wh-Question Formation in Nguni

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1. Introduction

In this paper, we present ongoing work on the syntax of wh-questions in Nguni. Nguni belongs to the Southern Bantu language groups (= Zone S, in terms of Guthrie's (1967) classification) and comprises a group of closely related, i.e., structurally and lexically similar, languages (S 40: Zulu, Xhosa, Swati, Ndebele). The examples in this paper are from Zulu, but the major claims about Zulu syntax also hold for the other Nguni varieties.

We examine the positions in which wh-phrases appear in questions and analyze our findings within the context of a broader typology of wh-questions. One important characteristic of Zulu wh-questions is that an argument wh-phrase may appear both ex situ (in a cleft wh-construction) and in situ – but never in the structural subject position Spec TP (i.e. Zulu shows a *Wh-in Spec TP restriction). We argue that the [+wh]-feature which is located in C^0 of a question is weak in Zulu and hence does not trigger wh-ex situ. Instead, the ex-situ wh-cleft construction comes about as the result of the (optional) selection of a strong [+focus]-feature, and we argue that this feature is checked by the clefted wh-phrase, which is located in the specifier of a focus phrase. This analysis makes it possible to explain why Zulu obeys the *Wh-in Spec TP restriction. Furthermore, we show how the assumption that the [+wh]-feature in Zulu is weak also explains two other characteristics of Zulu wh-constructions, i.e. that Zulu, in contrast to other optional wh-in situ languages like Duala or French, allows for partial wh-movement and for wh-in situ in embedded questions.

In section 2, we illustrate the basic properties of wh-constructions in Zulu, and we discuss the restriction that wh-phrases in Zulu may not appear in Spec TP. Section 3 focuses on partial wh-movement and wh-in situ/wh-ex situ in direct and indirect questions, and Section 4 outlines our analysis of these data.

2. Optional wh-in situ and the *Wh-in-Spec TP restriction in Zulu

Zulu is an optional wh-in situ language. The examples (1)-(2) show that both wh-in situ and wh-ex situ is possible with wh-objects:[1]

(1) a.   U-bona   **ini**?   a.' U-bona-**ni**?
      2ndSG-see what9
      'What do you see?'

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[1] In Bantu languages, each noun belongs to a particular noun/gender class. Class membership determines agreement with nominal modifiers, verbs, adjectives, etc. In the glosses, we mark the Zulu noun classes and agreement according to Meinhof's (1906) numbering system of Proto-Bantu. Morphemes are glossed as follows: AUX = past tense auxiliary; COP = copula; DEM = demonstrative pronoun; EXPL = expletive prefix; FOC = focus marker; OC = object clitic; PASS = passive; PL = plural; PRT = wh-particle; RC = relative concord; RS = relativising suffix; SG = singular; SP = subject prefix.

b. U-bona **ubani**?   b.' U-bona **bani**?
   2ndSG-see who1a
   'Who do you see?'

(2) a. **Y-ini**   o-yi-bona-yo?
   COP-what9 RC2ndSG-OC9-see-RS
   'What is it that you see?'

   b. Ng-**ubani**   o-m-bona-yo?
   COP-who1a RC2ndSG-OC1a-see-RS
   'Who is it that you see?'

In Zulu, both subject and object wh-phrases can be realized as *ini*, 'what' (class 9), and *ubani*, 'who', (class 1a). If a wh-phrase appears in situ, its initial vowel may be dropped (see (1a'-b')); the monosyllabic –*ni* is then suffixed to the verb stem.[2] Note that Zulu allows for argumental pro-drop, an aspect to which we return in section 4.1.

The wh-ex situ construction in Zulu is realized as a wh-cleft, (2). The copula is a prefix which has the allomorphs *y-* and *ng-* in wh-constructions; the choice between these two forms depends on the noun class of the noun (see section 4.1).[3] The form copula+noun is followed by a full sentence which seems to have all the properties of a relative clause in Nguni (but see the discussion in section 4.2). The verb *bona* in (2) is prefixed with the so-called relative concord, which differs from the regular subject prefix in that it expresses relativisation and agreement with the subject of the relative clause simultaneously. In object relatives, an object clitic attaches to the verb stem which agrees with the head noun in noun class (cf. *-yi-* in (2a) and *-m-* in (2b)); furthermore, a phrase-final verb usually bears a relativising suffix –*yo* (see Zeller 2004 for more details).

In Zulu, a preverbal subject *wh*-phrase cannot appear in the derived subject position, i.e. in Spec TP, as is shown in (3a-b) for an active and a passive sentence. (4) illustrates that the wh-ex situ variants of both sentences are possible:

(3) a. *****Ubani** u-banga   lowo msindo?
    who1a SP1a-cause DEM3 noise3
    'Who is making that noise?'

   b. *****Ubani** u-ya-shay-wa?
    who1a SP1a-FOC-beat-PASS
    'Who is beaten?'

