

Raising out of Finite Clauses and Expletive Constructions in Zulu

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1. Introduction

In this paper I examine raising and expletive constructions in Zulu, a Southern Bantu language (Zone S 40) spoken in South Africa. The specific constructions that I discuss are based on the modal verb *fanele*, 'ought; should; to be necessary', and are illustrated in (1):¹

- (1) a. Ku-fanele ukuthi amadoda a-hamb-e manje. (Variant 1)
EXPL-ought that man6 SM6-leave-SUBJ now
'The men ought to leave now.'
- b. Amadoda a-fanele ukuthi a-hamb-e manje. (Variant 2)
man6 SM6-ought that SM6-leave-SUBJ now
'The men ought to leave now.'

In both examples in (1), the verb *fanele* selects a finite clause as its complement. This clause is introduced by the (optional) complementiser *ukuthi* and appears in the subjunctive mood. In (1a), the thematic subject of the subordinate clause is located in the embedded subject position, as is illustrated by the fact that the NP *amadoda* follows the complementiser in (1a). In this construction, which I have labelled "Variant 1", the matrix verb *fanele* is obligatorily prefixed with the expletive marker *ku-*, originally the subject prefix of the locative class 17 (which is non-productive in Zulu). In contrast, the NP *amadoda* appears in the matrix subject position in (1b) ("Variant 2"). Consequently, *fanele* shows noun class agreement with this NP. I argue that the subject-NP in examples such as (1b) has undergone raising (A-movement) out of the finite clausal complement of *fanele* into the matrix clause.

I briefly discuss Variant 1 of the *fanele*-construction in section 2, and I provide arguments for my raising analysis of Variant 2 in section 3. In section 4, I offer a theoretical analysis of Variant 2 within the syntactic framework of the Minimalist Program (MP) (Chomsky 1995, 2000, 2001, 2005). I propose a novel account of this construction which is based on the idea that case assignment and agreement are two unrelated phenomena in Zulu whose formal properties are associated with different functional heads in the syntax. Section 5 discusses the implications of this proposal for the analysis of Variant 1 of the *fanele*-construction.

¹ In the glosses, I mark the noun classes and agreement through numbers, according to Meinhof's (1906) numbering system. Morphemes are glossed as follows: BP = basic (adjectival) prefix; EXPL = expletive marker; FOC = focus; FUT = future tense; FV = final vowel; INF = infinitive marker; LOC = locative marker; PC = pronominal clitic; PASS = passive voice; PERF = perfect tense; RC = relative concord; REC = reciprocity marker; SG = singular; SM = subject marker; SUBJ = subjunctive mood.

In my discussion, I adopt the standard view of phrase structure assumed in the MP. Finite sentences are analysed as CPs, i.e. as projections of the complementiser position C. C selects TP, the projection of the functional head T (tense), which selects the VP.² I further assume that the verb moves to the T-position in Zulu. Subjects are generated ("merged") as arguments in the specifier of V ([Spec, V]), but may move from this postverbal VP-internal position to the preverbal subject position, the specifier of T ([Spec, T]).

2. The expletive construction with *ku-*

Consider the example of Variant 1 in (2):

- (2) Ku-fanele ukuthi uMdu a-khulum-e isiZulu na-mi.
 LOC-ought that Mdu1a SM1a-speak-SUBJ Zulu7 with-PC1^{SG}
 'Mdu should speak Zulu with me.'

The matrix verb *fanele* in (2) is prefixed with the pleonastic element *ku-*. Following Van der Spuy (2001), I treat *ku-* as an expletive marker. The prefix *ku-* is the only expletive marker in Zulu. It occurs in all contexts in which English uses either the expletive pronoun *it* or *there*:

- (3) a. Ku-ya-neth-a ngaphandle.
 EXPL-FOC-rain-FV outside
 'It's raining outside.'
 b. Ku-ya-band-a namhlanje.
 EXPL-FOC-be.cold-FV today
 'It's cold today.'
 c. Ku-bukek-a sengathi uJohn u-cebile.
 EXPL-look-FV as.through John1a SM1a-be.rich
 'It looks as though John's rich.'
- (4) a. Ku-ne-ndoda e-ngadi-ni.
 EXPL-with-man9 LOC-garden9-LOC
 'There is a man in the garden.'
 b. Ku-fik-e amadoda a-ma-bili.
 EXPL-arrive-PERF man6 RC6-BP6-two
 'There arrived two men.'

It is a standard assumption in the MP that subject agreement is a property associated with formal features of the functional head T. According to this view, T in Zulu can be considered to have (uninterpretable) noun class features which need to be "valued" by the interpretable

² For ease of exposition, I ignore the existence of the so-called light verb phrase vP (which is located between T and VP) in this paper. I also do not represent noun phrases as DPs (determiner phrases), although this is standard in the Minimalist Program.

