

'Not' in focus: objects under negation in Zulu

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1. Introduction

In this paper I investigate aspects of the morphology, syntax and semantics of negated mono-transitive sentences in the Bantu language Zulu (Nguni; S42). Specifically, I discuss four different negation strategies, illustrated by the examples in (2)-(5) below, and examine how negation interacts with focus in each of these strategies:¹

- (1) U-Sipho u-qed-e i-sobho.
AUG-1.a.Sipho 1.SM-finish-PST AUG-5.soup
'Sipho finished the soup.'
- (2) U-Sipho a-ka-**li**-qed-anga i-sobho.
AUG-1a.Sipho NEG-1.SM-5.OM-finish-PST.NEG AUG-5.soup
'Sipho didn't finish the soup.'
- (3) U-Sipho a-ka-qed-anga i-sobho.
AUG-1a.Sipho NEG-1.SM-finish-PST.NEG AUG-5.soup
'Sipho didn't finished the SOUP (but he finished/did something else).'
- (4) Y-i-sobho a-nga-li-qed-anga u-Sipho.
COP-AUG-soup 1.SM.REL-NEG-5.OM-finish-PST.NEG AUG-1a.Sipho
'It's the soup that Sipho didn't finish.'
- (5) U-Sipho a-ka-qed-anga sobho.
AUG-1a.Sipho NEG-1.SM-finish-PST.NEG 5.soup
'Sipho didn't finish any soup.'

(1) is an affirmative declarative sentence based on a transitive verb which agrees with the subject-NP in noun class. This sentence can be negated in at least four different ways. (2) represents the default negation strategy used with transitive sentences in Zulu. In this strategy, an object marker (in bold) that agrees with the object-NP is added to the verb. In contrast, the negated sentence in (3) more closely resembles (1) in that it does not include the object marker. However, (3) represents a marked negation strategy, which is only acceptable in specific contexts in Zulu. As the translation shows, (3) not only assert that Sipho did not finish the soup, it also conveys the additional inference that he finished, or did, something else. (4) illustrates a cleft construction in which the object of the verb follows a copular element and is modified by a negated relative clause. Finally, the sentence in (5)

¹ All examples in this paper are from Zulu, unless otherwise indicated. Examples are glossed as follows: 1s = first person singular; AUG = augment; COP = copula; DJ = disjoint verb form; FV = final vowel; INF = infinitive; NEG = negation; OM = object marker; PROG = progressive; PST = past tense; REL = relative marker; RS = relative suffix; SM = subject marker. Numbers represent noun class. The research reported in this paper was funded by the Swedish Research Council.

also does not include an object marker, but differs from (3) in that the initial vowel (the so-called augment) of the object has been omitted. While augments are typically present with all nominals in Zulu, augmentless nouns are possible in the scope of negation, where they are interpreted as negative polarity items (NPIs).

As far as I am aware, there exists no systematic analysis of the information structure of negated sentences in Zulu. The purpose of this paper is to fill this gap, by discussing the four strategies illustrated in (2)-(5) and by analysing the relation between their specific morpho-syntactic properties and their focus semantics.

In section 2, I argue that the negation construction with the object marker is used to express polarity focus in Zulu, which I take to be the default focus reading of negated sentences. Section 3 demonstrates that the absence of the object marker is a grammatical means to mark the object-NP or the whole VP as focus, and discusses how these focus readings produce the contrastive inference associated with negated sentences such as (3). Section 4 presents the cleft construction as a strategy used in Zulu to remove a focused object from the scope of negation. Finally, in section 5 I analyse transitive sentences with NPIs and suggest, following a proposal made in Lahiri (1998), that the NPI in sentences such as (5) is interpreted with focus on an implicit cardinality predicate, which is inherently associated with the semantics of indefinites. Section 6 is a brief conclusion.

2. Negation and object dislocation

2.1 Negation and object marking

In Zulu and other Nguni languages, negation in indicative sentences is expressed by means of the prefix *a-*; some tenses and moods also require a specific negative suffix (*-i* in the present tense active; *-anga* in the recent past).² Importantly, in negated transitive sentences, an object marker that agrees with the object in noun class is prefixed to the verb stem:

- (6) U-John a-ka-**m**-thand-i **u-Mary**.
 AUG-1a.John NEG-1.SM-1.OM-like-NEG AUG-1a.Mary
 'John doesn't like Mary.'
- (7) U-Sipho a-ka-**li**-qed-anga **i-sobho**.
 AUG-1a.Sipho NEG-1.SM-5.OM-finish-PST.NEG AUG-5.soup
 'Sipho didn't finish the soup.'
- (8) A-ngi-**yi**-theng-anga **i-ncwadi**.
 NEG-1S-9.OM-buy-NEG.PST AUG-9.book
 'I didn't buy the/a book.'
- (9) A-ngi-**zi**-bon-anga **i-zin-dlovu**.
 NEG-1.SG-10.OM-see-PST.NEG AUG-10-elephant
 'I didn't see (the) elephants.'

² In addition, all negative verb forms are associated with special tonal suffixes (Buell 2005). Since this paper is concerned primarily with the morpho-syntax and the semantics of negation in Zulu, I have not marked my examples for tone.

The examples in (6)-(9) illustrate the default strategy used to negate transitive sentences in Zulu. They were offered by Zulu speakers when asked to provide the negated versions of the corresponding affirmative sentences in (10)-(13), which, notably, do not include object markers:

(10) U-John u-thand-a u-Mary.
AUG-1a.John 1.SM-like-FV AUG-1a.Mary
'John likes Mary.'

(11) U-Sipho u-qed-e i-sobho.
AUG-Sipho 1.SM-finish-PST AUG-5.soup
'Sipho finished the soup.'

(12) Ngi-theng-e i-ncwadi.
1S-buy-PST AUG-9.book
'I bought the/a book.'

(13) Ngi-bon-e i-zi-ndlovu.
1S-see-PST AUG-10-elephant
'I saw (the) elephants.'

