

The Absence of Intervention Effects in Amharic: Evidence for a Non-Structural Approach

Underlying much of the research on intervention effects, in which a quantificational or focusing element preceding a *wh*-phrase leads to degradedness, is the assumption that these effects are universal, and should therefore follow from basic properties of the grammar. This paper shows that unlike any other language documented until now, Amharic does not generally exhibit intervention effects. It is nevertheless empirically possible and theoretically preferable to retain the idea that these effects are derivative, rather than to consider their presence vs. absence a parameterized feature. Accordingly, two existing approaches to intervention effects are assessed with respect to their ability to account for the exceptionality of Amharic: a structural, hierarchical analysis, following Beck (2006), and an information structural-prosodic analysis based on Tomioka (2007a,b), whereby the effect is read off the linear string. The latter is claimed to better explain the data and correlate with independent aspects of Amharic, thus providing a general argument in favor of non-structural approaches to intervention effects. This analysis is also extended to alternative questions, in which an intervener preceding a disjunctive phrase removes the alternative question reading, allowing the sentence to be interpreted only as a yes/no question. In the process, many hitherto unknown properties of Amharic syntax, information structure and prosody are brought to light.

Keywords: Amharic, syntax, pragmatics, information structure, prosody, *wh*-questions, alternative questions, intervention effects

1. Introduction

Intervention effects arise when a quantificational or focusing element, labeled the intervener, precedes a *wh*-phrase in a *wh*-question, leading to degradedness¹.

Beginning with Hoji (1985), this phenomenon has garnered a great deal of attention in the theoretical literature, from which we may glean a number of important generalizations².

¹ For structural accounts, such as Beck (2006), the phenomenon is defined in hierarchical terms: when an intervener c-commands a *wh*-phrase, and both are c-commanded by the Q operator in C⁰, the result is ungrammatical, as schematized in (i). The issue of ungrammaticality vs. degradedness will be discussed below.

(i) *[Q_i [... [intervener [... *wh*-phrase_i...]]]] (Beck 2006:5)

² Discussions in the literature include Beck (1996, 2006), Beck and Kim (1997, 2006), Choi (2007), Grohmann (2006), Hagstrom (1998, 2007), Hamlaoui (2007), Hoji (1985), Hwang (2008), Kim (2002, 2005), Ko (2005), Kobele and Torrence (2006), Lipták (2001), Pesetsky (2000), Shields (2008),

First, there exist four primary types of interveners: certain quantificational elements (1), focused phrases (2), negative polarity items (NPIs) (3), and disjunctive NPs (4).

(1) 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)

(2) 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)

(3) 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)

(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?

Simpson and Bhattacharya (2003), Soh (2005), Sohn (1994), Szabolcsi (2006), Takahashi (1990), Tanaka (1997, 2003), Tomioka (2006, 2007a,b, 2008), Zocca (2007), and Zubizarreta (2003).

what-ACC John-or Bill-NOM read-past-Q

'What did John or Bill read?'

(Japanese; Tomioka 2007b:1571)

Second, despite the existence of crosslinguistic variation in the exact elements that give rise to intervention effects (Beck 2006), as well as the strength of the effect associated with different interveners within a given language (i.e., the extent to which the sentences are degraded and the degree of interspeaker agreement regarding judgments; Tomioka 2007a,b), there seems to be a core set of crosslinguistically stable interveners. These interveners, identified by Kim (2002) and Beck (2006) as focusing operators corresponding to English *only*, *even*, and *also*, as well as NPIs (which are focus-sensitive; see also Tomioka 2007b), produce the most robust effects across speakers and languages. Beck (2006) suggests that the effect itself is universal, and thus an explanation for it should be sought in the basic properties of the grammar. Indeed, intervention effects have been documented in a wide range of genetically and typologically distinct languages: Asante Twi, Bangla, Dutch, English, French, German, Hindi-Urdu, Japanese, Korean, Malayalam, Mandarin, Passamaquoddy, Persian, Thai, and Turkish (Kim 2002, Simpson & Bhattacharya 2003, Beck 2006, Kobele & Torrence 2006)³. A final noteworthy observation is that the (b) versions in examples (1)-(4) above are perfectly acceptable, illustrating that the effects are eliminated if the *wh*-phrase is scrambled over the intervener.

Attempts to determine the underlying cause of intervention effects have run the gamut from syntactic (Pesetsky 2000), through semantic (Beck 2006), to information

³ For many of these languages, the examples provided involve only one type of intervener, and in particular an NPI. What to make of this is unclear, since NPIs are known to behave differently from other interveners (see below; Tomioka 2007a,b). More data from a wider range of languages is obviously needed.

structural accounts (Tomioka 2007a,b). An alternative, perhaps more insightful way to classify theories of intervention divides them according to whether they apply to the hierarchical structure (i.e., structural theories) or to the linear string. In the former camp, we can further distinguish between theories which attribute the effect to the *wh*-word (Kim 2005, Beck 2006) vs. those which reduce it to the illicit position of the intervener (e.g., Grohmann 2006), while the latter group of non-structural theories is best represented by Tomioka (2007a,b) (see also Hamlaoui 2007).

This paper compares these two major classes of approaches, structural and non-structural, in light of a range of novel data from Amharic, which contrasts with every other language reported in generally not exhibiting intervention effects. The two types of approaches to intervention are assessed here with respect to their ability to account for the exceptionality of Amharic. Although it is *prima facie* possible to handle the exceptional status of Amharic by simply ascribing the presence or absence of intervention effects to a parameter, such a solution is uninteresting and stipulative. An alternative solution, both empirically possible and theoretically preferable and hence taken up here, is to reduce the status of Amharic to independent properties of the language. By doing so, one can retain the idea that intervention effects are derivative, while acknowledging that the properties which conspire to produce them are subject to crosslinguistic variation.

In order to account for the fact that Amharic does not show intervention effects, the structural approach must appeal to its clausal structure. Specifically, the hypothesis to be explored below is that potential interveners in Amharic, like subjects in general, are positioned above the Q operator in C^0 . In some sense, this hypothesis

looks promising at first: assuming, for example, that intervention effects stem from the binding of a *wh*-phrase by a focus-sensitive operator (i.e., the intervener), instead of the required Q operator in C^0 (Beck 2006), the data is successfully explained. That is, the position of interveners does not preclude the necessary relation between Q and the *wh*-phrase from being established, and hence no intervention effects are found in Amharic. However, beyond general difficulties with structural accounts of this type, outlined in Tomioka (2007a,b) and detailed below, this analysis also leads to predictions which are specific to Amharic and are not confirmed by the data.

In view of these problems, an alternative approach is considered, in which the hierarchical structure does not play a role. According to this theory, proposed by Tomioka (2007a,b), intervention effects are the result of a mismatch between syntactic structure and information structure, the latter construed as in Vallduví (1990, 1995). Thus, *wh*-questions are divided into a focus (the *wh*-phrase) and a ground, with the ground further partitioned into a topic-like link and tail. Interveners, like all non-*wh*-phrases, must occupy the ground, but they cannot do so: their inherent anti-topicality prevents them from serving as links, while their linear position is not that of a tail, due to prosodic considerations. These factors work together to produce the degradedness of intervention configurations described above. If this approach is correct, one expects there to be properties of Amharic prosody and/or information structure which distinguish it from languages which have intervention effects; as demonstrated below, this is indeed the case. All in all, while both the structural and non-structural approach can in principle explain the uniqueness of Amharic, the latter encounters fewer problems and captures a greater range of observations. Accordingly,

it should be the preferred analysis, not only for Amharic but also as a general account of intervention effects.

The structure of the paper is as follows. Section 2 reviews existing analyses of intervention effects, focusing on the theories of Beck (2006) and Tomioka (2007a,b) as representatives of the two principal approaches to the issue. Section 3 then provides the relevant data from Amharic, establishing that the language generally does not show intervention effects. A range of potential interveners is considered, in accordance with the typology outlined above; in addition to various types of *wh*-phrases, alternative questions are also discussed. Section 4 attempts to capture the findings of section 3 under a structural analysis, such as Beck (2006), proposing a clausal structure in which the absence of intervention effects is expected. Although this structure appears to find some support in the data, it also results in incorrect predictions which are addressed in detail, alongside more general problems with the approach it is embedded in. Section 5 explains the Amharic data following Tomioka's (2007a,b) non-structural theory of intervention effects, tying in the absence of the latter to certain characteristics of Amharic information structure and prosody, and also arguing in favor of a non-structural approach to intervention effects in general. Section 6 concludes the paper.

2. Existing analyses of intervention effects

The review of existing analyses here follows a thematic and chronological order: the early literature, to be discussed first, consists solely of structural theories building on or replacing one another as new facts and frameworks were taken into account, while non-structural theories have emerged only very recently, and will thus be described

subsequently.

The first major attempt to account for intervention effects, Beck (1996), focused on the observation that scrambling of a *wh*-phrase above an intervener yields a grammatical result. Given the received view at the time that in-situ *wh*-phrases undergo movement at LF (Huang 1982), the conclusion was that intervention effects reflect constraints on such movement; specifically, intervening quantifiers were claimed to block LF movement, but not overt movement, of an in-situ *wh*-phrase. This approach has since been abandoned, because the basic assumptions underlying it are no longer thought to hold: restrictions on overt movement and LF movement are nowadays believed to be identical (Chomsky 1993, *the Uniformity Condition* of Hornstein, Nunes & Grohmann 2005); moreover, many current theories do not assume that in-situ *wh*-phrases move at all (e.g., Tsai 1994, Reinhart 1998). An additional problem with this analysis, as well as other theories, is that it does not provide a clear definition for the set of interveners⁴.

Pesetsky (2000) links intervention effects to other phenomena in the domain of movement, situating them within a model which assumes three types of movement: overt phrasal movement, covert phrasal movement, and feature movement. Without going into too many details, intervention effects are claimed to indicate feature movement, as opposed to covert phrasal movement. The former separates the restriction on *wh*-quantification from the quantifier, creating an intervention effect when a scope-bearing element appears between the two. A list of the other properties and phenomena associated with feature movement, as well as those related to covert

⁴ See also Beck and Kim (2006) for an argument against movement-based accounts of intervention based on the behavior of alternative questions.

phrasal movement, is provided in table 1 below.

Feature Movement	Covert Phrasal Movement
– Doesn't license Antecedent Contained Deletion (ACD)	– Licenses ACD
– No Superiority effects	– Superiority effects
– Intervention effects	– No intervention effects
– No Subjacency effects ⁵	– Subjacency effects
– Obeys Attract Closest	– Obeys Attract Closest

Table 1: Properties of Feature Movement vs. LF Phrasal Movement (Pesetsky 2000)

Of interest here are the following predictions, based on this theory, regarding a configuration that lacks intervention effects: (i) it licenses *wh*-phrases through covert phrasal movement; (ii) it will exhibit Superiority effects; (iii) it will not allow *wh*-phrases inside islands.

Most of the problems with Pesetsky's theory are common to all structural approaches, and will thus be addressed below. Issues pertaining specifically to this analysis are the use of the notion of covert phrasal movement from the pre-Minimalist era, which may be conceptually problematic, and the lack of an explanation for why interveners block feature movement (cf. Mathieu 2002, Grohmann 2006).

More recent accounts which are purely syntactic include Lipták (2001) and Kim (2005). The former views intervention effects as blocking of feature movement, specifically arguing that various adverbs in Hungarian block movement of the [+wh] feature of a *wh*-phrase to the C^0 probe, and hence prevent the uninterpretable [+wh] feature of C^0 from being checked. However, it is not clear why adverbs like *mindig*

⁵ Although Soh (2005) claims that in Mandarin, feature movement is sensitive to Subjacency while phrasal movement is not, this type of crosslinguistic parameterization seems undesirable (see also Sprouse 2007). I will therefore follow Pesetsky in using the lack of Subjacency effects as a diagnostic for feature movement (see section 4).

'always' block this type of feature movement, given that they do not share relevant features with either the probe or the target. Similarly, Kim (2005) construes intervention effects as Relativized Minimality effects (Rizzi 1990, Chomsky 2001), in which a focus operator with an interpretable focus feature blocks the Agree relation between C^0 and the *wh*-phrase. Again, it is difficult to establish that C^0 , the focus operator and the *wh*-phrase have a feature in common.

Recently, researchers studying intervention effects have recognized the importance of uniquely defining the set of interveners, which was often overlooked in earlier accounts, and have thus taken this issue as their starting point. Beck (2006) is a theory of this sort, in which the semantic content of interveners plays a crucial role, as does their position in the hierarchical structure. She proposes that interveners are the set of operators which can have focus affected readings, i.e., those that have the focus operator \sim in the sense of Rooth (1992). The semantics works as follows. In the general case, when the operator \sim applies to its complement, it resets the focus semantic value of the c-commanding node to its ordinary semantic value, and hence alternatives introduced below the operator cannot be used by operators higher up. *Wh*-phrases introduce alternatives into the computation (i.e., the set of answers to the question; Hamblin 1973), but unlike focused phrases, their ordinary semantic value is undefined. Thus, when \sim applies to a complement containing a *wh*-phrase, the result is undefined, and this undefinedness is inherited by the larger structure. The Q operator ends up with this structure, which has neither a well-defined ordinary semantic value nor a focus value, as its argument, and the entire question is then undefined and uninterpretable. Assuming that uninterpretability is a possible source

of ungrammaticality, the question is also ungrammatical. *Wh*-phrases demand the Q operator for interpretation, which uses the focus semantic value and outputs it as the ordinary semantics of the question.

