

## Micro-typological Covariation of Negation and Focus Marking Morphology in Bantu Languages

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**Abstract:** This paper investigates the typological correlation between negation marking and focus marking based on the ‘Bantu Morphosyntactic Variation Database’ (Marten et al. 2018) compiling linguistic data obtained through 142 parameters to capture morphosyntactic microvariation in Bantu languages. Based on the inter-parametric analysis on the correlation between four parameters related to main clause negation marking and one parameter related to morphological focus marking, two typologically significant correlations are established: 1) languages with a postverbal strategy for main clause negation highly tend to have a morphological focus marker, and 2) languages lacking a morphological means of focus marking tend to adopt the preinitial strategy for main clause negation. These two tendencies can be explained from three perspectives, namely, 1) focus as inherent nature of (pragmatic) negation and the incompatibility of preinitial negation with an additional morphological focus marker, 2) the grammaticalisation path from a locative as a focus marking element to postverbal negation particle, and 3) ‘focus contrast’ as a structural requirement in the postverbal negative particle constructions.\*

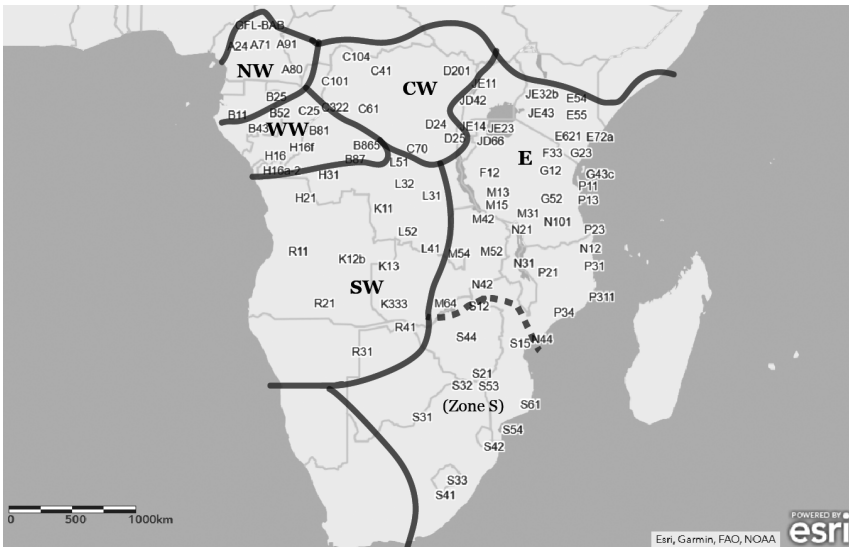
**Key words:** Bantu languages, Morphosyntax, Microvariation, Focus, Negation

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## 1. Introduction

This study investigates typological correlations of structural micro-parameters related to negation and focus marking morphology in Bantu languages. It is based on the large-scale Bantu Morphosyntactic Variation Database (BMV, Marten et al. 2018), which consists of the values of 142 parameters aiming to capture a wide range of morphosyntactic microvariation of Bantu languages (Guérois et al. 2017) and contains data from 146 sample languages in total. The Bantu languages are the largest language group in the Niger–Congo language phylum, including approximately 550 languages (Hammarström 2019: 17), which are conventionally identified by the referential code system originally established by Guthrie (1967–1971) and later updated by Maho (2009). The system classifies Bantu languages according to 16 geographical zones using an alpha-numerical code with letters indicating the zone and numbers the languages and language groups within the zone – for example M42 refers to Bemba, spoken in Zambia. Map 1 shows the geographical distribution of the sample languages, as well as the five groups of the phylogenetic classification in Grollemund et al. (2015), namely i) North-western (NW; zones A and B10–30), ii) West-western (WW; B40–80 and some adjacent H languages), iii) Central-western (CW; C and D10–30), iv) South-western (SW; L, K, R, and some adjacent H languages), and v) Eastern (E; remaining zones and groups



Map 1. Geographical distribution of the sample languages in BMV (plotted with the updated Guthrie code by Maho 2009) and the boundaries of the phylogenetic groupings of Grollemund et al. (2015)<sup>1</sup>

<sup>1</sup> The base map showing geographical plotting of the sample languages with Guthrie code was generated on ArcGIS online (<https://www.arcgis.com/index.html>).

including zone S as a genetically highly homogeneous cluster). The North-western group is structurally the most diverse group reflecting the longer time-depth of Bantu Languages in the area, as well as a situation where a number of languages, including non-Bantu Niger-Congo languages, have historically been in contact. Eastern languages are regarded as well retaining macro-level structural similarities compared to the other groups and hence have often been treated as an ideal testing ground for micro-typological investigation (cf. Marten et al. 2007).

Both negation and focus in Bantu have been studied extensively, and previous studies have shown the morphosyntactic complexity of these two domains in the language group. Negation is marked, for example, through verbal affixes in different positions in the morphological template, through negative particles, through auxiliaries, through tonal modification, and through a combination of different strategies (cf. Kamba-Muzenga 1978, Devos and van der Auwera 2013, Guérois et al. to appear). Similarly, focus can be expressed through verbal inflection (notably the so-called conjoint/disjoint distinction, cf. Van der Wal and Hyman 2018), prosody, word order, or focus particles (Morimoto 2017, Downing and Marten 2019). However, while these two phenomena have been studied in isolation, the present study specifically investigates the interaction of negation and focus as part of overall patterns of morphosyntactic variation in Bantu. Conceptually, the link between negation and focus has often been made, e.g. by Hyman and Watters (1984) and Hyman (1999) for Bantu, and by Childs (1995) for Kisi, a related Niger-Congo language, who show that negation and focus often behave the same in various morphosyntactic contexts (for further discussion, see 2.4). Our analysis probes this link with reference to the wider set of data available in BMV. Based on our investigation of the interaction of different parameter values, we propose that languages with specific negation strategies, which are relatively marked from the point of view of cross-Bantu typology, tend to have a morphological focus marker (MFM), while those without an MFM tend to retain relatively unmarked strategies of negation marking. The results of the parametric survey based on BMV show that not only are negation and focus related in terms of their function, but there is also a correlation between the morphosyntactic expression of the two categories. We will show how this correlation gives rise to a specific view of the grammaticalisation of negation and focus in Bantu.

The paper is organised as follows. In Section 2, we summarise background information of the methodology adopted and the topics dealt with in this paper. Section 3 presents several sets of parameter-value combinations in BMV that suggest typologically significant correlations between negation and focus marking, and we propose several typological generalizations based on the correlation. In Section 4, we discuss the background typological principles that explain these micro-typological generalizations and illustrate how negation and focus markers are intertwined in the grammatical system of specific sample languages. Section 5 concludes the paper with a discussion of further research questions suggested by the results of this study.

## 2. Previous studies

### 2.1. The study of morphosyntactic microvariation as linguistic micro-typology

The study of morphosyntactic microvariation has received increasing attention over the last two decades or so. Typological and generative work was originally concerned mainly with language universals and universal grammar, and large-scale typological variation, such as basic morphological types or the ‘pro-drop’ parameter. However, variation of the world’s language is more fine-grained than can be captured through large-scale comparison, and a number of studies have shown the high degree of morphosyntactic variation found among closely related languages. These studies are concerned with microvariation, in part building on older comparative traditions and dialect studies (e.g. Cornips and Corrigan 2005, Biberauer 2008, Siemund 2011).

Within Bantu studies, a long tradition of comparative-historical linguistics exists, dating back to the earliest Western analyses of Bantu languages in the 19th century (e.g. Bleek 1862, Meinhof 1899). More recently a number of morphosyntactic constructions have been analysed from a comparative perspective – including, for example, relative clause constructions (e.g. Nsuka Nkutsi 1982, Zeller 2004, Henderson 2006), applicatives (Ngonyani 1996, Mchombo and Firmino 1999, Ngonyani and Githinji 2006, Pacchiarotti 2017), and locative constructions (Gregoire 1975, Demuth and Mmusi 1997, Marten 2006, Diercks 2011). However, these studies were restricted to investigating only one specific morphosyntactic domain and so provide only a small snapshot of the overall variation found in the family. A more comprehensive approach to morphosyntactic microvariation in Bantu was developed in Marten et al. (2007) and subsequent work (e.g. Bax and Diercks 2012, Petzell and Hammarström 2013, Zeller and Ngoboka 2015, Van der Wal 2018, Shinagawa and Abe 2019, Bloom Ström et al. to appear), where a large number of Bantu languages are compared with respect to a number of morphosyntactic features. The current study is situated within this general research approach and especially focuses on covariation between a set of selected features. This involves comparing two or more features and establishing any distributional or implicational relations between them. These relations, in turn, can be used to develop theoretical analyses which explain their existence through underlying (formal, cognitive, communicative, etc.) constraints. The approach follows well-established typological practice, but is here applied to a sample of closely-related languages, thus establishing a micro-typology of the relevant features. The specific features used in this paper relate to negation on the one hand, and morphological focus marking on the other, and will be discussed in more detail in the following sections.

