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## The syntax of the infinitive in Xhosa

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**The syntax of the infinitive in Xhosa.** The syntax of the infinitive in Xhosa is explored. The general framework which is assumed is the version of transformational generative grammar known as the theory of Government and Binding. The central issue addressed relates to the nature of the infinitive, taking into account the fact that it exemplifies both verbal and nominal properties. On the grounds of various arguments, it is proposed that a threefold categorial distinction be made with respect to the infinitive. In particular, the infinitive may occur as one of the following categorial types: (i) clausal S complement, (ii) NP with an internal clausal structure and (iii) NP lacking an internal clausal structure.

Die sintaksis van die infinitief in Xhosa word ondersoek. Die teoretiese raamwerk wat aanvaar word, is dié van transformasioneel-generatiewe grammatika, bekend as die teorie van Regering en Binding ('Government and Binding'). Die kernvraagstuk hou verband met die aard van die infinitief in die lig van die feit dat dit naamwoordelike sowel as werkwoordelike kenmerke het. Daar word op grond van verskeie argumente voorgestel dat 'n drieledige kategoriale onderskeid gemaak moet word ten opsigte van die infinitief. In die besonder, die infinitief kan verskyn as een van die volgende kategoriale tipes: (i) sinskomplement S, (ii) NP met 'n interne sinstruktuur, en (iii) NP sonder 'n interne sinstruktuur.

### Abbreviations and symbols

Adj :	Adjective (stem)
Adj.C. :	Adjectival concord
AGR :	Agreement specification in INFL
[-AGR] :	Infinitival clause
Agr :	Agreement affix of nominal modifier or adjective predicate
AP :	Adjective phrase
App :	Applied
[C.1],[C.2],	
[C.3], etc.:	Gender feature specification of noun class 1,2,3 etc.
Caus :	Causative verbal extension
cl :	clitic
COMP :	Complementizer
Compl :	Complement
Cop :	Copular verb
Dem :	Demonstrative
Fut :	Future tense affix
Gen :	Genitive
Ind :	Indicative mood
INFL :	Inflection node
Infin :	Infinitival morpheme
Loc :	Locative affix
Neg :	Negative affix
NPas :	Neuter-passive verbal suffix
O.C. :	Objectival concord
p :	plural
Pass :	Passive verb suffix
Perf :	Perfect tense affix
Pres :	Present tense affix
Quan :	Quantifier
Refl :	Reflexive clitic
S :	Singular
S.C. :	Subjectival concord

Subj :	Subjunctive affix
V-el :	Applied verb
1,2 :	first, second person

### 1. Presentation

In this paper distribution of the empty category PRO in the various structural positions occupied by the infinitive in Xhosa will be explored.<sup>1</sup> PRO is one of the phonologically null NPs identified in Government-Binding (GB) theory. In particular, PRO is classified in terms of the features [+ pronominal, + anaphor] in the typology for NPs posited by Chomsky(1982). Since the occurrence of PRO is characteristically associated with ungoverned positions, specifically, the subject position in infinitival clauses, this paper will be concerned crucially with determining the categorial status of the Xhosa infinitive in a range of constructions. The framework that will be presupposed is the version of GB theory outlined in Chomsky(1981), (henceforth LGB).

Although the properties of the infinitive in the Bantu languages have been characterized by a number of linguists, no coherent study has been made of the syntactic nature of the infinitive, taking into consideration the full range of its distributional possibilities. In this paper, the general view of the infinitive as constituting a class 15 noun in all the structural positions it may occupy is called into question. It will be proposed that the infinitive in Xhosa, and more widely in Bantu, is clausal in most of its occurrences, rather than a class 15 noun with a verbal nature, as has often been assumed. Thus it is argued that in each of its occurrences, the infinitive can be identified as belonging to one of the following category types:

- (1) (i) § clausal complement of verb;
- (ii) NP (dominating §) : nominal infinitive;
- (iii) N: infinitival (class 15) noun.

In section 2, the verbal and nominal properties exhibited by infinitives are reviewed. It will be argued in section 3 that certain Xhosa infinitives with predicate adjectives provide supporting evidence for positing PRO as the null subject in infinitival clauses. In section 4, genitive nominal infinitives are considered, and it is proposed that these constructions constitute support for the view that nominal infinitives have a clausal structure. Finally, some observations will be made in section 5 concerning the properties of control of verbs in Xhosa.

Since the properties of the infinitive are highly similar in a wide range of Bantu languages, the structures proposed for the Xhosa infinitives may be characteristic of the nature of the infinitive in Bantu more generally.

## 2. Properties of the infinitive

The infinitive in Bantu has been frequently noticed in the linguistic literature for the fact that it exemplifies both nominal and verbal properties.<sup>2</sup> The precise syntactic nature of the infinitive in the various constructions that it may occur has, however, not been established in a systematic way. The infinitive is commonly viewed by linguists as a class 15 noun on the one hand, characterized by the class prefix *-ku-*, and as a verb on the other hand because of the verbal properties it exemplifies. The infinitival form of a verb is homophonous with the corresponding 'class 15 noun' which in this view, is assumed to be derived from the particular verb. Class 15 is, in fact, commonly referred to as the 'infinitive class'.<sup>3</sup> Louw (1963:35) refers to class 15 as the class of 'verbal nouns'. Cole (1955:96) views class 15 nouns in a similar way by claiming that 'this class includes only the infinitive forms of verbs.'

Doke (1955:28) describes the dual nature of the infinitive as follows:

'It is true that the infinitive, in Zulu, is a genuine noun of class 8 (i.e. class 15 within the alternative noun classification system — MV) with its class concordial agreement ..., but is also a genuine verb, in that it is subject to derivative formations, it may contain an objectival concord, and may have a negative form and various extensions ...'

It is evident from the above quotations that the morpheme *-ku-* which characterizes the infinitive form of the verb in Xhosa is considered as the nominal prefix of class 15 in the literature of Bantu linguistics.<sup>4</sup> Hence the corollary view that an infinitive verb functions as a class 15 noun in the different structural positions it may occur.<sup>5,6</sup> For expository purposes, an infinitive of which the meaning constitutes a nominalization of its (verbal) stem will henceforth be referred to as a **nominal infinitive**, rather than a class 15 noun.<sup>7</sup> As the discussion proceeds it will in fact become evident that the term 'class 15 noun' is largely untenable for designating the occurrence of the infinitive as an NP in the range of grammatical functions it may have. Since a discussion of the function of the Xhosa infinitive crucially relies on the properties it exemplifies, a brief review of the arguments advanced in support of the view that the infinitive is both nominal and verbal in nature, is in order. The term

**infinitive** will henceforth be used with the systematic ambiguity to refer to the infinitive that has the grammatical function of NP on the one hand, and of a clausal S complement, on the other.

Firstly, the nominal properties exhibited by the infinitive relate to the phenomena in (2).<sup>8</sup>

### (2) Nominal properties of the infinitive

- (i) The infinitive exhibits grammatical gender, identified by the class prefix of noun class 15;
- (ii) The infinitive may appear in NP positions such as subject and object;
- (iii) The infinitive is associated with concordial agreement elements, such as a subjectival, objectival, and adjectival concord;
- (iv) The infinitive may be qualified by nominal modifiers.

In accordance with (2i), the infinitive is viewed as a class 15 noun because it has the class prefix *-ku-* of this noun gender class. Thus, it is on a par with other nouns in that its gender class is identified by its class prefix. In (3i), for example, the noun *abantu* 'people', exhibits the class prefix *-ba-* characteristic of class 2. The noun *indoda* 'man' is identified as belonging to gender class 9 since it has the characteristic prefix *-n-* of this class. Likewise, it is claimed, the infinitive *ukuhamba* 'travelling' in (3iii), which bears the class prefix *-ku-*, displays grammatical gender.

- (3) (i) *a-ba-* : *a-ba-ntu* 'people'
- (ii) *i-n-* : *i-n-doda* 'man'
- (iii) *u-ku-* : *u-ku-hamba* 'travelling'

The occurrence of the infinitive in various NP positions can be illustrated by the sentences in (4). In (a), the infinitive *ukubaleka* 'running' is the subject. The infinitive *ukucula* 'singing' is the object in (b), and in the passive sentence (c), *ukuhleba* 'gossip' is the complement of the copular element in passives.<sup>9</sup>

- (4a) *ukubaleka kunempilo*  
*ukubaleka ku-na-impilo*  
running it S.C-with-health  
'running is healthy'
- (4b) *abantu bamamela ukucula*  
*abantu ba-mamela ukucula*  
people they S.C-listen singing  
'the people are listening to the singing'
- (4c) *umfazi uliliswa kukuhleba*  
*umfazi u-lil-is-w-a k-ukuhleba*  
woman she S.C.-cry-Caus-Pass-Pres Cop-gossip  
'the woman is being made to cry by the gossiping'

Du Plessis (1982:7) points out that the infinitive is similar to nominals in a further respect in that it may be moved by application of the transformational rule Move  $\alpha$ . Assuming a movement analysis for the passives in Xhosa, an infinitive may be moved from its D-structure position as object, to the subject position.<sup>10</sup> Consider, for instance, the passive sentence (5a), with the D-

structure in (b) and the S-structure in (c), respectively. The S-structure is derived by movement of the infinitive *ukucula* 'singing' to the subject position, where the trace of *t* of *ukucula* is 'left behind' by the moved NP.

- (5a) *ukucula kuyathandwa ngabantu*  
*ukucula kuya-thand-w-a ng-abantu*  
 singing S.C.-Pres-like-Pass-Pres by-people  
 'the singing is liked by the people'
- (5b) [ ] AGR [<sub>VP</sub> -thand-w- *ukucula* Cop *abantu* ]  
           like-Pass singing          people
- (5c) [<sub>NP</sub> *ukucula*] AGR [<sub>VP</sub> -thand-w- *t* Cop *abantu* ]  
           singing                  like-Pass          people

The property in (2iii) states that the infinitive may enter into the various agreement relations possible for nouns in Bantu. The sentences in (6) illustrate a number of these agreement relations. In (a), the subject *ukusebenza* 'working' is in agreement with the predicate as indicated by the subjectival concord *ku-*. In (b), *ukusebenza* appears as object of the sentence and its objectival concord or clitic *-ku-* is present in the verbal morphology.<sup>11</sup> The adjective *-hle* 'good' in (c) qualifies the NP object *ukusebenza*. The relevant agreement concords are indicated in bold print.

- (6a) *ukusebenza **ku**lungile*  
*ukusebenza ku-lungile*  
 working S.C.-Cop-good  
 '(the) working is good'
- (6b) *umqeshi uyakujonga ukusebenza*  
*umqeshi u-ya-ku-jonga uku-sebenza*  
 employer S.C.-Pres-O.C.-watch Infin-work  
 'the employer watches the working'
- (6c) *umqeshi ujonga ukusebenza **oku**hle*  
*umqeshi u-jonga ukusebenza oku-hle*  
 employer S.C.-watch working Agr-good  
 'the employer watches the good working'

According to (2iv), it is possible for the Xhosa infinitive to occur with nominal modifiers.<sup>12</sup> This property is also illustrated in (c) above, where the infinitive is qualified by the adjective stem *-hle* 'good'. Consider, further, the examples in (7a,c), where the infinitive is qualified by the demonstrative, the relative *-mnandi* 'nice', and the quantifier *-odwa* 'only', respectively.

- (7a) ***oku** kucula kulungile*  
*oku kucula ku-lungile*  
 Dem singing S.C.-good  
 'this singing is good'
- (7b) *umnimimzi uthanda ukupheka **okumnandi***  
*umnimimzi u-thanda ukupheka oku-mnandi*  
 house-owner S.C.-likes cooking Agr-nice  
 'the house-owner likes nice cooking'
- (7c) *kukuthetha **kodwa** akwanelanga*  
*k-uku-thetha kodwa aku-anel-ang-a*  
 Cop-to-speak only Neg-S.C.-sufficient-Neg-Perf  
 'it is talking only that is not sufficient'

Finally, it may be noted that the infinitive also behaves similarly to nominals in indefinite negative sentences in Xhosa. After a negative verb, the preprefix of a noun object is dropped unless its objectival concord appears in the verbal morphology. An object noun of which the preprefix has been dropped after a negative verb, is considered to be indefinite or non-specific as compared to the corresponding negative sentence in which the preprefix of the object whose concord appears in the verbal morphology is retained. In the example of (8a), the preprefix *i-* of the object *inyama* 'meat' is dropped, while it is retained in (8b) where the objectival concord is present.

- (8a) *umntwana akathandi nyama*  
*umntwana a-ka-thand-i nyama*  
 child Neg-S.C.-like-Neg meat  
 'the child does not like (any) meat'
- (8b) *umntwana akayithandi inyama*  
*umntwana a-ka-yi-thand-i inyama*  
 child Neg-S.C.-O.C.-like-Neg meat  
 'the child does not like the (specific) meat'

In sentence (9a), the preprefix of the infinitival object has been dropped, thus representing the indefinite negative. Since the objectival concord, indicated in bold print, co-occurs with the object in (9b), the preprefix of the latter is retained.

- (9a) *utitshala akathandi kucula*  
*utitshala a-ka-thand-i kucula*  
 teacher Neg-S.C.-like-Neg singing  
 'the teacher does not like (any) singing'
- (9b) *utitshala akak**u**thandi ukucula*  
*utitshala a-ka-ku-thand-i ukucula*  
 teacher Neg-S.C.-O.C.-like-Neg singing  
 'the teacher does not like the (particular) singing'

It is evident that the properties in (2), that are characteristic of nouns, may all be associated with the infinitive as well, thereby indicating that the latter has a nominal nature. However, according to the view that the infinitive is a class 15 noun, there is one crucial respect in which it differs from other nouns: infinitives have no plurals.

The verbal nature of the infinitive, on the other hand, is generally defined in the linguistic literature in terms of the properties in (10).<sup>13</sup>

- (10) Verbal properties of the infinitive
- (i) The infinitive may be inflected for the negative;
  - (ii) The infinitive may be inflected for tense;
  - (iii) The infinitive may be inflected for aspect;
  - (iv) The infinitive may be extended by means of verbal suffixes;
  - (v) The infinitive may have an object which may co-occur with an objectival concord (clitic);
  - (vi) The infinitive may be modified by adverbs and locatives.

The properties in (10i-vi) above are illustrated in the

examples (11a-f), respectively, where in (i) of (a-f) the infinitive occurs as a clausal  $\bar{S}$  complement of the verb, and in (ii) as an NP complement, that is, a nominal infinitive. The empty category PRO occurs as subject of the clausal  $\bar{S}$  complements in (i) of (a-f).<sup>14</sup> Nominal modifiers may occur with the nominal infinitives in (ii) but not with the clausal  $\bar{S}$  complements in (i) of (a-f).

## (11a) Negative inflection

- (i) *umqeshi ukhetha ukungasebenzi*  
*umqeshi u-khetha* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-nga-sebenz-i* ]]  
 employer S.C.-choose to-Neg-Work-Neg  
 'the employer prefers not to work'
- (ii) *umqeshi ukhetha ukungasebenzi kwakhe*  
*umqeshi u-khetha* [ $_{NP}$  *uku-nga-sebenz-i kwa-khe* ]  
 employer S.C.-choose to Neg-working-Neg of-his  
 'the employer prefers his not working'

(11b) Tense inflection<sup>15</sup>

- (i) *umfundi ufuna ukuza kufunda ngomso*  
*umfundi u-funa* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-za ku-funda*  
*ngomso* ]]  
 student S.C.-want to-Fut Fut-study tomorrow  
 'the student wants to study tomorrow'
- (ii) *utitshala ufuna ukuza kufunda kwabo ngomso*  
*utitshala u-funa* [ $_{NP}$  *uku-za ku-funda kwa-bo*  
*ngomso* ]  
 teacher S.C.-want to-Fut Fut-study of-them  
 tomorrow  
 'the teacher wants them studying tomorrow'

## (11c) Inflection for aspect

No aspect morphemes may occur in the Xhosa clausal infinitive.<sup>16</sup> The following sentence, for instance, is unacceptable.

- (i) \**utitshala ukhetha ukungasayi esikolweni*  
*utitshala u-khetha* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-nga-sa-y-i*  
*esikolweni* ]]  
 teacher S.C.-choose to-Neg-Progr-go-Neg  
 to-school  
 'the teacher prefers to come to school no more'
- (ii) \**utitshala ukhetha ukungasayi kwabo esikolweni*  
*utitshala u-khetha* [ $_{NP}$  *uku-nga-sa-y-i kwa-bo*  
*esikolweni* ]  
 teacher S.C.-choose to-Neg-Progr-go-Neg  
 to-school  
 'the teacher prefers their coming to school no more'

## (11d) Verbal suffixes

- (i) *abafazi bathanda ukuculelana*  
*abafazi ba-thanda* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-cul-el-an-a* ]]  
 women S.C.-like to-sing-Appl-Rec-Pres  
 'the women like to sing to each other'
- (ii) *abafazi bathanda oku kuculelana*  
*abafazi ba-thanda* [ $_{NP}$  *oku ku-cul-el-an-a* ]  
 women S.C.-like this Infin-sing-Appl-Rec-Pres  
 'the women like this singing to each other'

## (11e) Object and/or clitic

- (i) *utitshala uqala ukubancoma abafundi*  
*utitshala u-qala* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-ba-ncoma*  
*abafundi* ]]  
 teacher S.C.-start to-them-praise pupils  
 'the teacher starts to praise the students'
- (ii) *utitshala uqala ukubancoma kwakhe abafundi*  
*utitshala u-qala* [ $_{NP}$  *uku-ba-ncoma kwa-khe*  
*abafundi* ]  
 teacher S.C.-start to-them-praise of-his students  
 'the teacher starts his praising of the students'

## (11f) Adverbs and locatives

- (i) *intombi ithanda ukunxiba kakuhle ehlotyeni*  
*intombi i-thanda* [ $\bar{S}$ [ $\bar{S}$  PRO *uku-nxiba kakuhle*  
*ehlotyeni* ]]  
 girl S.C.-likes to-dress nicely in-summer  
 'the girl likes to dress nicely in summer'
- (ii) *intombi ithanda ukunxiba kwabo kakuhle ehlotyeni*  
*intombi i-thanda* [ $_{NP}$  *uku-nxiba kwa-bo kakuhle*  
*ehlotyeni* ]  
 girl S.C.-likes to-dress of-them well in-summer  
 'the girl likes their dressing nicely in summer'

It appears from the above examples that the meaning of the nominal infinitive is sometimes similar to that of the gerund in English.<sup>17</sup> In (12), examples are given of infinitive verbs with their respective English translations as clausal complement and nominal infinitive.<sup>18</sup>

(12) Infinitive	Clausal complement	Nominal infinitive
<i>ukuthanda</i>	'to love'	'(the) loving'
<i>ukubaleka</i>	'to run'	'(the) running'
<i>ukulima</i>	'to plough'	'(the) ploughing'
<i>ukudlala</i>	'to play'	'(the) playing'
<i>ukufunda</i>	'to learn'	'(the) learning'
<i>ukuhlamba</i>	'to wash'	'(the) washing'

The question may be posed as to what systematic grounds there exist for drawing the above distinction between the function of the infinitive as clausal  $\bar{S}$  complement on the one hand, and as nominal infinitive (i.e. as some GF for NP) on the other. In what follows, a brief review is given of the arguments presented by Du Plessis (1982a) in support of this distinction. Subsequently it will be argued that a clausal analysis rather than a VP-analysis, is correct for the non-nominal infinitival complement in Xhosa.<sup>19</sup>

### 3. The distinction between clausal infinitives and nominal infinitives

#### 3.1 Clausal infinitives

As shown in the examples of (12), the infinitive which functions as a clausal  $\bar{S}$  complement is homophonous with the corresponding nominal infinitive, which may function as NP complement. Du Plessis (1982a.) argues convincingly that the distinction between these two grammatical functions of the infinitive is necessitated on empirical grounds. He invokes the properties in (13) as

evidence for the view that the infinitive functions as an  $\bar{S}$  complement rather than an NP complement in certain constructions.

