

**ON THE RELATION BETWEEN NOUN PREFIXES AND
GRAMMATICALISATION IN NGUNI RELATIVE CLAUSES**

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1. Introduction

In this article I address a curious difference between the object relative clause¹ formation strategies of two closely related Southern Bantu language groups (= Zone S, in terms of Guthrie's (1967) classification of Bantu). In the Sotho-Tswana group (S 30: Southern and Northern Sotho; Tswana), object relative clauses are formed by means of relative clause-initial relative markers which are analysed as *relative complementisers*. These markers always precede the subject of the relative clause; furthermore, they agree with the head noun, (1). In contrast, object relative clauses in Nguni (S 40: Zulu, Xhosa, Swati, Southern Transvaal Ndebele) are formed by means of so-called *relative concords*, verbal prefixes that simultaneously express relativisation and agreement with the subject of the relative clause, (2):

(1) **Head Noun** [Relative clause **relative complementiser** – subject – subj.prefix+verb]
└──────────────────────────┘
Agreement

(2) Head Noun [Relative clause **subject** – **relative concord**+verb]
└──────────────────┘
Agreement

The Nguni languages also differ from Sotho-Tswana in another, at first sight unrelated, respect. Nouns in Nguni usually begin with a vowel, the so-called prevowel (also termed initial vowel, augment or preprefix), which is printed in bold in the example in (3a). The prevowel precedes the normal class prefix (in italics), which is a regular feature of nouns in all Bantu languages. In contrast to Nguni, nouns in the Sotho-Tswana languages do not take a prevowel, see e.g. (3b):

- (3) a. Zulu: abafazi (**a**-ba-fazi), 'women'
b. Southern Sotho: basadi (\emptyset -ba-sadi), 'women'

It is my aim to show that the difference between Nguni and Sotho-Tswana object relative clauses is correlated with this morphological difference between the noun class systems of both language groups. My starting point is the assumption that the Nguni relative concords in object relatives are the result of a grammaticalisation process in which a structure similar to the one in (1) was reanalysed as the structure in (2). The most important characteristic of this process was the change of the phonological and morphological properties of the relative marker in Nguni: the relative complementiser of early Nguni turned from a fully-fledged word into a clitic. As a clitic, it was first interpreted as a "phrasal affix", i.e. as a reflex of phrase-level agreement morphology (Anderson 1992), and ultimately reanalysed as part of the inflectional morphology of the verb, i.e. as a relative concord. I then argue that this development can be linked to the fact that Nguni nouns require prevowels. I show that at some stage of early Nguni, the relative complementiser in object relatives systematically started to *replace* the prevowel of the following noun, a process which forced the relative marker and the noun to merge into one phonological word. It was as a result of this process that the Nguni relative marker adopted properties of a clitic and turned into a phrasal affix. Since nouns in Sotho-Tswana do not have prevowels, relative complementisers in these languages never adopted prevowel properties and hence never became phrasal affixes, which explains why relative concords did not develop in Sotho-Tswana object relative clauses.

My discussion of the syntactic properties of relative clauses in Southern Bantu is based on the assumptions about clause structure articulated in the Principles-and-Parameters-framework and the Minimalist Program (cf. Chomsky & Lasnik 1993;

Chomsky 1995, 2000). Relative clauses, like all sentences, are CPs; relative complementisers are located in C^0 , and relative operators move to SpecCP. C^0 selects TP, and the subject occupies SpecTP, to which it moves from a VP-internal position (SpecvP). Furthermore, I follow the standard approach (cf. Alexiadou et al. 2000) and assume that (restrictive) relative clauses are adjoined to the head noun NP. However, notice that nothing essential hinges on this choice of framework or terminology; my analysis is equally compatible with alternative syntactic theories and alternative analyses of relative clauses (such as e.g. the one proposed by Kayne 1994).

In section 2 I discuss and compare the properties of relative clauses in the Nguni and the Sotho-Tswana languages. In section 3 I analyse the grammaticalisation process which derived the relative concords in Nguni object relatives, and in section 4 I offer some speculations about the historical period in which this development has taken place.

2. Relative markers in Sotho-Tswana and Nguni

2.1. *Relative complementisers and relative concords*

Compare the two object relative clauses in (4) and (5):²

- (4) setulo [seo basadi ba-se-rek-ile-ng kajeno]
 chair7 REL7 woman2 SP2-OC7-buy-TNS-RS today
 'the chair which the women bought today'

(Southern Sotho; Demuth & Harford 1999: 42)

- (5) incwadi [isitshudeni esi-yi-funda-yo]
 letter9 student7 REL7-OC9-read-RS
 'the letter that the student is reading' (Zulu)

There are obvious similarities between Zulu and Southern Sotho relative clauses. In both languages, the grammatical role of the head noun is indicated by a clitic inside the relative clause. In (4) and (5), the head noun corresponds to an object in the relative clause, and consequently, an object clitic showing noun class agreement with the head noun is attached to the verb stem. Furthermore, the verb in both constructions is in the participial mood and is modified with a relativising suffix (*-ng* in Southern Sotho; *-yo* in Zulu).^{3, 4}

However, Southern Sotho and Zulu relative clauses differ with respect to their relative markers, which are printed in italics in (4) and (5). The relative markers in Southern Sotho object relatives are free standing lexical items; they are derived from (and are in most cases identical to) the demonstrative pronouns in Southern Sotho (see Doke 1954, Mischke 1998 and Harford & Demuth 1999; Visser 2002 for Northern Sotho), cf. e.g. *setulo seo*, 'this chair'. Importantly, the Sotho relative marker *precedes the subject* of the relative clause and *agrees with the head noun*. Therefore, Demuth & Harford (1999) and Harford & Demuth (1999) analyse this marker as a relative complementiser located in C⁰ of the relative clause. In contrast, the relative marker in Zulu (labelled a "relative concord" by Doke (1954)) is *prefixed to the relative clause predicate* and always *agrees with the subject*. One view, frequently expressed in textbooks and grammars, is that the relative concord takes over the role filled by the subject prefix of the verb in non-relatives and expresses relativisation and subject agreement simultaneously (cf. Doke 1954; Poulos & Msimang 1998).

The examples shown in (4) and (5) are representative of a characteristic difference between the languages of the Sotho-Tswana group, which always employ demonstrative pronouns as relative complementisers in object relative clauses, and the languages of the Nguni group, which all use relative concords. (6)-(9) illustrate this with more examples from Northern Sotho and Tswana (Sotho-Tswana) and from Xhosa and Swati (Nguni):

- (6) badišana [ba mosetsana a ba tseba-go]
herdboy2 REL2 girl1 SP1 OC2 know-RS
'the herdboys who(m) the girl knows'
(Northern Sotho; Poulos & Louwrens 1994, 107)
- (7) dijo [tsê bana ba di jel-e-ng]
food8 REL8 child2 SP2 OC8 eat-TNS-RS
'the food which the children ate' (Tswana)
- (8) umfazi [abantu aba-m-thanda-yo]
woman1 person2 REL2-OC1-love-RS
'the woman whom the people like' (Xhosa)
- (9) umfati [tintfombi leti-m-elekelela-ko]
woman1 girl10 REL10-OC1-help-RS
'the woman whom the girls help' (Swati)

One additional comment on the relative markers employed by the Sotho-Tswana languages is in order. Although Demuth and Harford analyse these markers as relative complementisers in C^0 , it should be noted that their analysis seems to be motivated mainly by theory-internal considerations. As far as I can see, relative markers such as e.g. *seo* in (4) and *tsê* in (7) could equally well be analysed as relative pronouns in SpecCP. In fact, De Vries (2002) argues that only relative pronouns, but not relative complementisers, have ϕ -features and hence the ability to agree with the head noun. The fact that Sotho-Tswana relative markers agree with their head nouns would then support a relative pronoun-analysis. In spite of these considerations, I adopt Demuth and Harford's complementiser analysis in this paper, because it facilitates the discussion of their syntactic proposal in section 2.2., and because the choice between the two approaches is of no relevance for the analysis I propose in section 3. However, it should be kept in mind that the clause-initial position of the Sotho-Tswana relative markers

would also be compatible with a relative pronoun treatment (see Zeller 2004 for more discussion of this point).

