Zulu *Ngani* as Postverbal WHY in CP*

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About This Paper

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Abstract

Beginning with Rizzi's (1999) analysis of Italian, it is being claimed for a growing number of languages that, unlike other *Wh* phrases, reason WHY is introduced in the complementiser field rather than moving there from a position below the inflectional domain. Zulu *ngani* "why", a word used only to question negative clauses, is argued to need a similar analysis, even though it appears in postverbal position. Arguments for the analysis are made on the basis of the distribution of conjoint and disjoint verb forms, interactions between WHY and negation, and previous analyses of Zulu's elocutionary force particles *yini* and *na*. Specifically, *ngani* is argued to be an Int^0 head, around which the IP must move. It is suggested that reason WHY (as opposed to purpose WHY) is universally introduced above negation. Implications are discussed for analysing IAV (Immediate After the Verb) position focus effects in Bantu languages as a dedicated sub-IP focus position, showing that *ngani* weakens the attractiveness of such analyses.

This paper is about the syntactic position of WHY, and more specifically about a particular reason-questioning strategy used in Zulu, a Bantu language (S42) of the Nguni cluster, spoken primarily in South Africa. Since Rizzi's (1999) manuscript on Italian, it has been argued for an increasing number of languages that the type of WHY known as "reason WHY" is introduced (base-generated) in the complementiser domain, rather than in a subinflectional (sub-IP) position like other *Wh* phrases. These languages include Korean, Japanese, Mandarin, Tsou, and English. This article extends the typological and genetic application of this type of analysis to Bantu languages, as well as to a language in which WHY appears postverbally.

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1 Why questions in Zulu

There are three why questioning strategies in Zulu. The first is the purpose applicative question, illustrated in (1):

(1) U-cul-el-a-ni?
2S-sing-APPL-FV-what
"Why are you singing? What are you singing for?"

In this strategy, discussed in detail in Buell (2007a, 2007c), the applicative suffix *-el* and the enclitic *-ni* "what" both clearly originate and surface within the IP. This strategy can only be used to question affirmative clauses.

The second strategy is the non-applicative reason cleft, whose three variants with *yingani*, *yin' indaba*, and *yini* are shown in (2):

(2) a. Yi-nga-ni w-enz-a lokho?
COP-for-what 2S-do-FV 17.that
"Why are you doing that?"

b. Y-in' indaba w-enz-a lokho?
COP-what 9.story 2S-do-FV 17.that
"Why do you that? What makes you do that?"

c. Y-ini uSipho e-ng-enz-anga lutho?
COP-what 1.Sipho 1-NEG-do-FV nothing
"Why Sipho didn't do anything?"

The derivation of this construction is less clear (Buell 2007a). All three variants can be used to question both negative and affirmative clauses.

The third strategy, the one we are concerned with in this paper is postverbal *ngani*.[1] This strategy can only be used to question a negative clause, as shown in (3). In the negative question in (3a), *ngani* has the interpretation of "why", but in the affirmative question in (3b), only the interpretation of "what about" or (instrumental) 'what with" is possible:

(3) a. A-wu-khulum-i ngani?
NEG-2S-speak-FV why
"Why aren't you talking?"

b. Ni-khulum-a nga-ni?
2P-speak-FV about-what
"What are you talking about?" NOT "Why are you talking?"

We might naïvely attribute the fact that *ngani* cannot used to mean *why* in (3b) to ambiguity, but *ngani* cannot be used with this meaning even when no ambiguity is possible, as shown with a verb like *bhema* "to smoke", which cannot take a complement meaning "about something":

[1] While the string *ngani* also appears in the cleft reason question variant in (2a), the properties of the *yingani* cleft and the postverbal *ngani* in (3a) are quite different. For the remainder of the paper, we will only concern ourselves with postverbal *ngani* and will hence from here on forego the word "postverbal".

(4) ∗ Ni-(ya-)bhem-a nga-ni/ngani?
2P-DJ-smoke-FV about-what/why
Intended: "Why do you smoke?"

In contrast with the applicative strategy in (1), which has been argued to express "purpose WHY" (Buell 2007a), questions with *ngani* of the sort in (3a) clearly express "reason WHY", as can be seen in the following contrast:

(5) a. ∗ U-gul-el-a-ni pho?
2S-be.sick-APPL-FV-what so
("I only eat healthy food.") "So why are you sick?"

b. A-wu-gul-i ngani pho?
NEG-2S-sick-FV why so
("I just ate some rotten meat.") "So why aren't you sick?"

The predicate "be sick" is not amenable to a purpose applicative question (5a) because it involves no intentional participant. The fact that *ngani* can be used to question this predicate in (5b) is best explained by assuming that *ngani* encodes reason, which does not require any intentional participant.

Embedded clauses employing *ngani* are licensed whether the embedded clause is a selected question (as in (6a)) or not (as in (6b)):

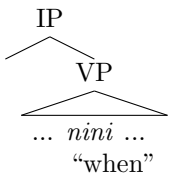
(6) a. Ngi-zo-ba-buz-a ukuthi uThembi a-ka-khulum-anga ngani.
1S-FUT-2-ask-FV that 1.Thembi NEG-1-speak-FV why
"I will ask them why Thembi didn't speak."

b. Ni-cabang-a ukuthi uThembi a-ka-khulum-anga ngani?
2P-think-FV that 1.Thembi NEG-1-speak-FV why
"Why do you think that Thembi didn't speak?"

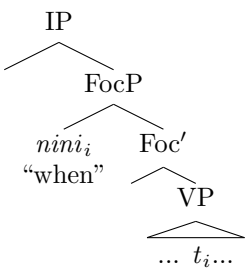
The sections that follow consider the structural height of *ngani* and how it comes to appear in postverbal position. *In situ* postverbal *Wh* phrases are the norm in Zulu. These phrases, like *nini* "when" in (7) are generally assumed to sit inside the verb phrase, as in (8a), or, at the very highest, in a focus projection below the inflectional domain, as in (8b):

(7) U-cul-e nini?]$_{VP/IP}$
2S-sing-PERF.CJ when
"When did you sing?"

(8) a.

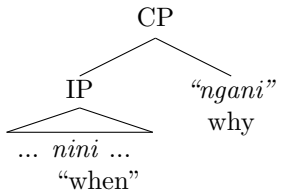


b.



The zero hypothesis is therefore that *ngani* in a question like (3a) also occupies a VP-internal or other subinflectional position. The following sections challenge this hypothesis and discuss both the structural height of *ngani* and the way in which it comes to appear in postverbal position. Specifically, it will be argued that while *in situ Wh* phrases like *nini* "when" in Zulu are generally inside IP, *ngani* is outside of IP, in the complementiser domain, as pictured in (9):

(9)



This analysis will be found to concur with conclusions drawn concerning words meaning "why" in other languages, such as Italian *perchè* (Rizzi 1999), Korean *way*, Japanese *naze*, and Mandarin *weishenme* (Ko 2005; Lin 1992). While the result for Zulu *ngani* is the same as for these words for "why" in other languages, Zulu provides the unique case of a language in which *why* appears in a strictly postverbal position.

Organisation of this paper. The remainder of this paper is organised as follows. Section 2 presents some necessary background information and assumptions. In section 3, junctivity (conjoint/disjoint) facts will be presented as morphosyntactic evidence that *ngani*, at variance with other *Wh* phrases, occupies a position outside the verb phrase. In section 4, the interaction between WHY and negation is discussed, showing that the interaction is best explained by assuming that WHY does not fall under the scope of negation at any point in the derivation. In section 5, it is suggested that reason WHY is universally introduced outside the scope of negation, even though some languages may allow introduction of WHY in a subinflectional position in affirmative clauses. The argument is developed that the precise position that *ngani* occupies is Int′, IntP being a projection in an articulated complementiser domain. Recent analyses of WHY Italian and Korean, as well as an analysis of Nguni elocutionary force particles, are argued to support the analysis proposed. In section 6, the implications of this analysis are brought to bear on the notion of the IAV (Immediate After the Verb) position, concluding that the analysis of *ngani* weakens the claim that IAV linear position should be reduced to a unique structural IAV position, such as a low focus position. Section 7 sums up the conclusions and gives an example of a language where further testing can be done to determine whether a postverbal WHY questioning a negative clause is not, in fact, in the complementiser domain.

2 Some background and assumptions

In preparation for our discussino of *ngani*, we will first consider two relevant morphosyntactic issues about Zul as well as a few theoretical assumptions

Like most other Bantu languages, Zulu has complex verbal morphology which can include both subject and object prefixes, which are traditionally called "subject markers"

and "object markers". For example, in (10), the verb displays the first person singular subject marker *ngi-* and the noun class 2 (typically human plural) object marker *ba-*:

(10) a. Ngi-ba-bon-ile izolo.
1S-DJ-2-see-PERF.DJ yesterday
"I saw them yesterday."