The clear, crosslinguistically applicable prediction arising from Beck's theory is that "a *wh*-phrase may never have a focus-sensitive operator other than the Q operator as its closest c-commanding potential binder" (Beck 2006:46). As in other structural theories, hierarchical structure is involved here in the form of c-command relations, due to the way in which LF representations are assumed to be organized. Beck incorporates an additional aspect of previous structural theories by suggesting that her account is a translation of Pesetsky's notion of feature movement into semantic terms. Of course, her account could be right even if the predictions of Pesetsky's theory were not confirmed.

Although Beck's proposal is an interesting attempt to tackle intervention from a semantic point of view, the main issue with it is the claim that all interveners give rise to focus affected readings. While this may be trivial for the core set of interveners, *only*, *even*, *also* and NPIs, it is debatable whether it can be extended to other members of this class, such as disjunctive NPs and existential quantifiers (Tomioka 2007b; see also Szabolcsi 2006). A more general critique of structural approaches, applicable to Beck (2006) as well as the other theories described above, is given in Tomioka (2007a,b). He lists four observations which pose a problem for theories of this type: (1) there is a great deal of interspeaker variability in judging intervention configurations; (2) there exist intraspeaker distinctions in the acceptability of configurations involving different interveners: NPIs always lead to the greatest

degree of unacceptability, while other interveners vary in their degradedness; (3) some quantificational NPs do not give rise to intervention effects (e.g., Japanese *subete-/zenbu-no-NP*, Korean *motun-NP* 'all (the) NP'), while Japanese nominative-marked subjects (as opposed to topic-marked subjects) unexpectedly constitute interveners, albeit weaker than others; (4) intervention effects are much weaker when the intervener is an embedded subject and when it is not a subject, at least in Japanese and Korean (as noted also by Choi 2007). All four observations can be satisfactorily explained, Tomioka (2007a,b) argues, under an alternative, non-structural analysis.

According to Tomioka, intervention effects are the result of a mismatch between syntactic structure and information structure. The latter is modeled after Vallduví (1990, 1995), so that the informational articulation of a sentence is divided into two major parts, a focus and a ground, with the ground further partitioned into a topic-like link and tail. The focus constitutes the informative part of the sentence, and the ground is its complement, indicating to the hearer where and how the information contributed by the focus is to be entered into his knowledge store. Within the ground, the link is analogous to the more familiar notion of topic, but restricted to sentence-initial position, and its function is to point to the specific address in the hearer's knowledge store *where* the information must be recorded. Lastly, the tail signals *how* the information carried by the sentence is to be entered under a given address. Unlike the focus and link, which are universally associated with some property (i.e., intonational prominence and sentence-initial position, respectively), the tail is only negatively characterized as the counterpart of the link and as lacking intonational prominence. I illustrate this partition with the English example from Vallduví (1990)

in (5), where [L] delimits the link and [F] the focus; the latter bearing intonational prominence as indicated by the capital letters. In this case, the hearer is instructed to go to the entry 'the boss' and substitute the new information 'hates' for V in the existing record 'The boss V broccoli'.

(5) [L The boss] [F HATES] broccoli. (Vallduví 1990:64)

In the case of *wh*-questions, Tomioka follows the common assumption that the *wh*-phrase constitutes the focus (e.g., Krifka 2001) and the remainder of the sentence is the ground; the information structure of a *wh*-in-situ question is thus as schematized in (6):

(6) [...A... [Wh] ...B...]
 LINK FOCUS TAIL

Given such an information structural articulation, all non-*wh* material must obviously occupy the ground, and this is where the problem with interveners arises. On the one hand, they cannot serve as links, because they are inherently anti-topical; in fact, this is the property which uniquely defines all interveners. Indefinite expressions, for example, are not suitable links because their referents are not familiar to the discourse participants⁶. Moreover, there is morphological evidence for this distinction: the class of interveners cannot be topic-marked in Japanese and Korean, and are hence dubbed 'anti-topic items' (ATIs) by Tomioka (e.g., Korean **amuto-nun* 'anyone-top'), whereas items which appear semantically similar but are compatible with topic marking do not constitute interveners, such as Japanese *subete-no NP-wa*

⁶Although Tomioka (2007b) explains the incompatibility between the link function and each category of interveners separately, using the file card metaphor of Vallduví (1990, 1995), many of them can be subsumed under the class of non-referring expressions. The anti-topical status of the latter is well established in the literature (Reinhart 1981, Lambrecht 1994, a.o.).

'all (the) NP-top'⁷.

On the other hand, there is also incompatibility between interveners and tails, related to the observation that tails must be phonologically reduced. One possible explanation for this incompatibility, advocated by Tomioka, is that material to the left of *wh*-phrases and focused phrases cannot be reduced, at least in Japanese and Korean. However, there are two potential problems with this idea. First, it is not clear whether the claim regarding pre-*wh*-phrase material is extendable to languages beyond the ones Tomioka deals with, Japanese and Korean. A second debatable aspect, which he does not discuss, is the implication that non-interveners occurring to the left of a *wh*-phrase can only be links.

An alternative proposal regarding the incompatibility between interveners and tails reduces it to the prosodic prominence of interveners, which obviously clashes with the requirement that tails be phonologically reduced. This hypothesis is tentatively adopted here, based on the findings from Amharic to be presented below, as well as possible support from French data discussed in Zubizarreta (2003) and Japanese data found in Tomioka (2007a). As shown in (7), a floating quantifier like *tous* 'all' in French gives rise to intervention effects only if emphatically or contrastively focused (indicated by capital letters).

(7) a. Ils ont tous mangé quoi?

 they have all eaten what

 'What have they all eaten?'

⁷ There does not appear to be a one-to-one correspondence, both within a language and crosslinguistically, between the information structural notion of anti-topicality, arguably rooted in semantic properties, and the morphosyntactic exponence of this notion, such as the unavailability of topic marking. It is the latter, i.e., the language-specific encoding, which determines whether or not the expression will constitute an intervener.

b. *Ils ont TOUS mangé quoi?

(Zubizarreta 2003:363)

Assuming that floating quantifiers, like quantifiers in general, cannot be topics (Rizzi 1997), the distinction between (7a) and (7b) is difficult to explain under Tomioka's proposal; that is, *tous* should not be able to precede the *wh*-phrase regardless of its prosodic status. The hypothesis put forward here, however, could accommodate these facts, since it is the prosodic status of the potential intervener, rather than a specific portion of the sentence, which is at issue. The crucial role played by the status of the intervener is also demonstrated in Japanese, where focusing interveners in a post-*wh*-phrase position brings back intervention effects (Tomioka 2007a), as in (8b).

(8) a. NAni-o daremo yom-ana-katta-no?

what-ACC anyone read-NEG-PAST-Q

'What did no one read?'

b. *NAni-o daREMO yom-ana-katta-no?

(Tomioka 2007a:111)

In any case, under both proposals, intervention effects are cancelled by scrambling of the *wh*-phrase above the intervener due to prosodic reasons. Since the portion of the sentence to the right of a focus, including a *wh*-phrase, is phonologically reduced, a tail is acceptable there (cf. (9)). In other words, unlike their unsuitability as links, this problem with interveners can be circumvented.

(9) [[Wh]_i ...Int... t_i ...B...]

FOCUS TAIL →

Having shown that his theory explains the well-known observations regarding intervention effects, such as the existence of a constrained set of potential interveners and the effects of scrambling, Tomioka argues that this framework also resolves the

difficulties for structural accounts noted above. First, the variability between speakers in judging intervention configurations is related to their pragmatic nature. That is, speakers differ in the extent to which they can accommodate pragmatic difficulties caused by less-than-perfect realization of information structure, while a purely semantic or syntactic phenomenon would not be expected to allow this type of flexibility. Second, the robust unacceptability of intervention configurations involving NPIs follows from the existence of phonological restrictions on their licensing, at least in Japanese and Korean. In other words, NPIs not only fail to surface in the ground portion of the sentence, like other interveners, but also violate a phonological locality condition, which states that they must be in the same intermediate phrase (or major phrase) that includes their licenser⁸. Because it is focused, a *wh*-phrase places an intermediate phrase boundary to its left, and hence separates a clause-initial NPI from its licenser in terms of phonological phrasing. The result of noncompliance with this locality condition, in addition to the information structure-syntax misalignment, is stronger intervention effects with NPIs than with other interveners. A third observation that seems mysterious under existing structural accounts, namely, the fact that some quantificational NPs do not cause intervention effects in Japanese and Korean, is predicted by Tomioka's account: these quantificational NPs can be topic marked, indicating that they are not interveners⁹. Although Tomioka's generalization regarding compatibility with topic marking may be language-specific, the data establishes that it is necessary to employ a criterion of

⁸ NPIs are also obviously subject to a syntactic locality condition, requiring clausemate negation for their licensing.

⁹ Readers are referred to Tomioka (2007b) for discussion of the opposite case, i.e., Japanese nominative-marked subjects which surprisingly function as interveners.

this type for anti-topicality, rather than just semantic or pragmatic diagnostics, which may or may not be universal (see fn. 7). The language-specific encoding and semantic/pragmatic properties will often, but not always, overlap. Finally, the improved status of sentences in which the intervener is an embedded subject or a non-subject can also be linked to properties of information structure, and possibly prosody. Although the details remain to be worked out, it appears that such interveners can be backgrounded more easily; for example, while matrix subjects in Japanese will generally be interpreted as focused if not topic-marked, this is not true of non-matrix subjects and non-subjects (Tomioka 2007b). Research on other possible information structural and prosodic contrasts between root and embedded contexts is obviously needed.

While Tomioka's analysis, which appeals to the linear notions of information structure and prosody, leaves a number of issues unresolved, it seems *prima facie* better equipped to deal with the data reported in the literature than analyses which refer exclusively to hierarchical structure. The extent to which it is specific to certain languages or subsets of the data and not applicable elsewhere, a concern expressed by Beck (2006) and Hagstrom (2007), is an empirical question. Novel data from Amharic to be presented below suggests that the analysis is on the right track, and that structural approaches, whatever their particulars, are not.

3. The absence of intervention effects in Amharic

Amharic is an SOV *wh*-in-situ language, belonging to the Ethiopic branch of Semitic.

Unlike any other language documented until now¹⁰, and contra the descriptive generalization suggested in Beck (2006) whereby intervention effects are universal, Amharic does not exhibit degradedness when a quantificational or focusing element precedes a *wh*-phrase, regardless of whether or not the latter is nominal (10), adverbial (11), or a d-linked 'which'-phrase (12)^{11,12}. Note that in the following examples, the (a) versions represent intervention configurations, which are expected to be degraded, while the (b) versions have the *wh*-phrase preceding the potential intervener and hence should be acceptable crosslinguistically. In Amharic the preferred order is in fact (a), on a par with run-of-the-mill *wh*-questions.

- (10) a. haile bəčča mən anäbbäb-ä?^{13,14,15} (only + nominal *wh*-phrase)

¹⁰ It has recently come to my attention that Brazilian Portuguese also does not exhibit intervention effects, at least with negation and quantifiers (Pires & Taylor 2007, Zocca 2007). Whether or not the explanation given here for Amharic extends to Brazilian Portuguese is beyond the scope of this paper; in any case, one would have to first examine all possible interveners.

¹¹ Some languages exhibit distinctions among these categories. In Mandarin, for example, intervention effects do not occur with nominal *wh*-phrases, at least for some speakers, but rather only with 'which'-phrases and *wh*-adverbs (Soh 2005, Beck 2006). In Japanese and Korean, d-linked *wh*-phrases and *why* do not result in the same degradedness as nominal *wh*-phrases (Ko 2005, Tomioka 2006, 2008).

¹² Amharic has an additional, oft-used *wh*-question formation strategy, in which the *wh*-phrase is clefted. This strategy enables one to circumvent the intervention configuration by placing the *wh*-phrase above the potential intervener (ia), but it also allows word order variants which are *prima facie* expected to give rise to intervention effects and yet are perfectly acceptable, as in (ib) and (ic).

- (i) a. mändən näw haile bəčča y-anäbbäb-ä-w?
 what it.is haile only REL-read.PER-3MS-DEF
 b. haile bəčča mändən näw y-anäbbäb-ä-w?
 c. haile bəčča y-anäbbäb-ä-w mändən näw?
 'What is it that only Haile read?'

¹³ The Amharic transcription more or less follows the conventions of the descriptive literature (Leslau 1995, 2000): č', k', p', s' and t' are ejective stops; ñ is the palatal nasal; superscribed w represents labial secondary articulation; ə is a high central vowel and ä is a mid-central vowel.

¹⁴ The following abbreviations are used for the Amharic data: ACC = accusative, ANTC = anticausative, 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.

¹⁵ The fact that the focus particle *bəčča* 'only' is post-nominal and derived from the adverb 'alone' does not seem relevant to the analysis, since these properties are not unique to Amharic. Many of the languages discussed here use post-nominal particles (e.g., Korean in (2)), and their equivalents of 'alone' in its exclusive particle function also give rise to intervention effects (e.g., Japanese; Satoshi Nambu, p.c.). Moreover, even if *bəčča* were somehow unique this would not extend to the entire set of

Haile only what read.PER-3MS

b. mən haile bəčča anäbbäb-ä?