Given the abovementioned similarities between relative clause constructions in Sotho-Tswana and Nguni (participial mood of the verb; relativising suffix etc.), the use of different relative markers in object relatives is a noteworthy example of variation among the Southern Bantu languages. What makes this phenomenon even more interesting is that the correlation between a certain type of relative marker and a particular language group only exists in *object* relative clauses. When we consider *subject* relatives, the picture changes somewhat. Although the Nguni languages also use relative concords in subject relatives (as is illustrated by the Xhosa example in (10)), and Northern Sotho and Tswana use relative complementisers (cf. the Tswana example in (11)), Southern Sotho does not behave as expected. As (12) shows, subject relatives in Southern Sotho are *not* formed by means of a relative complementiser, but rather by means of a relative concord-like element:

- (10) abafazi [aba-lila-yo]
 woman2 REL2-weep-RS
 'the women who are weeping' (Xhosa)
- (11) dikgômo [tsê di fula-ng fâle]
 cattle8 REL8 SP8 graze-RS there
 'the cattle which graze there' (Tswana)
- (12) ngwana [ya bala-ng hantle]
 child1a REL1a read-RS well
 'the child who studies well' (Southern Sotho)

In the Tswana example in (11), the relative complementiser *tsê* in C⁰ can clearly be distinguished from the subject prefix *di*, which forms part of the verbal morphology.⁵ In contrast, the Southern Sotho example in (12) exhibits a single relativising element,

which is the result of merging the relative complementiser and the subject prefix. The demonstrative pronoun of class 1a in Southern Sotho is *eo*, the (participial) subject prefix of this class is *a*, and the adjacency of both elements in subject relatives has given rise to the element *ya* used in (12). Similar processes derive the subject relative markers of the other noun classes in Southern Sotho (cf. Doke 1954; Mischke 1998).

So why, then, do we observe such a clear difference between Nguni and Sotho-Tswana with respect to the grammar of object relative clauses? And why is this difference less pronounced in subject relatives? In order to answer these questions, I take a closer look at the morphological properties of the Nguni relative concords and at their relation to relative complementisers.

2.2. The structure of the relative concord and grammaticalisation

Despite the difference between Sotho-Tswana and Nguni with respect to the position and the agreement properties of the relative marker used in object relatives, there is also a noteworthy parallel between the relative markers used in these language groups. I mentioned earlier that the relative markers in Sotho-Tswana are derived from demonstratives. Interestingly, the Nguni relative concords also bear a striking resemblance to the form of the Nguni demonstrative pronouns of the so-called position 1, which expresses proximity (Hendrikse 1975; Poulos 1982; 1999; Zeller 2004). This similarity is illustrated in Table 1:

(Table 1)

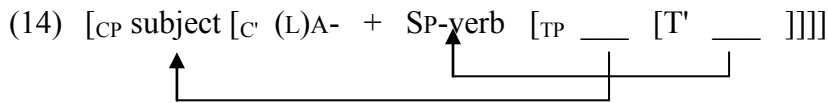
The relative concords of each noun class are normally identical in subject and object relatives. Only noun class 1/1a is an exception, since here, the relative concord in subject relatives (*(l)o-*) is different from the one used in object relatives (*(l)a-*).

Both the Nguni relative concords and the Nguni demonstrative pronouns have a morphologically complex structure. They consist of (i) an *initial morpheme* with the underlying form (L)A-, and (ii) a following affix which is identical to the subject prefix of the respective noun class and to which I will refer in the following as the *class marker*. The overt form of the initial morpheme is determined by the phonological properties of the latter; the vowel of the morpheme (L)A- assimilates to the vowel of the following class marker, deriving either (l)a-, (l)e- or (l)o- (cf. e.g. Khumalo 1992 for Zulu). Furthermore, if the class marker is a vowel, it is deleted. For example, in Nguni class 2, we therefore get the relative concord/demonstrative (l)aba-, whereas in class 9, we get (l)e- (see Table 1 and (13)):

- (13) a. (L)A- + ba- > (l)a- + ba- > (l)aba-
 b. (L)A- + i- > (l)e- + i- > (l)e-

The obvious similarities between Nguni relative concords and Nguni demonstrative pronouns suggest that there is a relation between Nguni relative concords and the relative complementisers of Sotho-Tswana, given that the latter are also derived from demonstratives. One possibility (which I will reject below) would be to characterise the nature of this relation *synchronically*, in terms of syntactic movement. For example, one could argue that the relative morpheme (L)A- in Nguni is also a relative complementiser in C⁰ which is based on (a reduced form of) a demonstrative. However, in contrast to Sotho-Tswana, it could be assumed that the Nguni complementiser is an affix and therefore forces the inflected verb to move to C⁰. (L)A- and the subject prefix of the verb would then merge in this position to form the relative concord (notice that according to this proposal, the class marker of the relative concord *is* the subject prefix of the verb, an assumption to which I return in section 3.2.). In a second step, the subject would then

have to move to SpecCP, in order to derive the S-V-order found in Nguni object relatives:



Interestingly, an analysis along these lines has been proposed by Demuth & Harford (1999) and Harford & Demuth (1999) to account for the word order properties of object relative clauses in Shona (a Bantu language spoken in Zimbabwe):

- (15) a. mbatya [dza-v-aka-son-era vakadzi mwenga]
 clothes₁₀ REL₁₀-SP₂-TNS-sew-APL woman₂ bride₁
 'the clothes which the women sewed for the bride'
 (Shona; Demuth & Harford 1999: 42)
- b. ?mbatya [vakadzi dza-v-aka-sona]
 clothes₁₀ woman₂ REL₁₀-SP₂-TNS-sew
 'the clothes which the women sewed'
 (Shona; Harford & Demuth (1999: 50))

In Shona object relative clauses such as (15), the relative marker (*dza-* in (15)) is prefixed to the verb and hence shares this property with the Nguni relative concord. As (15a) shows, the standard word order in Shona relatives is V-S-O.⁶ This word order follows from Demuth and Harford's assumption that the verb in Shona relative clauses moves to C⁰. The (only marginally acceptable) order S-V-O in (15b) is then derived by moving the subject to SpecCP, according to their analysis.⁷

However, (16) shows that Demuth and Harford's analysis cannot be applied to Nguni. The basic word order in Nguni is S-V-O (see Van der Spuy 1993), (16a); the word order V-S-O exhibited in (15a) is not possible in Nguni relative clauses, (16b):

- (16) a. incwadi [isitshudeni *esi-yi-fund-ela* unina]
 letter₉ student₇ REL7(=(L)A-+ SP7)-OC9-read-APL mother_{1a}
 'the letter that the student is reading for his mother'
- b. *incwadi [*esi-yi-fund-ela isitshudeni unina*] (Zulu)

One could try to rescue the analysis by claiming that in contrast to Shona, the second step of the derivation, which moves the subject to SpecCP, is obligatory in Nguni. However, there is also evidence that militates against this revised analysis. First, relative clause constructions such as (15b), in which the subjects precedes the verb, are "very marked" in Shona (Harford & Demuth 1999: 50), whereas the S-V-O order is unmarked in Nguni relative clauses. Second, and more importantly, the position of adverbs in Nguni contradicts the idea that the subject moves to SpecCP in Nguni relatives. As (17c) shows, an adverb like *mhlawumbe*, 'maybe', cannot intervene between the finite verb and the direct object in Zulu non-relatives, but may intervene between the subject in SpecTP and the verb, (17a), or precede the subject, (17b):

- (17) a. (ukuthi) UThemba mhlawumbe u-hlanz-e indlu.
 that Themba_{1a} maybe SP_{1a}-clean-TNS room₉
 'that Themba maybe cleaned the room'
- b. (ukuthi) mhlawumbe UThemba uhlanze indlu.
- c. *(ukuthi) UThemba uhlanze mhlawumbe indlu. (Zulu)

The adverb in (17a) is either adjoined to VP or, on the assumption that the verb moves out of VP in Zulu, must be associated with a functional projection between VP and the subject position (cf. Cinque 1999). Importantly, regardless of how one analyses the syntactic position of the adverb in (17), the assumption that the verb moves to C⁰ and the subject to SpecCP in Nguni relatives leads to the prediction that the order S-V-Adv-O should be possible in object relatives, since the verb (and the subject) would have been moved to a position preceding the position of the adverb. However, as (18c) shows, this prediction is not borne out:⁸

- (18) a. ?Ngi-thengis-e umshanelo [uThemba mhlawumbe a-hlanz-e indlu nga-wo].
 1stSG-sell-TNS broom3 T. maybe REL1a-clean-TNS room9 with-Pc9
 'I sold the broom that Themba maybe cleaned the room with.'
 b. Ngithengise umshanelo [mhlawumbe uThemba ahlanze indlu ngawo].
 c. *Ngithengise umshanelo [uThemba ahlanze mhlawumbe indlu ngawo].