### 2.2. Negation marking in Bantu

#### 2.2.1. Overview of negation marking in Bantu

One of the geographically wide-spread morphosyntactic characteristics in Bantu is the existence of two distinct strategies for negation marking depending on the clause type (see e.g. Kamba-Muzenga 1978: Ch. 1, Güldemann 1999: 545, Nurse

and Philippson 2003: 7). Meeussen (1967: 114) postulates that in Proto-Bantu, negation for main clauses is achieved through a negation marker which precedes the subject marker, i.e., negation is marked in the preinitial slot, while in subordinate clauses including infinitive, relative, and subjunctive clauses, the negative marker follows the subject marker, i.e., negation is marked in the postinitial position. Each slot and its relative order in the general morphological template of the Bantu verb is given in (1).

- (1) Bantu verbal morphological template (cf. Meeussen 1967: 108–111, Rose et al. 2002: 1–4)

|            |                 |             |     |    |      |       |           |
|------------|-----------------|-------------|-----|----|------|-------|-----------|
| 1          | 2               | 3           | 4   | 5  | 6    | 7     | 8         |
| Preinitial | SM<br>(Initial) | Postinitial | TAM | OM | Stem | Final | Postfinal |

This complementary negation system is still widely attested in many present-day Bantu languages. In Swahili (G42), the preinitial *ha-* is used for the negation of independent main clauses as in (2a), while the postinitial *si-* marks negation in subjunctive forms as in (2b).

- (2) Swahili [G42]  
 a. **ha**-tu-end-i  
 NEG(II-2-a)-SM1PL-go-PRS.NEG(II-2-c)  
 ‘We do not go.’  
 b. tu-**si**-end-e  
 SM1PL-NEG(II-2-b)-go-SBJV  
 ‘Let us not go.’

**2.2.2. Preinitial complex vs. postinitial complex**

Expanding on this positional and functional dichotomy, Güldemann (1999) further proposes two macro-groupings of negation marking strategies for the typology of negation in Bantu, i.e., a ‘preinitial complex’ and a ‘postinitial complex’.

Table 1. Güldemann’s (1999) cross-Bantu classification of negation marking strategies: preinitial complex (grey shaded) and postinitial complex (striped)

|                 |   |                |
|-----------------|---|----------------|
| I. Periphrastic | II. Grammaticalised                     |                |
|                 | 1. Function Word                        | 2. Affix       |
|                 | a. Initial particle/proclitic           | a. Preinitial  |
| Auxiliary       | _____                                   | b. Postinitial |
|                 | c. Final particle/ Enclitic (Postfinal) | c. Final       |

The ‘preinitial complex’ (marked with grey shading in Table 1) consists of preinitial affixes, as illustrated in (2a), and proclitics and initial particles as illustrated in (3).

- (3) Preinitial complex, Initial particle (II-1-a): Mbukushu [K333] Fisch (1998: 101)

**Mbadi**                    na-mu-dimuk-a  
 NEG(II-1-a)    SM1SG.PRS-OM1-know-F  
 'I do not know him'

On the other hand, the 'postinitial complex' (marked with striped cells in Table 1) includes periphrastic negation, which is typically expressed by an auxiliary verb as in (4), as well as postinitial affixes as illustrated in (2b) (see 2.4 for further explanation of the relatedness of each group).

- (4) Postinitial complex, Periphrastic (I): Chindamba [G52] Edelsten and Lijongwa (2010: 111)

Ndembo ka-**lem**-a                    ku-yend-a  
 9.elephant SM1.PRF-refuse-F    INF-go-F  
 'The elephant has not gone.' < 'The elephant has refused to go.'

According to Güldemann (1999: 556), the postinitial complex is the most frequent strategy for negation of non-main clauses, not only as a general tendency in Bantu, but as a morphosyntactic architecture of individual languages. On the other hand, it 'is the marked strategy in the functional context of a finite declarative main clause', whose unmarked strategy for negation is the preinitial complex.

### 2.2.3. Postverbal negative particles

The remaining strategies in Table 1 (unmarked cells) utilise the final or postfinal position. The former (II-2-c) is a verb-internal modification and widely attested as part of multiple negation marking rather than as a sole negative exponent as illustrated in (2a), where negation is expressed through the combination of the preinitial prefix *ba-* and the final *-i* (see 3.2.2 for further discussion). As for the final particle/enclitic (II-1-c), Devos and van der Auwera (2013) show how it is related to the 'Jespersen's cycle' (cf. Jespersen 1917, Dahl 1979), a process of introducing a secondary (and possibly tertiary and even quaternary) negation marker initially for the purpose of pragmatic enforcement which then develops into an obligatory marker with or without loss of the original negator. Based on their cross-Bantu survey, Devos and van der Auwera (2013: 214–215) show that the postverbal negation particles (II-1-c) are typically introduced through this process and about one third of their 100 sample languages have obligatory non-emphatic postverbal negative particles. They also propose three common grammaticalisation sources of such particles, namely i) negative words, ii) possessive pronouns, and iii) locative pronouns, which are illustrated in (5), (6), and (7), respectively.

- (5) Tumbuka [N21] Young (1932: 140, cited in Devos and van der Auwera 2013: 233)

chara kuti                    n-ku-ku-pulik-a                    **chara**  
 no    NEG(II-1-a)    SM1SG-PROG-OM2SG-hear-F    NEG(II-1-c)  
 'No, I do not hear you.'

- (6) Kete [L21] Kamba-Muzenga (1980: 147, 117, cited in Devos and van der Auwera 2013: 246)  
 ká-tsa-tánd-**end** cf. iyimbund yend  
 NEG(II-2-a)-FUT-burn-NEG(II-2-c) 9.hip 9.POSS.1  
 ‘S/He will not burn.’ ‘his hip’
- (7) Kongo [H16h] Bentley (1887: 599, cited in Devos and van der Auwera 2013: 241)  
 kiele ko kwame **ko**  
 NEG(II-2-a).1SG.be.PRF 17.LOC 17.POSS1SG NEG(II-1-c)  
 ‘I have not been there.’

We will return to the issue of grammaticalisation paths in 2.4 and 4.2 as it is essential to explain the interrelation between verb-external negation (I and II-1) and morphological focus marking as suggested by Devos and van der Auwera (2013: 250–251).

### 2.3. Focus marking in Bantu

The study of focus marking strategies has been one of the central issues of Bantu morphosyntax for more than a couple of decades, with increasing scholarly interest, for example, in the relation to prosody and word order (Zerbian 2006) or the conjoint/disjoint distinction (Van der Wal and Hyman 2018). Bantu languages display a rich array of focus marking, and information structure permeates virtually all areas of grammar. Nurse (2006) investigates various examples of focus marking strategies in a wide range of Bantu languages and identifies four common types of focus marking patterns found in Bantu, which are briefly explained with examples in the following sections.

#### 2.3.1. Prosodic strategy: metatony

Metatony is found in a number of Western Bantu languages of Zones A–D20 (Nurse 2006: 192) which employ prosody to mark focused elements. In example (8b), the verb final high tone on *bá-mandá* ‘(women) buy’ indicates that the following object *mabato* ‘clothes’ is focused, contrasting with the predicate focus form without a final H in (8a).

- (8) Duala [A24] Nurse (2006: 192)  
 a. bitó bá-manda vs. b. bitó bá-mandá mabato  
 women SM2-buy women SM2-buy clothes  
 ‘Women [buy]<sub>F</sub>’ ‘Women buy [clothes]<sub>F</sub>’<sup>2</sup>

While this verb-final H tone can be regarded as syntactically conditioned by the presence of a postverbal element in many cases (cf. Costa & Kula 2008), this is not a necessary condition as evidenced in (9), where the realization of the verb-final H

<sup>2</sup> A focused element is hereafter marked by the bracket ([ ]<sub>F</sub>) if it is explicitly indicated in the source.

is independent from the mere presence of a postverbal element.

- (9) Lega [D25] Meeussen (1971), cited in Hyman (2018: 108)  
 a. be-ko-bolótá                    †mózígi vs. b. be-ko-bolota                    tɔŋgo  
     SM2-PROG-pull rope                    SM2-PROG-pull also  
     ‘They are pulling the rope’                    ‘They are pulling also’

### 2.3.2. Syntactic strategy: IAV position

The ‘Immediate After the Verb (IAV)’ position shows that focus can also be encoded by syntactic position, as in many Bantu languages, IAV is the most typical position reserved for focused elements. In Aghem, the IAV position is reserved not only for focused objects and adverbial constituents as in (10a), but also focused subjects can be moved to the position, leaving an expletive or dummy subject in the preverbal position as in (10b).

- (10) Aghem [Grassfield] Hyman and Watters (1984: 235, 238): IAV position  
 a. ì mò zì né bé-<sup>1</sup>kó  
     I PST1 eat today fufu  
     ‘I ate fufu [today]<sub>F</sub>’  
 b. à mò zì mùò bé-<sup>1</sup>kó né  
     DS PST1 eat I fufu today  
     ‘[I]<sub>F</sub> ate fufu today’ [DS = dummy subject]

### 2.3.3. Verbal inflection: CJ/DJ distinction

The conjoint/disjunct (CJ/DJ) distinction shows that focus may also be expressed through a combination of tonal, syntactic, and morphological operations as part of verbal inflectional paradigms. CJ is a verbal form that obligatorily cooccurs with a postverbal complement,<sup>3</sup> which is typically focused (cf. IAV effect in 2.3.2). On the other hand, a DJ form, which may or may not be morphologically and/or tonally more marked than CJ, tend to be specifically used in clause final position and thus typically regarded as a predicate focus form. In Bemba, the distinction is manifested through morphological operation in the past tense, i.e., selection of *á-* vs. *á’/h-* in the TAM slot, as well as tonal modification as illustrated in (11).