There has been much discussion about whether subject and object markers are instantiations of agreement or incorporated pronouns,[2] a question which may have different answers depending on the specific language. The only matter relevant here is the fact that in Zulu, an object marker may or may not cooccur with a lexical object, but that the two options reflect different constituencies (van der Spuy 1993). If there is no object marker, the object is inside a particular constituent, which we will here assume is IP as in (11a). If an object marker is present, the lexical object lies outside of IP, as in (11b), and the lexical object is said to be "doubled" by the object marker.

(11) a. Ngi-bon-e izingane. $]_{IP}$
1S-see-PERF.CJ 10.children
"I see the/some children."
b. Ngi-zi-bon-ile $]_{IP}$ izingane.
1S-10-see-PERF.DJ 10.children
"I see the children."

There is a verbal alternation in a few tenses in Zulu which reflects the same constituency as does doubling of the lexical object with an object marker. This is called the "conjoint/disjoint" alternation, which can be said to encode the "junctivity value" of the verb. We will see in the next section that junctivity has variously been analysed as a morphological indicator of verbal focus, of postverbal term focus, and of constituency. Classic environments for the conjoint form of the verb are before an undoubled object, as in (12a), before a *Wh* phrase, as in (12b), and before a focused adjunct, as in (12c):

(12) a. Ngi-cul-e ingoma. $]_{IP}$
1S-sing-PERF.CJ 9.song
"I sang a song."
b. U-cul-e nini? $]_{IP}$
2S-sing-PERF.CJ when
"When did you sing?"
c. Ngi-cul-e phandle. $]_{IP}$
2S-sing-PERF.CJ outside
"I sang OUTSIDE."

Classic environments for the disjoint verb form are the clause-final position, as in (13a), before a doubled object, as in (13b), and before an unfocused adjunct, as in as in (13c):

(13) a. Ngi-cul-ile. $]_{IP}$
1S-DJ-sing-PERF.DJ
"I sang."

[2] *Add references.*

b. Ngi-yi-cul-ile]$_{IP}$ ingoma yakho.
1S-9-sing-PERF.DJ 9.song 9.your
"I sang your song."

c. Ngi-cul-ile]$_{IP}$ phandle.
1S-DJ-sing-PERF.DJ outside
"I sang outside."

Disjoint forms in Zulu are final in IP, while conjoint forms are non-final in IP (van der Spuy 1993; Buell 2006). We shall soon see that junctivity facts provide important evidence about the structural height of *ngani*.

As for theoretical assumptions, as is standard, it is assumed that the clause can be divided in to three main regions or domains. The lowest of these is the thematic domain, the domain in which the lexical verb and all of its arguments are introduced. Above this is the inflectional domain, in which tense and related heads are located. All prefixal verbal morphology in Zulu is assumed to be in the inflectional domain. Above the inflectional domain, at the top of the clause, sits the complementiser domain. Here is where overt and silent complementisers can be found, as well as any fronted material such as pre-subject topics. In the discussion, the term IP will be used broadly to indicate a constituent encompassing all of both the inflectional and thematic domains. An element will be said to be in a "subinflectional position" if it is in any position below the inflectional heads composing the inflectional domain. In very simplistic models, this could mean that it is VP-internal, but in more sophisticated models, the element could also be in vP, AgrOP, or a low FocP.

Because this paper addresses differences between WHY and all other types of *Wh* phrases, it will be useful to have an easy way to refer to this dichotomy. The term "arbitrary *Wh* phrases" will thus be used to designate all *Wh* phrases other than WHY.

3 *Ngani* and junctivity

An environment in which the verb precedes a *Wh* phrase was given in (12b) as a classic context for the conjoint verb form. In fact, the conjoint form is obligatory in this context, as shown in (14):

(14) a. U-bon-e bani? (conjoint)
2S-see-PERF.CJ 1.who

b. $*$ U-bon-ile bani? (disjoint)
2S-see-PERF.DJ 1.who
"Who did you see?"

We will now see that *ngani* "why" behaves differently in this respect. Showing this is complicated by the fact that *ngani* occurs only in negative clauses, an environment which is problematic for other *Wh* phrases. There is one group of negative tenses in Zulu that exhibits the conjoint/disjoint alternation, namely those in which the verb ends in the perfect *-e/-ile* suffixes. To see that the conjoint/disjoint alternation is active in

these negative tenses, consider the sentences in (15) and (16), which employ the negative perfect tense:[3]

(15) a. A-ngi-gqok-ile. (disjoint)
NEG-1S-wear-PERF.DJ

b. ∗ A-ngi-gqok-e. (conjoint)
NEG-1S-wear-PERF.CJ
"I'm not dressed."

(16) a. A-ngi-gqok-e sigqoko. (conjoint)
NEG-1S-wear-PERF.CJ 7.hat

b. ∗ A-ngi-gqok-ile sigqoko. (disjoint)
NEG-1S-wear-PERF.DJ 7.hat
"I'm not wearing any hat."

In (15) we see that only the disjoint form can appear in clause-final position, while in (16) we see that only the conjoint form can be followed by an undoubled object (in this case, a bare or augmentless noun, which behaves as a negative polarity item). These are classic disjoint and conjoint environments, respectively. Now note that postverbal *ngani* "why" must be preceded by the disjoint form of these tenses:

(17) a. A-wu-gqok-ile ngani? (disjoint)
NEG-2S-wear-PERF.DJ why

b. ∗ A-wu-gqok-e ngani? (conjoint)
NEG-2S-wear-PERF.CJ why
"Why aren't you dressed?"

The behaviour of *ngani* in its meaning of "what about" in affirmative clauses is just the opposite, the verb which precedes it needs to appear in conjoint form:

(18) a. ∗ U-bhal-ile nga-ni? (disjoint)
2S-write-PERF.DJ about-what

b. U-bhal-e ngani? (conjoint)
2S-write-PERF.CJ about-what
"What did you write about?"

The contrast is summarised in (19):

(19) *Ngani*, in its meaning as "why", must be preceded by a disjoint verb form.
All other *Wh* phrases must be preceded by a conjoint verb form.

This difference between *ngani* and other types of *Wh* phrases raises questions about the comparative height of *ngani* and other *Wh* phrases.

There are two classes of analyses for the conjoint/disjoint alternation: focus-encoding and constituency-encoding. We shall now consider what these two analyses have to say about questions with *ngani*, starting with the focus-encoding account, under which the

[3] Speakers varied somewhat on (16). Some of them accepted a bare noun after a disjoint negative form, and others found it ungrammatical. However, all of them agreed on the distribution of conjoint and disjoint forms before *ngani* as presented in (17).

alternation directly encodes focus. This type of account can be formulated in two ways: either in terms of Verb Focus, under which the disjoint form encodes focus on the verb, or in terms of Postverbal Term Focus, under which a conjoint verb form indicates that the item following the verb is in focus. We will begin with the former formulation.

It is important to first understand that under such a Verb Focus analysis, the alternation can only be understood as encoding focus within a particular domain. Consider the *Wh in situ* questions in (20) and the clefted questions in (21):

(20) a. [U-bon-e bani?]$_{IP}$ (conjoint)
2S-see-PERF.CJ 1.who

b. $*$ [U-bon-ile bani?]$_{IP}$ (disjoint)
2S-see-PERF.DJ 1.who
"Who did you see?"

(21) a. $*$ Ngu-bani$_i$ [$_{CP}$ [$_{IP}$ o-m-bon-e t_i]$_{IP}$]$_{CP}$ (conjoint)
COP-1.who REL:2S-1-see-PERF.CJ

b. Ngu-bani$_i$ [$_{CP}$ [$_{IP}$ o-m-bon-ile t_i]$_{IP}$]$_{CP}$ (disjoint)
COP-1.who REL:2S-1-see-PERF.DJ
"Who did you see? Who is it that you saw?"

The two pairs of questions are asking essentially the same thing, but the junctivity facts (and thus, by hypothesis, also the focus facts) for the two strategies are different, and this difference is explained by saying that every domain, which we will assume is IP, needs a focus. The pair in (20) has one domain of focus, while that in (21) has two. In (20a) the focus is *bani* "who", and the ungrammaticality of (20b) is explained by saying that the IP can only have one focus, rendering the focused disjoint form ungrammatical. In (21), the inherently focused *Wh* phrase *bani* is in a different IP, leaving the verb alone in an embedded IP. This embedded IP needs a focus, as shown by the ungrammaticality of (21b), in which the verb bears the unfocused conjoint form. In that sentence the verb is thus not focused, and the sentence is ungrammatical because the IP also lacks an overt element after the verb which could itself be focused.

Now let's compare arbitrary *Wh* phrases with *ngani* by considering the pair of questions in (22):

(22) a. U-cul-e nini? (conjoint)
2S-sing-PERF.CJ when
"When did you sing?"

b. A-wu-cul-ile ngani? (disjoint)
NEG-2S-sing-PERF.DJ why
"Why haven't you sung?"