The ungrammaticality of (18c) shows that the verb and the subject in Nguni relative clauses occupy the same position as in non-relatives. This means that no verb movement to C⁰ applies in object relative clauses. Given the ban on syntactic lowering operations, this in turn entails that (L)A- cannot be a C⁰-affix, but enters the derivation as part of the verbal morphology. The possibility that the relative concord in Nguni is the result of a syntactic movement process must therefore be ruled out.⁹

An alternative hypothesis, which also captures the relation between the Nguni relative concords and the Sotho-Tswana relative complementisers, maintains that the different relative clause formation strategies of Nguni and Sotho-Tswana are *diachronically* related (cf. Mischke 1998; Poulos 1999; Zeller 2004). According to this assumption, *early* Nguni, like Sotho-Tswana, used demonstrative pronouns as relative complementisers in C⁰ of the relative clause, and the modern Nguni relative concords are the result of a grammaticalisation process that turned these relative complementisers into affixal relative markers:

- (19) [Head Noun] [CP [C⁰ **rel. complementiser**] [TP **SP**-predicate]] (early Nguni)
 → *Grammaticalisation* →
 [Head Noun] [CP [C⁰] [TP **rel. concord**-predicate]] (modern Nguni)

According to the idea expressed in (19), a subject relative like (10) in section 2.1. above (repeated here as (20a)) would have been expressed as in (20b) in early Nguni:

- (20) a. [abafazi] [_{CP} [_{C⁰}] [_{TP} [_{V⁰} **aba**-lilayo]]] (Nguni: Xhosa)
 b. [abafazi] [_{CP} [_{C⁰} **laba**] [_{TP} [_{V⁰} **ba**-lilayo]]] (early Nguni; hypothetical)

Since SpecTP is never filled with lexical DPs in subject relatives, the relative complementiser and the subject prefix in (20b) are adjacent. Furthermore, the complementiser and the subject prefix always belong to the same noun class in subject relatives. Due to the resulting phonological and formal similarity of the two adjacent elements, they would often coalesce in fluent speech and eventually be reanalysed as a single relative marker – the relative concord in (20a).

However, the reanalysis process illustrated in (19) and (20) raises the question of how relative concords could actually develop in *object* relative clauses. First, note that the canonical subject position SpecTP intervenes between C⁰ and the relative clause predicate. In contrast to subject relatives, an object relative clause may include a full subject DP, and if this DP is located in SpecTP, it blocks adjacency of the relative complementiser and the subject prefix. Although SpecTP is not *necessarily* filled with lexical material in object relatives in Nguni (a point to which I return in section 3.2.), the blocking effect of a *potentially* intervening subject weakens the explanatory strength of the reanalysis proposal when applied to object relatives.

Second, the relative complementiser and the subject prefix may belong to different noun classes in object relatives, given that the former agrees with the head noun and the latter with the relative clause subject. Therefore, the class marker of the relative complementiser/demonstrative and the subject prefix of the predicate are not necessarily identical elements (in contrast to what is the case in subject relatives, cf. the two occurrences of *-ba-* in (20b)). This means that even when a relative complementiser and the subject prefix are adjacent, speakers might still not be tempted to merge these two elements into one. In fact, I speculate that this is one of the major reasons why relative concords did not emerge in object relatives in Sotho-Tswana – but if this conjecture is

correct, then the existence of relative concords in Nguni object relatives turns out to be even more mysterious.

One could of course assume that relative concords emerged first in Nguni subject relative clauses, and that speakers then extended this strategy at some later point in time and simply adopted it in object relative clauses. However, this idea still does not explain why the same thing did not happen in Southern Sotho, which also has relative concords in subject relatives (see (12) above). Why do we find variation with respect to the formation of subject relatives *within* one language group, but no such variation with respect to object relatives? – all of the Sotho-Tswana languages use relative complementisers in object relatives, whereas all of the Nguni languages use relative concords. Furthermore, as was shown in Table 1, the relative concords used in subject relative clauses and those used in object relatives are not identical in all noun classes. There are (small, but noteworthy) differences between the two paradigms (in noun class 1/1a), which are not explained by the assumption that the Nguni relative concord strategy found in object relatives was a mere adaptation to an already existing relative concord strategy in subject relatives.

I believe that it is worth pursuing an analysis which does not simply regard the existence of relative concords in Nguni object relatives, and their systematic absence in Sotho-Tswana, as an historical accident. As for relative concords in *subject* relatives, we might have to accept such a view – here the reanalysis process illustrated in (19) took place not only in Nguni, but also in Southern Sotho, and was therefore not systematically linked to the grammatical properties of a specific language group. However, as far as relative concords in *object* relatives are concerned, I believe that there are good linguistic reasons for why these markers exist only in Nguni, and not in Sotho-Tswana. In the following section I discuss these reasons by showing that, although relative concords in object relatives are also the product of a

grammaticalisation process which involves reanalysis, this process was determined by slightly more complex conditions than those that shaped the development of relative concords in subject relatives.

3. The development of object relative concords in Nguni

The objective of this section is to demonstrate how the relative concords in Nguni object relative clauses were derived. I suggest that, in contrast to what happened in subject relatives, the relative concords of Nguni object relatives were *not* derived by merging a fully-fledged, free-standing relative complementiser with the subject prefix of the verb. Instead, my analysis is based on the idea that the grammaticalisation process in object relatives took place in two steps. In the first step (discussed in detail in section 3.1.), the Nguni relative complementiser was reduced to a clitic, and it was this phonologically "weak" element which merged with the subject prefix of the verb in a second step (examined in section 3.2.).

3.1. Step 1: relative complementiser → 'phrasal affix'

3.1.1. Strategy 2. Consider the Zulu relative clause in (21):

(21) indoda [ubaba a-shay-e izinja za-yo]
 man9 my.father1a REL1a-hit-PERF dog10 POSS10-PC9
 'the man whose dogs my father hit'

(Zulu; Poulos 1982: 171)

(21) follows the pattern of relative clause formation in Nguni discussed in section 2. The relative concord is attached to the verb and agrees with the subject DP (class 1a). Since the head noun in (21) corresponds to a *possessor* of the object DP in the relative clause, the possessive marker combines with a pronominal clitic which expresses agreement with the head noun.¹⁰

However, Poulos (1982) and Pahl (1971), among others, show that there is a second relative clause formation strategy in the Nguni languages, which Poulos labels "Strategy 2". Strategy 2 seems to be preferred in relative clauses with possessor DPs (although Poulos (1982) claims that it is also possible with other types of object relative clauses). (22) is the Strategy 2-version of (21); (23) is an example from Xhosa:

(22) indoda [e-baba u-shay-e izinja za-yo]
 man9 REL9-my.father1a SP1a-hit-PERF dog10 POSS10-PC9
 'the man whose dogs my father hit'

(Zulu; Poulos 1982: 172)

(23) umfazi [o-ndoda ya-khe i-swelek-ile-yo]
 woman1 REL1-man9 POSS9-PC1 SP9-die-TNS-RS
 'the woman whose man died'

(Xhosa; Pahl 1971: 207)

The relative markers of Strategy 2 are identical to the relative concords used in the standard strategy of modern Nguni (see Table 1), but importantly, they occur in a different position and show different agreement properties. They are not attached to the verb, but to the *initial noun* of the relative clause (usually the subject), which drops its initial vowel in this context (an important point which I address in section 3.1.3.). Furthermore, the relative markers of Strategy 2 *agree with the head noun*, and not with the subject of the relative clause (notice that the relative marker in (22) is class 9 *e-*, not class 1a *o-* or *a-*). In these respects, they closely resemble the relative complementisers found in Sotho-Tswana.