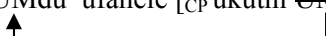
noun class features of a subject-NP.³ I argue in section 4 that for the subject to value T's noun class features, it must move to [Spec, T], the derived preverbal subject position. When the verb moves to T, subject agreement is reflected morphologically on the verb. However, if there is no NP in [Spec, T] which can value T's noun class features, then the noun class features of T must be valued by the default expletive marker *ku-*.⁴

These assumptions explain the presence of *ku-* in constructions such as (3) and (4) and in examples of Variant 1 such as (2). Since the subject position of the matrix clause is not filled with an NP in these constructions, the verb must be prefixed with the expletive marker *ku-*. Variant 1 can therefore be regarded as an expletive construction.

3. Raising out of finite clauses

Let me now turn to Variant 2. As mentioned in the introduction, I suggest that the matrix subject in these constructions has undergone A-movement to the matrix [Spec, T]-position from inside the finite CP-complement of *fanele*, leaving behind an (unpronounced) copy:

- (5) UMdu u-fanele ukuthi a-khulum-e isiZulu na-mi.
 Mdu1a SM1a-ought that SM1a-speak-SUBJ Zulu7 with-PC1stSG
 'Mdu should speak Zulu with me.'

- (6) [_{TP}UMdu ufanele [_{CP}ukuthi ~~UMdu~~ akhulume isiZulu nami]]


In sections 3.1 and 3.2 I present a number of empirical arguments in favour of the movement analysis shown in (6). Section 3.3 addresses a potential objection to this proposal.

3.1 Zeller (2006): Four arguments in favour of a raising analysis

In Zeller (2006) I provide four arguments in favour of my claim that the lexical subject in Variant 2 of the *fanele*-construction has moved into the matrix clause from a position inside the embedded CP. These arguments are based on well-attested syntactic differences between typical raising constructions such as (7a) and subject control constructions such as (7b):

³ In constructions with pronominal subjects, T's noun class features are valued by the (interpretable) noun class features of the subject marker. (I leave open the question whether [Spec, T] in these constructions is filled with an unpronounced pronominal NP (*pro*) in Zulu.)

⁴ In the MP, expletive constructions in pro drop languages such as Zulu are typically analysed as involving phonetically null counterparts of the expletive pronouns *it* and *there* in English. According to this view, the subject position [Spec, T] in constructions such as (2)-(4) is filled with "expletive *pro*", an expletive pronoun which is phonetically zero. Oshita (2004) provides interesting evidence from second language (L2) studies that for speakers of pro drop languages such as Italian and Spanish, expletive *pro* is psychologically real. It would be interesting to find out what comparable L2-data from Zulu mother tongue speakers can reveal about the possible existence of expletive *pro* in Zulu. In this article, I remain agnostic about the existence of (expletive) *pro* in Zulu (see also note 3).

- (7) a. John seems to be on time. (Raising)
 b. John tried/promised/wants to be on time. (Control)

In showing that constructions such as (5) behave in many important respects like raising constructions, but differ syntactically from control constructions, I provide evidence that we are in fact dealing with raising out of finite clauses.

One important property of raising constructions is that they alternate with expletive constructions. This alternation is not possible with control verbs (see Rosenbaum 1967):

- (8) a. It seems that John is on time.
 b. *It tried/promised/wants that John is on time.

Since control verbs thematically select their subjects, an expletive is not possible in subject position. The occurrence of an expletive in (8a) therefore implies that the matrix subject in (7a) is not an argument of the matrix verb.

In light of the contrast in (8), the existence of the expletive construction with *fanele* (Variant 1) discussed in section 2 provides the first argument for the view that Variant 2 of the *fanele*-construction involves raising. The fact that *fanele* can be prefixed with *ku-* shows that the subject-NP in Variant 2 is not an argument of *fanele*, but has moved to the matrix [Spec, T]-position from its base position inside the CP-complement.

The second argument in favour of a raising analysis derives from the fact that the matrix subject in Variant 2 can be interpreted as part of a sentential idiom or proverbial expression embedded under *fanele*, (9a). This is not possible with subjects of control constructions, (9b):

- (9) a. Izandla zi-fanele ukuthi zi-gez-an-e.
 hand8 SM8-ought that SM8-wash-REC-SUBJ
 'It's vital that one hand washes another.' (idiomatic)
 b. Izandla zi-thembis-a uku-gez-an-a.
 hand8 SM8-promise-FV INF-wash-REC-FV
 'The hands promise to wash one another.' (not idiomatic)

As (9) shows, the idiomatic reading of *izandla zigezane* is preserved with Variant 2 of the *fanele*-construction. This follows from the fact that, as a result of raising, the NP in the subject position of *fanele* is linked to the embedded predicate via its copy in the embedded clause.