Object-marked objects in negated sentences in Zulu tend to be interpreted as definite. This follows from the specific discourse conditions associated with negative utterances, which are typically used to negate sentences in which the relevant discourse participants have already been introduced (Givón 1978). Therefore, negated transitive sentences are more likely to include definite objects than the corresponding affirmatives. However, a definite interpretation is not obligatory for an object-marked object under negation in Zulu. For example, as the translations indicate, the objects in (8) and (9) can be interpreted as either definite or indefinite. Likewise, (14) can mean that Zodwa doesn't want *the* children, but the sentence can also be used to express her wish to remain childless:

(14) U-Zodwa a-ka-**ba**-fun-i **a-ba-ntwana**.
AUG-1a.Zodwa NEG-1.SM-2.OM-want-NEG AUG-2-child
'Zodwa doesn't want (the) children.'

The possibility of interpreting object-marked NPs in negated sentences as indefinite has also been noted for the closely related Nguni language Xhosa by Visser (2008). Visser claims that in Xhosa, object-marked indefinite objects under negation are obligatorily specific:

(15) U-m-fazi a-ka-**m**-nced-i **u-m-ntwana o-m-hle o-lusizi**
AUG-1-woman NEG-1.SM-1.OM-help-NEG AUG-1-child 1.REL-1-beautiful 1.REL-sad
o-gula-yo.
1.REL-be.sick-RS
'The/a woman does not help the/a (specific) beautiful sad child who is sick.'

[Xhosa; Visser 2008: 22]

However, even the specificity requirement does not hold in Zulu. On its indefinite reading, the object in (14) is clearly non-specific. Similarly, the object in (16) can be interpreted as definite or specific, but also as a non-specific indefinite (e.g., when uttered standing in front of a bookshelf, (16) can mean that I am not able to find a particular book I like, but also that I cannot find anything I would like to read):

- (16) A-**ngi-yi-thol-i** **i-ncwadi** **e-ngi-yi-thand-a-yo.**
 NEG-1S-9.OM-find-NEG AUG-9.book REL-1S-9.OM-like-FV-RS
 'I don't find the/a book I like.'

Compare also the following example from Swati, another Nguni language, in which the object is also object-marked, but arguably interpreted as non-specific:

- (17) Ti-nkhomo a-ti-**yi-dl-i** **i-nyama.**
 10-cows NEG-10.SM-9.OM-eat-NEG AUG-9.meat
 'Cattle don't eat meat.'

[Swati; Ziervogel and Mabuza 1976: 176]

In sum, the examples show that the object marker in negated transitive sentence in Zulu and other Nguni varieties is not simply a grammatical device to mark the object as definite or specific. Its occurrence is required for a different reason, which I discuss now.

2.2 Negation, object dislocation and polarity focus


As has been shown by numerous studies, object marking in Zulu implies that the corresponding object has been dislocated to a position outside VP (Adams 2010; Cheng and Downing 2009; Van der Spuy 1993; Zeller 2015 a.o.). Below I present some evidence for the link between object marking and object dislocation; the reader is referred to the relevant literature for more discussion.

The first piece of evidence comes from the so-called conjoint-disjoint alternation. In some tenses in affirmative clauses, Zulu verbs show a morphological alternation which reflects syntactic constituency. The conjoint (or short) verb form signals that the verb is followed by VP-internal overt material, while the disjoint (or long) form is required when the verb is VP-final (Buell 2005; Halpert 2015; Van der Spuy 1993):

- (18a) U-John u-fund-a i-ncwadi. (conjoint)
 AUG-1a.John 1.SM-read-FV AUG-9.book
 'John is reading a book.'
- (18b) U-John u-ya-fund-a. (disjoint)
 AUG-1a.John 1.SM-DJ-read-FV
 'John is reading.'
- (19a) ... ufunda incwadi]_{VP} (= 18a)
- (19b) ... uyafunda]_{VP} (= 18b)

However, even when a postverbal object is present, the conjoint form is not licensed when an object marker appears, (20a). Unless there is other VP-internal material, the verb must

be in the disjoint form, (20b). Since the disjoint form signals that the verb is VP-final, the object in (20b) must have been dislocated to a VP-external position:

- (20a) *U-John u-yi-fund-a **i-ncwadi.**
 AUG-1a.John 1.SM-9.OM-read-FV AUG-9.book
 'John is reading a book.'
- (20b) U-John u-ya-yi-fund-a **i-ncwadi.**
 AUG-1a.John 1.SM-DJ-9.OM-read-FV AUG-9.book
 'John is reading (it), the book.'
- (21a) *... uyifunda **incwadi**]_{VP} (= 20a)
- (21b) ... uyayifunda ___]_{VP} **incwadi** (= 20b)
- 

A second argument is based on the word order in double object constructions. The standard word order in Zulu is IO>DO (the indirect object must precede the direct object), (22a), but this word order is not licensed when the IO is object-marked and the verb is in the conjoint form, (22b). However, the object marker is licensed with the word order DO>IO, (22c). This follows if object marking in (22c) is correlated with right dislocation of the IO to a VP-external position, as shown in (23b):

- (22a) Ngi-theng-el-a u-Sipho u-bisi.
 1S-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
 'I'm buying Sipho some milk.'
- (22b) *Ngi-m-theng-el-a **u-Sipho** u-bisi.
 1S-1.OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
 'I'm buying Sipho some milk.'
- (22c) Ngi-m-theng-el-a u-bisi **u-Sipho.**
 1S-1.OM-buy-APPL-FV AUG-11.milk AUG-1a.Sipho
 'I'm buying (him) Sipho some milk.'
- (23a) *... ngimthengela uSipho ubisi]_{VP} IO>DO
- (23b) ... ngimthengela ___ ubisi]_{VP} **uSipho** DO>IO
- 

The data in (20) and (22) thus tell us that the presence of an object marker in Zulu is a sign of object dislocation. In negative sentences, the conjoint-disjoint alternation is not marked and therefore cannot be used as a diagnostics, but the syntactic position of an object can be inferred from the presence or absence of the object marker. In transitive negative sentences such as (6)-(9) where the object marker appears, the postverbal object must be in a VP-external position, and no VP-internal material follows the verb.

