The typology of multiple wh-questions and language variation

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The aim of this paper is to review the typology of multiple wh-questions in order to describe and classify a language type that has been ignored in the discussion of multiple wh-questions. I argue that, due to specific morpho-syntactic properties, languages like Somali and Berber do not allow for multiple wh-questions. It is therefore reasonable to assume that there are primarily two language types with respect to the possibility of multiple wh-question formation. These are the languages which allow only for single wh-questions and those which allow for multiple wh-questions.

1. Introduction

1.1. The central problem

The paper focuses on the non-existing option of building multiple wh-questions, represented by some languages that do not belong to one and the same language family. The languages, which have been reported to exhibit this phenomenon, are Italian (Calabrese 1984, 1987, Rizzi 1982, 1997), Somali (Lecarme 1999, Svolacchia et al. 1995, Svolacchia & Puglielli 1999), Berber (Calabrese 1987), and Irish (Adams 1984; McCloskey 1979). The analysis I propose here is based on Somali and Berber but it is also compatible with Italian and Irish.

1.2. Some preliminaries to the grammar of Somali and Berber

Somali and Berber belong to the Afro-Asiatic phylum. Somali is assumed to be a discourse-configurational, polysynthetic SOV language of a particular subtype. Since it does not fit neatly Baker’s (1996) polysynthesis parameter, Svolacchia & Puglielli (1999) refer to it as a ‘clitic polysynthetic language’ similar to the pronominal argument languages defined in Jelinek (1984). A basic feature of that language type is a pronominal argument structure. Pronominal clitics occur in the A-positions and are assigned theta-roles there. Full NPs appear in adjoined A*-positions associated with the IP-internal
pronominal positions that determine their interpretation. All clitic elements in Somali must precede the verb in a fixed linear order. The pronominal clitics are either enclitics or proclitics, depending on their lexical properties. Subject clitics are attached to the so-called focus markers. Object clitics are proclitics that are either adjacent to the verb or combined with right adjacent prepositions (cf. Lecarme 1999, Svolacchia et al. 1995 and Svolacchia & Puglielli 1999).

While Somali is a single member of the East Cushitic branch within the Afro-Asiatic languages, Berber constitutes a language family in itself. As it is not possible to consider all varieties for the current purposes of investigation, I will concentrate on the varieties of Tamazight and Tarifit. Common typological properties are the pro-drop feature and the VSO base word order (cf. Ouhalla 1993, among others).

1.3. The structure of the paper

The paper is organized as follows. I start with a brief outline of the current typology of multiple wh-questions (Section 2). A discussion of the basic properties of wh-question formation in Somali and Berber follows (Section 3). The following descriptive generalizations are made: first, due to their specific morphological properties, wh-phrases in Somali and Berber cannot occur in situ. They are forced to appear in the left periphery of the clause, left adjacent to a head element, i.e. a focus marker in Somali and a cleft marker in Berber. Second, wh-questions in these languages are instances of focus constructions. Finally, focus in Somali and Berber is licensed in a unique structural position. In order to illustrate this crucial property, I compare Somali and Berber with languages that allow for multiple wh-questions and also license wh-phrases in a structural focus position, such as Hungarian and Malagasy. On the basis of these three important observations I draw the conclusion that the licensing position of wh-phrases is also unique and multiple wh-questions can therefore not occur. With respect to the specific properties of wh-question formation, Somali and Berber constitute a separate language type. The last section contains a summary of the argumentation and a proposal for a revision of the typology of multiple wh-questions.

2. The typology of multiple wh-questions

According to the three major strategies of multiple wh-question formation languages have been divided into three types:

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1 Since both varieties display an identical syntactic behaviour with respect to wh-question formation, I do not indicate the variety for every single example throughout the paper.

2 Subtype internal differences are not relevant for the current proposal.
2.1. Multiple wh-fronting languages

Some languages make use of the so-called ex-situ strategy according to which all wh-phrases in a multiple wh-question form a sequence of adjacent elements which occupy a sentence initial position (cf. Rudin 1988, among others):

(1) **Koj kakvo kupi?**  (Bulgarian)
    who what bought
    ‘Who bought what?’