'What did only Haile read?'

(11) a. haile bəčča läməən ya-n mäs'haf anäbbäb-ä? (*only* + adverbial *wh*-phrase)

Haile only why that-ACC book read.PER-3MS

b. läməən haile bəčča ya-n mäs'haf anäbbäb-ä?

'Why did only Haile read that book?'

(12) a. haile bəčča yätəññaw-ən mäs'haf anäbbäb-ä? (*only* + *which*-phrase)

Haile only which-ACC book read.PER-3MS

b. yätəññaw-ən mäs'haf haile bəčča anäbbäb-ä?

'Which book did only Haile read?'

This is true of (almost) all potential interveners, including the core set of *bəčča* 'only', as illustrated in (10)-(12), *dägmo* 'also' in (13)-(14) and *ən^kan* 'even' in (15)-(16), as well as quantificational elements like *hullum* 'everyone' ((17)-(18))¹⁶, and disjunctive NPs ((19)-(20)). Examples of other potential interveners of all types can be found in the appendix.

(13) a. haile dägmo mən/yätəññaw-ən mäs'haf anäbbäb-ä? (*also*)

Haile also what/which-ACC book read.PER-3MS

b. mən/yätəññaw-ən mäs'haf haile dägmo anäbbäb-ä?

'What/which book did Haile also read?'

potential interveners.

¹⁶ Questions with *hullum* 'everyone' allow a single-answer and a pair-list reading, regardless of the position of the *wh*-phrase (unlike German, where an intervening *jeder* 'every(one)' rules out a single-answer reading; Beck 1996).

- (14) a. haile dägmo lämən ya-n mäs'haf anäbbäb-ä? (also)
 Haile also why that-ACC book read.PER-3MS
 b. lämən haile dägmo ya-n mäs'haf anäbbäb-ä?
 'Why did Haile also read that book?'
- (15) a. haile-mm ənkwən mən/yätəññaw-ən mäs'haf anäbbäb-ä? (even)
 Haile-FOC even what/which-ACC book read.PER-3MS
 b. mən/yätəññaw-ən mäs'haf haile-mm ənkwən anäbbäb-ä?
 'What/which book did even Haile read?'
- (16) a. haile-mm ənkwən lämən ya-n mäs'haf anäbbäb-ä? (even)
 Haile-FOC even why that-ACC book read.PER-3MS
 b. lämən haile-mm ənkwən ya-n mäs'haf anäbbäb-ä?
 'Why did even Haile read that book?'
- (17) a. hullumm mən/yätəññaw-ən mäs'haf anäbbäb-u? (bare universal)
 everyone what/which-ACC book read.PER-3MPL
 b. mən/yätəññaw-ən mäs'haf hullumm anäbbäb-u?
 'What/which book did everyone read?'
- (18) a. hullumm lämən ya-n mäs'haf anäbbäb-u? (bare universal)
 everyone why that-ACC book read.PER-3MPL
 b. lämən hullumm ya-n mäs'haf anäbbäb-u?
 'Why did everyone read that book?'
- (19) a. haile wäyæss girma mən/yätəññaw-ən mäs'haf anäbbäb-u? (or)
 Haile or Girma what/which-ACC book read.PER-3MPL

b. mən/yätəññaw-ən mäs'haf haile wäyæss girma anäbbäb-u?

'What/which book did Haile or Girma read?'

(20) a. haile wäyæss girma lämən ya-n mäs'haf anäbbäb-u? (or)

Haile or Girma why that-ACC book read.PER-3MPL

b. lämən haile wäyæss girma ya-n mäs'haf anäbbäb-u?

'Why did Haile or Girma read that book?'

An additional class of intervention effects, which has not been discussed here until now, involves alternative questions. While this case has received much less attention in the literature, it appears to constitute a robust effect similar to its *wh*-question counterparts across many languages (Beck & Kim 2006). Unlike *wh*-questions, however, the result is the absence of an alternative question reading for the sentence, rather than degradedness. Thus, in (21), an intervener like *only* preceding a disjunctive phrase in English leaves the question with only a yes/no interpretation, allowing it to be answered as in (b), but not (a).

(21) Does only John like Mary or Susan?

a. #Mary. [*AltQ]

b. Yes. [✓Yes/NoQ]

Amharic is once again distinct: an intervener before a disjunctive phrase does not rule out the alternative question reading in (22).

(22) haile bəčča šay wäyæss buna t'ät'-a?

Haile only tea or coffee drink.PER-3MS

'Did only Haile drink tea or coffee?'

a. šay. [✓AltQ]

tea

b. awo. [✓Yes/NoQ]

yes

Lastly, there is one class of interveners for which judgments are not as clear as one would hope, namely, NPIs. Some speakers prefer a *wh*-phrase to remain in situ following an NPI ((23a), (24a), (25a)), while others prefer it scrambled above the NPI ((23b), (24b), (25b))¹⁷; in any case, neither version seems to be degraded to the extent that examples involving NPIs from other languages are ((3a), and see section 2). The issue of NPIs will be noted again in section 5, although comprehensive treatment must await future research.

(23) a. mannəmm mən al-anäbbäb-ä-mm?

anyone what NEG-read.PER-3MS-NEG

b. mən mannəmm al-anäbbäb-ä-mm?

'What did no one read?' (NPI + nominal *wh*-phrase)

(24) a. mannəmm lämən ya-n mäs'haf al-anäbbäb-ä-mm?

anyone why that-ACC book NEG-read.PER-3MS-NEG

b. lämən mannəmm ya-n mäs'haf al-anäbbäb-ä-mm?

'Why did no one read that book?' (NPI + adverbial *wh*-phrase)

(25) a. mannəmm yätəññaw-ən mäs'haf al-anäbbäb-ä-mm?

anyone which-ACC book NEG-read.PER-3MS-NEG

b. yätəññaw-ən mäs'haf mannəmm al-anäbbäb-ä-mm?

¹⁷ A third option which speakers often spontaneously produce is the cleft strategy illustrated in fn. 12.

'Which book did no one read?'

(NPI + *which*-phrase)

These observations raise two key questions, the answer to the second dependent on the first: (i) What could explain the exceptionality of Amharic? and (ii) What does the exceptionality of Amharic tell us about the underlying cause(s) of intervention effects? One possibility, which can be quickly dismissed, is that intervention effects are parameterized, and Amharic simply has the negative setting for this parameter. Not only does this idea have no independent empirical support, it also flies in the face of the abundant evidence suggesting that intervention effects derive from something basic in the grammar of natural language. Another option, in line with Beck (2006), is that the semantics of Amharic *wh*-phrases and/or focus is unique. While this proposal is more interesting than the previous one, it is similarly problematic: a theory allowing for crosslinguistic variation in the interpretation of *wh*-phrases or focus operators, contrasting with existing frameworks, should be grounded in more than just the phenomenon it is meant to explain (see also fn. 15).

We are then left with two primary candidates for crosslinguistic variation. First, it is possible that the clausal structure of Amharic differs from that of the other languages described in the literature on intervention effects. Under structural theories, whatever their specifics, if a potential intervener does not actually come between C^0 and the *wh*-phrase in hierarchical terms, intervention effects are predicted to be absent. Consider, for example, Beck's (2006) claim, mentioned in section 2, that "a *wh*-phrase may never have a focus-sensitive operator other than the Q operator as its closest c-commanding potential binder" (p. 46). Accordingly, a hypothesis to be explored in the following section is that in Amharic interveners are above the Q

operator in C^0 , so that the latter is indeed the closest c-commanding potential binder to the *wh*-phrase.

A second possible source of crosslinguistic variation which could explain the presence vs. absence of intervention effects is information structure and prosody, in accordance with Tomioka (2007a,b). Finding the precise locus of this variation is an empirical task, and not an easy one at that, given the dearth of research on crosslinguistic differences in information structure and the almost complete absence of work on information structure and prosody in Amharic. Nevertheless, this possibility will be taken up in section 5.

4. A structural analysis

4.1 Evidence for a structural analysis

As noted in section 3, all structural approaches to intervention, regardless of their details, appeal to the relation between the Q operator in C^0 and the *wh*-phrase; intervention is on this path. Moreover, these relations are viewed in hierarchical, rather than linear, terms. Thus, this section will be devoted to the possibility that interveners in Amharic, like subjects in general, do not occur between the *wh*-phrase and C^0 , but rather above the latter.

Before going into the details of this idea, it is important to rule out another possible syntactic explanation for the lack of intervention effects in Amharic, which is specific to the theory of Pesetsky (2000). Recall that Pesetsky puts forward a three-way classification of movement—overt phrasal movement, covert phrasal movement, and feature movement—and associates each with certain phenomena and properties

(see table 1 in section 2). Crucially, in this system *wh*-phrases licensed through covert phrasal movement do not create intervention effects, because the *wh*-phrase is not c-commanded by the intervener at LF (or, alternatively, because the restriction on the *wh*-phrase is not separated from it, precluding a scope-bearing element from appearing between the two). Although this would account for the Amharic data, it also predicts that the language will exhibit Subjacency effects, contra to fact¹⁸: as (26a) illustrates, *wh*-phrases in situ are acceptable inside islands¹⁹, while (26b) shows that a relative clause is indeed an island for overt movement in Amharic.

- (26) a. haile astämari-w lä-man yä-sät't'-ä-w-ən mäs'haf anäbbäb-ä?
 Haile teacher-DEF to-who REL-give.PER-3MS-DEF-ACC book read.PER-3MS
 b. *lä-man haile astämari-w yä-sät't'-ä-w-ən mäs'haf anäbbäb-ä?
 to-who Haile teacher-DEF REL-give.PER-3MS-DEF-ACC book read.PER-3MS
 'Who is the person x such that Haile read the book that the teacher gave to x?'

Thus, we can conclude that under Pesetsky's (2000) theory, *wh*-phrases in Amharic remain below the intervener at LF²⁰; whether or not this also entails that they are licensed through feature movement, in accordance with Pesetsky, or some other mechanism (e.g., unselective binding; Tsai 1994), is not crucial to the issue at hand.

Returning to the hypothesis that interveners in Amharic occur above C⁰, we can

¹⁸ Covert phrasal movement is correlated with other phenomena in this system, including Superiority effects, which Amharic lacks as well (see below). In any case, the evidence regarding Subjacency is sufficient to exclude this as an explanation.

¹⁹ This is true of relative clause and adjunct islands. I illustrate with a *wh*-nominal and leave the issue of whether *wh*-adverbials pattern differently in islands for future research (for this distinction in Mandarin see Tsai 1994).

²⁰ There is a third type of movement, overt phrasal movement, which would also predict no intervention effects. However, if Amharic *wh*-phrases overtly raised, despite appearances to the contrary (see Simpson and Bhattacharya (2003) for such a proposal for Bangla), constituents preceding the *wh*-phrase would have to be higher than SpecCP. Thus, the implications of this idea parallel those of the hypothesis that interveners are above C⁰ and need not be discussed separately.

now consider the evidence available to support it. There does not seem to be any morphological data pointing one way or the other: elements arguably marking the position of C^0 , like complementizers and question particles, do not occur in simple *wh*-questions. Moreover, even if these did surface, they would not help, since Amharic is a head-final language with specifiers to the left. Thus, elements in C^0 will typically surface at the right edge of the clause, while interveners and subjects in general end up at the left edge. As for possible syntactic evidence, which is necessarily more indirect, there are four observations that warrant examination.

The first relevant observation is that Amharic is a null subject language with obligatory, rich subject agreement, marked for person, number and gender. (27) shows that the subject need not be overtly expressed, while (28) establishes that subject agreement is necessary.

(27) sak'-äčč.

laugh.PER-3FS

'She laughed.'

(28) aster doro-wa-n arräd-*(äčč).

Esther hen-DEF-ACC butcher.PER-3FS

'Esther butchered the hen.'

Following Alexiadou and Anagnostopoulou (1998), among others, one could assume that agreement is pronominal in null subject languages. It would therefore occupy SpecIP, and overt subjects would have to be dislocated in a higher position in the C domain. This type of correlation between agreement and dislocation has been argued for in a wide variety of languages (see Baker 2003 for recent discussion), raising

numerous questions; for example, are the agreement markers indeed arguments or do they simply license null *pro* arguments in A-positions, and is the dislocated NP base-generated in its surface position or does it arrive there by movement. Discussion of these matters is beyond the scope of this paper, but one issue to be addressed below is the precise position of subjects under this hypothesis; i.e., SpecCP, adjoined to CP, or perhaps in a higher C domain specifier (e.g., SpecTopP). Various problems with the idea of dislocated subjects as it applies to Amharic will also be noted below, in the context of a general assessment of the structural analysis.

A second potential piece of evidence for the hypothesis that interveners in Amharic are above C^0 comes from adverb placement: sentential adverbs may follow the subject in Amharic, as in (29) and (30). While the order in (29) is also possible in English (*The police, fortunately, caught the thief*), in (30) 'mənələbatə' *probably* is able to take sentential scope from its position following the subject, which seems to be impossible in the English equivalent (??*No one probably read the book*).

