

**PROBING THE INTERACTION OF LANGUAGE CONTACT AND  
INTERNAL INNOVATION: FOUR CASE STUDIES OF  
MORPHOSYNTACTIC CHANGE IN RANGI \***

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The Bantu language Rangi is spoken at the northern borderlands of Tanzania, where Bantu, Cushitic and Nilotic languages meet. In many regards, Rangi exhibits the morphosyntax typically associated with East African Bantu: SVO word order, an extensive system of agreement and predominantly head-marking morphology. However, the language also exhibits a number of features which are unusual from a comparative and typological perspective, and which may have resulted from language contact. Four of these features are examined in detail in this paper: 1) Verb-auxiliary order found in the future tense, 2) clause-final negation, 3) a three-way distinction in verbal deictic markers, and 4) an inclusive/exclusive distinction in personal possessive pronouns. These features are assessed with reference to three criteria: syntactic structure, lexical/morphological form and geographic distribution. The examination shows that two of the unusual features result from a combination of internal and external factors, while the other two appear not to be related to external influence through contact. The results of the study show the complex interaction between internal and external factors in language change, and the importance of investigating potentially contact-induced change in detail to develop a more complex and fine-grained understanding of the morphosyntactic process of innovation involved.

**Keywords:** Bantu languages, Cushitic languages, language contact, morphosyntactic change, grammaticalisation, negation, word-order, auxiliary constructions, deictic particles, inclusive/exclusive distinction

## **1. Introduction**

While there is broad consensus that languages change over time, there is no consensus as to exactly what constraints – if any – are operative on this process of change, nor on the role of language contact in processes of change. Language change has been noted to impact on all aspects of linguistic structure (Harris and Campbell 1995, Aikhenvald 2002). However, there is no agreement as to the interaction between language contact and language change. Some schools of thought believe that

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language contact can impact on all domains of language (Thomason and Kaufman 1988, Thomason 1997) whilst others believe that language contact makes no independent contribution to linguistic change, but that all linguistic change is the result of language-internal innovation, although this may take place in the context of language contact and hence be influenced by it (Heine and Kuteva 2005).

In this paper we investigate the interaction between innovation, grammaticalisation and contact by presenting four detailed case studies from the Northern Bantu borderland, an area well known for its complex language contact dynamics (Kießling et al. 2008). We provide analyses of four innovative morphosyntactic features of the Tanzanian Bantu language Rangi, highlighting the complexity of morphosyntactic innovation and its relationship to language contact. We distinguish three parameters within which the interplay between grammaticalisation and contact is analysed: syntactic structure, morphological form, and geographic distribution. This approach allows us to understand the complexities of the case studies in a more structured and fine-grained way and we will show below that, for example, in one case study (the innovative negation marker *toko* in Rangi) it is the lexical expression which is due to language contact with Cushitic, and the morphosyntactic construction is likely to be an independent innovation, whilst in another case study (the innovative verb-auxiliary word order), the opposite is the case, representing borrowing of structure but not of form. Through this detailed investigation of the different aspects of the case studies, we show that the role of language contact in all four instances – which at first sight appears to be quite strong – turns out to be much less central to the genesis of these forms. The results show that in only two of our four case studies does language contact play a role, and even in these, the process is also motivated by language-internal factors, whilst in the other two case studies, despite appearances, language contact does not play a role and the innovative structures can instead be explained solely on the basis of language internal dynamics.

The discussion demonstrates the complex interaction of internal and external factors in language change, and also shows that even if socio-historical conditions for language contact are met, the role of contact in structural innovation cannot be taken for granted and needs to be demonstrated in detail. This is done here by specific parameters which provide a framework for comparing and assessing the interaction of different drivers of language change.