The literature suggests that the relative concords of all noun classes can also be used as the relative markers of Strategy 2. However, it is interesting that in most of the examples of Strategy 2 that one finds in grammars and textbooks, the head noun belongs to a noun class which requires a *monosyllabic* relative marker. Examples with bisyllabic markers, such as (24), can be found, but are rare:

- (24) iNgisi [eli-baba u-hlala endlini ya-lo]
 Englishman5 REL5-father1a SP1a-stay in.hut9 POSS9-PC5
 'the Englishman in whose hut my father is staying'

(Zulu; Poulos 1982: 172)

I assume that the small number of examples like (24) is not accidental, but that it reflects a tendency of speakers to avoid bisyllabic relative markers in Strategy 2. This assumption is confirmed by examples such as the following:

- (25) izithethi [e-zintetho za-zo si-zi-phulaphule-yo namhlanje]
 speakers10 REL10-talk10 POSS10-PC10 1stPL-OC10-listen.to-RS today
 'the speakers whose talks we listened to today'

(Xhosa; Pahl 1971: 207)

In (25), the first noun of the relative clause (a fronted object) is *izintetho*, whose noun class is marked by the bisyllabic element *izi-* (= prevowel *i-* plus noun class prefix *zi-*). Since only the prevowel is deleted in Strategy 2, and the relative concord agreeing with the head noun is *ezi-*, we would expect the form of the initial noun in (25) to be *ezi-zintetho*. However, what we find is the reduced form *ezintetho*. I assume that this form is the result of the omission of the second syllable of the relative concord, which has been deleted in (25) in order to derive a monosyllabic relative marker (*e-*).¹¹ I return to these observations in section 3.1.3 below.

3.1.2. Clitics and "phrasal affixation". The examples in (22)-(25) make it seem as if the relative markers of Strategy 2 were prefixed to the first noun of the relative clause. However, in Zeller (2003) I argue that these examples are not instances of genuine word-level affixation. Instead, I analyse the relative markers in Strategy 2 as *clitics*. Clitics are elements which show a phonological dependency on an adjacent element, but which, in contrast to word-level affixes, usually do not select for a particular host (Zwicky & Pullum 1983). This explains why the relative marker of Strategy 2 is not

only found attached to subjects, but also attached to fronted objects, cf. (25) above and (26):

- (26) umfazi [o-bantwana ba-khe u-ba-limaz-ile]
woman1 REL1-child2 POSS2-PC1 2ndSG-OC2-hurt-TNS
'the woman whose children you hurt'

(Zulu; Poulos & Msimang 1998: 162f.)

As a clitic immediately preceding the relative clause-TP, the relative marker in Strategy 2 uses the first element of the TP as its phonological host, regardless of this element's grammatical status.

In Zeller (2003), the function of the relativising clitics of Strategy 2 is analysed on the basis of Anderson's (1992) theory of inflection. Anderson suggests that clitics are "phrasal affixes", i.e. phonological reflexes of morphological rules that do not apply to *word* stems, but to whole *phrases*. Adopting this idea, I argue in Zeller (2003) that the relativising clitics of Strategy 2 are affixed to the whole relative clause TP. A relative clause is a predicate which is semantically conjoined with the predicate expressed by the head noun NP. Predicate conjunction can be reflected morpho-syntactically by agreement between the two predicates, as is illustrated by languages like German, which show adjective-noun agreement in DPs. Therefore, I suggest that the relativising clitics of Strategy 2 express agreement between the relative clause and the head noun. Morphologically, they are comparable to the English possessive marker *-s*, also an affix which attaches not to a single word, but to the whole (possessor noun) phrase.

The status of Strategy 2 is somewhat controversial. Not all Nguni speakers accept the data provided by Poulos (1982) and Pahl (1971), and even acceptable examples are often judged as marked. In Zeller (2003), I take this situation to indicate that Strategy 2 is no longer fully productive in present-day Nguni, but is rather a reflex of an older form of Nguni. Adopting this view here, I assume that Strategy 2 is representative of an

intermediate stage in the development of Nguni relative concords. At some historical stage (call it stage A), the Nguni languages, like Sotho-Tswana, used fully-fledged demonstrative pronouns as relative complementisers in C^0 . In Nguni object relatives, this construction underwent reanalysis: the relative marker in C^0 was re-interpreted as a phrasal affix attached to the relative clause-TP. Instead of being a relative clause complementiser which itself agrees with the head noun, the relative marker turned into an inflectional morpheme which *expressed* agreement between a predicate and a noun phrase. This stage B of Nguni (of which Strategy 2 is a synchronic residue) was the input for further reanalysis which eventually gave rise to the relative concord strategy of present-day Nguni (this step is discussed in section 3.2.):

(27) a. Stage A: [Head Noun] [_{CP} **relative complementiser** [_{TP} subject [predicate]]]

→ *Grammaticalisation* →

b. Stage B: [Head Noun] [_{CP} **relativising clitic**-[_{TP} subject [predicate]]]

Notice that the relative marker at stage B (Strategy 2) shows a characteristic of grammaticalisation processes which Heine, Claudi & Hünnemeyer (1991) call *overlapping*. Whenever an element or structure develops from a stage A to a stage C, there is also an intermediate stage B in which the respective element exhibits properties of both stage A and stage C. At stage B (Strategy 2), the relativising clitic still has the agreement properties of a relative complementiser (stage A), but already shares the affixal properties of the relative concord (stage C), which provides the final link of this grammaticalisation chain.

3.1.3. Prevowel deletion and cliticisation. The clitic-hood of the relative markers in Strategy 2 seems related to another property of Strategy 2 on which I have not yet commented. As the examples in section 3.1.1. show, the prevowel of the first noun in

the relative clause is deleted in Strategy 2. This fact is highly relevant in the light of the following observation. *Demonstratives* in Nguni can both follow and precede their nouns (cf. (28) and (29)), but if a demonstrative pronoun occurs in prenominal position (the canonical position in Nguni; see Visser 2002), then the initial vowel of the following noun is deleted, (28b), (29b), (30). This deletion is probably related to the fact that the initial vowel has properties of a definite determiner (and therefore is incompatible with a preceding demonstrative):

(28) a. umfana lo b. lo mfana
 boy1 DEM1 DEM1 boy1
 'this boy' 'this boy' (Zulu)

(29) a. abafana laba b. laba bafana
 boy2 DEM2 DEM2 boy2
 'these boys' 'these boys' (Zulu)

(30) a. lo + umfana > lo mfana (= (28b))
 b. laba + abafana > laba bafana (= (29b))

Importantly, as a result of prevowel deletion, the demonstratives in (28b) and (29b) cliticise to the nouns; a prenominal demonstrative and the following noun in Nguni form a phonological word. This is revealed by the tone pattern of demonstratives. If a bisyllabic demonstrative pronoun like *laba* follows the noun, the first syllable has high tone and the second low tone. However, in contexts such as (29b), where the noun follows the demonstrative, the tone of the second syllable is raised and also receives high tone. This tone spread is triggered by the extension of the phonological word by the noun *bafana* in (29b) (cf. Cope 1984 for Zulu; Louw 1984 for Xhosa). In the light of this observation, Poulos & Msimang (1998: 133) argue that "the demonstrative actually loses its status of a fully-fledged word and becomes a mere prefix". Similarly, Van der Spuy (2001) argues that the noun is a "morphological complement" of the preceding

demonstrative. In the light of Anderson's (1992) characterisation of clitics introduced above, it seems appropriate to classify pronominal demonstratives in Nguni as "phrasal affixes": as determiner-elements, they express a grammatical function of the whole NP by attaching to the first word of the NP (the head noun).

Interestingly, deletion of the prevowel not only causes the demonstrative to become a clitic, but it may also lead to the phonological reduction of the demonstrative. Consider (29) again, where the demonstrative preceding the noun is bisyllabic. Instead of only deleting the initial vowel of the noun following the demonstrative, as in (29b), Nguni speakers frequently also delete the *second syllable of the demonstrative* (i.e. the part of the demonstrative which corresponds to the class marker), (31):

(31) laba + abafana > la bafana

In fluent speech, Nguni speakers prefer the reduced version in (31) over the form in (30b).