It is well known that object dislocation has an effect on the information structure of a sentence. The VP is the domain of focus in Zulu; a VP-internal object is therefore typically interpreted as (part of) the focus, while nonfocused material tends to be removed from VP (Buell 2008; Carstens and Zeller 2020; Cheng and Downing 2009; Zeller 2015). According to Cheng and Downing (2009), the dislocation of nonfocused material is motivated by prosodic and syntactic conditions for focus assignment. VP-internal material on the right edge of the

VP is assigned prosodic prominence, which Cheng and Downing consider to be a prerequisite for focus assignment. At the same time, the syntactic position associated with focus is the so-called IAV-position ("immediately after the verb"), the highest position within VP. As Cheng and Downing note, the best way to guarantee that a VP-internal XP is focused is to produce a syntactic configuration in which this XP is the only element in VP, and therefore simultaneously realised in the highest position in, and at the right edge of, the VP.

I now suggest that object marking and dislocation are preferred in negated transitive sentences in Zulu because removing the object from the VP allows focus to be placed on the *polarity* of the sentence. While the neutral interpretation of an affirmative clause is typically with narrow focus on the VP or a VP-internal constituent, I assume, following Givón (1978) and Hyman and Watters (1984), that the unmarked reading of a negated sentences is polarity focus. According to Geurts and van der Sandt (2004: 37), in a sentence with polarity focus, "the proposition is treated as given material, and the sentence's point is just to affirm or deny it". Accordingly, what is under discussion by default in a negative statement is the entire proposition and its status as either true or false, and the new information asserted by the sentence is the negation of that proposition.

Extending Cheng and Downing's (2009) proposal, I assume that for polarity focus to be expressed, the inflected verb which carries the negation has to remain on the right edge of the prosodic phrase aligned with the right edge of VP, where it can be assigned phrasal stress.³ Importantly, this implies that all VP-internal constituents have to be removed from the VP. Object dislocation, indicated by object marking, is therefore a grammatical device in Zulu to express the default, polarity focus-reading of negated sentences.

Evidence for my claim that negated sentences require the dislocation of all VP-internal material in order to mark polarity focus comes from negated ditransitive sentences in Zulu. I showed in (22b) above that the word order IO>DO is not possible in Zulu when the IO is object-marked and the verb is in the *conjoint* form. However, the object marker can appear with the IO>DO word order when the verb is in the *disjoint* form:

- (24) Ngi-ya-**m**-theng-el-a **u-Sipho** u-bisi.
 1S-DJ-1.OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
 'I am buying (him) Sipho some milk.'

- (25) ... ngiy**a**mthengela ____]_{VP} **uSipho** ubisi IO>DO
-

The disjoint form in (24) signals that the verb is the final element in the VP. As shown in (25), this means that both objects have been dislocated in (24), a possibility which exists in Zulu even though only one object marker can be prefixed to the verb stem (Adams 2010; Zeller 2015). Importantly, in this "double dislocation" construction, the original word order IO>DO can be re-created with both objects in a VP-external position.

Against this background, now consider the default, unmarked strategy used in Zulu to negate a sentence such as "I gave Nwabisa her book":

³ In the same way, object dislocation licenses other types of "auxiliary focus" (Hyman and Watters 1984), i.e. focus on inflectional categories such as tense, aspect, polarity, as well as contrastive verb focus. As far as I could establish, all these readings are available with the negative sentences in (6)-(9).

(26) A-**ngi-m**-nik-anga **u-Nwabisa** i-ncwadi yakhe.
 NEG-1S-1.OM-give-NEG.PST AUG-1a.Nwabisa 9.book 9.her
 'I did not give Nwabisa her book.'

The word order in (26) is IO>DO, but the IO is object-marked. Given the contrast between (22b) and (24), this word order in combination with object marking signals that in (26), both objects have been removed from the VP:

(27) ... angimnikanga _____]_{VP} **uNwabisa** incwadi yakhe


The double dislocation depicted in (27) follows from my proposal, according to which polarity focus is marked grammatically in Zulu by removing all material from the VP-domain.

2.3 Grammatically and pragmatically controlled focus

In Zulu, the default negation strategy involving object marking is not only used when the truth value of the proposition is under discussion. It is also accepted by some speakers as a response to an object questions such as (28a):

(28a) Q: U-John u-thand-a bani?
 AUG-1a.John 1.SM-like-FV 1a.who
 'Who does John like?'

(28b) A: U-John a-ka-**m**-thand-i **u-Mary**.
 AUG-1a.John NEG-1.SM-1.OM-like-NEG AUG-1a.Mary
 'John doesn't like MARY.'

Given my claim that object marking is a sign that the object has been removed from the focus domain in order to mark polarity focus, the use of the strategy in (28b) is surprising at first, because in the answer to (28a), the object clearly presents the new information.

I believe that examples such as (28) provide evidence for a proposal made in Hyman and Watters (1984), according to which negative polarity is *intrinsically* marked as focus in many Bantu languages. "Intrinsic focus" means that focus is not assigned according to a particular discourse situation, but by the grammar; it is "grammatically controlled". Grammatical control of focus is not arbitrary, but reflects "universal tendencies" of focus assignment; "what tends to be semantically in focus comes to be grammatically focused" (Hyman and Watters 1984, note 5). Since polarity focus is the most common interpretation in negative sentences, this focus assignment has become grammatically encoded, and negative polarity is intrinsically associated with focus.

Because intrinsic negative polarity focus reflects the default interpretation of negated sentences, it will in most contexts correspond to the focus assignment determined by the discourse. However, "grammatically controlled" and "pragmatically controlled" focus can dissociate, and a grammatical construction that marks polarity focus may be chosen even if some other element provides the new information in the discourse. An example of this scenario that is discussed by Hyman and Watters (1984) comes from the Grassfield Bantu language Aghem. In Aghem, objects which are not part of the focus appear in a special "out-of-focus" form (which Hyman 2010 calls the "B-form"). Hyman and Watters (1984) and

Hyman (2010) observe that the B-form of the object is obligatory in Aghem in negated sentences, regardless of the focus assignment intended by the speaker in the discourse. This follows from the fact that focus on negative polarity is an intrinsic grammatical feature in Aghem.

