# V USE OF THE AUGMENT IN NEGATIVES AND OTHER IRREALIS CONTEXTS IN ISINDEBELE 

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#### Abstract

The paper examines the use of the augment in isiNdebele, a Nguni language spoken in South Africa. Inspired by typological work on the effects of negation on the marking of noun phrases, special attention is paid to the use of the augment under negation and in other irrealis contexts. It is hypothesized that the augment is connected with the marking of referentiality and might therefore be more readily omitted in negatives and other irrealis contexts. The paper is based on data collected in the field with a questionnaire designed for this study. The results show that the augment is dropped only in negated existential and possessive predications expressed with the associative copula. Thus, the absence of the augment is much more restricted in isiNdebele than it is in other Nguni languages.


## 1. INTRODUCTION

This paper examines the use of the augment (also known as preprefix in Bantu linguistics) in negatives and other irrealis contexts in isiNdebele (also known as Southern South African Ndebele). ${ }^{1}$ It is a Nguni language spoken by approximately 1.1 million people around and to the north of Johannesburg in South Africa. It is one of the eleven official languages of the Republic of South Africa. Despite its official status, descriptive linguistic work has been rather limited there is no full grammar of isiNdebele to date - and it can clearly be considered an underdocumented language. ${ }^{2}$

The augment is an intriguing feature in Bantu morphosyntax (see Halpert in press for an overview). It can be described as a morpheme that precedes the noun class prefix and most commonly consists of a single vowel (e.g. isiNdebele a-ba-ntwana AUG2-NCP2-child 'children', vs. ba-ntwana without the augment,

[^0]and $i$-ncwadi AUG9-book 'book' where the noun class prefix is zero, vs. ncwadi without the augment). In this study, we are especially interested in the use of the augment under negation and other irrealis contexts. It has been observed that the use of the augment is sensitive to polarity in closely related languages, for example, isiXhosa and isiZulu, as well as a number of Bantu languages beyond Nguni, for example Bemba, and furthermore, it has been noted that the augment is involved in marking of the (non-)referentiality of NPs (see, e.g. von Staden 1973; Givón 1978; cf. Petzell \& Kühl 2017: 42). In a broader typological perspective, effects of negation on the marking of NPs and their referentiality have been studied by Miestamo (2014). The main research questions addressed in the present paper are as follows: To what extent is the augment used on nouns under the scope of negation vs. in affirmative declaratives? How does it work in other irrealis contexts such as interrogatives? To what extent can we see referentiality as a conditioning factor? Very little is known about the behaviour of the augment in isiNdebele, and it is this gap in our knowledge that this article aims to bridge.

The article is structured as follows. Section 2 outlines the effects of negation on the marking of NPs in a broad typological perspective, addresses the connection between negation and referentiality, and takes a brief look at the behaviour of the augment under negation in Nguni languages. Section 3 introduces our research material and method. Section 4 presents the results of the study. These results are discussed in Section 5, which also concludes the paper. Appendix I presents the questionnaire used to collect the data, which is given in full in Appendix II.

## 2. BACKGROUND AND HYPOTHESES

Let us start by putting the relationship between negation and the use of the augment in Bantu languages in a larger typological context. Negation has been found to affect the marking of nouns and noun phrases in a number of languages; in a broader context, such effects constitute one way in which negatives can show structural asymmetry vis-à-vis affirmatives (see Miestamo 2005). Miestamo (2014) surveyed the effects of negation on the marking of NPs in a sample of 240 languages. The starting point in that study were the well-known case alternations in negatives vs. affirmatives in Finnic, Baltic, and Slavic languages. In the Finnish examples in (1), the affirmative makes a meaning difference by selecting either genitive or partitive case ( $1 \mathrm{a}, \mathrm{b}$ ), but the negative has to use the partitive (1c).
(1) Finnish (constructed examples) ${ }^{3}$
a. söin banaani-n
eat.PST.1sG banana-GEN
'I ate $\{a /$ the $\}$ banana.'
b. söin banaani-a
eat.PST.1sG banana-PAR
'I \{ate some / was eating \{a/the\}\} banana.'
c. en syönyt banaani-a

NEG.1SG eat.PST.PTCP banana-PAR
'I \{didn't eat / wasn't eating\} \{a/the\} banana.'
The function of the genitive in these examples is to mark total objects and perfective aspect, whereas the partitive marks partial objects and imperfective aspect. Similar case changes are also found in existential and possessive predications, in which the existential or possessive NP is marked with the nominative in the affirmative but with the partitive in the negative.

In many Baltic and Slavic languages, transitive objects alternate between accusative and genitive: the accusative marks total objects and the genitive marks partitive objects. The genitive appears more often in the negative, and the affirmative usually has accusative marking. Similarly, existential and possessive NPs are marked by the genitive in the negative. It is worth noting that the closely related Baltic languages Latvian and Lithuanian behave differently in this respect. In Lithuanian the case alternation is found both with transitive objects and with existential and possessive predications, whereas in Latvian only existential and possessive predications exhibit case alternations between affirmatives and negatives, while transitives do not.

In French, we find an alternation between indefinite articles in the affirmative and the marker de in the negative, as illustrated in (2).
(2) French (constructed examples)
a. je vois un chien

I see.1SGINDF.mdog
'I see a dog.'

[^1]b. je ne vois pas de chien

I NEG see.1SGNEG DET dog
'I do not see a dog.'
These alternations are well-known in linguistic literature, but Miestamo's survey shows that parallels can be found in other parts of the world as well. In many Oceanic languages, for example, indefinite NPs under the scope of negation are marked by determiners referred to as partitive in many sources. This is the case in Araki (3), spoken in Vanuatu.
(3) Araki (Alexandre François, pers. comm.)
a. nam les-i-a jau lo lepa

1SG.R see-OBJ.REF-3SG coconut.crab LOC ground
'I've seen a/the coconut crab on the ground.'
b. nam je les re jau lo lep̈a 1SG.R NEG see PAR coconut.crab LOC ground
'I haven't seen a/any coconut crab on the ground.'
c. nam je les-i-a jau lo lej̈a

1SG.R NEG see-ObJ.REF-3SG coconut.crab LOC ground
'I haven't seen the coconut crab on the ground.'
[but not *'I haven't seen a coconut crab on the ground.']
In realis affirmatives (3a), the verb shows referential object and person-number cross-reference, and nominal objects are unmarked noun phrases. In the negative in (3b), the verb has no cross-reference marking and the object is preceded by the partitive marker $r e$. Negatives may also show referential object marking, and cross-reference on the verb. In such cases re does not appear, but this results in a definite reading (3c). It is worth noting that the irrealis (expressing, e.g. future) can also take $r e$ and no referential marking on the verb in the affirmative, which places it somewhere between negatives and realis affirmatives in this regard.
All in all, effects of negation on the marking of NPs are not very common in the 240-language sample examined in Miestamo's (2014) survey, but they are found in different parts of the world. Common to many of the alternations is that they have to do with the referentiality of the NPs. Very often, the marking that appears in indefinite NPs under negation can be identified as non-referential marking. The connection is clear in cases like Araki, but non-referentiality can also be shown to play a role in the case alternations found in the Finnic, Baltic,
and Slavic languages, as well as in the alternation in the use of the indefinite article in French.

In the languages discussed above, the effects of negation on the referentiality of indefinite NPs have been grammaticalized in different ways. In most languages, however, the effects of negation are not seen as clearly in grammatical constraints, but they may be visible in semantics and pragmatics. Following Givón (1978; 2001), we may note that the referentiality of the object is typically implied in fact modalities. The majority of verbs, including have, carry inherent realis modality, and they create fact modality when used in past or present tense declaratives. Thus in (4a) the NP a dog receives a referential reading - there is a particular dog that Chris has.
(4) English
a. Cbris has a dog.
b. Chris wants a dog.
c. Chris doesn't have a dog.