(4) a. Ng-**ubani** o-banga   lowo msindo?
    COP-who1a RC1a-cause DEM3 noise3
    'Who is it that is making that noise?'

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[2] Speakers generally prefer the reduced variants of the in situ wh-phrases, although full forms are accepted in all contexts where the reduced forms can occur. In contrast to the reduced wh-phrase, the non-reduced phrase seems to have a referential interpretation (cf. Hendrikse & Poulos (1980); for example, (1b) could be translated as 'Whom *specifically* do you see?'. In the text, we provide in situ examples with reduced and non-reduced forms indiscriminately.

[3] The copular prefixes, in particular *ng-*, are often omitted in spoken Zulu. However, this seems to be a purely phonological deletion process, since the depressor-effect of the copula (= lowering of the tone of the first syllable of the following noun) is maintained even if the copula itself is not pronounced. We assume that in the relevant cases, the form of the copula which is prefixed to the noun is zero (Ø).

b. Ng-**ubani**   o-shay-wa-yo?
   Cop-who1a Rc1a-beat-Pass-Rs
   'Who is it that is beaten?'

Importantly, as illustrated in (5), wh-elements that are not allowed to appear in Spec TP, (5a), may appear in the (postverbal) VP-internal (Spec vP)-position in the so-called impersonal *ku*-construction, (5b) (van der Spuy 1993). Like English, and in contrast to languages such as Icelandic, most Zulu dialects do not seem to allow for transitive expletive constructions (see Chomsky 1995 for an attempt to derive this typological variation; see also fn. 4.); the *ku*-construction is therefore not available for the examples in (3) and (4).) (5c) again illustrates that wh-ex situ is always possible:

(5) a. *Ubani** u-fikile?
        who1a SP1a-arrived
    b. Ku-fike   **bani**?
        Expl-arrived who1a
    c. Ng-**ubani** o-fikile?
        Cop-who1a Rc1a-arrived
        'Who arrived?'

It seems that the examples in (3) and (5a) are ruled out because of a general property of Spec TP in Zulu:

(6)   *Wh-in-Spec TP

(6) must be a parameterized property, since it is well-known that languages such as English allow for wh-phrases to appear in Spec TP.[4] It has been noted that (6) is also operative in languages other than Zulu. For example, wh-subjects are excluded from occuring in Spec TP in other Bantu languages such as Kinyarwanda (Maxwell 1981), Dzamba (Bokamba 1976) and Kitharaka (Muriungi 2003) and also in Austronesian languages such as Malagasy, Tagalog, and Javanese, which are optional wh-in situ languages like Zulu (see Sabel 2002, among others). The examples in (7)-(9) are from Kinyarwanda and illustrate the same pattern as the Zulu examples in (3)-(5) above:

(7) a. Umugore jiše   **nde**?
       woman   killed who
       'Who did the woman kill?'
    b. Ni-**nde**   umugore jíše ?
       Foc-who   woman   kill
       'Who did the woman kill?'

(8) a. *Nde** jiše   umunhu?
       who   killed man
       'Who killed the man?'

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[4] See, for example, the discussion of the vacuous movement hypothesis in Chomsky (1986, 1995, chapter 4). The absence or presence of the *Wh-in-Spec TP restriction in a language is only one parametric property of Spec TP. Another parametric property concerns the licensing of nominative subjects in the Spec TP position of infinitives; nominative subjects in this position are found in languages such as European Portuguese and Spanish, but not, for example, in English and German. As is well-known, the licensing of empty pro-subjects in a language also depends on the properties of this position (and its head T^0). Further parametric properties of Spec TP are whether it can be filled with indefinite subjects (as in English), or not (as for example in Malagasy, see Keenan 1976), and whether it allows for multiple specifiers and hence for transitive expletive constructions (Chomsky 1995).

   b. ***Nde** jiš-we   na umunhu?
       who killed-PASS by man
       'Who was killed by the man?'

(9) a.   Ni-**nde**   u-íše   umunhu?
        FOC-who SP-killed man
        'Who killed the man?'
    b.   Ni-**nde**   u-íš-we   na umunhu?
        FOC-who SP-kill-PASS by   man
        'Who was killed by the man?'

(7) shows that wh-in situ and wh-ex situ (also a wh-cleft construction) are possible with a wh-object (Sabel 2002). In (8a), it is demonstrated that a wh-subject may not appear in Spec TP; (8b) illustrates the same restriction for a derived grammatical subject in a passive construction (compare (3b)). The only possibility to rescue these sentences is to construct them with the wh-subject ex situ, as in (9).