- (13) (i) the use of the long form of the matrix verb;  
 (ii) the infinitive as complement of intransitive verbs;  
 (iii) the infinitive as complement of the so-called deficient verbs;  
 (iv) the occurrence of an adverb between the matrix verb and the infinitival complement.

The long form of the verb in Xhosa is indicated by the presence of the morpheme *-ya-* in the verbal morphology.<sup>20</sup> In the absence of an objectival concord or clitic in the verbal morphology, the long form must occur if the verb is not followed by an object. Consider, for example, the sentences in (14).

- (14a) *umfazi upheka inyama*  
*umfazi u-pheka inyama*  
 woman S.C.-cook meat  
 'the woman is cooking meat'  
 (14b) *umfazi uyapheka*  
*umfazi u-ya-pheka*  
 woman S.C.-Pres-cook  
 'the woman is cooking'

In (14b), the long form *-ya-* occurs, since the verb is not followed by an object. On the assumption that the infinitive is a class 15 noun, it would similarly be predicted that the long form of the verb would be disallowed if the verb is followed by an infinitive. This prediction is, however, not borne out, since the infinitive may follow a verb in the long form, as shown in (15).

- (15) *abafazi bayafuna ukusebenza*  
*abafazi ba-ya-funa uku-sebenza*  
 women S.C.-Pres-wants to work  
 'the women want to work'

Thus, we are led to the conclusion that the infinitive in (15) cannot be a class 15 noun. It is rather a clausal  $\bar{S}$  complement of the matrix verb *-fun-* 'want'.<sup>21</sup> Verbs such as *-fun-* 'want', *-thand-* 'like', *-kheth-* 'choose', and *-ngwen-* 'wish', that may take an infinitival  $\bar{S}$  complement, will be subcategorized for  $\bar{S}$  in their lexical entries.<sup>22</sup> If, on the other hand, the infinitive functions as an NP complement of a verb, the occurrence of the long form of this verb is disallowed, as it is in the case of any other NP object following the verb (see the discussion of (14) above). This means that, unless the clitic of the infinitival object occurs in the verbal morphology, the long form of the verb is impermissible. Sentence (16a), for example, is illformed because the matrix verb occurs in the long form in the absence of the clitic. Sentence (16b) on the other hand, is well-formed because the matrix verb is in the short form. In (c), the clitic *-ku-* of the infinitival object occurs in the verbal morphology together with the morpheme *-ya-* which indicates the long form of the verb, thus yielding a grammatical sentence.

- (16a) \**utitshala uyathanda ukuthetha kwakhe okuhle*  
*utitshala u-ya-thanda* [<sub>NP</sub> *ukuthetha kwa-khe*  
*oku-hle* ]  
 teacher S.C.-Pres-like speaking of-him  
 Agr-good  
 'the teacher likes his good speaking'  
 (16b) *utitshala uthanda ukuthetha kwakhe okuhle*  
*utitshala u-thanda* [<sub>NP</sub> *ukuthetha kwa-khe*  
*oku-hle* ]  
 teacher S.C.-like speaking of-him Agr-good  
 'the teacher likes his good speaking'  
 (16c) *utitshala uyakuthanda ukuthetha kwakhe okuhle*  
*utitshala u-ya-ku-thanda* [<sub>NP</sub> *ukuthetha kwa-khe*  
*oku-hle* ]  
 teacher S.C.-Pres-O.C.-like speaking of-him  
 Agro-good  
 'the teacher likes his good speaking'

The possible function of the infinitive as a clausal complement is secondly supported by the fact that certain intransitive verbs may have an infinitival complement. The possibility that such an infinitive can function as an NP complement, that is, a nominal infinitive, is excluded. Thus the infinitival complement of an intransitive verb can only function as a clause. Consider, for example, the intransitive verbs *-vuy-* 'glad', *-phum-* 'go out' and *-nduluk-* 'leave' that are followed by an infinitival  $\bar{S}$  complement, as shown in (17a-c) respectively. The infinitival complement of motion verbs such as *-phum-* and *-nduluk-* is required to contain a motion verb.

- (17a) *uvuya ukufumana imali*  
*u-vuya* [<sub>S</sub> [<sub>S</sub> PRO *uku-fumana imali* ]]  
 he-glad to-get money  
 'he is glad to get money'  
 (17b) *uphume ukuguqula iinkomo*  
*u-phum-e* [<sub>S</sub> [<sub>S</sub> PRO *uku-guqula iinkomo* ]]  
 S.C.-go-out-Perf to-gather cattle  
 'he went out to go and gather the cattle'  
 (17c) *wanduluka ukuya eMthatha*  
*wa-nduluka* [<sub>S</sub> [<sub>S</sub> PRO *uku-ya e-Mthatha* ]]  
 S.C.(Past)-leave to-go Loc-Umtata  
 'he left to go to Umtata'

As mentioned in (13iii) above, the subcategorization of certain deficient verbs for an infinitival complement provides additional support for the view that the infinitive may function as a clausal complement. Deficient verbs (sometimes called auxiliary verbs) cannot serve as predicates on their own: they are dependent on a complement verb to form a predicate. Deficient verbs are highly restricted with respect to the mood or moods in which their complement verbs may occur. There are a number of deficient verbs such as *-mana* 'often', *-sandula* 'just (recently)', and *-kholisa* 'usually' that require their complement verb to be in the infinitive. This infinitive can only have a clausal structure. (*-Mana* may alternatively subcategorize for a

clause in the participial mood). Consider the following examples, where PRO is coindexed with its antecedent.

- (18a) *inzwakazi imana ukuya edolophini*  
*inzwakazi<sup>i</sup> i-mana* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-ya edolophini ]]  
 woman S.C.-often to-go to-town  
 'the woman often goes to town'
- (18b) *abahambi basandula ukufika*  
*abahambi<sup>i</sup> ba-sandula* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-fika ]]  
 travellers S.C.-just to-arrive  
 'the travellers have just arrived'
- (18c) *umlimi ukholisa ukulima umbona*  
*umlimi<sup>i</sup> u-kholisa* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-lima umbona ]]  
 farmer S.C.-usually to-plant meales  
 'the farmer usually plants meales'

Finally, the fact that an adverb may occur between the matrix verb and its infinitival complement lends support to the view that the infinitive is a clause, rather than a class 15 noun in such constructions. In Xhosa, an adverb may not appear before the NP object in a sentence unless the objectival concord is present. The sentence in (19a), for instance, is ill-formed since the adverb *kakuhle* 'well' appears before the NP object while the object clitic is absent in the verbal morphology. The example in (19b), on the other hand, is perfectly acceptable because the clitic is present.<sup>23</sup>

- (19a) \**umlimi u-lima kakuhle intsimi*  
*umlimi u-lima kakuhle intsimi*  
 farmer S.C.-plough well land  
 'the farmer ploughs the land well'
- (19b) *umlimi uyilima kakuhle intsimi*  
*umlimi u-yi-lima kakuhle intsimi*  
 farmer S.C.-O.C.-plough well land  
 'the farmer ploughs the land well'

The fact that an adverb may, however, occur before the infinitival complement of a verb, suggests that this infinitive is a clausal complement, as illustrated in (20), since the construction would be excluded if the infinitive were regarded as a class 15 noun.<sup>24</sup> The clausal structure of the infinitive in (20a) is supported by the fact that an adverb may not intervene between a verb and its infinitival NP object in the absence of the clitic, as shown in (b).<sup>25</sup>

- 20a) *umlimi uthanda kakhulu ukulima intsimi*  
*umlimi u-thanda kakhulu* [<sub>S</sub>[<sub>S</sub> PRO uku-lima  
*intsimi* ]]  
 farmer S.C.-like much to-plough field  
 'the farmer much likes to plough the field'
- (20b) \**umlimi uthanda kakhulu oku kulima kwabo*  
*umlimi u-thanda kakhulu* [<sub>NP</sub> oku kulima kwa-bo  
*intsimi* ]  
 farmer S.C.-like this to plough of them field  
 'the farmer likes this ploughing of theirs of the field'

The above arguments present confirming evidence for the view that the infinitive in Xhosa is distinguished in terms of its function as clausal  $\bar{S}$  complement on the one hand, and as an NP complement, or more generally a nominal infinitive, on the other. Having established the necessity for this distinction regarding the Xhosa infinitive the question may be posed as to why an  $\bar{S}$ -analysis with PRO subject, rather than a  $\bar{VP}$ -analysis, is adopted for the clausal (i.e. non-nominal) infinitival complement. Bresnan (1978), among others, has proposed a  $\bar{VP}$ -analysis for object infinitival complements.<sup>26</sup> Whereas an empty subject, PRO, is structurally present in terms of the  $\bar{S}$ -analysis for infinitival complements, no such subject occurs in these complements in terms of the  $\bar{VP}$ -analysis. According to the latter analysis, the absence of a surface structure subject in infinitival complements indicates the absence of a subject in the structural representation, although the matrix subject is to be interpreted as the logical subject of the infinitival complement. The structure of the sentence (a) of (21) is roughly as in (b) in terms of the  $\bar{S}$ -analysis, and as in (c), in terms of the  $\bar{VP}$ -analysis.

- (21a) *umfana ufuna ukuya eKapa*  
*umfana u-funa uku-ya eKapa*  
 young man S.C.-want to-go to-Cape Town  
 'the young man wants to go to Cape Town'
- (21b) *umfana ufuna* [<sub>S</sub>[<sub>S</sub> PRO ukuya eKapa ]]  
 (21c) *umfana ufuna* [<sub>VP</sub> ukuya eKapa ]

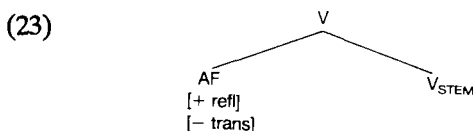
Koster and May (1981) review the  $\bar{VP}$ -analysis and provide convincing evidence in favour of the  $\bar{S}$ -analysis. Rather than repeating their arguments here, two constructions in Xhosa that constitute confirming evidence for the  $\bar{S}$ -analysis for non-nominal infinitival complements will be considered briefly. Firstly, it will be shown that the  $\bar{S}$ -analysis is supported on semantic grounds in view of the nature of the thematic roles that are assigned to the subjects of reflexive and reciprocal verb constructions. It will be argued that these thematic roles cannot be assigned to a subject of a clause containing a non-reflexive or non-reciprocal verb. Hence, reflexive and reciprocal verbs must occur in clausal structures of which subjects have the respective thematic roles pertaining to the NP subject of these verbs. The second argument that can be advanced as evidence for the  $\bar{S}$ -analysis for Xhosa non-nominal infinitival complements relates to the agreement exemplified in adjectival predicates. This is illustrated clearly in the case of impersonal matrix verbs with an infinitival complement. The infinitival complement of an impersonal passive verb must contain a subject of which the grammatical features govern the agreement that is realized in the morphology of the adjective, since the latter cannot enter into an agreement relation with the matrix subject, a pleonastic non-argument.<sup>27</sup>

Consider first the thematic nature of the antecedent in Xhosa reflexive and reciprocal verb constructions. Although reflexive and reciprocal verbs in Xhosa are derived in distinct ways, the argument concerning the

thematic role of the subject of the clauses containing these verbs is essentially the same for both reflexive and reciprocal verb constructions. Reflexive verbs in Xhosa are derived by prefixing the invariable clitic, *-zi-*, to a verb stem. Thus the r(eflexive) clitic differs from non-r(eflexive) clitics in that the former remains constant for all persons and noun classes. Consider the examples in (22), where the r-clitic *-zi-* is indicated in bold print.

- (22a) *amantombazana ayazihlamba*  
*amantombazana* S.C.-*ya-zi*-hlamba  
 [C.2]  
 little girls S.C.-Pres-Refl-wash  
 'the girls are washing themselves'
- (22b) *isityebi siyazicupha*  
 [C.7]  
*isityebi si-ya-zi-cupha*  
 rich-man S.C.-Pres-Refl-enrich  
 'the rich man enriches himself'
- (22c) *indoda iyazihengela imoto*  
*indoda i-ya-zi-theng-el-a imoto*  
 [C.9]  
 man S.C.-Pres-Refl-buy-Appl-Pres car  
 'the man is buying himself a car'

The r-clitic is an affix of derivational morphology which gives 'reflexive force' to the verb.<sup>28</sup> It has the effect of intransitivization on the verb, in that the transitivity valence of the verb is decreased by one argument.<sup>29</sup> Thus, single-object verbs become intransitive, such as *-hlamb-* 'wash' and *-cuph-* 'enrich' in (22a,b) and double-object verbs like *-thengel-* 'buy for' become single-object verbs, as in (22c), by affixation of the reflexive clitic. The affixation of the r-clitic to a verb stem may be roughly represented as in (23).



In accordance with this view of reflexive verbs, the r-clitic, unlike the non-r-clitic, is not associated with an NP object. Hence the subject of a clause with a reflexive verb is not the antecedent of a reflexive 'theme' argument in object position, as for instance, in English. Rather, the subject of a Xhosa reflexive verb is assigned a thematic role which is something like 'self-doer'. This thematic role can be assigned only to the subject of a reflexive verb clause. In terms of the clausal analysis for infinitival complements in Xhosa, the empty subject PRO would bear the thematic role of 'self-doer' if this infinitival complement is a clause containing a reflexive verb, as in (24).

- (24a) *intombi ifuna ukuzihlamba*  
*intombi i-funa* [<sub>S</sub> PRO *uku-zi-hlamba* ]  
 girl S.C.-want to-Refl-wash  
 'the girl wants to wash herself'

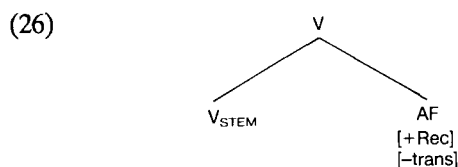
- (24b) *sifuna ukuzibona*  
*si-funa* [<sub>S</sub> PRO *uku-zi-bona* ]  
 [1 s]  
 S.C.-want to-Refl-see  
 'we want to see ourselves'

If, however, the matrix subject is viewed as the logical subject of the infinitival complement, as is maintained under the VP-analysis, the thematic role of 'self-doer' cannot be associated with the interpreted subject of reflexive verbs in infinitival complements, since this thematic role cannot be assigned to the subjects of non-reflexive verbs, like the matrix verbs in (24a,b). Thus a reflexive verb must be contained in a clause with a subject that bears the thematic role of 'self-doer'. It may be concluded, then, that non-nominal infinitival complements in Xhosa are clauses, rather than VPs.

The argument concerning the nature of the  $\theta$ -role of the subject in reflexive verb constructions extends analogously to reciprocal verb constructions. Reciprocal verbs in Xhosa are derived by suffixation of the reciprocal extension *-an-* to a verb stem, as illustrated in the sentences of (25), where the reciprocal suffix is indicated in bold print.

- (25a) *abafundi bayabizana*  
*abafundi ba-ya-biz-an-a*  
 students S.C.-Pres-call-Rec-Pres  
 'the students are calling each other'
- (25b) *iintombi ziyancedana*  
*iintombi zi-ya-nced-an-a*  
 girls S.C.-Pres-help-Rec-Pres  
 'the girls help each other'
- (25c) *amadoda abuzana imibuzo*  
*amadoda a-buz-an-a imibuzo*  
 men S.C.-ask-Rec-Pres questions  
 'the men ask questions of each other'

Like the reflexive prefix, the reciprocal extension intransitivizes the verb to which it is affixed.<sup>30</sup> In other words, monotransitive verbs become intransitive, like *-bizan-* 'reciprocally call', and *-ncedan-* 'reciprocally help' in (25a,b), while ditransitive verbs become monotransitive, like *-buzan-* 'reciprocally ask' in (25c). The affixation of the reciprocal extension *-an-* to a verb stem may be represented as in (26).



Since the reciprocal suffix intransitivizes the verb stem to which it is attached, it cannot be associated with an NP object. This means that there is no anaphoric 'theme' argument in the object position for which the subject of the reciprocal verb construction serves as antecedent.<sup>31</sup> The subject of a clause containing a reciprocal verb may rather be considered to bear the  $\theta$ -role of 'reciprocal doer'. This  $\theta$ -role cannot be borne by the subject of a



clause containing a non-reciprocal verb. In terms of the  $\bar{S}$ -analysis for infinitival complements, the  $\theta$ -role of 'reciprocal-doer' is assigned to PRO in constructions such as (27).

- (27a) *iintombi zifuna ukuncedana*  
*iintombi zi-funa* [<sub>S</sub>[<sub>S</sub> PRO *uku-nced-an-a* ]]  
 girls S.C.-want to help-Rec-Pres  
 'the girls want to help each other'
- (27b) *amadoda athanda ukubuzana imibuzo*  
*amadoda a-thanda* [<sub>S</sub>[<sub>S</sub> PRO *uku-buz-an-a*  
*imibuzo* ]]  
 men S.C.-like to ask-Rec-Pres questions  
 'the men like to ask each other questions'

On the assumption of the  $\bar{VP}$ -analysis that the matrix subject is interpreted the logical subject of an infinitival complement, it would not be possible for the reciprocal verb to be associated with the  $\theta$ -role of 'reciprocal-doer', since this  $\theta$ -role cannot be borne by the subject of a clause which contains a non-reciprocal verb. The presence of a subject in reciprocal infinitival complements is therefore essential for assignment of the appropriate  $\theta$ -role to the subject in reciprocal verb constructions.

To summarize: considerations concerning the nature of the  $\theta$ -role of the subject of reflexive and reciprocal verb constructions favour the  $\bar{S}$ -analysis rather than the  $\bar{VP}$ -analysis for non-nominal infinitival complements in Xhosa. In this regard it was proposed that the reflexive and reciprocal affixes intransitivize the verb stems to which they are attached. Since these affixes are therefore not associated with an anaphoric NP object, the  $\theta$ -role of 'self-doer' and 'reciprocal-doer' were proposed for the subject arguments of reflexive and reciprocal verb constructions respectively.

The second argument in support of the  $\bar{S}$ -analysis for infinitival complements concerns the overt agreement realized on an adjective stem in an adjective predicate in the infinitival complement of an impersonal passive verb. Consider the examples in (28).<sup>32</sup>

- (28a) *kuyathandwa kakhulu ukuba mhle yintombi*  
*ku-ya-thand-w-a kakhulu uku-ba m-hle*  
 Cop-intombi  
 it-Pres-like-Pass-Pres much to-be Agr-pretty  
 by-girl  
 'it is liked very much to be pretty by the girl'
- (28b) *kuyafunwa kakhulu ukuba bakhulu*  
*ngamakhwenkwe*  
*ku-ya-fun-w-a kakhulu uku-ba ba-khulu*  
 Cop-amakhwenkwe  
 it-Pres-want-Pass-Pres much to-be Agr-big by the  
 boys  
 'it is wanted very much to be big by the boys'

The realization of the agreement features of noun classes 1 and 2 on the adjective stems *-hle-* 'pretty' and *-khulu-* 'big' in (28a,b), respectively, requires the presence of some NP category with which these

adjectives enter into an agreement relation, thus realizing the grammatical features of this NP overtly as an agreement concord. These agreement features are realized on the adjective in sentences such as (28a,b) irrespective of whether the copular complement noun in the passive is present, and to what noun class the agent belongs if it occurs. This is illustrated by the agents in (28a,b) that belong to classes 9 and 6 respectively. Thus the agreement features on the adjective cannot be determined by the copular complement noun. Since the matrix subject position is a non-argument position, occupied by the grammatical features of the impersonal subjectival concord *ku-* 'it', the adjective stem can neither agree with this non-argument subject. These facts constitute evidence for the view that the infinitival complement in (28a,b) is indeed a clause with PRO subject containing the grammatical gender features of class 1 and 2 respectively. The adjective bears an agreement relation to PRO, thus exhibiting the identical grammatical features of the latter. The representations of the sentences in (28a,b) are as illustrated in (29a,b) respectively, where the identity of agreement features between PRO and the adjective is indicated by co-superscripting.