On the basis of the parallel between (30), (31) and the examples in (22) – (25) above, I now propose that the deletion of the prevowel in the latter examples is the result of an overgeneralisation of the rule that deletes the noun's initial vowel after a demonstrative inside a DP. Since a relative clause at stage A of early Nguni was formed by means of a demonstrative pronoun used as a relative marker in C^0 , this complementiser would have been in a position immediately preceding the initial noun of the relative clause. Speakers might then have started to treat the demonstrative/complementiser and the prevowel of the following noun as incompatible; they therefore applied the rule that triggers the deletion of the prevowels in (30) to these contexts, thereby deleting the prevowel of the first noun of the relative clause-TP.¹² As in the case of pronominal demonstratives, the relative complementiser was then forced to cliticise to the noun, as if to "take over" the place previously occupied by the prevowel. In this process, the relative complementiser became a phrasal affix, but since the relativising clitic still

agreed with the head noun, the phrasal domain of this affix was interpreted as the whole relative clause-TP.¹³ The early Nguni relative complementiser, a fully-fledged lexical item which agreed with the head noun, thus turned into an inflectional prefix which *expressed* agreement between the head noun and the relative clause:

(32) a. Stage A: [indoda]_{[CP} **le** [TP ubaba ushaye izinja zayo]] = early Nguni
 (hypothetical)

→ *Vowel Deletion; Reanalysis* →

b. Stage B: [indoda]_{[CP} **e**-[TP baba ushaye izinja zayo]] = Strategy 2; cf. (22)

According to this proposal, the process that led to the phrasal affix-strategy in object relative clauses at stage B of early Nguni is the result of the deletion and the subsequent replacement of the noun's initial vowel.

The following observation from Strategy 2 (which is the synchronic residue of stage B) can be interpreted as evidence for my assumption that the adjacency of the relative marker and the relative clause-initial noun at stage A was (mis-)interpreted as a combination of a pronominal demonstrative and a noun. Poulos (1982) notes that Strategy 2 is impossible if the subject of the relative clause is an absolute pronoun:

(33) *indoda [e-mina ngi-khuluma na-yo]
 man9 REL9-1stSGABS 1stSG-speak with-PC9
 'the man with whom I'm talking' (Zulu; Poulos 1982: 119)

Given that both demonstratives and pronouns are D⁰-elements (Postal 1969; Abney 1987) and therefore cannot co-occur, the curious ungrammaticality of (33) can be assumed to be a remnant of stage B in early Nguni, where conditions and restrictions that hold inside DP were also applied to the linear order relative marker-subject noun.

I noted in section 3.1.1. that the majority of the examples from Strategy 2 have *monosyllabic* affixal relative markers attached to the relative clause-TP. I assume that

this is because (early) Nguni speakers applied the same deletion rule that affects bisyllabic demonstratives in examples like (31) to the demonstratives used as relative complementisers in object relative clauses. When turning into the relativising clitics, bisyllabic relative complementisers were therefore frequently reduced to monosyllabic markers; bisyllabic relative markers would have only exceptionally occurred at stage B in early Nguni. I hypothesise that the frequent phonological reduction of the relativising clitic in fluent speech might eventually have led to a situation where the phrasal affixes of stage B were only represented by the three allomorphs *(l)o-*, *(l)e-* and *(l)a-* (whose choice then depended on the noun class of the head noun).

The extent to which a language user in early Nguni was likely to "mistake" the linear order of the relative complementiser and the first noun of the relative clause as the DP-internal order demonstrative-noun (and therefore would apply the prevowel deletion rule) differed from relative clause to relative clause. A demonstrative always agrees with its noun, but a relative complementiser agrees with the head noun, and the adjacent noun (subject or fronted object) does not necessarily belong to the same noun class. Obviously, overgeneralisation was most likely to occur in those object relatives where the relative complementiser happened to be identical to the demonstrative of the subject's (or fronted object's) noun class. This situation arose whenever the head noun and the initial noun of the relative clause belonged to the same class, but also in those contexts where a head noun and a subject or fronted object belonging to different noun classes would nevertheless select for the same demonstrative/relative marker (a possible scenario, due to the syncretism of the Nguni demonstrative system exhibited in Table 1; cf. e.g. the marker *le*, which represents class 4 and class 9).

In addition, I suspect that even if a relative complementiser was different from the demonstrative corresponding to the class of the relative clause-initial noun, it could still have been phonologically similar enough to trigger prevowel deletion. For example,

each of the elements *le*, *lesi*, *leli*, *lezi*, which cover six of the 15 Nguni noun classes (cf. Table 1), might have triggered prevowel deletion of a following noun belonging to any of these six noun classes, even if the marker would not fit the "right" noun class. (One should bear in mind that this is a proposal about reanalysis, which strictly speaking always involves an "incorrect" analysis of the input structure.) Moreover, if I am correct in assuming that, in parallel to the deletion process exhibited in (31), speakers tended to delete the second syllable of bisyllabic relative markers, then the differences between many of these markers would ultimately have disappeared anyway (albeit admittedly only *after* the prevowel rule and cliticisation had already applied).

Only in contexts where the phonological form of the relative complementiser was very different from the form of the "correct" demonstrative of the subject's (or fronted object's) noun class was overgeneralisation less likely to occur. For example, with a head noun of class 2 and a subject noun of class 9, the relative complementiser would have been *laba*, whereas the subject noun would require *le*. I assume that these object relatives were the last to be affected by reanalysis; only at the point where the grammaticalisation process which derived stage B of early Nguni was nearly completed would speakers have begun to delete the subject's prevowel systematically in constructions like these as well.

I conclude that the first step of the grammaticalisation process that derived the Nguni relative concords in object relatives was triggered by the adjacency of the initial noun of the relative clause and the demonstrative/relative marker in C^0 . Since the relative marker was interpreted as replacing the prevowel of the initial noun, it turned into a clitic and was as such reanalysed as a phrasal affix. Importantly, this step was brought about by the specific syntactic properties of object relative clauses: in contrast to subject relatives, object relatives frequently have full subject DPs occurring in a position immediately following the relative complementiser.

3.2. Step 2: 'phrasal affix' → relative concord

Although a clitic is phonologically dependent on a host, it does not depend on a *particular* host. Rather, it can attach to any word that appears in the correct adjacent position. Given that the phrasal affixes discussed in section 3.1. do not select a word stem, but attach to the whole TP, they always cliticise to the first word of this phrase. In the examples from Strategy 2 discussed earlier, this word was the subject noun or a fronted object.

However, the first word of an object relative clause-TP is not always a noun. Whenever the subject position (SpecTP) is not filled with phonological material, the inflected relative clause predicate becomes a likely candidate for the clause-initial position. This situation arises, for example, when the subject appears in the right periphery of the relative clause, as a result of *subject extraposition*, a transformation which is attested in Nguni object relative clauses (see e.g. Du Plessis 1989 for Xhosa):

- (34) incwadi [esi-yi-fund-ela unina isitshudeni]
letter9 REL7-OC9-read-APL mother1a student7
'the letter that the student is reading for his mother' (Zulu)

Furthermore, object relatives with *weak subject pronouns* also create a context in which the relative marker and the predicate are adjacent in object relatives, since Nguni languages are *pro-drop* languages and allow for SpecTP to be filled with *pro* (cf. Chomsky 1982; Visser 1986 for Xhosa).¹⁴

I assume that the corresponding structure (35a), where the phrasal affix is adjacent to the subject prefix of the inflected predicate of the relative clause, provided the input for the second step of the grammaticalisation process that derived relative concords in Nguni object relatives: the relative marker cliticised to the adjacent relative clause

predicate, such that the two would form a phonological word; as a result, the relativising clitic and the adjacent subject prefix merged into a single inflectional prefix, (35b):

(35) a. Stage B: [head noun] [_{CP} **relativising clitic**-[_{TP} e [**SP**-predicate]]]

→ *Grammaticalisation* →

b. Stage C: [head noun] [_{CP} [_{TP} e [**relative concord**-predicate]]]

In re-interpreting the former relativising clitics as part of the inflectional morphology of the predicate, Nguni speakers started to develop a full set of relative concords in object relatives with the agreement properties of subject prefixes.