    What could be the reason behind the *Wh-in-Spec TP restriction? We claim that (6) is a corollary of a more general constraint that bans focused constituents (i.e. elements with a [+focus]-feature) from appearing in subject position. Notice that focused non-wh-phrases may also not occur in Spec TP in Zulu:

(10)a.   Abafana ba-ya-sebenza.
       boy2   SP2-FOC-work
       'The boys are WORKING.'
    b.   Abafana ba-sebenza kakhulu.
       boy2   SP2-work a.lot
       'The boys are working A LOT.'

(11)a. *Abafana ba-sebenza.
       boy2   SP2-work
       'The BOYS are working.'
    b.   Ng-abafana aba-sebenza-yo.
       COP-boy2   RC2-work-RS
       'It is the boys who are working.'

The affix *-ya-* in Zulu marks focus on the verb in the present tense, (10a). If another constituent in the VP is focus-marked, *-ya-* does not occur. However, in contrast to (10b), where focus is on the adverb, subject focus cannot be expressed by simply combining a focused subject DP in Spec TP with the unmarked verb form, as in (11a). The only way to express subject focus is by means of the cleft construction; (11b) hence patterns with the wh-ex situ examples provided in (2) and (4) above.

    The incompatibility of focus and subject position is not entirely surprising, given that even in subject-prominent languages, subjects are often associated with typical topic functions such as definiteness and referentiality (Givón 1976). Furthermore, according to Givón (1976), subjects in languages with subject-verb agreement are the result of a diachronic process in which the left-dislocated topic phrase of a topic-comment construction was reanalyzed as the subject of the neutral sentence pattern; in the same process, a pronoun that originally expressed anaphoric agreement with the shifted topic was reanalyzed as a subject agreement marker (see also Lehmann 1976 on the topic-comment "ancestors" of subject-predicate constructions in modern Indo-European languages). One might therefore assume that some languages still show a reflex of this diachronic development in that

the inherent topichood of subjects is synchronically still prominent enough to prevent focus-marked constituents from occurring in subject position (cf. in this regard Hendrikse & Poulos (1980), who observe that indefinite NPs are not licensed in sentence-initial position in Xhosa). As for wh-constructions, it is well-known that a wh-phrase in a wh-question represents the focus (the new information) of the sentence (while the rest of the proposition is presupposed). A possible explanation for (6) may therefore be sought in the semantic incompatibility of wh-phrases and topics.[5]

However, a semantic account for (6) predicts that wh-phrases are banned from Spec TP in all languages, and it is not clear how the fact that (6) is a parameterized property of Spec TP can be captured in this approach. We therefore claim instead that there is a *syntactic* explanation for why wh-subjects cannot occur in Spec TP in Zulu, which is nevertheless related to the semantic fact that wh-phrases are inherently focused. We suggest below that the focus character of wh-phrases can be morpho-syntactically implemented by assuming that they bear a [+wh]- as well as a [+focus]-feature (see Sabel 1998, 2000, 2002, 2003). On the basis of this idea, our explanation for (6) is then derived as a consequence of the analysis of the syntax of wh-questions in Zulu that we present in the following sections.

3. Wh-in situ, wh-ex situ and partial wh-movement

In this section, we turn to the positions that wh-phrases in Zulu may occupy if they originate in embedded sentences. Consider the examples in (12), with wh-objects:

(12) a. [$_{CP}$ U-cabanga [$_{CP}$ ukuthi uBev   u-thenge   **ini**]]?
         2ndSG-think   that   Bev1a SP1a-bought what9
         'What do you think Bev bought?'
     b. [$_{CP}$ Y-**ini**   o-cabanga [$_{CP}$ ukuthi uBev   u-yi-thengile ___]]?
         COP-what9 RC2ndSG-think that   Bev1a SP1a-OC9-bought
         'What do you think Bev bought?'
     c. [$_{CP}$ U-cabanga [$_{CP}$ ukuthi y-**ini**   a-yi-thengile-yo   uBev ___]]?
         2ndSG-think   that   COP-what9 RC1a-OC9-bought-RS   Bev1a
         'What do you think Bev bought?'

(12a) is a direct question with wh-in situ in an embedded clause; the wh-phrase appears in the position in which it receives its theta role. (12b) is the "full wh-movement" variant of this sentence (see fn. 6); the wh-phrase is realized in the left periphery of the matrix clause, the sentence in which it takes scope. Importantly, (12c) shows that Zulu allows for *partial wh-movement*. In partial wh-movement constructions, the wh-phrase neither appears in situ nor in the position in which it is interpreted. In Zulu, the wh-phrase appears instead in an intermediate cleft position following the complementizer, but it still takes sope in the matrix [+wh]-position.[6]

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[5] Independent evidence for this generalization comes from languages such as Japanese where topics are morphologically marked with the topic-marker *-wa*. In Japanese, a wh-phrase with the topic marker obligatorily receives a contrastive (topic) interpretation (Miyagawa 1987). Similarly, examples such as (8) seem to be possible if the wh-phrase receives a contrastive (topic) reading.