The situation is, however, different in non-fact modalities such as negation or other irrealis contexts. The irrealis context created by the inherent irrealis verb want in (4b) allows either a referential or a non-referential reading; there may be a specific dog that Chris wants or then Chris may just want to become a dog owner but has no specific dog in mind yet. Under negation (4c), the indefinite NP gets a non-referential reading; Chris does not have any dog, there is no dog such that Chris has it. Note that we are talking about indefinite NPs here definite NPs are referential under all modalities (unless interpreted generically). The connection between negation and non-referentiality can be explained by discourse factors, as argued by Givón (1978). Negatives are not used to introduce new participants into discourse. Referential NPs under the scope of negation have already been introduced by a preceding affirmative (or are otherwise known in the context) and thus referential NPs in the scope of negation tend to be definite rather than indefinite. These pragmatic factors can be seen as motivating the connection between negation and non-referentiality, and a functional explanation can be proposed to Miestamo's (2014) typological findings along these lines.

Coming back to Bantu languages and more specifically to the Nguni subgroup, we may note that the effects of negation on the use of the augment are included as one type of effect of negation on the marking of NPs in Miestamo's typological survey. In isiXhosa, the augment appears in the affirmative (5a) but is absent in the negative (5b).
(5) isiXhosa (Taraldsen 2010: 1526-1527)
a. ndi-bon-a a-ba-fundi

1SG-see-FV AUG2-NCP2-student
'I see the/some students'
b. a-ndi-bon-i ba-fundi

NEG-1SG-see-FV NCP2-student
'I don't see any students'
c. a-ndi-ba-bon-i a-ba-fundi

NEG-1SG-OM2-see-FV AUG2-NCP2-student
'I don't see the students' / 'There are some students I don't see.'

The augment may be present in the negative as well (5c) but then, again, the reading is specific and usually definite with object marking appearing on the verb. There is some variation in the use of the augment within Nguni. Earlier observations of the use of the augment in isiNdebele suggest that the augment is almost always present and dropped in very limited contexts; what the nature of the contexts are has not been systematically studied before. In contrast, Sindebele, a language variety spoken by the Ndebele people in the Mokopane region, has been reported to lack the augment altogether (Ziervogel 1959). Other Nguni languages, for example, isiZulu and isiXhosa, seem to fall between these extremes, the presence vs. absence of the prefix being connected to polarity and referentiality in different ways. ${ }^{4}$ Recent studies of the use of the augment in Nguni languages include Buell (2009), Carstens \& Mletshe (2016), and Bloom Ström \& Miestamo (forthcoming). Note that the latter two studies have observed that there is an ongoing change in Nguni languages whereby the augment is losing its function of marking referentiality and its distribution is becoming primarily syntactically determined.

In this section, we have observed that in a number of languages, indefinite NPs in the scope of negation are marked as non-referential in various ways. In many Bantu languages, including (earlier stages of) the close relatives of isiNdebele within the Nguni group, this non-referential marking is realized by dropping the augment. Much less is known about the behaviour of the augment in isiNdebele,

[^2]but on the basis of what we know from other languages, we can propose the hypothesis that non-referential nouns will occur without the augment in isiNdebele as well. If it turns out to be the case that there are a limited number of contexts in which the augment is absent, we can hypothesize that these would be connected to non-referentiality. Typical contexts to find non-referential readings for nouns are, first and foremost, negatives, as shown by Miestamo's typological survey and Givón's discourse considerations. These studies additionally suggest that other irrealis contexts may also be interesting in this regard. Therefore, to test the hypothesis, we prepared a questionnaire that systematically elicits sentences varying between realis and irrealis to produce referential and nonreferential readings for nouns, which would then, according to the hypothesis, show variation between presence and absence of the augment. The next section will discuss the questionnaire and the ways in which the data for this study were collected. The actual data and results will be presented in Section 4.

## 3. MATERIAL AND METHOD

The study is based on primary fieldwork by the authors. We prepared a translation questionnaire consisting of a list of sentences in English to elicit noun phrases in various environments relevant to the research questions; these include NPs in the scope of direct negation but also in other irrealis contexts, as well as corresponding affirmative declaratives. We included the affirmative forms in order to reveal the differences that negatives and other irrealis contexts might show vis-à-vis their unmarked counterparts. The questionnaire is available in Appendix I. The research material consists of elicitations using this questionnaire, recorded and transcribed in South Africa by our team in May 2016. The majority of the recordings were made in the South African province of Mpumalanga, in the town of Siyabuswa. Additional data was elicited in April 2017 in Helsinki with a visiting isiNdebele speaker.

All in all, the questionnaire contains 58 sentences to be translated by the language consultants. Each sentence is preceded by another sentence providing a background context. The questionnaire aims to elicit sentences corresponding to a number of relevant variables. From the point of view of realis vs. irrealis, our sentences are divided into affirmative and negative declaratives and positive interrogatives, all with past time reference, and then affirmative declaratives with future reference. The most typical realis contexts are affirmative declaratives with past time reference. Negativity, interrogativity, and future reference lead to different degrees of irreality in the reading. On another axis, as different syntactic positions may
behave differently with respect to the marking of NPs, our questionnaire contains a number of different sentence types: intransitive, transitive, existential/locative, and possessive predications; the latter types are interesting to examine separately as they have been observed to behave differently in some languages, for example in Latvian vs. Lithuanian as mentioned in Section 2. In each of these clause types, we observe whether or not the augment is present on the relevant noun constituent in the different realis and irrealis contexts. The relevant noun constituents are as follows: the subject in intransitives, the object in transitives, and the predicate noun in existential/locative and possessive predications. For some sentence types, we also elicited animate and inanimate nouns separately to see if any differences would emerge along this variable. Differences in the behaviour of different noun classes are not systematically addressed in the questionnaire, as testing sentences with nouns from all or most noun classes would have increased the amount of material to be elicited beyond what was possible within the limits of this study. The presentation of the results in Section 4 is ordered according to the four main sentence types found in the questionnaire.

The elicitation sessions were first recorded and then transcribed with the help of the consultants. The full questionnaire was elicited from five consultants altogether, four in Siyabuswa in May 2016, and one in Helsinki in April 2017. In Appendix I the sentences are given in order from 1 to 58 . Because this order presents closely related sentences next to each other, the order of the sentences was randomized for the elicitation sessions. Although it was not strictly necessary, all informants also translated the background sentence. The recorded data therefore consists of 58 pairs of sentences that provide first the background context and then the actual stimulus sentence in which the (non-)occurrence of the augment was tested; transcriptions exist for the actual stimulus sentences only. The elicited data from our five main consultants is available in Appendix II. The recordings are archived by the Helsinki Ndebele project ${ }^{5}$ and are available for research purposes upon request.

It is clear that our research questions cannot be fully answered on the basis of elicited data. Referentiality and definiteness are highly context-dependent phenomena, and to get a complete picture of how these and other factors influence the use of the augment, a thorough discourse study with extensive corpora should be conducted. Such extensive materials are, however, not available at the moment. What the elicitation study does allow is the systematic manipulation of the stimuli, which would not be possible using corpus data, and it thus gives us a

[^3]good initial picture that can later be completed with systematic corpus study when it becomes possible. Some currently available textual materials were examined to evaluate the questionnaire-based results (see discussion in Section 5). Further methodological caveats include the usual potential problems encountered when using elicitation with translation questionnaires, such as problems of interference from metalanguage. One concern would naturally be the consultants' skills in the metalanguage of elicitation, English; that is, whether they know English well enough to be able to understand the relevant distinctions in the stimuli. Our consultants all had excellent command of English, so we are confident that this is not a problem in our study. It should also be noted that detailed tonal analysis is beyond the scope of this paper; in most cases the segmental analysis is clear, but the usefulness of tonal information will be brought up at some points. With these caveats in mind, we now move on to the presentation of the results.