How exactly did the phrasal affix of stage B merge with the subject prefix to derive the relative concord of modern Nguni? I have argued in section 3.1. that in the transition from stage A to stage B, speakers frequently reduced bisyllabic relative complementisers to monosyllabic markers. Therefore, bisyllabic phrasal affixes were rare; the most common forms of the relative marker at stage B of early Nguni were (*l*)*a*-, (*l*)*o*- or (*l*)*e*-. I assume that in the transition from stage B to stage C, the form of these monosyllabic relative markers assimilated to the form of the vowel of the adjacent participial subject prefix (for example, a relative marker (*l*)*a*- would eventually become (*l*)*e*- in the context of a subject prefix *zi*-). The result is a morphologically complex element which incorporates the original subject prefix of the verb and hence expresses agreement with the subject of the relative clause: a relative concord.

Notice that according to this analysis, the second syllable of bisyllabic relative concords is *not* related diachronically to the second syllable of the corresponding bisyllabic demonstratives. Only the initial morphemes (*l*)*a*-, (*l*)*o*- or (*l*)*e*- are remnants of the original demonstratives used as relative complementisers in early Nguni; the second part of the relative concord (which I have called the class marker) corresponds to what was originally the subject prefix. This conclusion is in accordance with the view

held by most Bantuists that even synchronically, the class marker of the relative concord *is* the subject prefix of the verb (cf. e.g. Hendrikse 1975; Poulos 1982; Khumalo 1992):

(36) [relative morpheme + subject prefix]
relative concord

Since the subject prefix is in most cases identical to the class marker of the corresponding demonstratives, we nevertheless expect that the forms of relative concords are similar to those of the demonstrative pronouns. This is indeed the case, as was shown in Table 1 in section 2. But in addition, the view that the class marker of the relative concords is based on the subject prefix, and not on the class marker of demonstratives, also explains why there are relative concords of the first and second person, for which there are no corresponding demonstrative pronouns or relative complementisers.

It is obvious that the progress of reanalysis and the development of affixal relative concords illustrated in (35) was considerably smoothed by the fact that the Nguni relative markers at stage B were clitics and presumably phonologically reduced to monosyllabics. Clitics are generally more likely to develop into bound morphemes than are independent words; it is a typical characteristic of grammaticalisation that an element which develops into a bound morpheme passes through an intermediate stage of clitic-hood (cf. Heine & Reh 1984; Hopper & Traugott 1993; Roberts 1993). Furthermore, given that the Nguni phrasal affixes of stage B were reflexes of a rule of inflectional morphology and already expressed a grammatical function like agreement, relative concords could eventually emerge, even though the relative marker and the subject prefix are generally less prone to reanalysis in object relative clauses than in subject relatives (for reasons already discussed in section 2.2.).

Notice that according to this analysis, the crucial step of the grammaticalisation process, i.e. the one in which the relative marker and the subject prefix were merged into a relative concord, was characterised by different input conditions in subject and object relatives. Whereas reanalysis in Nguni object relatives was brought about by the clitic properties of an affixal relative marker, reanalysis in subject relatives was possible because here, a free-standing, fully-fledged complementiser and the subject prefix are always adjacent and always agree in noun class.

This does not mean that the grammaticalisation process in subject relatives was entirely independent of the process that derived the relative concords in object relatives. It is possible, and even likely, that both developments mutually influenced each other, and eventually, this led to an established relative concord paradigm in both Nguni subject and object relatives. Since both sets of markers are ultimately based on and derived from an early Nguni demonstrative/relative complementiser, their synchronic forms are identical in almost all noun classes. However, since the input conditions for grammaticalisation were different, it is not surprising that we observe minor differences in the output as well: recall that the relative concords of class 1/1a in subject and object relatives are not identical (see Table 1 in section 2).

My analysis now explains why relative concords did not emerge in Sotho-Tswana object relatives. Relative complementisers in Sotho-Tswana are not (and never were) clitics; they are independent lexical items (cf. Harford & Demuth 1999) and always maintained their status as fully-fledged elements. They were never phonologically reduced and hence never reached the phrasal affix-stage of their Nguni counterparts. Therefore, even when a relative complementiser and the subject prefix of the verb are adjacent in a Sotho-Tswana object relative clause, speakers continue to analyse the two as separate elements, since the complementiser and the relative clause predicate are phonologically and morpho-syntactically independent.¹⁵ Obviously, this did not exclude

the possibility that in Southern Sotho *subject* relatives, relative concords could emerge as the result of phonological coalescence processes similar to those whose effects we observe synchronically in Nguni. However, in this regard, Southern Sotho remains the exception among the Sotho-Tswana languages. In Northern Sotho and Tswana, reanalysis did not occur in either subject or object relatives; no relative concords developed in these languages.¹⁶

Let me now combine these considerations with the idea formulated in section 3.1. There I have put forward the hypothesis that the cliticness of the relative markers in early Nguni, which facilitated the development of relative concords, came about as a result of a relative complementiser taking over the role of an otherwise obligatory prevowel. The difference between the object relative clause formation strategies of the Nguni and the Sotho-Tswana languages can now be linked to another difference, which concerns the properties of nouns in these languages. A major typological difference between the Nguni group and the Sotho-Tswana group, already noted in Doke (1954: 28), is that whereas in Nguni, "an initial vowel [...] is found regularly with all ordinary nouns", "[t]he Sotho and Venda groups lack the initial vowel entirely". Table 2 illustrates this situation with a few examples:

(Table 2)

If my hypothesis is correct, then the fact that nouns in Sotho-Tswana lack an obligatory prevowel explains why relative markers have not become clitics in these languages. Since Sotho-Tswana nouns do not have prevowels, there is no need to analyse a relative complementiser and an adjacent noun as part of the same phonological word. Relative complementisers in Sotho-Tswana hence never became phrasal affixes and, as was argued above, they therefore did not develop into relative concords. According to this proposal, then, the difference between the Nguni and the Sotho-Tswana relative clause

formation strategies in object relatives is due to the different properties of nouns in these language groups; the fact that the Nguni languages have relative concords in object relative clauses is a historical consequence of the fact that a Nguni noun usually takes a prevowel.

4. Proto-Nguni and Sotho-Tswana influences

I have suggested that the relative concords in object relatives in present-day Nguni are the result of a two-step grammaticalisation process which took place in early Nguni. In this section I briefly consider some historical and linguistic criteria which might help define the period in which this grammaticalisation process could have occurred.

The ancestors of present-day Nguni and Sotho-Tswana were Eastern Bantu speakers who migrated into southern Africa between 800 AD and 1400 AD (cf. Bailey 1995; Herbert & Bailey 2002). There is linguistic and archaeological evidence that these southbound movements were actually two separate migrations and that the Nguni and the Sotho entered southern Africa in two streams (cf. Huffman 1989; Louw & Finlayson 1990). Bailey (1995) assumes that the Nguni stream of migrants amalgamated with earlier Bantu speaking tribes, which had occupied the area of present-day South Africa at least since 300 AD. He states that "the second millenium is generally regarded as the period [...] in which the technological, cultural and linguistic characteristics of modern Nguni societies emerged" (1995: 42).¹⁷ I tentatively postulate a Proto-Nguni dialect, which manifested itself during this period, to be the ancestor of the present-day Nguni languages.