Under the focus-encoding analysis, the verb in (22a) is in the conjoint form because it is the *Wh* phrase *nini* "when" which is in focus rather than the verb. As for (22b), there seem to be two things in focus: *ngani*, because as a *Wh* phrase it is necessarily in focus, and the verb, because the disjoint form indicates that it's the verb which is in focus. Making the default assumption that all postverbal *Wh* phrases are inside IP, we have a striking contrast:

(23) a. ∗ [$_{\text{IP}}$ [U-cul-ile]$_{foc}$ [nini?]$_{foc}$]$_{\text{IP}}$ (disjoint)
2S-sing-PERF.DJ when
"When did you sing?"

b. [$_{\text{IP}}$ [A-wu-cul-ile]$_{foc}$ [ngani?]$_{foc}$]$_{\text{IP}}$ (disjoint)
NEG-2S-sing-PERF.DJ why
"Why haven't you sung?"

In (23a), it is ungrammatical to have two focused elements (the *Wh* phrase and the disjoint verb) within IP. In contrast, two focal elements are allowed within the verb phrase with *ngani* in (23b). The way to resolve this discrepancy is to assume that *ngani* does *not* lie in IP as in (23b), but outside of it, as in (24):

(24) [$_{\text{IP}}$ [A-wu-cul-ile]$_{foc}$]$_{\text{IP}}$ [ngani?]$_{foc}$ (disjoint)
NEG-2S-sing-PERF.DJ why
"Why haven't you sung?"

This assumption provides a coherent analysis of (23): only one focused element can appear within IP.

Now let's briefly consider the alternative formulation of the focal encoding analysis of junctivity, the Postverbal Term Focus formulation, in which the conjoint form indicates that the element following it is in focus (Ndayiragije 1999). This analysis leads to similar conclusions. Under this analysis, the ungrammaticality of (23a) is accounted for by the fact that *nini* "when" (since it is inherently focused) needs a conjoint verb form to license it. This results in the same puzzle when we now consider (23b): if *ngani* is inside IP, why isn't it licensed by a conjoint verb form and, conversely, why *is* it licensed by a disjoint verb form? This puzzle is solved in the very same way as with the Verb Focus formulation: *ngani* falls outside the domain relevant for the conjoint/disjoint alternation as in (24) rather than inside IP, as was first hypothesised in (23b).

Finally we take up the alternate analysis of the conjoint/disjoint alternation: the constituency-encoding analysis. Under this analysis, the disjoint verb form occurs when the verb is final in some constituent, which we again take to be IP. Under this analysis, the constituency hypothesised in (23b) is simply not possible, because the verb is in disjoint form without being constituent-final. *Ngani* is thus necessarily in a structural position different from that of *nini* "when" in (23a). The analysis thus points directly to the constituency in (24).

Thus, both types of accounts of the conjoint/disjoint alternation (the focal-encoding and constituency-encoding accounts) point towards an analysis in which *ngani* occupies a higher structural position than do other postverbal *Wh* phrases, due to *ngani*'s need to be preceded by a disjoint verb form. This conclusion dovetails with independent facts about reason WHY, namely that reason WHY, crosslinguistically speaking, either on the surface or as a trace, cannot appear under the scope of negation, as will now be discussed.

4 WHY and negation

In the previous section it was discussed how the anomalous interaction between *ngani* and junctivity could be easily explained by assuming that *ngani* is introduced outside

the IP. Note that any position above IP would necessarily situate *ngani* outside the scope of verbal negation. In the present section, we will briefly discuss crosslinguistic evidence that WHY can be introduced outside the scope of negation, looking at evidence from English and Sambaa. Control structures in Zulu will be shown to provide additional evidence for this claim. Further, it will be hypothesised that WHY is always introduced outside the scope of negation.

English *why*. Using a variety of arguments, Stepanov and Tsai (2006) argue that English *why* is always introduced in the complementiser domain. Such a position necessarily places *why* outside the scope of verbal negation. Here we consider only certain issues not discussed in that paper which directly concern the interaction between *why* and negation, starting with extraction from negative islands.

There are important differences between *why* and other *Wh* phrases concerning their ability to be extracted from weak islands. We will discuss these differences here specifically in terms of negative islands, since this is the type of weak island most relevant to a discussion of *ngani*. Certain differences in extraction possibilities from weak islands for two different types of *Wh* phrases have been described in terms of arguments versus adjuncts, D-linked ("discourse-linked") versus non-D-linked elements, and, as we shall do here, following Szabolcsi (2002), individuated versus non-individuated elements. These two types of *Wh* phrases can be illustrated with English *which* and *how much*. Note in (25) that both of these types of phrases can be used to form a simple affirmative question:

(25) a. [Which boy]$_i$ did you see t_i?
b. [How much maize]$_i$ did you buy t_i?

Once the clause is negated, though, we see that the *which* phrase yields a grammatical question while the *how much* phrase does not:

(26) a. [Which boy]$_i$ didn't you see t_i?
b. $*$ [How much maize]$_i$ didn't you buy t_i?

It is thus difficult to move the *how much* phrase across the negative element *not*. The two different types of *Wh* phrases in (25) and (26) can be characterised in terms of individuation. *Which boy* is grammatical in (26a), because it can be interpreted as asking for one out of a set of possible boys. Conversely, *how much maize* is ungrammatical in (26b) because, unlike *which*, *how much* cannot be interpreted as asking for one out of a set of different quantities (or such an interpretation is very difficult to get). Extraction from a negative island (movement of a *Wh* phrase over a negative element) yields a grammatical question only if the *Wh* phrase can be interpreted as ranging over a set of individuated elements.

How and *why* are often thought of behaving similarly with respect to extraction. Note that, at variance with individuable *Wh* phrases, both *how* and *why* result in ungrammaticality when moved over the negative element in the upper clause in (27) in contrast to their affirmative counterparts in (28):[4]

[4] See Hegarty (1991) for more details. Traces indicating the base position of the *Wh* phrases have been omitted. Cyclic movement is assumed, meaning that a trace of the *Wh* phrase is left in the complementiser region of the embedded CP.

(27) a. What$_i$ don't you think [$_{\text{CP}}$ t_i Judy fixed the car with?] A wrench.
b. What$_i$ don't you think [$_{\text{CP}}$ t_i Judy fixed?] The car.
c. $*$ How$_i$ don't you think [$_{\text{CP}}$ t_i Judy fixed the car?] With a wrench.
d. $*$ Why$_i$ don't you think [$_{\text{CP}}$ t_i Judy fixed the car?] Because she was forced to.

(28) a. What$_i$ do you think [$_{\text{CP}}$ t_i Judy fixed the car with?] A wrench.
b. What$_i$ do you think [$_{\text{CP}}$ t_i Judy fixed?] The car.
c. How$_i$ do you think [$_{\text{CP}}$ t_i Judy fixed the car?] With a wrench.
d. Why$_i$ do you think [$_{\text{CP}}$ t_i Judy fixed the car?] Because she was forced to.

This might lead us to think that *how* and *why*'s similar behaviour stems from an inability of these *Wh* phrases to range over a set of individuated items, but in monoclausal contexts, *why* behaves differently both from *how* and from quantity questions like *how much*:

(29) a. $*$ [How much maize]$_i$ didn't a boy buy t_i?
b. $*$ [How]$_i$ didn't a boy sing t_i?
c. Why didn't a boy sing?

There is thus an additional way in which *how* and *why* differ from each other.[5] An obvious possibility is that *why* can simply be inserted in the complementiser domain, unlike other *Wh* phrases. The reason for the different grammaticality judgements in (29), then, can be said to stem from the fact that in (29a) and (29b) there is a trace of the *Wh* phrase within the scope of negation, while there is no such trace in (29c).

Why interacts with negation in another interesting way, in addition to the one displayed in (29). First consider the following question and answer pairs in which the *Wh* question is affirmative:

(30) a. Q: When$_i$ did you sing t_i?
A: But I didn't sing!
b. Q: How$_i$ did you sing t_i?
A: But I didn't sing!
c. Q: Why did you sing?
A: But I didn't sing!

No contrast is detected between *why* and the two other *Wh* phrases. The answers show that in each case, the question seems to presuppose that a singing event took place. Now consider the counterparts to (30), where the polarity has been switched in both the question and the answer:

(31) a. Q: When$_i$ didn't you sing t_i?
A: # But I did sing!

[5] Consider also (32b), which shows that it is actually possible to force a reading of *how* that ranges over a set of manners.

Other types of differences between Mandarin *weishenme* "why" and *zenmeyang* "how" are discussed in Lin (1992). Two kinds of HOW and WHY are discussed at length from a crosslinguistic perspective in Tsai (1999).

b. Q: How$_i$ didn't you sing t_i?
A: # But I did sing!

c. Q: Why didn't you sing?
A: But I did sing!

The questions in (31a) and (31b), with the adjuncts *when* and *how*, do not allow a presupposition that no discourse-relevant singing event took place, but seem rather to presuppose that some potential singing event went unrealised. In contrast, the *why* question in (31c) does allow for a presupposition that no singing event took place. In a similar vein, consider the question and answer pairs in (32):

(32) a. Q: When$_i$ didn't you sing t_i?
A: Well, I sang on Monday, but not on Tuesday.