## 4. RESULTS

In this section we will go through the data systematically, observing the presence vs. absence of the augment with respect to the relevant variables. The order of presentation follows the sentence types outlined above: transitives (4.1), intransitives (4.2), existentials and locatives (4.3), and possessives (4.4). Section (4.5) is a short interim summary. In the analysis, explicit reference is made to the sentence numbers in the questionnaire (these are always given following the letter $S$, i.e. S1, S2, S3 etc.; see Appendix I for the sentences to be translated and Appendix II for the translations given by the consultants). While the complete data can be seen in the appendix, only a selection of interesting examples will be discussed in the main text. These examples are numbered with plain numbers without a preceding letter; the number of the questionnaire sentence that the example corresponds to is given with each example.

### 4.1 Transitive

The first sixteen stimuli in the questionnaire ( $\mathrm{S} 1-\mathrm{S} 16$ ) are transitive sentences. We are interested in the behaviour of the object noun's augment. The examples in (6) give the most typical responses to sentence stimuli S1-S4, which are meant to elicit declarative affirmatives with indefinite vs. definite and animate vs. non-animate objects. As can be seen in the complete data in the Appendix II, there is some variation between the consultants, but the general picture holds that the augment is always present and that definiteness seems to be expressed by the presence of the object prefix on the verb. No difference is found between
animate and non-animate objects used in the elicitation stimuli. Note that for noun classes 5 and 9 in ibhubezi and incwadi, the noun class prefix is zero, so the only overt prefix in these examples is the augment.
(6a) Ba-thol-e $i$-bhubezi izolo
SM2-find-PFV AUG5-lion yesterday
'They found a lion yesterday.' (S1)
(6b) Ba-thol-e i-ncwadi izolo.
SM2-find-PFV AUG9-book yesterday
‘They found a book yesterday.' (S2)
(6c) Ba-li-thol-ile i-bhubezi izolo
SM2-OM5-find-PFV AUG5-lion yesterday
'They found the lion yesterday.' (S3)
(6d) Ba-yi-thol-ile i-ncwadi izolo
SM2-OM9-find-PFV AUG9-book yesterday
'They found the book yesterday.' (S4)

Looking at the corresponding negatives (7), we find a less clear picture and more variation. The object prefix may occur regardless of definiteness vs. indefiniteness ( $7 \mathrm{a}, \mathrm{b}$ ) - as shown in the translations, these examples are given as responses to both indefinite and definite stimuli, $\mathrm{S}_{5} / \mathrm{S}_{7}$ and $\mathrm{S} 6 / \mathrm{S} 8$, respectively. ${ }^{6}$ An alternative construction with negation expressed by an auxiliary preceding a positive verb form is given by some consultants ( $7 \mathrm{c}-\mathrm{e}$ ) and in those examples animacy seems to show some effect on the presence of the object marker (cf. 7c with 7d vs. 7e). But most importantly, the augment is present in all cases, indicating that transitive objects under the scope of negation do not drop the augment.
(7a) A-ba-ka-li-thol-i i-bhubezi izolo NEG-SM2-NEG-OM5-find-NEG AUG5-lion yesterday
'They didn't find $a /$ the lion yesterday.' $\left(S_{5} / S_{7}\right)$

[^4]> (7b) A-ba-ka-yi-thol-i i-ncwadi kizolo
> NEG-SM2-NEG-OM9-find-NEG AUG9-book yesterday
> ‘They didn't find a/the book yesterday.' (S6/S8)
(7c) A-zange ba-li-thol-e i-bhubezi izolo
NEG-AUX.NEG SM2-OM5-find-PFV AUG5-lion yesterday
‘They didn't find $\mathrm{a} /$ the lion yesterday.' $\left(\mathrm{S}_{5} / \mathrm{S}_{7}\right)$
(7d) A-zange ba-thol-e i-ncwadi izolo
NEG-AUX.NEG SM2-find-PFV AUG9-book yesterday
'They didn't find a book yesterday.' (S6)
(7e) A-zange ba-yi-thol-e i-ncwadi izolo
NEG-AUX.NEG SM2-OM9-find-PFV AUG9-book yesterday
'They didn't find the book yesterday.' (S8)
The sentence stimuli with positive interrogative and future meanings ( $\mathrm{S}_{9}-\mathrm{S}_{1} 6$ ), aiming to bring in non-negative irrealis contexts, do not present any surprises. As can be seen in the responses to these stimuli in Appendix II, the marking of the object is quite similar to what was seen with affirmatives and negatives above. It is perhaps worth noting that object marking occurs on the verb with definite objects as well as with indefinite objects. Crucially for our hypothesis, the augment is present in all cases.

### 4.2 Intransitive

The following ten stimuli in the questionnaire (S17-S26) are intransitive sentences. In these cases, we are interested to see whether the subject shows any variation as to the presence of the augment. Sentences S17-S20 contain indefinite and definite subjects in affirmative and negative declaratives. The definites are by default referential, but for the indefinites there is variation: the affirmative (S17 'Some children arrived yesterday.') is meant to elicit a specific reading whereas the negative (S19 'No children arrived yesterday.') should be non-specific, and (S20 'The children didn't arrive yesterday.') should be specific. Example (8a) is given by two consultants in response to $\mathrm{S}_{17}$ and by all five in response to $\mathrm{S}_{1} 8$. Two consultants presented alternative ways to explicate the indefiniteness of the subject in S17, either adding an indefinite quantifier 'one' (8b) or by using an existential and a relative construction (8c). Example (8d) was given as a translation of S19, the negation of the subject being expressed by the combination of a
negated existential and a relative construction. Example (8e) was given for S2o by several consultants and for S 21 by one. ${ }^{7}$

| A-be-ntwana | ba-fik-ile | izolo |
| :--- | :--- | :--- |
| AUG2-NCP2-child | SM2-arrive-PFV | yesterday |

'Some/the children arrived yesterday.' (S17/S18)
(8b) A-ba-ntwana a-ba-nye ba-fik-e kizolo
AUG2-NCP2-child AUG2-NCP2-one SM2-arrive-PFV yesterday
'Some children arrived yesterday.' (S17)
(8c) Ku-n-a-ba-ntwana a-ba-fik-e izolo
SM17-ASCOP-AUG2-NCP2-Child REL-SM2-arrive-PFV yesterday
'Some children arrived yesterday.' (S17)
(8d) A-ku-na-be-ntwana a-ba-fik-ile-ko izolo NEG-SM17-ASCOP-NCP2-child REL-SM2-arrive-PFV-REL yesterday
'No children arrived yesterday.' (S19)
(8e) A-be-ntwana a-ba-ka-fik-i izolo
AUG2-NCP2-child NEG-SM2-NEG-arrive-NEG yesterday
'The/Some children didn't arrive yesterday.' (S20/S21)
The augment is clearly present in examples ( $8 \mathrm{a}, \mathrm{b}, \mathrm{e}$ ). Looking at the two relative constructions ( $8 \mathrm{c}, \mathrm{d}$ ) more closely, we can see that the presence vs. absence of the augment is not entirely clear, as the associative copula ends in $a$ and the augment for class 2 is $a$ as well - has the augment been lost or have the two consecutive vowels been fused? Tonal analysis could help to decide the matter, as the high tone of the augment might show on the remaining vowel in case of fusion, but detailed tonal analysis is beyond the scope of this study (we will come back to the behaviour of tone with the associative copula and with the augment in Section 5). As will be seen in the following section, the associative copula construction is the only construction in which the augment has been observed to be lost under negation, but not in affirmatives. Thus, following this pattern, the most plausible analysis seems to be that in the affirmative (8c) there is fusion and in the negative (8d) the augment has been lost; the glossing follows this analysis. In any

[^5]case, these examples do not provide evidence for the augment being absent in the affirmative. Note also that the behaviour of the augment in the two examples under discussion ( $8 \mathrm{c}, \mathrm{d}$ ) is not a property of simple intransitive sentences, but rather something that happens in associative copula constructions, of which we will see more examples in the following section. So our conclusion here is that the augment is not dropped in plain intransitives.