- (29a) *ku-ya-thand-w-a kakhulu* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> *ukuba mi-*  
*mhle y-intombi* ]]  
 S.C.-Pres-like-Pass-Pres much Agr-pretty Cop-girl
- (29b) *ku-ya-fun-w-a kakhulu* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> *uku-ba bai-*  
*khulu ng- amakhwenkwe* ]]  
 S.C.-Pres-like-Pass-Pres much to-be Agr-big  
 Cop-boys

To summarize: the fact that agreement morphology is exhibited by the adjective predicate of the infinitival complement of impersonal passive verbs strongly confirms the  $\bar{S}$ -analysis for non-nominal infinitival complements in Xhosa. The presence of the null subject PRO is crucial in accounting for the realization of agreement on the adjective in these constructions.

### 3.2 Nominal infinitives

So far the discussion of the Xhosa infinitive has dealt mainly with the reasons for: (i) distinguishing between a clausal infinitive and a nominal infinitive, and (ii) for adopting the clausal  $\bar{S}$ -analysis, rather than the  $\bar{VP}$ -analysis for non-nominal infinitival complements. The nominal infinitive has, however, not been discussed in detail. It was mentioned at the outset of section 2 that the infinitive in Bantu is generally viewed by linguists as a class 15 noun. The verbal properties exhibited by the infinitive are ascribed to the verbal nature of class 15, as opposed to other noun classes. In the preceding discussion evidence was presented for the view that all infinitives in Xhosa cannot be considered as NPs and that the distinction between a clausal  $\bar{S}$  infinitive and a nominal infinitive is necessitated on empirical grounds (see (13) above). It remains, then, to ascertain whether the view of nominal infinitives as class 15 nouns is tenable. It will be argued below that it is not. The

designation of the nominal infinitive as a class 15 noun can only be maintained for a relatively small number of nominal infinitives of which the meanings do not constitute regular nominalizations, or which do not have a verb stem. These nouns, of which *ukutya* 'food', *ukuhlwa* 'night', and *ukwindla* 'autumn' are examples, may be considered as **infinitival** nouns. By far the largest number of infinitives that function as NPs, however, have meanings that constitute regular nominalizations of their respective verb stems, similarly to the gerund in English (see (12) above). These infinitives, which will be referred to as **nominal infinitives**, cannot be regarded as class 15 nouns. A nominal infinitive is structurally an S dominated by an NP. In this view, the fact that the nominal infinitive exhibits nominal as well as verbal properties is naturally accounted for. It will, in particular, be shown that the empty subject PRO of an infinitival clause is crucial for yielding the appropriate interpretation of the nominal infinitive. To understand fully how the structures that will be proposed for the infinitive on the basis of its various syntactic functions differ from the general view of the infinitive expressed in the literature on Bantu linguistics, a brief review of previous scholarship on the infinitive is in order.

As mentioned in section 1.2 above, the infinitive has generally been identified as a class 15 noun by linguists.<sup>33</sup> Louw (1963:168) considers the infinitive as a noun of class 15 since it contains the prefix *uku-* of this class. He describes class 15 as being verbal in nature because it has a verb stem, because it may occur in the present or future tense in the positive or negative, and because it may have an object.<sup>34</sup> Van Eeden (1956:83) states that all verbal infinitives that are used as nouns belong to class 15. He views class 15 to a certain extent as a noun class with nominalized forms of verb stems. He maintains further (p. 237f) that the infinitive is in the first place a noun but that it may also be described as a verb stem which functions as a noun. As such, Van Eeden claims, the infinitive is a type of noun which possesses certain verbal properties. Cole (1955:96) views the function of the infinitive as follows: 'Although possessing certain verbal features and characteristics that are **not found in other nouns, infinitives function as nouns rather than verbs**' (my emphasis — MV).

According to Doke (1955:28) the infinitive functions as a class 15 noun. He states:

'The infinitive, which may function as simple subject or object of the sentence is susceptible to a number of inflexions, not possible to **nouns of any other class**; this is due to its verbal nature' (my emphasis — MV).

The inflections to which Doke refers in the above quotation are those that were summarized in (10), repeated here as (30).

- (30) (i) The infinitive may be inflected for the negative;  
 (ii) The infinitive may be inflected for tense;  
 (iii) The infinitive may be inflected for aspect;  
 (iv) The infinitive may be extended by means of verbal suffixes.

Doke (1955:29) claims that these infinitives (i.e. infinitives that may exhibit the inflections in (30)) are simple (substantival) subjects and objects.<sup>35</sup> He gives the following examples of Zulu infinitives, where the infinitive (in parenthesis) in (a) of (31) is a simple subject, and the infinitive in (b) is a simple object.

- (31a) *ukungabonisisi kuyahlupha*  
 [uku-nga-bon-is-is-i ] ku-ya-hlupha  
 to-Neg-see-Caus-Neg it-Pres-bothers  
 'not to see well is a handicap'  
 (31b) *sifikele ukusebenza*  
 si-fik-el-e [uku-sebenza ]  
 we-arrive-Appl-Perf to-work  
 'we came in order to work'  
 lit.: 'we came for working'

Infinitives such as the above are regarded by Doke as class 15 nouns. He continues (p. 29): 'When, however, the verbal function of the infinitive overrides the purely nominal, **the infinitive automatically becomes phrase forming** (my emphasis — MV).'

According to Doke (p. 29), the infinitive becomes phrase-forming if any of the following requirements are met:

- (32) (i) when followed by an object, or when indicating one by an objectival concord;  
 (ii) when extended adverbially;  
 (iii) when used with ideophones.

Doke's (1955:6) concept of 'phrase-forming' entails the view that the infinitive does not have a clausal structure. He claims: 'The essential characteristic of a clause is that its predicate is expressed in one of the finite moods (indicative, potential, subjunctive or participial) ...'

Doke presents the Zulu examples in (33a-c) to illustrate the properties in (32i-iii) respectively. He maintains that the infinitive (indicated in parenthesis) in these sentences is an NP object.

- (33a)(i) *ngizele ukuthenga izinkomo*<sup>36</sup>  
 ngi-z-el-e [uku-thenga izinkomo ]  
 I come-Appl-Perf to-buy cattle  
 'I came to buy cattle'  
 (ii) *ngifuna ukudla inyama*  
 ngi-funa [uku-dla inyama ]  
 I-want to-eat meat  
 'I want to eat meat'  
 (33b) *sithanda ukuya ethekwini*  
 si-thanda [uku-ya ethekwini]  
 we-like to-go to-Durban  
 'we like to go to Durban'  
 (33c) *umlilo usuqala ukuvutha bee*  
 umlilo u-su-qala [ku-vutha bee]  
 fire it-begin to-burn  
 'the fire is now beginning to roar'

Doke points out that sentences like the above, containing one predicate and a simple or extended (phraseforming) infinitive, should still be regarded as

simple sentences. The view of the infinitive adopted by Doke, as outlined above, is to a large extent representative of previous scholarship on the infinitive in Bantu. The main points of Doke's approach to the infinitive are summarized in (34).

- (34) (i) The infinitive is a class 15 noun;  
 (ii) A class 15 noun differs from other classes of noun in that it may assume the verbal properties in (30);  
 (iii) The infinitive may be extended in terms of the properties in (31) in which case it becomes phrase-forming;  
 (iv) A sentence containing one predicate and an infinitive is a simple sentence;  
 (v) The infinitive may occur as subject or object in a sentence.

It is evident from (34i,ii) that the distinction of the infinitive in terms of its function as clausal complement on the one hand, and some NP-GF on the other is not made by Doke. The untenability of this position was pointed out above (see the discussion of (13i-iv)). Hence the claims in (iii,iv) of (34) are likewise unacceptable as generalizations obtaining for the infinitive in the different structural positions it may occur. The claim made in (34v) is only partly correct, since the infinitive which functions as NP may not only occur as subject or object; it may also appear in the full range of syntactic positions available to NP in Xhosa, as will be shown below. Furthermore, Doke's view that the infinitive which functions as an NP is a class 15 noun, in all its occurrences, will be rejected and it will be proposed that only a number of infinitives, which will be referred to as **infinitival nouns**, can be regarded as class 15 nouns, that is, **infinitival nouns**. In its most general occurrence, the infinitive functioning as an NP is not an infinitival (class 15) noun, but rather a clause dominated by an NP node, which henceforth will be referred to as a **nominal infinitive**. The nominal infinitive exhibits all the nominal properties in (2) above. Since it has an internal clausal structure it may also exemplify the verbal properties given in (10).

The claim that the nominal infinitive has a clausal structure is supported by the same evidence that has been invoked above in arguing for the Š-analysis, rather than the VP-analysis for non-nominal infinitival complements. Recall that infinitives containing adjectival predicates like the examples in (28a,b), necessarily must have a subject (PRO) that governs adjectival agreement. These infinitives may also function as nominal infinitives. Consider, for example, the following sentences, where the infinitive appears as subject, object, prepositional object and complement of a copular element in (a-d) respectively.

- (35a) *oku kuba ntle kwentombazana kuvuyisa abazali*  
 [<sub>NP</sub> *oku ku-ba n-tle kwe-ntombazana*] *ku-vuyisa*  
 abazali  
 Dem infin-be Agr-pretty of-little-girl S.C.-delight  
 parents

- 'this being pretty of the little girl delights the  
 parents'  
 (35b) *utata uthanda oku kuba makhulu kwamakhwenkwe*  
*utata u-thanda* [<sub>NP</sub> *oku ku-ba ma-khulu kwa-*  
*amakhwenkwe* ]  
 father S.C.-like Dem Infin-be Agr-big of-boys  
 'father likes this being big of the boys'  
 (35c) *abazali bavuya ngoku kuba ntle kwentombazana*  
*abazali ba-vuya* [<sub>PP</sub> *nga* [<sub>NP</sub> *oku ku-ba n-tle kwe-*  
*ntombazana* ]]<sup>37</sup>  
 parents S.C.-happy by Dem infin-be Agr-pretty of-  
 little girl  
 'the parents are delighted through this being pretty  
 of the little girl'  
 (35d) *abazali bavuyiswa koku kuba makhulu*  
*kwamakhwenkwe*  
*abazali ba-vuyis-w-a* [<sub>NP</sub> *Cop oku ku-ba ma-khulu*  
*kwa-amakhwenkwe* ]  
 parents S.C.-gladden-Pass-Press this infin-be Agr-  
 big of-boys  
 'the parents are gladdened by this being big of the  
 boys'

In (35a,c) the adjectival agreement concord is that of class 9, namely *-n-*, whereas in (35b,d) it is that of class 6, namely *-ma-*. The question then arises as to which NP in these structures governs the adjectival agreement. In each of the sentences in (34) two NPs occur, namely the matrix subject and the complement NP of the genitive connective. Firstly, the possibility that it is the matrix subject which governs the adjectival agreement can be ruled out, as is evident from the fact that the noun class features of the matrix subject in (35b,c) are different from the class features of the adjectival concord. Furthermore, the occurrence of a 'possessor'-NP, *intombazana* 'little girl' in (a,c), and *amakhwenkwe* 'boys' in (b,d), indicates that these nouns are being identified with the attributes of 'being pretty' and 'being big'. Hence the possibility that the matrix subject governs the adjectival agreement is also excluded from a semantic point of view. The possibility that the complements of the genitive connective *-a-*, *intombazana* and *amakhwenkwe* govern the adjectival agreement is excluded since these nouns occur within the genitive NP which is a modifier of the infinitive. As such, the occurrence of these genitives is optional. Thus the adjectival agreement cannot be determined by the object-noun of the genitive *-a-*, *intombazana* 'girl' in (a,c) and *amakhwenkwe* 'boy' in (b,d) of (34) respectively. It may be concluded, then, that nominal infinitives, like those in (35), have a clausal structure with PRO as subject. This subject PRO may govern adjectival agreement in adjectival predicates as in (35). Since the adjective *-hle* 'pretty' has the class 9 concord, and *-khulu* 'big' the class 6 concord, it follows that subject PRO contains the grammatical features [C.9] and [C.6] in (a,c) and (b,d), respectively. Thus the sentences in (35) have the structures (36a-d) respectively (details omitted), where coindexing indicates identity of grammatical features.

(36a) [NP Dem [S PRO<sup>i</sup> *ku-ba* Agr<sup>i-hle</sup>] *kwa-intombazana*]  
AGR [VP *vuyis-a abazali*]  
[C.9]

this to-be pretty of-little girl gladdens parents  
'this being pretty of the girl delights the parents'

(36b) *utata* AGR [VP *-thand* [NP Dem [S PRO<sup>i</sup> *ku-ba* Agr<sup>i-hle</sup>]  
*-khulu kwa-amakhwenkwe*]]  
[C.6]

father like this to-be big of-boys  
'father likes this being big of the boys'

(36c) *abazali* AGR [VP *vuy* [PP *nga* [NP Dem [S PRO<sup>i</sup> *ku-ba* Agr<sup>i-hle</sup>] *kwa-intombazana*]]]  
[C.9]

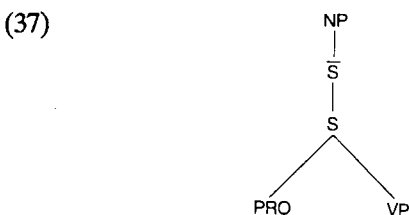
parents glad by this to-be pretty of little girl  
'the parents are delighted by this being pretty of the little girl'

(36d) *abazali* AGR [VP *vuyis-w-a* [NP Cop Dem [S PRO<sup>i</sup> *ku-ba* Agr<sup>i-khulu</sup>] *kwa-amakhwenkwe*]]]  
[C.6]

parents gladden-Pass-Pres this to be big of boys  
'the parents are gladdened by this being big of the boys'

As mentioned earlier, the genitive NP in Xhosa is a nominal modifier which may be omitted in expressions. If, for example, the genitive modifiers *kwentombazana* 'of the little girl', and *kwamakhwenkwe* 'of the boys' in (a,c) and (b,d) of the sentences in (35) are omitted, subject PRO has an arbitrary interpretation. The actual grammatical features for which arbitrary PRO (PRO<sub>arb</sub>) is specified may be that of any noun gender class. In other words, PRO<sub>arb</sub> may contain any gender feature and its interpretation is arbitrary with respect to this noun gender class.

The properties exemplified by the sentences in (35) lend support to the structure in (37) for nominal infinitives in Xhosa.



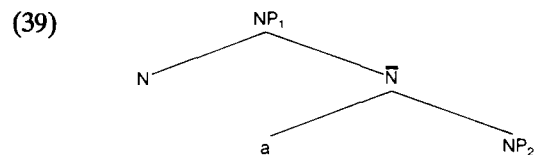
Thus the generalization that clauses have subjects, as stipulated by the base rule in (38) can be maintained.

(38) S → NP INFL VP

#### 4. Genitive nominal infinitives

The genitive construction in Xhosa, as generally in Bantu, exhibits the internal order 'possession-possessor', where the latter is linked to the former by the genitive connective *-a-*. The agreement features of the head of the genitive NP construction (i.e. the 'possession') are realized on the connective *-a-* which is prefixed to the 'possessor' NP.<sup>38,39</sup> Because of this property of overt agreement, the connective *-a-*,

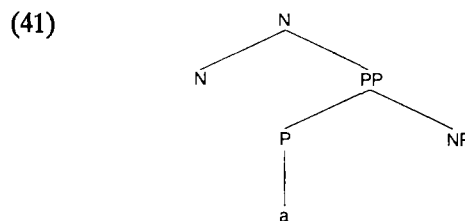
together with the 'possessor' NP to which it is prefixed, is generally considered to be in a modifying relationship to the head. The 'possessor' NP to which the connective *-a-* is prefixed is commonly referred to as the possessive or genitive (modifier) in the literature of Bantu linguistics. The possessive is thus on a par with other nominal modifiers in Xhosa in that it exhibits overt agreement with the head of which it occurs as a complement. As complement of the head N, the genitive has a strong tendency to precede in a linear order all other nominal modifiers occurring as complements of an NP head. Thus we may assume the structure (39) for the genitive construction in Xhosa.<sup>40</sup>



The connective *-a-* in Xhosa is in some respects similar to, but in others different, from prepositions such as the associative *na-* 'and, with', the instrumental *nga-* 'by means of, about, with', and the locative *ku-* 'to'.<sup>41,42</sup> The structure in (39) is generated by the base rule in (40).

(40) NP → N N̄

Because of the preposition-like nature of the connective *-a-*, Stuurman (1981) postulates the structure in (41) for the possessive construction in Xhosa:



Since an investigation of the categorial status of the genitive *-a-* is irrelevant to the following discussion, this issue will not be pursued further. Nothing in the discussion that follows depends crucially on a choice between the structures (39) and (41). Since the prepositional status of the genitive has not yet been established beyond doubt, the structure in (39) for Xhosa genitives is assumed in this study, this assumption being admittedly tentative. Further research on the nature of the connective *-a-* needs to be done in order to establish whether (39) or (41) is the correct structure for the genitive construction in Xhosa. The genitive connective *-a-*, which agrees with the head N, that is, the 'possession' NP, is prefixed to the 'possessor' NP, that is NP<sub>2</sub> in (39).<sup>43</sup>

Consider, for example, the following genitive NP constructions in which other nominal modifiers, in addition to the possessive, occur. In (a-e), the

demonstrative, the adjective, the quantifier *-onke* 'all', the enumerative and the quantifier *-odwa* 'only, alone', respectively, co-occur with the possessive within the same NP.<sup>44</sup> Unlike other nominal modifiers which may be ordered relatively freely with respect to the head N, the possessive has a strong tendency to occur in the position adjacent to the head. Thus the examples in (i) of (42b-d) are generally preferred to the corresponding examples in (ii).<sup>45,46</sup> If the quantifier *-odwa* co-occurs with the possessive, the latter must precede the former as illustrated by the unacceptable example in (ii) of (42e).

- (42a) *le moto yendoda*  
*Dem imoto ya-indoda*  
 this car of-man  
 'this car of the man'

- (42b)
- (i) *incwadi yomfundi entsha*  
*incwadi ya-umfundi en-tsha*  
 book of-student Agr-new  
 'the student's new book'

- (ii) *incwadi entsha yomfundi*

- (42c) *zonke iinkabi zomlimi*  
*zonke iinkabi za-umlimi*  
 all bulls of-farmer  
 'all the farmer's bulls'

- (42d)
- (i) *umntwana wendoda wuphi*  
*umntwana wa-indoda wu-phi*  
 child of-man Agr-which  
 'which child of the man'

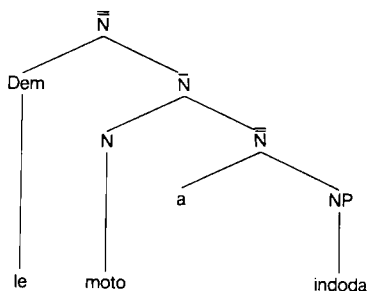
- (ii) *mntwana wuphi wendoda*

- (42e)
- (i) *iinkomo zenkosi zodwa*  
*iinkomo za-inkosi zi-odwa*  
 cattle of-chief Agr-only  
 'only the cattle of the chief'

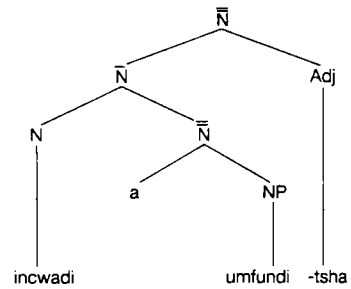
- (ii) *\*iinkomo zodwa zenkosi*

On the assumption of the structure in (39) for genitive constructions in Xhosa, the structures of the examples in (i) of (42a-e) are demonstrated in (43a-e) respectively. The genitive modifier occurs structurally adjacent to the head N, irrespective of the other modifiers with which it co-occurs.