2.2. Wh- in situ languages

The *in situ* strategy defines a language type that does not exemplify any kind of movement of wh-elements. All wh-items in a multiple wh-question remain in their base positions (cf. Cheng 1997, among others):

(2) **Taroog-dare-ni nani-o ageta no?**  (Japanese)
    Taroog-NOM who-DAT what-ACC gave Q
    ‘Who did Taroog give what?’
    (Richards 1997:13)

2.3. The mixed language type

The third language type adopts a mixed version of the pure *ex situ* and *in situ* strategy. Multiple wh-questions show a surface structure like (3). One wh-phrase is realized sentence initially while other wh-elements appear in-situ (cf. Cheng 1997, among others):

(3) **Wer hat was gekauft?**  (German)
    who has what bought
    ‘Who bought what?’

2.4. The fourth language type

I claim that there is a fourth language type that does not use any of the three outlined strategies of multiple wh-question formation. Consider the following examples:

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1 The following abbreviations are used in the glosses of the examples: NOM = nominative case; ACC = accusative case; DAT = dative case; Q = interrogative morpheme / question (yes-no) particle; FM = focus marker; CM = cleft marker; SCL = subject clitic; 3FS = 3. person feminine singular; 3MS = 3. person masculine singular; PART = participle; AT = agent topic marker; TT = theme topic marker; PRET = verbal particle; PAST = past tense; PRES = present tense.
The grammatical examples (4a) and (5a) show the only position in which wh-phrases in Somali and Berber are licensed properly. This is a position left adjacent to a focus marker in Somali (cf. 4a). In Berber the wh-item appears left adjacent to a cleft marker (cf. 5a). The ungrammatical examples (4b) and (5b) are evidence that multiple wh-fronting is not possible. The observation that a wh-phrase cannot be left in situ is represented in (4c) and (5c). Hence, the mixed strategy cannot be applied in Somali and Berber either.

3. The Somali-Berber language type

The central task of this paper is to determine the place of languages like Somali and Berber within the current language typology, based on the criterion of multiple wh-question formation. As the examples in (4) and (5) illustrate, all considerable strategies of deriving multiple wh-questions found across different language types give rise to ungrammaticality in Somali and Berber: the pure in situ strategy (the Japanese type) is excluded, because the canonical position of a wh-item is structurally marked: a position followed by a focus marker in Somali and a cleft site in Berber. Fronting of one wh-phrase and leaving another one in situ (the German Type) is not possible either. Multiple wh-fronting (the Bulgarian type) is not available either.
In what follows, I argue that due to the specific internal properties of these languages there is no syntactic mechanism for the derivation of multiple wh-questions. Therefore, languages like Somali and Berber constitute a separate type. The current typology of multiple wh-questions has to be revised in order to capture the observed language variation.

3.1. The morpho-syntactic properties of the wh-phrase position in Somali and Berber

The only grammatical examples (4a) and (5a) illustrate that wh- elements like maxaa ‘what’ in Somali and may ‘what’ in Berber can only occur in the left periphery of the clause. However, such elements are not bare wh-phrases but rather complexes of more than one different morphological item. I assume the following structural properties for the wh-position in Somali (cf. 6a) and Berber (cf. 6b):

\[(6) \text{a. } [\text{Spec ma wax}[\text{Head baa}]\ldots[\text{vp}]] \text{ contracted: maxaa (Somali)}
\]

\[Q \quad \text{thing} \quad \text{FM} \quad \rightarrow \quad \text{‘what’}
\]

\[b. [\text{Spec m}[\text{Head ay}]\ldots[\text{vp}]] \text{ contracted: may (Berber)}
\]

\[Q \quad \text{CM} \quad \rightarrow \quad \text{‘what’}
\]

According to this descriptive generalization only one wh-phrase can appear in the left periphery of the interrogative clause followed by a right adjacent head element. I therefore conclude that this is a specific morpho-syntactic condition of licensing wh-items in languages that do not allow for multiple wh-interrogatives. I will refer to this language specific licensing mechanism as the Head-Adjacency Hypothesis.

(7) The Head-Adjacency Hypothesis

Languages that do not allow for multiple wh-questions can licence wh-phrases only through an overtly established spec-head relation with a functional head endowed with a [+Focus] feature.