- (11) Bemba [M42] Kula (2018: 278): CJ/DJ  
 a. Bùshé bàmàyó bá-á-fik-ílé mwàkà nshí?  
     Q 2.mother SM2-PST4.CJ-arrive-PST4 3.year what  
     ‘What year did mother arrive?’

<sup>3</sup> Unlike the examples in (11), it is generally accepted that there is a cross-Bantu tendency of asymmetry of markedness between DJ, which tends to be morphologically marked, and CJ, which is less marked. For example, in her micro-parametric cross-Bantu survey of the CJ/DJ distinction, Van der Wal (2018: 33) shows that only DJ is morphologically marked in 5 languages out of 11 sample languages.



- b. Bùshé bàmàyó bá-á<sup>1</sup>lí-fík-<sup>1</sup>ílé?  
 Q 2.mother SM2-PST4.DJ-arrive-PST4  
 'Did mother arrive?'

#### 2.3.4. Morphological strategy: MFM

MFM expresses focus simply through morphological means. For example in Kĩitharaka, a focused element, be it finite verb or nominal argument, is marked by the proclitic *n-*.

- (12) Kĩitharaka [E54] Abels and Muriungi (2008: 690): Proclitic
- a. Maria n-a-gũr-ir-e î-buku  
 1.Maria FOC-SM1-buy-PRF-F 5- book  
 'Maria [bought]<sub>F</sub> a book.'
- b. N-Aana a-gũr-ir-e î-buku  
 FOC-1.Ana SM1-buy-PRF-F 5-book  
 '[Ana]<sub>F</sub> bought a book.'

These examples show the complexity and richness of the focus marking system in Bantu, which employs prosodic, morphological and syntactic means, and often a combination of different marking strategies. Due to our concern with structural strategies of focus marking which are clearly observable at a morphosyntactic level, we concentrate on morphological focus marking by a focus particle, about which we have a set of reliable data in BMV.

#### 2.3.5. Types of focus: quality and domain

Apart from the structural aspects of focus marking, we should briefly mention the terminology for focus related concepts used in this paper. We essentially follow Gũldemann's (2003) terminology, which, following Dik's (1997) conceptualisation, consists of terms indicating the quality of focus on the one hand and the domain of focus on the other. The subcategorization of focus quality includes, among others, assertive focus (prominence for filling an information gap), contrastive focus (prominence for contrastive information), and truth-value focus. On the other hand, terms related to the focus domain include term focus (to a referent of nominal arguments), predicate or verb focus (to a lexical content of a predicate or verb), and operator focus (to various predicate operators including TAM). Since the present study specifically investigates the interrelation between morphological aspects of focus marking and main clause negation, which is principally a predicate-related operation, we are mainly concerned with predicate focus rather than term focus, and with assertive and truth-value focus rather than other constituent-specific types of focus.

Before discussing results from our survey, we will provide some background information of what has been discussed in the Bantu linguistics literature on the interaction between focus and negation in the next section.

## 2.4. Interaction between negation and focus

### 2.4.1. Inherently focused categories and focus-related processes

The relation between negation and focus has often been noted in Bantu languages. Hyman and Watters (1984) propose that information structure is grammaticalised in different ways, reflecting the contrast between conceptually marked vs. unmarked categories; e.g., the marked value of polarity is negative (i.e., compared to unmarked affirmative), making negation inherently focused. Other marked values include imperative (and sometimes subjunctive) as marked mood, progressive as marked aspect, and perfect as marked tense, etc (1984: 262–263). In their analysis, these inherently focused categories are associated with the grammatical focus feature [+F], which may in turn block other focus related operations. For example, in Haya, tonal reduction (TR) is a de-focusing operation which occurs typically when a (high toned) predicate is followed by a postverbal constituent, marking the predicate as ‘out-of-focus’ (13b). However, TR does not apply if the verb contains an inherently focused category such as negation, as illustrated in (13c).

- (13) Haya [JE22] (Hyman and Watters 1984: 260, Hyman and Byarushengo 1984: 96)
- |             |             |       |                 |       |
|-------------|-------------|-------|-----------------|-------|
| a. ba-kóm-a | b. ba-kom-a | káto  | c. ti-bá-kom-a  | káto  |
| SM2-tie-F   | SM2-tie-F   | Kato  | NEG-SM2-tie-F   | Kato  |
| ‘They tie’  | ‘They tie   | Kato’ | ‘They don’t tie | Kato’ |

In (13a) the high tone of the verb *-kóma* ‘tie’ remains part of the verb form, which is in a predicate focused form. In (13b), the high tone disappears, due to TR, as the verb is followed by a postverbal constituent and is out of focus. In contrast, TR does not occur in (13c) because negation is inherently focused and thus blocks TR as a de-focusing operation.

### 2.4.2. Pragmatic vs. semantic functions of negation

A more detailed analysis of the relation between negation and focus in Bantu is developed by Güldemann (1996, 1999). As noted in Section 2.2.2 above, Güldemann (1999) distinguishes between two main negation types in Bantu – a preinitial and a postinitial complex. Based on prototypical functions associated with the two negation types, Güldemann (1999) proposes that the two different structures result from two different grammaticalisation paths. Preinitial negation is typically grammaticalised from an element bearing pragmatic illocutionary force of metalinguistic negation, such as a negative illocutionary particle, followed by a finite dependent verb form. For example, according to Nurse (2008: 181, 195), the preinitial negative marker *si-* in Gogo can be regarded as historically derived from the negative copula *\*tí*, thus from the metalinguistic negative construction ‘It is not that...’, as illustrated in (14).

- (14) Gogo [G11] (Nurse 2008: 195)
- |               |                   |
|---------------|-------------------|
| a. ku-gul-ire | b. si-ku-gul-ire  |
| SM1PL-buy-PST | NEG-SM1PL-buy-PST |
| 'We bought'   | 'We didn't buy'   |

In contrast, postinitial negation typically results from a negative periphrastic construction. For example, as Heine and Dunham (2010) explain, the infinitive negation marker *to-* in Swahili was grammaticalised from the lexical verb stem *-toa* 'put out, remove' through a process in which it was desemanticised and decategorised as a pure negator of a following infinitive complement, as schematised in (15b).

- (15) Swahili (Heine and Dunham 2010: 42–43, Ashton 1947: 279)
- |  |
|--|
| a. Wengi huwa na desturi ya kutoandika majina yao halisi...    |
| wa-ingi hu-wa na desturi ya ku-to-andika                       |
| PPx2-many HAB-be with 9.custom 9.of INF-NEG-write              |
| ma-jina yao halisi   |
| 6-name 6.their genuine   |
| 'Many people have a custom of not writing their real names...' |
| b. ku-toa ku-fanya > ku-toa-fanya/ku-to-ku-fanya > ku-to-fanya |
| INF-remove INF-do (intermediate forms) INF-NEG-do              |

These two different grammaticalisation paths are linked to a difference in the typical communicative function associated with the two types. As Güldemann (1999: 570–576) argues, preinitial negation is more strongly associated with metalinguistic, illocutive negation, i.e., with functions such as correcting or contradicting an assumption which the speaker assumes is part of the common ground (cf. Horn 1989). On the other hand, postinitial negation is more strongly associated with semantic or descriptive negation, which asserts a particular state of affairs, but does not necessarily carry pragmatic force. In terms of their relation to focus, metalinguistic negation carries the main assertive force of the utterance and so is less compatible with other marking of focus in the same utterance. On the other hand, semantic negation, which typically does not carry illocutionary force, is more compatible with independent focus marking within the same utterance than metalinguistic negation. The relation between the two structural types and corresponding functional features developed by Güldemann (1999) will provide a foundation for the further discussion of the micro-typological correlation between morphological focus marking and negation in 4.1 and in 4.3.

### 2.4.3. Negative particles and focus marking effect

A different aspect of the relation between negation and focus is discussed in Devos and van der Auwera's (2013) comparative study of negation in Bantu, where they point out that in a number of languages of zone H and L, negation is marked by a grammaticalised locative (class 17) possessive pronoun, as for example in Kwezo in (16).

- (16) Kwezo [L13] Forges (1983: 330), cited in Devos and van der Auwera (2013: 250)  
 lo **gwâmi** nga-swëg-á  
 NEG NEG (17.POSS.1SG) SM1SG-hide-PRF  
 ‘I have not hidden.’

In addition, locative possessive pronouns are also found outside of the domain of negation. The form can be used to mark contrastive subject focus, as in Bembe (17), and exclusive focus on the verb phrase, as in Kanincin (18).

- (17) Bembe [H11] Nsayi (1984: 224), cited in Devos and van der Auwera (2013: 251)  
 me mua-măn-a **kuámi**  
 I SM1SG.PROX-finish-F 17.POSS.1SG  
 ‘As for me, I am finished.’ (i.e., the others haven’t finished yet)
- (18) Kanincin [L53A] Devos et al. (2010: 169, 170), cited in Devos and van der Auwera (2013: 250–251)  
 n-áá-láand-aaj **kwáam** mákônd  
 SM1SG.PST-buy-PLUR 17.POSS.1SG 6.banana  
 ‘I only bought bananas.’ (i.e., I did not do anything else)

The discussion in this section has shown that there is a close, and potentially complex, relation between focus and negation in Bantu. Against this background, we will present in the next section our findings about the statistical correlation between negation marking and focus marking within the BMV.