Passivisation of the embedded clause provides the third argument for the claim that *fanele* is a raising predicate. As first observed by Rosenbaum (1967), when the embedded predicate of a raising verb is passivised, and the arguments of the construction are "flipped", such that the thematic object of the embedded predicate is now realised as the matrix subject, the truth conditions of the corresponding active sentence are preserved (e.g. *Mary seems to be visited by John* is roughly synonymous with *John seems to visit Mary*). The same does not hold, however, when the arguments of a control construction are flipped (*Mary wants to be visited by John* does not mean the same as *John wants to visit Mary*). Flipping the arguments in a construction involving *fanele* preserves the truth conditions; (10a) means the same as (10b):

- (10) a. Udokotela u-fanele ukuthi a-bhek-e isiguli.
 doctor1a SM1a-ought that SM1a-examine-SUBJ patient7
 'The doctor must examine the patient.'
- b. Isiguli si-fanele ukuthi si-bhek-w-e ng-udokotela.
 patient7 SM7-ought that SM7-examine-PASS-SUBJ by-doctor1a
 'The patient must be examined by the doctor.'

In contrast, flipping the arguments in a control construction in Zulu changes the meaning:

- (11) a. Udokotela u-funa uku-bhek-a isiguli.
 doctor1a SM1a-want-FV INF-examine-FV patient7
 'The doctor wants to examine the patient.'
- b. Isiguli si-funa uku-bhek-w-a ng-udokotela.
 patient7 SM7-want INF-examine-PASS-FV by-doctor1a
 'The patient wants to be examined by the doctor.'

The synonymy of (10a) and (10b) is due to the fact that the NP *isiguli* is the internal argument of *bheka* in both examples; it has just raised to the matrix subject position in (10b). If *isiguli* in (10b) was an argument of *fanele*, then we would expect to observe a semantic difference between (10a) and (10b) similar to that between (11a) and (11b).

The fourth argument presented in Zeller (2006) in favour of a raising analysis is based on the observation that an embedded object can take scope over the matrix subject in raising constructions, but not in control constructions. Wurmbrand (1999) suggests that this difference is because quantifier raising (QR) cannot cross a sentence boundary (no long QR), thus there is no way that an embedded object can raise to a position above the matrix subject position at LF. Since the matrix subject in control constructions originates in the matrix clause, an embedded object can never have wide scope. However, since the matrix subject in a raising construction originates in the lower clause, an embedded object can take scope over the matrix subject by undergoing QR to a position above the *copy* of the subject in the embedded clause. Importantly, in Variant 2 of the *fanele*-construction, the embedded object can have wide scope with respect to the matrix subject:

- (12) Othisha aba-bili ba-fanele ukuthi ba-bhek-e wonke umfundi.
 teacher2a RC2a-two SM2a-ought that SM2a-supervise-SUBJ every1 student1
 'Two teachers must supervise every student.'

(12) can mean that there are two specific teachers who must supervise every student (narrow scope), but it can also mean that it is necessary that every student is supervised by (any) two teachers (wide scope). Since no similar scope ambiguity is observed with control constructions in Zulu, (12) provides further evidence for the view that *fanele* is a raising verb.

3.2 Two additional arguments: emphatic pronouns and *V-Sub-CP

The following example provides additional evidence in favour of a raising analysis:

- (13) a. UMdu yena u-fanele ukuthi a-theng-e imoto.
Mdu1a he SM1a-ought that SM1a-buy-SUBJ car9
'Mdu, HE must buy a car.'
- b. UMdu u-fanele ukuthi yena a-theng-e imoto.
Mdu1a SM1a-ought that he SM1a-buy-SUBJ car9
'Mdu, HE must buy a car.'

In (13a), the matrix subject position is filled by a complex NP, consisting of the noun *uMdu* and the emphatic pronoun *yena*. According to the raising-analysis of Variant 2, the noun and the pronoun form one complex nominal constituent which has raised from the embedded clause into the matrix clause. The interesting example is (13b), where the emphatic pronoun and the NP *uMdu* appear in different positions, but are still obligatorily coreferential. A plausible analysis of (13b) would be to assume that the complex subject-NP *uMdu yena* has first raised into the embedded subject position. From here, the NP *uMdu* has raised further into the matrix subject position, stranding the pronoun inside the embedded [Spec, T].⁵ According to this analysis, only one part of the matrix subject-NP in (13a) is realised in the matrix clause in (13b); the other part still appears in the embedded clause. The position of *yena* in (13b) can therefore be regarded as further evidence for the raising analysis.

My final argument is provided by the contrast between (14) and (15):

- (14) a. UJohn u-thembis-a ukuthi u-zo-fik-a namhlanje.
John1a SM1a-promise-FV that SM1a-FUT-arrive-FV today
'John promises that he will arrive today.'
- b. Ku-thembis-a uJohn ukuthi u-zo-fik-a namhlanje.
EXPL-promise-Fv John1a that SM1a-FUT-arrive-FV today
'John promises that he will arrive today.'
- (15) a. Abantwana ba-fanele ukuthi ba-dlal-e ngaphandle.
child2 SM2-ought that SM2-play-SUBJ outside
'The children must play outside.'
- b. *Ku-fanele abantwana ukuthi ba-dlal-e ngaphandle.
LOC-ought child2 that SM2-play-SUBJ outside
'The children must play outside.'

