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On some structural similarities and differences between Herero and Swahili

MARTEN Lutz* and GIBSON Hannah**

1. Introduction

The circa 500 Bantu languages spoken in Eastern, Central and Southern Africa provide a rich empirical base for linguistic comparison. The languages are closely related and typologically similar, sharing a number of grammatical features. On the other hand, no two Bantu languages are morphosyntactically identical, giving rise to complex effects of micro-variation across the family. Herero and Swahili, the two languages of interest in this paper, are no exception to this overall characterisation. As we will show in this paper, the two languages are similar with respect to many aspects of their grammar, but also show a number of key differences. The comparison of these two languages is particularly interesting as they are located on opposite ends of the Bantu speaking area – Herero being one of the most southwestern Bantu languages, spoken mainly in Namibia, and Swahili being a northeast coastal Bantu language spoken in Kenya and Tanzania and across East Africa more widely.¹

In the present paper, we will provide a comparison of these two languages based on selected grammatical features, in part drawing on the Bantu Morphosyntactic Variation Database (BMV, Marten et al. 2018), to develop a contrastive analysis and to show how the similarities and differences between the two languages can be seen as illustrative of wider patterns of morphosyntactic variation in Bantu.

2. Herero and Swahili: Two Bantu languages at the opposite ends of the Bantu-speaking area

The two languages this paper focusses on are Herero and Swahili. Before discussing morphosyntactic similarities and differences between the two languages, we provide a brief sociolinguistic background of each language.

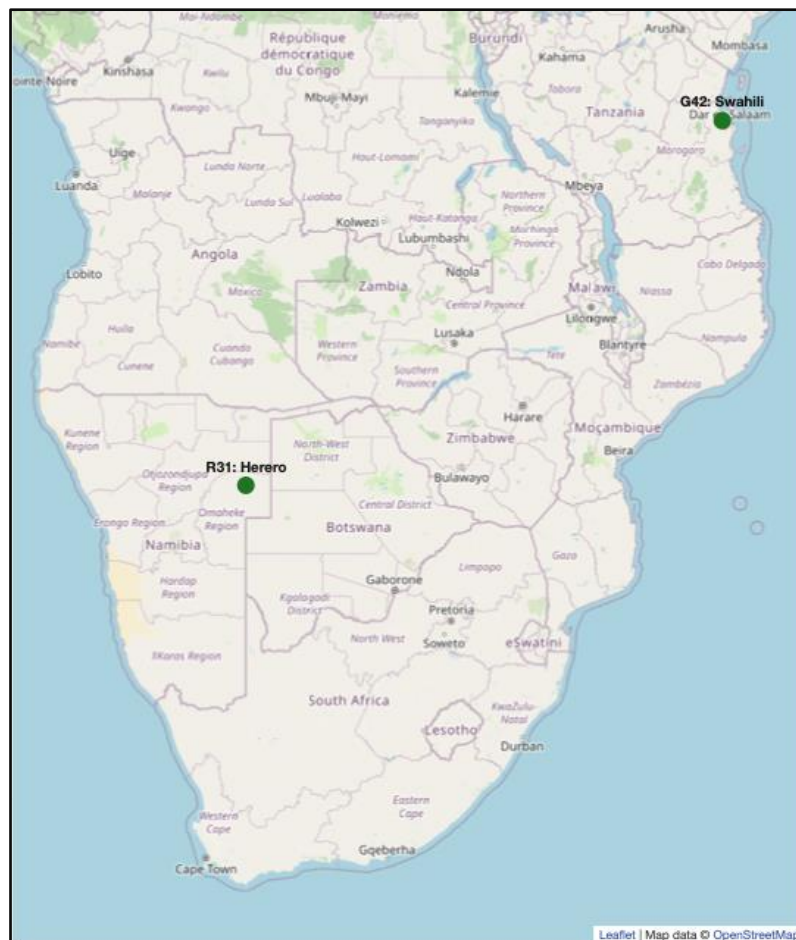
Herero (or Otjiherero)² is spoken by about 250,000 people in the southwest of the Bantu speaking area, mainly in Namibia but also by smaller communities in Botswana and Angola (Kavari 1993, forthcoming). Within Namibia, Herero is mainly spoken in the north of country, close to the border with Angola, in the central districts and along the border with Botswana, as well as in the

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¹ In addition, the two languages have been investigated in great detail by Professor Nobuko Yoneda to whom this paper is dedicated (e.g Yoneda 2016, 2022, 2023, Gibson and Yoneda 2018).

² Both Swahili and Herero are also known with their class seven noun class prefixes *ki-* and *otji-* respectively, so *Kiswahili* and *Otjiherero*. While we have shown these forms on first mention, we use the prefixless forms throughout the paper whilst acknowledging that discussions regarding the use of the prefixed or prefixless forms differ between contexts.

capital Windhoek. Herero is one of the national languages of Namibia and is used in schools and higher education, in the media and in wider public discourse. Herero is classified as R31 in Guthrie’s (1967-71) referential classification and belongs to the Southwestern group in Grollemund et al.’s (2015) more recent phylogenetic classification.



Map 1: Herero and Swahili approximate location (map from the BMV database)

Swahili (or Kiswahili) is the largest African language in terms of first and second language speakers, with an estimated 200 million speakers (UNESCO 2021), which also places it among the top major world languages. Historically, the language is associated with the so-called ‘Swahili Coast’, that is, a narrow strip of the East African coastline along the Indian Ocean from southern Somalia to northern Mozambique and the Comoros. A flourishing urban trading community developed along this area from the turn of the first millennium onwards, absorbing influences from Arabic, Persian, and from neighbouring Bantu and non-Bantu languages. Over the last few centuries, use of Swahili has spread into the East African mainland, in the wake of expanding trade, administration and education. Today, Swahili is an official, national or recognised language in several East African countries, as well as an official language of the East African Community and African Union. It is used widely in all public domains throughout East Africa, and is taught in

schools, universities or privately across the world.³ Swahili is classified as G42 in Guthrie (1967-71) and as part of the Eastern group in Grollemund et al. (2015).