I suggest that in Zulu, as in Aghem and other Bantu languages, polarity focus is intrinsic and grammatically controlled in negated sentences. Therefore, the strategy used in negated transitive sentences to mark polarity focus is used even in contexts such as (28), in which the object represents new, nonpresupposed information. While Aghem has a special form that marks "antifocus" directly on the object, Zulu has to remove the object from the focus by dislocating it from the focus domain. For Zulu speakers who accept (28b) as an answer to the object question in (28a), the tension between the grammatical requirement to place focus on polarity and the information structure established by the discourse is resolved in favour of the former.⁴

Since focus on negative polarity is intrinsic, one might expect that the negation strategy with object marking has to be used in all discourse situations in Zulu. However, as it turns out, there exists an alternative negation strategy in Zulu in which no object marker occurs, and in which focus is assigned to the object-NP, or the whole VP. As I show in the next section, this (marked) strategy produces an additional inference, which results from the contrast between what is asserted and what is presupposed by these negated sentences.

3. Negation with an augmented VP-internal object

3.1 A contrastive inference

As noted in the introduction, another way of negating a transitive sentence in Zulu is to simply negate the verb without using an object marker:

(29) U-Sabelo a-ka-theng-anga i-ncwadi.
 AUG-1a.Sabelo NEG-1.SM-buy-NEG.PST AUG-9.book
 'Sabelo didn't buy a BOOK (...but something else).'
 'Sabelo didn't BUY A BOOK (...but did something else).'

(30) U-John a-ka-thand-i u-Mary, u-thand-a u-Susan.
 AUG-1a.John NEG-1.SM-like-NEG AUG-1a.Mary 1.SM-like-FV AUG-1a.Susan
 'John doesn't like MARY, he likes SUSAN.'

(31) U-Sipho a-ka-qed-anga i-sobho kodwa u-qed-e i-nyama.
 AUG-1a.Sipho NEG-1.SM-finish-PST.NEG AUG-5.soup but 1.SM-finish-PST AUG-9.meat
 'Sipho didn't finished the SOUP but he finished the MEAT.'

The negated sentences in (29)-(31) only differ from their affirmative counterparts in that the verb is inflected for negation; in contrast to the default strategy discussed in section 2, no object marker appears. However, examples such as (29) are typically considered as marked, and even rejected by some speakers when offered as the negated versions of the

⁴ A question raised by this analysis is whether the possibility of focus on a dislocated object in Zulu only exists in negative statements where polarity focus is grammatically controlled, or whether this is also possible in affirmative constructions with polarity focus. The answer to this question is currently explored in work by Bloom Ström and Zeller (in progress).

corresponding affirmative sentences. When accepted, speakers typically point out that these sentences trigger a specific inference, namely that the action described by the verb is applied to someone/something other than the referent of the object, or that the subject is engaged in some other activity which is different from the one negated by the sentence. I henceforth refer to this additional interpretation as a "contrastive" inference or implication.⁵ When the contrastive implication is spelled out explicitly, as in (30) and (31), the acceptability judgments improve.

The contrastive inference is already noted in Cope's (1984) Zulu grammar. When describing negation, Cope (1984: 105-6) mentions that "[t]he object concord is used more frequently with negative verbs than with positive verbs" and that "[i]f the object concord is not used, the implication may be 'something else'." Cope provides the following examples to illustrate:

- (32a) A-**ngi-mu-zw-a** **u-mu-ntu**.
 NEG-1S-1.OM-hear-FV AUG-1-person
 'I do not hear the person.'
- (32b) A-**ngi-zw-a** u-mu-ntu, **ngi-zw-a** i-nja.
 NEG-1S-hear-FV AUG-1-person 1S-hear-FV AUG-9.dog
 'I do not hear the person, I hear the dog.'

The same phenomenon is reported for Xhosa by Bloom Ström and Miestamo (forthcoming). With respect to the examples in (33) and (34), in which the negated verb appears without the object marker, they state that "[33] implies that something else is eaten or in this case drunk instead" and that "the example in [(34)] implies that there is something else that you want, rather than tea" (Bloom Ström and Miestamo forthcoming: 16).

- (33) A-**ba-dl-anga** ii-mbotyi, **ba-sel-e** a-ma-nzi.
 NEG-2.SM-eat-NEG.REC AUG-10.beans 2.SM-drink-PST AUG-6-water
 'They did not eat beans, they drank water.'
- (34) A-**ndi-fun-i** i-ti.
 NEG-1S-want-NEG AUG-9.tea
 'I don't want tea.'

[Xhosa; Bloom Ström and Miestamo forthcoming: 16]

Asiimwe (2014) presents data from Runyankore-Rukiga which show that contrastive inferences with VP-internal objects under negation are also attested elsewhere in Bantu:

- (35a) O-mu-**ishiki** ti-a-ri-ku-**ki-shom-a** **e-ki-tabo**.
 AUG-1-girl NEG-1.SM-COP.PROG-INF-7.OM-read-FV AUG-7-book
 'The girl is not reading the (specific) book.'

⁵ I avoid the term "contrastive focus" to describe this phenomenon, as this term is sometimes used in the focus literature to describe the situation in which a focused constituent is contrasted with exactly one discourse-salient alternative (see e.g. Büring 2016: 22).

- (35b) O-mu-ishiki ti-a-ri-ku-shom-a e-ki-tabo.
 AUG-1-girl NEG-1.SM-COP.PROG-INF-read-FV AUG-7-book
 'A/the girl is not reading a/the book (but she is reading or doing something else).'

[Runyankore-Rukiga; Asimwe 2014: 140]

The negation strategy depicted in (35a) involves the use of an object marker. When the object marker is omitted, as in (35b), the negation of the sentence induces a contrastive inference, as indicated in the translation.

Asimwe (2014) claims that the contrastive inference associated with sentences such as (35b) is due to a contrastive focus-feature associated with the object. However, I do not believe that a special feature needs to be stipulated to account for this additional meaning component. Rather, the contrastive inference arises as a natural consequence of the fact that the objects in the above examples are not object-marked. They are therefore located inside the VP, and consequently are either focused, or part of the focus. As I show now, the contrastive interpretation simply follows from the presuppositions associated with sentences which contain narrowly focused constituents in the scope of negation.