### 3. Correlations between negation and focus marking in the Bantu Morphosyntactic Variation Database

In this section, we will present an overview of a statistical survey on negation and focus related parameters in BMV. Following a brief discussion of the methodology of our survey in 3.1, the simple numerical data of each parameter’s values are shown in 3.2, based on which we will focus on specific pairings of parameters showing typological correlations in 3.3.

#### 3.1. Methodological background

BMV contains data from 146 Bantu languages based on 142 parameters, or features, on key areas of Bantu morphosyntax (Guérois et al. 2017). However, the number of data points available in the database varies from one language to another. About 45 languages have data for more than half of the parameters, and 35 languages have data for more than 80% of the parameters. The set of languages with more than 80% of values is best suited for comparison between different languages, as it keeps the absence of data to an acceptable level. However, for comparing parameters, rather than languages, as we do in this paper, we will use the set of all languages, as long as the languages have values for the two parameters compared.

In the following sections, we compare five different parameters – four related to negation, and one related to focus – in order to investigate the relation between them. In particular we are looking for implicational relations between them – either absolute ones, or those showing through quantitative tendencies. Since we are working on the set of all languages of BMV with values for the two relevant parameters compared, the sets of languages used for different comparisons may differ from each other. For example, when comparing the number of languages with the value ‘1’ for Parameter 140 ([P140=1]) with different values of Parameter 52 (P052), we are looking at 14 languages which have both [P140=1] and a value for P052. In contrast, 15 languages have [P140=1] and a value for P054, 16 languages have [P140=1] and a value for P056, and so on. This imbalance is caused by the different data availability of each parameter and may influence the assessment of significance of the covariation ratios. If there are different parameter-value combinations with the same covariation ratio, those with a higher number of languages should be regarded as more conclusive than those with a smaller number of languages. It is also important to note that since the data on which our comparison is based are comparatively low in number, the correlations we discover should be seen as quantitative tendencies, which may not be sufficient for the rigid conditions for statistic validation including sample size sufficiency.

In the following section, we discuss and illustrate the individual parameters in more detail, and show how the different values for each parameter are distributed across our sample of Bantu languages. In the subsequent section, we then show selected correlations between the parameters.

### 3.2. Parameters and values: Simple numerical data

In the following subsections, we present a table summarising the simple numerical data of each parameter, followed by brief comments on the data with illustration from specific languages, when needed for clarification. The parameters we are investigating in the following sections are as follows; P049: Negation in independent tenses: the formal means, P052: Place of negation in independent tenses, P054: Number of negation markers in independent main clause, P056: Independent negative particle, and P140: Morphological focus marker.

#### 3.2.1 P049: Negation in independent tenses: the formal means

The first parameter we discuss is concerned with the formal means of expressing negation in main clauses, i.e., those with independent verbal forms, indicated as ‘independent tenses’ in the parameters. The main clause negation shows a variety of formal means of expression. The results are summarised in Table 2.

Table 2. P049: What are the formal means of expressing negation in independent tenses?  
[n=62]

| Values                                       | Number | %  | Types in Table 1 |
|--|--------|----|------------------|
| 1: by morphological modification of the verb | 34     | 55 | II-2-a/b/c       |
| 2: by a particle                             | 7      | 11 | II-1-a/c         |
| 3: by a periphrastic construction            | 1      | 2  | I                |
| 4: multiple strategies                       | 20     | 32 |                  |

As expected from the general tendencies noted in the literature (see 2.2.1), more than a half of the sample languages use morphological modification. While only one language, Babanki (a Grassfield language, which is historically considered to have split before the phylogenetic core of Bantu languages was formed), uses a periphrastic construction as a sole means of main clause negation (19),<sup>4</sup> languages utilising a negative particle are less prominent in number than those with morphological modification (details of negative particles are discussed in 3.2.4).

(19) Babanki [Grassfield] Akumbu (2016: 151–152)

a. fə-nín fə kó` fəŋ bwen  
19-bird SM NEG fall NEG  
‘The bird hasn’t fallen.’

b. fə-nín fə kó` di? á shè bwen  
19-bird SM NEG COP PREP here NEG  
‘There is no bird here.’

On the other hand, about one third of sample languages utilise multiple strategies for main clause negation, which means either different strategies are attested in different types of main clauses (as in (28) in 3.2.3) or different strategies are used in combination in the same clause. (the availability of multiple forms in a single main clause will be examined in 3.2.3). For example, in Mbugwe standard negation of independent clauses is marked by the combination of the verbal prefix *te-* and clause-final particle *tokó*.

(20) Mbugwe [F34] Gibson and Wilhelmsen (2015: 234): Multiple strategies  
síyé te-kw-á-re-fééŋ-éí-a ma-sibitálí  
SM1PL.PRON NEG-SM1PL-PST-PROG-run-APPL-F 6-hospital  
**tokó**  
NEG  
‘We were not running to the hospitals at all.’

### 3.2.2. P052: Place of negation in independent tenses

The second parameter relates to the position in which negation is marked, in particular in relation to the verb. Again, we are focusing on independent tenses.

<sup>4</sup> The analytic structure of Grassfields languages makes the morphological status of grams more periphrastic. However, the negative marker in Babanki (cf. Akumbu 2016) seems more like an ‘isolated postinitial’ rather than a typical periphrastic construction.

Table 3. P052: Where is negation expressed in independent tenses? [n=57]

| Values  | Number | %  | Types<br>in Table 1 |
|---|--------|----|---------------------|
| n/a: negation is achieved using a periphrastic construction               | 1      | 2  | I                   |
| 1: in the preinitial position only (NEG-SM-...)                           | 15     | 26 | II-2-a              |
| 2: in the postinitial position only (SM-NEG-...)                          | 3      | 5  | II-2-b              |
| 3: in the final vowel position of the inflected verb only                 | 0      | 0  | II-2-c              |
| 4: in the postfinal position of the inflected verb (i.e., as an enclitic) | 1      | 2  | II-1-c              |
| 5: two (or more) of the above (either 1 or 2 + 3)                         | 17     | 30 |                     |
| 6: in a preverbal independent negative particle only                      | 2      | 4  | II-1-a              |
| 7: in a postverbal independent negative particle only                     | 7      | 12 | II-1-c              |
| 8: two (or more) of the strategies above                                  | 11     | 19 |                     |

In Table 3, as well, it is shown that the overall results support the cross-Bantu tendency summarised in 2.2, i.e., the use of preinitial slot is dominant among the languages adopting verb-internal modification as a sole means of negation marking, while the use of the postinitial slot for the function is uncommon. As for particles, 20 languages (35% of the total), i.e., the languages with the value [P052 = 6, 7, 8], take at least one negative particle (see also the discussion of P056 in 3.2.4. below).<sup>5</sup> The following examples illustrate each of the strategies presented in Table 1.

(21) = (4) Chindamba [G52] Edelsten and Lijongwa (2010:111): Periphrastic construction

Ndembo ka-**lem**-a ku-yend-a

9.elephant SM1.PRF-refuse-F INF-go-F

'The elephant has not gone.' < 'The elephant has refused to go.'

(22) = (2a) Swahili [G42]: Preinitial and final vowel position

**ha**-tu-end-**i**

NEG-SM1PL-go-PRS.NEG

'We do not go.'

(23) Nyakyusa [M31] Persohn (2017: 152): Postinitial

tu-**ti**-ku-job-a

SM1PL-NEG-PRS-speak-F

'We do not speak.'

(24) Bafia/Kpā? [A53] Guarisma (2003: 324): Postfinal

à-kpāj-í-**bi**

SM1-leave-PFV-NEG

'He hasn't left.'

<sup>5</sup> Our findings with respect to particles are comparable to the data given in Nurse (2008: 182–183, 289) and in Devos and van der Auwera (2013: 214), who use a sample of 100 languages, out of which 33 languages have an obligatory and “non-emphatic” negative particle, i.e., not a negative reinforcer but a fully grammaticalised negation marker (cf. Jespersen’s cycle in 2.2.3).

- (25) Matengo [N13] Yoneda (2019: 426): Preverbal particle  
**ngasé** dʒu-gú-butuk-il-iti  
 NEG SM1-OM2SG-run-APPL-PRF  
 ‘S/he did not run after you.’
- (26) Manda [N11] Bernander (2017: 309, 185): Postverbal particle  
 a-gon-a **lepa** pa-ki-tanda  
 SM1-lie\_down-F NEG LOC16-7-bed  
 ‘She is not lying down on the bed.’

As for the relative order of particles, it may be worth mentioning that there are some cases where a common particle can be used postverbally in one language, and preverbally in another closely related language. For example, the form *ndi* is a clause-final negation particle in Rwa (E621A), while the apparent cognate *nde* is used as a proclitic in the genetically closely related language Dabida (E74a).