[6] In section 4.2 we discuss the possibility that a wh-phrase such as *ini* in (12b-c) has not moved from its base position in the subordinate clause (indicated by (12a)), but is merged into the matrix (12b) or intermediate clause (12c). We continue to use the terms "full wh-movement" and "partial wh-movement" to refer to constructions such as (12b-c), but we remain agnostic at this stage about the position from which the wh-phrase has moved.

Notice that, due to the restriction in (6), subject wh-phrases are also banned from embedded Spec TP positions, as shown in (13a). However, the wh-subject is again possible in VP-internal position, as is shown by the impersonal *ku*-construction in (13b):

(13) a. *[$_{CP}$ U-cabanga [$_{CP}$ ukuthi [$_{TP}$ **ubani**   u-sebenzile [$_{vP}$ ___]]]]?
           2ndSG-think   that   who1a SP1a-worked
     b.   [$_{CP}$ U-cabanga [$_{CP}$ ukuthi [$_{TP}$ ku-sebenze [$_{vP}$ **bani**]]]]?
           2ndSG-think   that   EXPL-worked who1a
           'Who do you think worked?'

In constructions with more embedded sentences, the wh-phrase can appear in all intermediate cleft positions. The examples in (15), based on (14), show all possible positions which a wh-ex situ subject can occupy in a direct question from an embedded clause. It may appear in the full wh-movement construction (15a), or in the two intermediate positions in the partial wh-constructions in (15b-c):

(14)   [$_{CP}$ U-cabanga [$_{CP}$ ukuthi ba-the   [$_{CP}$ uPeter u-sebenzile]]].
         2ndSG-think   that   3rdPL-said   Peter1a SP1a-worked
         'You think that they said Peter worked.'

(15) a. [$_{CP}$ Ng-**ubani**   o-cabanga   [$_{CP}$ ukuthi ba-the   [$_{CP}$ ___   u-sebenzile]]]?
          COP-who1a RC2ndSG-think that   3rdPL-said   SP1a-worked
     b.   [$_{CP}$ U-cabanga [$_{CP}$ ukuthi ng-**ubani**   aba-the   [$_{CP}$ ___   u-sebenzile]]]?
          2ndSG-think [ukuthi COP-who1a RC3rdPL-said   SP1a-worked
     c.   [$_{CP}$ U-cabanga [$_{CP}$ ukuthi ba-the [$_{CP}$ ng-**ubani**   ___   o-sebenzile]]]?
          2ndSG-think   that   3rdPL-said COP-who1a   RC1a-worked
          'Who do you think they said worked?'

The question is whether the distributional possibilities for wh-phrases in Zulu follow a systematic pattern from a typological point of view. Sabel (1998) shows that languages with optional wh-in situ exhibit a correlation between *partial wh-movement* and *wh-in situ in embedded questions* and can accordingly be divided into two groups. Optional wh-in situ languages such as Babine-Witsuwit'en, Iraqi Arabic, and Malagasy allow for both partial wh-movement and for wh-in situ in embedded questions (Type A-languages). In contrast, optional wh-in situ languages such as Duala and French, which do *not* allow for partial wh-movement, also do *not* allow for wh-in situ in embedded questions (Type B-languages). These properties of the latter type of languages are illustrated by the following examples from Duala, an SVO-Bantu language spoken in Cameroon. (16) shows that Duala has optional wh-in situ:

(16) a. O   bodi   **nja**   moni?
          you give   who   money
     b.   **nja** o   bodi no   moni?
          who you give PRT money
          'Who did you give the money to?'

If we turn to direct questions from embedded sentences, we observe that wh-in situ is again possible, (17a), and that wh-elements may also appear ex-situ in the highest clause, where they are interpreted, (17b). However, the partial wh-construction is impossible in Duala, as illustrated in (18):

(17) a. [$_{CP1}$ o   ta   o   pula [$_{CP2}$ na   Kuo a keke [$_{CP3}$ wanea muna-o **nje**]]]
you AUX you want   that Kuo he try   bring child-his what

b. [$_{CP1}$ **nje** o   ta   no   pula [$_{CP2}$ na Kuo a keke [$_{CP3}$ wanea muna-o __]]]?
what you AUX PRT want   that Kuo he try   bring child-his
'What did you want Kuo to try to bring to his child?'