(29) polis-u dāggənnātu leba-w-ən yaz-ä.

police-DEF fortunately thief-DEF-ACC catch.PER-3MS

'Fortunately, the police caught the thief.'

(30) mannəmm mənələbatə mäs'haf-u-n al-anäbbäb-ä-mm.

anyone probably book-DEF-ACC NEG-read.PER-3MS-NEG

'Probably, no one read the book.'

Assuming that this class of adverbs is adjoined to IP (e.g., Jonas & Bobaljik 1993), we can infer that the subject is positioned higher up. Unfortunately, the behavior of other types of adverbs does not allow such a straightforward conclusion. Although

manner adverbs in Amharic can appear between the subject and verb (31) or object (32), in order for this to bear on the position of the subject, one has to adopt a set of debatable assumptions, namely, that Amharic has V-to-I movement, and that adverbs cannot adjoin to the X' level (Alexiadou & Anagnostopoulou 1998). The former assumption seems to have no support beyond arguments for a general correlation between V-to-I movement and null subject languages (Alexiadou & Anagnostopoulou 1998) or rich subject-verb agreement languages (Platzack 2003), while the latter has been disputed (e.g., Chomsky 1995).

(31) aster tolo čäffär-äčč.

Esther quickly dance.PER-3FS

'Esther danced quickly.'

(32) aster bät'ənək'uk'ə bär käffät-äčč.

Esther carefully door open.PER-3FS

'Esther carefully opened a door.'

A third observation bearing on the hypothesis comes from an Amharic construction which seems to displace elements in the C domain, but nonetheless allows them to remain below the subject. Displacement could be "hidden" in this way if subjects, including potential interveners, are above the position of the displaced element; i.e., higher in the C domain (see Uribe-Etxebarria 2002 and Simpson and Bhattacharya 2003 for other cases of putative "masked" movement). Although this string-vacuous clitic-left-dislocation (CLLD) differs from other left dislocation phenomena in not requiring a phrase in the clause-initial position (van Riemsdijk

1997; cf. (33))²¹, it shares interpretive and syntactic properties with them, in particular CLLD in Arabic (see Aoun and Benmamoun 1998, Alexopoulou, Doron and Heycock 2004). Some of these properties of Amharic CLLD will be considered in turn, as will an apparent word order reflex it exhibits.

(33) <naadya> šeeḥ-a <*naadya> kariim <*naadya> mbeeriṣ.²²

Nadia saw.3MS-her Nadia Karim Nadia yesterday

'Nadia, Karim saw her yesterday.' (Lebanese Arabic)

Consider (34a), which is a standard declarative sentence in Amharic with a transitive verb, compared to (34b), illustrating CLLD: the resumptive element *-w*, labeled an object marker in the Amharic literature, is suffixed to the verb and refers to the object *anbäsawən* 'the lion (accusative)', the latter putatively positioned in the left periphery despite its occurrence below the subject²³.

(34) a. yonas anbäsa-w-ən gäddäl-ä.

Jonas lion-DEF-ACC kill.PER-3MS

'Jonas killed the lion.'

b. yonas anbäsa-w-ən gäddäl-ä-w.

Jonas lion-DEF-ACC kill.PER-3MS-**3MS_o**

'Jonas killed the lion.' (Demeke 2003b:66)

Object marking (OM) as in (34b) is restricted in a way that is expected if the NP

²¹ This difference is not related to the SOV word order of Amharic, which distinguishes it from many languages which possess CLLD, including other Semitic languages: in other SOV languages, such as Hindi (Pritha Chandra, p.c.), left-dislocated phrases must also appear clause-initially.

²² I thank Lina Choueiri for providing the Lebanese Arabic judgments.

²³ I remain agnostic about the actual mechanism involved in this displacement, that is, base generation or movement.

referred to is a topic, and hence arguably in the C domain, the component of the clause structure which licenses discourse dependencies²⁴. First, nonreferential pronouns and *wh*-words are incompatible with OM, as shown in (35) and (37), respectively; (36) and (38) provide the corresponding data from CLLD in Lebanese Arabic. The ungrammaticality of (35) with OM derives from the fact that referentiality is an obligatory property of topics (Reinhart 1981, Lambrecht 1994, a.o.), while in (37) a *wh*-phrase, being inherently focused, cannot also serve as a topic (Bresnan & Mchombo 1987, Polinsky & Potsdam 2001)²⁵.

(35) aster and nəgər ayy-äčč-(*əw).

Esther a thing see.PER-3FS-3MS_O

'Esther saw something.' (Amberber 1996:139)

(36) *waahed šeft-o mbeerīŋ.

someone see.PER.1MS-3MS_O yesterday

'Someone, I saw him yesterday.' (Lebanese Arabic)

(37) aster mən ayy-äčč-(*əw)?

Esther what see.PER-3FS-3MS_O

'What did Esther see?' (Amberber 1996:139)

(38) *šu štriit-o mbeerīŋ?

what buy.PER.2MS-3MS_O yesterday

²⁴ OM seems to primarily be a cataphoric device, correlated with the recurrence of the marked object in subsequent sentences (Haile 1970, Hetzron 1971, Gasser 1983). This is a typical property of topics in the sense of Givón (2001). It is sometimes also said that OM is used to mark "emphasis" and/or is a marker of contrastive focus (Demeke 2003b, Yabe 2003), but this claim is difficult to assess, since no independent evidence is provided.

²⁵ This generalization is often cited in the literature, but may require refinement given the claim that in various cases *wh*-phrases can be topicalized (see below; Wu 1999, Jaeger 2004, Grohmann 2006).

'What did you buy yesterday?'

(Lebanese Arabic)

Second, the forms used as reflexive pronouns can only have their nonreflexive interpretation if referred to by OM, so that in (39b) *rasun* is understood as meaning 'his head' rather than the reflexive 'himself'. Reflexive pronouns are not possible topics due to their nonreferentiality (Polinsky & Potsdam 2001, following Reinhart 1981, Lambrecht 1994, a.o.).

(39) 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-3MS_O

'Haile saw his head/*himself.'

Beyond its interpretative properties and related distributional characteristics, which suggest displacement in the C domain, OM has a reflex in linear order. This is not observed with respect to the subject, as illustrated above, but rather is evident when OM resumes a phrase base-generated below an object; since the latter is not in the high left periphery, it does not hide displacement which places phrases in a higher position. Thus, (40a) is an example of a simple transitive verb with a direct object and PP adjunct, while in (40b) the prepositional suffix *-bb-*²⁶ and OM *-ät* referring to the PP have been added to the verb. Crucially, the PP must then precede the direct object. (40c) illustrates the same point with a slightly different structure, in which the PP

²⁶ The prepositional suffixes *-ll-* and *-bb-* are derived from the prepositions *lä-* and *bä-*, respectively, and carry a range of meanings similar to the latter two forms (Leslau 1995).

surfaces without a preposition, and instead takes the accusative/topic marker *-ən*²⁷.

- (40) a. aster bet-u-n bā-māt'rāgiya-w t'ārräg-äčč.

Esther house-DEF-ACC with-broom-DEF clean.PER-3FS

'Esther cleaned the house with the broom.'
(Yabe 2007:80)

- b. aster <bā-māt'rāgiya-w> bet-u-n <^{??}bā-māt'rāgiya-w>

Esther with-broom-DEF house-DEF-ACC with-broom-DEF

t'ārräg-äčč-əbb-ät.²⁸

clean.PER-3FS-P-3MS_O

'Esther cleaned the house with the broom.'

- c. aster <māt'rāgiya-w-ən> bet-u-n <*māt'rāgiya-w-ən>

Esther broom-DEF-ACC/TOP house-DEF-ACC broom-DEF-ACC/TOP

t'ārräg-äčč-əbb-ät.²⁹

clean.PER-3FS-P-3MS_O

'Esther cleaned the house with the broom.'
(Yabe 2007:82)

Note that the question of whether or not (40a) is the base-generated order is not essential for the issue at hand. If it is, (40b-c) indicate that the PP adjunct necessarily takes a higher position than the direct object only when it is resumed through OM, that is, having undergone CLLD. If (40a) is not the base-generated order, but rather PP-direct object is, (40b-c) show that the direct object cannot be higher than the PP

²⁷ It is not clear which of its two functions the suffix *-ən* fulfills here.

²⁸ Yabe (2007) says that leaving the PP adjunct in the lower position is dispreferred only by some speakers, while Haile (1970) claims that it is ungrammatical. I have found some interspeaker variation in such cases.

²⁹ Pace Yabe (2007), (40c) is not an applicative construction: the alleged applied argument does not exhibit the hallmark properties of argumenthood found crosslinguistically with applicatives, such as allowing passivization or *wh*-questions (Baker 1988, Peterson 2007).

adjunct solely when the latter is referred to by OM, arguably because CLLD positions phrases in the high left periphery, whereas scrambling as in (40a) does not³⁰.

Considering (40a) from another perspective provides further demonstration that subjects are high in the C domain. (41) is a variant of this sentence with scrambling of the PP adjunct (or vice versa; see above), establishing that scrambling can displace elements locally. However, as shown in (42), scrambling does not enable phrases to precede the subject, conceivably because it is limited to adjunction to IP, VP or AP, on a par with German, Japanese, etc. (Grewendorf & Sternefeld 1990, Müller & Sternefeld 1993), while CLLD derives this order, because it is associated with the C domain. If the subject remained within IP, it is not clear what would preclude another phrase from scrambling over it.

(41) aster bā-māt'rāgiya-w bet-u-n t'ärräg-äčč.

Esther with-broom-DEF house-DEF-ACC clean.PER-3FS

'Esther cleaned the house with the broom.'

(42) wəšša-w-ən_i aster t_i mätt-äčč-*(əw).³¹

dog-DEF-ACC Esther hit.PER-3FS-3MS_O

'Esther hit the dog.'

(Amberber 1996:138)

To summarize, Amharic possesses a construction which resembles clitic-left-dislocation in other Semitic languages: a phrase is resumed in the verb, and

³⁰ I use the term "scrambling" to refer to a process that derives non-canonical word order without a resumptive element. The properties of this process in Amharic and its affinity to scrambling in other languages are beyond the scope of this paper.

³¹ There is some interspeaker variation in the acceptability of (42) without OM, perhaps suggesting that some speakers allow scrambling to target CP-adjoined positions. I leave this issue for future research.

consequently takes on topic-like functions typically associated with the high left periphery. Unlike other languages, however, Amharic does not require the phrase which has putatively undergone CLLD to appear clause-initially. The hypothesis that subjects are also displaced in the C domain easily captures this peculiarity; the CLLDed phrase could then surface to the left or to the right of the subject, depending on its precise position within the C domain. The data from CLLD is also relevant for the aforementioned question of where exactly the subject is located. The existence of CLLD, allowing non-subjects to occupy the left periphery in addition to subjects, and the fact that CLLDed phrases can be to the left or right of the subject show that multiple positions are available³². Furthermore, no difference in interpretation between these positions is discernable, to the best of my knowledge. If multiple specifiers are not possible, the simplest hypothesis is that subjects are adjoined to CP, and do not occupy SpecCP; CLLDed phrases could then also adjoin to CP, either above or below the subject^{33,34}.

Before wrapping up this section, it is necessary to address a fourth and final set of data, which is predicted under the account presented thus far and hence serves to reinforce it. If lexical subjects in declarative sentences occupy a CP-adjoined position in Amharic, there is no a priori reason other types of elements could not also be

³² Evidence for several positions in the C domain is also provided by multiple *wh*-questions, to be discussed below.

³³ In principle, one could also follow a cartographic model (Rizzi 1997) and argue that subjects and CLLDed phrases are in the specifiers of iterated topic projections.

³⁴ Possible further support for the claim that subjects are not in SpecCP comes from sentences involving *lämən* 'why'. If Ko (2005) is correct in stating that *wh*-in-situ languages generate *why* in SpecCP, the canonical order exemplified in (i) indicates that the subject, as well as the CLLDed object, are higher than SpecCP. Of course, this is also evidence, albeit fragile, for the left peripheral position of subjects and CLLDed objects.

(i) *astämari-w tāmari-w-ən lämən wäk'k'äs-ä-w?*
 teacher-DEF student-DEF-ACC why reprimand.PER-3MS-3MS_o
 'Why did the teacher reprimand the student?'

(Leslau 2000:153)

placed in such a position. Furthermore, Amharic clausal structure should allow multiple elements of this type, given the recursive nature of adjunction. This appears to be what we find in multiple *wh*-questions. Although Amharic is a *wh*-in-situ language, displacement of *wh*-phrases is visible when more than one such phrase is involved. Crucially, this displacement does not obey Superiority: (43) shows the assumed underlying order of a question with three *wh*-phrases, and (44)-(46) illustrate three possible permutations of this order, where *mäče* 'when' has raised above *man* 'who', and *mən* 'what' remains in place (44), surfaces above *man* 'who' (45), or appears clause-initially (46). All these permutations are violations of Superiority, since it is not the closest *wh*-phrase that is attracted³⁵.

(43) *man mäče mən gäzz-a?*

who when what buy.PER-3MS

'When did who buy what?'