Let us now turn to the [+Focus] feature and its relationship with the wh-phrases in Somali and Berber.

3.2. Wh-questions as instances of focus constructions

Traditionally, wh-phrases are treated as inherently focused elements. Therefore, wh-questions are closely related to the linguistic mechanisms for the expression of information focus (see e.g. Horvath 1986, among others). In the lines of this standard view, wh-questions in Somali exactly parallel NP-
focus constructions and wh-questions in Berber correspond to focus clefts\(^4\),\(^5\). Several syntactic tests support the claim, but I will not discuss all these issues in detail\(^6\). What is important for the current argumentation is the fact that wh-questions and their answers show exactly the same structural properties. Hence, both are instances of one and the same construction. The only appropriate answer to a wh-question is a clause in which the constituent bearing the new information is focused:

(8) a. Kuma ayaa kalluunkii cunay? (Somali)  
who FM fish-the ate  
‘Who ate the fish?’

b. Cali baa kalluunkii cunay.  
Ali FM fish-the ate  
‘ALI ate the fish.’

c. #Kalluunkii baa Cali cunay.  
fish-the FM Ali ate  
‘Ali ate THE FISH.’  
(Saeed 1984:25)

(9) a. May t-sghu terbatt? (Berber)  
what-CM 3FS-bought girl  
‘What did the girl buy?’

b. Adil ay t-sghu terbatt  
grapes CM 3FS-buy girl  
‘It is grapes that the girl bought.’

c. #Terbatt ay yshhin adil.  
girl CM bought-PART grapes  
‘It is the girl that bought grapes.’  
(Calabrese 1987)

\(^4\) Livnat (1984:111) points out that there are cases where the phonological structure of the interrogative word makes it difficult to decide whether the nominal focus marker àà occurs or not. In contrast to that, the nominal focus marker àà with identical function does not undergo coalescence with the preceding wh- or focused element (Saeed 1999:38). Due to the strict analogy between wh-questions and their answers I assume that even wh-elements with unclear morpho-phonological structure like yaa ‘who’ bear a coalesced focus marker àà.

\(^5\) I follow Choe (1987) in assuming that even in cases where the cleft marker is morphologically not recoverable, wh-questions in every Berber variety involve a combination of a wh-element and a cleft marker. Note further that morpho-phonological rules in Berber are very complex (see also Guerssel 1984).

\(^6\) To mention some of them, wh-questions and pure focus constructions in both languages behave identically with respect to extraction. They illustrate an absence of weak crossover effects. Long extraction as well as movement out of islands shows a similar behavior. Finally, anti-agreement effects occur in both constructions (for definition and discussion of the anti-agreement effect see Ouhalla 1993).

\(^7\) The capitals in the translation are used to indicate the focused constituent whenever it is not expressed by a cleft sentence. ‘#’ marks a pragmatically incompatible answer.
In Somali a wh- subject appears to the left of a focus marker (cf. 8a). In the appropriate answer the subject NP is focused (cf. 8b) and shows the same structure as the wh- interrogative. Focusing of the object (cf. 8c) is not a compatible answer in this context. The same rule holds for Berber. The wh-question (9a) and the correct answer (9b) are structurally identical. The wh-word and the corresponding NP in the answer are focused by means of a cleft construction. Clefting of the subject NP (cf. 9c) is, as expected, not a possible answer to (9a).

Since both wh- questions and focus constructions reveal one and the same syntactic property, I assume that both are subject to one and the same licensing requirement. In other words, the Head-Adjacency Hypothesis holds for both constructions. Since the formation of wh- questions in Somali and Berber is a derivation driven by the need to satisfy a [+Focus] feature, I will discuss the particular properties of the focusing strategies in both languages in the next subsection.

3.3. The uniqueness of the focus strategy in Somali and Berber

I have argued that the head-adjacency requirement (cf. 7) is as an obligatory distributional pattern for both wh- phrases and focused constituents in Somali and Berber. In what follows, I extend the licensing conditions of wh- phrases with a further rule. The focusing strategies in Somali and Berber are unique in that they can affect only one constituent per clause (for discussion of the term “uniqueness” see Rizzi 1997). I propose that this syntactic condition constitutes a special parametric property of the languages that do not allow for multiple wh-questions.