(18) a. *[$_{CP1}$ o   ta   o   pula [$_{CP2}$ (na) **nje** Kuo a keke no [$_{CP3}$ wanea muna-o __]]]?
you AUX you want   that what Kuo he try   PRT   bring child-his

b. *[$_{CP1}$ o   ta   o   pula [$_{CP2}$ (na) Kuo a keke [$_{CP3}$ **nje** wanea no   muna-o __]]]?
you AUX you want   that Kuo he try   what bring PRT child-his

c. *[$_{CP1}$ o   ta   no   pula [$_{CP2}$ (na) **nje** Kuo a keke [$_{CP3}$ wanea muna-o __]]]?
you AUX PRT   want   that what Kuo he try   bring child-his

(19) shows that wh-in situ in embedded questions is impossible in Duala. Wh-ex situ is obligatory in this context:

(19) a. *[$_{CP}$ Na si   bi   [$_{CP}$ Kuo a-andi **nje**]].
I   not know   Kuo he-buy what

b. [$_{CP}$ Na si   bi [$_{CP}$ **nje** Kuo a-andi no   ___]].
I   not know   what Kuo he-buy PRT
'I don't know what Kuo bought. '   (Epée 1976:161)

Given that Zulu allows for partial wh-movement, it is predicted that, in contrast to Duala, embedded questions allow for wh-in situ. This prediction is realized, as is shown by (20b):

(20) a. [$_{CP}$ Ngi-buze   [$_{CP}$ ukuthi y-**ini**   uPeter a-yi-thengile-yo]].
1stSG-asked   that   COP-what9 Peter1a RC1a-OC9-bought-RS

b. [$_{CP}$ Ngi-buze   [$_{CP}$ ukuthi uPeter u-thenge-**ni**]].
1stSG-asked   that   Peter1a SP1a-bought-what9
'I asked what Peter bought.'

We conclude that Zulu fits well into the typology of optional wh-in situ languages. Like Babine-Witsuwit'en, Iraqi Arabic and Malagasy, Zulu is a Type A-language.

4.   The Analysis

4.1   FocP and Feature Checking in Zulu

In this section we develop an account for the Zulu data discussed above which is based on the feature-checking mechanism of the Minimalist Program (Chomsky 1995, 2000) and the analysis of wh-constructions proposed in Sabel (1998, 2000, 2002, 2003). The central idea of this analysis is that wh-phrases do not only check [+wh]-features, but also [+focus]-features.[7] Whereas a [+wh]-feature is always located in the position where the wh-phrase takes its scope (i.e. in C^0), a [+focus]-feature may occur in C^0, but also in Foc^0, the head of a focus phrase FocP, in some languages. For reasons outlined

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[7] Note that the idea to analyze wh-movement as an instance of focus-movement is sometimes traced back to the (semantic) fact that a wh-element is inherently a focus (see section 2). For example, in a sentence such as *I wonder what Susan said*, the wh-word is the ("information") focus of the question/clause *what Susan said* since the wh-phrase designates what is not presupposed as known (see Sabel 1998, 2000 for references).

in Sabel's work mentioned above, we assume that the position of wh-words is universally determined by properties of the [+wh]- and the [+focus]-features and that typological variation with respect to wh-questions in the languages of the world is determined by two parameters: (i) which of the two features ([+wh] or [+focus]) is strong and hence triggers wh-movement in a language, and (ii) which specifier (Spec CP or Spec FocP) serves as the position in which a strong [+focus]-feature would be checked in a language. Furthermore, the possibility of having both wh-ex situ and wh-in situ in a language can be explained by the assumption that the strong feature which triggers wh-movement is optionally selected for the numeration.

The way parameter (i) is set in a language can be determined by taking a look at the properties of embedded questions, where C^0 carries a [+wh]-feature due to the selectional properties of the matrix verb. Following Sabel (1998), we assume that if a language has a strong [+wh]-feature, this feature is obligatorily selected by the matrix verb in an embedded question, even if the strong [+wh]-feature is otherwise optional. Therefore, if a language has wh-in situ in embedded questions (= Type A-language), this means that the [+wh]-feature is always weak in this language (and hence need not be checked). In contrast, if wh-in situ is *not* possible in embedded questions (as in Type B-languages), then it follows that the [+wh]-feature is strong and therefore requires a wh-phrase in Spec CP in order to be checked. As we saw above, Zulu allows for wh-in situ in embedded questions. Hence, the [+wh]-feature in Zulu is weak. Since Zulu exhibits wh-ex situ as well, this alternative must be triggered by an optionally realized strong [+focus]-feature. In contrast, in Type-B languages such as Duala, wh-ex situ is triggered by a strong [+wh]-feature, which is obligatory in selected and optional in unselected contexts.

With respect to (ii), we assume that the strong [+focus]-feature is realized in Foc^0 in Zulu and that FocP is generated above VP/vP and below TP (cf. Ndayiragije 1999). If the strong [+focus]-feature is selected, a wh-phrase has to be realized in Spec FocP in order to check this feature. If the strong [+focus]-feature is not selected, we get wh-in situ. Evidence for the claim that ex situ wh-phrases in Zulu are not in Spec CP is provided by the word order in embedded questions, (20a), and by partial wh-movement constructions, (12c), (15b), which show that the wh-phrases occur in a position following the complementizer. In addition, note that focused constituents in cleft-constructions and ex situ wh-phrases occupy the same position (compare (21) and (12b-c)), and hence cannot co-occur, (22):

(21) a. [Y-**indoda** o-cabanga   [ukuthi uBev   u-yi-bonile ___]].
          COP-man9 RC2ndSG-think that   Bev1a SP1a-Oc9-saw
          'It was the man who you think that Bev saw.'
     b. [U-cabanga [ukuthi y-**indoda** uBev a-yi-bonile-yo ___]].
          2ndSG-think   that COP-man9 Bev RC1a-Oc9-saw-RS
          'You think that it was the man that Bev saw.'