Sentences S22-S26 add other irrealis contexts: positive interrogatives and futures, again with indefinite and definite variants. Here, too, we find variation between different consultants as to how the constructions are used, but the augment is present in all cases. Since these data do not change the picture in any way, we will not give glossed examples here, but all relevant data are available in Appendix II.

### 4.3 Existential and locative

Next we will look at existential and locative predications (S27-S34 and S43-S50 in the questionnaire). ${ }^{8}$ These stimuli come in pairs of indefinite and definite subject, or existential and locative predication, respectively. S27-S28 are affirmative declaratives and $S_{29}-S_{30}$ negative declaratives, $S_{31}-S_{32}$ are interrogatives, and $S_{33}-S_{34}$ are affirmative declaratives with future reference. $S_{43}-S_{50}$ show the same distinctions but with plural NPs. The examples in (9) show responses to the first four sentences (S27-S30).
(9a) Ku-ne-ncwadi etafuleni
SM17-ASCOP.AUG9-book table.LOC
‘There is a book on the table.' (S27)
(9b) I-ncwadi i-phezu kwetafula
AUG9-book Sm9-top LOC.table
'The book is on the table.' (S28)

[^6](9c) A-ku-na-ncwadi etafuleni
NEG-SM17-ASCOP-book table.LOC
'There is no book on the table.' (S29)
(9d) I-ncwadi a-yi-kbo phezu kwetafula
AUG9-book NEG-SM9-be top LOC.table
'The book is not on the table.' (S30)
As can be seen, the augment is absent in the negation of the existential expressed with the associative copula (9c), whereas it is present in all other cases. The presence of the augment in example (9a) is shown by the fusion of the vowel $a$ of the associative copula na with the vowel $i$ of the augment, resulting in $e$ (kunencwadi); compare to (9c) where the augment is absent and the vowel of the associative copula na is preserved as a (akunancwadi).

As regards sentence stimuli $\left(S_{31}-S_{34}\right)$ with positive interrogative and future meanings, the picture is straightforward and the augment is always present, see Appendix II. Finally we can observe that the plurality of the noun does not make a difference: the augment is present in all cases but the negative existential expressed with the associative copula, in which the noun referring to the entity whose existence is negated is, again, without the augment (see the responses to sentence stimuli $S_{43-S}$ - 6 in 10). ${ }^{9}$
(10a) Ku-nee-ncwadi etafuleni
sm17-ASCOp.AUG1o-book table.LOC
'There are books on the table.' (S43)
(1ob) Ii-ncwadi zi-phezo kwetafula
AUG10-book sM10-top LOC.table
'The books are on the table.' (S44)
(10c) $\quad A$-ku-na-ncwadi etafuleni
NEG-SM17-ASCOP-book table.LOC
'There are no books on the table.' (S45)

[^7]```
(10d) Ii-ncwadi a-zi-kho phezu kwetafula AUG10-book NEG-SM1O-be top LOC.table 'The books are not on the table.' (S46)
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In (10a,b,d) the augment is present; in (10a) it has been fused with the vowel of the associative copula $(n a+i i>n e e)$. In the negative existential with the associative copula (1Oc) the augment is absent.

### 4.4 Possessive

The final sentence type that we pay attention to in the questionnaire are possessive predications. These are expressed with the associative copula na. Stimulus sentences ( $\mathrm{S}_{35}-\mathrm{S}_{42}$ ) are possessive predications with singular possessees and ( $\mathrm{S}_{51}-\mathrm{S}_{5} 8$ ) are the corresponding sentences with plural possessees. Again, the stimulus sentences come in pairs of indefinite and definite noun (possessee), and are of four types: affirmative declaratives ( $S_{35}-S_{36}, S_{51}-S_{52}$ ), negative declaratives (S37-S38, S53-S54), interrogatives (S39-S40, S55-S56), and sentences with future time reference ( $\mathrm{S}_{41}-\mathrm{S}_{42}, \mathrm{~S}_{57}-\mathrm{S}_{5} 8$ ). All responses to the stimuli are available in Appendix II. In (11) we can see examples given in response to affirmative and negative declarative stimuli with singular reference ( $\mathrm{S}_{35}-\mathrm{S}_{3} 8$ ).
(11a) Ba-ne-ncwadi
SM2-ASCOP.AUG9-book
'They have a/the book.' (S35/S36)
(11b) Ba-na-yo i-ncwadi
SM2-ASCOP-PRON9 AUG9-book
'They have the book.' (S36)
(11c) $A$-ba-na-ncwadi NEG-SM2-ASCOP-book
'They don't have a/the book.' ( $\mathrm{S}_{37} / \mathrm{S}_{3} 8$ )
(11d) A-ba-na-yo i-ncwadi NEG-SM2-ASCOP-PRON9 AUG9-book
'They don't have a/the book.' ( $\mathrm{S}_{37} / \mathrm{S}_{3} 8$ )
As we can see, the definiteness distinction does not come out very clearly in these examples. There seems to be a preference to translate the examples with a defi-
nite possessee by a sentence including a pronominal marker ( $-y 0$ in class 9 , see $11 \mathrm{~b}, \mathrm{~d})$ followed by an augmented noun even in negative clauses. For the indefinites, there seems to be a preference for a construction without the pronominal marker, and the following noun then lacks the augment in the negative (11c). The positive interrogative and future tense stimuli do not present any surprises and the augment is always present. Finally, it can be noted that there is no essential difference between singular and plural nouns: just like in the singular, stimuli with plural nouns produce examples without the augment only when the possession of an indefinite noun is negated. ${ }^{10}$

### 4.5 Interim summary

In this section we have discussed the data elicited through our questionnaire. We have observed the presence vs. absence of the augment in nominal participants in four different sentence types: transitive, intransitive, existential/locative, and possessive, in each case looking at affirmative and negative declaratives, positive interrogatives, and sentences with future reference as well as the properties of the relevant nouns as singular vs. plural and definite vs. indefinite. The general picture has emerged that the augment is always present except in negated existential and possessive predications expressed with the associative copula construction, especially when the relevant noun has indefinite status. Illustrative examples ( $11 \mathrm{a}, \mathrm{c}$ ) are repeated here as ( $12 \mathrm{a}, \mathrm{b}$ ).
(12a) Ba-ne-ncwadi (12b
SM2-ASCOP.AUG9-book
'They have a book.' (S35)
(12b) A-ba-na-ncwadi
NEG-SM2-ASCOP-book
'They don't have a book.' (S37)
In the following section, we will discuss these results in more detail and relate them to the hypotheses and to the observations in earlier literature.

## 5. DISCUSSION AND CONCLUSION

In this final section we will discuss the results from different perspectives. We will begin by addressing the adequacy of the data for drawing conclusions about the use of the augment and bringing in some additional examples from other sources. We will then place the results in the wider context of Nguni languages, and then come back to the typological and functional considerations that origi-

[^8]nally prompted our research questions. Finally, we will point to open questions and future research possibilities, and then conclude the paper.

The results reported above were based on data systematically elicited through a questionnaire designed specifically for answering the research questions posed in this article. Using elicited data has benefits as well as obvious problems. With a questionnaire we can elicit data that are highly relevant for answering the research questions and that take into account different contexts systematically. This is an obvious advantage and our data do indeed cover a wide variety of contexts relevant for the use of the augment. On the negative side, as the presence vs. absence of the augment is hypothesized to be sensitive to the referentiality status of the noun, it would be useful to see the wider discourse context of the examples to be analysed. This cannot be achieved with elicited data even if our questionnaire does include a sentence clarifying the context for each stimulus sentence; naturally occurring data would be needed. Another problem with our data is that although we have questionnaire data collected from five different consultants, some of their responses contain alternative structures that are not directly relevant and do not allow us to make inferences about the presence vs. absence of the augment in the intended context; therefore the number of relevant examples is somewhat limited. To complement the data provided by the questionnaire, we searched the database of the Helsinki Ndebele project for additional examples instantiating relevant contexts for the possible absence of the augment. Other materials, such as available Bible portions, were also examined, somewhat less systematically, to find further relevant examples.