In terms of their sociolinguistic profiles, Herero and Swahili can be seen as being at the opposite ends of the Bantu-speaking area. Geographically, they are spoken in the far southwest and the far northeast of the area, respectively, and so at two extremes of the spectrum (Map 1).

In terms of speaker numbers, Herero is a medium-sized community language, spoken by just under 10% of the overall Namibian population, while Swahili is a widely-used lingua franca in East Africa and a major world language. In terms of the multilingual ecologies in which the languages are embedded, Herero serves mainly as a community language, and many speakers have access to other languages of wider communication such as Afrikaans and English. Swahili also serves as a language of wider communication and for many speakers is used in addition to one or more community languages, as well as other international languages such as English or French.

Against this broad historical and sociolinguistic background, we will now provide a structural comparison of the two languages, focussing primarily on the domain of and morphosyntax.

3. Some structural similarities between Herero and Swahili

As noted in the Introduction, Bantu languages share broad typological similarities, and Herero and Swahili are no exceptions to this generalisation. Despite being at opposite ends of the Bantu speaking area, the languages share many structural features. We will illustrate these similarities with selected examples from phonology, morphology and syntax, before turning to illustrating some differences in Section 5.

In the present section we show three examples of (broad) similarity between the two languages, namely vowel harmony as a phonological feature, the use of verbal extension as a morphological feature, and the number of object markers as feature of morphosyntax.

Vowel height harmony is a common feature of Bantu languages and is found across the family (Kula fcmg.). The process typically occurs in the context of verbal suffixation, where the vowel of the suffix is harmonic to the final vowel of the root. Mid/high vowels are subject to harmony, both front (/i/ vs. /e/) and back (/u/ vs. /o/). However, within Bantu, there is also a certain amount of micro-variation with respect to the details of the harmony processes. Examples of vowel harmony in Herero and Swahili in the context of applicative formation are shown in (1) and (2) below (from Marten and Kula 2000):

- (1) Herero vowel height harmony
- | | | | | |
|----|-------------------------|----------|-----------------------|---------------|
| a. | pít-á ‘go out’ | pít-ír-a | ‘go out for/at’ | (Applicative) |
| b. | túk-a ‘shake’ | túk-ir-a | ‘shake for’ | (Applicative) |
| c. | pat-a ‘close’ | pat-er-a | ‘close for’ | (Applicative) |
| d. | vét-a ‘hit by throwing’ | vét-er-a | ‘hit by throwing for’ | (Applicative) |
| e. | ror-a ‘taste’ | ror-er-a | ‘taste for’ | (Applicative) |

³ Including at Osaka University, where Professor Nobuko Yoneda has taught Swahili for many years.

- (2) Swahili vowel height harmony
- | | | | | | |
|----|--------|---------|-----------|---------------|---------------|
| a. | pit-a | ‘pass’ | pit-i-a | ‘pass for/at’ | (Applicative) |
| b. | fung-a | ‘close’ | fung-i-a | ‘close for’ | (Applicative) |
| c. | kat-a | ‘cut’ | kat-i-a | ‘cut for’ | (Applicative) |
| d. | let-a | ‘bring’ | let-e-a | ‘bring for’ | (Applicative) |
| e. | tobo-a | ‘bore’ | tobol-e-a | ‘bore for’ | (Applicative) |

In the examples in (1) and (2), we can see that the quality of the vowel in the applicative suffix changes systematically between /i/ and /e/, resulting in *-ir* or *-er* in Herero, and *-i* or *-e* in Swahili. However, the examples also show that the context of the harmony differs slightly between the two languages. In Herero, high stem vowels are followed by /i/ (1a, b), and mid and low stem vowels are followed by /e/ (1c-e). In Swahili, the high vowels and the low /a/ are followed by /i/ (2a-c) and only the mid vowels /e/ and /o/ are followed by /e/ (2d, e). The difference between the two languages thus resides in the behaviour of stems with an /a/ vowel. In Herero /a/ patterns with /e/ and /o/, while in Swahili /a/ patterns with /i/ and /u/. This is a small difference, but it raises the interesting question of whether the suffix vowel is lexically high (/i/) and is then lowered by vowel harmony, or whether it is lexically mid (/e/) and raised due to vowel harmony – or maybe one process applies in one language, and another in the second. However, this is a question we will have to leave for a future occasion and further examination.

In the domain of morphology, verbal suffixes or extensions are frequently involved in rich processes of verbal derivation in Bantu languages. These processes include in applicatives, causatives, passives and a range of other derivational processes, some found almost universally in Bantu languages, others with a far more restricted distribution. Here, too, Herero and Swahili are no exceptions. The following examples provide a list of verbal extensions in the two languages.