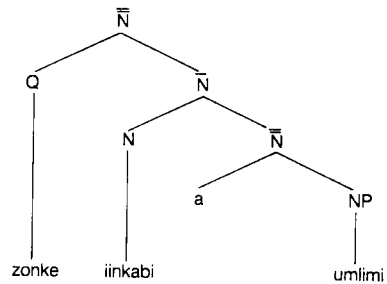
- (43a) *le moto yendoda*  
 'this car of the man'



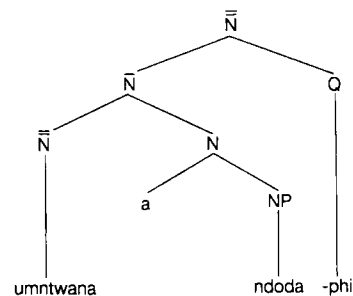
- (43b) *incwadi yomfundi entsha*  
 'the student's new book'



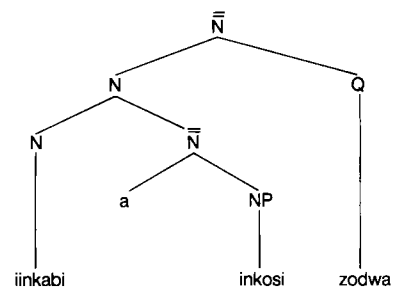
- (43c) *zonke iinkabi zomlimi*  
 'all the bulls of the farmer'



- (43d) *umntwana wendoda wuphi*  
 'which child of the man'



- (43e) *iinkabi zenkosi zodwa*  
 'only the cattle of the chief'



A distinction is made on semantic grounds with respect to possessive constructions in Xhosa, as generally in Bantu, between the descriptive possessive and non-descriptive possessive modifiers. Whereas the latter type expresses the meaning of possession in the literal sense, the former does not. Descriptive possessives rather describe or qualify the head that they modify.<sup>47</sup>

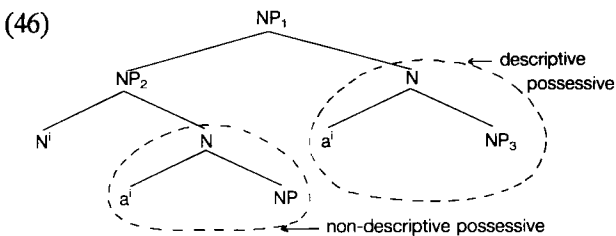
Descriptive possessives such as the following are similarly represented by the structure in (39) above.

- (44a) *ikomityi yobisi (ya-ubisi)*  
cup of-milk  
'a cup of milk'
- (44b) *ipisi yenyama (ya-inyama)*  
piece of-meat  
'a piece of meat'
- (44c) *idyasi yemvula (ya-imvula)*  
coat of-rain  
'raincoat'
- (44d) *umhlambi weenkomo (wa-iinkomo)*  
herd of-cattle  
'herd of cattle'

It is possible for a descriptive and a non-descriptive genitive modifier to co-occur within the same NP, as demonstrated in (i) of the following examples of (45). In such a case, however, the non-descriptive NP has a strong tendency to precede the descriptive NP, as shown in the examples in (i) of (45). The reverse order is generally unacceptable, as shown in (ii).

- (45a) (i) *ikomityi yakho yeti*  
*ikomityi ya-kho ya-iti*  
cup of-yours of-tea  
'your cup of tea'
- (ii) \**ikomityi yeti yakho*
- (45b) (i) *umhlambi wabo weenkomo*  
*umhlambi wa-bo wa-iinkomo*  
herd of-them of-cattle  
'their herd of cattle'
- (ii) \**umhlambi weenkomi wabo*

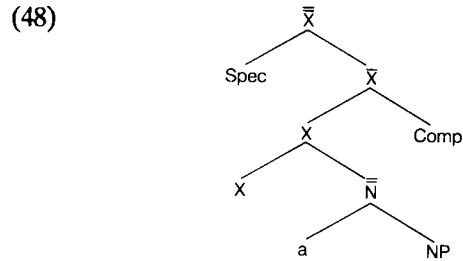
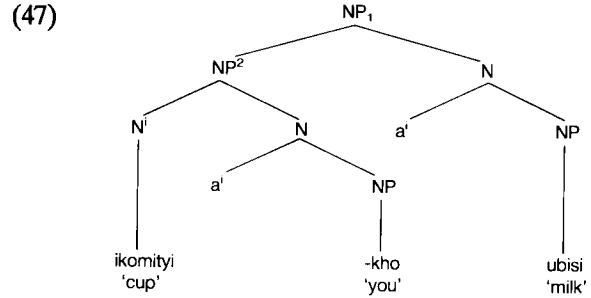
Examples such as (45) may be represented by the structure in (46), which exemplifies the recursive application of the base rule in (40), where the index *i* indicates identity of grammatical features between the genitive connective and the head of NP<sub>1</sub>.



Example (i) of (45a) may be roughly represented as in (47) where *i* indicates identity.

It is assumed, then, that when a descriptive possessive and a non-descriptive possessive co-occur within an NP, the latter occurs as sister to the head of this NP (i.e. the head of NP<sub>2</sub> in (46)), whereas the descriptive possessive occurs as sister of the whole non-descriptive construction (i.e. NP<sub>2</sub> in (46)).

To summarize: the position of the possessive modifier with respect to other nominal modifiers which occur as



specifiers or complements in the NP may be represented as in (48) in X-bar notation, where X = N.

After this brief outline of the possessive construction in Xhosa, the occurrence of the possessive modifier in nominal infinitives can be considered. This type of construction will henceforth be referred to as the **genitive nominal infinitive**. The following examples in (49) demonstrate that the possessive has a high preference to occur adjacent to the head of VP, thereby preceding other complements (e.g., objects and adverbs) in VP.<sup>48,49</sup> Thus the examples in (i) of (49a-c) are preferred to those in (ii).

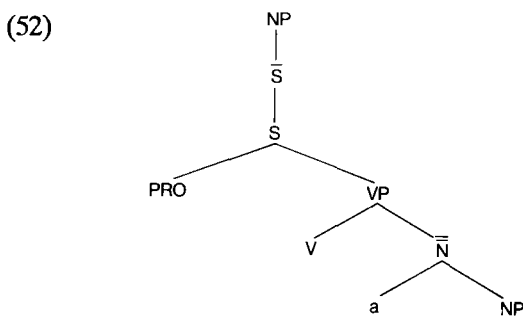
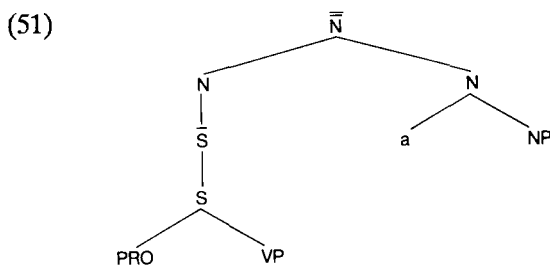
- (49a) (i) *ukusebenza komfazi kakuhle*  
*uku-sebenza kwa-umfazi kakuhle*  
Infin-work of-woman well  
'the woman's working well'
- (ii) *ukusebenza kakuhle komfazi*
- (49b) (i) *ukuthanda kwabantwana iintsomi*  
*uku-thanda kwa-abantwana iintsomi*  
Infin-like of-children folktales  
'the children's liking folktales'
- (ii) *ukuthanda iintsomi kwabantwana*
- (49c) (i) *ukuboleka kwendoda umfundi imali*  
*uku-boleka kwa-indoda umfundi imali*  
Infin-lend of-man student money  
'the man's lending money to the student'
- (ii) *ukuboleka umfundi imali kwendoda*

Similarly, the possessive modifier strongly tends to occur adjacent to the infinitival verb, thus preceding other nominal modifiers that occur as complements in the nominal infinitive, as can be seen from the following examples. The sentences in (i) of (50a-c) are preferred to those in (ii), and (dii) is unacceptable.

- (50a) (i) *oku kucula kwabafazi okumnandi*  
*oku ku-cula kwa-abafazi oku-mnandi*  
Dem Infin-sing of-women Agr-nice

- 'this nice singing of the women'
- (ii) *oku kucula kumnandi kwabafazi*
- (50b)(i) *oku kuqhuba komqhubi okuhle*  
*oku uku-qhuba kwa-umqhubi ku-hle*  
 Dem Infin-drive of-driver Agr-good  
 'this good driving of the driver'
- (ii) *oku kuqhuba kuhle komqhubi*
- (50c)(i) *oku kulima komlimi okubi*  
*oku ku-lima kwa-umlimi*  
 Dem Infin-plough of-farmer Agr-bad  
 'this bad ploughing of the farmer'
- (ii) *oku kulima kubi komlimi*
- (50d)(i) *oku kusebenza kwabafazi kodwa*  
*oku ku-sebenza kwa-abafazi ku-odwa*  
 Dem Infin-work of-women Agr-only  
 'only this work of the women'
- (ii) \**oku kusebenza kodwa kwabafazi*

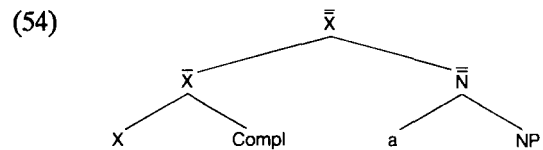
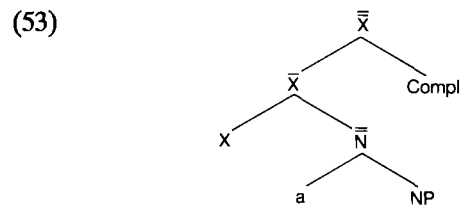
The crucial question concerning genitive nominal infinitives such as (49), (50) may be posed as follows: does the surface structure adjacency of the possessive to the head of VP reflect a structural relation of adjacency? Suppose the answer to this question is negative, then the structural position of the possessive modifier is presumably that of complement of the NP node which dominates the clause  $\bar{S}$  as in (51) below. If the answer on the other hand is positive, the structure of the genitive nominal infinitive will be as in (52).



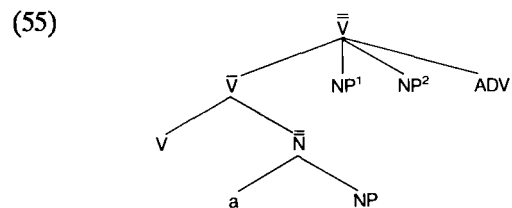
Consider first, the configuration (51) in which the possessive is a complement of the NP dominating  $\bar{S}$ . This analysis of the structure of the genitive nominal infinitive in Xhosa can be shown to be untenable for a number of reasons. Firstly, the fact that the examples such as (i) of (49b,c), where the possessive modifier is adjacent to the head of VP, is more acceptable than those in (ii) of (49b,c), where the NP object occurs before the possessive modifier may be evidence for the view that

the former examples reflect the D-structure linear order, given in (52).

Secondly, the assumption of (51) as the correct structure for genitive nominal infinitives is unacceptable in view of the structure (39) adopted for genitive (non-infinitival) NPs, in which the possessive is base-generated in a position adjacent to the head N. It would be expected that a symmetry exists between the structure of genitive non-infinitival NPs and that of genitive nominal infinitives. Thus if (51) were the correct structure for genitive nominal infinitives, it would be predicted that the structure of genitive non-infinitival NP would be as in (54), where the possessive is generated as daughter of the maximal N projection, rather than as in (39), repeated here as (53), where the possessive N occurs as complement of the head N, where  $X=N$ .



Consider, secondly, the structure in (52), where the possessive appears as complement of the head of VP. If this VP would contain any other verbal complements such as objects or adverbs, these would appear as complements of a higher projection of V, as illustrated in (55).



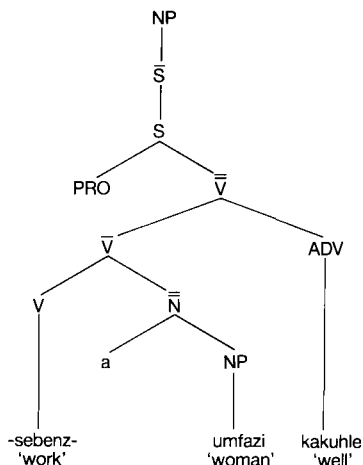
Notice that the configuration in (52) is similar to that in (53) in that the possessive  $\bar{N}$  is a complement of X: of N in (53), and of V in (52). Thus, it may be concluded that the configuration for genitive nominal infinitives in (52) is favoured to the configuration in (51). The fact that there is a symmetry between the position of the possessive modifier with respect to X in genitive (non-infinitival) NPs and in genitive nominal infinitives may be expressed as a generalization by substituting N or V for X in (53). Similarly, the base rule which generates the possessive may be formulated in the general form in (56), where X is either N or V.

(56)  $X \rightarrow X \bar{N}$

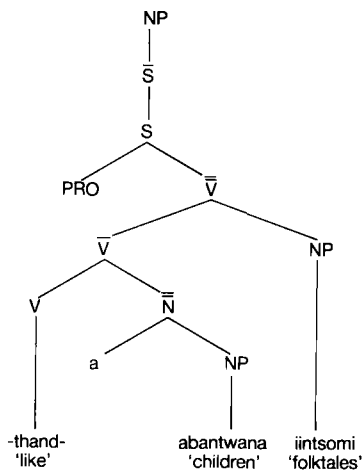
In conclusion, the VP of the nominal infinitive in Xhosa may be optionally expanded by the rule (56). Thus, the occurrence of the possessive modifier in a position adjacent to the infinitival verb reflects its base-generated position.

In accordance with the analysis proposed here for genitive nominal infinitives, the examples in (49a-c) have the structures in (57a-c) respectively.

(57a) *ukusebenza komfazi kakuhle*  
 'the woman's working well'

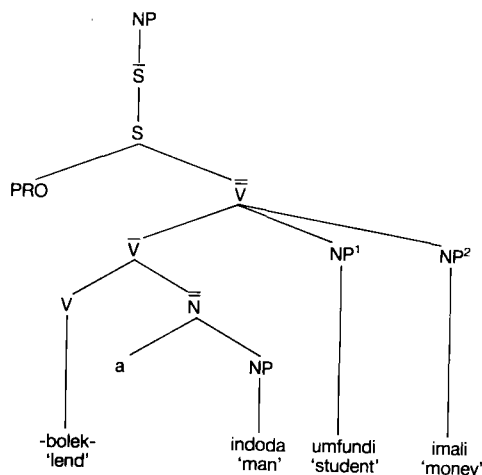


(57b) *ukuthanda kwabantwana iintsomi*  
 'the children's liking folktales'



A possible objection that may be raised to accepting (52) as the structure of genitive nominal infinitives concerns the assignment of Case to the NP object (if present) in VP. The problem lies in the fact that the object is governed by a phrasal projection  $\bar{V}$ , rather than by the lexical category V, as required for assignment of objective Case.<sup>51</sup> This is illustrated in the examples (57b,c) above. It seems, therefore, as though the structure (52) postulated for the genitive nominal infinitive constitutes a problem with respect to the principles of Case-assignment. The problem may, however, be resolved by adopting an approach along the lines of one of the following assumptions.

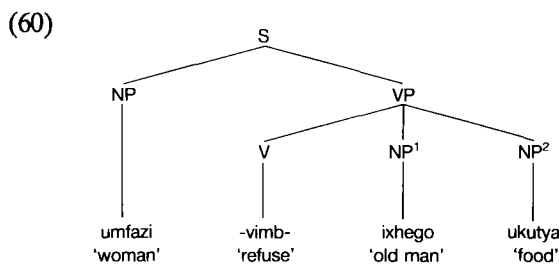
(57c) *ukuboleka kwendoda umfundi imali*  
 'the man's lending money to the student'



- (58) (i) V is allowed as a governor, hence it can assign (objective) Case;<sup>52</sup>
- (ii) the Case features of a verb V which are specified in its lexical entry percolate to its higher projection,  $\bar{V}$ , which governs the NP object thus assigning Case to the latter.

The proposal in (i) is invoked by Chomsky (LGB: 170-172) in order to account for Case-assignment in double object constructions. The reason for allowing  $\bar{V}$  as a governor, hence a Case-assigner, is to maintain the generalization that each verb can assign Case only once. This generalization would be disproved if it is assumed that the verb in a double object construction governs both the direct and indirect object, as illustrated in the structure in (60) of the sentence in (59).<sup>53</sup> Thus, the verb assigns (objective) Case twice.

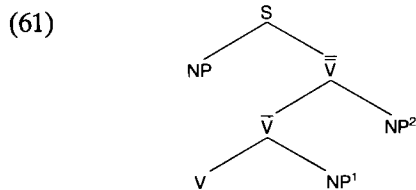
(59) *umfazi uvimba ixhego ukutya*  
*umfazi u-vimba ixhego ukutya*  
 woman S.C.-refuse old man food  
 'the woman refuses food to the old man'



Chomsky (LGB:171) proposes that in double object constructions, only the indirect object, NP<sup>1</sup>, is governed by the lexical category V; hence it is assigned (objective) Case by this verb. The direct object, NP<sup>2</sup>, is governed by  $\bar{V}$ . The category  $\bar{V}$  thus assigns objective Case to the direct object. According to this view, the structure of double object constructions is as in (61).<sup>54</sup>

Thus the generalization that a verb can assign Case only once is maintained. In accordance with (61), the





sentence in (59) has the following representation:

(62) *umfazi* AGR [<sub>v</sub> [<sub>v</sub> -vimb- ixhego] ukutya]]  
 woman refuse old man food

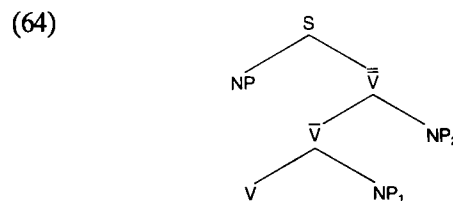
In terms of the proposal in (58ii), it may alternatively be assumed that the Case features of a verb are lexically specified together with its subcategorization and  $\theta$ -marking properties, an approach developed in Borer (1981).<sup>55</sup> The Case-assigning features can percolate from V to a higher projection,  $\bar{V}$  in the structure of (61). Thus  $\bar{V}$  can assign (objective) Case to NP<sup>2</sup>.

An approach to Case-assignment along the lines of one of the proposals in (58) is moreover necessitated by NP subject inversion constructions containing an object. NP subject inversion constructions occur freely in Xhosa, irrespective of the definiteness of the subject or the transitivity of the verb.<sup>56</sup> The thematic subject appears in immediate post-verbal position, whereas the grammatical features of the pleonastic subjectival concord *ku-*, which has a meaning similar to English **there, it**, are inserted into the subject position.<sup>57,58</sup> Consider, for example, the sentences in (i) of (63) with their respective subject inversion counterparts in (ii).