(44) a. *mäče_i man t_i mən gäzz-a?*

when who what buy.PER-3MS

'When did who buy what?'

b. *tənant Kassa mäs'haf gäzz-a.*

yesterday Kassa book buy.PER-3MS

'Yesterday Kassa bought a book.' (Demeke 2003a, in Aboh 2007:304)

(45) a. *mäče_i mən_j man t_i t_j gäzz-a?*

when what who buy.PER-3MS

³⁵ I consider Superiority effects to be a violation of Attract Closest (Chomsky 1995), although nothing in the analysis hinges on this.

'When did who buy what?'

b. *tənant məs'haf Kassa gāzz-a.*

yesterday book Kassa buy.PER-3MS

'Yesterday Kassa bought a book.' (Demeke 2003a, in Aboh 2007:304)

(46) a. *mən_j māčē_i man t_i t_j gāzz-a?*

what when who buy.PER-3MS

'When did who buy what?'

b. *məs'haf tənant Kassa gāzz-a.*

book yesterday Kassa buy.PER-3MS

'Yesterday Kassa bought a book.' (Demeke 2003a, in Aboh 2007:304)

The fact that all these Superiority-violating examples are perfectly grammatical in Amharic indicates that displacement of the *wh*-phrases is motivated by something other than checking the [+*wh*] feature of C⁰; i.e., focus movement (Bošković 2002) or *wh*-topicalization (Wu 1999, Jaeger 2004, Grohmann 2006)³⁶, both of which are known to disregard Superiority. Moreover, given that (44)-(46) allow single-answer readings and not just pair-list interpretations, as illustrated above, we can conclude that, as in (43), none of the *wh*-phrases occupy SpecCP (Bošković 2002). Rather, *wh*-phrases apparently occupy the same CP-adjoined positions targeted by lexical NPs in declaratives.

On the whole, we have amassed a reasonable amount of data and observations to

³⁶ According to Demeke (2003a), the leftmost *wh*-phrase in Amharic multiple questions is the most "prominent". While for Aboh (2007) this implies that it is a focused *wh*-phrase, topicalized *wh*-phrases are also known to indicate what a question primarily requests information about (Jaeger 2004). Determining which of the two possibilities is correct goes beyond the scope of this paper.

back up the hypothesis that subjects in Amharic, and potential interveners among them, are adjoined to CP. Findings from subject agreement, adverb placement, string-vacuous CLLD and multiple *wh*-questions suggest that interveners do not occupy a position between the *wh*-phrase and the Q operator in C^0 , but rather are above the latter, enabling the necessary relation between Q and the *wh*-phrase to be established and hence precluding intervention effects. If this hypothesis is correct, one could in principle maintain a structural approach to intervention, and in particular Pesetsky's (2000) framework of movement types and their correlates, as well as Beck's (2006) basic ideas regarding the defining property of interveners, the underlying cause responsible for intervention effects, and the relevance of hierarchical structure for the phenomenon at hand. However, the story does not end here. Beyond a variety of reservations regarding these findings, some of which were noted above in passing, and general problems with structural approaches, outlined in section 2, the structural analysis does not successfully explain the entire range of data, and it derives a number of predictions which are not confirmed by the data. I turn to these problems next.

4.2 Problems with a structural analysis

Although the structural explanation for the absence of intervention effects in Amharic, appealing to the hierarchical position of interveners, handles the findings presented thus far, it raises two issues. First, there is the question of whether the available data indeed constitutes clear-cut, unambiguous evidence in support of the analysis. Second, there are particular observations that seem incompatible with a

structural analysis, and certain incorrect predictions it derives when extended beyond the simple examples provided above, both in terms of when intervention effects are expected and the general clausal structure that it assumes for Amharic. In the end, the conclusion will be that matrix subjects can, but need not, be above C^0 , and that in any case the position of the subject is not related to the presence or absence of intervention effects.

Regarding the data presented in the previous subsection, a range of doubts and objections could be brought up, only some of which will be noted here. In general, dislocated subjects across different languages tend to correlate with properties which are characteristic of the C domain. We thus find that nonreferential subjects in these languages have a very restricted distribution, as expected given the incompatibility between nonreferential NPs and the C domain (Baker 2003)³⁷. It is also common to discover interpretational or binding corollaries of subject dislocation; for example, that dislocated subjects cannot be bound, since they are not in A-positions (Alexiadou & Anagnostopoulou 1998). Furthermore, many of these findings are based on a comparison between non-dislocated and dislocated subjects, each associated with a variety of characteristics allowing for classification (e.g., preverbal vs. postverbal subjects in the Romance languages; Alexiadou & Anagnostopoulou 1998). Unfortunately, while Amharic seems to possess both types of subjects, it does not exhibit most of the abovementioned corollaries of dislocation observed in other languages. In addition to this paucity of data, some of the existing data constitutes rather weak evidence for the position of subjects in Amharic, relying on theory-

³⁷ If agreement in such cases is pronominal, this and other findings could derive from incompatibility between nonreferential NPs and resumption (e.g., Aoun and Benmamoun 1998).

specific assumptions and hence amenable to alternative explanations. For example, the findings from adverb placement were limited to sentential adverbs, and depend on the assumption that the latter are not being used parenthetically.

Even if these issues were to be overcome, however, the structural analysis would still face a range of data, which it is hard-pressed, if not unable, to explain. First, consider (47)-(48), in which a potential intervener is a non-matrix subject and a non-subject, respectively; neither exhibits the degradedness of an intervention effect.

(47) girma haile bəčča mən ənd-anəbbäb-ä y-asəb-all?

Girma Haile only what that-read.PER-3MS 3MS-think.IMP-AUX.3MS

'What does Girma think that only Haile read?'

(48) girma lä-haile bəčča mən sät't'-ä?

Girma to-Haile only what give.PER-3MS

'What did Girma give only to Haile?'

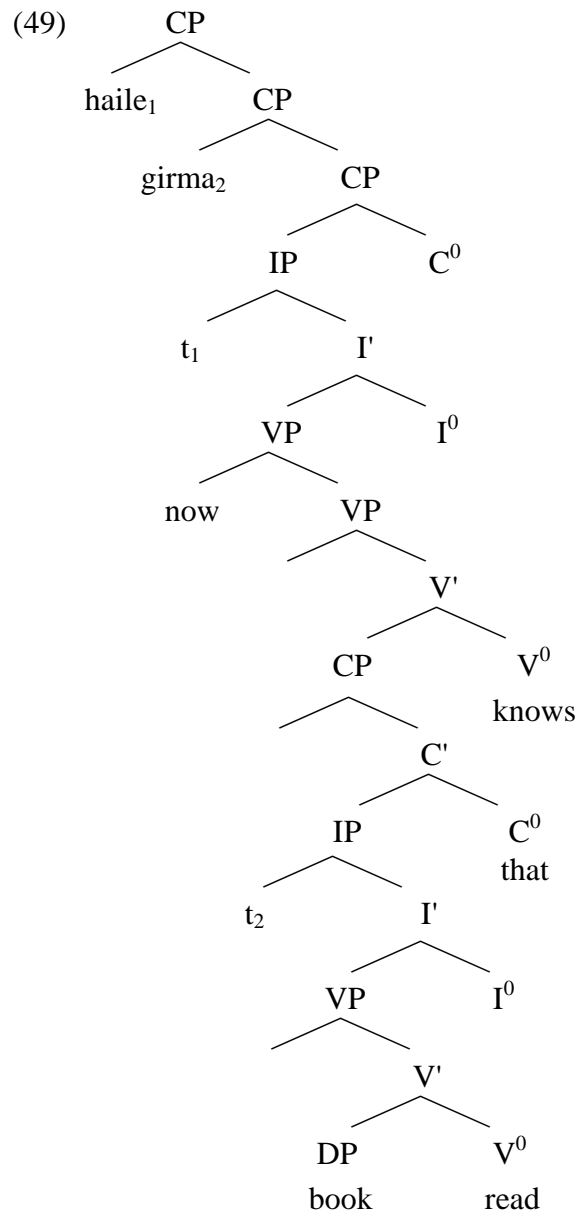
To explain these facts within the structural approach, one could maintain that in such cases both the matrix subject and the potential intervener are adjoined to the matrix CP, so that neither interferes with the relation between C^0 and the *wh*-phrase.

However, by doing so, one muddles the putative relation between verbal marking, whether subject agreement or object marking, and displacement in the C domain, and it becomes difficult to identify what is in the left periphery and what is not.

Moreover, the well-known correlation between subjecthood and topichood (e.g., Chafe 1976) renders the C domain position of the matrix subject in Amharic plausible, while the same cannot be said of embedded subjects and non-subjects.

Finally, the idea that embedded subjects surface so high in the clause leads to the

prediction, schematized in (49), that they could precede adverbs associated with the matrix clause. This prediction fails, as shown in (50).



- (50) <ahun> haile <ahun> girma <*>ahun> tənant mäs'haf-u-n
 now Haile now Girma now yesterday book-DEF-ACC
 ənd-anəbbäb-ä <ahun> y-awk'-all.³⁸

³⁸ Barring displacement of the entire embedded clause, the fact that the matrix adverb can immediately

that-read.PER-3MS now 3MS-know.IMP-AUX.3MS

'Haile now knows that Girma read the book yesterday.'

A second prediction of the structural analysis relates to the finding that non-subjects do not cause intervention effects. While this by itself is difficult to reconcile with the analysis, there is a subset of cases which are even more problematic; namely, when the non-subject cannot take object marking and hence intervention effects are explicitly expected. If an NP is incompatible with object marking, it is assumed that it cannot undergo clitic-left-dislocation, and therefore remains in its low base-generated position, below C^0 . Such NPs nevertheless do not cause intervention effects, as shown below.

(51) girma lä-haile bəčča mən sät't'-ä-w?

Girma to-Haile only what give.PER-3MS-3MS_o

'What did Girma give only to Haile?'

(52) girma lä-ras-u bəčča mən sät't'-ä-(*w)?

Girma to-himself only what give.PER-3MS-3MS_o

'What did Girma give only to himself?'

(51) is identical to (48) above but for the addition of object marking referring to the indirect object *lä-haile* 'to Haile', which is perfectly acceptable. In (52) this indirect object has been replaced by a reflexive and the result is still grammatical, despite the fact that the reflexive is incompatible with object marking (at least under its reflexive interpretation; see above). The upshot is that the connection between object marking

precede the matrix verb seems to indicate that it can right-adjoin to VP, and that the verb raises to I^0 , thus surfacing to the right of the adverb. In any case, this does not bear on the position of the embedded subject.

and displacement in the C domain becomes unclear, undermining the case for dislocated subjects.

At this point, alert readers may wonder whether cases in which the potential intervener is an embedded subject or a non-subject are indeed as damaging to the structural analysis as they seem. Specifically, recall that among the problems for structural approaches listed by Tomioka (2007a,b) is the observation that intervention effects in Japanese and Korean are significantly ameliorated when the intervener is an embedded subject or a non-subject. The findings from Amharic could then be part of a general, crosslinguistic pattern, rather than something as exceptional as the behavior of matrix subject interveners in the language. However, even if this pattern were proven to exist, which would require a much larger sample of languages, structural approaches would still need to explain it, and it is unclear how they would do so.

A third problematic data point for the structural analysis of intervention in Amharic laid out in the previous subsection is an interpretational distinction between subjects, which seems to be associated with specific structural positions. Modifying the analysis to accommodate this data produces an undesirable result: one relinquishes the structural explanation for the absence of intervention effects.

Returning to the basic example of a *wh*-question with a potential intervener, as in (53), we find that it actually has two possible readings, only one of which was noted in section 3³⁹.

³⁹ The same two readings are not linked to a particular clause type, and are hence also available in alternative questions (see below for declaratives):

(i) haile bəčča šay wäyæss buna t'ät'-a?

Haile only tea or coffee drink.PER-3MS

a. 'Did only Haile drink tea or coffee?'

b. 'Only speaking of Haile, did he drink tea or coffee?'

(53) haile bæčča mən anäbbäb-ä? (=10a)

Haile only what read.PER-3MS

a. 'What did only Haile read?'

b. 'Only speaking of Haile, what did he read?'⁴⁰

The (a) interpretation, mentioned above, is the same as in the corresponding English sentence, while in (b), which is missing from the English sentence, the speaker indicates that the question *What did he read?* refers exclusively to Haile.

To illustrate the distinction between the two readings more clearly, consider the context in (54): the question-answer pair in (55) is compatible with the (a) reading of the question, but not (b), while that in (56) is compatible with the reading in (b) and not with (a).

(54) Context: There are four students in the class. All four have read "The Neverending Story" and "Harry Potter and the Philosopher's Stone", but only Haile has read "The Hobbit".

(55) Q: haile bæčča mən anäbbäb-ä?

A: "The Hobbit".

(56) Q: haile bæčča mən anäbbäb-ä?

A: "The Neverending Story", "Harry Potter and the Philosopher's Stone", "The Hobbit".

Comparable readings can be found in simple declaratives like (57), where under the (b) reading the speaker asserts the proposition *He read that book* only with respect to

⁴⁰ The translation "speaking of" is intended to differentiate this interpretation from that of a contrastive, "as for" topic (see below).

Haile. Put differently, the speaker conveys that the asserted proposition is the only proposition he makes with respect to the question under discussion; in (57b) this means that the speaker makes an assertion only about Haile with respect to the question under discussion *Who read that book?* and he asserts that Haile read that book.