Our results in Section 4 show that the augment is present in the nouns in all affirmative contexts and in almost all negative and irrealis contexts. There are only two contexts in our data in which the augment is dropped: negative existential and possessive predications expressed by the associative copula construction. The additional sources consulted confirm this picture: the augment is absent in negative existential and possessive predications expressed by the associative copula construction and present in all other contexts relevant to the hypothesis tested in this paper. In (13) we provide additional examples in which the augment is absent in the negated associative copula construction (Aunio et al. in this volume which also includes tonal information and marks surface penultimate lengthening).

| (13a) | A-ngi-ná | muu-ntu |
| :--- | :--- | :--- |
|  | NEG-1SG-ASCOP | NCP1-person |
|  | 'I don't have a person.' (Aunio et al. in this volume, example 30) |  |


| (13b) | A-ngi-ná$\quad$ paaka |  |
| :--- | :--- | :--- |
|  | NEG-1SG-ASCOP | wild.cat |

The augment is absent in all three examples; the forms with the augment would be $u$-mu-ntu, $i$-paka and a-be-sana, respectively. Looking at the tones marked in (13), we can see that the vowel á of the associative copula ná carries high tone. This is, however, not a remnant of the augment absent on the following word, but is most likely contributed by the negative prefix on the associative copula (see Aunio et al. this volume for discussion). According to Lotta Aunio (pers. comm.), no cases have been found in isiNdebele in which the high tone of the augment is preserved when the augment has been dropped, although such effects are found in some other Bantu languages. These facts about the behaviour of tone make it quite clear that tone will not give any indication of the presence of the augment in cases where the vowel of the dropped augment would be identical to the vowel of the preceding associative copula, e.g. in example (8d), see discussion in Section (4.2), or in example (13c) where the augment would also be $a$-. In addition to the additional data examined, consultant PM, who spent time in Helsinki after the fieldtrip, confirmed the absence of the augment in negated associative copula constructions and its presence in other contexts when presented with examples from the questionnaire data. These facts give further support to our preliminary conclusion that, in isiNdebele, the augment is absent in nouns under the scope of negation in negative existentials and in negative possessives expressed with the associative copula construction, whereas it is present in all other contexts covered by our questionnaire. ${ }^{11}$

Within the wider context of Nguni languages, our results confirm earlier observations about the limited number of contexts in which the augment is absent in isiNdebele. It has thereby been shown that isiNdebele occupies one extreme in the cross-Nguni variation evident in the use of the augment: in isiNdebele the

[^9]augment is used in a higher number of contexts than in other Nguni languages. In other words, isiNdebele is the clearest case of a default-augmented language within the Nguni subgroup. Regarding the other extreme, during the field trip our team also gathered recordings from speakers of Sindebele. We observed that the augment is indeed always omitted regardless of the context, thus confirming Ziervogel's (1959) observations. It should, however, be noted that a closer tone analysis would be required to see if the augment has left some traces in the tone patterns of the prefixes in that variety. As to the contexts in which the augment is dropped in isiNdebele, these are indeed contexts that typically involve nonreferential NPs. From the perspective of Nguni, we can observe that the contexts form a subset of the contexts in which the augment is dropped in isiXhosa and isiZulu. In isiNdebele, the augment is absent in negative possessives and negative existentials, whereas in isiXhosa and isiZulu, the contexts of its absence additionally include objects of negated transitive sentences for example.

An interesting typological parallel can be observed in Baltic languages. As discussed in Section 2, many languages around the Baltic Sea (Finnic, Slavic, Baltic) show differences in case marking in affirmatives vs. negatives. These differences involve both transitive objects under the scope of negation and the predicate NPs ("subjects") of existential and possessive sentences. Recall, however, that the relatively closely related Baltic languages Lithuanian and Latvian behave differently in this respect. In Lithuanian the effects of negation on case marking are present in transitives, existentials and possessives, but in Latvian these effects are limited to existentials and possessives (see Miestamo 2014), in parallel with what happens with the augment in isiNdebele.

In this paper, we have tested the hypothesis that if the augment is absent in some contexts in isiNdebele, the contexts will be those that typically involve nonreferential NPs. The hypothesis was motivated by functional and typological considerations, as explained in Section 2. The hypothesis has been confirmed, and isiNdebele has been shown to conform to the typological tendency in which the effects of negation on the marking of NPs tend to relate to the (non-)referentiality of the NPs under the scope of negation. The effects are not very strong or clear in isiNdebele: many contexts that induce non-referential readings retain the augment; but, taking the opposite perspective, we may conclude that those contexts that drop the augment are among the contexts in which non-referential readings are induced.

However, due to the limitations of the data discussed in the beginning of this section, these results must be considered somewhat tentative and preliminary, or at least as not revealing the whole picture or bringing out all factors relevant to the behaviour of the augment. To gain a more complete picture in future work,
the data underlying the generalization must be increased both in sheer quantity as well as regarding the types of data considered. The questionnaire should be elicited using nouns from different noun classes. More contexts should be included in the questionnaire, for example, negative questions and further types of irrealis contexts. Questionnaire data should be collected from a higher number of speakers. And most importantly, data types should be expanded to cover proper corpus work to ensure that enough naturally occurring data complement the questionnaire based elicited data. In the corpus work, since the presence of the augment seems to be the default case in isiNdebele, a good methodological strategy could be to start by collecting all examples in which the augment is absent and then analyse the properties of those examples. The next step would be to invesitigate examples with otherwise similar properties but with the augment present, to tease out the relevant factors. Unfortunately, the availability of corpora for isiNdebele is still rather limited, so more extensive corpus work will have to wait until more corpora become available.

## ABBREVIATIONS

| ASCOP | Associative copula | OM | Object marker |
| :--- | :--- | :--- | :--- |
| AUG | Augment | PAR | Partitive |
| AUX | Auxiliary | PFV | Perfective |
| DET | Determiner | PRON | Pronoun |
| FV | Final vowel | PST | Past |
| GEN | Genitive | PTCP | Participle |
| INDF | Indefinite | R | Realis |
| LOC | Locative | REF | Referential |
| M | Masculine | REL | Relative |
| NCP | noun class prefix | SG | Singular |
| NEG | Negative/negation | SM | Subject marker |
| OBJ | Object |  |  |

Numbers preceding an abbreviation refer to person (e.g. 1SG, 2PL, 3SG). Numbers following an abbreviation refer to noun class (e.g. AUG5, OM5).

## REFERENCES

Bloom Ström, Eva-Marie \& Matti Miestamo forthcoming. The Use of the Augment in Nguni Languages with Special Reference to the Referentiality of the Noun. In: E.-M. Bloom Ström, H. Gibson, R. Guérois \& L. Marten (eds), Current Approaches Morphosyntactic Variation in Bantu. Oxford: OUP.
Buell, Leston 2009. The Distribution of the Nguni Augment: A Review. Paper presented at the Bantu Augment Workshop, Leiden University.
Carstens, Vicki \& Loyiso Mletshe 2016. Negative Concord and Nominal Licensing in Xhosa and Zulu. Natural Language and Linguistic Theory 34: 761-804.
Givón, Talmy 1978. Negation in Language: Pragmatics, Function, Ontology. In: P. Cole (ed.), Syntax and Semantics (Pragmatics 9): 69-112. NY: Academic Press.
Givón, Talmy 2001. Syntax: An Introduction, I. Amsterdam: John Benjamins.
Halpert, Claire in press. The Augment. In: L. Marten, N.C. Kula, J. Zeller \& E. Hurst (eds), The Oxford Guide to the Bantu Languages. Oxford: OUP.
Miestamo, Matti 2005. Standard Negation: The Negation of Declarative Verbal Main Clauses in a Typological Perspective. Berlin: Mouton De Gruyter.
Miestamo, Matti 2014. Partitives and Negation: A Cross-Linguistic Survey. In: S. Luraghi \& T. Huumo (eds), Partitive Cases and Related Categories: 63-86. Berlin: Mouton De Gruyter.
Petzell, Malin \& Karoline Kühl 2017. The Influence of Non-Linguistic Factors on the Usage of the Pre-Prefix in Luguru. Linguistic Discovery 15(1): 35-48.
von Staden, Paul M.S. 1973. The Initial Vowel of the Noun in Zulu. African Studies 32: 163-181.
Taraldsen, Knut Tarald 2010. The Nanosyntax of Nguni Noun Class Prefixes and Concords. Lingua 120: 1522-1548.
Ziervogel, Dirk 1959. A Grammar of Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa. Pretoria: J.L. van Schaik.