- (63a) (i) *le ndoda ifuna imoto edulu*  
*le ndoda i-funa imoto e-dulu*  
 Dem man S.C.-want car Agr-expensive  
 'this man wants an expensive car'  
 (ii) *kufuna le ndoda imoto edulu*  
*ku-funa le ndoda imoto e-dulu*  
 there-want this man car Agr-expensive
- (63b) (i) *abalimi abakhutheleyo batyala umbona*  
*abalimi aba-khutheleyo ba-tyala umbona*  
 farmers they-diligent Agr-plant mealies  
 'the diligent farmers plant mealies'  
 (ii) *kutyala abalimi abakhutheleyo umbona*  
*ku-tyala abalimi aba-khutheleyo umbona*  
 there-plant farmers Agr-diligent mealies
- (63c) (i) *uJohn uthenga ihempe*  
*uJohn u-thenga ihempe*  
 John he-buys shirt  
 'John is buying a shirt'  
 (ii) *kuthenga uJohn ihempe*  
*ku-thenga uJohn ihempe*  
 'there-buy John shirt'

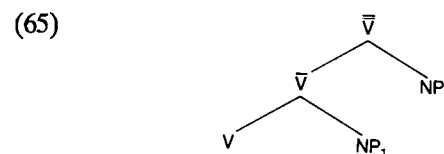
Assume that in the structures of the sentences in (63ii) the post-verbal subject has been adjoined to the verb by a movement rule, thus forming an internal V.<sup>59</sup> Thus the general structure of the examples in (ii) of (63) is roughly

as in (64) where NP<sup>1</sup> represents the extraposed subject, and NP<sup>2</sup> the object.<sup>60</sup>



In addition to double-object constructions, the subject-inversion structure in (64) constitutes a further instance of the NP object being adjacent to a  $\bar{V}$  rather than a lexical verb. Thus the proposals in (58) are once more invoked to account for Case-assignment to NP<sup>2</sup> in the structure (64).

In conclusion, adopting an approach to Case-assignment in terms of either of the assumptions in (58) is not only necessitated by the genitive nominal infinitive in Xhosa (see (52) above). It is independently justified by double object and NP subject inversion structures, illustrated in (61) and (64) respectively. The structure (65) represents all three these constructions which illustrate the same problem concerning Case-assignment in that the NP object (NP<sub>2</sub>) is adjacent to and governed by V, rather than a lexical verb.



In double-object constructions, NP<sub>1</sub> in (65) represents the indirect object, [NP<sup>1</sup>, VP], and NP<sub>2</sub> the direct object, [NP<sup>2</sup>, VP]. In genitive nominal infinitives, NP<sub>1</sub> (i.e.  $\bar{N}$  in (52)) represents the possessive modifier constituted by the connective *-a-* and its complement NP, whereas NP<sub>2</sub> is the object. In subject inversion constructions, NP<sub>1</sub> represents the extraposed subject which has been derived by an adjunction rule while NP<sub>2</sub> is the object in VP.

From the above discussion it is clear that there exists a striking structural relatedness between genitive nominal infinitives and NP subject inversion constructions, the essential difference being that the post-verbal NP (i.e. NP<sub>1</sub> in (65) above) is base-generated in the case of genitive nominal infinitives whereas it is derived by application of a movement rule in the case of inversion constructions. In both these constructions NP<sub>1</sub> dominates the argument that serves as the thematic agent, while the position of grammatical subject is filled by grammatical features which yield a variable-like interpretation. The subject PRO of genitive nominal infinitives contains the grammatical features of person, number and gender (see (54) above) whereas the subject position is occupied by the feature specification of the impersonal subject concord *ku-* 'there' in the case of subject inversion constructions. Consider, for example,

the following sentences, where the subject inversion forms are given in (i), and the corresponding genitive nominal infinitive in (ii).

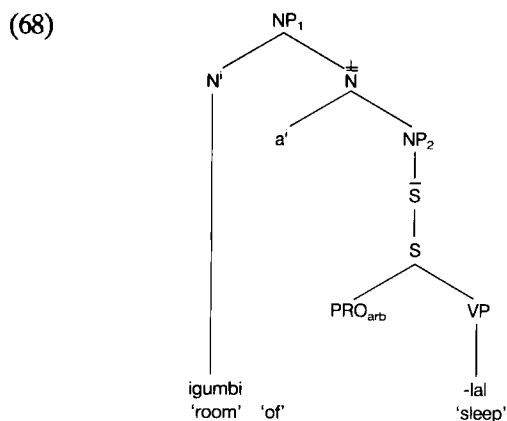
- (66a) (i) *kudlala abantwana ibhola*  
*ku-dlala abantwana ibhola*  
 there-play children ball  
 'the children are playing ball'  
 (ii) *ukudlala kwabantwana ibhola*  
*uku-dlala kwa-abantwana ibhola*  
 Infin-play of-children ball  
 'the children's playing ball'
- (66b) (i) *kuqhuba le ndoda imoto kakuhle*  
*ku-qhuba le ndoda imoto kakuhle*  
 there-drive Dem man car well  
 'this man drives car well'  
 (ii) *ukuqhuba kwale ndoda imoto kakuhle*  
*uku-qhuba kwa-le ndoda imoto kakuhle*  
 Infin-drive of-Dem man car well  
 'this man's driving car well'
- (66c) (i) *kupha umfazi umntwana isipho*  
*ku-pha umfazi umntwana isipho*  
 there-give woman child gift  
 'the woman gives a gift to the child'  
 (ii) *ukupha komfazi umntwana isipho*  
*uku-pha kwa-umfazi umntwana isipho*  
 Infin-give of-woman child gift  
 'the woman's giving of a gift to the child'

The nominal infinitive commonly occurs as complement of the connective *-a-* in descriptive possessive constructions. Consider, for example, genitive constructions such as (67) in which the nominal infinitive appears as complement of the connective *-a-*. In the structures of these genitives, the infinitive will thus appear under NP<sub>1</sub>, in the structure (65) above.<sup>61</sup>

- (67a) *igumbi lokulala*  
*igumbi la-uku-lala*  
 room of-Infin-sleep  
 'bedroom'
- (67b) *into yokutya*  
*into ya-uku-tya*  
 thing-of Infin-eat  
 'something to eat'
- (67c) *ithuba lokuphumla*  
*ithuba la-uku-phumla*  
 time of-Infin-rest  
 'a time to rest'

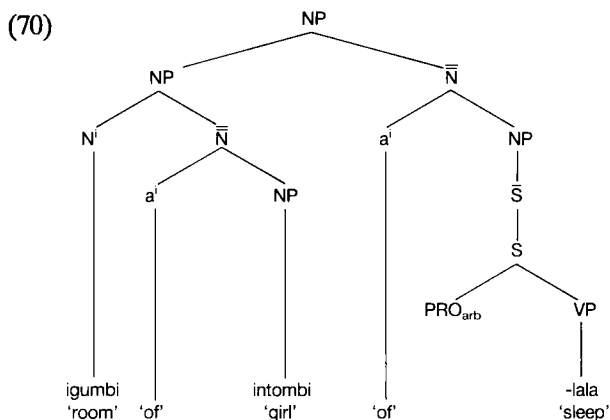
The structure of (67a) is given in (68). The identity of grammatical features of the connective *-a-* with the head N is indicated by coindexing.

Consider, finally, the occurrence of the nominal infinitive as NP<sub>3</sub> in the structure (46) above, where it is preceded by a non-descriptive 'possessor' which occupies the position of NP<sub>2</sub>. The expressions in (69), for example, have this kind of structure, as shown in (70), where identity of grammatical features is indicated by coindexing.



- (69a) *igumbi lentombi lokulala*  
*igumbi la-intombi la-uku-lala*  
 room of-girl of-Infin-sleep  
 'the girl's bedroom'

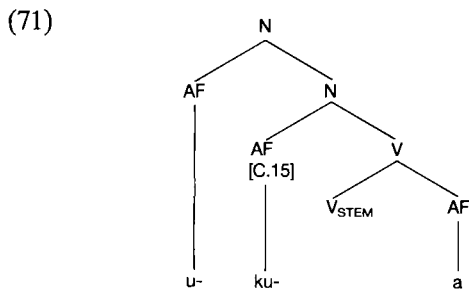
- (69b) *intonga yakhe yokubetha*  
*intonga ya-khe ya-uku-betha*  
 stick of-his of-Infin-hit  
 'his hitting stick'



It is evident from genitive constructions like the above that subject PRO in nominal infinitives lacks an antecedent. Being uncontrolled, PRO is arbitrary in reference, thus having a variable-like interpretation.

It remains, finally, to make precise the notion of class 15 noun in the light of the structure proposed for nominal infinitives in Xhosa. As mentioned earlier, the distinction between a class 15 noun on the one hand, and a nominal infinitive on the other, is based on two main criteria, namely the meaning of the infinitive and the possibility of its exhibiting the verbal properties given in (10) above. As regards meaning, the nominal infinitive is a nominalization of the particular infinitival verb (translated as a gerund in English — cf. (12) above) whereas an infinitive which functions as a class 15 noun has an idiosyncratic meaning which does not constitute a regular nominalization of the particular verb. The verbal properties in (10) above may be exemplified by a nominal infinitive but not by a class 15 noun. Some infinitives may function both as a class 15 noun and a

nominal infinitive. The infinitive *ukutya*, for instance functions as a class 15 noun when it has the meaning of 'food', but as a nominal infinitive when it has the meaning of '(the) eating'. While all infinitives which may function as class 15 nouns may also function as nominal infinitives, the reverse is not true. In fact, class 15 contains a relatively small number of nouns compared to other noun classes.<sup>62</sup> Some examples are: *ukukhanya* 'light', *ukwindla* 'autumn', *ukutya* 'food', *ukunene* 'right side' and *ukhohlo* 'left side'. The morphological structure of class 15 nouns that are derived from verb stems may be represented as indicated in (71).<sup>63</sup>



The infinitive morpheme *-ku-* thus serves as the noun prefix of class 15.

In conclusion, there are clear properties of Xhosa infinitives that necessitate drawing a distinction between the function of the infinitive as a class 15 noun and as a nominal infinitive respectively. The semantic relatedness of a nominal infinitive to a derived noun containing the corresponding verb stem is similar to that between gerunds and derived nominals in English. More generally, most of the differences between derived nouns and gerunds in English discussed in Chomsky (1972b) carry over to derived nouns and nominal infinitives respectively in Xhosa.<sup>64</sup> Consider the examples of nouns in class 11, derived from the verb stems in column A, and their corresponding nominal infinitives in column C, as indicated in (72).

**5. Control constructions**

In the preceding sections which dealt with the syntactic structure of the Xhosa infinitive, it was argued that a distinction must be made between the function of the infinitive as clausal  $\bar{S}$  complement on the one hand, and as nominal infinitive on the other, where the latter is structurally an  $\bar{S}$  dominated by NP. The phonologically empty pronominal PRO was posited as the subject of

infinitival clauses. Recall that PRO may contain the grammatical features person, number and gender, but it contains no phonological features.<sup>65</sup> In the following paragraphs a closer view will be taken at the antecedent which controls PRO and the properties of control of Xhosa verbs. With regard to the latter issue, the infinitive functioning as a clausal complement is of major concern. The question of the antecedent of subject PRO in infinitival  $\bar{S}$  complements of verbs and in nominal infinitives will be considered.

The properties of the infinitive have been investigated in a number of studies. Some of these studies were in particular concerned with the properties of Chomsky's (LGB) pronominal anaphor PRO, which typically appears as subject of the infinitive, and control theory. Manzini (1983) proposes that a unified approach can be followed with respect to control theory and binding theory on the assumption that control is a configurational phenomenon, constructed in terms of the same notions as Chomsky's LGB binding theory. According to Manzini, the distribution of PRO can be determined by the notions of binding theory, and partially by Case theory. Koster (1984) adopts a similar approach, pointing out the similarities between control theory and binding theory. The approach to empty categories advanced by Bouchard (1984) in essence entails the position that no rules or principles of the grammar should be stipulated specifically for empty categories. Such principles and rules should, according to Bouchard, rather refer to NPs in general, independent of whether an NP is phonetically overt or empty. For this reason he argues that control theory should be dismissed, since it is postulated for an empty category, PRO, only. Bouchard argues that PRO can have the syntactic status of either an anaphor, when it is locally bound, or of a pronominal, when it is freely indexed at S-structure. Thus his view of the categorial nature of PRO differs from that of Chomsky, who identifies PRO as a pronominal anaphor. Nishigauchi (1984) advances an approach to control according to which a distinction is made between thematically determined control on the one hand, and non-thematically or pragmatically determined control on the other. These two types of control are distinguished in terms of a locality principle invoking the notion of Minimal Thematic Domain, which is based on the local nature of  $\theta$ -role assignment. I will not discuss these proposals concerning control theory and the syntactic status of PRO since these issues are not directly relevant to the questions that will be dealt with in this section.

(72)

A. Verb	B. Class 11 noun	C. Nominal infinitive
<i>-gxek-</i> 'criticise'	<i>u-gxeko</i> 'criticism'	<i>uku-gxeka</i> 'criticising'
<i>-cel-</i> 'ask'	<i>u-celo</i> 'request'	<i>uku-cela</i> 'asking'
<i>-thand-</i> 'love'	<i>u-thando</i> 'love'	<i>uku-thanda</i> 'loving'
<i>-hamb-</i> 'travel'	<i>u-hambo</i> 'travel'	<i>uku-hamba</i> 'travelling'
<i>-nyul-</i> 'elect'	<i>u-nyulo</i> 'election'	<i>uku-nyula</i> 'electing'
<i>-b-</i> 'steal'	<i>ulu-bo</i> 'theft'	<i>uku-ba</i> 'stealing'
<i>-v-</i> 'feel, hear'	<i>ulu-vo</i> 'opinion'	<i>uku-va</i> 'feeling'

Chomsky's classification of PRO as a pronominal anaphor [+pronominal, +anaphor] will be assumed.

According to Chomsky (LGB:20,57), the theory of control which belongs to the LF component constitutes one of the sub-systems of principles in the GB framework. Control theory determines the referential properties of the pronominal anaphor PRO which characteristically occurs as the subject of an infinitival clause. The rule of control, one of the rules of construal in the LF component, coindex PRO with its antecedent NP. The feature content of PRO matches that of the antecedent by which it is controlled. If PRO is not coindexed with an antecedent, it is PRO<sub>arb</sub>, having a variable-like interpretation.<sup>66</sup> Chomsky (LGB:21) suggests that PRO may alternatively be indexed at S-structure and that the rule of control checks indices rather than assign them.<sup>67</sup> Chomsky (LGB:61) refers to PRO which is coindexed with an antecedent as proximate PRO and to PRO lacking a controller NP as obviative PRO.

Chomsky (LGB:56) characterizes PRO in terms of the following properties:

- (73) (i) PRO is ungoverned;  
 (ii) the antecedent of PRO (if there is one) has an independent  $\theta$ -role;  
 (iii) the antecedent-PRO relation does not observe subadjacency.

The property of PRO given in (i) explains why it characteristically appears as subject of an infinitival clause. The element AGR(ement) which governs the NP subject is absent in infinitival clauses, hence the subject is ungoverned.<sup>68,69</sup> In terms of (ii), PRO as well as its antecedent occurs in a position to which a  $\theta$ -role is assigned (i.e. a  $\theta$ -position). Since Subadjacency (bounding theory) is a property of the rule Move  $\alpha$ , and since the antecedent-PRO relation does not entail movement, this relation is not subject to Subadjacency. This means that PRO does not need to have a local controller (i.e. an antecedent in an adjacent bounding category). PRO may have a remote controller, in which case there exists a long-distance dependency between PRO and its antecedent. Consider, for example, the Xhosa sentences in (74a,b) with their respective structures in (75a,b).

- (74a) *abantu balo mzi benjenjalo ukusabela isimemo*  
*abantu ba-lo mzi be-njenjalo uku-sabela isimemo*  
 people of-Dem homestead S.C. -do-so Infin-answer  
 invitation  
*somhlelelazi ilukrozo ukusinga komkhulu*  
*sa-umhlelelazi i-l-ukrozo uku-singa ku-omkhulu*  
 of-chief S.C.-Cop-queue Infin-go Loc-great-place  
 'the people of the homestead did like that to  
 answer the chief's invitation, it being a queue to go  
 to the great place'

- (74b) *isizwe esi sifumene iyimfanelo ukuyenza loo nto*  
*isizwe esi si-fumene i-y-infanelo uku-y-enza loo nto*  
 nation Dem S.C.-found S.C.-Cop-right Infin-cl-do  
 Dem thing  
 'the nation found that it is a right to do that thing'

- (75a) [<sub>S1</sub> *abantu balo mzi benjenjalo* [<sub>S2</sub> PRO<sup>i</sup> *ukusabela isimemo somhlelelazi* [<sub>S3</sub> *ilukrozo* [<sub>S4</sub> PRO<sup>i</sup> *ukusinga komkhulu* ]]]]]

- (75b) [<sub>S1</sub> *isizwe<sup>i</sup> sifumene* [<sub>S2</sub> *iyimfanelo* [<sub>S3</sub> PRO<sup>i</sup> *ukuyenza loo nto* ]]]

In (75a), PRO in S<sub>4</sub> is separated from its antecedent, PRO in S<sub>2</sub>, by the clause S<sub>3</sub>. Thus PRO in S<sub>4</sub> does not have an antecedent in the adjacent clause, S<sub>3</sub>. Notice that subject PRO in S<sub>2</sub> is locally controlled in that it has an antecedent in the adjacent clause, S<sub>1</sub>. In (75b), PRO in S<sub>3</sub> is also removed from its antecedent by one clause, namely S<sub>2</sub>.

It might be appropriate at this stage of the discussion to reflect briefly on the fact that c-command is not a requirement for control.<sup>70,71</sup> This is illustrated in Xhosa by the genitive nominal infinitives in (76).

- (76a) *ukuzenza ntle kwentombi kuhle*  
*uku-zi-enza n-tle kwa-intombi ku-hle*  
 Infin-Refl-make Agr-pretty is-good  
 'the girl's self-beautifying is good'  
 (76b) *ukucula kwabafazi amaculo kumnandi*  
*uku-cula kwa-abafazi amaculo ku-mnandi*  
 Infin-sing of-women songs it-nice  
 'the women's singing songs is nice'

Recall that the structure in (52), repeated here, had been proposed for genitive nominal infinitives. The examples in (76) have the structures in (77) respectively. Since the antecedent of PRO in genitive nominal infinitives such as (77) occurs in the complement of the infinitival verb ( $\bar{N}$  in (52)), PRO is not c-commanded by its antecedent in these constructions.<sup>72</sup>

- (52)
- 

- (77a) [<sub>NP</sub> [<sub>S</sub> [<sub>S</sub> PRO<sup>i</sup> *uku-zi-enza n-tle kwa-intombi<sup>i</sup>* ]]]]  
*ku-hle*  
 Infin-Refl-make agr-pretty of-girl it-good  
 'the girl's self-beautifying is good'  
 (77b) [<sub>NP</sub> [<sub>S</sub> [<sub>S</sub> PRO<sup>i</sup> *uku-cula kwa-abafazi amaculo* ]]]]  
*ku-mnandi*  
 Infin-sing of-women songs it-nice  
 'the women's singing songs is nice'

In (77a,b), PRO is controlled by an antecedent which does not c-command it, namely *intombi* 'girl' and *abafazi* 'women', respectively. The features of PRO match those of its (non-c-commanding) antecedent, as indicated by the coindexing between these two categories. Recall the

discussion in section 3.2 where it was argued that the occurrence of an adjective predicate in a nominal infinitives constitutes evidence for the presence of the phonologically null subject PRO containing the grammatical features which are overtly realized on the adjective. In genitive nominal infinitives such as (77a,b), PRO is thus coindexed by the rule of control with its non-c-commanding antecedent.