3.2 Focus, negation, and presupposition

According to one prominent view, the role of focus is to introduce *alternatives* to what is asserted by a sentence (Büring 2016; Erlewine 2014; Jackendoff 1972; Krifka 2008; Rooth 1985; a.o.). For example, the focus alternatives of a sentence such as (36), with focus on the object *Mary*, are specified in the alternative set in (37):

- (36) John likes [Mary]_F.

- (37) Alternative set of (36):
 {John likes Susan, John likes Bill, John likes Mary, John likes his mother,...}

Focus in (36) is marked by a grammatical feature (the subscript F), which in a language such as English may receive a phonological interpretation in terms of stress or accent (Büring 2016; Jackendoff 1972; Selkirk 1984). The alternative set in (37) is formed by first replacing the F-marked constituent with a variable of the appropriate semantic type, to derive what Rooth (1985: 11) calls the *presupposition skeleton* or "Presup" (Jackendoff 1972; Rooth 1985). The Presup of a sentence such as (36) is (38):

- (38) Presup of (36): John likes x

The alternative set in (37) is then simply the set of all propositions that take the form of the Presup, where x is replaced with an alternative to the focus.

The Presup also determines the *presupposition* of a sentence. According to Rooth (1985), the presupposition of (36) is that the alternatives in (37) are "under discussion" or "under consideration" in the discourse (cf. Jackendoff 1972). A stronger position is advocated by Geurts and van der Sandt (2004), who claim that the presupposition of a sentence is the existential closure of its Presup. According to this view, (36) presupposes that John likes someone, and asserts that it is Mary who he likes:

(39) Presupposition of (36): $\exists x[\text{John likes } x]$ (existential closure of (38))

I adopt Geurts and van der Sandt's (2004) in this paper, mainly because it simplifies the discussion. However, I believe that my analysis is also consistent with the weaker view of presuppositions as sets of propositions "under discussion".

I now turn to the presuppositions of negated sentences. The interaction of negation with focus has been analysed in numerous studies (see e.g. Glanzberg 2009; Herburger 2000; Jackendoff 1972; Kratzer 1989; see also the references and discussion in Fălăuş 2020). One important insight going back to Jackendoff (1972) is that negation typically *associates with focus*, which means that it is not part of the Presup of a sentence. A negated sentence such as (40) therefore has the same presupposition as its affirmative counterpart in (36):

(40) John doesn't like [Mary]_F

(41) Presup of (40): John likes x

(42) Presupposition of (40): $\exists x[\text{John likes } x]$ (i.e. John likes someone)

The idea that negation associates with focus implies that both the affirmative sentence in (36) and the negated version in (40) share the presupposition that John likes someone. Against this background, (40) asserts that the person liked by John is *not* Mary.

There is a debate whether the association of negation with the focus is a semantic or a pragmatic phenomenon (see Fălăuş 2020). Kratzer (1989) is seen as an advocate of the view that association with focus is part of the semantics of negation (which Kratzer analyses as a two-place operator that takes the Presup of the sentence as its restriction). Others (such as Buring 2016) suggest, in contrast, that the tendency of negation to associate with the focus is only a pragmatic inference, as it is only optional – negation can in fact also associate with the presupposition (see section 4 below). No matter which view is adopted, however, it is uncontroversial that the association of negation with focus is the default interpretation of a negated sentence when focus falls on one of its constituents (see Herburger 2000 for discussion).

It is clear that the association of negation with focus is the source of the contrastive inference associated with the negation strategy introduced in section 3.1. The most important difference between this strategy and the default strategy discussed in section 2 is the fact that the former does not include the object marker, and therefore, that the object-NPs in the examples presented above are not dislocated, but have remained in the VP. Given that the VP is the domain of focus in Zulu (see section 2.2), this means that in these sentences, either the object-NP in the IAV-position, or the whole VP, are focused. In (43), which repeats example (29) from section 3.1, I have represented the first possibility by associating the focus feature F with the object:

(43) U-Sabelo a-ka-theng-anga [i-ncwadi]_F.
 AUG-1a.Sabelo NEG-1.SM-buy-NEG.PST AUG-9.book
 'Sabelo didn't buy a BOOK (...but something else).'

Since negation associates with the focus and is not part of the Presup, the presupposition of (43) is (44):

(44) Presupposition of (43): $\exists x$ [Sabelo bought x]

The second possibility, focus on the whole VP, is represented in (45), by F-marking the combination of object and verb. The presupposition of the sentence is given in (46), where the variable P ranges over predicates that apply to Sabelo:

(45) U-Sabelo a-ka-[theng-anga i-ncwadi]_F.
AUG-1a.Sabelo NEG-1.SM-buy-NEG.PST AUG-9.book
'Sabelo didn't BUY A BOOK (but did something else).'

(46) Presupposition of (45): $\exists P$ [P(Sabelo)]

The sentence in (43) with object focus presupposes that Sabelo bought something, while the same sentence with VP-focus in (45) presupposes that Sabelo did something. In both cases, the assertion of the sentence is that Sabelo did not buy a book. It is the effect of contrasting this assertion with the presupposition of a negative sentence with object or VP-focus that Zulu speakers identify as the contrastive inference associated with a negated transitive sentence with a VP-internal object.

3.3 Two types of object focus

It was shown in section 2.3 that Zulu speakers also use the default negation strategy with an object-marked, dislocated object in contexts where focus is on the object in response to a *wh*-question. Given that object focus associated with a VP-internal object produces an additional inference that results from the contrast between the negative assertion and the non-negated presupposition, the question arises why this contrastive inference is not attested when object focus is expressed with the default strategy.

I believe the answer to this question lies in the difference between how object focus is realised in these different negation strategies. I suggested above that negative polarity is intrinsically focused, and that therefore, object dislocation is preferred for some speakers in negated sentences even when the object expresses new information. In such cases, the focus assignment determined by the discourse is in conflict with the syntactic construction, which reflects grammatically controlled polarity focus via object dislocation. In contrast, in negated sentences without object marking, focus on a VP-internal object is determined by the grammatical configuration in which the object appears (the IAV-position inside the VP). I suggest that the absence of a contrastive inference with negated transitive sentences whose objects have been dislocated is because object focus in these constructions is of a different nature than focus associated with a VP-internal object. Only the latter produces a presupposition that gives rise to the contrastive inference discussed in the previous section.