## **2. Rangi in the context of the East African linguistic ecology**

Bantu languages provide an ideal lens through which to examine processes of language contact and change. With some 450 languages spoken across much of Central, Southern and Eastern Africa, the Bantu languages exhibit a range of broad typological similarities across a number of morphosyntactic domains. The genetic relatedness of Bantu languages has been assumed since the earliest comparative studies (see, e.g. Bleek 1862/9, Meinhof 1899). More recent studies have affirmed this relatedness, albeit with refinements to the internal sub-classifications (Grollemund et al. 2015). However, the current structural relations among Bantu languages are often argued to be as much a result of sustained language contact as of genetic, inter-generational inheritance (e.g. Möhlig 1981, Vansina 1979, Bastin et al. 1999, Marten 2013), in part due to high levels of multilingualism among speakers of Bantu languages. Most recently, Marten et al. (2016) have proposed the hypothesis that at the centre of the Bantu-speaking area centripetal convergence effects (language transmission and contact between Bantu languages) have led to the development of closer structural similarity, while the periphery of the Bantu-speaking area is characterised by centrifugal convergence through contact with non-Bantu languages. Centrifugal convergence effects would then be expected in Rangi which is spoken at the north-eastern periphery of the Bantu-speaking

area, where a number of non-Bantu languages are also found. However, while this seems correct in terms of overall typological generalisation, we will show that the case for contact-induced change in Rangi is more difficult to make than would appear at first sight.

Rangi is spoken in the Rift Valley area of northern Tanzania, where Bantu, Cushitic and Nilotc languages meet. The area has a sustained history of language contact, with high degrees of multilingualism and language shift (Kießling et al. 2008). The nature of language contact in the region is further characterised by the fact that the languages involved come from different language families. In addition to Bantu languages, the area is home to the Southern Cushitic languages Iraqw, Burunge and Alagwa, the Nilotc languages Datooga and Maasai, as well as the isolates Hadza and Sandawe.<sup>1</sup> It has been suggested that the predecessors of the Rangi-Mbugwe-speaking community were one of the first Bantu language-speaking arrivals in Tanzania (Kießling et al. 2008). It has also been noted that the relation of Rangi and its position within the rest of East African Bantu is unclear (Nurse 1999, Masele and Nurse 2003, Kießling et al. 2008: 187).

There is a high degree of contact between Rangi and the neighbouring Cushitic languages. The primary non-Bantu contact languages for present-day speakers of Rangi are the Cushitic languages Alagwa and Burunge. So-called ‘mixed villages’ are widespread throughout the Rangi area and inter-marriage between Rangi-speaking and Burunge- or Alagwa-speaking communities is relatively common. For Alagwa, Mous notes that mixed marriages with Rangi speakers are ‘very common, and have been so since time immemorial’ (Mous 2016: 2). An estimated 35,000 speakers of Burunge are thought to have shifted to join the Rangi community between the late 1950s and the late 1990s (Oliver Stegen p.c.), and this trend continues today, resulting in intense language contact. In the present day, there are more first language speakers of Alagwa and Burunge who speak Rangi as an additional language than Rangi speakers with competence in Alagwa or Burunge. Dunham (2005: 15) notes that in marriages between Rangi speakers and Alagwa or Burunge speakers, the latter two communities often adopt Rangi.

Influence through contact from Bantu languages, particularly Rangi and Swahili, on Burunge and Alagwa has been noted in the verbal domain, as well as in the encoding of tense-aspect distinctions (Kießling et al. 2008: 191). With respect to Alagwa, Mous (2016: 2/3) notes that there is considerable influence from Rangi on Alagwa, but also influence in the opposite direction. For Burunge, Mous and Kießling (2003: 29/30) provide *maarimu* ‘teacher’ and *cherewim* ‘be late’ as examples of loanwords from Rangi as part of modern Bantu influence on Burunge.

Other possible Cushitic contact languages for Rangi are Iraqw and Gorwaa. The Rangi and Iraqw communities are no longer in direct contact due to the presence of Gorwaa in the area intervening between the two languages. However, Gorwaa is closely related to Iraqw and given the history of language shift in the region it is also possible that (predecessors of modern-day) Rangi and Iraqw were in direct contact at some point in the past. In their survey of loanwords in Iraqw, Mous and Qorro (2009) note only a limited number of loanwords of Bantu origin. The majority of these come from Swahili – the dominant lingua franca in the Iraqw region and throughout Tanzania – and a small number from the Bantu language Mbugwe. As such, the influence from Rangi on the Iraqw

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<sup>1</sup> There is on-going discussion regarding the genetic classification of the Tanzanian languages Hadza and Sandawe. A number of studies have proposed that these two languages are related to the Khoisan languages of Southern Africa (Ehret 1986, Elderkin 1986). However, Westphal (1971:401) and Wright et al. (1995: 1) do not support such a claim. Güldemann and Vossen (2000) further counter the claim that Khoisan constitutes a genetic grouping at all. The exact classification of Hadza and Sandawe is not central to the current discussion, but the presence of these languages in the region shows yet another instance of linguistic diversity in the area.

lexicon, if indeed there is any, appears to be very limited. No studies of contact between Gorwaa and Rangi or other Bantu languages have yet been conducted.