- (3) Herero verbal extensions (cf. Möhlig et al. 2002: 71-74, Möhlig and Kavari 2008: 146)
- | | | |
|----|------------------------|---|
| a. | Applicative | <i>-ir, -er-, -in, -en</i> |
| b. | Causative | <i>-is</i> |
| c. | Neutro-passive/stative | <i>-ik, -ek</i> |
| d. | Passive | <i>-w, -íw, -éw</i> |
| e. | Reciprocal | <i>-ásan</i> |
| f. | Reversive/intensive | <i>-or(or), -ur(ur), -on(on), -un(un)</i> |
- (4) Swahili verbal extensions
- | | | |
|----|------------------------|---------------------|
| a. | Applicative | <i>-i, -e</i> |
| b. | Causative | <i>-ish, -esh</i> |
| c. | Neutro-passive/stative | <i>-ik, -ek</i> |
| d. | Passive | <i>-w, -íw, -ew</i> |
| e. | Reciprocal | <i>-an</i> |
| f. | Reversive/separative | <i>-u, -o</i> |

The examples in (3) and (4) show well the similarity between the two languages in terms of the morphological shape of the verbal extensions (their morphosyntactic characteristics are of course a different question). In many cases, the shape of the morphemes is identical such as the neutro-passive (3c, 4c) and passive (3d, 4d) extensions, or almost identical, for example the causative (3b, 4b). In other cases, such as the applicative (3a, 4a) and reversive (3f, 4f) extensions, Herero retains a historical consonant /r/, sometimes reconstructed for Proto-Bantu as */l/ or */d/ (cf. Meeussen 1967: 92), which has largely been lost in Swahili, although it sometimes surfaces, for example in the context of multiple extensions (Schadeberg 1992).

The larger inventory of these two extensions in Herero results from the presence of nasal consonant harmony in Herero, accounting for the four variant forms for each of these extension in Herero. This is in contrast to the presence of only two forms in Swahili. The only substantive difference between the two languages in this respect can be seen with the reciprocal extension, which is *-an* in Swahili (4e), but has the more complex form *-asan* in Herero (3e). The latter form is an innovation and wide-spread in southwestern Bantu languages.

Finally, in the domain of morphosyntax, Swahili and Herero belong to a group of languages which only allows one object marker in the inflected verb form. Bantu languages differ in this respect, and it has often been noted that some Bantu languages allow multiple object markers, and others only one (cf. e.g. Marlo 2015, Marten and Kula 2012, van der Wal 2022). Marten and Kula (2012: 244-247) distinguish languages with only one object marker and those with multiple object markers, and also note that there are intermediate cases, where more than one object markers are allowed in certain (phonological, morphological or syntactic) contexts. Languages with multiple object markers include, for example, Chaga, Ha and Setswana, while languages like, for example, Bemba, Ruwund and Sambia are intermediate cases, where multiple object marking is possible under certain conditions only. Finally, languages which only permit one object marker per verb form include, for example, Chewa, Lozi and siSwati, in addition to Herero and Swahili. The examples in (5) and (6) illustrate the constraint in these two languages.

(5) Herero object marking (Kempson et al. 2013)

- a. Ú-térék-èr-à òvá-éndà ònyàmà p-òngàndà.
SM1-cook-APPL-FV 2-guests 9.meat 16-9.house
'S/he cooks meat for the guests at home.'
- b. Ú-vé-térék-èr-à ònyàmà p-òngàndà
SM1-OM2-cook-APPL-FV 9.meat 16-9.house
'S/he cooks them meat at home.'
- c. Ú-í-térék-èr-à òvá-éndà p-òngàndà
SM1-OM9-cook-APPL-FV 2-guests 16-9.house
'S/he cooks it for the guests at the house.'

- d. \acute{U} -pé-térék-èr-à òvá-éndà ònyàmà.
 SM1-OM16-cook-APPL-FV 2-guests 9.meat
 ‘S/he cooks meat for the guests there.’
- e. * \acute{U} -vé-í-térék-èr-à p-òngàndà
 SM1-OM2-OM9-cook-APPL-FV 16-9.house
 ‘S/he cooks it (for) them at the house.’
- f. * \acute{U} -í-vé-térék-èr-à p-òngàndà
 SM1-OM9-OM2-cook-APPL-FV 16-9.house
 ‘S/he cooks it (for) them at the house.’

The examples in (5) show that there are no restrictions on the kind of object or complement which can be object marked on the verb in Herero. The ditransitive sentence in (5a) has three noun phrase complements – an applied object (*òváéndà* ‘guests’), a theme object (*ònyàmà* ‘meat’), and a locative object (*pòngàndà* ‘at home’). Each of these objects can be pronominalised and expressed by an object marker (5d-e), as long as there is only one object marker at a time. However, trying to use two object markers leads to ungrammaticality, as examples (5e) and (5f) show. The restriction on object marking in Herero appears to be a structural one, as there are no restrictions on the thematic role of grammatical function of the object-marked objects.

(6) Swahili object marking

- a. Ni-li-m-p-a
 SM1SG-PAST-OM1-give-FV
 ‘I gave (them) to him/her.’
- b. *Ni-li-zi-p-a
 SM1SG-PAST-OM10-give-FV
 ‘I gave them (to) him/her.’
- c. Ni-li-m-p-a hi-zi
 SM1SG-PAST-OM1-give-FV DEM-CD10
 ‘I gave these (to) him/her.’
- d. *Ni-li-zi-m-p-a
 SM1SG-PAST-OM10-OM1-give-FV
 ‘I gave them (to) him/her.’

- e. *Ni-li-m-p-a-zi/-zo
 SM1SG-PAST-OM1-give-FV-OM10
 ‘I gave them (to) him/her.’

A constraint similar to the one operating in Herero also appears to be relevant for Swahili. Namely, only one object marker per verb is possible, although in addition to this, object marking is restricted in Swahili by an animacy constraint. In the presence of both an animate object (class 1/2) and a non-animate object, only the animate object can be expressed by an object marker. This is shown by (6a), with an animate object, and (6b) where the use of a class 10 (non-animate) object marker leads to ungrammaticality. In order to pronominalise the non-animate object, a demonstrative form such as *hizi* ‘these’ needs to be used (6c), or the non-animate object may simply remain unexpressed as in (6a). However, as in Herero, the use of two object markers in the same verb form is not possible (6d, e). In Swahili, a structural constraint on the number of object markers, as well as a semantic animacy constraint are relevant for the licensing of object markers.