(10) The Uniqueness Hypothesis

Languages that do not allow for multiple wh-questions licence wh-phrases only in a unique structural focus position.

A closer look at the wh- and focus constructions in Somali and Berber will help to confirm the Uniqueness Hypothesis. I will compare Hungarian and Malagasy with Somali and Berber in order to draw an exact picture of the syntactic properties that exclude the possibility of deriving multiple wh-questions. In the following I address the question why wh- phrases cannot be licensed in situ (section 3.3.1). Next, I show that the appearance of a second focus marker causes ungrammaticality in Somali. I also provide evidence that it

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8 Rizzi’s (1997) proposal for the fine structure of the left periphery deals exclusively with the representation of contrastive focus in Italian. Note that the focussing strategies in Somali and Berber are not restricted to the expression of contrastive focus. The bàa/àyaa-focus construction in Somali (cf. Saeed 2000) and the cleft focus construction in Berber (cf. Calabrese 1987) are used to mark new information in general. Depending on the context, a constituent bearing new information can be interpreted contrastively.
is not possible to cleft two constituents in one and the same clause in Berber (section 3.3.2). Finally, the option to realize focused elements in multiple specifiers of a head endowed with a [+Focus] feature (Richards 1997) or alternatively, to form a cluster of focused constituents (Sabel 2003) is not available in Somali and Berber (section 3.3.3).

3.3.1. Wh- in situ and optional licensing of wh- phrases in a focus position

Consider a wh- in situ language like Malagasy (cf. Sabel 2003). As the examples show, wh- phrases usually appear in their base position (cf. 11a), but the language has also an option to license wh- words in a focus position marked by a special focus particle: *no* (cf. 11b). Thus, a combination of both strategies results in a grammatical multiple wh- question (cf. 12a and b). For ease of representation I call this variant of multiple wh- question formation the “Malagasy strategy (I)”.

(11) a. Nividy  *inona* Rabe?  (Malagasy)
PAST-AT-buy what Rabe
b. *Inona* no novidin-d Rabe?
what FM PAST-TT-buy Rabe
“What has Rabe bought?”

(12) a. *Iza* no nividy *inona* ti?
who FM PAST-AT-buy what
b. *Inona*, no novidin *iza* ti?
what FM PAST-TT-buy who
‘Who bought what?’

A crucial prediction of the Clausal Typing Hypothesis is that a language that has yes-no particles is a wh- in situ language (Cheng 1997:16f)9. Somali and Berber have yes-no particles (cf. 13a for Somali and 14a for Berber), but nevertheless wh- phrases in situ are excluded (cf. 13b for Somali and 14b for Berber).

(13) a. *Muu* kúu dhiibay?  (Somali)
Q-he you-to hand
‘Did he hand it to you?’
(Saeed 1999:197)
b. *Maryan baa kuma arkay?*
Maryan FM who saw
‘Who did MARYAN see?’
(Cabdelqadir Ruumi, personal communication)

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9 The Clausal Typing Hypothesis: Every clause needs to be typed. In the case of typing a wh-question, either a wh- particle in C° is used or else fronting of a wh- word to SpecCP is used, thereby typing a clause through C° by Spec-head agreement (Cheng 1997:22).
c. *yaa yimid goorma?
   who-FM came time-which
   ‘Who came when?’
   (Svolacchia & Puglielli 1999)

(14) a. Is y-sghu Mohand adlis?
   3MS-bought Mohand book
   ‘Did Mohand buy a book?’
   (Guerssel 1984)
b. *t-sga tarbat min?
   3FS-bought girl what
   ‘What did the girl buy?’
c. W(g)i yzwn Tifa?
   who-CM kissed-PART Tifa
   ‘Who kissed Tifa?’
d. *Manwan i(g) ysgin manyn?
   who CM bought-PART what
   ‘Who is it that bought what?’
   (Noureddine Elouazizi, personal communication)