(57) haile bəčča ya-n mäs'haf anäbbäb-ä.

Haile only that-ACC book read.PER-3MS

a. 'Only Haile read that book.'

b. 'Only speaking of Haile, he read that book.'

As expected, the sentence in (57) is compatible with a context in which each book was read by more than one person. The critical datum against the structural analysis of intervention is given in (58): the (b) reading of the question is lost when the *wh*-phrase precedes the subject, rendering the reply below infelicitous given the context in (54) (cf. (56)).

(58) Q: mən haile bəčča anäbbäb-ä? (=10b)

what Haile only read.PER-3MS

'What did only Haile read?'

A: # "The Neverending Story", "Harry Potter and the Philosopher's Stone", "The Hobbit".

The finding in (58) shows that the "speaking of" interpretation is necessarily connected to a high left peripheral position. In attempting to explain why the subject in (58) is not, and cannot, be in this position, the structural analysis encounters a problem: since it claims that subjects are universally displaced in the left periphery,

and that *wh*-phrases can also freely adjoin to CP, what is to distinguish the subject in (58), when it follows the *wh*-phrase, from that in (53), when it is clause-initial? In order to handle this data, it seems necessary to adopt a different set of assumptions. The *wh*-phrase in (58) must be adjoined to IP, rather than CP⁴¹, and therefore the subject is in SpecIP, which is also the canonical position of subjects in Amharic. Furthermore, when the subject is clause-initial, as in (53), this actually hides two possible hierarchical positions: one is the canonical SpecIP position, not associated with any peculiar interpretation, and the other is a higher, CP-adjoined position, where the "speaking of" interpretation is derived. I tentatively suggest that the latter represents a type of hanging topic left dislocation, which is a base-generated dependency between a topic and a pronominal element (cf. Grohmann 2000, a.o.). Accordingly, a subject in this position can be linked to an element inside an island; in addition, there is an intonational break following the subject, as often characterizes IP-external material crosslinguistically. Both properties are demonstrated in (59).

- (59) haile # girma yä-s'af-ä-w-ən mäs'haf näw y-anäbbäb-ä-w.
 Haile Girma REL-write.PER-3MS-DEF-ACC book is REL-read.PER-3MS-DEF
 'Speaking of Haile, the book that Girma wrote is the one he read.'

Returning to the list of properties which were claimed to show that subjects are in the C domain, these are attributable to the possibility of subjects being hanging topics. For instance, subject agreement can, but does not have to be, pronominal, a conclusion also reached by Sheehan (2006) regarding Romance null subject

⁴¹ This would fit in with the hypothesis that the *wh*-phrase has been scrambled to its clause-initial position, given the earlier assumption that an IP-adjoined position is the highest possible target for scrambling in Amharic. However, it also causes problems in explaining (42), where the clause-initial position should be available for a scrambled object if the subject is simply in SpecIP.

languages, pace Alexiadou and Anagnostopoulou (1998). In addition, the left peripheral position of a hanging topic is predictably restricted to matrix subjects, so that the problems related to embedded subjects are avoided. The most important by-product of the revised clausal structure, however, is the conclusion that the position of the subject is orthogonal to the presence or absence of intervention effects. As shown in (53), repeated here as (60), intervention effects are not observed in Amharic regardless of whether the subject is in the position of a hanging topic above C^0 , and thus associated with a "speaking of" interpretation, or in the lower SpecIP position.

(60) haile bəčča mən anäbbäb-ä?

Haile only what read.PER-3MS

a. 'What did only Haile read?'

b. 'Only speaking of Haile, what did he read?'

The attempt to implement a structural analysis, whereby Amharic evades intervention effects because it places subjects, including interveners, above C^0 seems to have ended in failure. While numerous findings regarding Amharic clausal structure may be retained and further examined in future work, they do not provide a satisfactory explanation for the absence of intervention effects. Non-structural factors must be considered, and these are the topic of the next section.

5. A non-structural approach

The absence of intervention effects in Amharic is a challenge for all existing approaches to the phenomenon, since they are generally believed to reflect basic properties of the grammar. Maintaining the latter idea, this section is devoted to an

alternative take on intervention effects, proposed in Tomioka (2007a,b), in which information structure and prosody are the crucial components, and the effects are accordingly read off the linear string. I begin by recapping the basic features of the theory, which were described in section 2, and then apply it to the Amharic data introduced in section 3. If Tomioka's proposal is correct, we expect that characteristics of information structure and/or prosody in Amharic would distinguish it from languages which exhibit intervention effects; indeed, this is exactly what we find. Following presentation of these characteristics, Tomioka's theory is extended to alternative questions, which have not yet been addressed in this framework, but follow from it rather straightforwardly. The outcome is not only a general argument in favor of non-structural approaches to intervention and against structural ones, but also a case for more judicious consideration of other phenomena which seem at first glance to be structural in nature.

Recall that in the informational partition of *wh*-questions Tomioka adopts, the *wh*-phrase is the focus and the rest of the question is the ground. Intervention effects then come about because this information structure has difficulty accommodating a certain class of elements, namely, interveners. Intervenors cannot serve as links since they are intrinsically anti-topical, and they cannot be (part of) the tail because of phonological reasons. According to Tomioka, the phonological cause is the inability to reduce material to the left of *wh*-phrases and focused phrases in Japanese and Korean, which clashes with the requirement that tails lack intonational prominence. A slightly different position, which I suggested in section 2, views this as a clash between the intonational prominence of interveners and the aforementioned

constraint on tails. Regardless of this detail, intervention effects are not observed when the *wh*-phrase scrambles above the intervener because the latter ends up in the phonologically reduced part of the sentence to the right of the focus, which serves as the tail.

Tomioka's account has a number of advantages over structural approaches, as described in section 2; it not only covers the data which all analyses attempt to handle, but also explains a number of additional observations which have generally gone unnoticed. As for its applicability to languages other than Japanese and Korean, I now proceed to show that certain properties of Amharic prosody and information structure line up as predicted by the theory, yielding the absence of intervention effects in the language. These findings serve to further undermine structural approaches, and they refute suggestions by Beck (2006) and Hagstrom (2007) that the theory is overly language-specific.

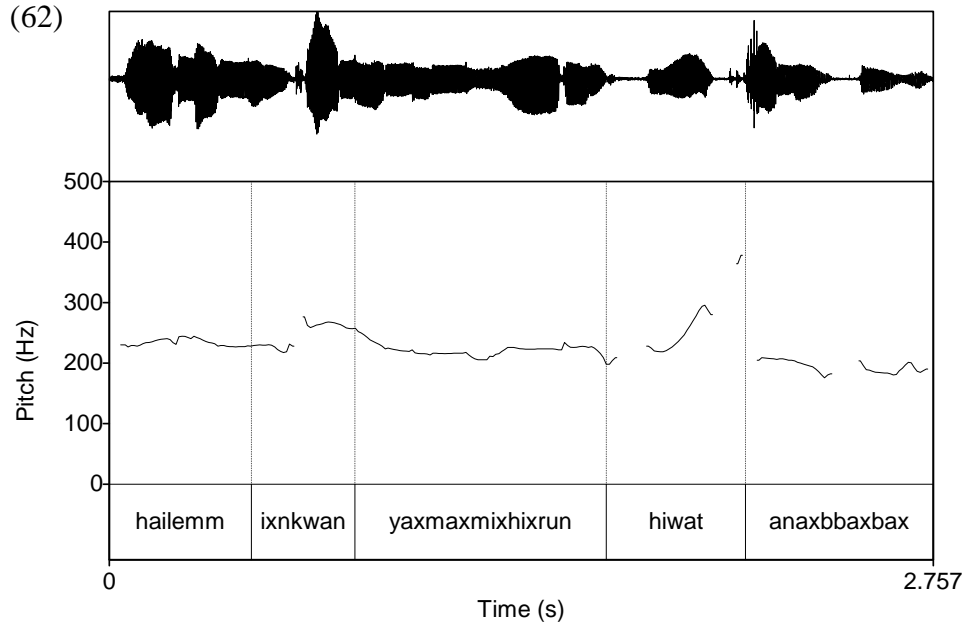
First, Amharic does not exhibit the type of pitch prominence commonly associated with the use of focus particles in various languages, apparently neither on the associate nor on the focus particle itself. Thus, in (61) the focus particle *ənkwən* 'even' is associated with the subject *haile*; the pitch track in (62) only shows a clear pitch peak on the NP immediately preceding the verb, *hiwat* 'life'⁴².

(61) *haile-mm ənkwən ya-mäməhər-u-n hiwat anäbbäb-ä.*

Haile-FOC even POSS-professor-DEF-ACC life read.PER-3MS

'Even Haile read "The Life of the Professor".'

⁴² Recordings were done with four native speakers of Amharic, three females and one male, who read written materials directly into Praat (Boersma & Weenink 2008), installed on a PC laptop. The pitch tracks presented here are from two of the four speakers, but all four produced the same general pitch contours.



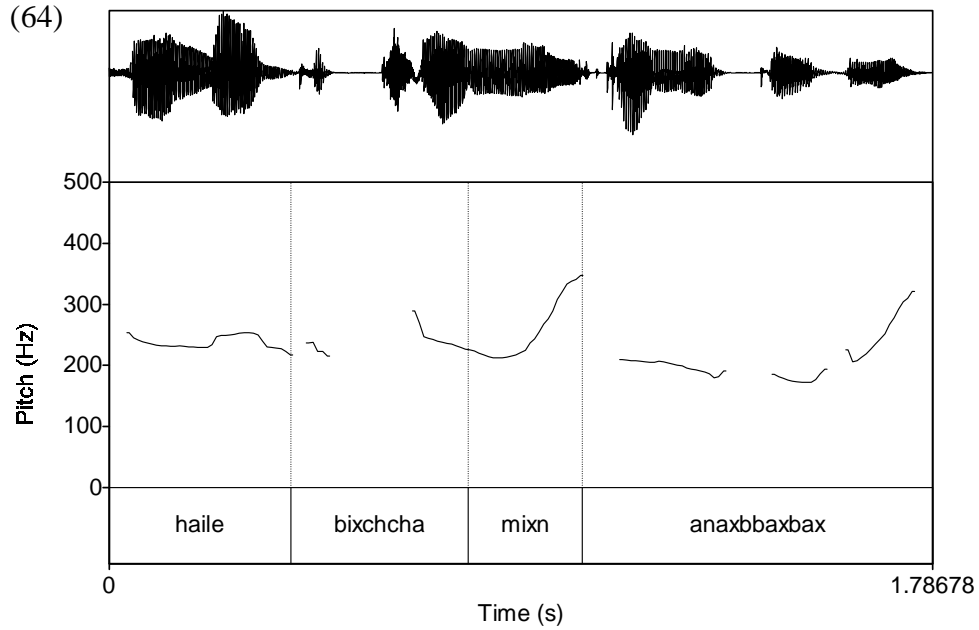
(64) illustrates the pitch contour of the standard intervention configuration in (63), i.e., a *wh*-question in which the focus particle *bəčča* 'only' is associated with the subject *haile*; a pitch peak is found on the *wh*-word, as is common in *wh*-in-situ languages (Ladd 1996), and on the sentence-final verb.

(63) *haile bəčča mən anəbbäb-ä?* (=10a)

Haile only what read.PER-3MS

'What did only Haile read?'⁴³

⁴³ The pitch contour represents only the standard, non-hanging topic interpretation of the subject. The precise prosodic characterization of the latter is beyond the scope of this paper.

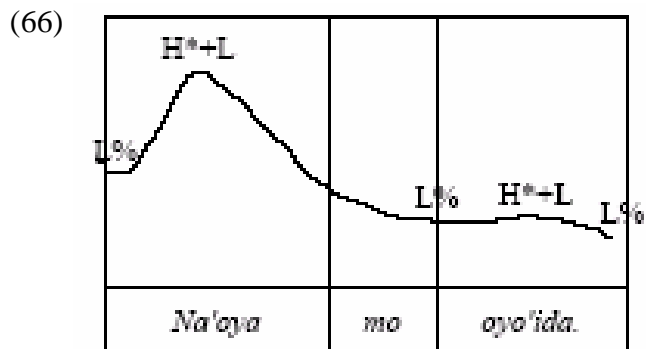


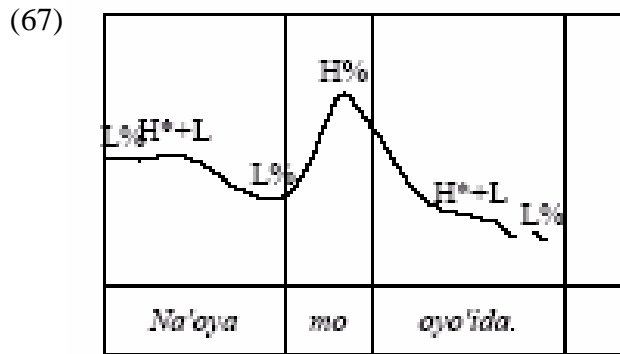
An informal comparison with analogous Japanese examples demonstrates the distinction between the languages: (66) and (67) are typical pitch patterns for the underlined portion in (65), in which the focus particle *mo* 'also' is associated with the subject *naoya*. While the phonetic implementation allows for more than one option, including a number of contours not provided here, all involve a pitch peak on the associate and/or the focus particle.