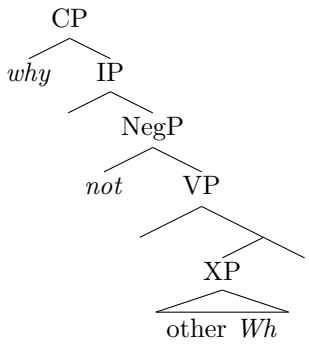
b. Q: How$_i$ didn't you sing t_i?
A: Well, I sang *piano*, *mezzopiano*, and *fortissimo*, but not *mezzoforte*.

c. Q: Why didn't you sing?
A: # Well, I sang because the host asked me to, but not because I think my voice is so good.

In the answers, two members of the set of singing events are made explicit: the first of them a realised event and the second of them an unrealised potential event. The felicity judgements show that *why* does not allow such a set of events, unlike *how* and *when*. When questioning a negative proposition, *why* does not allow presupposition of a set of realised and unrealised events, rather it presupposes that no event took place.

As with the pattern in (29), these facts are most easily explained by introducing English *why* in the complementiser domain rather than in the thematic domain, as in (33), at least when *why* modifies a negative clause, as proposed by Stepanov and Tsai (2006) and as will be proposed here for Zulu *ngani*:

(33)



Such a structure can explain the issue in (31) and (32). Note that in the *why* questions in (31c) and (32c), applying the analysis in (33), *why* c-commands the entire proposition *you didn't sing*. This is not the case in the analogous questions with *when* and *how* after *when* or *how* move (overtly or covertly) to CP. In these cases, the proposition also contains a trace or a copy of *when* or *how*. If the availability of the set of realised and unrealised events is related to the trace of the *Wh* phrase inside the proposition, then we expect exactly the pattern we observe in (31) and (32).

Sambaa. We now turn to Sambaa (also called Shambala), a Bantu language (G23) spoken in Tanzania. In the following section, it will be shown that WHY in Italian and Korean are best analysed as being introduced in the complementiser domain, and thus outside the scope of verbal negation. This, and the fact that this is also what is being argued for here for Zulu *ngani*, might lead us to suppose that perhaps reason WHY is universally introduced in the complementiser field and thus outside the scope of verbal negation. But we will now see that Sambaa serves as a candidate for a language in which one form of WHY (namely the enclitic *-i*) is introduced in a subinflectional position, allowing us to examine the interaction of WHY and negation in a different way.

Examples (34) and (35), show that the verbal enclitic *-i* can mean either "why" or "what", depending on the context. On the intuition that the clitic's basic meaning is "what", it will be glossed as such.[6]

(34) U-ghul-iye-i?]$_{IP}$ (conjoint)
2S-buy-PERF-what
"What did you buy?"

(35) U-kem-a-i?]$_{IP}$ (conjoint)
2S-cry-PRES.CJ-what
"Why are you crying?"

The enclitic is essentially in free variation with the independent word form *mbwai*, which will not be used in the examples here.

It is not entirely clear whether *-i* in its meaning as "why" expresses reason or purpose. The fact that it cannot be used to modify the non-intentional verb *onekana* "seem, appear" suggests that it expresses purpose:

(36) a. Kwai i-onekan-a sa via ni iwe je-shey-a?
why 9-seem-PRES.CJ if how COP 5.stone 5.REL-descend-FV

b. ∗ I-onekana-i sa via ni iwe je-shey-a?
9-seem-PRES.CJ-what if how COP 5.stone 5.REL-descend-FV
"Why does it seem like it's the stone that is rolling down?"

However, unlike the Zulu purpose applicative in (5a), it was found compatible with the predicate BE SICK, as shown in (37), which forces us to leave open the possibility that it expresses reason:

(37) Ushe, u-hum-a-i iviaha?
well 2S-be.sick-CJ-what now
("I only eat healthy food.") "Then why are you sick now?"

The distribution of conjoint and disjoint verb forms in Sambaa shows much greater flexibility than in Zulu. Three generalisations can be made about the distribution in Sambaa. The first is that a conjoint form is required before a *Wh* phrase, as shown with the "what" interpretation of *-i* in (38). The other two generalisations are that a disjoint form is required clause-finally and that there is a slight preference for a conjoint form before other types of focused items (such as an object restricted by *du* "only"). The enclitic *-i* must appear after a conjoint verb form just like any other *Wh* phrase, as shown in (39):

[6] This data was collected partially by and partially in conjunction with Sambaa specialist Kristina Riedel.

(38) a. A-on-a-i? (conjoint)
1-see-FV-what

b. ∗ A-a-on-a-i? (disjoint)
1-PRES.DJ-see-FV-what
"What does he see?"

(39) a. U-chi-ghul-iye-i? (conjoint)
2S-7-buy-PERF.CJ-what

b. ∗ U-za-chi-ghul-a-i? (disjoint)
2S-PERF.DJ-7-buy-FV-what
"Why did you buy it?"

These facts suggest that *-i* is IP-internal, whether it is interpreted as "what" or "why". Given the possibility that *-i* encodes reason rather than purpose, Sambaa provides a candidate of a language in which reason WHY is introduced in a subinflectional position in affirmative contexts.

Now note that *-i* cannot be used to question a negative clause, as attempted in (40a):

(40) a. ∗ Nku-vin-a-i?
2S.NEG.PRES-dance-FV-what

b. Kwai nku-vin-a?
why 2S.NEG.PRES-dance-FV
"Why don't you dance?"

To question the reason for a negative clause a different strategy (with clause-initial *kwai* "why") has to be resorted to, illustrated in (40b), in which WHY is clause-initial, and hence outside the scope of negation. WHY thus arguably needs to be outside the scope of negation even in a language in which it is arguably introduced in a subinflectional position.

Zulu control structures. Returning to Zulu, let's consider a subject control construction. Note how in an (affirmative) purpose question the applicative morpheme and the clitic *-ni* "why" can attach to the selected infinitive in a subject control construction with *funa* "want", as in (41b). On the basis of the fact that in both cases the question asks for a reason for wanting rather than a reason for going, a structure like (41b) is argued in Buell (2007c) to constitute a restructuring domain.

(41) a. [IP U-fun-el-a-ni [IP uku-hamb-a]]
2S-want-APPL-FV-what 15-go-FV

b. [IP U-fun-a uku-hamb-el-a-ni?]
2S-want-FV 15-go-APPL-FV-what
"Why do you want to leave?"

Given the possibility of (41b) with a purpose applicative question, one might expect that *ngani* would also have the option of appearing after the embedded infinitive in the same way, but (42a) shows that this is not the case.

(42) a. ∗ [IP A-wu-fun-i [ukuhamb-a ngani?]]
NEG-2S-want-FV 15.leave-FV why

b. [$_{IP}$ A-wu-fun-i] ngani [$_{IP}$ ukuhamb-a?]
NEG-2S-want-FV why 15.leave-FV
"Why don't you want to leave?"

This fact is easily accounted for in the analysis poroposed here. In (42a), *ngani* is lower than the negative verb and thus falls under its scope, while the proposal here is that WHY cannot fall under the scope of negation.

The complementiser domain as an escape from negation. We have just seen that WHY behaves differently from other *Wh* phrases in a variety of languages, in a way which can be accounted for by introducing WHY outside the scope of negation. The question now is what positions are available to introduce WHY in outside the domain of verbal negation. Or, put another way, how high does WHY need to be introduced to be above verbal negation? In Zulu, the answer is that it must be introduced very high indeed. Note that in most main clause tenses in Zulu, the first prefix on the verb is a negative marker:

(43) a. a-ngi-cul-i
NEG-1S-sing-FV
"I don't sing, I'm not singing" (negative present tense)

b. a-ngi-cul-anga
NEG-1S-sing-FV
"I didn't sing" (negative past tense)

In accordance with the Mirror Principle (Baker 1985), this means that the negative prefix in these tenses corresponds to a syntactic head higher than the head corresponding to the subject marker.[7] This places negation at the top, or very close to the top, of the inflectional domain, which we are loosely calling IP. No positions have been proposed to exist at the top of IP in which *Wh* elements can be introduced or moved to. (Except, of course, a questioned subject or something questioned within the subject.) This leaves the complementiser domain as the only region within the clause in which WHY could be introduced and escape the scope of negation. In the following section we will see that introduction of WHY in the complementiser domain is precisely what has been proposed for some other languages, and it will be argued that Zulu *ngani* is an Int^0 head in that domain.

5 WHY as a complementiser-domain element

This section will discuss analyses of Italian and Korean in which WHY is introduced directly into the complementiser field. These anlyses lend support to the proposal that *ngani*, as well, appears in, and is introduced in, the complementiser domain. Then we will consider how *ngani* comes to appear in postverbal position and examine similarities between *ngani* and two other complementiser domain elements.