In addition to loanwords in specific languages, there are a number of examples of Bantu loanwords adapted into Cushitic in earlier times. These words with wider areal distribution seem to provide evidence in support of borrowing of Bantu lexical items into Proto-West-Rift Southern Cushitic. Mous and Qorro (2009) note that words with a wider areal distribution which may have cognates in Rangi include *maso'o* (Iraqw) ‘first milk after a cow has calved’, *masusu* ‘milk’ in Rangi and \**mariinga* (Proto-West-Rift Southern Cushitic), *muringa* ‘beehive’ in Rangi, *miriingamo* ‘beehive’ (Iraqw) and *miriingi* ~ *mariingi* ‘beehive’ (Gorwaa). Other examples include words for ‘pestle’, ‘mortar’, ‘pumpkin’ and ‘worn-out hoe’, as well as a ‘type of ogre’, ‘father’ or ‘ancestor’.<sup>2</sup> Many of these words seem to be ancient borrowings which are found in all four of the Cushitic languages of the area, and the majority of them relate to agriculture and farming.

While there is good evidence for lexical influence of Rangi on the Cushitic languages in the area, either at some time in the past or more recently (at least for Alagwa and Burunge), there is less evidence for lexical influence of Cushitic languages in Rangi. However, as we will discuss in more detail below, there are potential cases of structural influence of Cushitic languages on Rangi.

The overall linguistic ecology in which Rangi is embedded and the contact effects which have been noted in the past are compatible with a situation involving borrowing and imposition by second-language speakers of Rangi with a Cushitic first language. These speakers would have borrowed Rangi lexical features into the relevant Cushitic languages, explaining the lexical influence of Rangi, but could also have subconsciously imposed structural features from their first, Cushitic language onto Rangi (cf. Thomason and Kaufman 1988, Van Coetsem 1988, Guy 1990).

Structurally, Rangi has many of the morphosyntactic features most commonly associated with East African Bantu languages: noun classes, an extensive system of agreement, head-marking morphology and pragmatically-influenced word order. However, Rangi also has a number of morphosyntactic features which stand out from a comparative perspective. Four of these features form the basis of the present study:

- 1) **Head-final word order:** Rangi exhibits a comparatively and typologically unusual verb-auxiliary order in the immediate and general future tense
- 2) **Clause-final negation:** Rangi has a clause-final negative marker *tukw* which appears to have a Cushitic source

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<sup>2</sup> These forms appear as 1) \**irimu* ‘ancestor’s spirit’ (Proto-West-Rift Southern Cushitic) from \**dimu* ‘ancestor’s spirit’ (Proto-Bantu, with the [r] suggesting transfer from Rimi or Rangi (Kießling & Mous 2002: 183)); 2) \**kunu* ‘mortar’ (Proto-West-Rift) which is claimed to represent transfer from a Bantu source; Proto-Bantu has the form \**nó* (class 7/8) which has the reflex *kunu* in Rangi; 3) *muusa* ‘pestle’ (Iraqw), *musu*~*musung* (Gorwaa), *maysu* (Alagwa), *maysu* (Burunge) *moosi* ‘pestle’(Rangi) (Kießling and Mous 2002: 206); 4) *taangi* ‘pumpkin’ (Iraqw), *taangaa* ‘pumpkin’ (Gorwaa), *tangaa* (Alagwa), *taanga* (Burunge), and *itaanga* ‘pumpkin’ (Rangi) (Kießling and Mous 2002: 267); 5) \**musuko* ‘worn-out hoe’ (Proto-North-West-Rift) *muski* ‘broken hoe’ (Iraqw) *musuka* ‘broken hoe’ (Rangi); 6) *taangoo* ‘deserted homestead’ (Iraqw) which is proposed to be transferred from a Bantu source, either Rangi *tongo* ‘deserted homestead’ or Swahili *tongo* with the reconstructed form for Proto-Bantu \**tóngò*, *taangoo* ‘deserted village’ (Gorwaa), *toongoo* (Alagwa), *tongoo* ‘village, settlement’ (Burunge) (Kießling and Mous 2002: 268); 7) \**taatáa* (Proto-South-West-Cushitic), *taataa* ‘father, ancestor’ (Iraqw) , *taatáa* (Alagwa), *taataa* (Burunge), *taataa* ‘father’ (Rangi) (Kießling and Mous 2002: 269).