(65) kinoo, na'oya-mo oyo'ida.

yesterday Na'oya-also swam

'Naoya also swam yesterday.'





(Venditti, Maekawa & Beckman, in press)

The ostensible lack of a necessary relation between focus particles and intonational prominence in Amharic is not unheard of crosslinguistically: morphosyntactic focus structures in various languages are claimed to be independent of intonational prominence (Drubig 2003). In fact, Vallduví (1990) makes a convincing case that even in English the association between *only* and focus is a tendency, rather than a requirement, and provides many examples in which the associate of *only* is not the intonationally prominent element in the sentence⁴⁴. Furthermore, as perhaps might be expected in a situation such as that found in Amharic, marking the associate of a focus particle can be achieved through linear adjacency, even if this involves breaking up constituents, as in (68), where italics indicate that *k'ay* 'red' is the associate of the focus particle⁴⁵.

(68) aster *k'ay* bæčča šämiz-očč tə-därg-all-äčč.

Esther red only shirt-PL 3FS-wear.IMP-AUX-3FS

⁴⁴ In these examples, as in the *wh*-questions discussed here, the focused phrases are backgrounded in terms of information structure, and not just prosody. While focus expressions are typically (part of) sentence foci (Tomioaka 2007a), this is by no means always the case (see Vallduví 1990 for numerous counterexamples).

⁴⁵ As expected, this distinguishes Amharic from Japanese, where focus particles cannot appear between an adjective and noun (Satoshi Nambu, p.c.). Focus particles can similarly appear in Amharic between a possessor and possessum when associating with the former.

'Esther only wears *red* shirts.'

The connection between the fact that focus particles do not require intonational prominence in Amharic and the absence of intervention effects in the language seems fairly straightforward. Simply put, Amharic has as a default the property which other languages derive by scrambling the *wh*-phrase over the intervener. Languages like Japanese and Korean circumvent intervention effects through this scrambling, which places interveners in the phonologically reduced portion of the sentence following the *wh*-phrase. Amharic, however, does not require this mechanism, since focused elements are ordinarily not prosodically prominent, and hence can be interpreted as (part of) the tail. As a result, there is no reason for intervention effects to occur.

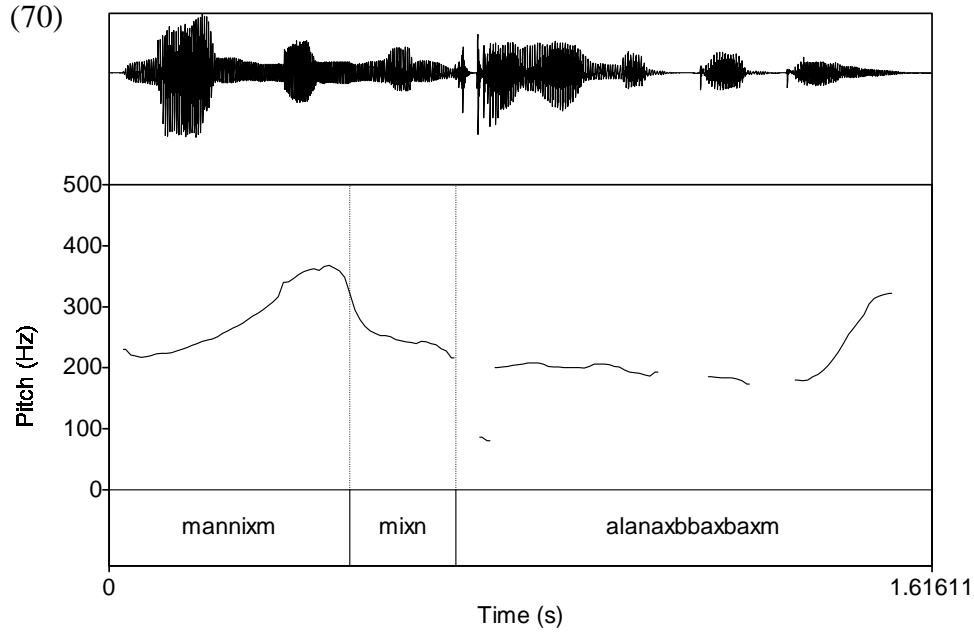
However, one class of potential interveners in Amharic, NPIs, was singled out in section 3, because judgments were variable, both within and between speakers; these might indicate intervention effects, at least for some speakers or for a certain subset of the data. Although conclusive claims regarding this data await a comprehensive study of NPIs in Amharic, it is interesting to note that these elements do exhibit unambiguous intonational prominence. The judgments are then perhaps not entirely surprising. For example, the pitch track for (23a), repeated below as (69), has a peak on the NPI *mannəm* 'anyone'⁴⁶.

(69) mannəmm mən al-anäbbäb-ä-mm?

anyone what NEG-read.PER-3MS-NEG

'What did no one read?'

⁴⁶ The absence of a pitch peak on the *wh*-phrase in (70) is putatively the type of post-focus reduction also observed following NPIs in Japanese (Ishihara 2007).



Although the phonetic data from Amharic fits in nicely with Tomioka's account of intervention effects, and therefore provides support for the theory, it should obviously be augmented by a full-scale study of Amharic prosody. An additional issue which must be left for future research is whether or not the assumptions regarding focus particles extend to other interveners, and in particular quantificational phrases⁴⁷. Given the story laid out thus far, one would expect all interveners to be associated with intonational prominence in languages which have intervention effects, like Japanese, but not in Amharic. Of course, it might be the case that Tomioka's original idea is crosslinguistically valid; that is, any material preceding a *wh*-phrase cannot be phonologically reduced, and hence cannot be in the tail. Amharic would be an exception to this generalization as well, and so intervention effects should still not occur.

Turning to information structure, recall the finding that *wh*-questions like (71)

⁴⁷ Recall that quantificational phrases are not considered to be in the "core set" of interveners: they exhibit a great deal of crosslinguistic variation in terms of their status as interveners, and when they do function as interveners, the effect is weaker than with focus phrases and NPIs.

actually have two possible readings, (a) and (b), the latter roughly meaning that the question *What did he read?* refers exclusively to Haile.

(71) haile bəčča mən anäbbäb-ä?

Haile only what read.PER-3MS

a. 'What did only Haile read?'

b. 'Only speaking of Haile, what did he read?'

While the (a) reading, I assume, is sanctioned by virtue of the prosodic facts described above, allowing the focused phrase to be in the ground, the interpretation in (b) requires additional discussion. I use the declarative in (72) for the purpose of clarity and brief exposition, but the facts remain the same in questions.

(72) haile bəčča ya-n mäs'haf anäbbäb-ä. (=57b)

Haile only that-ACC book read.PER-3MS

'Only speaking of Haile, he read that book.'

In examples like (72) the focus particle *bəčča* takes the hanging topic as its argument, as schematized in (73), rather than the prejacent proposition (e.g., *Haile read that book*), as English *only* does. Thus, *bəčča* here does not signal exhaustification over the proposition, but rather over the address in the hearer's knowledge store where the information contributed by the focus is to be entered.

(73) [[haile]_{TOP}]_{ONLY} he read that book.

The fact that Amharic enables focus particles like *bəčča* to take a topic as their argument provides it with a second way to evade intervention effects. The reasoning behind this is simple: there is no degradedness in such cases because the focused

hanging topic is an extra-sentential element, not integrated in the information structure of the question⁴⁸. No attempt to accommodate the focused phrase in the ground portion of the question is made, and hence no clash between information structural properties and the information structural articulation of the questions arises. Other languages seem to lack this option; they ban this order of topic marking and focus particle and/or the interpretation which it derives in Amharic (or the combination of topic marking and focus particles altogether, as in Tsez; Polinsky & Potsdam 2001)⁴⁹. An additional noteworthy aspect of the Amharic data, which similarly sets it apart from other languages, is the fact that although possible⁵⁰, overt morphosyntactic marking of the subject is not necessary to obtain the topic interpretation.

A final issue which must be addressed within Tomioka's framework is alternative questions, both from a general, theoretical point of view and specifically in Amharic. As noted in section 3, alternative questions were subsumed under Beck's (2006) structural analysis of intervention by Beck and Kim (2006), who contend that the effect is basically the same as in *wh*-questions; in the latter case the problem involves a *wh*-phrase, while in alternative questions it is the disjunctive phrase which ends up

⁴⁸ The structural analysis is able to capture the absence of intervention effects with the hanging topic interpretation, given the assumption that the intervener is indeed above C^0 in such cases. However, we have abandoned this analysis altogether at this stage.

⁴⁹ Japanese does allow the combination of *dake* 'only' and the topic marker *-wa*, in that order. While there seems to be some interpretational affinity with the combination of *bəčča* and the hanging topic in Amharic, the fact that *dake-wa* is not permissible in questions (Hara 2006, 2007) indicates that the two are not the same.

⁵⁰ For example, with the marker *-ss*:

(i) haile-ss bəčča ya-n mäs'haf anäbbäb-ä.
 Haile-TOP only that-ACC book read.PER-3MS
 'Only as for Haile, he read that book.'

Demeke and Meyer (2007) argue that *-ss* marks contrastive topics, while sentence-initial position in Amharic indicates non-contrastive topics.

lacking the alternatives required for interpretation. The result is that examples like (74) only have a yes/no reading, which can be answered with (b), but not (a).

(74) Does only John like Mary or Susan? (=21)

a. #Mary. [*AltQ]

b. Yes. [✓Yes/NoQ]

Although Tomioka did not extend his theory to alternative questions, it can easily account for the effect found in (74). In an alternative question, the disjunct is the focus and the remainder is the ground, but interveners are not easily accommodated in the ground, at least when preceding the focus. They cannot be links because of their anti-topical status, while their tendency to attract intonational prominence interferes with their serving as tails⁵¹. The polar reading of the question is nonetheless retained in the presence of an intervener because yes/no questions have a different information structure. This information structure is arguably very similar to that of a declarative, and in any case does not have a fixed focus, so that the focus-ground partition is much more amenable to speaker modification and hearer accommodation than in alternative questions. Interestingly, we have come to the conclusion that alternative questions in a language like English parallel *wh*-questions in *wh*-in-situ languages like Japanese and Korean, which accords with the assumption that the articulation of information structure and many associated properties are universal in nature. Furthermore, one can remove the intervention effect from alternative questions by placing the disjunctive phrase in a position which naturally houses the

⁵¹ This extension of Tomioka's analysis to English alternative questions corroborates the position advocated here, whereby the mismatch between interveners and tails reduces to the intonational prominence of the former, rather than the prosodic status of the material preceding the *wh*-phrase or disjunct.

ground; for example, in the non-clefted part of an it-cleft (75) (see Vallduví 1990 for similar declarative examples, where the associate of *only* is claimed not to constitute the focus)⁵². This is the equivalent of scrambling the *wh*-phrase to eliminate intervention effects in *wh*-in-situ languages⁵³.

(75) Is it Mary or Susan who only John likes? (Beck & Kim 2006:167)

a. Mary. [✓AltQ]

b. Yes. [✓Yes/NoQ]

Unsurprisingly, Amharic allows interveners to precede the disjunctive phrase in alternative questions, akin to the findings from *wh*-questions, and the alternative question reading is not excluded. Moreover, the same two interpretations observed in *wh*-questions and declaratives, linked to the status of the subject, are also found in this case, as noted in fn. 39.

(76) haile bæčča šay wäyæss buna t'ät'-a? (=22)

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. šay. [✓AltQ]

⁵² In fact, intervention effects can be greatly ameliorated in alternative questions simply by setting up a particular context, as in (i); (ii) is then acceptable as an alternative question.

(i) Context: The graduate students in linguistics had to take two preliminary exams, in syntax and phonology, this week. The results were surprising: all the students, including John, passed one of the exams, but no one except John passed the other.

(ii) Did only John pass syntax or phonology?

Assuming that intervention in alternative questions reflects the same phenomenon as in *wh*-questions, as Beck and Kim (2006) do, this data constitutes decisive evidence against structural approaches. See Eilam (in prep.) for further discussion.

⁵³ Of course, for Beck and Kim (2006) and other structural explanations, what is crucial in (75) is the fact that *only* does not c-command the disjunct.

tea

b. awo. [✓Yes/NoQ]

yes

The explanation for the exceptionality of Amharic in this case is the same as in *wh*-questions. Interveners can be tails even when preceding the disjunctive phrase 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 alternative question.

6. Conclusions and remaining issues

This paper took as its starting point the novel observation that intervention effects are nonexistent (or nearly so) in Amharic, making it unique in the fairly broad typological picture of the phenomenon currently available. Assuming that this peculiarity follows from some property of Amharic grammar, and is not a primitive resistant to explanation, I surveyed the two existing approaches to intervention effects in terms of their ability to explain the Amharic data. I first attempted to apply a structural theory, focusing on Beck's (2006) semantic analysis, in which hierarchical structure plays a crucial role. Under such a theory, Amharic necessarily has an exceptional clausal structure, which it hides under a linear string that is identical to that of other SOV languages which do exhibit intervention effects. While this approach seems to have some merit, it also has numerous problems, in terms of the evidence available to support it and its ability to explain the entire range of existing data, both in Amharic and in other languages, in a satisfactory manner. In addition,

the discussion on alternative questions briefly alluded to what appears to be a critical datum against structural approaches to intervention; namely, the fact that they are context-sensitive in a way not expected of truly structural phenomena.