## APPENDIX I: QUESTIONNAIRE

S1. What did they find yesterday? They found a lion yesterday.
S2. What did they find yesterday? They found a book yesterday.
S3. Did they find the lion yesterday? They found the lion yesterday.
S4. Did they find the book yesterday? They found the book yesterday.
S5. Did they find something yesterday? They didn't find a lion yesterday.
S6. Did they find something yesterday? They didn't find a book yesterday.
S7. Did they find the lion yesterday? They didn't find the lion yesterday.
S8. Did they find the book yesterday? They didn't find the book yesterday.
S9. They were looking for animals. Did they find a lion yesterday?
S10. They were looking for things. Did they find a book yesterday?
S11. They were looking for the lion. Did they find the lion yesterday?
S12. They were looking for the book. Did they find the book yesterday?
S13. What will they find tomorrow? They will find a lion tomorrow.
S14. What will they find tomorrow? They will find a book tomorrow.
S15. Will they find the lion tomorrow? They will find the lion tomorrow.
S16. Will they find the book tomorrow? They will find the book tomorrow.
S17. Who arrived yesterday? Some children arrived yesterday.
S18. Did the children arrive yesterday? The children arrived yesterday.
S19. Did some children arrive yesterday? No children arrived yesterday.
S20. Did the children arrive yesterday? The children didn't arrive yesterday.
S21. Were there some children that arrived yesterday? Some children didn't arrive yesterday.
S22. There were people arriving yesterday. Did some children arrive yesterday?
S23. There were people arriving yesterday. Did any children arrive yesterday?
S24. The children were supposed arrive. Did the children arrive yesterday?
S25. Who will arrive tomorrow? Some children will arrive tomorrow.
S26. Will the children arrive tomorrow? The children will arrive tomorrow.
S27. What is there on the table? There is a book on the table.
S28. Where is the book? The book is on the table.
S29. What is there on the table? There is no book on the table.
S30. Where is the book? The book is not on the table.
S31. I'm seeing something on the table. Is there a book on the table?

S32. The book is somewhere here. Is the book on the table?
S33. What will there be on the table? There will be a book on the table.
S34. Where will the book be? The book will be on the table.
S35. What do they have? They have a book.
S36. I don't know where the book is. Do they have the book? They have the book.
S37. What do they have? They don't have a book.
S38. The book is somewhere here. Do they have the book? They don't have the book.
S39. They have some things. Do they have a book?
S40. The book is somewhere here. Do they have the book?
S41. What will they have? They will have a book.
S42. Will they have the book? They will have the book.
S43. What is there on the table? There are books on the table.
S44. Where are the books? The books are on the table.
$\mathrm{S}_{45}$. What is there on the table? There are no books on the table.
S46. Where are the books? The books are not on the table.
S47. I see something on the table. Are there books on the table?
S48. I don't know where the books are. Are the books on the table?
S49. What will there be on the table? There will be books on the table.
S50. Where will the books be? The books will be on the table.
S51. What do they have? They have books.
S52. I don't know where the books are. Do they have the books? They have the books.
S53. What do they have? They don't have books.
S54. I don't know where the books are. Do they have the books? They don't have the books.
S55. They have some things. Do they have books?
S56. I don't know where the books are. Do they have the books?
S57. What will they have? They will have books.
S58. Will they have the books? They will have the books.

## APPENDIX II: DATA

This appendix contains the questionnaire answers given by the five consultants:
a. MM (interviewed 16 May 2016)
b. ZLS (interviewed 17 May 2016)
c. MS (interviewed 18 May 2016)
d. FS (interviewed 19 May 2016)
e. PM (interviewed 19 April 2017)

As mentioned in Section 4.3, an earlier version of the questionnaire was used with consultants $a$ and $b$. The difference is that for the existential and possessive sentences, the word 'lion' was used instead of 'book'. The transcriptions have not been normalized to the official orthography. Obvious transcription errors made by the consultants have been corrected based on the recordings, but speaker variation for example, in vowel elision, vowel qualities and whether morphemes/words are written separately vs. together has not been systematically unified.

S1. What did they find yesterday? They found a lion yesterday.
a. Bathole ibhubezi kizolo.
b. Bathole ibhubezi izolo.
c. Bathole ibhubezi kizolo.
d. Bathole ibhubezi izolo.
e. Bafumene ibhubezi izolo.

S2. What did they find yesterday? They found a book yesterday.
a. Bathole incwadi kizolo.
b. Bathole incwadi izolo.
c. Bathole incwadi kizolo.
d. Bathole incwadi izolo.
e. Bafumene incwadi izolo.

S3. Did they find the lion yesterday? They found the lion yesterday.
a. Baltholile ibhubezi kizolo.
b. Baltholile ibhubezi izolo.
c. Balitholile ibhubezi kizolo.
d. Balitholile ibhubezi izolo.
e. Balifumene ibhubezi izolo.

S4. Did they find the book yesterday? They found the book yesterday.
a. Baytholile incwadi izolo.
b. Baytholile incwadi izolo.
c. Bayitholile incwadi kizolo.
d. Bayitholile incwadi izolo.
e. Bayifumene incwadi izolo.

S5. Did they find something yesterday? They didn't find a lion yesterday.
a. Abakaltholi ibhubezi kizolo.
b. Abakaltholi ibhubezi izolo.
c. Abakalitholi ibhubezi kizolo.
d. Azange balithole ibhubezi izolo.
e. Azange bafumane ibhubezi izolo.

S6. Did they find something yesterday? They didn't find a book yesterday.
a. Abakaytholi incwadi kizolo.
b. Ababaytholi incwadi izolo.
c. Abakatholi incwadi kizolo.
d. Azange bathole incwadi izolo.
e. Azange bafumane incwadi izolo.

S7. Did they find the lion yesterday? They didn't find the lion yesterday.
a. Abakaltholi ibhubezi kizolo.
b. Abakaltholi ibhubezi izolo.
c. Abakalitholi ibhubezi izolo.
d. Azange balithole ibhubezi izolo.
e. Azange balifumane ibhubezi izolo.

S8. Did they find the book yesterday? They didn't find the book yesterday.
a. Abakaytholi incwadi kizolo.
b. Abakaytholi incwadi izolo.
c. Abakayitholi incwadi kizolo.
d. Azange bayithole incwadi izolo.
e. Azange bayifumane incwadi izolo.

S9. They were looking for animals. Did they find a lion yesterday?
a. Balitholile ibhubezi izolo?
b. Baytholile ingwenyama izolo na?
c. Balitholile ibhubezi kizolo na?
d. Balitholile ibhubezi izolo na?
e. Balifumene ibhubezi izolo na?

S10. They were looking for things. Did they find a book yesterday?
a. Niytholile incwadi kizolo?
b. Baytholile incwadi izolo na?
c. Bayitholile incwadi kizolo na?
d. Bayitholile incwadi izolo na?
e. Bayifumene incwadi izolo na?