[7] The idea that the Bantu word-initial negative morpheme corresponds to a syntactic head above other components of the verb word is exploited by both Henderson (2004) and Ngonyani (2001) to explain the morphology of Swahili negative synthetic relative clauses.

5.1 Italian *perchè* and Korean *way*

Italian. First we will consider Italian *perchè* "why", which is argued by Rizzi (1999) to be introduced in the complementiser domain on the basis of facts concerning its cooccurrence with right-peripheral focused elements. Observe that a *Wh* phrase cannot cooccur with a focused phrase in the left perphery:[8]

(44) a. ∗ A chi QUESTO hanno detto (non qualcos' altro)?
to who this have said (not something else)
"To whom THIS they said (not something else)?"

b. ∗ QUESTO a chi hanno detto (non qualcos' altro)?
this to who have said (not something else)

This is explained in terms of competition for the spec-FocP position in overt syntax: both the *Wh* phrase and the focused phrase need to occupy this position. Curiously, though, *perchè* does not adhere to this cooccurrence restriction. *Perchè* is allowed to precede the focused phrase (but not to follow it), as shown in (45) in a monoclausal question:

(45) a. Perchè QUESTO avremmo dovuto dirgli, non qualcos' altro?
why this will.have should say.him, not something else
"Why THIS we should have said to him, not something else?"

b. ∗ QUESTO perchè avremmo dovuto dirgli, non qualcos' altro?
this why will.have should say.him, not something else

Rizzi argues that this is because *perchè* is introduced in a projection higher than the FocP whose specifier is occupied by the focused phrase. He calls this projection IntP (for "interogative"). The configuration for (45a) is schematised here:

(46) $[_{\text{IntP}}$ *perchè* $[_{\text{Int}'}$ $[_{\text{FocP}}$ *questo* $[_{\text{Foc}'}$ $[_{\text{IP}}$ ...]]]]]

The claim that *perchè* is introduced directly into spec-IntP, rather than moving from somewhere in the verb phrase, stems from *perchè*'s behaviour in multiclausal questions. Although *perchè* can also precede a focused phrase in such a question, it cannot have the interpretation where the reason modifies the embedded clause, as in (47b). It can only modify the upper clause, as in (47a):

(47) a. Perché A GIANNI ha detto che si dimetterà (non a Piero)?
why to gianni has said that himself will.resign not to Piero
"Why$_i$ did he tell GIANNI (not Piero) t$_i$ that he will resign?"

b. ∗ Perché A GIANNI ha detto che si dimetterà (non a Piero)?
why to gianni has said that himself will.resign not to Piero
"Why$_i$ did he tell GIANNI (not Piero) that he will resign t$_i$?"

This is explained by saying that when *perchè* moves to a higher clause, it moves to the matrix FocP rather than to a matrix IntP. The contrast between *perchè* modifying the matrix clause and it modifying the embedded clause is schematised in (48):

[8] Data in (44), (45), and (47) is from Rizzi (1999). Translations and glosses have been slightly modified. Data in (48) is from Ivano Caponigro, p.c.

(48) a. *Perchè* modifies the matrix clause

[$_{\text{IntP}}$ Perchè [$_{\text{IP}}$ ha detto [$_{\text{ForceP}}$ che si dimetterá]]]?
why has said that himself will.resign

"Why did he said [that he would resign?]" (≈ "Why did he say that?")

b. *Perchè* modifies the embedded clause

[$_{\text{FocP}}$ Perchè$_i$ [$_{\text{IP}}$ ha detto [$_{\text{ForceP}}$ che [$_{\text{IntP}}$ t_i [$_{\text{IP}}$ si dimetterá...]]]]]
why has said that himself will.resign

"Why did he said [that t_i he would resign?]" (≈ "Why will he resign, according to what you said?")

The fact that *perchè* in an embedded clause moves to the matrix FocP renders it subject to the same competition with the focused phrase for the spec-FocP as we saw in (44), where an arbitrary *Wh* phrase clashes with *perchè* in a monoclausal question.

Korean. We will now consider *way* "why" in Korean, an SOV language which provides a typologically different language where syntactic facts are again best accounted for if WHY is introduced in the complementiser domain, as argued by Ko (2005). In this case, the argumentation relies on differences in cooccurrence restrictions with scope bearing elements (henceforth SBE), which include negative polarity items like *amwuto* "anyone".

Let's first consider an arbitrary *Wh* phrase. There is an intervention effect in Korean whereby a *Wh* phrase may not appear to the right of an SBE. This is shown with the *Wh* phrase *mues-ul* "what" and the SBE *amwuto* "anyone" in (49):

(49) a. ∗ Amwuto mwues-ul ilk-ci-anh-ass-ni?
anyone what-ACC read-*ci*-not-PAST-Q

b. Mwues-ul$_i$ amwuto t$_i$ ilk-ci-anh-ass-ni?
what-ACC anyone read-*ci*-not-PAST-Q

"What did no one read?"

Building on Beck and Kim (1997), Ko gives this intervention effect the following analysis. A *Wh* phrase moves to a specifier of C^0, either overtly or covertly, as is widely assumed. The intervention effect, seen in (49a), then, consists of the inability of a *Wh* phrase to cross over an SBE covertly on its way to CP. Example (49b), though, shows that the *Wh* phrase can undergo such a move if it does so overtly.

By now it will probably not surprise the reader that *way* is not subject to this restriction in monoclausal questions. *Way* may appear to either side of the SBE *amwuto*, as shown in (50):

(50) a. Amwuto way ku chayk-ul ilk-ci-anh-ass-ni?
anyone why that book-ACC read-*ci*-not-PAST-Q

"Why did no one read that book?"

b. Way amwuto ku chayk-ul ilk-ci-anh-ass-ni?
why anyone that book-ACC read-*ci*-not-PAST-Q

However, this fact cannot be explained away by saying that *way* is merely an exception to the intervention effect, because the effect reappears in biclausal questions if the SBE is in the matrix clause and *way* is in the embedded clause, as in (51):

(51) ∗ Amwuto [John-i way saimha-yess-ta-ko] malha-ci-anh-ass-ni?
anyone John-NOM why resign-PAST-DEC-C say-*ci*-not-PAST-C
"What is the reason x such that no one said that John reisgned for x?"

This puzzle is solved by assuming that *way*, unlike arbitrary *Wh* phrases, does not move to CP but is first introduced there. To see how this works, let's first consider the two distinct analyses needed for the cases in (49b) and (50b), in which the *Wh* phrase precedes the SBE. These are schematised in (52):

(52) a. $[_{\text{CP}}$ WHAT$_i$ $[_{\text{C}'}$ $[_{\text{IP}}$ ANYONE t_i VERB]]]
b. $[_{\text{CP}}$ *way* $[_{\text{C}'}$ $[_{\text{IP}}$ ANYONE OBJ VERB]]]

In (52a) the arbitrary *Wh* phrase has moved overtly from the IP, crossing the SBE ANYONE. (Recall that it is only when such a move is made covertly that it results in an intervention effect.) In (52b) no crossing occurs, overtly or otherwise, because *way* is first introduced into the structure in the CP already above and to the left of the SBE. Now let's consider cases (49a) and (50a), where the SBE precedes the *Wh* phrase. These are schematised in (53):

(53) a. ∗ $[_{\text{CP}}$ $[_{\text{C}'}$ $[_{\text{IP}}$ ANYONE WHAT VERB]]]
b. [ANYONE $[_{\text{CP}}$ *way* $[_{\text{CP}}$ $[_{\text{C}'}$ $[_{\text{IP}}$ ANYONE OBJ VERB]]]]

(53a) is ungrammatical because WHAT will still need to move to CP overtly, but to do so, it must cross the SBE ANYONE, incurring the intervention effect. In contrast, (53b) is grammatical because *way* does not need to move to CP, by virtue of having been introduced there. ANYONE comes to precede *way* by means of A′ scrambling of the former.

Now we can see why the intervention effect came back to haunt us in the biclausal question in (51). Although *way* is introduced in the CP of the lower clause, it will still need to move to the CP in the matrix clause covertly, crossing the SBE in the matrix clause.

Italian *perchè* and Korean *way* provide evidence that the introduction of WHY in the complementiser domain is needed in typologically and genetically diverse languages. Further evidence could be seen in Ko's application of the same analysis for Japanese, and in similar analyses of Mandarin (Ko 2005; Lin 1992). These languages thus lend support to the proposal here that Zulu *ngani* is in the complementiser domain.

5.2 Sharpening the analysis of *ngani*

Assuming that *ngani* occupies a complementiser-domain position, we will first consider how it comes to appear in a postverbal position. Then it will be argued that it heads an IntP projection.

Not head movement. If we can assume that *ngani* is a phrase in the complementiser domain, head movement of the verb over *ngani* initially looks appealing, due to *ngani*'s relatively strict requirement for the immediate postverbal position. In this respect, *ngani*'s behaviour with aspectual verbs is particularly striking. I is shown in (54) that the aspectual verb *vamise* "to do often" can form a restructuring domain as *funa* "want" in (41), allowing the purpose applicative to appear in its complement.