The examples discussed in this section have illustrated the close typological similarity between Herero and Swahili, exemplified by the domains of phonology (vowel harmony), morphology (verbal extensions), and morphosyntax (object marking). In each of these examples, we have seen the basic similarity in form and structure between the two languages. However, each example has also shown variation in detail between the languages – some difference in the application of the rule of vowel harmony, differences in the shape of some of the verbal extensions discussed, and differences in the exact constraints licensing object marking in Herero and Swahili. The examples thus illustrate the ‘diversity in unity’ effect in comparative Bantu, where languages are often similar, but also differ on examination of the finer details.

In the following section, we will look at cases where the differences between the two languages are more pronounced.

4. Some structural differences between Herero and Swahili

Against the background of many similarities and shared structural features between Herero and Swahili, there are, however, also areas where the languages differ. As in the previous section, we will illustrate these differences with selected examples.

While we noted above the similarity between the two languages in the domain of phonology with respect to vowel harmony, Herero and Swahili differ with respect to nasal consonant harmony. Like vowel harmony, consonant harmony operates within the verbal base, but here it is the suffix consonants /l/ and /r/ which assimilate to preceding nasal consonants. Nasal harmony in Herero is shown in (7).

(7) Herero nasal harmony

- | | | | | |
|----|--------|----------|-------------|-------------------|
| a. | -pít-á | ‘go out’ | mbá-pít-íre | ‘I have gone out’ |
| b. | -túk-a | ‘shake’ | mbá-túk-ire | ‘I have shaken’ |
| c. | -ror-a | ‘taste’ | mbá-ror-ere | ‘I have tasted’ |

d.	-tín-a	‘whine’	mbá t́ín-ine	‘I have whined’
e.	-túm-á	‘send’	mbá t́úm-íne	‘I have sent’
f.	-rám-á	‘choke’	mbá-rám-éne	‘I have choked’

The examples in (7) show the effects of nasal harmony with the perfective suffix *-ire*. In (7a-c), the suffix surfaces with the underlying consonant /t/, but in (7d-f), the consonant is harmonised to /n/ due to the nasal consonant of the verbal root. The examples also show vowel harmony (e.g. *-ire* vs. *-ere* and *-ine* vs. *-ene*) in operation. Nasal consonant harmony is comparatively wide-spread in mainly central and southern Bantu languages, and is well described (see Bennett forthcoming). However, nasal harmony is not found in Swahili, and so in the respect the two languages show a clear difference.

Another important difference between the two languages is the presence of tone. Swahili is among the relatively few Bantu languages where tone has been lost, and so there are no lexical or grammatical tone distinction. In contrast, Herero retains a distinction between H and L tones, as well as complex tonal processes, and tone is used for the expression of both lexical and grammatical meanings. We illustrate the importance of tone in Herero here from two domains: nominal tone in so-called ‘tone cases’ and verbal tone in tense-aspect-mood (TAM) marking.

Although often called ‘tone cases’, the nominal tonal patterns behind this label are not grammatical inflectional cases indicating grammatical functions such as ‘subject’ or ‘object’ as found, for example, in many European languages (Schadeberg 1986). Rather, tone cases in Herero and other southwestern Bantu languages are a nominal inflectional system in which nouns are assigned a specific tonal pattern, partly depending on their surface position, and partly depending on their function (Kavari et al. 2012, Yoneda 2023). An example of the three tone cases found in Herero is provided in (8).

(8) Herero ‘tone cases’ (Kavari et al. 2012: 318)

a.	Òtjì-hávèrò	tj-á	ù	Default Case: LL
	7-chair	SM7-PST	fall.down	
	‘The chair fell down.’			
b.	Vé	múná	òtjì-hávèrò	Complement Case: LH
	SM2.HAB	see	7-chair	
	‘They usually see the chair.’			
c.	Ótjì-hávèrò			Predicative Case: HL
	7-chair			
	‘It’s a chair.’			

The examples in (8) show that Herero distinguishes three different nominal tonal patterns: LL, LH and HL. The distinction is usually marked on the nominal prefix vowels (including the augment and the vowel of the CV-prefix), although other patterns exist for non-canonical prefix shapes. The LL pattern in (8a) is called ‘default’ pattern as it is used in all contexts except for the ones shown in (8b) and (8c). The ‘complement’ LH pattern in (8b) is found only on nouns which directly follow a verb in the relevant TAM form. The use of complement case depends both on the structural position of the noun, and on the inflectional properties of the verb. In contrast, the ‘predicative’ HL pattern requires the noun to constitute a separate clause encoding existential or identificational predication.

Tone case systems like the one illustrated in (8) are found in several Western Bantu languages along the Atlantic coast. The system has often been compared to conjoint/disjoint systems, and to function of the augment, as well as, diachronically, to (the loss of) a copula form, which would explain in particular the predicative use in (8c). Since tone cases rely on tone for their expression, and since the system is geographically restricted to Western Bantu languages, it is not surprising that no such system is found in an Eastern and tone-less Bantu language such as Swahili, and the two languages clearly differ in this respect.

Another domain where the presence of tone results in a wider grammatical difference between Herero and Swahili is in TAM marking. While there are a number of segmental markers in the Herero TAM system, several distinctions are expressed by tone, and overall, the TAM system seems to be morphologically more articulated, and includes more fine-grained distinctions than the Swahili TAM system.

Two examples of the function on tone in the Herero TAM system are provided in (9), showing recent and remote past marking, and in (10), showing recent and remote definite past perfect marking.