- (27) Relative positions of the cognate NEG particle in Kilimanjaro Bantu languages
- |  |  |
|--|--|
| <p>a. Rwa [E621A]: Clause-final particle<br/> <i>tikabáa ndi</i><br/>         ti-kab-a-a ndi<br/>         SM1PL-hit-FUT-F NEG<br/>         ‘We will not hit’</p> | <p>b. Dabida [E74a]: Preverbal clitic<br/> <i>ndeukúkabíeye</i><br/>         nde=u-ku-kab-íeye<br/>         NEG=SM1-OM2SG-hit-PST<br/>         ‘S/he did not hit you (hesternal past)’</p> |
|--|--|

### 3.2.3. P054: Number of negation markers in independent main clause

The next parameter is concerned with the number of negation markers in independent main clauses.

Table 4. P054: How many markers of negation are there in independent tenses? [n=58]

| Values   | Number | %  |
|--|--------|----|
| n/a: there is no negation (or means to express negation) in the language | 0      | 0  |
| 1: a single marker in the clause   | 34     | 59 |
| 2: optional double marking in the clause (including tone marking)        | 3      | 5  |
| 3: obligatory double marking in the clause (including tone marking)      | 10     | 17 |
| 4: optional triple marking in the clause                                 | 0      | 0  |
| 5: obligatory triple marking in the clause                               | 0      | 0  |
| 6: it varies depending on the tense                                      | 12     | 20 |

The majority of the sample languages take a single marker for independent clause negation. Double negation marking is clearly less common and triple marking is not attested in BMV, though its existence in Bantu is reported in Devos and van der Auwera (2013: 209).<sup>6</sup> However, it should be noted that there are a certain

<sup>6</sup> There are two types of languages with double marking of negation, i.e., one with two segmental markers as in (20) from Mbugwe, and the other with a combination of segmental



number of languages where multiple negation markers are observed in a limited set of tense forms, revealing that multiple marking as a strategy of main clause negation is not unusual if this type of restricted usage is taken into account. Lunda is one of such languages where both single and double marking strategies are attested but used differently depending on the tense.

(28) Lunda [L52] Kawasha (2003: 219): multiple marking strategies depending on the tense

|                   |              |                        |                       |
|-------------------|--------------|------------------------|-----------------------|
| a. n-á-zata       | <b>wanyi</b> | b. <b>hi</b> -a-di     | na-ku-zata- <b>ku</b> |
| SM1SG-PST-work    | NEG          | NEG-SM1-be             | PROG-INF-work-NEG     |
| 'I did not work.' |              | 'S/he is not working.' |                       |

Note, however, that in this language the multiple marking with the preinitial *hi*- and the postfinal enclitic *-ku* (28b) is rather a general template of negation, while the postverbal particle *wanyi* (28a) is attested only with a limited set of tense forms.

### 3.2.4. P056: Independent negative particle

The next parameter is concerned specifically with the presence of independent negative particles, i.e., forms classified as II-1 in Table 1, and with the question of whether they are optional or obligatory.

Table 5. P056: Is there an independent negative particle used to express negation? [n=59]

| Values  | Number | %  |
|---|--------|----|
| n/a: there is no negation (or means to express negation) in the language        | 0      | 0  |
| 0: no, not attested in the language   | 31     | 53 |
| 1: yes, it is obligatorily present in addition to verb marking (including tone) | 8      | 14 |
| 2: yes, it is optionally present in addition to verb marking (including tone)   | 0      | 0  |
| 3: yes, it is obligatorily present without any other verb marking               | 11     | 19 |
| 4: yes, its presence varies depending on the tense                              | 9      | 15 |

While slightly more than half the languages do not have an independent negative particle, one third of languages take an independent particle obligatorily and the remaining languages may take a negation particle whose presence depends on verbal tense forms. The following examples show the use of an obligatory post-verbal particle cooccurring with another obligatory preverbal marker in Rangí (29) and without any other verb marking in Chindamba (30).

(29) Rangí [F33] Gibson and Wilhelmsen (2015: 234, 237)

|                             |                     |                  |      |        |
|-----------------------------|---------------------|------------------|------|--------|
| <b>Sí</b>                   | n-íyó-dom-a         | *( <b>toko</b> ) | na   | Dodoma |
| NEG                         | SM1SG-PRS.PROG-go-F | NEG              | PREP | Dodoma |
| 'I am not going to Dodoma.' |                     |                  |      |        |

and tonal marking as in Rombo (33a) as well as many other Kilimanjaro Bantu languages. See 3.3.2 for further discussion.

- (30) Chindamba [G52] Edelsten and Lijongwa (2010: 111):  
 Ndembo ka-yend-a **duhu**  
 9.elephant SM1.PRF-go-F NEG  
 ‘The elephant has not gone.’

### 3.2.5. P140: Morphological Focus Marker

The final parameter of our study refers to focus marking, and in particular to the presence of an MFM.

Table 6. P140: Can a focused term be marked by an MFM? [n=29]

| Values  | Number | %  |
|---|--------|----|
| 0: no, focalisation is rendered by another strategy (e.g. word order)         | 13     | 45 |
| 1: yes (e.g. a grammaticalized form of the copula <i>ni</i> or other form(s)) | 16     | 55 |

The languages with an MFM and those without are comparable in number. The most typical MFM is expected to be a grammaticalised identificational copula, whose typical form is *ni* or its phonologically related forms as seen in Kikuyu (31). According to our database, it is widely distributed in Eastern Bantu area (especially in zones E, F, G, and JD).

- (31) Kikuyu [E51] Mugane (1997: 148), cited in Morimoto (2017: 150)
- a. **nī** Kamau ũ-nyu-ire njohi nyingĩ  
 FOC Kamau SM1-drink-PFV 9.beer 9.lot  
 ‘[Kamau]<sub>F</sub> drank a lot of beer.’
- b. **nī** njohi nyingĩ Kamau a-nyu-ire  
 FOC 9.beer 9.lot Kamau SM1-drink-PFV  
 ‘Kamau drank [a lot of beer]<sub>F</sub>.’

It is easy to assume that the languages without MFM may express focus through one of, or a possible combination of, the other strategies listed in 2.3.1–3. However, it should also be noted that the distinction between MFM and CJ/DJ can be structurally ambiguous, especially in a system where morphological marking of DJ, as a predicate focus form, is historically derived from an MFM (or a marker of progressive aspect as an inherently focused category) that can be attached to both nominal and verbal hosts (cf. Güldemann 2003, Hyman 1999). Based on this structural and historical link, Morimoto (2018: 171) observes the formal as well as functional parallelism between morphologically focus-marked verb forms and disjoint verb forms from a cross-Bantu typological viewpoint. This parallelism is confirmed, e.g. in the ‘intermediate’ case of Ha (JD66) discussed in 3.3.2, and does provide a significant insight into the typological interaction between focus and negation.

### 3.3. Intra-parametric correlations

Based on a quantitative survey on the correlational ratio, or cooccurrence percentage, of any two values from two different groups of parameters, i.e., parameters

related to negation marking (P049, P052, P054, P056) vs. focus marking (P140), we will show that there are several salient combinations of parameters that suggest typologically significant correlations. Specifically, what is suggested in the database is that there may be potential covariation such that specific types of negation strategies imply a high tendency of the presence of an MFM, and that the absence of an MFM may predict the dominant use of the unmarked type of negation marking. In the following subsections, we will discuss these points from five pairs of parameters that show a significantly high percentage of value correlation.

### 3.3.1. Variation in the place of negation marking implying presence of an MFM: P052 → [P140=1]

Our first comparison is the place of negation (P052) and the presence of an MFM. As shown in Table 7 below, there are two clusters of value-parameter combinations that contrast with each other. First, languages with a preinitial strategy for main clause negation [P052=1] typically do not have an MFM. In contrast, the second group of languages has non-preinitial strategies of negation (those with the P052 values 2, 4, 6, 8, and, with less probability, 7) and shows a high percentage of presence of an MFM.<sup>7</sup>

Table 7. Covariation rate P052 → [P140=1]

| Parameter matching | Covariation rate | Number of languages  |
|--------------------|------------------|--|
| If P052=1, P140=1  | 0.20             | [P052=1, P140=0] (8); [P052=1, P140=1] (2); [P052=1, P140=undefined] (5) |
| If P052=2, P140=1  | <b>1.00</b>      | [P052=2, P140=1] (1); [P052=2, P140=undefined] (2)                       |
| If P052=4, P140=1  | <b>1.00</b>      | [P052=4, P140=1] (1)   |
| If P052=5, P140=1  | 0.56             | [P052=5, P140=0] (4); [P052=5, P140=1] (5); [P052=5, P140=undefined] (8) |
| If P052=6, P140=1  | <b>1.00</b>      | [P052=6, P140=1] (1); [P052=6, P140=undefined] (1)                       |
| If P052=7, P140=1  | 0.75             | [P052=7, P140=0] (1); [P052=7, P140=1] (3); [P052=7, P140=undefined] (3) |
| If P052=8, P140=1  | <b>1.00</b>      | [P052=8, P140=1] (1); [P052=8, P140=undefined] (10)                      |

While the majority of languages with [P052=1] does not show clear evidence of an MFM, only two languages, Ha (JD66) and Digo (E73), have the value [P140=1]. With respect to Ha, the morphological marking of focus may well be regarded as part of DJ marking (for more discussions, see 3.3.2). On the other hand, a num-

<sup>7</sup> We have to admit the scarcity of sample languages with these value combinations, which is in part explained simply by the fact that there are fewer languages with non-preinitial strategies than with preinitial strategies. However, it is also true that the total percentage of non-preinitial languages with an MFM is still salient, i.e., presence of an MFM is confirmed in 7 out of 8 non-preinitial languages with a specific value for P140.

ber of languages illustrate the second group, with non-preinitial negation and the presence of an MFM. For example, Fuliiru (JD63) has the value [P052=2], i.e., main clause negation is morphologically expressed solely by a postinitial negation marker and shows the existence of an MFM, which is illustrated in (32b).