(22) a. *[U-cabanga ukuthi [y-**ini**   ng-**umama**   abantwana aba-m-nike   yona]]?
          2ndSG-think that   COP-what9 COP-mother1a child2   RC2-Oc1a-gave it9
          'What do you think that the children gave to MOTHER?'
     b. *[U-cabanga ukuthi [y-**imali**   ng-**ubani**   abantwana aba-m-nike   yona]]?
          2ndSG-think that   COP-money9 COP-who1a child2   RC2-Oc1a-gave it9
          'To whom do you think the children gave the MONEY?'

As was shown in section 2, ex situ wh-phrases in Zulu, like the focused constituents in (21), obligatorily combine with a copula verb *ng-* or *y-* (or Ø – see fn. 3) which is prefixed to the wh-element. The fact that these copula affixes are genuine verbs is illustrated by nominal predicate constructions such as (23), in which the subject agreement marker is prefixed to the copula:

(23) a.   UThandi u-**ng**-umfazi.
           Thandi1a SP1a-COP-woman1
           'Thandi is a woman.'
   b.   UThemba u-**y**-indoda.
           Themba1a SP1a-COP-man9
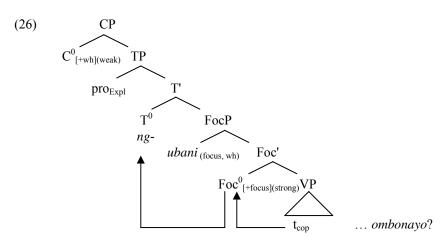   'Themba is a man.'

At first sight, one might be led to believe that copula allomorphy in Zulu is phonologically conditioned, since nouns whose initial vowel is *i-* take the copula *y-*, whereas the majority of all other nouns take *ng-*. However, on closer inspection, it turns out that the choice of the copula prefix cannot be determined by the phonological properties of the head-noun, but must take its noun class into account:

(24)   class 1:   a.   **ng**umfana, 'it is a boy'   b. ***l**umfana   c. ***y**umfana
        class 14:   a.   **ng**ukudla, 'it is food'   b. ***l**ukudla   c. ***y**ukudla
        class 11:   a.   (*)**ng**udonga, 'it is a wall'   b. **l**udonga   c. **y**udonga

As (24) shows, nouns of class 11 start in the vowel *u-*. Interestingly, the copula for class 11 nouns is usually *l-* or *y-* (depending on the dialect of the speaker); for many speakers, the copula *ng-* is not possible with nouns in this noun class. Importantly, other nouns with the prevowel *u-*, such as those of class 1 or 14 in (24), never permit copulas *l-* or *y*. This means that the choice of the copula cannot be treated as a mere phonological phenomenon, but is determined via grammatical agreement between the noun class (gender) features of the noun and the copular verb. We assume that this agreement is established by specifier-head agreement in the focus phrase FocP.

On the basis of these considerations, we arrive at the following analysis of (the relevant aspect of) wh-ex situ cleft constructions such as (25) in Zulu (νP is ignored in (26), and we postpone the discussion of the structural relation between the wh-phrase and the following clause to section 4.2):

(25)   Ng-**ubani**   o-m-bona-yo?
         COP-who1a RC2ndSG-OC1a-see-RS
         'Whom did you see?' ('It is who that you see?')

(26)

In wh-ex situ constructions such as (25)/(26), where a strong [+focus]-feature is realized, the wh-phrase is located in Spec FocP where it checks the [+focus]-feature in Foc^0. The strong [+focus]-feature selects the copula-VP in (26). We assume that Zulu, a language with a "rich" verbal inflection

paradigm, has V-to-T movement for both finite full verbs and auxiliaries. Therefore, the prefixal copular verb moves first from V^0 to Foc^0, where agreement between the copula and the wh-phrase in Spec FocP is established, and then further to T^0, where it precedes the wh-phrase in Spec FocP and can be prefixed to this phrase at PF.