Let us now consider more closely the properties of Xhosa verbs that are subcategorized for an infinitival clausal complement. For expository ease, verbs which take purposive infinitival clauses will be distinguished from verbs that take non-purposive infinitival clauses.<sup>73</sup>

Firstly then, some observations concerning verbs that are subcategorized for non-purposive infinitival complements. Verbs such as *-qal-* 'begin', *-vum-* 'agree', *-khumbul-* 'remember', *-az-* 'know', *-zam-* 'try' and *zimisel-* 'be determined', are generally verbs of subject control in that the subject of the clause in which they occur controls subject PRO in the embedded infinitival complement. This is demonstrated in the following examples where PRO is coindexed with its antecedent, the matrix subject.<sup>74</sup>

- (78a) *ndiqala ekuseni ukusebenza egadini*  
*ndi<sup>i</sup>-qala ekuseni* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-sebenza egadini]]  
 I-begin early to-work-in-garden  
 'I begin early to work in the garden'
- (78b) *umfazi uvuma ngovuyo ukugcina usana*  
*umfazii u-vuma nga-uvuyo* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-gcina usana]]  
 woman she-agree with-happiness to-look after baby  
 'the woman gladly agrees to look after the baby'

Non-applied verbs with the associated meaning of 'wish' or 'desire' like *-kheth-* 'prefer', *-fun-* 'want', *-ngwen-* 'wish', and *-cel-* 'ask' are subject control verbs if they are subcategorized for an infinitival clause. Consider the examples in (79), where PRO is coindexed with its antecedent.

- (79a) *ndifuna kakhulu ukugoduka*  
*ndi<sup>i</sup>-funa kakhulu* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup>-goduka]]  
 I-want much to-go home  
 'I very much want to go home'
- (79b) *indoda ikhetha kakhulu ukuhamba ngemoto*  
*indoda<sup>i</sup> i-khetha* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-hamba nga-imoto]]  
 man he-prefer much to-travel by-car  
 'the man prefers much to travel by car'
- (79c) *umfundi ucela ngobubele ukuthenga incwadi*  
*umfundi<sup>i</sup> u-cela ngobubele* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-thenga incwadi]]  
 student he-ask friendly to-buy book  
 'the student asks friendly to buy a book'

Verbs such as the above do not have the property of object control; that is, they may not occur in the

structure of the form in (80). Thus, the examples in (81) are ungrammatical.<sup>75</sup>

- (80) [VP V NP<sup>i</sup> [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> VP], where V is **not** an applied verb.
- (81a) *\*ndifuna abantu ukugoduka*  
*ndi-funa abantu* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-goduka]]  
 I-want people to-go-home  
 'I want the people to go home'
- (81b) *\*sikhetha indoda ukutyhala imoto*  
*si-khetha indoda<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-tyhala imoto]]  
 we-choose man to-push car  
 'we choose a man to push the car'
- (81c) *\*ucela abazali ukuya ethekweni*  
*u-cela abazali<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-ya ethekweni]]  
 he-ask parents to-go to-party  
 'he asks his parents to go to the party'

Some verbs containing the causative suffix *-is-* 'such as' *-fundis-* 'teach', *-bonis-* 'show', and *-cebis-* 'advise' more readily occur as object control verbs. These verbs therefore can appear in structures of the type in (80).<sup>76</sup> Consider the following examples:

- (82a) *utata ufundisa umfana kakuhle ukuqhuba imoto*  
*utata u-fund-is-a umfana<sup>i</sup> kakuhle* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> ukuqhuba imoto]]  
 father he-learn-Caus-Pres young-man well to-drive car  
 'father teaches the young man well (how) to drive a car'
- (82b) *umqeshi ubonisa abasebenzi ngomonde ukusebenzisa umatshini*  
*umqeshi u-bon-is-a abasebenzii ngomonde* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-sebenzi-is- a umatshini]]  
 employer he-see-Cause-Pres labourers patiently to-work- Caus- Pres machine  
 'the employer patiently shows the labourers (how) to use the machine'
- (82c) *ugqirha ucebisa isigulana ngamandla ukusela iyeza*  
*ugqirha u-ceb-is-a isigulana<sup>i</sup> ngamandla* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-sela iyeza]]  
 doctor he-plan-Caus-Pres patient seriously to-drink medicine  
 'the doctor seriously advises the patient to drink the medicine'

There is a small group of simple (i.e. non-derived) verbs in Xhosa which have the property of object (but not subject) control, as illustrated in (83).

- (83a) *imbongi incoma inkosi ukutyeba*  
*imbongi i-ncoma inkosi<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-tyeba]]  
 praise-poet he-praise chief to-be-rich  
 'the praise poet praises the chief to be rich'
- (83b) *isithunywa ibika umfundisi ukugula*  
*isithunywa i-bika umfundisi<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-gula]]  
 messenger he-report minister to-be-ill  
 'the messenger reports the minister to be ill'

- (83c) *utiishala ugxeke umfundi ukunqena*  
*utiishala u-gxeke umfundi* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-  
 nqena ]]  
 teacher he-criticize student to-be-lazy  
 'the teacher criticizes the student to be lazy'

The infinitive in expressions such as (83) may alternatively be considered as a nominal infinitive, containing subject PRO, which may either be controlled by the matrix subject, or be arbitrary in reference if it is not coindexed with the matrix subject.<sup>77,78</sup>

Consider, secondly, purposive infinitivals like the examples in (84).

- (84a) *usebenzela ukufumana umvuzo*  
*u<sup>i</sup>-sebenz-el-a* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-fumana umvuzo ]]  
 he-work-Appl-Prés to-get salary  
 'he works to get a salary'
- (84b) *ndibuzela ukuqonda*  
*ndi<sup>i</sup>-buz-el-a* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-qonda ]]  
 I-ask-Appl-Prés to understand  
 'I ask (in order) to understand'
- (84c) *umfundi ufundela ukuphumelela uviwo*  
*umfundi<sup>i</sup> u-fund-el-a* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-phumelela  
 uviwo ]]  
 student he-study-Appl-Prés to-pass examination  
 'the student studies to pass the examination'

The applied verbs in the matrix clause of the above examples are verbs of subject control: the matrix subject is coindexed with subject PRO of the purposive infinitival complement. The applied suffix of the verbs in (84) seems to sanction the subcategorization of an infinitival clause since the (purposive) complement clause of the corresponding verb that lacks the applied extension cannot be in the infinitive. This complement clause must be in the subjunctive mood, as illustrated in (85), where the ungrammatical sentences in (i) exemplify the corresponding non-applied verbs of the matrix verbs in (84). The matrix verbs in (ii) have a subjunctive complement clause.

- (85a)  
 (i) \**usebenza ukufumana umvuzo*  
*u<sup>i</sup>-sebenza* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-fumana umvuzo ]]  
 he-work to-get salary  
 'he works to get a salary'
- (ii) *usebenza ukuba afumane umvuzo*  
*u-sebenza* [<sub>S</sub> ukuba [<sub>S</sub> a-fumane umvuzo ]]  
 he-work that he-get-Subj salary  
 'he works to get a salary'
- (85b)  
 (i) \**ndibuza ukuqonda*  
*ndi<sup>i</sup>-buza* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-qonda ]]  
 I-ask to-understand  
 'I ask (in order) to understand'
- (ii) *ndibuza ukuba ndiqonde*  
*ndi-buza* [<sub>S</sub> ukuba [<sub>S</sub> ndi-qond-e ]]  
 I-ask that I-understand-Subj  
 'I ask (in order) to understand'

- (85c)  
 (i) \**umfundi ufunda ukuphumelela uviwo*  
*umfundi<sup>i</sup> u-funda* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-phumelela uviwo ]]  
 student he-study to-pass examination  
 'the student studies to pass the examination'
- (ii) *umfundi u-funda ukuba aphumelele uviwo*  
*umfundi u-funda* [<sub>S</sub> ukuba [<sub>S</sub> a-phumelele-e uviwo ]]  
 student he-study that he-pass-Subj examination  
 'the student studies to pass the examination'

It appears from the above examples that if verbs lacking the applied suffix can take a purposive complement clause, the latter must be in the subjunctive.<sup>79</sup> This requirement holds irrespective of whether the subject of the complement clause is coreferential with the matrix subject as in (ii) of (85a-c) or with the matrix object, as in the following examples in (86). The sentences in (i) are ungrammatical because the complement clause is in the infinitive instead of the subjunctive, as in (ii).

- (86a)  
 (i) \**ndibiza uJohn ukwankela iindwendwe*  
*ndi-biza uJohn<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-amkela  
 iindwendwe ]]  
 I-call John to-receive guests  
 'I call John to receive the guests'
- (ii) *ndibiza uJohn ukuba amkele iindwendwe*  
*ndi-biza uJohn* [<sub>S</sub> ukuba [<sub>S</sub> a-amkel-e iindwendwe ]]  
 I-call John that he-receive-Subj guests  
 'I call John (in order) to receive the guests'
- (86b)  
 (i) \**umfazi umema aba bantu ukuxhamla itheko*  
*umfazi u-mema aba bantu<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-xhamla  
 itheko ]]  
 woman she-invite Dem people to-enjoy party  
 'the woman invites these people (in order) to enjoy  
 the party'
- (ii) *umfazi umema aba bantu ukuba baxhamle itheko*  
*umfazi u-mema Dem bantu* [<sub>S</sub> ukuba [<sub>S</sub> ba-xhamle-e  
 itheko ]]  
 woman she-invite these people that they-enjoy-Subj  
 party  
 'the woman invites these people (in order) to enjoy  
 the party'
- (86c)  
 (i) \**uqala ihashe ukuwina umdyarho*  
*u-qala ihashe<sup>i</sup>* [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> uku-wina umdyarho ]]  
 he-train horse to-win race  
 'he trains the horse (in order) to win the race'
- (ii) *uqala ihashe ukuba liwine umdyarho*  
*u-qala ihashe* [<sub>S</sub> ukuba [<sub>S</sub> li-win-e umdyarho ]]  
 he-train horse that he-win-Subj race  
 'he trains the horse (in order) to win the race'

It was pointed out above that verbs which may take a purposive complement clause in the infinitive must have the applied extension, as illustrated by the verbs in (84) which have the general structure in (87).

- (87) NP<sup>i</sup> V-el [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> VP ]]

The corresponding verb without the applied suffix may not have an infinitival complement, as shown in (i) of (86); its complement clause must be in the subjunctive, as in (ii) of (86). Similarly, by suffixing the applied extension *-el-* to a non-applied verb which is followed by an NP object and which may take a purposive complement clause, the latter may be in the infinitive.<sup>80</sup> The object of the applied verb may serve as the antecedent of subject PRO in the infinitival complement clause as shown in (88) below. One further requirement must, however, be met: an overt NP bearing the  $\theta$ -role of theme may not follow the applied verb. Such a theme argument must rather occur in TOPIC position, and a clitic which is co-referential with this NP TOPIC, if the latter is present, must occur in the verbal morphology of the particular applied verb.<sup>81</sup> Consider the following examples in which the infinitival clause appears as complement of the applied verb, as opposed to the corresponding examples in (86) where the complement clause must be in the subjunctive because the matrix verbs lack the applied suffix, thus excluding the occurrence of an infinitival complement.

(88a) *uJohn ndimbizela ukwamkela iindwendwe*  
 [TOP *uJohn*]<sup>i</sup> [<sub>S</sub> *ndi-m<sup>i</sup>-biz-el-a* [<sub>S</sub> PRO<sup>i</sup> *uku-amkela iindwendwe* ]]]

John I-him-call-Appl-Pres to-receive guests  
 'I call John (in order) to receive the guests'

(88b) *aba bantu umfazi ubamemela ukuxhamla itheko*  
 [TOP *aba bantu*]<sup>i</sup> [<sub>S</sub> *umfazi u-ba<sup>i</sup>-mem-el-a* [<sub>S</sub> PRO<sup>i</sup> *uku-xhamla itheko* ]]]

Dem people woman she-them-invite-Appl-Pres  
 to-enjoy party  
 'the woman invites these people (in order) to enjoy the party'

(88c) *ihashe uliqalela ukuwina umdyarho*  
 [TOP *ihashe*]<sup>i</sup> [<sub>S</sub> *u-li<sup>i</sup>-qal-el-a* [<sub>S</sub> PRO<sup>i</sup> *uku-wina umdyarho* ]]]

horse he-it-train-Appl-Pres to-win race  
 'he trains the horse (in order) to win the race'

Applied verbs that are subcategorized for an NP object followed by a purposive infinitival complement like the examples in (88) thus have the general structure exhibited in (89), where PRO has an NP object as antecedent.

(89) [TOP]<sup>i</sup> [S NP cl<sup>i</sup>-V-el [S<sub>S</sub> PRO<sup>i</sup> VP]]], where  
 V-el indicates an applied verb.

Although the NP object in the applied verb constructions of (88) is interpreted as the antecedent of PRO (assuming that the clitic indicates an object) the possibility to interpret the matrix subject as the antecedent of PRO is not excluded, provided that no semantic anomaly arises. Subject PRO in structures of the kind in (89) are thus ambiguous as to its antecedent, although the matrix object might be preferred. This fact is illustrated by the coindexing in the structure in (90).

(90) [TOP]<sup>i</sup> [S NP<sup>i</sup> cl<sup>i</sup>-V-el [S<sub>S</sub> PRO<sup>i</sup><sub>j</sub> VP]]]

The examples of (88) may be represented by the structure in (90), where it is indicated that either the matrix subject or object may serve as antecedent of PRO.

It is important to note here that if the applied extension is suffixed to a verb which has the inherent meaning of wish or intention (see the discussion related to (81) above) the resulting applied verb may also occur in structures of the kind exhibited in (89). Thus subject PRO in the infinitival complement may have either the matrix subject or object as antecedent (assuming again that the clitic indicates an object), provided that no semantic anomaly arises. This is illustrated by the examples in (91) below which correspond to those in (88) in exhibiting the structure (89). Also in these constructions subject PRO may have either the NP subject or object in the higher clause as antecedent in these constructions.

(91a) *abantu ndibafunela ukugoduka*  
 [TOP *abantu*]<sup>i</sup> [<sub>S</sub> *ndi<sup>i</sup>-ba-fun-el-a* [<sub>S</sub> PRO<sup>i</sup><sub>j</sub> *uku-goduka*]]]

people I-them-want-Appl-Pres to-go-home  
 'I want/look for the people to go home'

(91b) *indoda siyikhethelela ukutyhala imoto*  
 [TOP *indoda*]<sup>i</sup> [<sub>S</sub> *si<sup>i</sup>-yi<sup>i</sup>-khethe-el-a* [<sub>S</sub> PRO<sup>i</sup><sub>j</sub> *uku-tyhala imoto*]]]

man we-him-choose-Appl-Pres to-push car  
 'we choose a man (in order) to push the car'

(91c) *abazali ubacelela ukuya ethekweni*  
 [TOP *abazali*]<sup>i</sup> [<sub>S</sub> *u<sup>i</sup>-ba<sup>i</sup>-cel-el-a* [<sub>S</sub> PRO<sup>i</sup><sub>j</sub> *uku-ya ethekweni*]]]

parents he-them-ask-Appl-pres to-go to-party  
 'he asks (his) parents to go to the party'

It was shown in the above discussion that if the applied extension is suffixed to a non-applied verb stem, the derived verb may take an infinitival complement clause.<sup>82</sup> The applied suffix adds to the meaning of purpose or reason to the verb to which it is suffixed in structures of the type (89).<sup>83</sup> Thus it may be said that the proposition expressed in the clause containing the applied verb is performed for the purpose or reason of the proposition expressed in the complement clause of this applied verb.

To summarize the content of this section on control structures in Xhosa: a distinction was made between purposive and non-purposive infinitival complements. A non-purposive infinitive may occur as complement of subject control verbs such as *-az-* 'know', *-qond-* 'understand', *-zam-* 'try' and *-libal-* 'forget'. Verbs which have the causative extension *-is-* such as *-cebis-* 'advise', *-bonis-* 'show' and *-fundis-* 'teach' readily occur as object control verbs in that their object serves as the antecedent of the non-purposive infinitival complement. It was further pointed out that a small group of simple (i.e. unextended) verbs such as *-bik-* 'report', *-ncom-* 'praise'

and *-gxek-* 'criticise', which have the property of object control, take a non-purposive infinitival complement. Non-applied verbs which have the meaning of wish, e.g. *-fun-* 'want', *-cel-* 'ask', *-nqwen-* 'wish' and *-kheth-* 'choose', that have an infinitival clausal complement are subject control verbs.

As regards purposive infinitival complements, it was pointed out that the subcategorizing verb must have the applied suffix. If no clitic (indicating an object) occurs in the verbal morphology of the applied verb, subject PRO of the infinitive is controlled by the subject of the clause of which the infinitive appears as complement, as demonstrated in the following structure:

(92) NP<sup>i</sup> V-el [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> VP]]

Subject PRO in the purposive infinitival complement of an applied verb may also be controlled by the latter's object. This object must, however, be indicated by the clitic; no overt NP object is permitted in the post-verbal object position of the applied verb. An NP which bears the thematic role of theme or patient, and which is coreferential with the clitic may occur in the TOPIC position. This kind of structure may be represented as follows:

(93) [<sub>TOP</sub>]<sup>i</sup> [<sub>S</sub> NP cl<sup>i</sup>-V-el [<sub>S</sub>[<sub>S</sub> PRO<sup>i</sup> VP]]]

Finally, it was observed that PRO in structures of the type (93) may be ambiguous with respect to control, since the NP subject of the matrix clause may alternatively serve as the antecedent of PRO, on condition that the resulting interpretation is semantically acceptable (cf. the structure in (90)).

## 6. Summary and conclusions

In this chapter, the occurrence of the empty category PRO in Xhosa sentence structures has been examined with specific reference to the question of the syntactic status of the Xhosa infinitive. In particular, the claim that the infinitive in Xhosa (and generally in Bantu) constitutes a class 15 noun was called into question. On grounds of its exemplification of the verbal properties (cf. (10)), it was argued that the Xhosa infinitive can be distinguished in terms of its function as one of the following categories:

- (i) clausal complement:  $\bar{S}$ ;
- (ii) nominal infinitive: NP dominating  $\bar{S}$ ;
- (iii) infinitival (i.e. class 15) noun.

It was argued that the assumption of the structure in (37) for the nominal infinitive accounts naturally for both the nominal and verbal character of this infinitive: because the nominal infinitive has a clausal structure, it may assume the verbal properties in (10); because it functions as an NP, it may assume the properties associated with nominals given in (2) above. Moreover, the structural distribution of the nominal infinitive exhausts all the positions available to NP in Xhosa (see Appendix).

It was pointed out, that the occurrence of the empty subject PRO in infinitival clauses is empirically supported by infinitives containing adjectival predicates, in that the overt agreement exhibited by the adjective in these constructions is accounted for by the relation of agreement which exists between the categorially present empty subject and the adjective.

It was proposed that the designation 'class 15 noun' is correct for only a small group of infinitives that may be referred to as **infinitival nouns**, such as *ukutya* 'food', *ukuhlwa* 'evening' and *ukwindla* 'autumn'. The meanings of these nouns, unlike those of nominal infinitives, do not constitute nominalizations of their respective verb stems, if they do have verb stems. Their meanings rather constitute irregular and idiosyncratic non-nominalized forms of their respective verb stems. Hence infinitival nouns cannot exemplify verbal properties as nominal infinitives do. The distinction between what constitutes an infinitival (class 15) noun and what constitutes a nominal infinitive is thus based on two main criteria: the idiosyncratic meaning of the infinitive in question, and the possibility for it to assume verbal properties while retaining its meaning as nominalization or non-nominalization of its verb stem. In the case of class 15 nouns, the infinitival prefix *-ku-* functions as noun class prefix.