Since Somali and Berber do have question particles, wh-fronting can evidently not be applied for clausal typing purposes as generally assumed for languages like English, which type interrogative clauses through spec-head agreement by fronting of a wh-word to SpecCP. Note further that the Clausal Typing Hypothesis still holds, as the head elements, which enter into a spec-head relation with the wh-phrases in Somali and Berber, are different in nature from the question particles. Recall that both languages make use of specific focusing strategies for the representation of wh-items. Wh-phrases in Somali appear left adjacent to a focus marker and wh-words in Berber precede a cleft marker. It follows that the Head-Adjacency Hypothesis (cf. 7) as a language specific morpho-syntactic licensing requirement for wh-phrases is a condition fully independent of typing of the clause as interrogative by means of wh-fronting to SpecCP and establishing spec-head agreement with C°. I therefore propose that there is another rule that is crucial for the distribution of wh-phrases in Somali and Berber (cf. 10). Wh-words cannot occur in situ because an interrogative wh-phrase has to be in a focus position in the overt syntax in order to be interpreted properly. This requirement is not necessary for in situ languages like Malagasy. Somali and Berber obligatorily license wh-phrases in a structurally marked focus position, while Malagasy optionally makes use of this possibility (cf. also the focus theory of Horvath 1986). The Malagasy strategy (I) for deriving multiple wh-questions is, as expected, not available in Somali and Berber (cf. 13d for Somali and 14d for Berber).
3.3.2. Multiple wh-questions as focus recursion

Consider now another way of deriving multiple wh-questions. As argued by É. Kiss (1998), Hungarian allows for a multiple focus construction in which more than one focus phrase of the same type, i.e. “more than one operator introducing a set and exhaustively identifying a proper subset of it” can appear in a single clause. Hungarian is therefore considered to be a language that allows for focus recursion (cf. 15a). The licensing head of focused elements in Hungarian is V. It licenses both items in (15a) through successive movement from the lower to the higher focus projection. This is a construction that syntactically corresponds to multiple wh-questions in Hungarian (cf. 15b).

(15) a. \[
\begin{array}{ll}
[TopP \ldots [TopP \ldots [FocP [Foc° Vi] [FocP [Foc° ti] [VP \ldots ti \ldots ]]]]]
\end{array}
\]

b. Ki \, \text{vert} \, \text{meg} \, ki?
who \, beat \, PRT \, whom
‘Who beat somebody, and who was the person beaten by him?’

Compare now Hungarian with Somali and Berber. Recall that both languages exhibit overt focusing particles. Then, if focus recursion were possible, these special markings would be expected to appear attached to every focused element. The following ungrammatical examples show that it is impossible to have more than one focus phrase per clause in Somali (cf. 16b) and Berber (cf.17b) as well as multiple wh--phrases (cf. 16a for Somali and 17a for Berber):

(16) a. *yaa \, yimid \, goorma \, baa? \quad \text{(Somali)}
who-FM \, came \, time-which FM
‘Who came when?’

b. *Cali \, baa \, yimid \, shalay \, baa.
Ali \, FM \, came \, yesterday FM
‘ALI came YESTERDAY.’
(Cabdelqadir Ruumi, personal communication)

(17) a. *W(g)ji \, yzwn \, manwn \, i? \quad \text{(Berber)}
who-CM \, kissed-PART \, whom \, CM
‘Who kissed whom?’

b. *Muhand \, i(g) \, yzwn \, Tifa \, i.
Muhand \, CM \, kissed-PART Tifa \, CM
‘MUHAND kissed TIFA.’
(Noureddine Elouazizi, personal communication.)

Note that the possibility that the focus marker in Somali (cf. 13d) or the cleft marker in Berber (cf. 14d) moves upwards –just like the finite verb in Hungarian- is not available either. I conclude from these observations that focus recursion is a language-specific parameter that is negatively set in Somali and Berber. The focus position in these languages is unique. Considering the
fact that wh-phrases may only occur in a unique focus position in Somali and Berber, there is no other position in the clause capable of licensing wh-phrases. (cf.16a for Somali and 17a for Berber) Hence, it is impossible to derive a multiple wh-question in the same way as in Hungarian.

3.3.3. Multiple wh-fronting as focus cluster

It has been argued in the minimalist literature that overt multiple wh-fronting languages like Bulgarian use a strategy that consists of moving a wh-cluster to SpecCP (cf. 1). The formation of a wh-cluster is motivated by the assumption that wh-elements can act as landing sites for wh-movement due to certain morphological properties. The clustering proceeds prior to wh-movement. (for details, cf. Grewendorf 2001 and Sabel 2001; for alternative analyses of multiple wh-fronting in Bulgarian see Richards 1997 and Bošković 2003).