As was shown in section 2, Zulu allows for V-Sub word order, thus allowing a subject to remain inside the VP, in which case the verb (in T) is prefixed with the expletive marker *ku-*.

⁵ The idea that NPs may be selected as complements of pronominal heads which are stranded when the NP moves away also underlies various analyses of A-bar movement constructions with resumptive pronouns, such as e.g. clitic left dislocation (see e.g. Boeckx 2003 and references cited therein).

This word order is not only possible with intransitive verbs, but, as shown in (14b), also in constructions in which the verb takes a CP-complement.⁶ Importantly, the ungrammaticality of (15b) provides strong evidence that the matrix subject in (15a) does not originate in the matrix clause. If *abantwana* in (15) was a true argument of the verb *fanele*, then we would expect the order V-Sub-CP in (15b) to be possible, with *abantwana* in its base position inside the matrix VP. However, (15b) is ungrammatical, which follows from the fact that the subject of *fanele*, in contrast to the subject of a control verb such as *thembisa*, does not originate in the matrix VP, but inside the embedded clause. Therefore, the word order in (15b) cannot be derived, since movement of the embedded subject to a position inside the matrix VP is impossible.

In light of the evidence provided in this and the preceding section, I conclude that Variant 2 is an instance of raising (A-movement) out of a finite clause (for similar conclusions about a variety of related and unrelated languages, see Perez 1985; Ura 1998; Alexiadou and Anagnostopoulou 1999; Uchibori 2000, among many others).

3.3 Variant 2 is not Copy Raising

Before I discuss the theoretical implications of my claim that *fanele* triggers raising out of a finite complement, I need to address a potential objection. English and many other (Bantu and non-Bantu) languages have constructions such as those in (16):⁷

- (16) a. It seems/looks/sounds as if John is sick.
 b. John seems/looks/sounds as if he is sick.

The subject position of the matrix verb(s) in (16a) is occupied by an expletive. In (16b), a so-called Copy Raising-construction (CR), the subject position is filled by the thematic subject of the embedded finite clause; this subject is linked to a coreferential pronoun in the subject position of the finite clause. In these respects, the two constructions in (16) obviously resemble the expletive and the raising variant of the *fanele*-construction, and one might be tempted to analyse Variant 2 on a par with examples such as (16b).

Importantly, a raising (A-movement) analysis of CR has been refuted in various ways. While Potsdam & Runner (2001) argue that CR does not involve A-movement of the matrix subject-NP at all, Asudeh (2004) proposes an analysis according to which the subject-NP has been moved, but not from the position of its pronominal copy. If it could be shown that

⁶ V-Sub word order is also possible in Zulu with verbs which select a PP-complement. Some Zulu dialects also permit V-Sub-Obj word order with transitive verbs (Van der Spuy 2001); this possibility is also attested in Northern Sotho (S 30) (see Zerbian 2005 for a discussion of the conditions which license V-Sub-Obj in Northern Sotho).

⁷ Constructions like (16b) are also attested in Zulu (compare (i) and (3c) in section 2 above):

(i) UJohn u-bukek-a sengathi u-cebile.
 John1a SM1a-looks-FV as.through SM1a-be.rich
 'John looks as though he's rich.'

Variant 2 of the *fanele*-construction is in fact an instance of CR, then the movement analysis illustrated in (6) above presumably would look less plausible.

However, there are two important differences between CR and Variant 2 of the *fanele*-construction which cast doubt on the assumption that the latter is an instance of the former. First, CR is only attested with perception verbs whose propositional argument denotes a perceived state. Importantly, *fanele* is not a perception verb, and its argument denotes an unrealised future event. Second, as noted by Potsdam & Runner (2001), among others, the embedded clause in CR is introduced by particles such as *like* or *as (if)*,⁸ but never by a genuine complementiser such as *that*:

(17) *John seems that he is sick

In contrast, the embedded finite clause selected by *fanele* is introduced by a genuine complementiser *ukuthi* and is hence a CP. Thus, I conclude that Variant 2 of the *fanele*-construction is not an instance of CR but is derived by subject-to-subject raising.

4. Weak phases and the dissociation of case and agreement

In this section I provide a theoretical discussion of the raising variant of the *fanele*-construction which will lead me to a new proposal concerning the relation between *agreement* and *case assignment* in Zulu. In recent versions of the MP, it is assumed that these two phenomena are closely related. According to Chomsky (2000, 2001), a functional head F can assign (structural) case to an NP only if F agrees with this NP. In contrast, I suggest below that case and agreement in Zulu are not related and are not even associated with the same functional head.