In section 5 some general observations concerning control properties of infinitival verbs in Xhosa were made. It was shown in particular that in the case of genitive nominal infinitives, PRO has a non-commanding antecedent. This fact is due to the structural position of genitive NPs in Xhosa as specifier of the NP head. Finally, it was pointed out that the nominal infinitive exhausts all the positions available to NP in Xhosa.

## Notes

1. Cf. Chomsky (LGB:chapter 2) for discussion of the empty category PRO.
2. For discussion of the infinitive, see Cole (1955:96-97, 438); for Tswana; Doke (1955:28-30) and Van Eeden (1956:83-84, 237-238) for Zulu; Du Plessis (1978: 43-45, 106, 143); for Xhosa; Doke and Mofokeng (1957: 82-83, 188-189, 438) and Guma (1971:258-259) for Southern Sotho; and Ziervogel and Mabuza (1976:90-91, 170-172) for Swati.
3. Cf. Ziervogel and Mabuza (1976:90).
4. See among others, Doke (1955:28).
5. See references cited in note 2.
6. The notion '... function as ...' is used here in the sense of '... serve as ...'. It must not be confused with the term grammatical function (GF) as used by Chomsky (LGB:42). According to Chomsky, grammatical functions such as subject, object-of-verb, object-of-preposition, and clausal complement, are determined in terms of syntactic configurations (for configurational languages). Henceforth, reference to 'the grammatical function (in short, **function**) of the infinitive as a nominal infinitive', will have the intended meaning of 'the grammatical



- function of the infinitive as an NP-GF, such as subject, object or prepositional object.'
7. The term **nominal infinitive** was introduced in Du Plessis (1982a,b) to refer to the infinitive which exhibits characteristic nominal properties.
  8. See du Plessis (1982b) for a more detailed discussion of the nominal and verbal properties of the infinitive in Xhosa.
  9. Unless other verbal suffixes occur which are relevant to the discussion, the final suffix *-a-* of a verb in the present tense will be written consecutively to the verb stem in the glosses. In this chapter the morpheme *uku-* of the infinitive is indicated by the abbreviation **Infin** if the particular infinitive is a nominal infinitive, and translated as 'to' in the case of a clausal infinitive.
  10. Cf. Visser (1983) for discussion of Xhosa passive constructions.
  11. An overt NP object may optionally co-occur with its objectival concord. Thus, object-verb agreement is usually optional in Xhosa, unlike subject-verb agreement, which is obligatory. The presence of the objectival concord associated with an overt NP object adds semantic emphasis to the expression, while the object is usually associated with the feature of [definiteness]. See Du Plessis (1978:118-120) for a detailed discussion of the semantics of sentences containing an objectival concord in their verbal morphology.
  12. Du Plessis (1982b:9-14) gives a systematic review of the occurrence of the infinitive with the various nominal modifiers in Xhosa.
  13. See also Doke (1955:28f).
  14. Following Chomsky (LGB:5) the following base rule for S will be assumed:  $S \rightarrow \text{COMP } S$ . Since the complementizer node is irrelevant to the present discussion, nothing further will be said about it. We will return below to the argument that the infinitive can function as a clausal S complement in addition to its functioning as a nominal infinitive.
  15. The question may be raised as to why the Xhosa infinitive, and more generally the infinitive in Southern Bantu, may be inflected for the future tense only. In particular, it may be hypothesized that what is referred to as the future tense form of the infinitive is composed of two separate infinitives, namely the 'auxiliary' part (*ukuza* 'to will/come' in (11b)) and its 'complement' (*ku-funda* 'to study' in (11b)). According to this view, then, the future tense form of the infinitive is in fact a compound tense. Being a non-basic tense form as such, the future tense form of the infinitive may possibly be a later development from primitive tense forms.
  16. Although aspect morphemes such as the progressive and exclusive aspect morphemes cannot appear in Xhosa nominal infinitives, they may occur in Zulu and Sotho nominal infinitives. Cf. Doke (1955:29).
  17. It is pointed out by Du Plessis (1978:44-45) that the Xhosa infinitive is similar in meaning to the gerund in English.
  18. See Cole (1955:96) and Van Eeden (1956:83) for further examples of the infinitive in Tswana and Zulu respectively.
  19. The VP-analysis for infinitival complements has been proposed by, among others, Bresnan (1978).
  20. See Du Plessis (1978:115-125) for an extensive discussion of the long form of the verb in Xhosa.
  21. Infinitival S complements are on a par with non-infinitival clause complements in that the (matrix) verb which takes finite clause complement may also be in the long form. Consider the following examples, where *fun-* 'want' has an infinitival complement in (i), and a non-infinitival complement in (ii). In both sentences, the matrix verb *-fun-* is in the long form:
    - (i) *umntwana uyafuna ukucula*  
*umntwana u-ya-funa* [<sub>S</sub> PRO *uku-cula*]  
child S.C.-Pres-want to-sing  
'the child wants to sing'
    - (ii) *umntwana uyafuna ukuba ndicule*  
*umntwana u-ya-funa* [<sub>S</sub> *ukuba* [<sub>S</sub> *ndi-cule*]]  
child S.C.-Pres-want that I-sing  
'the child wants me to sing'
  22. See Du Plessis (1978:106) for further examples of verbs that are subcategorized for clausal S infinitives.
  23. The sentence in (19a) may be considered as support for the idea of Chomsky (LGB:170f) that the adjacency requirement for Case-assignment determines word order. In (a), then, the adverb may not intervene between the verb and the object since the latter is not adjacent to its Case-assigning verb. The presence of the clitic in the verbal morphology as in (b), may be viewed as determining or indicating the structural adjacency of the object to the verb. Hence the adverb is permitted to appear before the NP object. If the object clitic is absent the adverb appears after the NP object, as in the following example:
 

*umlimi ulima intsimi kakuhle*  
*umlimi u-lima intsimi kakuhle*  
farmer S.C.-ploughs land well  
'the farmer ploughs the land well'
  24. See Visser (1983:11-14) for further examples in which the adjacency relation for Case-assignment is established by the presence of the clitic in the verbal morphology.
  25. In the absence of the clitic of the infinitival NP object, the adverb occurs after the infinitive, as shown in the following sentence:
 

*umlimi uthanda oku kulima kwabo intsimi kakhulu*  
*umlimi u-thanda* [<sub>NP</sub> *oku kulima kwa-bo intsimi kakhulu* ]  
farmer he-like this ploughing-of-them field much  
'the farmer much likes this ploughing of theirs of the field'  
The above sentence is, however, ambiguous in that the adverb *kakhulu* 'much' may be interpreted as modifying either the matrix verb *-thand-* 'like' or the infinitive *ukulima* 'to plough'.
  26. Object infinitival complements, sometimes also referred to as 'bare' infinitival complements, have no complementizer, as for example, for-infinitives such as I want [S for [S John to leave]], where for occurs as complementizer. See Bresnan (1978) and Koster and May (1981) for further discussion of the VP-analysis for infinitival complements.
  27. See Koster and May (1981:136f) for arguments concerning the antecedent in reflexive verb

constructions, and in predicate adjective constructions in English, in support of the S-analysis for infinitival complements.

28. See also Doke and Mofokeng (1957:244), among others.
29. Informally stated, the transitivity valence of a verb refers to the number of NP objects for which it is subcategorized. Thus, a single-object has a transitivity valence of one, and a double-object verb a transitivity valence of two arguments.
30. See Grimshaw (1980) for a similar analysis of French reflexivization.
31. Vitale (1981) proposes an analysis for Swahili reciprocal verb constructions which is essentially the opposite of the view of reciprocal verbs advanced here. Vitale suggests that the reciprocal suffix is associated with an NP object position which contains the feature [+reciprocal] but lacks phonological content. Thus Vitale considers Swahili reciprocal verb constructions to be structurally similar to reciprocal constructions in English, where an anaphoric pronoun (*each other*) appears as NP object. The reciprocal verb in Swahili is morphologically similar to the Xhosa reciprocal verb in that the former is also derived by suffixation of the reciprocal verbal extension. Vitale's view is, however, problematic in that it cannot explain why the transitivity valence of a verb is decreased by one argument if it has the reciprocal extension which itself is associated with an NP object position. Put differently, if the reciprocal extension is associated with an NP object as claimed by Vitale, it is similar to the applied and causative extensions that add an argument to the argument structure of a verb, that is, increase the transitivity valence of the verb to which it is suffixed. Consider, for instance, the monotransitive verb *-cul-* 'sing', which becomes bitransitive when the applied and causative suffixes respectively are suffixed to it.

*-cul-* 'sing':

*umfundi ucula iculo*  
*umfundi u-cula iculo*  
 student S.C.-sing song  
 'the student sings a song'

- (i) Applied suffix *-el-*  
*umfundi uculela umakhulu iculo*  
*umfundi u-cul-el-a umakhulu iculo*  
 student S.C.-sing-Appl-Pres grandmother song  
 'the student is singing a song to grandmother'
- (ii) Causative suffix *-is-*  
*utitshala uculisa umfundi iculo*  
*utitshala u-cul-is-a umfundi iculo*  
 teacher S.C.-sing-Caus-Pres student song  
 'the teacher makes sing the student a song'

If the reciprocal suffix is considered as being associated with an NP argument, then it should add an argument position to the existing number of NP objects in the argument structure of a verb. Hence, a monotransitive verb like *-bon-* 'see', for example, should become ditransitive. This is, however, not the case. In the sentence (27a) above *-nced-* 'help' cannot be followed by any object. Thus, it may be concluded that the view adopted here of the reciprocal suffix as an intransitivizing

suffix is supported on grounds of the morphology of verb derivation.

32. It is possible that the post-verbal complement clause in the examples of (28) has been extraposed from the subject position by a movement rule. Thus the following sentences would have been derived respectively if extraposition did not apply:
- (i) *ukuba mhle kuyathandwa kakhulu yintombi*  
*uku-ba m-hle ku-ya-thandwa kakhulu y-intombi*  
 [C.1] [C.9]  
 to-be Agr-pretty S.C.-Pres-be-liked much Cop-girl  
 'to be pretty is liked very much by the girl'
- (ii) *ukuba bakhulu kuyafunwa kakhulu ngamakhwenkwe*  
*uku-ba ba-khulu ku-ya-funwa kakhulu ng-amakhwen*  
 [C.2] [C.6]  
 to-be Agr-big S.C.-Pres-be-wanted much Cop-boys  
 'to be big is wanted very much by the boys'

In sentences such as these with a subject clause, the concord *-ku-* is the sentential agreement concord, rather than the pleonastic agreement concord, associated with the impersonal subject, with the meaning of 'it, there'. The issue at stake is, however, not affected by the question of whether the sentences in (28) have been derived by extraposition or not. As in all passives, the agent may be omitted in the above examples, thus the agreement on the adjective cannot be governed by the agent.

33. See references cited in note 2.
34. Louw gives the following example of the negative future tense of the infinitive:
- ukungayi kubona*  
*uku-nga-y-i ku-bona*  
 to-Neg-Fut-Neg to-see  
 'not to will see'
35. Doke seems to use the term simple (subject or object) to refer to the infinitive as a class 15 noun that is not followed by an object, adverb, locative, or ideophone. When the infinitive is followed by one or more of these items, it is not 'simple' any more, but constitutes an extended infinitive. It is clear that Doke's distinction between the 'simple' and 'extended' infinitive is based on whether the verbal properties in (10) are realized in the morphology of the infinitival verb, or whether they are realized as separate lexical categories. The extended or phrase-forming infinitive will be discussed in the following section.
36. Doke considers this infinitive as the object of the applied form *-zela* 'come for' of the verb *-za* 'come'. He points out that this sentence may be compared to (30b), where the infinitive also occurs as object of an applied verb.
37. In Xhosa, the genitive connective *-a-* and the preprefix (if any) of the noun to which the morpheme *-a-* is prefixed, undergo vowel coalescence. Henceforth, the connective *-a-* (on which the grammatical features of the head N are realized) and the noun with whose preprefix it coalesces, will be indicated separately in the glosses. Likewise, in other instances where coalescence takes place, e.g. between the subjectival concord or object clitic and the

verb to which such a concord is prefixed, the relevant morpheme and verb are isolated in the glosses.

- 38. This pattern is not followed when the 'possessor' is a class 1a noun. In this case, the invariable morpheme *-ka-* is prefixed to the class 1a noun of which the prefix is dropped. If the 'possession' is furthermore in a non-nasal class (i.e. a noun class with a prefix that does not contain a nasal) the subjectival concord of this class occurs before *-ka-*.
- 39. Henceforth, the connective *-a-* will occur with its agreement inflection in examples.
- 40. This structure has also been proposed by Keach (1980:111) for the Swahili genitive construction.
- 41. Unlike the genitive *-a-*, prepositions themselves do not exhibit agreement (although a pronominal element may be cliticized onto them). Like prepositions, the connective *-a-* may not be prefixed directly to quantifiers. A pronominal element which agrees with the quantifier must be cliticized onto *-a-*. Thus the example (i), in which the genitive *-a-* is prefixed to the quantifier *-onke* 'all', is ungrammatical, whereas in (ii), a clitic, which is in agreement with the quantifier, is suffixed to the connective *-a-*.

- (i) \**imali yabonke*  
*imali ya-bonke*  
'money of-all'
- (ii) *imali yabo bonke*  
*imali ya-bo bonke*  
money of-them all  
'their all's money'

- 42. See Malinga (1980) for discussion of the locative *ku-* as preposition.
- 43. At this point, it might be appropriate to reflect briefly on the assignment of Case to the NP complement of the connective *-a-* in the configuration [N a, NP]. Chomsky (1981:171f) postulates the following property for genitive Case-assignment in English.

(i) Np is genitive in [NP \_\_\_\_ X]

The genitive NP in (i) is not governed by a Case-assigning [-N] category. In (ii), for example, the NPs *John*, *the children* and *his* are ungoverned.

- (ii) [NP { John's  
the children's  
his } books]

Chomsky proposes that a genitive rule assigns (genitive) Case to the ungoverned NP in (i). The assignment of genitive Case in English, as opposed to the assignment of the other Cases, is thus not contingent on government. In order to maintain the generalization that Case-assignment is contingent on government, Chomsky (LGB:188) suggests alternatively that an abstract element GEN is adjoined to the NP that receives (genitive) Case, where this element functions as both a governor and a Case-assigner (cf. note 52 for a definition of government). Thus, genitive Case-assignment is reduced to Case-assignment under government. The approach of assuming a genitive element as a governor which assigns (genitive) Case is an extremely plausible one for the possessive construction in Xhosa. The connective *-a-* in the structure governs its complement NP, thus assigning it genitive

Case. This is illustrated in (iii), where the NPs *abafundi* 'students', *-khe* 'his', and *itiitshala* 'teacher' are assigned genitive Case under government by the connective *-a-*.

- (iii) [NP *iincwadi* [N *-a-* { *abafundi*  
*-khe*  
*itiitshala* } ]
- |                 |   |  |   |       |
|-----------------|---|--|---|-------|
| <i>iincwadi</i> | { | <i>abafundi</i><br><i>-khe</i><br><i>itiitshala</i>    | } |       |
| the books       | { | <i>zabafundi</i><br><i>zakhe</i><br><i>zetiitshala</i> | } |       |
|                 | { | of-students<br>of-his<br>of-teacher                    | } |       |
|                 | { | 'the students'<br>his<br>the teacher's                 | } | books |

- 44. See Du Plessis (1978:62-96, 1983b:51-152) for a detailed discussion of nominal modifiers in Xhosa.
- 45. Notice that vowel coalescence takes place between the connective *-a-* and the preprefix of the noun to which the former is prefixed. Recall that the grammatical features of the head N in the possessive construction are morphologically realized on the genitive *-a-*; it is this form of the genitive *-a-* that will henceforth occur in the glosses.
- 46. The form of the possessive, known as the emphatic possessive, may, however, be ordered freely within an NP containing one or more other modifiers. This may be due to the fact that the definitizing morpheme of the 'possession' is prefixed to the non-emphatic possessive. This kind of free ordering is of a stylistic nature.
- 47. See Du Plessis (1978:88-91) for extensive data on descriptive possessives in Xhosa. For discussion of the various semantic relationships that the descriptive possessive may have with respect to its head, see Du Plessis (1978:88-91) for Xhosa; Doke and Mofokeng (1957:139-141; 158f) for Sotho; Doke (1965:121ff) for Zulu, and Cole (1955:167ff) for Tswana.
- 48. Stuurman (1981) quotes some examples of genitive nominal infinitives in which the object may precede the possessive modifier if the infinitival verb has an applied extension. This is not surprising in the light of the strong tendency of an applied verb to appear adjacent to the category which is its logical argument. Consider, for example, the following examples of genitive nominal infinitives, where in (i), the possessive appears adjacent to the infinitival verb, but in (ii) the object precedes the possessive.
  - (a) (i) *ukuthandazela komfundisi imvula*  
*uku-thandaz-el-a kwa umfundisi imvula*  
Infin-pray-Appl-Pres of-minister rain  
'the minister's praying for rain'
  - (ii) *ukuthandazela imvula komfundisi*
  - (b) (i) *ukusebenzela komntwana umama*  
*uku-sebenz-el-a kwa-umntwana umama*  
Infin-work-Appl-Pres of-child mother  
'the child's working for mother'
  - (ii) *ukusebenzela umama komntwana*
- 49. Cf. the examples in (42) of genitive (non-infinitival) NPs where the possessive has a strong tendency to occur adjacent to the head N.
- 50. Cf. the example of (42e) above, where the linear order

NP-Quantifier-*odwa*-Possessive yields an unacceptable expression.

51. In Chomsky (LGB:170) the principle for the assignment of objective Case is given as follows:

NP is objective if governed by V with the sub-categorization feature:  $\text{— NP}$  (i.e. transitive).

52. The following definition of **government** given in Chomsky (LGB:250) will be assumed in this study.

In the structure (i)

- (i)  $[\beta, \gamma, \alpha, \gamma \dots]$  where  
 (a)  $\alpha = \chi^0$  or is coindexed with  $\gamma$   
 (b) where  $\phi$  is a maximal projection, if  $\phi$  dominates  $\gamma$  then  $\phi$  dominates  $\alpha$   
 (c) c-commands

In this case,  $\gamma$  governs  $\alpha$

Chomsky (LGB: 166) defines the notion of **c-command** as follows:

$\alpha$  c-commands  $\beta$  if and only if

- (i)  $\alpha$  does not contain  $\beta$   
 (ii) Suppose that  $\gamma_1, \dots, \alpha_n$  is the maximal sequence such that  
 (a)  $\gamma_n = \alpha$   
 (b)  $\gamma_i = \alpha^i$   
 (c)  $\gamma_i$  immediately dominates  $\gamma_{i+1}$

Then if  $\delta$  dominates  $\alpha$ , then either

- (i)  $\delta$  dominates  $\beta$ , or  
 (ii)  $\delta = \gamma_i$  and  $\gamma_i$  dominates  $\beta$

The notion of **governing category** is defined as follows by Chomsky (LGB:211):

$\beta$  is a governing category for  $\alpha$  if and only if  $\beta$  is the minimal category containing  $\alpha$ , a governor of  $\alpha$ , and a SUBJECT accessible to  $\alpha$ .

Chomsky (LGB:209) introduces the notion of SUBJECT to refer to the subject of an infinitive, an NP and a small clause. In addition, AGR of INFL, is considered a SUBJECT in finite clauses, but not the NP subject in a clause of which INFL contains AGR.