The C^0-head in (26) contains a [+interpretable] [+wh]-feature (in terms of Chomsky's 1995 analysis) which, as pointed out above, establishes the scope of the wh-phrase in (26). Since the [+wh]-feature in Zulu is weak, it does not need to be checked by an overt wh-phrase in Spec CP. Instead, the non-local relation between the [+wh]-feature of the wh-phrase in Spec FocP and the weak [+wh]-feature in C^0 is licensed via unselective binding at LF.[8]

(26) also shows that Spec TP in the cleft construction is filled with an expletive pro-subject in Zulu. This assumption is well-motivated, because Zulu has all the properties that are characteristic of a null subject language. First, we have already seen in a number of examples that Zulu freely allows for (argumental) pro drop (see e.g. (1), (12), (14), (20)). Second, example (15a) in section 3 above shows subject extraction across a complementizer and hence demonstrates that in Zulu, this kind of movement does not induce that-t-effects. Finally, Zulu (optionally) allows for subject-inversion, as was already illustrated by the impersonal *ku*-construction in (5b) and (13b) above. Since Zulu behaves in all relevant respects like a null subject language, it is plausible to assume that Zulu realizes expletive null subjects in the cleft construction. In contrast, a language such as English, which does not allow for null expletives, requires the overt expletive *it* in Spec TP in a cleft wh-construction:

(27) $[_{CP} [_{TP} It [_{T} was] [_{FocP} the book t_v' [_{VP} t_v [_{CP} that Peter bought]]]]]$.

Following standard assumptions, we assume that the null expletive in (26) is merged into Spec TP to check T^0's EPP-feature, whereas argumental *pro* would be merged in SpecvP.

The structure in (26) also accounts for the word order found with wh-ex situ in embedded questions. The CP in (26) would represent the embedded question, and the [+wh]-feature on the C-head would be the result of the lexical properties of the matrix verb, which selects the [+wh]-feature on the embedded C-head.

Partial wh-movement constructions are also derived in this way. The only difference is that here, a weak [+wh]-feature is realized in the C-head of the matrix clause; the matrix verb selects a CP like (26), but with a [-wh]-C-head. However, the strong [+focus]-feature is optionally realized on the embedded Foc^0-head, and consequently, the wh-phrase appears in a copula construction in the embedded clause.

Finally, if both the [+wh]-feature and the [+focus]-feature are weak, then we derive wh-in situ constructions, since neither of these two features needs to be checked by a wh-phrase in a local specifier position. Both features can be checked via unselective binding, and the wh-phrase remains in situ. Note that, in contrast to (26), a weak [+focus]-feature does not select the copula (VP).

A welcome implication of our analysis is that it allows us to derive the *Wh-in Spec TP restriction, discussed in section 2. Since FocP is automatically activated in all wh-questions, Spec FocP intervenes between the base position of wh-phrases (in vP or VP – depending on the argument structure of the verb) and Spec TP. If a wh-phrase were to undergo A-movement from its theta-position inside vP/VP to Spec TP, it would have to move to Spec FocP first in order to check the weak [+focus]-feature associated with the Foc-head.[9] But since Spec FocP is an A-bar position, further movement to Spec TP

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[8] Unselective binding refers to the idea that a wh-phrase which is not in a local Spec-Head relation with a [+wh]-feature in C^0 is nevertheless licensed if it is bound (coindexed and c-commanded) by the [+wh] C^0 scopal position in which the wh-phrase is interpreted. The idea that licensing of wh-phrases may be achieved non-locally via binding through a [+wh] head is expressed in Chomsky (1995: 291), among others.

[9] Note that this possibility only arises when the [+focus]-feature in Foc^0 is weak, since a strong [+focus]-feature automatically selects a copula (VP) and gives rise to the cleft construction. Notice further that even though the

would result in *Improper Movement*, an illegitimate operation – movement from an A- to an A-bar- and then again to an A-position is ruled out. The only way to save a construction with a wh-subject and a weak [+focus]-feature is to leave the subject in vP/VP and insert an expletive in Spec TP to check the EPP-feature (= the impersonal *ku*-construction, (5b)). If the [+focus]-feature is strong, no problem of Improper Movement arises. A copula is selected as part of the numeration, and we derive a structure like (26), in which the final landing site of the wh-element is Spec FocP.

4.2   The cleft construction

In the analysis presented so far we have left open the relation between the clefted wh-phrase and the following sentence. In principle, there are two possible analyses. The traditional view assumes that the sentence which follows the focused phrase in wh-cleft and non-wh-cleft constructions is a relative clause. According to this view, a sentence such as (25) above is monoclausal; the wh-phrase and the relative clause form one constituent (in bold in (28)) which is merged into the structure as the complement of the copula and moves to Spec FocP to check the [+focus]-feature in the Foc-head:[10]

(28)   [$_{CP}$ [$_{TP}$ pro [$_T$ [$_T$ *ng*-]$_v$ [$_{FocP}$ **[$_{DP}$ *ubani*$_i$ [$_{CP}$ OP$_i$ [$_{TP}$ pro [*ombonayo* t$_i$]]]]**$_j$ [$_{Foc'}$ t$_v$' [$_{VP}$ t$_v$ t$_j$]]]]]]]

A strong reason to adopt an analysis like (28) for the Zulu wh-ex situ constructions is that the verb in the sentence immediately following the clefted wh-phrase has relative clause morphology (see section 2). Furthermore, the object wh-phrase in the cleft construction in (25) is represented in the embedded sentence by a resumptive object clitic pronoun which is attached to the verb stem. The Southern Bantu languages do not permit object markers to co-occur with object wh-phrases or focused objects; notice that the verb in wh-object-in situ constructions in Zulu may not bear an object clitic. In contrast, object pronouns may occur in Bantu object relative clauses, a possibility which is attributed to the topic character of the moved relative operator (see e.g. Bresnan & Mchombo 1987).