- (32) Fuliiru [JD63] Van Otterloo (2011: 225, 345)
- a.  $\dot{A}$ =má-fúmbà      gà-bìrì      gà-tà-lí-íbw-à  
 AUG-6-bundle      6-two      SM6-NEG-eat-PASS-F  
 ‘Two bundles are not eaten.’
- b. Y-éhê              y-é=w-à-yàbíír-á                      yizò  
 1-CPRON      SM1-FOC.COP.1=SM1-PST1-take-F      those.10  
 fwárángá      zà-àni  
 10.money      10-POSS.1SG  
 ‘He is the one who took those monies of mine.’

According to Van Otterloo (2011), negation in Fuliiru is expressed by the negative prefix *ta-* in the postinitial slot of the verb as in (32a). As for focus marking, especially identificational focus can be marked by a morphological element as in (32b), i.e., the focality imposed on the subject *y-ébé* ‘he’ is marked by the class 1 ‘focus copula’ *y-e=*, which is procliticised to the verb.

Furthermore, the presence of an MFM is reported for Bafia (A53), the single sample language with [P052=4], i.e., a postfinal enclitic as a sole means of main clause negation, as well as for Uru (E622D) and Rombo (E623) with the value [P052=7], where main clause negation is expressed by a postverbal negative particle.<sup>8</sup>

- (33) Rombo [E623]
- a. *usoma ktabú ku*  
 u-Ø-som-a                      ki-tabu      kú  
 SM2SG-PRS-read-F      7-book      NEG  
 ‘You don’t read a book’
- cf. *úsoma ktabu*  
 H=u-Ø-som-a                      ki-tabu  
 FOC=SM2SG-PRS-read-F      7-book  
 ‘You read a book’
- b. *ɸwaná álewaólya márú*  
 ní-wa-ana      a-le-wa-ol-i-a                      ma-ru  
 FOC=2-child      SM1-PST1-OM2-buy-APPL-F      6-banana  
 ‘S/he bought [children]<sub>F</sub> bananas’

In Rombo, main clause negation is morphologically marked by the clause-final particle *kú* with tonal modification as in (33a), and the language also has a focus

<sup>8</sup> However, in our database, there are also a number of languages with [P052=7] where the presence of an MFM is unclear, which include Basaa (A43a), Mboshi (C25), Nyiha (M23), and Ndendeule (N101).

marking proclitic *ní=*, which can be attached either to a nominal argument for marking term focus as in (33b) or to the main clause affirmative verb for marking predicate focus.

### 3.3.2. Variation in the number of negation markers implying the presence of an MFM: P054 → [P140=1]

Our second comparison involves the relation between the number of negation markers (P054) and the presence of an MFM. A relatively high correlation can be seen between languages with obligatory double marking of negation [P054=3] and the presence of an MFM. Of the five languages with double negation in our sample, Uru (E622d), Rombo (E623), Rangi (F33), and Ha (JD66) share the value [P140=1], while only Herero (R31) lacks an MFM.

Table 8. Covariation rate P054 → [P140=1]

| Parameter matching | Covariation rate | Number of languages  |
|--------------------|------------------|--|
| If P054=1, P140=1  | 0.53             | [P054=1, P140=0] (9); [P054=1, P140=1] (10); [P054=1, P140=undefined] (15) |
| If P054=2, P140=1  | no match         | [P054=2, P140=0] (0); [P054=2, P140=1] (0); [P054=2, P140=undefined] (3)   |
| If P054=3, P140=1  | 0.80             | [P054=3, P140=0] (1); [P054=3, P140=1] (4); [P054=3, P140=undefined] (4)   |
| If P054=6, P140=1  | 0.25             | [P054=6, P140=0] (3); [P054=6, P140=1] (1); [P054=6, P140=undefined] (8)   |

This distribution further suggests a possible correlation between specific types of negation and the presence of a morphological device of marking focus. As we have seen in (29) in 3.2.3, the obligatory negation marking in Rangi involves two verb-external particles, while the negation in Rombo, as illustrated in (33a) in 3.3.1, is achieved through a postverbal particle and tonal modification, both of which are structurally obligatory. Unlike those languages that have a clear form of MFM, Herero, which lacks an MFM, utilises the preinitial marker *ka-* and the following high tone (Möhlig and Kavari 2008: 166), i.e., verb-external marking is not part of the combination of obligatory negation marking.

- (34) Herero [R31A] Möhlig and Kavari (2008: 171)
- |           |                    |           |
|-----------|--------------------|-----------|
| ka-tú     | na-kú-ká-hongá     | ova-nâtjé |
| NEG-SM1PL | with-INF-DIR-teach | 2-child   |
- ‘We are not going to teach children.’

This suggests that the essential factor underlying the correlation between negation and the presence of an MFM seems to be not the mere multiplicity of negation marking but the presence of a verb-external negation marker as part of the combination of obligatory double marking. This tendency can be tentatively generalised as follows.

Table 9. Implicational correlation between presence of an MFM and types of double negation marking

|            | Focus marking<br>MFM | Negation marking |               |                |
|------------|----------------------|------------------|---------------|----------------|
|            |                      | Verb external    | >Tone marking | >Verb internal |
| Rangi      | +                    | ++               | +             |                |
| Uru, Rombo | +                    | +                | +             |                |
| Ha         | +?                   |                  | +             | +              |
| Herero     | -                    |                  | +             | +              |

The summary in the table shows that the presence of an MFM correlates with verb external negation marking in Rangi, Uru and Rombo. In contrast, Herero neither has verb-external negation nor an MFM. In this context, the case of Ha is interesting, where the correlation can be seen to highlight the marginal status of morphological marking of focus of the language. According to Harjula (2004: 98–104, 152–154, 167–169), while main clause negation is achieved through a preinitial marker and tonal modification just as in Herero, the morphological aspect of focus marking can most probably be regarded as part of CJ/DJ marking system, and not as a typical form of independent MFM.<sup>9</sup>

### 3.3.3. Negative particles implying the presence of an MFM: P056 → [P140=1]

The next set of data provides a more detailed picture of the correlation discussed in the previous section. It examines the correlation between the presence of MFM and one type of verb-external negation, namely the presence of a negation particle (P056). As suggested by the implicational correlation discussed in the last section, our data show a significant correlation between them. According to the database, all the languages with [P056=1], i.e., a negative particle is obligatory in addition to verb marking (including tone marking), are confirmed to have morphological means of focus marking (disregarding those languages without relevant information of P140). These languages include Nzadi (B865), Uru (E622d), Rombo (E623), Rangi (F33), Manda (N11), and Matengo (N13).<sup>10</sup>

<sup>9</sup> In the database Ha is included in [P140=1]. While there is good evidence for the existence of a conjoint/disjoint distinction in the language (cf. Harjula 2004), we have not found clear evidence for any other morphological means to mark focus. Hence, more information on the focus marking in this language is needed. However, for the time being we follow the coding in the database.

<sup>10</sup> A prominent feature of the focus marking system of Matengo is the conjoint/disjoint distinction, which involves a morphological operation (cf. Yoneda 2018, and pers. comm.), but we have not found any evidence for other morphological focus marking. As in the case of Ha mentioned in 3.3.2, here we follow the interpretation reflected in the database.

Table 10. Covariation rate P056 → [P140=1]

| Parameter matching | Covariation rate | Number of languages  |
|--------------------|------------------|--|
| If P056=0, P140=1  | 0.41             | [P056=0, P140=0] (10); [P056=0, P140=1] (7); [P056=0, P140=undefined] (14) |
| If P056=1, P140=1  | <b>1.00</b>      | [P056=1, P140=0] (0); [P056=1, P140=1] (6); [P056=1, P140=undefined] (2)   |
| If P056=3, P140=1  | 0.50             | [P056=3, P140=0] (1); [P056=3, P140=1] (1); [P056=3, P140=undefined] (9)   |
| If P056=4, P140=1  | 0.67             | [P056=4, P140=0] (1); [P056=4, P140=1] (2); [P056=4, P140=undefined] (6)   |

However, it should also be noted that for [P056=3], i.e., languages where a negation particle is obligatory without any other verb marking, and for [P056=4], i.e., its presence depends on the tense forms, the correlation with [P140=1] seems less clear. Given that most of the languages with [P056=3 or 4], 15 languages out of 20, lack a specific value for P140, the typological tendency between the preference for an MFM and the presence of the verb-external negation marking will need to be clarified through further investigation on the focus marking strategies of such languages.

### 3.3.4. The absence of an MFM implying unmarked negation marking: [P140=0] → P049 and P056

Unlike the preceding three pairs of parameters, the following two pairs investigate correlations which involve the absence of an MFM (P140=0). Table 11 shows the correlation ratio with P056, i.e., the presence of a negation particle.