(9) Tone and TAM marking in Herero: Past (Möhlig et al. 2002: 85/6)

a. Mbá-rísá òzón-gòmbè
SM1SG-feed 10-cattle
‘I fed cattle.’ (Recent Past)

b. Mbà-rísà òzón-gòmbè
SM1SG-feed 10-cattle
‘I fed cattle (long ago).’ (Remote Past)

(10) Tone and TAM marking in Herero: Definite Past Perfect (Möhlig et al. 2002: 85/6)

a. Mbá-mún-ìnè òzón-gòmbè
SM1SG-see-PERF 10-cattle
‘I saw cattle (last week).’ (Recent Definite Past Perfect)

- b. Mbà-mún-íné òzón-gòmbè
 SM1SG-see-PERF 10-cattle
 ‘I saw cattle (long ago).’ (Remote Definite Past Perfect)

The TAM distinction expressed in the two examples are encoded in part segmentally and in part prosodically. In (9), the form of the subject marker, *mba-* for first singular, is used for past tense forms, and in (10) in addition the perfective marker *-ile* (*-ine*, due to nasal consonant harmony) is used. Tonal distinctions then add further remoteness distinctions, differentiating between ‘recent’ and ‘remote’ forms. In both examples, the difference between recent (9a, 10a) and remote (9b, 10b) is encoded through a specific tonal melody or tone pattern, although diachronically the difference may have been expressed through a specific (tonal) morpheme.

In contrast to Herero, no tonal marking is used in the Swahili TAM paradigm and – maybe in part because of this – the remoteness distinctions found in the Herero past tenses seen in (9) and (10) are not formally encoded in Swahili.

(11) TAM marking in Swahili

- a. Wa-li-sem-a
 SM2-PAST-say-FV
 ‘They said.’
- b. Wa-li-kuw-a wa-ki-sem-a
 SM2-PAST-be-FV SM2-SITU-say-FV
 ‘They were saying.’
- c. Wa-li-kuw-a wa-me-sem-a
 SM2-PAST-be-FV SM2-PERF-say-FV
 ‘They had said.’

The examples in (11) show the encoding of past tense in the Swahili TAM system. The past tense marker *li-* is used in (11a) to encode a past event, but this event could have taken place recently or a long time ago. There is no formal distinction in terms of remoteness of past events in Swahili. Swahili also has more complex TAM forms, based on an auxiliary construction with the auxiliary *-kuwa* ‘be’, as seen in (11b) and (11c). These forms provide aspectual distinctions, resulting in a past progressive interpretation in (11b) and a past perfect interpretation in (11c). However, these aspectual differences are unrelated to remoteness. We can thus see that Swahili differs from Herero in that no tone is used in the TAM system, and in that no past remoteness distinctions are formally encoded in the system.

Our final example of the differences between Herero and Swahili is related to locative constructions. First, we are looking at variation in locative marking between the two languages.

Three locative classes are typically found in Bantu, with morphological reflexes on both nouns (as noun class prefixes) and verbs (as agreement prefixes). Morphological forms for all three classes are also found in both Herero and Swahili. However, while in Herero locative markers are found in both the nominal and the verbal domain, in Swahili they are only found on verbs. This is because in Swahili locative marking on nouns is expressed by the innovative, invariable locative suffix *-ni*. The examples in (12) and (13) show this distribution.

(12) Locative marking in Herero (Marten 2006)

- a. Pò-ndjúwó p-á-rárá é-rùngà
 16-9.house SM16-PAST-sleep 5-thief
 ‘At the house slept the thief.’
- b. Kò-mù-tí kw-á-pósé òzó-ndjímá
 17-3-tree SM17-PAST-make_noise 10-baboons
 ‘In the tree the baboons made noise.’
- c. Mò-ndùndú mw-á-vázé-w-á òmu-átjé
 18-9.mountain SM18-PAST-find-PASS-FV 1-child
 ‘On the mountain was found the child.’

(13) Locative marking in Swahili (cf. Ashton 1947: 125-129)

- a. M-ji-ni pa-me-kuf-a wa-tu w-engi
 3-town-LOC SM16-PERF-die-FV 2-people 2-many
 ‘(Here) at the town many people have died.’
- b. M-ji-ni ku-me-kuf-a wa-tu w-engi
 3-town-LOC SM17-PERF-die-FV 2-people 2-many
 ‘(There) at the town many people have died.’
- c. Ki-sima-ni m-na ma-ji
 7-well-LOC SM18-with 6-water
 ‘There is water in the well.’ (‘In-well therein-with water’)

The examples show that in Herero, both nouns and verbs show locative marking, distinguishing between three locative classes (labelled class 16, 17, and 18). While on the verb, the locative marker takes the slot of the subject agreement marker, and thus is a regular member of the subject marking paradigm, the locative markers in nouns are added to the ‘original’, lexical noun class markers

(Kavari and Marten 2009). For example, in (11b), the locative prefix *kò-* is found before the lexical class 3 prefix *mù-*, resulting in double prefixing. In contrast in Swahili, the nominal and verbal paradigms differ. In the verbal agreement, the three locative classes are morphologically distinguished, and indeed the agreement prefixes are very transparently similar to the corresponding prefixes in Herero. However, in the nominal domain, locative nouns in Swahili do not take a locative prefix, but the locative suffix *-ni*, a widespread innovation in Eastern Bantu languages, and possibly reflecting a grammaticalization process involving the Swahili noun *ini* ‘liver’ (Samsom and Schadeberg 1994). The locative suffix *-ni* is the only nominal locative marker in the Swahili system and is attached to all relevant locative nouns. This means that the historical distinction between three different locative classes, which is still maintained in Swahili verbal morphology, is collapsed in the Swahili nominal domain. The example shows how Herero and Swahili are similar in the overall system of locative marking, but differ with respect to details: Herero has three distinct locative class prefixes on both the nominal and the verbal domain, whereas Swahili has three agreement prefixes in the verbal domain, but only one locative suffix *-ni* in the nominal domain.