- 3) **Deictic particles:** Rangi employs a system of morphological marking of a three-way deictic distinction in the verb form, which is unusual in Bantu languages
- 4) **Inclusive/exclusive distinction:** Rangi has an inclusive/exclusive distinction in personal possessive pronouns, a distinction not found in other East African Bantu languages nor widely found in other languages of the area

The paper examines these features in turn and discusses the extent to which these features, assuming that they are not inherited, can be shown to result from language-internal and/or language-external origins. Each feature is examined in relation to three criteria: 1) syntactic structure, 2) lexical/morphological form, and 3) geographic distribution. We will show that it is often not easy to determine the origin of each of these features, and that it can be challenging to tease apart external and internal influence on these innovations, as well as the interplay between grammaticalisation and contact in grammatical change. Our criteria-based approach helps to do this more systematically, and we will show how, for each feature investigated, values for the different criteria support a particular interpretation of the genesis of the feature.

### **3. Head-final word order in compound verb constructions**

Our first case study focuses on head-final auxiliary constructions. These are unusual in an otherwise predominantly head-initial Bantu language like Rangi and may reflect contact influence from neighbouring head-final Cushitic languages. We will explore this scenario, but then also look at an alternative, grammaticalisation explanation, and show that there is evidence supporting both these analyses.

Rangi, in common with many Bantu languages, uses a combination of simple and complex verb forms to encode a range of tense-aspect distinctions. Simple verbal forms consist of a single verb which hosts tense-aspect marking through a combination of prefixes and suffixes. Thus, a general present construction is formed using a verb stem which hosts the general present prefix *a-*, as can be seen in example (1).<sup>3</sup>

- (1) N-a-térek-a                mboha                j-á                ma-sambi.  
          SM1SG-PRES-cook-FV 10.vegetables      10-of        6-leaves  
          ‘I am cooking leafy green vegetables.’

Compound constructions formed of an auxiliary and a main verb can also be used to encode specific tense-aspect combinations, as can be seen in the recent past perfective form in example (2) and in the distant past perfective in (3).

- (2) U-ra                mu-gonjwa    áá-ri                a-a-kwíy-ire.  
          1-DEM        1-ill.person    SM1.PST1-AUX        SM1-PST1-die-PFV  
          ‘That ill person has died.’

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<sup>3</sup> Unless otherwise indicated, Rangi data were collected by the first author in the Kondoa and Dodoma regions of central Tanzania between October 2009 and May 2010, and between October and November 2011. The data have their origins in semi-structured interviews and targeted elicitation sessions which were conducted on a one-to-one basis with native speakers of Rangi. Some of the examples also come from larger passages of text and traditional narratives.

- (3) V-*fja*              *va-tiite*              *u-jusi*              *w-óó*              *rut-a.*  
       SM2-AUX.PST2        SM2.PFV-have.PERF        14-knowledge        14-of        forge-FV  
       'They used to be blacksmiths.'

Examples such as (2) and (3) show that the auxiliary precedes the verb, as would be expected in a head-initial Bantu language like Rangi. However, a more unusual word order in which the auxiliary appears after the infinitival verb form is also found in the language (see also Gibson 2012). This verb-auxiliary order is restricted to the immediate future (4) and general future (5) tenses where an attempt at pre-verbal auxiliary placement results in ungrammaticality (6).

- (4) Kán-y-a              n-íise              o-hu              mo-ti.  
       fell-CAUS-FV        SM1SG-AUX        DEM-3        3-tree  
       'I will fell this tree.'
- (5) Térek-a              ndí-ri              chá-korya.  
       cook-FV            SM1SG-AUX        7-food  
       'I will cook food.'
- (6) \*Ndí-ri              térek-a              chá-korya.  
       SM1SG-AUX            cook-FV        7-food  
       Intd.: 'I will cook food.'