(54) a. Ngi-vamis-el-e-ni uku-vuk-a ekuseni kakhulu?
1S-usually-APPL-FV-what 15-wake.up-FV in.the.morning very

b. Ngi-vamis-e uku-vuk-el-a-ni ekuseni kakhulu?
1S-usually-FV 15-wake.up-APPL-FV-what in.the.morning very

"Why do I usually get up early?"

If the two verbs in this restructuring domain are thought of as a unit (as in the original sense of "restructuring" (Rizzi 1978)), we might expect the two verbs to be able to move as a unit to precede *ngani*, but as shown in (55), this is not possible. Only *vamise* itself (in its infrequent disjoint form *vamisile*) is allowed to precede *ngani*:

(55) a. A-wu-vamis-ile ngani ukucula? (disjoint)
NEG-2S-do.often-PERF.DJ why 15.sing-FV

b. ∗ A-wu-vamis-e ukucul-a ngani? (conjoint)
NEG-2S-do.often-PERF.CJ 15.sing-FV why

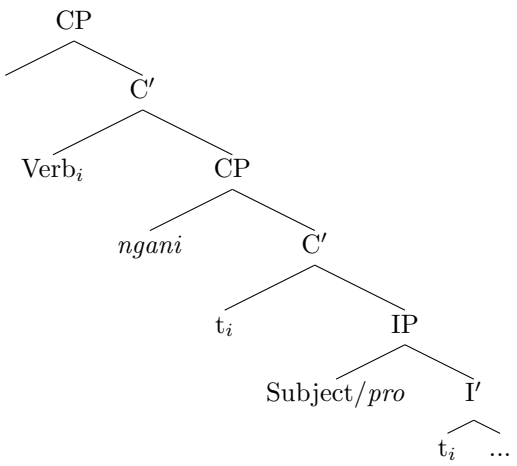
c. ∗ A-wu-vamis-e ngani ukucul-a? (conjoint)
NEG-2S-do.often-PERF.CJ why 15.sing-FV

"Why don't you sing often?"

This fact would be easily accounted for if the auxiliary verb (with its subject marker) and its infinitival complement were separate heads. Only the higher head would be able to move to precede *ngani*.

To implement head movement, we would need to make two assumptions. First, a Zulu conjugated verb form must be a head (to make it capable of head movement), and second, there must be a head position for it to move to. If *ngani* is a phrase in the complementiser domain, then there must be an additional complementiser-related projection above the specifier occupied by *ngani*, as would be compatible with the "exploded C" conception of Rizzi (1997), in which the complementiser domain is composed of projection of a number of distinct heads rather than of the projection of a single C^0 head. Under such assumptions, the verb simply head-moves stepwise to precede *ngani*, as in (56):

(56)



Unfortunately, however, head movement makes the wrong predictions for word order, as will now be shown. Consider a clause with an undoubled direct object, as in (57):

(57) A-wu-theng-e ingubo entsha.
NEG-2S-buy-PERF.CJ 9.dress 9.new

"You haven't bought a new dress."

Under the head movement account, we would expect to be able to introduce *ngani* above this clause and perform head movement on the verb to produce a reason question, but the result is ungrammatical, regardless of whether the verb is conjoint or disjoint, as shown in (58):

(58) $*$ [$_{CP}$ Awutheng(il)e$_i$ [$_{C'}$ ngani [$_{CP}$ t_i [$_{C'}$ [$_{IP}$ t_i ingubo entsha]]]]]

To question the statement in (57), the direct object must be extraposed and doubled with an object marker on the verb, as in (59):

(59) A-wu-yi-theng-ile ngani] ingubo entsha?
NEG-2S-9-buy-PERF.DJ why 9.dress 9.new
"Why haven't you bought a new dress?"

Even if these incorrect predictions about word order and object marking did not by themselves make the head movement account untenable, there are additional reasons weighing against a head movement account. First, though it was shown that WHY does not like to appear in the scope of negation, if *ngani* is inside the verb phrase as in (23b) and the verb is negative, *ngani* does fall under the scope of negation. In (24), in contrast, *ngani* can be structurally higher than any of the negative heads incorporated in the verb, depending on the syntactic structure assumed. Second, the first essential assumption we had to make in this account was that the Zulu verb word is a head. But recent work on morphosyntax (Julien 2003), inspired by directionality constraints imposed on phrasal syntax (Kayne 1994), has argued that Bantu conjugated verb forms, with their prefixal subject markers, cannot be heads (see Buell (2005) for Zulu specifically). Under these assumptions, head movement of the conjugated auxiliary verb over *ngani* is not a possible analysis. It is necessarily a phrase that moves. Third, the head movement analysis cannot account for the fact that certain light elements, such as *khona* "(anaphoric) there" are marginally permitted to intervene between the verb and *ngani*, as in (60b):[9]

(60) a. A-wu-y-i ngani khona?
NEG-2S-go-FV why there
b. ? Awuyi khona ngani?
NEG-2S-go-FV there why
("I don't go to Durban.") "Why don't you go there?"

And finally, the head movement account does not leave us with any clear way to account for the junctivity facts presented in the previous section.

[9] This also holds for arbitrary *Wh* phrases, such as *nini* "when":

1. (a) U-y-a nini khona?
2S-go-FV when there
(b) ? U-y-a khona nini?
2S-go-FV there when
("I go to Durban.") "When do you go there?"

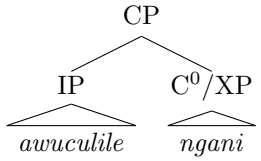
See Buell (2007b) for more details on the IAV position for arbitrary *Wh* phrases in Zulu.

The verb in a phrase. If head movement is not tenable for accounting for *ngani*'s postverbal position, two options remain. Consider again the case in (22b), repeated here as (61):

(61) A-wu-cul-ile ngani? (disjoint)
NEG-2S-sing-PERF.DJ why
"Why haven't you sung?"

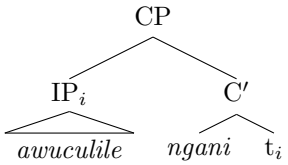
In the first possibility, *ngani* is a right-branching node (either a C^0 head or a phrase of some other category) in the complementiser domain, so that *ngani* follows the verb, but is out of the verb's scope.[10] This view is shown in (62):

(62) *Ngani* in a right-branching node



Alternatively, *ngani* could be either a left-branching head or specifier in the complementiser domain while the verb moves around *ngani* inside a phrase:

(63) IP movement around *ngani*



It is beyond the scope of this paper to discuss in detail the relative merits of right-branching analyses as in (62) versus those of phrasal movement analyses (which often ultimately require remnant movement) like in (63). Let it suffice to say that there has been a tendency in recent years to reanalyse right-branching structures like those in (62) as left-branching structures with movement as in (63).[11]

Other complementiser-domain elements. While placement of a right-peripheral element in the complementiser domain might seem unnatural in a "left-headed" language, this is in fact independently needed for Zulu. Zulu has two question particles which appear clause-finally. *Na* can be used with any type of question (that is, both *Wh* and polarity questions), while *yini* is used exclusively in polarity questions. *Na* and *yini* may cooccur in the same clause, but only in the order *yini na*. A *Wh* question is given in (64), while polarity questions are illustrated in (65):

(64) U-cul-a-ni (na)?
2S-sing-FV-what Q
"What are you singing?"

[10] It is obvious that *ngani* does not have the distribution of a complementiser, and in biclausal structures it can cooccur with a tautoclausal complementiser such as *ukuthi* "that", as in (80). C^0 is taken here to be some type of complementiser-domain head of a category distinct from what we normally think of as a complementiser, as is also true of the elocutionary particles *yini* and *na* discussed on page 21.

[11] *References?*

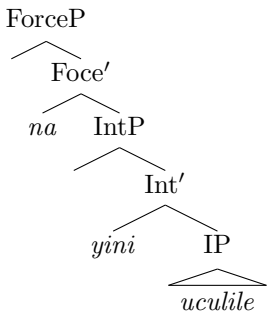
(65) a. U-ya-cul-a yini na?
2S-DJ-sing-FV POL.Q Q
b. Uyacula na?
c. Uyacula yini?
d. Uyacula?
e. ∗ Uyacula na yini?
"Are you singing?"

The fact that *yini* and *na* form an integral part of the clause's structure and are not merely parenthetical elements is demonstrated by the fact that at least one of them must be present in a selected polarity question, as shown in (66):

(66) a. Ngi-ya-ku-buz-a ukuthi uThandi u-cul-ile yini na.
1S-DJ-2S-ask-FV that 1.Thandi 1-sing-PERF.DJ POL.Q Q
b. Ngiyakubuza ukuthi uThandi uculile yini.
c. Ngiyakubuza ukuthi uThandi uculile na.
d. ∗ Ngiyakubuza ukuthi uThandi uculile.
"I'm asking you whether Thandi sang."