Another aspect of locative constructions is related to their morphosyntax, in particular in so-called locative inversion constructions. Here, again, we see overall similarity between Herero and Swahili, but variation in detail. Locative inversion constructions are part of a whole set of inversion constructions found in Bantu languages (Marten and van der Wal 2014). In locative inversion, a locative phrase is coded as grammatical subject, showing subject agreement and typically preceding the verb, while the logical subject follows the verb, although it typically does not show object qualities like availability of object marking. In fact, the examples in (12) and (13) illustrate locative inversion constructions in Herero and Swahili respectively, and (14) and (15) provide further examples.

(14) Pé-rís-à òvá-éndá òzò-ngòmbé.
 SM16.HAB-feed-FV 2-guest 10-cow
 ‘There feed guests cattle.’ (Herero, Marten 2006: 115)

(15) Ki-wanja-ni pa-na-tu-a ndege
 7-field-LOC SM16-PRS-land-FV 9.plane
 ‘In this field will land an aeroplane.’ (Swahili, Marten fieldnotes, YH02052013_3)

The Herero example in (14) shows that the initial locative phrase can be omitted, often giving rise to an existential or presentational construction. It also shows that in Herero, transitive verbs like *-rísá* ‘feed’ can undergo locative inversion. In contrast, in the Swahili examples, all the verbs are intransitive: *-kúfa* ‘die’ in (13a, b), *-tua* ‘land’ in (15) and the locative copula *mna* ‘be in’ in (13c). This difference is systematic, and in fact a well-studied property of locative inversion construction. Across Bantu, languages differ as to the kind of predicates which are allowed in locative inversion (Demuth and Mmusi 1997, Marten 2006). In Chichewa, for example, only unergative predicates are allowed, while in Setswana all intransitive predicates are possible, and Herero also allows

transitive predicates as seen in (14). Thus, while both Herero and Swahili allow locative inversion constructions, they differ typologically in terms of the predicates which are taking part in the alternations: In Swahili they are restricted to intransitives, while in Herero, also transitive predicates are possible.

In this section, we have looked at structural differences between Herero and Swahili. One important difference we identified is the presence of tone in Herero, which has significant implications for the grammar of the language overall and sets it apart in various ways from Swahili. On the other hand, we have also seen further examples of a combination of overall typological similarity and differences in specific details of aspects of a particular grammatical process or feature. Before drawing out some wider conclusions of the comparison, in Section 5 we will briefly turn to a comparison of the two languages in a wider comparative Bantu context, based on the BMV database.

5. Herero and Swahili in a comparative context

In this section we will draw on the data from the Bantu Morphosyntactic Variation (BMV) database (Marten et al. 2018) to place Herero and Swahili in a wider comparative context. The BMV database is built around 142 parameters, or variables, of morphosyntactic variation in Bantu developed in Guérois et al. (2017) as part of a collaborative project on variation in Bantu.

The database contains data from more than 50 Bantu languages, but for many languages, data for only some aspects of variation are available, and so not all of the 142 parameters receive a value. For the present study, we have included all languages in the database for which at least 80% of data points are available. This results in a set of 35 Bantu languages, which included languages from all Guthrie (1967-71) zones, except Zone L. We then calculated for each pair of languages in the set their similarity in terms of shared values for each parameter. For example, if two languages have the same value for half of the parameters, the similarity would be recorded as 50%. The results of this can be represented in a ‘distance matrix’ showing the percentage value of similarity for each pair (Table 1). We finally calculated the average similarity of each language with respect to all the other languages in the set (with the weighted average taking into account any parameters for which the language has no values). In some sense, the average value can be seen as indicating how ‘typical’ a Bantu language is with respect to the parameters of the sample.

The full dataset for all 35 languages of our sample is shown in Table 1, showing the shared similarity for each language pair. Taking all data into account, we can see that the range of values runs from 33% to 90% similarity. In fact, there are three pairs which exhibit 33% similarity, namely Eton (A71) and Makhuwa (P31), Eton (A71) and Luganda (JE15), and Nzadi (B865) and Herero (R31). All these pairs involve a language from the northwest part of the Bantu speaking area – Eton is spoken in Cameroon and Nzadi in the western Democratic Republic of the Congo – which is paired with languages from different opposite ends of the area – Makhuwa (spoken in Mozambique) in the southeast, Luganda (spoken in Uganda) in the northeast, and Herero in the southwest. On the

other end of the scale, the two closely related Kilimanjaro Bantu varieties Uru (E622d) and Rombo (E623) share 90% of the data values, which is the highest value in the sample.

Turning to the comparison of Herero and Swahili within this comparative context, we can see that the shared values between the two languages is 54%. Within the overall values of Swahili, this value is relatively low. While the similarity of Swahili with some northeastern languages is below 50%, apart from that, the similarity of Swahili with other languages of the sample is typically around high 50% or in the 60% range, and the weighted average is 58% so higher than the similarity between Swahili and Herero.⁴

In contrast, in the context of Herero, 54% similarity is comparatively high. This is because overall, Herero is less similar to the other languages of the sample than Swahili. In fact, for all languages in the sample the similarity with Herero is below 60% and the weighted average is only 51%. There is thus a difference between Herero and Swahili in terms of how the similarity between the two languages compares to their respective relations to the other languages in the sample, although the differences are not very large. This difference might indicate that Swahili is structurally closer to the languages of the sample overall, and that the relation to Herero is comparatively less close. This in turn may in part reflect the south-eastern bias of the sample languages, since even though almost all Guthrie zones are present, there is a slight bias towards southeastern languages. This imbalance might also be relevant for understanding the shared percentages of Herero, which are much lower. This may reflect the slightly more peripheral position of southwestern Bantu languages such as Herero, at least in our sample. From this perspective, the slightly higher shared percentage between Herero and Swahili might be seen as indicating that Swahili is maybe a less typical southeastern language, possibly as a result of the use as a language of wider communication.