This order is unusual from a typological perspective since SVO languages often exhibit head-initial auxiliary-verb order. While Greenberg's (1963) Universal 16 only refers to VSO and SOV order, in the majority of SVO languages in his sample the inflected auxiliary precedes the verb (seven vs. one languages, the exception being Guarani). Similarly, the Rangi order is unusual from a comparative point of view since pre-verbal auxiliary placement dominates across the Bantu languages of East Africa (Gibson 2018). Due to this markedness, and the overall contact situation in which Rangi is found, this head-final auxiliary construction in Rangi has often been analysed as resulting from language contact.

In the following sections, we will first review the evidence for a contact-induced change scenario, and then note that there is also evidence for language-internal, grammaticalisation processes. Finally, we conclude that the evidence is consistent with both contact and grammaticalisation, and so shows that both processes are likely to have been at play.

As noted above, Rangi has been in sustained contact with non-Bantu languages, particularly the Cushitic languages Burunge and Alagwa, and a widely-adopted suggestion to explain the marked word-order in Rangi is that it is the result of contact with these non-Bantu languages (Mous 2000, Stegen 2002, Nurse 2003, Dunham 2005, Kießling 2007). Kießling (2007: 191), for example, proposes that the verb-auxiliary order exhibited by Rangi can be accounted for by diffusion of structural features from a West-Rift Southern Cushitic source. The Cushitic language Iraqw for example, has rigid SOV word order, and a possible structural source for verb-auxiliary order in Rangi could be the periphrastic future tense found in Iraqw. This structure is formed through the use of a verbal noun which is followed by the auxiliary *aw* 'go', as can be seen in examples (7) and (8) below (from Mous 1993: 267).

- (7) Makay i ma'á mahúngw ay-á.  
 animals 3SG.SUBJ water:CON drinking:CON go.3-PL  
 'The animals will drink water.'
- (8) Matlo atén a gadyée-r tleehhamá-r aw-aan-a-ká.  
 tomorrow 1PL 1/2SG.SUBJ work:CON-F doing:CON-F go-1PL-INF-NEG  
 'Tomorrow we will not go to work.'

The Rangi structure seems similar to the Cushitic structures and so the periphrastic future tense construction in Iraqw could plausibly be the source of the unusual head-final construction in Rangi. The comparative evidence from Iraqw, and the assumption that these two languages have been in contact in the past, supports an analysis of the Rangi word-order as resulting from language contact.

The wider geographic distribution of the construction further supports this analysis: although it is a comparatively unusual construction, Rangi is not alone in exhibiting verb-auxiliary order. Post-verbal auxiliary placement is also found in five other languages spoken in East Africa: Mbugwe, Gusii, Kuria, Simbiti and Ngoreme (Gibson 2018). Mbugwe is spoken in the central region of Tanzania in an area contiguous to where Rangi is found. Kuria, Simbiti and Ngoreme are spoken in an adjoining area in the northwest Mara Region of Tanzania bordering Lake Victoria, whilst Gusii is spoken in the Nyanza Province of western Kenya. These languages all exhibit verb-auxiliary order to some extent, and they are all spoken in the Rift Valley area where contact with head-final languages exists or is likely to have existed in the past. Gusii, Kuria, Simbiti and Ngoreme are spoken in linguistically diverse areas which have also been inhabited by speakers of Nilotic languages for centuries (Shetler 2007). Earlier Cushitic peoples are also thought to have been present in the area, although they later disappeared and were absorbed into Bantu groups (Nurse 1999: 9, Shetler 2003: 9-13). It has been noted that there has been significant interaction and interference between languages from these families (Roth 2014, Lotta Aunio p.c.). In contrast, the construction is not found in other Bantu languages outside of the Rift Valley or outside East Africa more broadly.