It could be assumed that the change from a relative complementiser to a relative concord strategy began to take place at early stages of Proto-Nguni, in the first centuries of the second millenium. However, there is interesting evidence which suggests that the grammaticalisation process described in section 3 might have been a more recent

development. This evidence is provided by *Northern Transvaal Ndebele*, a Nguni language, but with strong Sotho admixture (Ziervogel 1959; Bailey 1995). Northern Transvaal Ndebele must not be confused with Southern Transvaal Ndebele described in Table 2 above; the latter is "unambiguously a Nguni language" (Herbert & Bailey 2002: 75, note 12) and behaves like Zulu in all relevant respects (it has initial vowels and relative concords). Northern Transvaal Ndebele is now extinct and has been replaced by Northern Sotho (*ibid.*). Interestingly, according to the description in Ziervogel (1959: 54ff.), nouns in Northern Transvaal Ndebele differ from nouns in other Nguni languages in that they lack the initial vowel in all noun classes:

- (37) a. class 1: munru, 'person'
 b. class 9: nja, 'dog'
 c. class 5: liye, 'stone'
 d. class 2: bafati, 'women' (Northern Transvaal Ndebele)

Importantly, Ziervogel (1959: 138) shows that relative clauses in Northern Transvaal Ndebele are *not* formed by means of relative concords:

- (38) a. mufati [lo ndi-mu-fun-ile]
 woman1 REL1 1stSG-OC1-look-TNS
 'the woman I was looking for'
 b. sihlahla [lesi bafati ba-hleti phasi kwa-so]
 tree7 REL7 woman2 SP2-sit under at-PC7
 'the tree under which the women sit'
 (Northern Transvaal Ndebele; Ziervogel 1959: 138f.)

As (38) illustrates, the Northern Transvaal Ndebele relative marker precedes the subject and agrees with the head noun. This relative clause formation strategy is therefore identical to the one found in Sotho-Tswana; in fact, (38) looks a bit like Sotho-Tswana syntax with Nguni words (most strikingly, the relative markers in Northern Transvaal Ndebele are clearly based on the form of the *Nguni*, not the Sotho-Tswana,

demonstrative pronouns). This means that the properties of Northern Transvaal Ndebele relative clauses are identical to those which I postulated to be characteristic of stage A of early Nguni.

It is of course possible that both the lack of relative concords in object relative clauses and the absence of prevowels in Northern Transvaal Ndebele are *independent* results of the Sotho-Tswana influence on this language. However, in the light of my analysis, which argues that there is a *correlation* between obligatory prevowels and relative concords, the Northern Transvaal Ndebele pattern looks like more than a mere coincidence. I suggest that Northern Transvaal Ndebele lost the initial vowel of Proto-Nguni as a result of the Sotho influence at a historical stage where the relative concord system of modern Nguni had not yet evolved. Since according to my analysis, the obligatory presence of an initial vowel is an important aspect of the development of relative concords in object relatives, these markers did not emerge in Northern Transvaal Ndebele, which maintained a relative complementiser strategy. In the other Nguni dialects, prevowels were still obligatory, and relative concords developed as a result of the processes discussed in section 3.

This hypothesis implies that Northern Transvaal Ndebele separated from the Nguni group early enough, such that there was enough time left for the relative concords of modern Nguni to develop. This implication seems to be confirmed by historical findings. The social organisation of the early Nguni people was based on kinship groups or clans; three major Nguni groupings, the Lala, the Mbo and the Ntungwa, had emerged by the 16th century (Bryant 1929; Parsons 1982; Van Aswegen 1990). According to Van Aswegen (1990: 52), the Nguni groups which settled in the Transvaal broke away from their parent clan, the Mbo, "fairly early"; Bailey (1995: 42) dates the presence of Northern Transvaal Ndebele groups in the areas where they came into contact with Sotho-Tswana speakers as early as 1500 AD. It is therefore possible that

during the 16th century (or even earlier), the Sotho-Tswana influence caused the disappearance of prevowels in Northern Transvaal Ndebele and hence prevented the development of relative concords in object relatives. The grammaticalisation process that led to the relative concord strategy in other Nguni dialects may have been instigated around the same time.

This grammaticalisation process must have been completed by the 19th century, when the first vocabularies and grammars of Nguni languages (Xhosa and Zulu) were written. For example, Colenso's (1859) grammar of Zulu already describes relative clauses as being formed by means of relative concords and lists examples of Strategy 2 only for possessive relative clauses. But even if relative concords had developed long before Colenso, this would still leave a window of roughly 200-250 years for the two-stage development of relative concords in Nguni object relatives. This is not an unrealistic time frame for substantial grammatical change - for example, it is assumed that it took about 200 years (from 1150 to 1350 AD) for Early Middle English to change its word order pattern from OV to VO (cf. Trips 2002).

A reconstruction of the historical relations between the ancestors of the present-day southern African Bantu languages is a notoriously complicated and problematic enterprise. However, I conclude that the history of early Nguni and Sotho-ised dialects such as Northern Transvaal Ndebele, once interpreted in the light of the proposal that I outlined in section 3, offers interesting clues about the historical period in which the relative concords of modern Nguni emerged.¹⁸

5. Conclusion

Genetically related languages whose grammars have the same origin might still show striking synchronic differences. Often it is impossible to find a linguistically interesting answer to the question of why certain differences emerged in the history of these

languages. However, I have tried to show that it might be possible to answer the question of why relative concord has developed only in Nguni object relatives, and not in the related languages of the Sotho-Tswana group. I have put forward the hypothesis that this difference is linked to an independent difference between the properties of nouns in these languages. I suggested that because only Nguni nouns employ an initial vowel, it was only in Nguni that relative complementisers (which precede these nouns in object relatives) turned into clitics - a situation that eventually triggered their reanalysis as bound inflectional morphemes. If this analysis is on the right track, then it can be regarded as an example of how a close look at certain grammatical properties of a language can sometimes open the window into the diachronic development of other, superficially unrelated, aspects of its grammar.

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Tables

Table 1: Subject prefixes, demonstratives and relative concords in Nguni

Noun class	Subject prefix	Relative concord¹	1st position demonstrative²
1, 1a	u-	(l)o- (subject relatives) (l)a- (object relatives)	lo-
2, 2a	ba-	(l)aba-	(l)aba
3	u-	(l)o-	lo
4	i-	(l)e-	le
5	li-	(l)eli-	(l)eli
6	a-	(l)a-	la(wa)
7	si-	(l)esi-	(l)esi
8	zi- ³	(l)ezi- ³	(l)ezi ³
9	i-	(l)e-	le
10	zi- ³	(l)ezi- ³	(l)ezi ³
11	lu-	(l)olu-	(l)olu
14	bu-	(l)obu-	(l)obu
15	ku-	(l)oku-	(l)oku
1stSG	ngi-	(l)engi-	-
2ndSG	u-	(l)o-	-
1stPL	si-	(l)esi-	-
2ndPL	ni-	(l)eni-	-

Note 1: In Swati, the relative concords have maintained the initial *l*-consonant which has been lost in the Zulu, Xhosa and Ndebele relative concords

Note 2: Xhosa discards the initial *l*- in the bisyllabic forms of the demonstrative pronouns

Note 3: The Swati forms of classes 8 and 10 are *ti-*, *leti-* and *leti* respectively.

Table 2: Nouns in Nguni and Sotho-Tswana¹

	class 1	class 9	class 5	class 2
Zulu	umuntu	inja	itshe	abafazi
Xhosa	umntu	inja	ilitye	abafazi
Southern Transvaal Ndebele	umuntu	inja	ilitje	abafazi
Swati	umuntfu	inja	litye	bafati
Southern Sotho	motho	ntja	lejoe	basadi
Northern Sotho	motho	mpša	leswika	basadi
Tswana	motho	ntša	lejwe	basadi
	'person'	'dog'	'stone'	'women'

Note 1: Generally, Swati nouns have initial vowels only in the nasal classes (= classes in which the noun prefix includes a nasal consonant).

Notes

* I thank my colleagues Simon Donnelly, Jeff Guy, Stefan Ploch, Stephanie Rudwick and Nhlanhla Thwala for many helpful discussions and three anonymous reviewers for important comments and suggestions. I gratefully acknowledge the contribution of various mother tongue speakers, in particular Dudu Gama, Watson Lekalake, Hillary Modimoeng, and Nolutando Xate. A special thanks goes to Dori Posel for her help with this article.

¹ I use the term "object relative" loosely in this paper to refer to all non-subject relative clauses.

² In Bantu languages, each noun belongs to a particular noun/gender class. Class membership determines agreement with nominal modifiers, verbs, adjectives, pronominal clitics etc. In the glosses, I mark the noun classes and agreement through numbers, according to Meinhof's (1906) numbering system of Proto-Bantu (if original examples did not provide glosses, I have added them). Morphemes are glossed as follows: ABS = absolute pronoun; APL = applicative; DEM = demonstrative pronoun; FOC = focus; NEG = negative affix, OC = object clitic; PC = pronominal clitic; POSS = possessive; REL = relative marker; RS = relativising suffix; SG = singular; SP = subject prefix; TNS = Tense. The majority of the examples that I present in this paper have been provided or checked by native speakers; otherwise, I have given the reference to the original example in the text.