The alternative analysis treats the whole sentence following the wh-phrase in the wh-cleft as a complement of the copular verb. According to this analysis, a sentence such as (25) is biclausal; the wh-phrase is merged inside the complement clause (in the position where it receives its theta role) and moves to the matrix Spec FocP to check the strong [+focus]-feature in Foc^0. This idea can be further specified by assuming that the complement clause also includes a FocP, and that the wh-phrase moves to the matrix Spec FocP in a successive-cyclic fashion, i.e. via the embedded Spec FocP, presumably also in order to check a strong [+focus]-feature in the embedded Foc-head:[11]

(29)   [$_{CP}$ [$_{TP}$ pro [$_{T'}$ [$_T$ *ng*-]$_v$ [$_{FocP}$ [*ubani*]$_i$ [$_{Foc'}$ t$_v$' [$_{VP}$ t$_v$ [$_{CP}$ [$_{TP}$ pro [$_{T'}$ [$_T$ *ombonayo*]$_v$ [$_{FocP}$ t$_i$'
        [$_{Foc'}$ t$_v$' [$_{VP}$ t$_v$ t$_i$]]]]]]]]]]]]

[+focus]-feature in Foc^0 is weak, the wh-phrase would have to stop in Spec FocP on its way to Spec TP in order to check this feature as a "free rider" (see Sabel 2000: 440 for discussion).

[10] This view is also compatible with the analysis proposed in Kayne (1994), according to which the head noun of a relative clause construction (= the wh-phrase in examples such as (28)) has moved from a position inside the relative clause to a relative clause-initial specifier position:

(i)   a.   the claim that John made

     b.   [$_{DP1}$ the [$_{CP}$ [$_{DP2}$ claim]$_i$ [$_{C'}$ that [$_{IP}$ John made t$_i$]]]]

DP$_1$ checks the strong [+focus]-feature in Foc^0.

[11] This implies that a strong [+focus]-feature in a matrix clause immediately triggers the realization of a similar feature on every embedded Foc-head. See Sabel (2000) for details of this feature percolation process. Furthermore, note that Chomsky (2000) assumes that an additional EPP-feature is located in the C-system, which would force the wh-phrase also to move through intermediate Spec CP(s). We have not represented this feature and the respective movement in (29).

In order to defend an analysis such as (29), one would have to address the fact that the verb in the complement clause in (29) is marked with the same morphology as a verb in a relative clause. However, notice that the morphological properties of the verb in cleft constructions such as (29) do not yet show convincingly that the sentence following the wh-phrase is in fact a relative clause. It is possible that the particular morphological marking observed in clefts and relative clauses reflects a specific syntactic movement operation which takes place in both relative clauses and complement clauses. What has been classified as relative clause morphology (relative concord and relativising suffix) could also be some kind of wh-agreement which is triggered by the movement of an operator in relative clauses, but also by movement of a wh-phrase in a wh-construction.

Furthermore, the occurrence of object clitics in object wh-constructions such as (25) may possibly be explained by the assumption that these alleged pronouns are in fact object agreement markers. As is argued in Woolford (2000) for KiRimi, object agreement in Bantu is triggered if the object moves out of the VP (object shift); the contrast between wh in situ (no object marker) and wh-ex situ (obligatory object marker) in Zulu can perhaps be explained along these lines.

Lack of space prevents us from offering a thorough discussion and comparison of both analyses. The behavior of wh-constructions in island configurations may provide a key to decide between the analyses in (28) and (29). However, on the basis of the comments made in this section, we conclude this article by pointing out that our analysis of wh-ex and wh-in situ constructions in Zulu is compatible with both analyses in (28)-(29). As a general conclusion, we note that Zulu fits well into the typological class of optional wh-movement languages such as Babine-Witsuwit'en, Iraqi Arabic and Malagasy, which all construct wh-ex situ as a result of checking a strong [+focus]-feature. Zulu provides further evidence for the claim that typological variation with respect to wh-questions in the languages of the world is determined by two parameters: (i) which of the two features ([+wh] or [+focus]) triggers wh-movement in a language, and (ii) which specifier (Spec CP or Spec FocP) serves as the position in which a strong [+focus]-feature would be checked in a language.

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