Thwala (2004) has convincingly argued that, in closely related Swati, *yini* is an Int^0 (Interrogative) head and *na* a Force^0 head, which are two of the heads in the articulated complementiser domain proposed by Rizzi (1997), as schematised in (67):

(67)



To account for the linear order, either these two elements are both right-branching nodes, or they are left-branching nodes which the IP moves around (like the tree in (67)). These are precisely the two options presented for *ngani* in (62) and (63). Thwala argues for the movement of IP. To account for the relative ordering of *yini* and *na* (as *yini na*, and not ∗*na yini*), the IP must first move to the specifier of *yini*, then the IntP moves to the specifier of *na*. The analysis presented here, then, is completely parallel to one independently needed in the same language. The possibility of similar analyses for *yini* and *na*, on the one hand, and *ngani*, on the other, is further strengthened by two other properties they share. The first is their ability to appear sentence-medially between two clauses when the matrix clause is a question which is shown in (68) and (69):

(68) a. A-ni-cabang-i na ukuthi uThandi u-cul-ile?
NEG-2P-think-FV Q that 1.Thandi 1-sing-PERF.DJ
b. A-ni-cabang-i yini ukuthi uThandi u-cul-ile?
NEG-2P-think-FV POL.Q that 1.Thandi 1-sing-PERF.DJ

c. “Don’t you think that Thandi sang?”

(69) A-ni-cabang-i ngani ukuthi uThandi u-cul-ile?
NEG-2P-think-FV why that 1.Thandi 1-sing-PERF.DJ
“Why don’t you think that Thandi sang?”

And the second property is that a verb immediately preceding either *yini* or *na* must be in disjoint form, as shown in (70), just as already shown for *ngani* in (17):

(70) a. U-cul-ile]$_{IP}$ na?
2S-sing-PERF.DJ Q
b. ∗ U-cul-e na?]$_{IP}$
2S-sing-PERF.CJ Q
c. U-cul-ile]$_{IP}$ yini?
2S-sing-PERF.DJ POL.Q
d. ∗ U-cul-e yini?]$_{IP}$
2S-sing-PERF.CJ POL.Q
“Did you sing?”

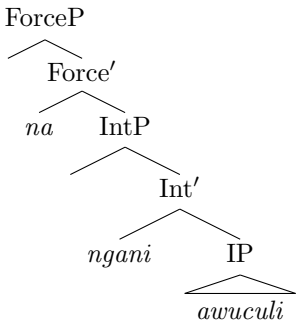
This distribution is natural if, as argued elsewhere, a conjoint form cannot be used if the verb is the final element in IP and if *yini*, *na*, and *ngani* are all in the complementiser domain.

Now we can address the question of precisely which specific complementiser domain projection *ngani* heads. Note that *ngani* and *na* cooccur with a fixed ordering, as shown in (71):

(71) a. A-wu-cul-i ngani na?
NEG-2S-sing-FV why Q
b. ∗ Awuculi na ngani?
“Why aren’t you singing?”

This can be captured in the same way as the relative ordering of *na* and *yini*, by assuming that *ngani* is a head below the Force^0 head *na*, as in (72):

(72)



Note that Rizzi’s (1999) cartographic view of the complementiser field has the IntP projection straddled by ForceP and FocP, and that *perchè* (Italian “why”) occupies the specifier of a phonetically empty Int^0, as in this partial bracketed structure:

(73) [$_{ForceP}$ [$_{IntP}$ WHY [$_{Int'}$ Int^0 [$_{FocP}$ ... [$_{IP}$ ...

This analysis of Italian can be fitted to the Zulu facts if we assume that *ngani* is the Int^0 head rather than a phrase in the specifier of a silent Int^0. This modification is necessary because if we adhere strictly to the hierarchy in (73), with no additional intermediary projection, there will be no specifier available for the IP to move to so that it can precede *ngani*. This analysis is also compatible with Thwala's analysis of the elocutionary particles, because while *ngani* can cooccur with the Force^0 particle *na*, as shown in (71), it cannot cooccur with *yini*, as shown in (74):

(74) a. A-wu-khulum-i ngani?
NEG-2S-speak-FV why
b. ∗ A-wu-khulum-i ngani yini?
c. ∗ A-wu-khulum-i yini ngani?
"Why aren't you talking?"

This cooccurrence restriction is natural if both *ngani* and *yini* are Int^0 heads and there is only one IntP projection.

The objection might be raised that it is unintuitive to think that *ngani* is a head, because in affirmative contexts it has the transparent meaning of "what about", as shown in (3b), and in that case *nga-ni* clearly seems to be a phrase, specifically, a PP. However, something very similar must also be said about *yini*, for it also has the transparent clausal usage meaning "what is it?", as illustrated in (75):[12]

(75) a. Yi-ni o-yi-cul-a-yo?
COP-what REL:2S-9-sing-FV-REL
"What is it that you're singing?"
b. Yi-ni lokho?
COP-what 17.that
"What's that?"

Yini thus has a phrasal usage and a head usage with different meanings, and the same claim must be made about *ngani*. If both *yini* and *ngani* are Int^0 heads, as claimed here, it is also interesting that they both developed from phrases containing the enclitic *-ni* "what".

Having argued for the position in which *ngani* is introduced and the way it comes to appear clause-finally, we will now turn out attention to its immediately postverbal property and the consequences for the analysis of postverbal focus in Bantu languages.

6 *Ngani* and the IAV position

For a number of Bantu languages, it has been claimed that the position immediately following the verb is a focus position, in the sense that a focused element must occupy that position. Consider the following evidence from Zulu:

(76) U-theng-e ingubo entsha izolo.
2S-buy-PERF.CJ 9.dress 9.new yesterday
"You bought a new dress yesterday."

[12] This usage seems to be the basis for the cleft reason strategy shown in (2a).

(77) a. ∗ U-theng-e ingubo entsha nini?]$_{IP}$
2S-buy-PERF.CJ 9.dress 9.new when

b. U-yi-theng-e nini]$_{IP}$ ingubo entsha?
2S-buy-PERF.CJ when 9.dress 9.new
"When did you buy a new dress?"

In (76) we see that the declarative order is S V O Adv. However, it is not possible to question the temporal adverb in this order, as in (77a). Instead, the intervening indirect object must be extraposed, with concomitant obligatory object marking on the verb (here *yi-*), so that the questioned constituent can immediately follow the verb, as in (77b). A growing body of literature on Bantu languages has been investigating the nature of this immediate postverbal position, which has come to be called by the abbreviation "IAV" ("Immediate After the Verb", Watters (1979)). Facts like those in (77) have led some to conclude that the IAV linear position in these Bantu languages corresponds to the specifier of a sub-IP focus projection (henceforth "low FocP"), similar to that first proposed for Italian by Belletti (2002) (Aboh 2006; van der Wal 2006).[13]

It is generally accepted that in Bantu languages an *in situ Wh* phrase occupies some IP-internal position. The point of contention is whether (in languages with IAV focus effects) the *Wh* phrase remains *in situ* or whether it moves to a slightly higher focal position still below the inflectional domain. The immediately postverbal property for arbitrary *Wh* phrases, then, can be explained in two ways, depending on which of these views is adopted. If the *Wh* phrase is assumed to move to a focus position, then this property comes for free if there is simply no other position between the verb and the focal position in which other elements could occur. Conversely, if the *Wh* phrase is assumed to remain *in situ*, other potential pre-*Wh* elements must evacuate the verb phrase, leaving the *Wh* element itself in the immediately postverbal position.

Now note that *ngani* has the same "immediately postverbal property" as arbitrary *Wh* phrases:

(78) a. ∗ A-wu-theng-e ingubo entsha ngani?
NEG-2S-buy-PERF.CJ 9.dress 9.new why

b. A-wu-yi-theng-ile ngani ingubo entsha?
NEG-2S-buy-PERF.DJ why 9.dress 9.new
"Why didn't you buy a new dress?"

The same property is observed in multiclausal structures. Consider the questions in (79) in which the upper clause is headed by a negative verb:

(79) a. A-ni-cabang-i ngani ukuthi uThandi u-cul-ile?
NEG-2P-think-FV why that 1.Thandi 1-sing-PERF.DJ

b. ∗ A-ni-cabang-i ukuthi uThandi u-cul-ile ngani?
NEG-2P-think-FV that 1.Thandi 1-sing-PERF.DJ why
"Why don't you think that Thandi sang?" (i.e. "Why don't you think so?")

[13] See Buell (2007b) for a discussion of the IAV position in Zulu and arguments against interpreting the position as a low focus position. In addition to those cited as arguing a focus projection to account for IAV focus effects in Bantu, Ndayiragije (1999) similarly argues for a focus position to account for a right-peripheral focus position which interacts with the conjoint/disjoint alternation in the same way.