Let me begin my discussion by illustrating the way in which raising constructions such as (18) are analysed in Chomsky (2000, 2001). At some point, the derivation of (18) (which proceeds in a bottom-up fashion) has reached the intermediate stage (19):

(18) He seems to love Mary.

(19) [T [_{VP} seem [_{TP} to [_{VP} PRON love Mary]]]]

In (19), the verb *seem* has merged with its infinitival complement (a bare TP) to create the matrix VP, which then has merged with matrix T. The external argument of the infinitival predicate is a third-person singular pronoun (abbreviated here simply as PRON) which is still located in the embedded VP. This pronoun needs case. However, for reasons to be discussed shortly, PRON cannot receive case inside the infinitive and therefore needs to enter into an agreement relation with a case assigner in the matrix clause. The relevant case assigner is matrix T. As noted above, case is assigned under agreement in the MP. Therefore, for matrix T to assign case to the embedded subject, T needs to agree with this NP. According to

⁸ Asudeh (2004) treats these particles as prepositional heads and consequently analyses the complement of CR-verbs as a predicative PP whose head selects a finite clause.

Chomsky (2000, 2001), agreement requires c-command. Since matrix T c-commands PRON in (19), it can agree with PRON and assign nominative case to it. This operation is followed by movement of the subject pronoun from the embedded clause to the matrix subject position [Spec, T] (note that the subject pronoun now bears nominative case, while agreement between the pronoun and matrix T is morphologically reflected on the finite matrix verb):

(20) [he [T [VP seem-s [TP to [VP he love Mary]]]]]

Since agreement and case assignment have already been established in the configuration in (19) (i.e. prior to movement), (20) raises the question of why the pronoun *he* has to raise into the matrix clause at all. According to Chomsky (1995, 2000, 2001, 2005), the movement step in (20) (the actual raising operation) is triggered by the so-called EPP-feature of matrix T, which requires T's specifier position to be filled.⁹ Importantly, the EPP-feature of T always attracts the phrase with which T agrees. Therefore, what moves to the specifier of matrix T in (20) is the embedded subject. (I return to the EPP below.)

This analysis of raising constructions depends, in two important respects, on the fact that the raising infinitive in (18) is a bare TP. First, this assumption explains why the embedded subject *must* agree with and receive case from the matrix T: as argued in Chomsky (2001, 2005), a T-head can only assign case if it is selected by C. In raising infinitives, which are selected as bare TPs without a CP-layer, embedded T is therefore "defective" and fails to assign case to its subject. Second, the assumption that the raising infinitive is merely a TP also explains why the embedded subject *can* enter into an agreement relation with the matrix T and eventually undergo A-movement into the matrix clause. It is usually assumed that finite CPs block syntactic relations between matrix elements and embedded NPs. Therefore, A-movement out of finite sentences is not possible in languages such as English, (21a) (and not necessary either, since the embedded C selects a non-defective T which can assign case to the embedded subject, (21b)):

- (21) a. *He seems that (he) loves Mary.
 b. It seems that he loves Mary.

However, since raising infinitives are TPs, no CP intervenes between matrix T and the embedded subject. The two can agree, T can assign case, and the embedded subject can move to the matrix [Spec, T]-position.

⁹ The *Extended Projection Principle* (EPP) was originally stipulated in Chomsky (1981) as the configurational requirement that sentences must have subjects. In Chomsky (1995), the EPP was reconceptualised as a non-interprettable EPP-feature of T which requires [Spec, T] to be filled. The EPP accounts for the presence of expletives in sentences such as (i) (see also (27) in the text below):

(i) *There* seem to be people in the garden.

As in (18), the matrix T in (i) agrees with and assigns case to the embedded subject-NP *people* under c-command in (i). The EPP-feature of matrix T then requires the matrix subject position to be filled. However, instead of moving the embedded subject-NP into the matrix clause, as in (18), the EPP-feature of the matrix T in (i) is checked by the expletive *there*, which is merged directly into [Spec, T].

As was shown in section 3, Zulu has raising out of finite complements of *fanele*. It is clear, therefore, that the conditions that govern A-movement have to be modified; raising out of finite CPs must not be excluded in principle. In Zeller (2006), I adopt and elaborate a proposal put forward by Uchibori (2000), which is based on the concept of a "phase" (see Chomsky 2001). What I suggest is that finite CPs are either "strong phases" (opaque domains) or "weak phases" (transparent domains).¹⁰ Because finite CPs are normally strong phases, examples such as (21a) are typically ruled out. However, I argue that in languages such as Zulu, certain verbs (e.g. *fanele*) may also select finite CPs which are weak phases and therefore transparent. Consequently, an element inside a weak CP-phase may enter into a syntactic relation with an element in the matrix clause and undergo long A-movement.

Although this idea captures the empirical fact that raising out of finite clauses is possible in Zulu, it leaves open the question why raising out of finite clauses is necessary at all. To make this question clearer, consider again the raising variant of *fanele*:

- (22) Abantwana ba-fanele ukuthi ba-dlal-e ngaphandle.
 child2 SM2-must that SM2-play-SUBJ outside
 'The children must play outside.'