Finally, we turn briefly to looking more closely at the specific data behind the shared similarity between Herero and Swahili. The value of 54% is based on comparison of 120 parameters. This is because we have data values for all 142 parameters for Swahili, but only for 120 parameters for Herero. Out of these 120 parameters, values are shared between Herero and Swahili for 65 parameters.⁵ The grammatical domains in which similarities and differences are found to some extent reflect the discussion in Section 3 and 4, above. For example, shared values are common in the areas of noun class and verbal derivation, where we noted the close similarity in terms of morphological markers. On the other hand, different values are found, for example, in the areas of TAM and negation, resonating with the discussion of tone and TAM marking in Section 4 above, but also in the area of auxiliaries and complementation, which provide interesting topics for future research.

⁴ The weighted average is the percentage of that language compared with all the other languages of the sample, weighted by their respective numbers of common parameters. In other words, this value calculates all similarity values for each language (both languages in the current study), resulting in one overall value, and the higher the value, the more similar the language is to the rest of the sample.

⁵ A full report is available from the Bantu Morphosyntactic Variation (BMV) website at <https://bantusoas.ac.uk/>.



Parameter matches by language pair

Language set: Languages over 80% 26 Nov 2017, Parameter set: ALL, Number of parameters: 142,

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	A50	A71	B865	C61	E35	E51	E622d	E623	E73	F12	F33	G22	G221KK	G42-Ash	G52	H21	JD61	JD63	JD66	JE15	K11	K333	M42	N13	N31	N44	P21	P31	P34	R11	R31	R41	R31	S31	S42			
A50																																						
A71	67%																																					
B865	56%	61%																																				
C61	39%	39%	43%																																			
E35	46%	42%	39%	46%																																		
E51	51%	40%	44%	45%	64%																																	
E622d	47%	37%	40%	46%	66%	69%																																
E623	46%	37%	41%	45%	63%	66%	90%																															
E73	46%	39%	39%	56%	58%	58%	68%	68%																														
F12	49%	42%	44%	53%	69%	58%	66%	68%	61%																													
F33	46%	37%	50%	52%	58%	62%	69%	69%	64%	67%																												
G22	45%	39%	45%	50%	62%	62%	67%	68%	62%	62%	61%																											
G221KK	47%	36%	47%	50%	66%	67%	74%	73%	62%	70%	64%	68%																										
G42-Ash	44%	35%	44%	51%	58%	58%	60%	60%	65%	67%	62%	59%	66%																									
G52	50%	41%	49%	50%	58%	58%	64%	62%	58%	62%	68%	55%	65%	68%																								
H21	54%	42%	43%	47%	66%	57%	58%	59%	57%	74%	56%	57%	66%	63%	59%																							
JD61	40%	42%	38%	49%	64%	54%	56%	54%	51%	59%	55%	50%	57%	52%	57%	57%																						
JD63	49%	42%	36%	52%	65%	54%	57%	52%	60%	68%	58%	55%	58%	55%	55%	56%	59%																					
JD66	36%	37%	39%	51%	54%	56%	60%	60%	69%	65%	61%	62%	58%	60%	59%	56%	56%	61%																				
JE15	43%	33%	35%	49%	75%	61%	58%	59%	57%	62%	56%	50%	62%	57%	61%	64%	57%	62%	56%																			
K11	50%	42%	41%	48%	56%	57%	52%	51%	52%	61%	57%	49%	58%	56%	59%	72%	56%	54%	50%	57%	60%	53%	50%	50%	52%	65%												
K333	50%	37%	43%	53%	56%	52%	53%	49%	51%	56%	55%	47%	50%	50%	57%	60%	53%	50%	50%	52%	65%																	
M42	47%	40%	41%	50%	60%	51%	56%	56%	51%	62%	53%	56%	59%	59%	55%	68%	54%	60%	53%	62%	59%	60%																
N13	48%	35%	37%	42%	64%	51%	61%	62%	55%	61%	55%	53%	51%	49%	55%	57%	55%	51%	49%	54%	49%	55%	57%															
N31	56%	41%	38%	49%	47%	49%	49%	50%	57%	54%	53%	50%	52%	56%	52%	56%	44%	53%	54%	50%	52%	52%																
N44	42%	40%	43%	52%	50%	45%	49%	51%	55%	59%	56%	47%	56%	63%	58%	59%	52%	52%	61%	55%	58%	58%	56%	48%	52%													
P21	47%	39%	42%	56%	57%	61%	60%	58%	59%	67%	64%	61%	60%	63%	61%	59%	51%	56%	57%	56%	54%	54%	64%	63%	59%	53%												
P31	39%	33%	39%	50%	55%	53%	55%	57%	58%	63%	53%	57%	62%	64%	51%	55%	52%	55%	57%	49%	44%	44%	55%	47%	63%	54%												
P34	43%	34%	35%	54%	48%	49%	49%	49%	56%	58%	49%	53%	57%	61%	49%	56%	45%	50%	59%	53%	48%	42%	52%	49%	47%	62%	55%	80%										
R11	40%	39%	42%	56%	56%	53%	49%	52%	54%	59%	54%	52%	61%	58%	54%	68%	59%	53%	59%	58%	62%	52%	63%	46%	52%	55%	55%	58%										
R31	34%	36%	33%	50%	56%	50%	56%	55%	57%	55%	50%	48%	49%	54%	48%	56%	50%	51%	57%	56%	55%	51%	54%	51%	52%	49%	51%	47%	50%									
R41	46%	42%	48%	43%	57%	53%	50%	50%	50%	64%	52%	51%	49%	58%	56%	65%	51%	51%	60%	55%	58%	63%	52%	52%	54%	64%	55%	54%	56%	54%	52%							
S31	48%	44%	43%	54%	43%	50%	50%	50%	61%	48%	54%	46%	56%	57%	46%	56%	48%	57%	58%	46%	53%	47%	50%	43%	49%	52%	49%	51%	53%	53%	49%	48%						
S42	40%	39%	36%	52%	56%	54%	45%	47%	50%	62%	51%	50%	53%	55%	46%	55%	59%	53%	53%	50%	55%	49%	52%	49%	54%	53%	55%	54%	54%	51%	61%	64%						
S54	50%	42%	41%	55%	60%	57%	54%	58%	63%	68%	62%	53%	60%	66%	54%	64%	53%	63%	64%	53%	56%	57%	57%	51%	57%	59%	56%	59%	62%	53%	59%	61%	60%	67%				