Table 11. Covariation rate [P140=0] → P056

| Parameter matching | Covariation rate | Number of languages  |
|--------------------|------------------|--|
| If P140=0, P056=0  | <b>0.83</b>      | (10) C61 Mongo, G42 Swahili, JE15 Ganda, M42 Bemba, P31 Makhuwa, P34 Cuwabo, R11 Umbundu, R31 Herero, S31 Tswana, S42 Zulu |
| If P140=0, P056=1  | 0.00             |  |
| If P140=0, P056=3  | 0.08             | (1) G52 Chindamba  |
| If P140=0, P056=4  | 0.08             | (1) K11 Cokwe  |

The data show that 10 out of 12 languages without a morphological means of focus marking lack a negation particle as well (P056=1). A similar tendency can be seen from the correlation between absence of morphological focus marking and types of formal means of negation, where 12 out of 13 languages use verbal modification.

Table 12. Covariation rate [P140=0] → P049

| Parameter matching | Covariation rate | Number of languages  |
|--------------------|------------------|--|
| If P140=0, P049=1  | <b>0.92</b>      | (12) C61 Mongo, G42 Swahili, JE15 Ganda, K11 Cokwe, M42 Bemba, N31 Chewa, P31 Makhuwa, P34 Cuwabo, R11 Umbundu, R31 Herero, S31 Tswana, S42 Zulu |
| If P140=0, P049=2  | 0.00             |  |
| If P140=0, P049=4  | 0.08             | (1) G52 Chindamba  |

It is worth noting that there is a large overlap of languages sharing the same value between the two sets of parameters, i.e., 10 out of 12 languages with [P140=0, P49=1] also have the value [P140=0, P56=0], namely Mongo (C61), Swahili (G42), Ganda (JE15), Bemba (M42), Makhuwa (P31), Cuwabo (P34), Umbundu (R11), Herero (R31), Tswana (S31), and Zulu (S42). Only one language, Cokwe (K11), does not follow this pattern, in that its value for P049 is '1', following the majority, while for P056 it is the only language with values [P140=0] and [P056=4]. Chindamba (G52) has different values on both comparisons, and we do not have a value of P056 for Chewa (N31), which is thus only included on the comparison between P140 and P049.

#### 3.4. Summary of micro-parametric correlation

To summarise the quantitative correlation between the parameters investigated in this section, the following can be pointed out as salient patterns attested in the BMV database.

- (35) Languages utilising the following strategies for main clause negation highly tend to have a morphological means of focus marking.
- those adopting non-preinitial strategies (3.3.1)
  - those with obligatory double negation marking (including tonal modification) (3.3.2)
  - those with 'verb-external' negation particles (3.3.3)
- (36) Languages without a specific morphological means of focus marking tend to show extremely high compatibility with the preinitial negation strategy (3.3.4)

On the other hand, it should also be mentioned that the mere presence of morphological focus marking does not imply any particular negation strategy according to the result of covariation ratio in BMV. Table 13 shows the percentage of each value of the negation related parameters under the condition of the presence of an MFM ([P140=1]).



Table 13. Percentage of the values of the negation related parameters under the condition of [P140=1]

|          |     |          |     |          |          |          |     |
|----------|-----|----------|-----|----------|----------|----------|-----|
| [P049=1] | 50% | [P052=1] | 13% | [P054=1] | 63%      | [P056=0] | 44% |
| [P049=2] | 13% | [P052=2] | 6%  | [P054=2] | no match | [P056=1] | 38% |
| [P049=4] | 31% | [P052=4] | 6%  | [P054=3] | 25%      | [P056=3] | 6%  |
|          |     | [P052=5] | 31% | [P054=6] | 6%       | [P056=4] | 13% |
|          |     | [P052=6] | 6%  |          |          |          |     |
|          |     | [P052=7] | 18% |          |          |          |     |
|          |     | [P052=8] | 6%  |          |          |          |     |

While languages with the value [P049=1] (negation by morphological modification of the verb) share 50% of [P140=1] languages (8 out of 16) and those with [P054=1] (single negation marker) share 63% of [P140=1] languages (10 out of 16), all the other percentages are below 50%. The reason why the two groups show a relatively high correlation may simply be explained by the fact that both groups represent unmarked strategies and are the majority of each parameter (34 out of 62 languages with the value [P049=1] and 34 out of 58 languages with the value [P054=1]). Furthermore, the unmarked preinitial strategy of main clause negation shows a less clear correlation than the presence of the marked verb-external strategies does. Similarly, this is partly explained by the unmarkedness of the preinitial strategy. However, it may also be suggested that such languages have less clear motivation to obtain an MFM than the languages with verb-external negation. Including this point, we will further discuss in the following section how the typological correlation summarised as (35) and (36) can be structurally explained and what the correlation suggests for the systematic understanding of negation and focus marking from a cross-Bantu perspective.

#### 4. Discussion on micro-typological implications

##### 4.1. Negation as inherent focus and structural restriction on functional redundancy

As a starting point, it is worth noting that (35a) shows that the languages adopting the preinitial complex as a sole strategy of main clause negation tend to be excluded from the language group employing an MFM. As mentioned in 2.4.2, Güldemann (1999: 571) argues that the preinitial strategy, which is the most unmarked strategy for a main-clause negation from a cross-Bantu typological perspective, can be regarded as a typical construction for pragmatic, metalinguistic negation. Since metalinguistic negation relates to pragmatic function, it interacts closely with information structure and focus. This suggests that the preinitial strategy as a typical expression of pragmatic negation is incompatible with an MFM within a single clause if both identify distinct focus domains, and so would make the information structure inconsistent (cf. the discussion on ‘double focus’ marking restrictions in Güldemann (1999: 573–574)).

On this point, Rombo (E623) shows quite interesting characteristics. As in many other Kilimanjaro Bantu languages (cf. Dalgish 1979, Philippon and

Montlahuc 2003), the focus marker *ní=*, which is a high toned verbal proclitic, is usually avoided in a negative context as in (37a). However, it can appear as a segmentally reduced form, when a whole clause can be interpreted as emphasising truth-value focus of the proposition or interrogating the truth-value itself of the proposition (the latter is pronounced with appropriate modification of intonation) as shown in (37b).

(37) Rombo [E623] Shinagawa (to appear)

- a. *é:he aláola marú* <sup>↑</sup>*kú*  
 ehe a-le-ol-a ma-ru ku  
 INTJ SM1-PST1-buy-F 6-banana NEG  
 ‘No, s/he didn’t buy bananas’
- b. (*n*)*áleóla marú* <sup>↑</sup>*kú*  
 ní=a-le-ol-a ma-ru ku  
 FOC=SM1-PST1-buy-F 6-banana NEG  
 ‘Is it true that s/he didn’t buy bananas?’

Thus, the discussion in this section, in particular in relation to (35a), suggests that this kind of ‘extra focus’ construction, where a negative predicate is additionally focus-marked by a (reduced) MFM directly attached to the verb, may be preferred with non preinitial negatives. This means that this type of double marking tends to be avoided in languages with a preinitial strategy as a sole means of main clause negation.

#### 4.2. The process of emergence of negation particles

The data also suggests that languages with obligatory double negation marking (35b), or more broadly those with verb-external negation marking (35c), tend to have an MFM. As noted in previous studies (e.g. Güldemann 1996, Nurse 2008, Devos and van der Auwera 2013), verb-external negation markers are typically regarded as a later innovation than verb-internal negators and, when the former occurs in the double negation constructions, the most typical combination is verb-internal negation with a postverbal negation particle (Devos and van der Auwera 2013: 208, see also 2.2). Actually, in our sample the distribution of obligatory double negation and that of verb-external negation are largely overlapping, i.e., Uru (E622d), Rombo (E623), Rangi (F33), Kikongo Kisolongo (H16a), and Lamba (E54) all have obligatory double marking ([P054=3], 9 languages in total), and a negation particle which is obligatory in addition to verb marking ([P056=1], 8 languages in total).

As mentioned in 2.2.3 and 2.4.3, Devos and van der Auwera (2013) identify major grammaticalisation paths of postverbal negation particles, in particular those beginning with locative and possessive pronouns, and argue that one of the semantic motivations for the development of such pronouns into a postverbal negation particle can be regarded as its focus marking effect. They point out that possessive pronouns (including locative possessives) especially in zones H and L are “recurrently used to contrastively focus the subject” or “put some kind of focus in the

verb phrase” (2013: 250, see also (17) and (18) in 2.4.3). However, this semantic linkage between postverbal negation particles and focus marking elements is not geographically restricted to the languages in these zones. For example, Moshi (1988: 129) suggests that the postverbal negation particle *ni* in Vunjo (E622C) can be regarded as a functional derivative of the homophonic MFM, observing that the MFM *ni*, which appears at sentence-initial position “is the same as the *ni* which appears at S-final [sentence-final] position in negative propositions. With its focus marking effects weakened, *ni* assumes the role of indicating negative focus”.

(38) Vunjo [E622C] Moshi (1988: 126)

- |          |                                     |        |           |
|----------|-------------------------------------|--------|-----------|
| a. Mai   | n-a-i-oky'a                         | nyama  |           |
| 1.mother | FOC-SM1-PRS-roast                   | 9.meat |           |
|          | ‘Mother is roasting the meat.’      |        |           |
| b. Mana  | a-le-okya                           | nyama  | <b>ni</b> |
| 1.child  | SM1-PST-roast                       | 9.meat | NEG       |
|          | ‘The child did not roast the meat.’ |        |           |

Taking these examples into account, it can be assumed that there is a cross-Bantu tendency that postverbal negation particles are frequently grammaticalised from grams with a certain kind of focalising effect, originating from locative or other forms, which can be naturally utilised for pragmatic enforcement of sentence negation as a core motivation of the emergence of postverbal negation particles. In other words, the existence of a morphological focus marking element can be seen as being part of the same grammaticalisation path as verb-external negation particles, and so the two forms are functionally and diachronically linked. This constitutes one underlying reason for the implicational tendency stated in (35c).