In (22), the embedded subject-NP *abantwana* has moved into the matrix clause, a possibility which exists because the CP selected by *fanele* is a weak phase. Importantly, the moved NP agrees with both the matrix and the embedded T (as is reflected by the fact that the subject marker *ba-* of class 2 appears on the matrix and on the embedded verb). However, if agreement entails case assignment, as is assumed by the standard analysis of raising constructions, agreement between the embedded T and the subject-NP *abantwana* implies that the NP would already receive nominative case from the embedded T (compare (21b)). However, the embedded subject would then not be required to (and thus should not) enter into another agreement relation with matrix T, since this would entail that the NP would now receive case from matrix T as well. The double agreement pattern shown in constructions such as (22) hence raises a problem for the assumption that agreement is associated with case assignment in Zulu. In order to explain raising data such as (22), this assumption must be revisited.¹¹

¹⁰ Chomsky's (2000, 2001) notion of a *phase* is based on his idea that syntactic derivations proceed in cycles, or "phases". During each phase, only a subset of the lexical elements that will appear in the sentence is available for the computation. No lexical element which is not part of this subset can be accessed by the computational system until the respective phase is completed. Once the phase is completed, it is sent off to the interface components and the computation proceeds. An implication of this view is that elements within a phase are invisible for elements outside this phase (the *Phase-Impenetrability Condition PIC*). Phases are therefore opaque domains. For reasons relating to the analysis of passives and unaccusative constructions, Chomsky (2001) introduces the further distinction between strong and weak phases. However, he does not apply this distinction to CPs.

¹¹ In their analysis of raising out of finite clauses in Greek, Alexiadou & Anagnostopoulou (1999) suggest that case assignment is not determined by the agreement features, but by the tense feature, of T. They argue that T in finite raising complements in Greek (which are also in the subjunctive mood) lacks a tense feature. Therefore, the embedded T may show agreement with its subject but still fails to assign case to it. However, in Zeller (2006), I show that T in the CP-complement of *fanele* does not lack

My account of the mechanisms that cause raising out of finite clauses in Zulu is therefore based on the view that case assignment and noun class agreement are *not* related in Zulu, but should rather be treated as two separate phenomena. More specifically, I make the following two assumptions: (i) Nominative case is assigned by a strong phase C-head under c-command, and (ii) agreement between an NP and T is established under "derivational sisterhood".

The assumption that nominative case is assigned by C is an extension of an idea first mentioned in Chomsky (2001: note 18) and further elaborated in Chomsky (2005). Chomsky (2005) suggests that the formal case and agreement features of T are *derivative*. According to this view, the category T is not itself equipped with formal features, but only *inherits* these features from a selecting strong phase head C. According to this view, T technically assigns nominative case, but strictly speaking, it only mediates between the NP which receives case and C, the true source of the case-assignment property. In light of this proposal, the idea that in at least some languages, nominative case is actually assigned by strong phase C does not seem to be entirely implausible.¹²

In contrast to case, I propose to treat agreement in Zulu as a property inherently associated with T. As noted in section 2, I assume that T in Zulu is equipped with unvalued noun class features which must enter into an agreement relation with the noun class features of an NP. Importantly, I suggest that in Zulu, agreement between T and NP can only be established under "derivational sisterhood" (see Epstein & Seely 2006). Sisterhood is a relation between X and Y which requires mutual c-command. *Derivational* sisterhood means that X asymmetrically c-commands Y at some stage of the derivation, and then Y moves to a position from which it asymmetrically c-commands X. Importantly, if agreement between T and NP in Zulu requires derivational sisterhood, we correctly predict that we only find noun class agreement with preverbal subjects in Zulu: when the subject remains in a postverbal position inside the VP, as in (23a), T c-commands NP, but not vice versa. For the NP to c-command T at some stage of the derivation, it has to move to [Spec, T], as in (23b), thereby establishing mutual c-command derivationally and providing the structural configuration for agreement in Zulu (see also (3) and (4) in section 2 above):

- (23) a. Ku-sebenz-a ubaba.
 EXPL-work-FV father1a
 'Father is working.'
- b. Ubaba u-ya-sebenz-a.
 father1a SM1a-FOC-work-FV
 'Father is working.'

Examples such as (23a) with V-Subj word order provide strong evidence for the dissociation of case and agreement. Assuming that the Case Filter is universal, postverbal subjects must bear case, despite the absence of noun class agreement. My analysis explains this situation:

a tense feature and that, as a result, Alexiadou & Anagnostopoulou's analysis cannot be adopted for Zulu.