The idea that there are different types of foci which have a different place in the architecture of grammar is not new. One prominent distinction that has been made is that between *pragmatic* and *semantic* focus (Fălăuș 2020; Krifka 2008; see also Kratzer 2004).⁶ Semantic focus contributes to what Kratzer (2004) calls the "descriptive content" of the sentence. It is represented by F-marking, has truth-conditional impact, and is visible to focus-sensitive elements such as *only* (and perhaps negation, if association with the focus is

⁶ Kratzer (2004) does not use the terms "semantic" or "pragmatic" focus, but the criteria she describes closely resemble this distinction.

a semantic property of negation). Pragmatic focus, in contrast, is merely new, non-presupposed information. It relates to the communicative goals of participants, is used in answers to questions, and contributes what Kratzer (2004) calls "expressive" meaning. According to Kratzer (2004), the two types of foci are processed on different tiers of the semantic/pragmatic interpretation system. Pragmatic focus does not affect truth conditions, but affects the appropriateness of utterances in discourse. Its infelicitous use does not produce false statements, but merely leads to incoherent conversation.

I propose that in Zulu, semantic focus must always be "anchored" in grammar. By this I mean that F-marking of a constituent is only possible if the position in which it appears is a [+focus] or "focus tolerant" position (Carstens and Zeller 2020). Consequently, only clefted or VP-internal elements add a Presup and evoke presuppositions as part of the descriptive content of a sentence. In contrast, focus that is associated with dislocated objects in negated sentences can only be pragmatic focus, which is part of the expressive meaning-tier, and not represented by F-marking. Consequently, pragmatically controlled object focus in constructions with grammatically controlled polarity focus cannot produce the contrastive inference associated with negated sentences whose objects are F-marked and assigned semantic focus.

4 Negation as part of the presupposition

Even though negation typically associates with the focus, it can also associate with the presupposition. The relevant reading of a negated sentence is elicited by a negative question such as *Who does John not like?*

In Zulu, a negative question and the corresponding answer are preferably expressed by means of a cleft construction. In the Zulu clefts in (47), the focused constituent is prefixed with a copula and modified by a relative clause. Negation in relative clauses is expressed by means of the prefix *nga-* which follows the relative marker:

- (47a) Q: Ng-[u-bani]_F a-nga-m-thand-i u-John?
 COP-AUG-1a.who REL.1.SM-NEG-1.OM-like-NEG AUG-1a.John
 'Who does John not like?' (lit. 'Who is it that John doesn't like?')
- (47b) A: Ng-[u-Mary]_F a-nga-m-thand-i u-John.
 COP-AUG-1a.Mary REL.1.SM-NEG-1.OM-like-NEG AUG-1a.John
 'It's MARY who John doesn't like.'

In (47), focus on the clefted NPs is indicated by F-marking. In (47b), the focused object is outside the scope of negation; as a result, negation is part of the Presup, and the presupposition of (47b) is (49):

- (48) Presup of (47b): \neg [John likes x]
 (49) Presupposition of (47b): $\exists x[\neg$ [John likes x]]

According to (49), (47b) presupposes that there is someone who John does not like; this presupposition is evoked by the negative question in (47a). (47b) then asserts that this someone is Mary.

Even though the cleft in (47b) is the preferred way of expressing the reading of a negated transitive sentence in which negation does not associate with the focus, a few speakers also accept (with various degrees of willingness) one or both of the two other negation strategies discussed thus far as a response to the question in (47a):

(50) U-John a-ka-**m**-thand-i u-Mary.
 AUG-1a.John NEG-1.SM-1.OM-like-NEG AUG-1a.Mary
 'John doesn't like MARY.'

(51) U-John a-ka-thand-i [u-Mary]_F.
 AUG-1a.John NEG-1.SM-like-NEG AUG-1a.Mary
 'John doesn't like MARY.'

As a reply to (47a), the object in (50) can only express pragmatic focus, because the object marker is present, and the object has been dislocated from VP. In (51), without the object marker, the object has remained inside the VP, and can therefore be F-marked. Both constructions are acceptable (for some speakers) in contexts in which negation does not associate with the focus. What is noteworthy is that speakers who accept (51) as a response to a negative question no longer report the contrastive reading that is otherwise implied with this strategy. This is predicted: in the answer to the question in (47a), negation associates with the presupposition, and there is therefore no contrast between what is asserted and what is presupposed by a negative answer.

5. Negation with augmentless objects

5.1 Augmentless objects as negative polarity items

In the final negation strategy I discuss in this paper, the object is not object-marked (and therefore not dislocated), but realised without its augment (the initial vowel):

(52) U-Sipho a-ka-qed-anga sobho.
 AUG-1a.Sipho NEG-1.SM-finish-PST.NEG 5.soup
 'Sipho didn't finish any soup.'

(53) U-Sabelo a-ka-theng-anga ncwadi.
 AUG-1.Sabelo NEG-1.SM-buy-NEG.PST 9.book
 'Sabelo didn't buy any book.'

(54) A-ngi-bon-anga zi-ndlovu.
 NEG-1S-see-PST.NEG 10-elephant
 'I didn't see any elephants.'

Zulu sentences such as (52)-(54) express what is sometimes called the "absolute negative" (Cope 1984). The augmentless nominals are translated by means of the indefinite determiner *any*, as in (52)-(54), or as 'none at all', as in the following example from Cope (1984: 106):

- (55) A-**ngi-zw-a** **mu-ntu.**
 NEG-1S-1.OM-hear-FV 1-person
 'I don't hear no-one at all, not a soul.'

Augment drop under negation is attested in many Bantu languages (see Halpert to appear for an overview). In Zulu and Xhosa, augmentless nominals are generally accepted in negated sentences, and by some speakers also in other downward-entailing or non-veridical contexts such as polar questions and conditionals (see Halpert 2015; Mzolo 1968; von Staden 1973 for Zulu; Carstens and Mletshe 2016; Visser 2008 for Xhosa). Therefore, the standard view about augmentless nominals in Nguni is that they are negative polarity items (NPIs) (see e.g. Adams 2010; de Dreu 2008; Halpert 2015; Carstens and Mletshe 2016). I adopt this view here.