### 4.3. Focus contrast of negative constructions

Finally, we will discuss the correlational tendency stated as (36), i.e., languages without a specific morphological means of focus marking tend to exclusively adopt a preinitial negation strategy. In other words, such languages do not tend to develop verb-external negation. We have already noted the conceptual relation between the preinitial complex as a structural type of negation and its functional preference for illocutive, thus focus-sensitive, negation in 2.4.2, and we will now focus on the same relation from a different angle, i.e., how verb-external negation can be explained by the presence of an MFM. As already mentioned in 2.4.3, as well as in the preceding discussion in 4.2 about the functional allomorphy of *ni* in Vunjo, one of the common characteristics shared by verb-external negation is the focality of the negation marker itself. Consider the following construction from Manyanga.

(39) Manyanga [H16b] Devos and van der Auwera (2013: 213)

- |                   |         |                |
|-------------------|---------|----------------|
| a. ki-tuúð-ídí    | malongá | vaméeza-ko     |
| SM1SG.NEG-put-PRF | 6.plate | 16.9.table-NEG |

- ‘I have not put the plates on the table.’  
 b. ki-tuúd-ídí-**ko** málónɡa vamáeza (kaántsi nzúngu)  
 ‘I have not put [the plates]<sub>F</sub> on the table (but the pot).’  
 c. ki-tuúd-ídí málónɡa-**kó** vamáeza (kaántsi músúku)  
 ‘I have not put the plates [on the table]<sub>F</sub> (but in the kitchen).’

As shown in these examples, the syntactic position of the secondary negative marker *-ko* is determined in relation to the position of a focused element. More precisely, *-ko* itself plays a role of providing focality of the immediately following NP or adjunct. On the other hand, in some of the other Kongo varieties (H10) a focused argument may precede the secondary negative *ko* (or a corresponding form) (cf. De Kind et al. 2013). However, in both cases the secondary negative particle marks term focus, and so the focusing function of *ko* gives rise to the ‘focus contrast’ making the negated predicate relatively ‘de-focused’ compared to the focused elements. This ‘de-focused effect’ with negated predicates is also attested in Uru as illustrated in (40).

- (40) Uru [E622D]  
 a. *kiléóló*<sup>+</sup> *ká pfo*  
 ki-le-olok-a pfo  
 SM7-PST1-fall-F NEG(<DEM.17)  
 ‘It (cl.7) didn’t fall’  
 b. *kiléóló*<sup>+</sup> *ká kyo*  
 ki-le-olok-a ki-o  
 SM7-PST1-fall-F NEG(<PP7-DEM)  
 ‘It (cl.7) didn’t fall’

As shown in (40), there are two series of negation particles in Uru. One is *pfo*, which is a general negation marker invariant for the person, number or noun class of the subject, and originates from the locative (class 17) demonstrative pronoun as is well attested in other Kilimanjaro Bantu languages (cf. *ku* in Rombo as in (33a) in 3.3.1) as well as in Bantu in general (see 2.2.3, 2.4.3, and 4.2). The other is a series of markers showing grammatical agreement with the subject and which are grammaticalised either from independent pronouns (in the case of speech participants) or from demonstrative pronouns (in the case of class nouns). As briefly mentioned in 4.1, the negative main clause is one of the typical environments where the preverbal focus marker *ni=* is avoided in Kilimanjaro Bantu in general (unless the truth-value is not crucial in a given context, see 4.1) and, in this sense, the negated main verb can be regarded as a morphologically de-focused verb form. The notion of a de-focused effect or focus contrast may explain the functional motivation for the introduction of demonstrative and independent pronouns as verb-external negation particles, i.e., these pronouns were originally introduced as a ‘dummy focus’ to make the negated predicate structurally less focused.

Given that the ‘focus contrast effect’ can be seen as one of the essential structural requirements of verb-external negation particles, then the presence of mor-

phological means of focus marking can be regarded as a necessary prerequisite for the construction, which in turn constitutes at least part of the underlying principle explaining the typological correlation summarised as (35).

## 5. Conclusion

In this paper, we have investigated the inter-parametric correlation between negation and focus marking in Bantu languages. The fundamental findings based on the quantitative analysis of selected values from the Bantu Morphosyntactic Variation database include the two sets of salient correlations, i.e., i) languages with a verb-external, more specifically postverbal, strategy for main clause negation highly tend to have an MFM, and ii) languages lacking a morphological means of focus marking tend to adopt the preinitial strategy for main clause negation. It may be also added to our findings that the opposite correlations do not hold: neither the presence of morphological focus marking nor absence of verb-external negation strategies makes meaningful typological prediction within our study.

Based on the observed correlations, we discussed possible explanations for the correlation from several different angles. One is based on the widely accepted understanding of the interaction between negation and focus in the Bantu literature, i.e., negation as inherent focus. What this perspective suggests to our data is that preinitial negation as a typologically unmarked strategy and as a strategy that has developed to express pragmatic, focused negation (cf. Güldemann 1999) can be seen as structurally focused by default (cf. Hyman and Watters 1984), which may be a factor to avoid extra focus marking. The second point is related to the source of the grammaticalisation of verb-external negation. As shown by Devos and van der Auwera (2013), one of the common sources of postverbal negation particles is a focus marking element that can be used as a pragmatic enforcement of negation. This simply requires the existence of such a gram for a language to develop a means for verb-external negation, and so shows the relation between the verb-external negation and the presence of an MFM. Finally, we discussed the ‘focus contrast effect’ attested in several languages with postverbal negation particles, which makes the negated predicate relatively de-focused, and this may require a language to have an MFM as a prerequisite to develop a postverbal negation particle.

However, there are several points that require further investigation. First, not only are there considerable gaps of information in our database, but also some inconsistencies of data interpretation remain relating, for example, to defining typologically meaningful subcategories of morphological means of focus marking especially for the inclusion of the conjoint/disjoint alternation, or border cases between fully grammaticalised focus markers and less grammaticalised focus sensitive particles, or between purely morphological focus marking and more syntactic cleft-like constructions. These issues need to be approached through quantitative expansion and qualitative refinement of the information in our database. Second, though the present study focuses on the correlation between main clause negation and morphological focus marking since they show a direct and clear typological

correlation in our database, we also need to include more parameters indirectly related to negation and focus marking for a broader understanding of the typological interplay between the two. Thirdly, a more fine-grained categorisation of focus types than has been assumed in this paper might be adopted. In this paper, we did not take into account the subcategorisation of focus, such as term vs. predicate vs. operator focus, or contrastive vs. exclusive vs. identificational focus, etc., since our discussion concerned the general morphosyntactic correlation between the negation and focus marking. However, consideration of different types of focused elements would provide the basis for more specific and fine-grained generalisations. These issues are open to the future research that is expected to be investigated based on more large-scale and comprehensive data collection.

### Abbreviations

The abbreviations in the gloss line of examples follow the Leipzig Glossing Rules (LGR). For consistency, some of the gloss abbreviations in examples from previous studies are modified according to LGR and general conventions of Bantu linguistics. Those which are not included in the LGR but used in this paper are as follows; 1, 2, 3, etc.: Noun class number; 1SG, 2PL etc.: Person and Number; AUG: Augment (nominal preprefix); CJ: Conjoint marker; CPRON: Contrastive pronoun; DIR: Directive; DJ: Disjoint marker, F: Final vowel (default verbal inflectional suffix); INTJ: Interjective; OM: Object marker; PLUR: Pluractional; PREP: Preposition; SM: Subject marker

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## 【要 旨】

### バントゥ諸語における否定および焦点表示形態論に関するマイクロ類型論的連動関係

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本研究は、「バントゥ諸語形態統語バリエーションデータベース (BMV)」(Marten et al. 2018) にまとめられた計量的データをもとに、バントゥ諸語における否定表示と焦点表示との間に見られる言語構造上の類型論的な相関関係を明らかにすることを目的としている。BMV は、バントゥ諸語内部の形態統語論レベルの類型的多様性を把握するための 142 のパラメータ (Guerois et al. 2017) に基づいて構築されているが、そのうちの否定表示に関する 4 つのパラメータと、形態論的焦点表示形式 (MFM) の有無に関するパラメータの値の連動関係の分析からバントゥ諸語における否定表示と焦点表示との間に見られる言語構造上の類型論的な相関関係を明らかにすることを目的としている。BMV における主節動詞の否定に関する 4 つのパラメータと、形態論的焦点表示形式 (MFM) の有無に関するパラメータの値の連動関係の分析から、i) 動詞後否定表示を行う言語は高い確率で MFM を有し、また ii) 明示的な MFM を有さない言語は動詞否定接頭辞表示を用いる顕著な傾向がある、という 2 点が有意な傾向として導出された。これに対し、否定の内在特性としての焦点性、動詞後否定詞の文法化過程、そして動詞外否定構文における焦点対照性という 3 点からマイクロ類型論的な解釈を試みた。