Malagasy is considered to be an optional multiple wh-fronting language (cf. Sabel 2003). In order to distinguish the two options of multiple wh-question formation in Malagasy, I will call this strategy the “Malagasy strategy II”. In this case, Malagasy behaves like Bulgarian, a language that obligatorily fronts all wh-items.

(18) a. Aiza iza no mividy ny vary? (Malagasy)
    where who FM PRES-AT-buy the rice
    ‘Where does who buy the rice?’

b. Aiza (ny) inona no vidinao?
    where (the)what FM PRES-TT-buy
    ‘Where do you buy what?’
    (Sabel 2003)

The feature that triggers wh-displacement in Malagasy is the strong [+Focus] feature of the clause (cf. the Malagasy Strategy I discussed in 3.3.1.). The important idea of the analysis is that wh-phrases can also be endowed with a strong [+Focus] feature. Therefore, the strong [+Focus] feature of a wh-phrase can attract other wh-elements. In (18a) the strong [+Focus] feature of iza ‘who’ and in (18b) the strong [+Focus] feature of inona ‘what’ attracts the second wh-item. This intermediate derivational operation results in a cluster formation. Then the wh-cluster is attracted by the [+Focus] feature in C°. To sum, there are two focus features involved in the derivation of a multiple wh-question in Malagasy, i.e. the strong [+Focus] feature of the wh-phrase itself and the strong [+Focus] feature of the clause (for further details of the analysis see Sabel 2003; see also Richards 1997 for another possible analysis in terms of multiple specifiers).

The option of forming a wh-cluster prior to movement into a focus position –the canonical position of wh-phrases in Somali (cf. 19) and Berber (cf. 20)- is prohibited because of the uniqueness of the available focusing strategy. Since the Malagasy Strategy II cannot be applied in Somali and Berber, I conclude
that they obviously lack the morphological properties of Bulgarian- and Malagasy-like wh-elements.

(19) *yaa goormuu yimid? (Somali)
who time-which-FM-SCL came
‘Who came when?’
(Svolacchia & Puglielli 1999)

(20) *W manwn (g) yzwn (Berber)
who whom CM kissed-PART
‘Who kissed whom?’
(Noureddine Elouazizi, personal communication)

4. The Typology of multiple wh-questions revisited

We have seen that Somali and Berber are languages that obligatorily license wh-phrases in a structurally marked (cf. 7), unique focus position (cf. 10). A wh-item occurs left adjacent to a focus marker in Somali, and appears left adjacent to a cleft marker in Berber. According to the Head-Adjacency Hypothesis as a licensing requirement for wh-phrases in Somali and Berber, wh- \textit{in situ} is not allowed. Following the Uniqueness Hypothesis, focus recursion and focus clustering are also not possible. Multiple wh-questions are therefore excluded in Somali and Berber.

Thus, the language typology based on the criterion of multiple wh-question formation needs to be extended with an additional type. There are primarily two language types: languages that allow only for single wh-questions and languages that allow for multiple wh-questions. The group of languages with multiple wh-questions shows a great variety of subtypes: a) \textit{ex situ}, b) \textit{in situ}, and c) mixed type languages, as well as subtype specific variations\textsuperscript{10}. The group of languages that do not allow for multiple wh-questions consists of members that license wh-phrases only in a unique focus position (cf. 10) in the left periphery of the clause through a spec-head relation (cf. 7). As far as I know, this language type consists only of overt wh-fronting languages. The analysis I have proposed makes the following correct prediction: there is no wh-\textit{in situ} language that does not allow for multiple wh-questions. The question whether the languages without multiple wh-questions show a variety of subtypes and, if so, which subtypes can be distinguished, remains subject for future research.

\textsuperscript{10} I have not discussed the question what kind of features exactly, wh- or focus-features, drive the derivation of multiple wh-questions in every single subtype of the languages that allow for multiple wh-questions. (for a feature based typology of wh-questions see Sabel 2004)
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References