The alternative non-structural approach of Tomioka (2007a,b) was consequently considered, where intervention is viewed as a violation of information structural constraints, interacting with prosody and linear order, on *wh*-questions. Beyond its advantages over structural theories vis-à-vis languages which have intervention effects, the approach was found to elegantly correlate with independent aspects of Amharic prosody and information structure, correctly predicting that the language should pattern differently. Furthermore, Tomioka's approach was applied for the first time to alternative questions, with seemingly positive results. The final outcome was a plausible non-structural explanation for the absence of intervention effects in Amharic, as well as corroboration of this type of explanation for intervention effects in general.

The analysis proposed here falls in line with a growing body of work establishing that intervention effects are not structural in nature. Engdahl (2006), for example, shows that the degradedness of French *in situ* questions with negation, often taken to reflect an intervention effect (e.g., Pesetsky 2000), is reducible to conditions on the use of negative questions; accordingly, setting up a discourse as in (77) renders the question in B acceptable.

(77) A: Mon fils ne mange pas de POISSON.

my son NE eats NEG fish

'My son doesn't eat fish.'

B: Et ta fille, elle ne mange pas QUOI?

and your daughter she NE eats NEG what

'What about your daughter? What doesn't she eat?' (Engdahl 2006:100)

This study should also be viewed in the broader context of work attempting to discriminate between phenomena that are truly structural and those that are not (e.g., Kroch 1989 on long movement of non-referential *wh*-phrases and negative islands). Since native speaker judgments are an indirect reflex of the grammar at best, and deviance could stem from any number of linguistic or extra-linguistic reasons⁵⁴, one must proceed with caution in deciding whether degradedness indicates ungrammaticality, or rather unacceptability, susceptible to the influence of context and other non-structural factors.

Of course, this is not to say that there exist no intervention effects with a structural basis. However, this class of phenomena, usually known as minimality effects (Rizzi 1990), have characteristics which clearly distinguish it from the effects under consideration in this paper. Indeed, although Beck and Kim (2006) propose a structural analysis for the latter which is entirely different from the one promoted here, they also contend that the two phenomena should be treated separately (pace, for example, Shields 2008). As for other minimality effects which seem to involve focus but are not necessarily associated with questions, such as multiple focus constructions and NPI licensing (see Beck 2006, Guerzoni 2007), whether or not they ought to be subsumed under the current framework is an empirical question; at this point there is no reason to rule out an information structural analysis.

⁵⁴ Cf. Chomsky (1977:4): "We may make an intuitive judgment that some linguistic expression is odd or deviant. But we cannot in general know, pretheoretically, whether this deviance is a matter of syntax, semantics, pragmatics, belief, memory limitations, style, etc."

Much work on the approach first outlined in Tomioka (2007a,b) and expanded here remains to be done. Besides further studies on various properties of Amharic, including the behavior of NPIs and the details of its intonational phonology, future research could continue the comparison between structural and non-structural approaches to intervention by examining cases where c-command and linear precedence do not line up. If examples of this sort are constructed so as to be relevant to the questions at issue, the two types of approaches could easily be tested, since they yield opposing predictions. For instance, if intervention effects are found when an intervener is in a position linearly preceding but not c-commanding a *wh*-phrase, this is obviously a problem for the class of structural approaches but could be accounted for by a non-structural theory.

I conclude with two observations which will hopefully serve as the basis for further research. First, recall that alternative questions generally give rise to intervention effects when an intervener appears before the disjunctive phrase, manifested in the lack of an alternative question reading. I claimed that this stems from a clash between the need to background the non-disjunctive portion of the question and the inherent properties of interveners, as well as their linear position. However, the patterning of alternative questions appears *prima facie* baffling in comparison with another class of questions, *why*-questions. As noted in fn. 11, intervention configurations with *why* in Japanese and Korean show much weaker intervention effects than those involving other *wh*-phrases, if at all (Ko 2005, Tomioka 2006, 2008). In order to account for this within his general framework, Tomioka (2008) appeals to the fact that *why*-questions presuppose the proposition

that corresponds to the non-*wh* portion of the sentence, which includes the intervener, as exemplified in (78)⁵⁵:

(78) Why did only Sue leave early? Presupposes: Only Sue left early.

The intervener is necessarily in the ground, no mismatch with the information structure of the question arises, and therefore speakers judge such questions as significantly more acceptable than intervention configurations with nominal *wh*-phrases.

If this line of reasoning is correct, one might expect alternative questions to behave on a par with *why*-questions. Alternative questions also trigger a presupposition, which would include an intervener if present; specifically, that one (and only one) of the alternatives is true (Karttunen 1977), as illustrated in (79).

(79) Does only John like Mary or Susan? Presupposes: Only John likes Mary or only John likes Susan, but not both.

Why then do the two types of questions differ in terms of acceptability judgments when interveners are involved? I suggest that the disparity derives from a distinction in their 'actual-world felicity' (Vallduví 1990), i.e., the extent to which they are usable, or pragmatically likely to occur, in the actual world. The contextual conditions necessary to make a *why*-question like (78) felicitous are easy to conjure up: it is sensible, and probably common, to inquire about the reason for an exceptional observation⁵⁶. An alternative question like (79), on the other hand, is

⁵⁵ According to Fitzpatrick (2005), *why*-questions only seem to have such a presupposition, which is actually an inference from the set of possible answers. For our purposes, the result is the same. *Wh*-questions with other *wh*-phrases generally do not contain an existential presupposition, contra the commonly held assumption (Geurts 1999, Fitzpatrick 2005).

⁵⁶ In fact, *only* in a *why*-question like (78) is crucial to obtain the intended interpretation, for which a

difficult for native speakers to contextualize, since it is virtually unusable under real world circumstances; one has to imagine a situation in which the speaker knows that John alone likes one of two women, but does not know which one⁵⁷. Native speakers asked to judge unusable sentences of this type find them unacceptable (see Kroch 1989, Vallduví 1990).

A second issue worthy of further examination concerns the information structure status of various quantified phrases, some of which tend to function crosslinguistically as interveners. While it is possible that some or all of what was said in this paper, which focused on the core set of interveners—focus operators and NPIs—is applicable to quantificational NPs, it is also conceivable that the latter follow the same pattern of exceptionality in Amharic for another reason. One speculative idea, inspired by Gundel (1999, in Gundel and Fretheim 2004) and Portner and Yabushita (1998), is that this class of elements can be links in Amharic, unlike other languages, because it is the discourse referent representing the domain of quantification, rather than the entire quantified phrase, which actually serves as the link in terms of information structure. Moreover, Amharic would allow this even in cases where the domain is not overtly expressed, but must be constructed based on the context. Thus, the equivalent of (80) in Amharic could be construed as a proposition about a pre-established group of people, and the discourse referent representing the group would be the link.

(80) Every man left.

felicitous answer could be *Because the rest of the employees hadn't completed their workload*. This answer would not be compatible with the same question without *only*.

⁵⁷ This is not impossible, however, as established in fn. 52.

If true, intervention effects would not be expected with such elements because they fit into the information structure of *wh*-questions and alternative questions⁵⁸.

Appendix: Remaining potential interveners

- (81) a. haile-mm mən/yätəññaw-ən mäs'haf anäbbäb-ä? (also)

Haile-also what/which-ACC book read.PER-3MS

- b. mən/yätəññaw-ən mäs'haf haile-mm anäbbäb-ä?

'What/which book did Haile also read?'

- (82) a. haile-mm lämən ya-n mäs'haf anäbbäb-ä? (also)

Haile-also why that-ACC book read.PER-3MS

- b. lämən haile-mm ya-n mäs'haf anäbbäb-ä?

'Why did Haile also read that book?'

- (83) a. haile mən/yätəññaw-ən mäs'haf al-anäbbäb-ä-mm? (negation)

Haile what/which-ACC book NEG-read.PER-3MS-NEG

- b. mən/yätəññaw-ən mäs'haf haile al-anäbbäb-ä-mm?

'What/which book didn't Haile read?'

- (84) a. haile lämən ya-n mäs'haf al-anäbbäb-ä-mm? (negation)

Haile why that-ACC book NEG-read.PER-3MS-NEG

- b. lämən haile ya-n mäs'haf al-anäbbäb-ä-mm?

'Why didn't Haile read that book?'

- (85) a. haile zäwätər mən/yätəññaw-ən mäs'het yə-gäz-all? (often)

⁵⁸ For this explanation to be valid, one would obviously have to show that in a language like Japanese this option is not available, but Portner and Yabushita (1998) argue that it is, at least for quantified NPs with an explicit domain of quantification. Also, it could in principle be applicable to NPIs.

Haile often what/which-ACC magazine 3MS-buy.IMP-AUX.3MS

b. mən/yätəññaw-ən mäs'het haile zäwätər yə-gäz-all?

'What/which magazine does Haile often buy?'

(86) a. haile zäwätər lämən ya-n mäs'het yə-gäz-all? (often)

Haile often why that-ACC magazine 3MS-buy.IMP-AUX.3MS

b. lämən haile zäwätər ya-n mäs'het yə-gäz-all?

'Why does Haile often buy that magazine?'

(87) a. haile hulgize mən/yätəññaw-ən mäs'het yə-gäz-all? (always)

Haile always what/which-ACC magazine 3MS-buy.IMP-AUX.3MS

b. mən/yätəññaw-ən mäs'het haile hulgize yə-gäz-all?

'What/which magazine does Haile always buy?'

(88) a. haile hulgize lämən ya-n mäs'het yə-gäz-all? (always)

Haile always why that-ACC magazine 3MS-buy.IMP-AUX.3MS

b. lämən haile hulgize ya-n mäs'het yə-gäz-all?

'Why does Haile always buy that magazine?'

(89) a. hullu tämari mən/yätəññaw-ən mäs'haf anäbbäb-ä? (universal)

every student what/which-ACC book read.PER-3MS

b. mən/yätəññaw-ən mäs'haf hullu tämari anäbbäb-ä?

'What/which book did every student read?'

(90) a. hullu tämari lämən ya-n mäs'haf anäbbäb-ä? (universal)

every student why that-ACC book read.PER-3MS

b. lämən hullu tämari ya-n mäs'haf anäbbäb-ä?

'Why did every student read that book?'

- (91) a. säw mən/yätəññaw-ən mäs'haf anəbbäb-ä? (indefinite)

someone what/which-ACC book read.PER-3MS

- b. mən/yätəññaw-ən mäs'haf säw anäbbäb-ä?

'What/which book did someone read?'

- (92) a. säw lämən ya-n mäs'haf anäbbäb-ä? (indefinite)

someone why that-ACC book read.PER-3MS

- b. lämən säw ya-n mäs'haf anäbbäb-ä?

'Why did someone read that book?'

- (93) a. abzañaw tämari-očč mən/yätəññaw-ən mäs'haf anəbbäb-u? (most)

most student-PL what/which-ACC book read.PER-3MPL

- b. mən/yätəññaw-ən mäs'haf abzañaw tämari-očč anəbbäb-u?

'What/which book did most of the students read?'

- (94) a. abzañaw tämari-očč lämən ya-n mäs'haf anäbbäb-u? (*most*)

most student-PL why that-ACC book read.PER-3MPL

- b. lämən abzañaw tämari-očč ya-n mäs'haf anäbbäb-u?

'Why did most of the students read that book?'

- (95) a. yätawässänu tämari-očč mən/yätəññaw-ən mäs'haf anəbbäb-u? (few)

few student-PL what/which-ACC book read.PER-3MPL

- b. mən/yätəññaw-ən mäs'haf yätawässänu tämari-očč anəbbäb-u?

'What/which book did few students read?'

- (96) a. yätawässänu tämari-očč lämən ya-n mäs'haf anəbbäb-u? (few)

few student-PL why that-ACC book read.PER-3MPL

b. lämən yätāwässānu tāmari-očč ya-n mäs'haf anäbbäb-u?

'Why did few students read that book?'

(97) a. kä-amst yannəsu tāmari-očč mən/yätəññaw-ən mäs'haf anäbbäb-u? (*less than*)

from-five less.than student-PL what/which-ACC book read.PER-3MPL

b. mən/yätəññaw-ən mäs'haf kä-amst yannəsu tāmari-očč anäbbäb-u?

'What/which book did less than five students read?'

(98) a. kä-amst yannəsu tāmari-očč lämən ya-n mäs'haf anäbbäb-u? (*less than*)

from-five less.than student-PL why that-ACC book read.PER-3MPL

b. lämən kä-amst yannəsu tāmari-očč ya-n mäs'haf anäbbäb-u?

'Why did less than five students read that book?'

(99) a. əskä amst tāmari-očč mən/yätəññaw-ən mäs'haf anäbbäb-u? (*at most*)

at.most five student-PL what/which-ACC book read.PER-3MPL

b. mən/yätəññaw-ən mäs'haf əskä amst tāmari-očč anäbbäb-u?

'What/which book did at most five students read?'

(100)a. əskä amst tāmari-očč lämən ya-n mäs'haf anäbbäb-u? (*at most*)

at.most five student-PL why that-ACC book read.PER-3MPL

b. lämən əskä amst tāmari-očč ya-n mäs'haf anäbbäb-u?

'Why did at most five students read that book?'

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