Another assumption about augmentless nominals in Nguni that I adopt is that they carry intrinsic focus features (see Adams 2010; Carstens and Mletshe 2016; see also Van der Wal and Namyalo 2016 for Luganda). This assumption is consistent with the fact that augmentless objects in Zulu cannot be object-marked and are banned from dislocated positions:

- (56) *A-**ngi-m-thand-i** **mu-ntu.**
 NEG-1S-1OM-like-NEG 1-person
 Intended: 'I don't like anyone.'

[Adams 2010: 42]

- (57) *A-**ngi-yi-theng-anga** **nyama.**
 NEG-1S-9.OM-buy-NEG.PST 9.meat
 Intended: 'I didn't buy any meat.'

Adams (2010) and Carstens and Mletshe (2016) argue that the intrinsic focus feature associated with augmentless objects is the reason for the impossibility of object marking and dislocation observed in (56) and (57) (however, see Halpert 2015; Pietraszko 2020; and below, for an alternative explanation in terms of case licensing).

Given the analysis of focused objects under negation that I presented in section 3, the fact that the augmentless nominals in (52)-(55) are VP-internal and intrinsically focused gives rise to the expectation that these sentences also come with a contrastive inference of the kind discussed above. However, this is not the case. While the equivalent of (53) with the augmented object *incwadi* implies that there is something that Sabelo bought (see (29) in section 3.1), no such inference is reported in relation to (53), where the object appears without its augment. The question then is why the contrastive inference associated with focused objects under negation disappears when the object is an NPI.

5.2 NPIs, focus, and alternative sets

My answer to the above question is based on the theory of NPIs presented in Lahiri (1998).⁷ According to Lahiri, NPIs are semantically indefinites, but make an additional contribution to the interpretation, which is closely related to focus. As will become clear below, the specific

⁷ Lahiri's (1998) account is related to the analysis of NPIs in terms of "domain widening" presented in Kadmon and Landman (1993). Other Alternative Semantics-versions of the "domain widening"-analysis are proposed in Krifka (1995) and Chierchia (2006).

focus semantics of NPIs postulated by Lahiri explains the absence of the contrastive inference with NPI-objects in Zulu. I first describe some details of Lahiri's proposal and then address its implications for the analysis of the Zulu data.

There are three important ingredients of Lahiri's (1998) analysis of NPIs. The first is his assumption that all indefinites are *cardinality predicates*, represented by the predicate **one**, which is the weakest of all predicates and "true of anything that contains at least one atomic part" (Lahiri 1998: 82). A sentence such as (58) is therefore translated as (59):

(58) John owns a book

(59) $\exists x[\mathbf{one}(x) \ \& \ \text{book}(x) \ \& \ \text{John owns } x]$

Since NPIs are also indefinites, a negative sentence such as (60) is translated as (61):

(60) John doesn't own any book

(61) $\neg \exists x[\mathbf{one}(x) \ \& \ \text{book}(x) \ \& \ \text{John owns } x]$

The assertion represented in (61) is identical to the assertion of the same sentence with the indefinite *a book* as the object. However, according to the second major feature of Lahiri's (1998) theory, the semantics of an indefinite functioning as an NPI includes an additional component, which is linked to focus: it induces a set of *alternative propositions*. Importantly, these propositions are derived by replacing the cardinality predicate **one** with alternative, contextually salient, predicates. Therefore, the alternative set of the sentence in (60) includes propositions of the form in (62) (cf. Lahiri 1998: 96):

(62) $\neg \exists x[P(x) \ \& \ \text{book}(x)] \ \& \ \text{John owns } x]$

(63) Alternative set of (60):

{John doesn't own a new book; John doesn't own an expensive book; John doesn't own two books; ...}

In (62), **one** has been replaced by the variable P, which stands for alternative properties which are salient in the discourse. Note that (62) is the Presup of (60) (to use Rooth's (1985) term), and recall that a Presup is formed by substituting a variable for the focus. This means that the specific lexical contribution of an NPI is the equivalent of placing focus on the (morpho-syntactically unrealised) cardinality predicate associated with an indefinite. Furthermore, note that the Presup in (62) includes the negation, which means that with NPIs, negation does not associate with the focus.

Before I return to the focus interpretation of augmentless objects in Nguni, let me illustrate the third important aspect of Lahiri's (1998) account, as it completes his analysis of NPIs. Lahiri suggests that NPIs introduce not only alternatives, but in addition, contribute a *scalar inference* similar to the implicature associated with the scalar focus particle *even*. The focus marker *even* introduces the conventional implicature that the asserted content of an utterance is less likely than any of a set of alternatives (see e.g. Erlewine 2014; König 1991; Rooth 1985):

(64) John even owns [a yacht]_F

(65) Alternative set of (64):
 {John owns a car, John owns a house, ...}

(66) Implicature of (64):
 That John owns a yacht is less likely than John owning a car, or a house, or ...

Similarly, according to Lahiri's analysis, a negated sentence such as (60) introduces the conventional implicature that (61) is less likely than any of the alternatives in (63). (60) asserts that John doesn't own a book, but adds the conventional implicature that John not owning *one* book (with *one* being the most general property) is less likely than him owning a book with a more specific, contextually determined property. According to this analysis, the meaning of (60) is therefore similar to what is expressed by a sentence such as (67) (with focus on *one* understood as evoking alternative cardinal and non-cardinal predicates):⁸

(67) John doesn't own even [one]_F book.