The notion of **accessibility** is formalized as follows by Chomsky (LGB:212):

- (i)  $*[\gamma \dots \beta \dots]$ , where  $\gamma$  and  $\beta$  bear the same index  
 (ii)  $\alpha$  is **accessible to**  $\beta$  if and only if  $\beta$  is in the c-command domain of  $\alpha$  and assignment to  $\beta$  of the index of  $\alpha$  would not violate (i).

53. See Chomsky (LGB:94:128–132) for discussion of the GFs of indirect (primary) object and direct (secondary) object, where the former is defined as  $[\text{NP}^1, \text{VP}]$ , and the latter as  $[\text{NP}^2, \text{VP}]$ .

54. Notice that, given the definition of **c-command** by which the maximal projection of the c-commanding category is relevant, V will govern both  $\text{NP}^1$  and  $\text{NP}^2$  within V in the structure in (61). See note 52 above for the definition of c-command. This view is, however, problematic with respect to the adjacency principle for Case-assignment cf. Chomsky (LGB:94f) since V is not adjacent to  $\text{NP}^2$ . The structure in (61) may be assumed for double-object sentences of which the (ditransitive) verb may be either primitive (i.e. underived) as in (i) or derived (by means of verbal extensions), as in (ii).

- (i)  
 a. *indoda iboleka umfundi imali*  
*indoda i-boleka umfundi imali*  
 man S.C.-lend student money  
 'the man lends money to the student'  
 b. *umakhulu unika abantwana iiswiti*  
*umakhulu u-nika abantwana iiswiti*  
 grandmother S.C.-give children sweets  
 grandmother gives sweets to the children'  
 c. *umlimi uhlawula unovenkile imali*  
*umlimi u-hlawula unovenkile imali*  
 farmer S.C.-pay shopkeeper money  
 'the farmer pays money to the shopkeeper'

- (ii)  
 a. *ndithengela umfundi iincwadi*  
*ndi-theng-el-a umfundi iincwadi*  
 S.C.-buy-Appl-Pres student books  
 'I buy books for the student'  
 b. *umama uculisa abantwana amaculo*  
*umama u-cul-isa abantwana amaculo*  
 mother S.C.-sing-Caus-Pres children songs  
 'mother lets the children sing songs'

55. Chomsky (LGB:183, 264ff, 331) alternatively suggests that Case may be assigned as a lexical property of nouns, an NP receiving the Case of its head noun by convention. A filter (not the Case filter) should then determine whether Case has been properly assigned.

56. The inverted subject bears thematic emphasis. A detailed discussion of the semantics of subject inversion constructions is irrelevant to the present issue.

57. Chomsky (1982:79) notes that, in view of the fact that overt pronominals can be referential or pleonastic, the same division would be expected to hold for empty categories.

58. Although the subjectival concord *ku-* whose features occupy the subject position in subject inversion constructions is homophonous to the locative subject concord *ku-* of the locative noun class 17, the first-mentioned *ku-* does not have a locative meaning, but rather an impersonal interpretation. It therefore cannot be said to be associated with the grammatical gender feature [class 17] of the locative class. The *ku-* concord in inversion constructions is rather similar to the sentential subjectival and objectival concord *ku-* which is associated with infinitival or finite clauses as illustrated in the following examples, where in (a) *ku-* occurs as objectival concord and in (b), as subjectival concord.

- a.  
 (i) *ndiyakwazi ukuqhuba imoto*  
*ndi-ya-ka-azi uku-qhuba imoto*  
 I-Pres-O.C.-know to-drive car  
 'I can drive a car'  
 (ii) *ndiyakwazi ukuba umkile*  
*ndi-ya-ka-azi ukuba u-mk-ile*  
 S.C.-Pres-O.C.-know that S.C.-left-Perf  
 'I know that he has left'
- b.  
 (i) *ukuqhuba imoto kakuhle kafunwa nguye*  
*uku-qhuba imoto kakuhle ku-fun-w-a ngu-ye*

to-drive car well S.C.-want-Pass-Pres Cop-him  
 'to drive car well is wanted by him'

- (ii) *ukuba utata ubanika izipho kavuyisa abantwana*  
*ukuba utata u-ba-nika izipho ku-vuyisa abantwana*  
 if father gives presents to them S.C.-delights the  
 children  
 'it makes the children happy if father gives presents to  
 them'

Guma (1971:209) points out that the concord *ho-* in Southern Sotho, a Southern Bantu language like Xhosa, has an impersonal interpretation although it is homophonous with the locative concord *ho-*.

59. Sentences such as those in (ii) in (63) which have an NP object following the inverted subject are, however, of wavering acceptability.
60. According to Chomsky (LGB:94), Case-assignment takes place at S-structure, subsequently to the application of transformational rules.
61. See Du Plessis (1978:91) for further examples of these genitives.
62. Because of the extremely small number of infinitives which can function as class 15 nouns, it might be speculated that the function of the infinitive as a class 15 noun is a later development brought about by a meaning shift from its function as nominal infinitive.
63. There is some doubt as to whether the nouns *ukunene* 'right side' *ukhohlo* 'left side' and *ukwindla* 'autumn' belong to class 15 (thus being an infinitival noun) or to the locative class, class 17.
64. See Stuurman (1981) for discussion of these differences with respect to derived nouns and infinitives in Xhosa. See also Du Plessis (1978:33-45) for discussion of derived nouns in Xhosa.
65. See Chomsky (LGB:20, 60, 102, 193, 323) for discussion of the feature content of pronominals.
66. In the following examples, PRO has no controller, hence it is arbitrary in reference.
- (i) *kumnandi ukudlala intenetya*  
*ku-mandi* [s[s PRO<sub>arb</sub> uku-dlala intenetya]  
 it-nice to-play tennis  
 'it is nice to play tennis'
- (ii) *kubalulekile ukuphumelela uviwo*  
*ku-balulekile* [s[s PRO<sub>arb</sub> uku-phumelela uviwo ]  
 it-important to-pass examination  
 'it is important to pass the examination'
67. This possibility relies essentially on the assumption that NPs which do not yet have an index at S-structure are assigned one by random indexing — see Chomsky (LGB: 186, 200).
68. AGR(eement) represents the complex of grammatical features of person, number and gender, which is specified under the INFL(ection) node. In Xhosa, the distinction between finite and non-finite clauses can be specified in terms of the feature [+AGR], where finite clauses are [+AGR] and infinitival clauses [-AGR]. [+AGR] clauses are furthermore specified for mood (cf. LGB:71, 142, note 54). If a verb is specified for a clausal complement in its lexical entry, this clausal complement will further have to be specified in terms of the features [+AGR] and mood.

69. Chomsky (LGB:71, 156) points out that PRO may also appear as subject of NP and in COMP, these positions being ungoverned. The D-structure of the sentence in (i) is roughly as in (ii). The S-structure, given in (iii), is derived by movement of PRO to COMP, where PRO is coindexed with its trace by convention.

- (i) Mary bought John a book to read  
 (ii) Mary bought John<sup>i</sup> a book [s[s PRO<sup>i</sup> to read PRO ]]  
 (iii) Mary bought John<sup>i</sup> a book<sup>j</sup> [s PRO<sup>j</sup> [s PRO<sup>i</sup> to  
 read t<sup>j</sup> ]]

The question now arises as to what the grammatical features of PRO in COMP are. PRO is dependent on some argument in the main clause for its referential properties. The rule of control coindex PRO with an antecedent in the main clause, namely the matrix object, as shown in (iii). PRO in COMP functions as an operator which  $\bar{A}$ -binds its trace, a variable. See Chomsky (LGB:64, 77, 80, 115-117, 180, 199-203, 329) for the development of this argument.

70. See note 52 for a definition of c-command.
71. See Chomsky (LGB:77f) for related discussion.
72. Subject PRO in genitive nominal infinitives may of course have an antecedent which does c-command PRO. This can be the case if the complement of the connective *-a-* is a pronominal as in the example (i), which has the structure in (ii), rather than a noun, as in the examples of (76).
- (i) *intombi icinga ukuzenza nle kwayo kuhle*  
*intombi icinga uku-zi-enza n-le kwa-yo ku-hle*  
 girl she-thinks Infin-Refl-make Agr-pretty of-her  
 it-good  
 'the girl thinks her self-beautifying is good'
- (ii) *intombi<sup>i</sup> i-cinga* [NP[s[s PRO<sup>i</sup> uku- [VP zi-enza n-  
 tle]]] kwa-yo ku-hle]
73. The intrinsic meaning of a verb in Xhosa determines whether its infinitival clausal complement is purposive or non-purposive. Du Plessis (1978:106f) cites an extensive range of Xhosa verbs which subcategorize for an infinitival S complement.
74. Notice that the occurrence of an adverbial expression between the matrix verb and the infinitive excludes the possibility that the latter functions as a nominal infinitive, i.e. NP object, since this word order is disallowed unless the object clitic appears in the verbal morphology. But see the discussion in section 3.1 above.
75. See Doke (1955:33) for some brief remarks concerning the occurrence of an infinitival clause, as opposed to a subjunctive clause, as verbal complement.
76. Notice that the occurrence of an adverb between the matrix verb and the infinitive rules out the possibility that this infinitive can be an NP object (i.e. a nominal infinitive).
77. See Du Plessis (1978:92) for further examples.
78. Since the infinitive in these examples is a clausal infinitive, it should not be confused with forms such as (i) where the nominal infinitive appears after the post-verbal object. In the examples of (ii), a noun class object appears in the corresponding position.
- (i)  
 a. *ndiyayincoma inkosi ukutyeba kwayo*  
*ndi-ya-yi-ncoma inkosi uku-tyeba kwa-yo*

I-Pres-cl-praise chief Infin-rich of-his  
'I praise the chief's being rich'

- b. *ndiyambika utitshala ukugula kwakhe*  
*ndi-ya-m-bika utitshala uku-gula kwa-khe*  
I-Pres-cl-report teacher Infin-ill of-his  
'I report the teacher's being ill'

(ii)

- a. *siyamazi lo mntu isigulo sakhe*  
*si-ya-azi lo mntu isigulo sa-khe*  
we-Pres-cl-know Dem person illness of-his  
'we know (about) this person's illness'

- b. *uyalwazi ufudo amendu alo*  
*u-ya-lu-azi ufudo amendu a-lo*  
he-Pres-cl-know tortoise speed of-it  
'he knows (about) the speed of the tortoise'

The forms in (i) and (ii) have a pause after the first post-verbal object, which indicates that the nominal infinitive in (i) and the second post-verbal object in (ii), are not part of the clausal structure. Thus the sentences in (i) and (ii) are stylistic in nature. This kind of stylistic change is nevertheless fairly regular. It entails the process formalized in (iii), assuming that the sentences in (ia,b) have been derived from (iva,b) and those in (iia,b) from (ivc,d) respectively.

- (iii)  $V [NP_1 NP_2 [N -a- NP_3]] \rightarrow cl^i-V NP_3 NP_2$   
(where  $NP_1$  is a genitive construction)

(iv)

- a. *ndincoma ukutyeba kwenkosi*  
*ndi-ncoma uku-tyeba kwa-inkosi*  
I-praise Infin-rich of-chief  
'I praise the chief's being rich'

- b. *ndibika ukugula koiitshala*  
*ndi-bika uku-gula kwa-utitshala*  
I-report Infin-ill of-teacher  
'I report the teacher's being ill'

- c. *sazi isigulo salo mntu*  
*si-azi isigulo sa-lo mntu*  
we-know illness of-Dem person  
'we know (about) the illness of this person'

- d. *wazi amendu ofudo*  
*u-azi amendu o-ufudo*  
he-know speed of-tortoise  
'he-knows (about) the speed of the tortoise'

79. Recall that verbs are excluded here that have the inherent meaning of wish or desire, e.g. *-fun-* 'want', *-thand-* 'like', *-cel-* 'ask', *-ngwen-* 'wish'. These verbs may be subcategorized for an infinitival clause, which we have considered as 'non-purposive' above.

80. This complement clause may alternatively be in the subjunctive mood.

81. I will not pursue the issue here of whether the NP in TOPIC position is base-generated or moved to this position by application of the rule Move *a*. The NP in TOPIC position receives thematic emphasis in these sentences.

82. The purposive clause complement of an applied verb may alternatively be in the subjunctive mood. Whereas a verb which can take a purposive complement clause must have the applied extension for this complement to be in the infinitive, the presence of the applied extension is not a

requirement for the complement clause of such a verb to be in the subjunctive mood.

83. This view is expressed by Doke (1955:30), among others.

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**Appendix**

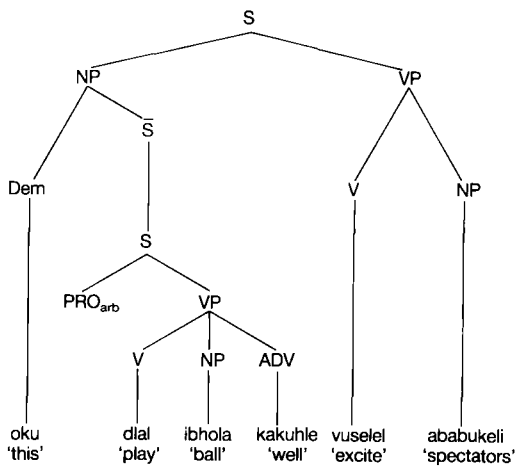
The distribution of nominal infinitives

A closer inspection of the syntactic distribution of the nominal infinitive reveals that the latter does not only appear as subject and object, as maintained by Doke (1955:28-31), but that it may occupy the full range of structural positions available to NP in Xhosa. These positions are given in (1).

- (1) (i) subject : [NP,S]
- (ii) direct object : [NP<sup>1</sup>, VP]
- (iii) indirect object : [NP<sup>2</sup>, VP]
- (iv) locative NP : [NP<sub>LOC</sub>, VP]
- (v) prepositional object : [NP,PP]
- (vi) complement of genitive connective: [NP [N a, NP],NP]
- (vii) complement of copula : [NP<sub>COP</sub>,VP]

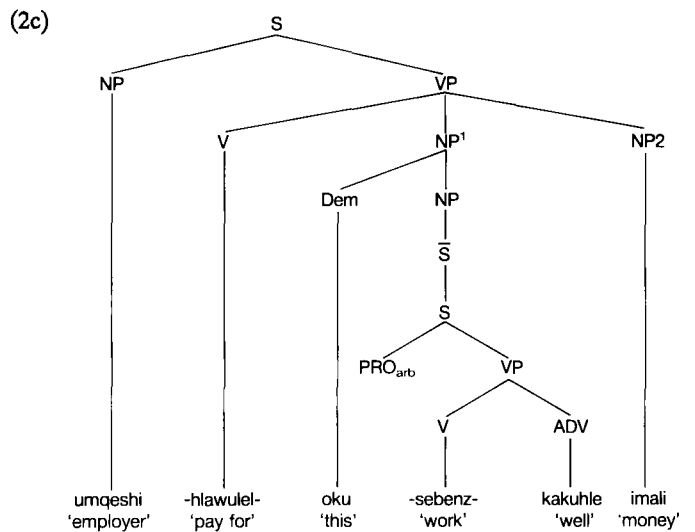
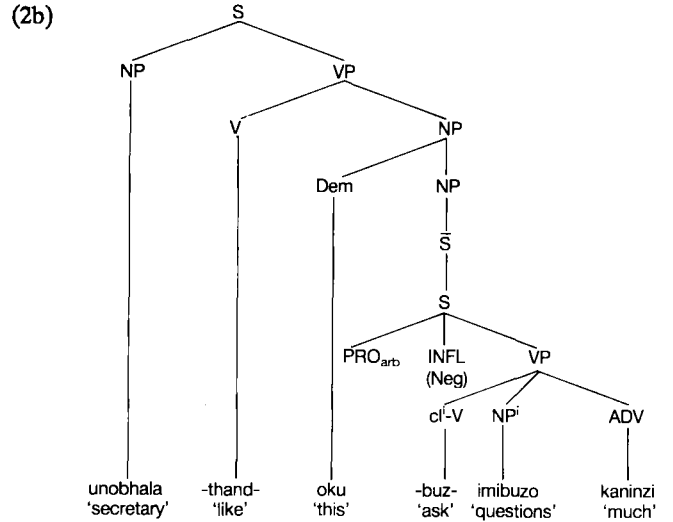
In Xhosa, the direct and indirect object have the same structural definition, namely [NP,VP]. When both objects occur, the indirect object, NP<sup>1</sup>, precedes the direct object, NP<sup>2</sup>. See Keach (1980) for a similar definition of direct and indirect object in Swahili. Chomsky (LGB:94, 97, 128, 130, 132) uses the same notation in order to distinguish the indirect (primary) object from the direct (secondary) object. The functions of the nominal infinitive as identified in (1i-vii) are illustrated in the constructions in (2a-g) respectively.

- (2a) *oku kudlala ibhola kakuhle kuvuselela ababukeli*  
 [NP oku ku-dlala ibhola kakuhle] ku-vuselela ababukeli  
 Dem Infin-play ball well it excite spectators  
 'this playing ball well excites the spectators'



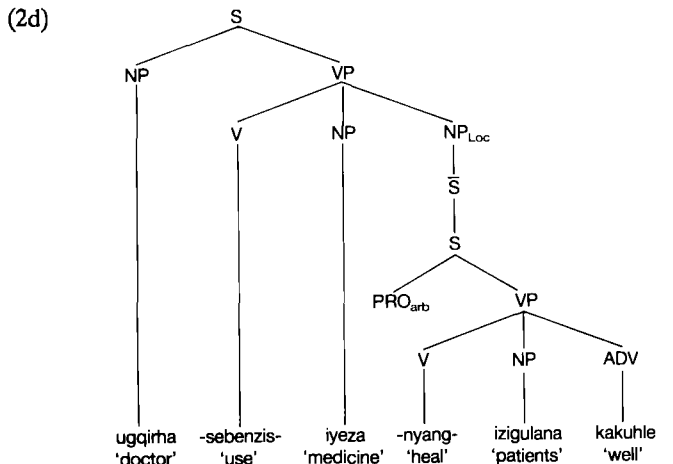
- (2b) *unobhala uthanda oku kungayibuzi imibuzo kaninzi*  
*unobhala u-thanda* [NP oku ku-nga-yi-buz-i imibuzo  
 kaninzi]  
 secretary S.C.-like this Infin-Neg-them-ask-Neg  
 questions much  
 'the secretary likes this not asking questions much'

- (2c) *umqeshi uhlawulela oku kusebenza kakuhle imali*  
*umqeshi u-hlawul-el-a* [NP<sub>1</sub> oku ku-sebenza kakuhle]  
 [NP<sub>2</sub> imali]  
 employer S.C.-pay-Appl-Pres Dem Infin-work  
 well money  
 'the employer pays money for this working well'



- (2d) *ugqirha usebenzisa iyeza ekunyangeni izigulana kakuhle*  
*igqirha u-sebenzisa iyeza* [NP<sub>LOC</sub> uku-nyanga  
 izigulana kakuhle]  
 doctor S.C.-use medicine Infin-heal patients well  
 'the doctor uses medicine for healing the patients well'

- (2e) *umntwana ugula ngoku kungayityi imifuno*  
*umntwana u-gula* [PP nga-oku ku-nga-yi-ty-i imifuno]  
 child S.C.-sick through-this Infin-Neg-O.C.-eat  
 -Neg vegetables  
 'the child is sick through this not eating vegetables'





(2f) *umsebenzi ufuna umatshini wokucheba ingca*  
*umsebenzi a-funa umatshini wa-uku-cheba ingca*

worker S.C.-want machine of-Infin-cut grass  
 'the worker wants the lawn-mower'