S11. They were looking for the lion. Did they find the lion yesterday?
a. Baltholile ibhubezi kizolo?
b. Baltholile ibhubezi izolo na?
c. Balitholile ibhubezi kizolo na?
d. Balitholile ibhubezi izolo na?
e. Balifumene ibhubezi izolo na?

S12. They were looking for the book. Did they find the book yesterday?
a. Baytholile incwadi kizolo?
b. Baltholile incwadi izolo na?
c. Bayitholile incwadi kizolo na?
d. Bayitholile incwadi izolo na?
e. Bayifumene incwadi izolo na?

S13. What will they find tomorrow? They will find a lion tomorrow.
a. Bazokthola ibhubezi ksasa.
b. Bazokthola ibhubezi ksasa.
c. Bazokuthola ibhubezi kusasa.
d. Bazokuthola ibhubezi ksasa.
e. Bazokufumana ibhubezi kusasa.

S14. What will they find tomorrow? They will find a book tomorrow.
a. Bazokthola incwadi ksasa.
b. Bazokthola incwadi ksasa.
c. Bazokutho incwadi ksasa.
d. Bazokuthola incwadi ksasa.
e. Bazokufumana incwadi kusasa.

S15. Will they find the lion tomorrow? They will find the lion tomorrow.
a. Bazolthola ksasa ibhubezi.
b. Bazolthole ibhubezi ksasa.
c. Bazolithola ibhubezi kusasa.
d. Bazolithola ibhubezi ksasa.
e. Bazolifumana ibhubezi kusasa.

S16. Will they find the book tomorrow? They will find the book tomorrow.
a. Bazoythola incwadi ksasa.
b. Bazoythola incwadi ksasa.
c. Bazoyithola incwadi ksasa.
d. Bazoyithola incwadi ksasa.
e. Bazoyifumana kusasa incwadi.

S17. Who arrived yesterday? Some children arrived yesterday.
a. Abanye abantwana bafike kizolo.
b. Abentwana bafikile izolo.
c. Abantwana abanye bafike kizolo.
d. Abentwana bafikile izolo.
e. Kunabantwana abafike izolo. / Kunabantwana abafikileko izolo.

S18. Did the children arrive yesterday? The children arrived yesterday.
a. Abantwana bafikile kizolo.
b. Abentwana bafikile izolo.
c. Abentwana bafikile kizolo.
d. Abentwana bafikile izolo.
e. Abantwana bafike izolo. / Abantwana bafikile izolo.

S19. Did some children arrive yesterday? No children arrived yesterday.
a. Akuna bantwana abafikilelo kizolo.
b. Akunabentwana abafikileko izolo.
c. Akunabentwana abafikileko kizolo.
d. Akunabentwana abafikileko izolo.
e. Akunabantwana abafike izolo.

S20. Did the children arrive yesterday? The children didn't arrive yesterday.
a. Abakafiki abantwana izolo.
b. Abentwana abakafiki izolo.
c. Abentwana abakafiki kizolo.
d. Abentwana azange bafike izolo.
e. Abantwana azange bafike izolo.

S21. Were there some children that arrived yesterday? Some children didn't arrive yesterday.
a. Abanye abantwana abakafiki kizolo.
b. Abentwana abakafiki izolo.
c. Abentwana abanye bafikilo kizolo.
d. Abentwana azange bafike izolo.
e. Abanye abantwana azange bafike izolo.

S22. There were people arriving yesterday. Did some children arrive yesterday?
a. Bafikile abantwana izolo?
b. Bakhona abentwana abaikileko izolo na?
c. Bafikile abentwana kizolona?
d. Kunabentwana abafikileko na?
e. Kukhona abantwana abafike izolo na?

S23. There were people arriving yesterday. Did any children arrive yesterday?
a. Ingabe kunabantwana abafikileko kizolo?
b. Kukhona abantwana abafikileko izolo na?
c. Bafikile abentwana kizola na?
d. Kunabentwana abafikileko izolo na?
e. Kukhona abantwana abafike izolo na?

S24. The children were supposed arrive. Did the children arrive yesterday?
a. Bafikile abantwana kizolo?
b. Abentwana bafikile izolo na?
c. Abentwana bafikile izolo na?
d. Abentwana bafikile izolo na?
e. Bafikile abantwana izolo na?

S25. Who will arrive tomorrow? Some children will arrive tomorrow.
a. Kuzoba nabentwana abefikako ksasa.
b. Abentwana bazokfika ksasa.
c. Abanye abentwana bazokufika ksasa.
d. Kunabentwana abazokufika ksasa.
e. Kunabantwana abazokufika kusasa.

S26. Will the children arrive tomorrow? The children will arrive tomorrow.
a. Bazokfika ksasa abantwana.
b. Abentwana bazokfika ksasa.
c. Abentwana bazokufika kusasa.
d. Abentwana bazokufika ksasa.
e. Abantwana bazokufika kusasa.

S27. What is there on the table? There is a book on the table.
a. Kune bhubezi nge mva.
b. Kunebhubezi ngemua kwendlu.
c. Kunencwadi phezu kwetafula.
d. Kunencwadi etafuleni.
e. Kunencwadi etafuleni.

S28. Where is the book? The book is on the table.
a. Iinge muva ibhubezi.
b. Ibhubezi lingemua kwendlu.
c. Incwadi iphezu kwetafula.
d. Incwadi iphezu kwe tafula.
e. Incwadi isetafuleni.

S29. What is there on the table? There is no book on the table.
a. Akuna bhubezi nge muva.
b. Akunabhubezi ngemua kwendlu.
c. Akunancwadi phezu kwetafula.
d. Akunancwadi etafuleni.
e. Akunancwadi etafuleni.

S30. Where is the book? The book is not on the table.
a. Alikho ibhubezi nge muva.
b. Ibhubezi alikho ngemua kwendlu.
c. Incwadi ayikho phezu kwetafula.
d. Incwadi ayikho phezu kwe tafula.
e. Incwadi ayisisetafuleni.

S31. I'm seeing something on the table. Is there a book on the table?
a. Ingabe kune bhubezi emuva?
b. Likhona ibhubezi ngenwa na?
c. Kunencwadi etafulenapho na?
d. Kunencwadi phezu kwetafula na?
e. Kunencwadi etafuleni na?
$S_{32}$. The book is somewhere here. Is the book on the table?
a. Ingabe kune bhubezi ngemuva?
b. Ibhubezi lingemua kwendlu na?
c. Incwadi iphezu kwetafula na?
d. Incwadi ikohna phezu kwe tafula na?
e. Incwadi isetafuleni na?

S33. What will there be on the table? There will be a book on the table.
a. Kungenzeka kuthi kune bhubezi emuva.
b. Kuzoba nebhubezi ngemua kwendlu.
c. Kuzobe kunencwadi phezu kwetafulapho.
d. Kungaba nencwadi etafuleni.
e. Kuzoba nencwadi etafuleni.

S34. Where will the book be? The book will be on the table.
a. Ibhubezi lizoba nge muva.
b. Ibhubezi lingaba ngemua kwendlu.
c. Incwadi izobe iphezu kwetafula.
d. Incwadi ingabe phezu kwe tafula.
e. Incwadi izokuba setafuleni.

S35. What do they have? They have a book.
a. Bane bhubezi.
b. Baphtethe ibhubezi.
c. Baphethe incwadi.
d. Banencwadi.
e. Banencwadi.

S36. I don't know where the book is. Do they have the book? They have the book.
a. Baltolile ibhubezi.
b. Balphethe ibhubezi.
c. Bayiphethe incwadi.
d. Banayo incwadi.
e. Banencwadi. / Banayo incwadi.

S37. What do they have? They don't have a book.
a. Abakaltholi ibhubezi.
b. Abakaphathi ibhubezi.
c. Abakaphathi incwadi.
d. Abanayo incwadi. / Abanancwadi.
e. Abanancwadi.

S38. The book is somewhere here. Do they have the book? They don't have the book.
a. Abakalitholi ibhubezi.
b. Abakaltholi ibhubezi.
c. Awa abakayitholi.
d. Abanayo incwadi. / Abanancwadi.
e. Abanayo incwadi.