¹² Note that a C-element such as *for* in English can assign accusative case to the subject of an infinitive:
 (i) I would prefer *for him* to be appointed.

the CP in (23a) is a strong phase; its head can therefore assign nominative case to the VP-internal subject under c-command. However, since noun class agreement requires derivational sisterhood between T and NP, no agreement between T and the postverbal NP can be established, and the verb must be prefixed with the expletive marker *ku-*.¹³

(23a) illustrates the possibility that a subject-NP receives case inside a CP without agreeing with T. Importantly, the proposed dissociation of case and agreement also allows for the opposite pattern: a subject-NP in [Spec, T] may agree with T, but fail to receive nominative case from the local C-head which selects the TP. I suggest that this is exactly the situation we find in raising constructions with *fanele*.

Recall that the complement of *fanele* is a weak phase. According to the view that only a strong phase-C assigns nominative case, an embedded subject-NP does not receive case from the embedded C. However, since the matrix CP is a strong phase, and since the embedded weak phase-CP is transparent, the embedded subject can receive nominative from matrix C. As noted above, nominative case assignment alone does not require NP-movement yet; since case is assigned under c-command, matrix C could assign nominative case to the embedded subject even if the latter remained inside the VP. However, both the embedded and the matrix T have noun class features which need to be valued. Therefore, an embedded subject-NP like *abantwana* in (22) may first move to the embedded [Spec, T] to establish sisterhood derivationally with the lower T. As a result, the embedded verb shows noun class agreement with *abantwana*. Then, the subject-NP may move further to the matrix [Spec, T], so that agreement can also be established between the NP and the higher T. This movement operation is possible because the intervening CP-node is a weak phase:¹⁴

(24) *abantwana* *bafanele* [_{CP} *ukuthi* *abantwana* *badlale* *abantwana* *ngaphandle*]

According to this analysis, the subject marker *ba-* on the embedded verb is a morphological reflex of the fact that the NP *abantwana* moves into the matrix clause via the embedded [Spec, T]. Further evidence for the view that the raised subject moves to the matrix subject position via the intermediate subject position is provided by examples such as (13) above, repeated in (25):

(25) UMdu u-fanele ukuthi yena a-theng-e imoto.
 Mdu1a SM1a-ought that he SM1a-buy-SUBJ car9
 'Mdu, HE must buy a car.'

¹³ Belletti (1988) suggests that postverbal subjects in English are not assigned structural (nominative) case, but inherent (partitive) case, which is assigned by the verb. This explains why only indefinite NPs are licensed postverbally in English and why the V-Sub word order is only attested with unaccusative verbs. In Zulu, however, V-Sub word order is not restricted to unaccusatives, and the postverbal subject position can also be filled with definite NPs (cf. e.g. (23a)). This suggests that postverbal subjects in Zulu do not bear partitive case, but structural nominative case, which is assigned by C.

¹⁴ Note that the noun class features of *abantwana* are interpretable. Therefore, they can enter into agreement relations with multiple T's.

As was argued in section 3.2, the position of the stranded pronoun *yena* in (25) shows that the complex nominal constituent which includes both the pronoun and the NP *uMdu* has first moved from its base position inside the embedded VP to the embedded [Spec, T], where it triggers agreement with the embedded T. From here, the NP *uMdu* has raised into the matrix clause to value the noun class features of matrix T, stranding the pronoun.

The claim that agreement is established via NP-movement to [Spec, T] has another welcome consequence: examples such as (22) and (25) can now be explained without appeal to the EPP. As noted above, the Chomskian analysis of raising postulates that agreement and case are established via c-command. Therefore, movement of the embedded subject to a matrix [Spec, T] needs to be motivated otherwise, i.e. through the stipulation of an EPP-feature associated with matrix T. However, the existence of the EPP has been called into question in recent years by numerous authors (see e.g. Martin 1999; Grohmann, Drury & Castillo 2000; Bošković 2002; Epstein & Seely 2006). The EPP has mainly been criticised from a conceptual point of view: it is essentially a stipulation whose sole *raison d'être* is that it is needed to explain constructions whose grammaticality otherwise seems to remain unexplained. If the effects of the EPP could be deduced from independently motivated properties of the computational system, then the EPP would become unnecessary and, given its stipulative and ill-understood nature, could be abandoned. My proposed analysis of raising out of finite clauses in Zulu achieves this goal: while case is assigned by (matrix) C under c-command, NP-movement is triggered by the presence of noun class features on (both matrix and embedded) T. Therefore, no EPP-features are necessary to explain NP-movement to the embedded and matrix [Spec, T]-position in raising constructions with *fanele*.

5. Some implications for the expletive construction

Consider now again the expletive variant with *fanele*:

- (26) Ku-fanele ukuthi abantwana ba-dlal-e ngaphandle.
 EXPL-must that child2 SM2-play-SUBJ outside
 'The children must play outside.'

In Zeller (2006) I suggest that the expletive variant of *fanele* can also be analysed on the basis of the idea that *fanele* selects a CP-complement which is a weak phase. According to this view, the subject-NP in the embedded clause in (26) does not receive nominative case from its local C, but instead is assigned case by the matrix C. In this respect, constructions such as (26) would be comparable to English expletive constructions such as (27):

- (27) There seem to remain several problems.