Lahiri's (1998) theory has two important implications for the analysis of Zulu. First, in Lahiri's account, the propositions in the alternative set of a sentence with an NPI are derived by replacing the cardinality predicate with an alternative property. This is tantamount to saying that what is focused is not the whole NPI, but only the cardinality predicate **one** associated with indefinites. And second, as (62) shows, in sentences with NPIs, negation is not associated with the focus, but part of the Presup; the elements of the alternative set in (63) are therefore negated propositions. If we adopt Lahiri's NPI-analysis for Zulu, then it follows that negated sentences with augmentless objects do not produce the contrastive inference associated with negated sentences with augmented objects. Recall that this inference was the result of a contrast between the presupposition (e.g. "Sabelo bought something") and the assertion of a negative transitive sentence (e.g. "Sabelo didn't buy a book."). But the presuppositions associated with a sentence such as (53) (repeated in (68)), with an NPI-object, are different. What is under discussion in (68) is not Sabelo's buying something (focus on the object NP; negation associates with focus), but rather Sabelo *not* buying books *of any kind or number* (focus on **one**; negation part of the presupposition):

(68) U-Sabelo a-ka-theng-anga ncwadi.
 AUG-1.Sabelo NEG-1.SM-buy-NEG.PST 9.book
 'Sabelo didn't buy any book.'

(69) Assertion of (68): $\neg \exists x[\mathbf{one}(x) \ \& \ \text{book}(x) \ \& \ \text{Sabelo bought } x]$

(70) Presup of (68): $\neg \exists x[P(x) \ \& \ \text{book}(x) \ \& \ \text{Sabelo owns } x]$

⁸ Lahiri's analysis is based on Hindi, in which NPIs overtly incorporate the focus marker *bhii*, 'even', e.g. 'any man' translates as *ek bhii aadmii*, which literally means "even one man" (Lahiri 1998: 91). Interestingly, as noted in Devos (to appear), Nash (1993) provides examples which show that in the Bantu language Ruwund, certain NPIs are formed through the addition of the numeral meaning 'one' and a particle meaning 'even':

(i) Nà-mù-men-ààp âap kapamp kàmwîng.
 1S.PST-1.OM-see-NEG even 12.time 12.one
 'I never saw him.' (lit.: 'I didn't see him even one time.')

[Ruwund; Nash 1993: 481, via Devos (to appear)]

- (71) Alternative set of (68):
 {Sabelo didn't buy a new book; Sabelo didn't buy an expensive book; Sabelo didn't buy two books; ...}
- (72) Implicature of (68):
 That Sabelo didn't buy "any one" book is less likely than Sabelo buying a new book, or an expensive book, or two books...

The analysis sketched in (69)-(72) correctly captures the "absolute negative"-meaning reported for negated transitive sentences with augmentless objects in Zulu. But in addition, it also explains why no contrastive inference is associated with this negation strategy.

5.3 Augment drop and NPI semantics

A question raised by my explanation is how Lahiri's semantic analysis of NPIs maps onto the morpho-syntax of NPIs in Zulu. While I cannot provide a fully worked-out answer to this question, I will offer some speculations.

Lahiri's account is based on the idea that the semantics of indefinites includes the generic cardinality predicate **one**, and the alternative propositions associated with the use of NPIs are construed from a Presup in which this predicate is replaced by a variable. While the morpho-syntax of NPIs in Zulu does not include an overt element corresponding to **one**, the existence of this cardinality predicate in the semantic representation can be linked to the fact that Zulu NPIs are formed by dropping the augment of the nominal. The Nguni augment is often analysed as a determiner-like element (see e.g. Adams 2010; de Dreu 2008; Visser 2008). Even though its presence is compatible with both a definite and an indefinite reading, the augment is arguably the host of the feature [+definite] in definite NPs. In the absence of the augment, an NP cannot be interpreted as definite (unless there is a definite demonstrative determiner). The omission of the augment can therefore be viewed as a grammatical means of marking an NP as "radically" indefinite, thereby guaranteeing the presence of the cardinality predicate **one** in the semantic representation.

The other important component of the semantics of NPIs is the focus on the cardinality predicate, which produces the alternative set required for the scalar interpretation of NPIs. It is difficult to see how this focus assignment, and the scalar ranking of the alternatives, can be linked to the morpho-syntax of augmentless nominals in Zulu. This aspect of the semantics may simply have to be stipulated as part of the lexical properties of NPIs in Bantu (and potentially other languages); or perhaps it is associated with abstract grammatical features that are added whenever a "radically indefinite" NP appears in the scope of negation. With respect to the latter possibility, it is worth mentioning the link between augmentless nominals and structural case that has been established in work by Halpert (2012, 2015) (see also Pietraszko 2020 for a recent defence of Halpert's analysis). Halpert argues that the augment in Zulu is a marker of inherent case. Therefore, when the augment is dropped, the augmentless NP needs to be independently licensed via structural case. Since according to Halpert's analysis, structural case can only be assigned to VP-internal material in Nguni, it follows that augmentless objects are only allowed in VP-internal positions. The idea that augmentless objects in Zulu are licensed by structural case is relevant in light of the fact that there are languages that show a close link between

structural case and focus. In Korean, for example, nominative and accusative case particles are also used to mark focus on NPs (Hong 2005; Schütze 2001). An interesting hypothesis would be that in the Nguni languages, structural case assignment simultaneously leads to grammatical focus marking of the NPI, which is then semantically expressed as focus on the cardinality predicate. According to this idea, dropping the augment in Zulu would have two consequences. The augmentless NP is obligatorily marked as indefinite, and focus is simultaneously assigned to the cardinality predicate via structural case licensing of the NP.

Admittedly, the details of this hypothesis will have to be worked out as part of a more comprehensive study of the relation between the structure and the meaning of augmentless nominals in Nguni. However, as far as I am aware, no existing analysis so far has even attempted to link the absence of the augment to focus assignment and the semantics of NPIs. I hope that my tentative suggestions are a first step towards such an analysis.

6. Conclusion

I have discussed four different strategies that are used in Zulu to negate transitive sentences, and I have described the specific information-structural properties associated with each strategy. My discussion has shown that the focus semantics of each strategy can be derived, without any major additional assumptions, on the basis of established theories about the grammar of focus and negation. The theories I have relied on concern in particular the morpho-syntactic expression of focus on objects, predicates, and polarity in Nguni and other Bantu languages; the association of negation with focus and the resulting presuppositions of negative statements; and the focus semantics of indefinite NPs that function as NPIs. I conclude that my paper has provided evidence both for the validity of existing, Nguni-specific proposals about the syntax of focus marking and for the universality of semantic theories about the interaction between negation and information structure in natural language.

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