³ The participial mood in the Sotho-Tswana and the Nguni languages differs from the indicative with respect to the form of the subject prefixes in some of the noun classes (e.g. Southern Sotho class 1 takes *a-* instead of *o-*). Furthermore, the negative marker of the participial mood (*-sa-* in Sotho-Tswana; *-nga-* in Nguni) *follows* the subject prefix, whereas the negative markers in the indicative (e.g. *-ha-/ga-* in Sotho-Tswana; *-a-* in Nguni) *precede* the subject prefix.

⁴ Whereas the relativising suffix is obligatory in Sotho-Tswana relative clauses, its (non-)occurrence in Nguni relative clauses depends on various syntactic and morphological conditions (such as e.g. the tense specification of the verb). A thorough discussion of these conditions would lead me too far afield; however, see Poulos (1982, chapter 4) for interesting comparative data and the suggestion that the relativising suffix in Nguni functions as a nominaliser.

⁵ The reader must not be confused by the disjunctive orthography of the SothoTswana languages, which represents verbal prefixes and verbs as separate elements. See Poulos & Louwrens (1994: 7) for some discussion.

⁶ Similar processes of subject-verb inversion in Bantu relatives are described and discussed by Meeussen (1971), Givón (1972) and Bokamba (1976).

⁷ Additional assumptions are necessary to make the idea that subject DPs move to SpecCP in Shona relative clauses compatible with the view that SpecCP in relative clauses is usually taken to be the landing site of (possibly non-overt) relative operator movement, which induces island (= relativised minimality) effects:

- (i) *_i[How carefully]_j did you find the letter Op_i that Mary wrote t_j t_i?

Demuth & Harford (1999) and Harford & Demuth (1999) do not address this point.

⁸ (17c) and (18c) are marginally acceptable for some speakers with a meaning where the adverb takes narrow scope over the object (as in English *Themba cleaned maybe the room, but not the car*). However, the V-to-C-movement analysis still predicts that the adverb in (18c) can also have a wide scope interpretation, contrary to fact.

⁹ As an anonymous reviewer points out, examples such as (18b) provide yet another argument against movement: given the standard assumption that sentence adverbs such as *mhlawumbe*, 'maybe', can be adjoined to TP, but not to CP, the structure in which the adverb precedes the subject is incompatible with an analysis according to which the subject is in SpecCP.

¹⁰ In example (21), this pronominal clitic is class 9 *-yo*, which is not to be confused with the relativising suffix *-yo* which is attached to relative clause predicates in Nguni (see section 2.1.).

¹¹ Since both the head noun and the fronted object of the relative clause belong to noun class 10, (25) does not show conclusively that what has been deleted is in fact the second syllable of the relative concord. (25) is also compatible with the assumption that the relative marker is *ezi-*, but that not only the prevowel of the fronted object (= *i-*), but also its noun class prefix (= *zi-*) have been deleted. (25) does show, however, that a bisyllabic relative concord does not seem to be tolerated in Strategy 2 in front of a noun with a syllabic noun class prefix.

¹² The misinterpretation of the relative marker as a determiner-like element modifying the initial noun may be even more plausible if it is assumed that the relative markers of early Nguni and modern Sotho-Tswana are not complementisers, but relative pronouns (see my respective remarks in section 2.1). As relative pronouns, the relative markers would be D⁰-elements (not C⁰-elements) and would therefore be not only phonologically but also categorically identical to demonstrative determiners inside DP (I owe this observation to an anonymous reviewer).

¹³ I also assume that, as a further consequence of this process, the initial *l*-consonant of the Zulu and Xhosa demonstratives was lost; therefore, the relative marker of Strategy 2/stage B already has the same form as the relative concords in these languages (see Table 1).

¹⁴ An alternative view is to assume that the subject prefix *is* is the weak pronoun and cliticises to the verb when there is no full subject DP (cf. Bresnan & Mchombo 1987; Van der Spuy 2001).

¹⁵ It should be noted that some of the relative complementisers in Northern Sotho and Tswana are monosyllabic. As an anonymous reviewer points out, this could pose a problem for the analysis presented here, since monosyllabic complementisers might have to be classified prosodically as clitics. I have not been able to establish whether monosyllabic complementisers in Northern Sotho and Tswana indeed merge phonologically with the following word in the same way as a pronominal demonstrative and the noun in Nguni. (Note incidentally that Northern Sotho and Tswana rarely use demonstratives pronominally, see Doke 1954, Visser 2002). Importantly, however, even if some of the relative complementisers in Northern Sotho and Tswana would have to be analysed as clitics *phonologically*, this does not imply that they are also clitics *morphologically* (i.e. phrasal affixes). Notice that even monosyllabic demonstratives/complementisers in Northern Sotho and Tswana are bimorphemic, consisting of a root and an agreement morpheme (see Visser 2002). These elements are hence inflected lexical items. In contrast, according to the analysis presented here, the phrasal affixes of Nguni stage B are not inflected lexical items but rather agreement markers which are attached to phrases to *express inflection*. Whereas the relative clause-initial position of the monosyllabic complementisers of Northern Sotho and Tswana is determined by their syntactic category (= C), the position of the Nguni phrasal affixes is determined by rules of phrase-level morphology (they are prefixed to TP). According to Anderson (1992, Chapter 5), only the latter type of clitic counts as a "special" clitic in the sense of Zwicky (1977), i.e. as a phrasal affix. This means that even if both the Nguni markers of stage B and the monosyllabic complementisers of modern Sotho-Tswana counted phonologically as clitics, their important morpho-syntactic differences would still explain why relative complementisers were not reanalysed as relative concords in Sotho-Tswana.

¹⁶ It might even be possible to treat Southern Sotho *syntactically* on a par with Northern Sotho and Tswana. One could assume that in Southern Sotho subject relatives, both the C⁰ and the T⁰ position are filled with independent elements (i.e. a relative complementiser/demonstrative and the inflected verb), and that the monosyllabic relative markers are in fact the result of regular, but *purely phonological*, processes, which operate "after" the syntax. This idea could be implemented in the "Distributed Morphology"-theory (Halle & Marantz 1993), which postulates morpho-phonological merging operations to take place at a post-syntactic level. Such an analysis would allow for a neat classification of Sotho-Tswana as a language group that exclusively uses relative complementisers in all types of relative clauses.

However, it is difficult to find independent evidence for the idea that the single relative marker of Southern Sotho direct relatives is indeed based on two syntactically independent elements. I therefore do not adopt such an approach in this paper.

¹⁷ The use of the term "Nguni" to refer to a particular language group and to people of the same descent does not imply that the Nguni group was linguistically and culturally homogenous. For some discussion of the problems associated with the "Nguni"-classification, see Marks (1969) and Van Aswegen (1990).

¹⁸ Further research into the properties of other Sotho-ised Nguni "offshoots" may provide even more information about the era in which the grammaticalisation process took place in Nguni. For example, another Nguni language which is characterised by heavy Sotho admixture is Phuthi, spoken in southern Lesotho and parts of South Africa (cf. Donnelly 1999). It is suggested that the Phuthi people moved into Lesotho in the 1600s (cf. Van Aswegen 1990; Donnelly 1999). Most Phuthi nouns come without an initial vowel. So far, I have not been able to establish how object relatives are formed in Phuthi. (Mzamane (1948) only lists examples of subject relatives; according to Donnelly (p.c.), Phuthi uses relative concords in subject relatives, but he also could not provide data on object relatives.) The predictions are as follows: If Phuthi object relatives are formed by means of relative complementisers, then the grammaticalisation process that derived the Nguni relative concords *must have begun after* the Phuthi moved into Lesotho. However, if Phuthi uses relative concords in object relative clauses, then the grammaticalisation process *must have been completed* before that time, such that the Sotho- influence and the loss of the initial vowel remained without consequences for the relative clause formation strategy employed by Phuthi.