S39. They have some things. Do they have a book?
a. Bane bhubezi?
b. Balphethe ibhubezi na?
c. Bayiphethe incwadi na?
d. Banayo incwadi na?
e. Banencwadi na?

S40. The book is somewhere here. Do they have the book?
a. Baltholile ibhubezi?
b. Balphethe ibhubezi na?
c. Bayiphethe incwadi na?
d. Banayo incwadi na?
e. Banencwadi na?
$S_{41}$. What will they have? They will have a book.
a. Bazobe bane bhubezi.
b. Bazobe baphethe ibhubezi.
c. Bazobe baphethe incwadi.
d. Bazokuthola incwadi.
e. Bazabe banencwadi.

S42. Will they have the book? They will have the book.
a. Bazobe bane bhubezi.
b. Bazobe balphethe ibhubezi.
c. Bazobe bangakayiphathi incwadi.
d. Bazoba nayo incwadi.
e. Bazoba nayo incwadi.

S43. What is there on the table? There are books on the table.
a. Kunama bhubezi emuva.
b. Libhubezi ekungemua kwendlu.
c. Kuneencwadi phezu kwetafula.
d. Kuneencwadi etafuleni.
e. Kuneencwadi etafuleni.

S44. Where are the books? The books are on the table.
a. Ange muva amabhubezi.
b. Amabhubezi angemua kwendlu.
c. Iincwadi ziphezo kwetafula.
d. Iincwadi zisetafuleni.
e. Iincwadi zisetafuleni.

S45. What is there on the table? There are no books on the table.
a. Akunama bhubezi nge muva.
b. Akunamabhubezi ngemua kwendlu.
c. Akunancwadi phezu kwetafula.
d. Akunaancwadi etafuleni.
e. Akunancwadi etafuleni.

S46. Where are the books? The books are not on the table.
a. Amabhubezi awekho ngemuva.
b. Amabhubezi awekho ngemua kwendlu.
c. Iincwadi azikho phezu kwetafula.
d. Iincwadi azikho phezu kwe tafula.
e. Iincwadi azisisetafuleni.

S47. I see something on the table. Are there books on the table?
a. Ingabe kunama bhubezi ngemuva?
b. Kunamabhubezi ngemua kwendlu na?
c. Kuneencwadi phezu kwetafula na?
d. Kuneencwadi etafuleni na?
e. Kuneencwadi etafuleni na?

S48. I don't know where the books are. Are the books on the table?
a. Ingabe kunama bhubezi nge muva?
b. Ingabe amabhubezi angemua kwendlu na?
c. Iincwadi ziphezu kwetafula na?
d. Iincwadi ziphezu kwe tafula na?
e. Kuneencwadi etafuleni na?

S49. What will there be on the table? There will be books on the table.
a. Kuzoba nama bhubezi nge muva?
b. Kungaba namabhubezi ngemua kwendlu.
c. Kuzobe kuneencwadi etafuleni.
d. Kungaba neencwadi etafuleni.
e. Kuzoba neencwadi etafuleni.

S50. Where will the books be? The books will be on the table.
a. Amabhubezi azoba nge muva.
b. Amabhubezi angaba ngemua kwendlu.
c. Iincwadi zizobe ziphezu kwetafula.
d. Iincwadi zingaba phezu kwe tafula.
e. Iincwadi zizoba setafuleni.

S51. What do they have? They have books.
a. Baphethe amabhubezi.
b. Baphethe inbhubezi.
c. Baphethe iincwadi.
d. Baneencwadi.
e. Baneencwadi. / Baphethe iincwadi.

S52. I don't know where the books are. Do they have the books? They have the books.
a. Banama bhubezi.
b. Bawaphethe amabhubezi.
c. Baziphethe iincwadi.
d. Banazo iincwadi.
e. Banazo iincwadi.

S53. What do they have? They don't have books.
a. Abakawatholi amabhubezi.
b. Abakaphathi amabhubezi.
c. Abakaphathi iincwadi.
d. Abanazo iincwadi.
e. Abanancwadi.

S54. I don't know where the books are. Do they have the books? They don't have the books.
a. Abakawatholi amabhubezi.
b. Abakawaphathi amabhubezi.
c. Abakaziphathi incwadi.
d. Abanazo iincwadi.
e. Abanazo iincwadi. / Abakaphathi iincwadi.

S55. They have some things. Do they have books?
a. Balitholile ama bhubezi?
b. Bawaphethe amabhubezi na?
c. Baziphethe iincwadi na?
d. Banazo iincwadi na?
e. Baneencwadi na?

S56. I don't know where the books are. Do they have the books?
a. Kunama bhubezi?
b. Bawaphethe amabhubezi na?
c. Baziphethe iincwadi na?
d. Banazo iincwadi na?
e. Banazo iincwadi na? / Baphethe iincwadi na?

S57. What will they have? They will have books.
a. Bazokthola amabhubezi.
b. Bazobe baphethe amabhubezi.
c. Bazobe baphethe iincwadi.
d. Bazokuthola iincwadi.
e. Bazoba neencwadi.

S58. Will they have the books? They will have the books.
a. Bazoba nawo amabhubezi.
b. Bazoba nalo ibhubezi.
c. Bazobe banazo iincwadi.
d. Bazozithola iincwadi.
e. Bazoba nazo incwadi.


[^0]:    1 We would like to thank Thera Crane and the anonymous referee, as well as Eva-Marie Bloom Ström and the editors of this volume for their valuable comments on the manuscript. A special thanks is due to the isiNdebele language consultants without whom this study would not have been possible.
    2 For Sindebele (Northern South African Ndebele) there is a short grammar (Ziervogel 1959) available.

[^1]:    3 Note that in Finnish the distinction between genitive and accusative has been lost in noun paradigms, and the genitive in these examples goes back to an earlier accusative.

[^2]:    4 Note that the augment may be dropped in some non-clausal contexts as well, e.g. in some derivational processes and after demonstratives, but these are not in the scope of our study. Instead, we are interested in the effects of polarity and referentiality in clauses.

[^3]:    5 Stability and Change in Language Contact: The Case of Southern Ndebele (South Africa) funded by the Academy of Finland.

[^4]:    6 The role of the object prefix in expressing definiteness and referentiality in isiNdebele is still unclear and more research is needed.

[^5]:    7 The forms kizolo and izolo seem to be in free variation, some speakers preferring one and others the other. The form be for the class 2 prefix in ( $8 \mathrm{a}, \mathrm{d}, \mathrm{e}$ ) is also a case of speaker variation.

[^6]:    8 Note that with two consultants, an earlier version of the questionnaire was used, and in this earlier version the word 'lion' appeared instead of the word 'book' in the sentences eliciting existential and possessive predications $\left(\mathrm{S}_{27}-58\right)$. One reason for the change was that in some cases 'lion' tended to elicit something else than simple existential or possessive constructions, e.g. constructions with the verbs 'keep' and 'capture'. Even more importantly the presence of the augment is not always easy to see because the augment in noun class 6 , the plural class for the word 'lion', has the same vowel quality as the associative copula (cf. also the discussion of tone in Section 5).

[^7]:    9 Note that in class 10, which marks the plural for nouns that have their singular in class 9 , the augment is a long $i i$ (contrasting with a short $i$ in class 9).

[^8]:    10 Note that the same sentence, namely example (11c), was given by one consultant as response to both $\mathrm{S}_{53}$ (plural noun) and $\mathrm{S}_{37}$ (singular noun).

[^9]:    11 The augment is absent in some other clausal contexts as well, e.g. with copulas (both positive and negative; Thera Crane, pers. comm.), but these are not addressed by our questionnaire. Since the absence of the augment in the copula construction concerns both affirmatives and negatives, its motivations are likely found somewhere else than polarity and (non-)referentiality, and it is therefore not directly relevant to the present paper.