In (27), the subject of the embedded clause receives case from matrix T¹⁵ but has remained inside the infinitive, while the subject of the matrix clause is an expletive pronoun.

However, as I point out in Zeller (2006), a problem with treating constructions such as (26) on a par with examples such as (27) is that (26) exhibits "partial raising": although the embedded subject can be case-marked by the matrix C even if it remains in its base position, it still raises from the embedded VP-internal position to the embedded [Spec, T]. Crucially, partial raising is not possible with expletive constructions in English:

(28) *There seem several problems to remain.

Since the embedded subjects in both (26) and (27) are assigned case by an element from the matrix clause, the question raised in Zeller (2006) is why only the subject in (26) moves to the embedded [Spec, T]-position.

The analysis that I have proposed in section 4 offers a straightforward answer to this question. Since case is dissociated from agreement in Zulu, it is possible that an embedded subject-NP raises to an embedded [Spec, T] in order to establish agreement with T via derivational sisterhood, although this NP cannot receive case from embedded T or C. In contrast, in a language like English, where case and agreement are linked to properties of the same functional head, partial raising is not possible.

According to this view, the raising and the expletive variant of *fanele* differ from each other only minimally. In both constructions, *fanele* selects a weak phase-CP, whose head selects a T with uninterpretable noun class features. In both constructions, the thematic subject of the embedded predicate gets case from matrix C; in both constructions, the thematic subject raises to the lower [Spec, T] and triggers agreement. The difference simply depends on how the noun class features of matrix T are valued: If the embedded subject moves further to matrix [Spec, T], then the features of matrix T are valued by this NP, and we get Variant 2. However, if the subject-NP remains inside the lower [Spec, T], the noun class features of the matrix T-head must be valued by the expletive marker *ku-*. In this case, we get Variant 1, which exhibits partial raising. In contrast to Variant 1 with *fanele*, T inside the raising infinitive in (27) does not agree with the embedded subject. Therefore, the subject-NP, which receives case from matrix T, remains in situ inside the embedded VP.

6. Conclusion: The C-T-relation, subjunctives and infinitives

I have proposed a theoretical analysis of the *fanele*-construction which is based on the idea that case assignment in Zulu is associated with a (strong phase) C-head, while noun class agreement is associated with T. I have focused on two possible variants of the *fanele*-construction which reflect this dissociation of case and agreement. The expletive variant

¹⁵ The question of whether my proposal that nominative case is assigned by C can be extended to languages other than Zulu cannot be explored here, but an investigation into whether languages differ with respect to the functional heads that assign structural case would be an interesting topic for future research. I continue to assume here that in English, nominative case is assigned by T, not C.

(Variant 1) is characterised by a configuration in which the embedded T shows noun class agreement with the embedded subject, while the noun class features of matrix T are valued by expletive *ku-*. In contrast, in the raising variant (Variant 2), the embedded subject moves to both [Spec, T]-positions and therefore agrees with both the embedded verb and with *fanele*.

Interestingly, there is a third variant of the *fanele*-construction: in (29), *fanele* combines with an *infinitival* complement (see Zeller 2006). In this example, the embedded subject shows noun class agreement with matrix T, but not with the embedded verb:

- (29) [A]bantwana ba-fanele uku-fundis-w-a kakhulu.
 child2 SM2-ought INF-teach-PASS-FV well
 'Children ought to be well educated.' (Nyembezi 1970: 211)

In (29), the subject-NP *abantwana* has received case from matrix C and has moved to matrix [Spec, T] to establish agreement with the matrix T. Importantly, however, there is no noun class agreement between the embedded T and this NP in (29) – the embedded verb is realised in the infinitive. This means that in raising infinitives, the embedded subject does not move to the embedded [Spec, T], but moves to the matrix [Spec, T]-position directly from the embedded [Spec, V].

What conclusions can be drawn from the difference between (29) on the one hand and Variants 1 and 2 of the *fanele*-construction on the other? One possibility is that this contrast reveals something about the use of the subjunctive mood in Zulu. Perhaps the subjunctive is a morphological reflex of particular properties of C and T in the complement of *fanele*: whenever a weak phase-C selects a T which agrees with the embedded subject in Zulu, the verb bears subjunctive morphology. Therefore, in Variants 1 and 2, where the embedded subject moves to the embedded [Spec, T] and triggers agreement with the embedded verb, the complement of *fanele* is in the subjunctive mood. In contrast, in raising constructions such as (29), where there is no movement to the intermediate [Spec, T] and no agreement with the embedded verb, the embedded clause is an infinitive. Future research is required to test this hypothesis and explore its consequences for the analysis of different types of biclausal constructions in Zulu as well as in other (Bantu and non-Bantu) languages.

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