However, there are aspects of the construction which do not easily support a contact analysis. First, the morphology of the Rangi constructions is very likely of Bantu origin. The auxiliary *-ri* can be related to the Proto-Bantu copula *\*-di* (Guthrie 1967-71 Vol. III: 150, C.S. 547; BLR3 940) or *\*-di* (Meeussen 1967: 86). The auxiliary *-iise* appears to have its origins in a main verb (a common lexical source of auxiliaries across Bantu), and is possibly related to an older, now obsolete, form based on PB *\*-yjj* 'come' (cf. Guthrie 1967-71 Vol. IV: 176, C.S. 2045; BLR3 3425).<sup>4</sup> This would mean that a contact-induced account of the verb-auxiliary order in Rangi represents an instance of borrowing of structure but not of form. Thus, the auxiliaries would be a genuine Bantu inheritance, but have been imposed onto a non-Bantu structure.

Furthermore, Mous (p.c.) notes that future constructions with the auxiliary *-aw* 'go' as seen in examples (7) and (8) are uncommon in Iraqw. Whilst the use of a verbal noun followed by an auxiliary is widespread in the language, the most grammaticalised form is a verbal noun followed by a verb expressing 'finish' which is used to convey the meaning 'to do something completely'. In terms of frequency, the borrowing of a future construction therefore appears less likely. Thirdly,

<sup>4</sup> As pointed out by an anonymous reviewer, the auxiliary *-iise* appears to exhibit signs of fossilized imbrication, a widespread process in Bantu where a perfect suffix triggers modification of the preceding root vowel (Bastin 1983, Kula 2002). This adds further support to the suggestion that the auxiliary is of Bantu origin.

Iraqw is not the primary present-day non-Bantu contact language for Rangi. These are rather Alagwa and Burunge, and no obvious candidate for a source of structural transfer into Rangi can be found in these two languages.

Another way of looking at verb-auxiliary futures in Rangi is to analyse them as the result of language-internal innovation, rather than language contact. One possible route of language-internal change could be related (at least historically) to information structure, and in particular to the use of verb-fronting to convey focus, which has been noted across Bantu (Meeussen 1967, Güldemann 2003, Morimoto 2013, Güldemann et al. 2014). In Gikuyu, for example, an infinitival verb can appear in a clause-initial position to convey focus: (11) is therefore an appropriate response to the question in (10).

- (9) Audu      é-dete      garí      y-aké. Irá      ne      a-ra-mé-tugát-ire.  
  1.Audu    SM1-love    car    9-POSS    yesterday    FOC    SM1-PST-OM9-care-PFV  
  ‘Audu loves his car. Yesterday he took care of it.’ (Gikuyu, Morimoto 2013: 9)
- (10) Ne      gu-thabía      a-ra-mé-thabi-rié      kana      ne      gu-thodék-a      a-ra-mé-thodék-ire?  
  FOC    INF-wash    SM1-PST-OM9-wash-PFV    or    FOC    INF-fix-FV    SM1-PST-OM9-fix-PFV  
  ‘Did he wash or fix it?’ (Gikuyu, Morimoto 2013: 9)
- (11) Ne      gu-thodék-a      a-ra-mé-thodék-ire.  
  FOC    INF-fix-FV    SM1-PST-OM9-fix-PFV  
  ‘He FIXed it.’ (Gikuyu, Morimoto 2013: 9)

The verb-fronting constructions shown in (9)-(11) employ a combination of the focus marker *ne* in clause-initial position followed by an uninflected infinitival verb which is doubled by an inflected form of the same verb. Thus, the verb *-thodéká* ‘fix’ appears twice in the construction. Similarly, in the Kimbeko variety of Kongo, the infinitival verb can appear clause-initially to convey focus on the predicate, which is reinforced by the focus-sensitive adverb *kaka* ‘only’ (12).

- (12) sonik-a      kaka      ba-sonik-idi  
  write-FV    only    SM2-write-PRF  
  ‘They only WROTE.’ (Kimbeko, de Kind et al. 2013)

Constructions of the type found in Gikuyu and Kongo that involve verb doubling, differ from those found in Rangi where the construction consists of a lexical infinitival verb and an auxiliary form rather than two forms of the same verb. However, the presence in East African Bantu languages of verb-fronting constructions, may be considered as synchronic support for an information structural account of the verb-auxiliary order in Rangi along the following hypothetical lines.