Table 1: Herero and Swahili in comparative context

In this section we have looked at the relation between Herero and Swahili in the wider context of morphosyntactic variation in Bantu. We have seen that Herero and Swahili share 54% of values for our morphosyntactic parameters, and that this is comparatively low for Swahili, compared to the shared percentages with other languages of the sample, but comparatively high for Herero. Two possible explanations for this are the comparatively more peripheral position of Herero (both geographically and typologically) as opposed to Swahili, but also the use of Swahili as wider lingua franca, which may have made the language in some sense a less typical eastern Bantu language. In terms of the main grammatical domains which account for the shared percentage figure between the two languages, we have noted noun classes as verbal derivation as areas of similarities, and TAM, negation, auxiliaries and complementation as areas of divergence.

6. Conclusions

In this paper we have developed a comparative, contrastive analysis of the two Bantu languages Herero and Swahili. The languages provide interesting points of comparison, as they are found at two ends of the Bantu speaking area, and also have very different sociolinguistic profiles. For the comparison we drew mainly on morphosyntactic data, harnessing recent work and progress in the study of Bantu grammar, as well as on the Bantu Morphosyntactic Variation database.

The results of the comparison have confirmed the well-known impression of variation in Bantu as ‘unity in diversity’, and we have seen a number of instances of typological similarity paired with differences in the specific expression or dynamics of a particular grammatical feature. Examples of this micro-variation included vowel harmony, verbal extensions, and object marking. But we also looked at areas where the two languages differ more substantially, for example with respect to tone and how this difference has effects in both nominal (‘tone cases’) and verbal (TAM marking) morphosyntax.

Following the qualitative-typological comparison, we presented a brief quantitative study, using the BMV database, where we contextualised the relation between Herero and Swahili in wider morphosyntactic variation studies using 142 parameters and data from 35 Bantu languages. Here we showed that Herero and Swahili have 54% shared parameter values, and that this is a comparatively low number for Swahili, but a high number for Herero, possibly reflecting both geographical-genetic differences, as well as sociolinguistic differences.

Stepping back from the specific aspects of the relation between Herero and Swahili so far, we can ask more general questions about the relationship, and we will address two of these questions here, one related to the role of geographic distance, the other to morphosyntactic complexity.

First, we noted already in the Introduction that a comparison between Herero and Swahili is interesting since the two languages are spoken at two ‘opposite’ ends of the Bantu-speaking area. Having looked at the similarities and differences between the two languages in some detail, we can now ask to what extent geography plays a role in their relationship. In fact, we already mentioned this in Section 5, where we pointed out that the difference in shared morphosyntactic parameters between Herero and Swahili may in part reflect their different geographical position as southwestern

(Herero) and southeastern (Swahili) Bantu languages, keeping in mind that in Bantu languages geographic position and genetic grouping often coincide. Looking back at the qualitative comparison on Sections 3 and 4, we can add further evidence to the question. Tone cases, for example, which set Herero apart from Swahili, are considered an areal phenomenon, found in western Bantu languages along the Atlantic coast. On the other hand, the innovative use of the locative suffix *-ni* is considered a southeastern Bantu feature. Thus, there is both quantitative and qualitative evidence for thinking of the differences between Herero and Swahili at least in part related to their geographic (and genetic) position.

Second, we can ask whether either Herero or Swahili are more structurally complex than each other. The discussion is limited by our understanding of (and ability to measure) structural complexity. But the question is pertinent in light of the discussion in Section 4, where we showed that both nominal ('case') and verbal (TAM) inflection in Herero would seem to be 'more complex' than in Swahili, although other than these impressionistic examples, we do not have more systematic data. Similarly, in the quantitative analysis, we noted that Swahili might be particularly close to Herero, in contrast to many other eastern Bantu languages, because Swahili is used as a lingua franca and has thus lost some eastern Bantu features (and with this some complexity?). With respect to Swahili, the question has been discussed before, and Marten et al. (forthcoming), for example, propose that Swahili has lost grammatical complexity vis-à-vis older forms of the language, and vis-à-vis neighbouring Bantu languages. The examples discussed here add further evidence to the discussion, but the evidence is by no means conclusive, and further research will provide more robust answers.

In conclusion, we have presented qualitative and quantitative analyses of the relationship between Herero and Swahili and have explored structural similarities and differences between the two languages. The discussion has highlighted the complexity of the relationship and how it is linked to wider typological, genetic, areal and sociolinguistic factors. We hope that the findings reported here will make a contribution to and stimulate further work in Herero and Swahili studies, Bantu languages, and historical and comparative linguistics more widely.

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