We see that *ngani* is only licit when it immediately follows the verb. Two separate analyses seem to result in the ungrammaticality of (79b). If the lower clause and *ngani* are inside the relevant constituent, then the verb is separated from *ngani* by that clause, a situation which was already found to be bad with intervening objects. Alternatively, the lower clause could be viewed of as outside the relevant clause ("shifted"), but then *ngani* also necessarily lies outside that same clause, resulting in ungrammaticality. For this word order to yield a grammatical result, it must be the lower clause, rather than the higher one, which is negative, as in (80):

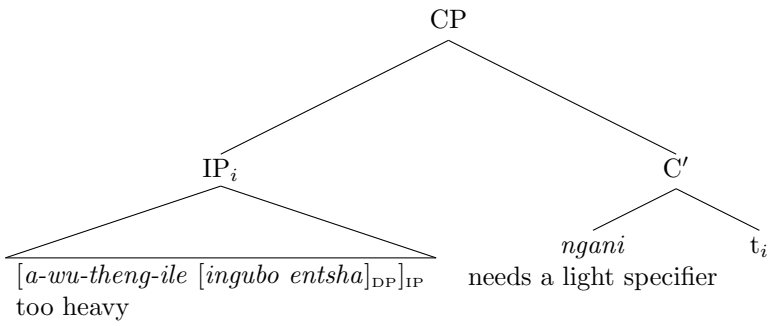
(80) Ni-cabang-a ukuthi uThandi a-ka-cul-anga ngani?
2P-think-FV that 1.Thandi NEG-1-sing-FV why
"Why$_i$ do you think that $\__i$ Thandi didn't sing?" (i.e. "In your opinion, why didn't Thandi sing?")

It has already been argued that *ngani* has to be outside the verb phrase, using evidence involving the conjoint/disjoint alternation, as well as crosslinguistic evidence concerning WHY and the scope of negation. If we take this property to define the IAV position, we are faced with the surprising conclusion that the IAV linear position cannot be associated with a single structural position, because sometimes the IAV position is outside the verb phrase (in the case of *ngani*), while at other times it is inside (in the case of all other *Wh* phrases). The claim that the IAV linear position corresponds to multiple structural positions is the same conclusion as the one reached in Hyman and Polinsky (2006) for Aghem.

Because both types of analyses for arbitrary *Wh* phrases leave the *Wh* phrase inside the IP, it should be obvious that the immediately postverbal property must be accounted for in a different way for *ngani*, which has been argued to sit outside of IP. Two different implementations of this were presented in (62) and (63). In (62), *ngani* is on a right-branching node in the complementiser domain, while (63) is a uniformly left-branching structure in which the IP (which contains the verb) has moved up to precede *ngani*. Both of these analyses directly account for the fact that *ngani* appears somewhere to the right of the verb, that it is clause-final. That is, both analyses capture the postverbal property of *ngani*, the fact that *ngani* appears *somewhere* to the right of the verb. However, they do not in themselves capture the *immediately* postverbal property, the fact that nothing may intervene between the verb and *ngani*.

Under the movement analysis, the immediately postverbal property can be accounted for using a complexity filter (Koopman and Szabolcsi 2000; Buell and Sy 2005). The idea is that a head can specify the maximum degree of complexity or heaviness of its (overt) specifier. In the case at hand, it would need to be assumed that *ngani* is a head requiring an overt specifier of a minimum degree of complexity. While it needs to host an IP in its specifier, that specifier must be minimally complex. It cannot contain any overt elements lower than the verb. This is illustrated in (81):

(81)



Any postverbal material within the IP must therefore be moved out before IP moves to the specifier of *ngani*.[14]

There is thus a way to account for the immediately postverbal property under an account where the IP moves to the specifier of *ngani*. As for the alternative account in (62), in which the IP remains *in situ* and *ngani* is the terminal of a higher, right-branching node, I am not aware of a mechanism to ensure that elements evacuate the IP which would otherwise intervene between the verb and *ngani*. The absence of such a mechanism could be take as evidence favouring the IP-movement account in (63), over the right-branching analysis in (62).

A final point to be made here is that, unlike *ngani*, there are no restrictions on the heaviness or complexity of the IP preceding the particles *yini* or *na*. Or, in analytically neutral terms, material of arbitrary heaviness or complexity may intervene between the verb and *yini* and *na*, as shown in (82), by the fact that a direct object can intervene between the verb and the particles:

(82) U-theng-e ingubo entsha yini na?
2S-buy-PERF.CJ 9.dress 9.new Q.POL Q
"Did you buy a new dress?"

This contrast between *ngani* and these two elocutionary force particles is explained by saying that, unlike *ngani*, these particles impose no maximum complexity restrictions on their overt specifiers.

The analysis pursued here weakens the attractiveness of equating the IAV to a structural position, since it was shown that factors operating on distinct structures can give the illusion that IAV focus effects constitute a coherent syntactic phenomenon. For the IAV linear position in a language like Zulu to be a candidate for a structural position analysis, the position itself must be explicitly restricted to constructions employing conjoint verb forms.

Among the evidence Buell (2006) uses to argue against the IAV linear position as a structural focus position is the fact that certain elements occur in this position (following a conjoint verb form) which cannot possibly receive a semantically focused interpretation, most notably resumptive pronouns. These elements are uncontroversially in a subinflectional position. *Ngani* thus provides new evidence against a low focus position, but this time using an inherently focused element above the inflectional domain.

[14] Recent work argues that in Zulu, non-focal material in *in situ* focus constructions must move out of the verb phrase (Buell 2007b; Cheng and Downing 2006).

7 Conclusion

In the foregoing discussion, several interesting conclusions were made. The first is that *ngani* is best analysed as introduced in the complementiser domain rather than under the inflectional domain. This was shown to be consistent with the two popular analyses proposed for the conjoint/disjoint alternation which provided morphosyntactic evidence for this analysis. More specifically, it was claimed that *ngani* is an Int^0 head, lending support for both Rizzi's (1999) specific decomposition of the complementiser domain and Thwala's (2004) analysis of Nguni elocutionary force particles.

The account of phrasal movement of IP to the specifier of Int^0 also converged with Thwala's account for word orders with elocutionary force particles, but *ngani*'s immediately postverbal property required the additional apparatus of complexity filters, demonstrating the utility of such filters.

Furthermore, the analysis of *ngani* was shown to weaken the analysis of the IAV linear position as a structural position, because this supra-inflectional focused item shares the same immediately postverbal property with other focused elements clearly below inflection.

A tentative proposal was made that while WHY may be introduced in the verb phrase in affirmative clauses in some languages, as in Sambaa, it may be that WHY is universally introduced in the complementiser domain if the clause is negative. Evaluation of such a proposal requires examining a number of languages with SVO word order and *Wh in situ*, in which WHY occurs in some postverbal position. Egyptian Arabic is an example of such a language.

Egyptian Arabic, a Semitic language, has overwhelmingly SVO word order (unlike Standard/Classical Arabic, in which the unmarked word order is VSO). Non-subject questions are typically formed with the *Wh* phrase *in situ* (Wahba 1984) as shown in (83a) with the temporal adjunct question word *'imta* "when":

(83) a. ḥa-truuḥ il-madrasa 'imta? $]_{\text{IP}}$
FUT-2S.go the-school when
"When will you go to school?"

b. ḥ-aruuḥ il-madrasa bukra.
FUT-1S.go the-school tomorrow
"I'll go to school tomorrow."

The standard assumption would be that *'imta* in (83a) is in a sub-IP position. Now consider the reason question in (84a):

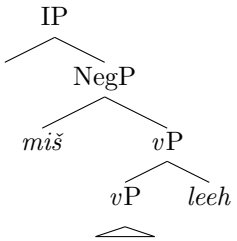
(84) a. miš ḥa- truuḥ il-madrasa leeh_i?
not FUT- 2M.go the-school why
"Why won't you go to school?"

b. miš 'ayz-iin- ak $[_{\text{CP}}$ tiruuḥ il-madrasa] leeh?
not PL.want- you 2M.go the-school why
"Why don't they want you to go to school?"

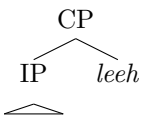
The word *leeh* "why" would seem amenable to the same IP-internal analysis as *'imta* "when" in (83a) But now note that *leeh* also appears in sentence-final position in the

biclausal structure in (84b). This is unexpected considering the interpretation. The question asks for a reason for wanting rather than for going. Furthermore, the two clauses have different subjects, so this is clearly not a restructuring environment. For these reasons, *leeh* cannot be inside the lower clause. It is therefore either somewhere below *miš* "not" but above the embedded CP node (such as an adjunct to the matrix VP), as in (85a), or it is above *miš* (such as in the matrix complementiser domain), as in (85b):

(85) a.



b.



According to the proposal made here, the analysis in (85b) is the only one possible, with *leeh* outside the scope of negation. It remains to be seen whether the alternative analysis in (85a) can be positively ruled out.

It is hoped that further research will be conducted on languages like Egyptian Arabic to test the proposal.

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