable element in a phonologically reduced position, allowing it to be interpreted as (part of) the tail.

– The variable judgments vis-à-vis NPIs might indicate intervention effects. Interestingly, these elements do exhibit unambiguous intonational prominence.

(37) mananmm mān al-anābbāb-ā-mm?
anyone what NEG-read.PER-3MS-NEG
'What did no one read?'
• Amharic information structure and the lack of intervention effects
  – There is no degradedness when a focus particle like ቀቻር ለ‘only’ takes a hanging topic as its argument (38b) because the topic is not integrated in the information structure of the question.

(38) haile ቀቻር በን ልላላብ-እ?
   Haile only what read.PER-3MS
   a. 'What did only Haile read?'
   b. 'Only speaking of Haile, what did he read?'

− Other languages ban this order of topic marking and focus particle and/or the interpretation which it derives in Amharic; some prohibit the combination of topic marking and focus particles altogether (e.g., Tsez; Polinsky & Potsdam 2001).

6. Conclusions and remaining issues

• Given the novel observation that Amharic exhibits (almost) no intervention effects, we first attempted to apply a structural theory, whereby the linear string of Amharic hides a hierarchical structure different from that of languages which have intervention effects.

• The structural approach did not capture the entire range of data, forcing us to abandon it in favor of a non-structural explanation. Under this theory, the attested crosslinguistic variation was reduced to prosodic and information structural properties which distinguish Amharic from other languages.

• The analysis can also be extended to alternative questions, where an intervener preceding a disjunctive phrase is said to remove the alternative question reading, allowing the sentence to be interpreted only as a yes/no question (Beck & Kim 2006).

(39) Does only John like Mary or Susan?
   a. #Mary. [*AltQ]
   b. Yes. [✓Yes/NoQ]
   – The alternative reading is lost because the disjunct is the focus, but the intervener can be neither link nor tail in its surface position. The polar reading is retained because in a yes/no question the disjunct is not the focus.
   – As expected, Amharic allows both readings despite the presence of an intervener.

(40) haile ቀቻር ረይወስ በኈን ከት-
   Haile only tea or coffee drink.PER-3MS
   'Did only Haile drink tea or coffee?' /
   'Only speaking of Haile, did he drink tea or coffee?'
   a. ረይ. [✓AltQ]
      tea
   b. ከው. [✓Yes/NoQ]
      yes
- The explanation is the same as in \textit{wh}-questions: interveners can be tails when preceding the disjunct since they are not prosodically prominent, and when they are interpreted as hanging topics they do not create intervention effects because they do not need to be incorporated in the information structure of the question.

- The analysis of Amharic contributes to a growing body of work showing that intervention effects are not structural in nature.
  - Eilam (2009): English alternative questions

- The analysis is also part of a broader line of research attempting to distinguish structural from non-structural phenomena, and, correspondingly, ungrammaticality from unacceptability (cf. Kroch 1989).

- Remaining issues and open questions:
  - Does the analysis extend to other interveners, and in particular QPs?
  - Find independent language-specific diagnostics for topicalizability.
  - Further work on the intonational phonology of Amharic is needed.
  - Further work on the left periphery in Amharic: are there any other correlates of hanging topics?
7. References