Historically, it might have been possible in Rangi for an infinitival verb form in a compound construction to be fronted for pragmatic reasons (possibly to encode predicate focus), with the result being verb-auxiliary order. Since the lexical meaning of the predicate was supplied by the infinitive, the auxiliary merely served as a host of TAM information. Whilst historically, verb-fronting would have resulted in a focus reading on the predicate, over time this word-order became the standard means for forming these conjugations and no specific focal interpretation would have been associated with the word-order – as is the case in present-day Rangi. The restriction to future constructions might have addressed a functional gap in the TAM system; either the absence, or loss,

of future tense marking, so that constructions previously associated with predicate focus became absorbed into the broader TAM system of the language.

Support for this proposal comes from word-order variation in future constructions. Whilst declarative future main clauses exhibit verb-auxiliary order, this order is inverted (yielding auxiliary-verb order) in wh-questions (13), negation (14), clefts (15) and relative clauses (16).

- (13) Ani á-ri wúl-a ma-papai a-ya?  
who SM1-AUX buy-FV 6-papaya DEM-6  
'Who will buy these papayas?'
- (14) Niíni sí ndí-ri dóm-a na Kondoa tóku.  
1SG.PP NEG SM1SG-AUX go-FV CONN Kondoa NEG  
'I will not go to Kondoa.'
- (15) Ní niíni ndí-ri kány-a ú-hú mu-ti.  
COP 1SG.PP SM1SG-AUX cut-FV DEM-3 3-tree  
'It is me that will fell this tree.'
- (16) Mw-aarimo a-ri lok-a a-boh-a.  
1-teacher SM1-AUX leave-FV SM1-be.good-FV  
'The teacher who is going to leave is good.'

All of the contexts in which the inverted auxiliary-verb order is found are associated with marked information structure: wh-questions, clefts, and negatives are all associated with focus, and syntactic similarities between relative clauses, constituent interrogatives and focus constructions have been noted in a large number of unrelated languages (e.g. Schachter 1973, Drubig 2001, 2003). In a grammaticalisation account of the development of verb-auxiliary order, verb fronting would not have been used to encode a focal reading on the predicate in these focus contexts, since such constructions differed from declarative main clauses in terms of information structure. As the verb-auxiliary order developed into the standard way to form the future tense construction, the auxiliary-verb order was maintained in these structures which already had their own focal elements and were, as a result, not available for the pragmatically-motivated variant word order.

Further comparative evidence comes from verb-auxiliary constructions in the related Rift Valley Bantu languages noted above. In these languages, the construction is preceded by (some variant of) the particle *ne-* which is described in the literature as a focus marker (Cammenga 2002, 2004; Aunio et al. 2019), and which can be related to a copula \**ni*. This can be seen in example (17) below from Gusii and in example (18) from Ngoreme.

- (17) N-kó-riing-or-a ndé a-ma-raangeti.  
FOC-INF-fold-RVRS-FV SM1SG.AUX AUG-6-blankets  
'I am unfolding the blankets.' (Gusii, Cammenga 2002: 385)
- (18) N-ko-bin-a baa-ni.  
FOC-INF-sing-FV SM1SG-AUX  
'I am singing' (Ngoreme, Tim Roth p.c.)

These examples may reflect an intermediate stage in the grammaticalisation of the construction, in which the verb-auxiliary order was formed through clefting. In such a construction, the fronted

infinitive would have been preceded by the invariable identificational copula *ni*, resulting in a structure ‘*ni* + verb-auxiliary’ with an interpretation along the lines of ‘It is to VERB I am DOing’. This may have been similar in terms of information structure to the verb doubling constructions synchronically attested in a number of other Bantu languages such as Gikuyu and Kongo, described above. However, over time the copula became phonologically reduced, yielding the *n-* prefix that is attested in some of today’s varieties of these languages. Moreover, whilst the *n-* prefix may have started out as a copula, and developed into a focus marker, the associated pragmatic interpretation has been lost in these present-day Rift Valley languages which regularly exhibit the verb-auxiliary order. In the literature describing these constructions, it has also been noted that this marker appears to be fossilised and is no longer associated with a focal interpretation. In Kuria, for example, it has been observed that the historical focus marker *n-* appears to have become lexicalised in certain tenses and has ‘lost its emphatic force’ (Cammenga 2004: 249) and crucially, there is often no ‘unfocused’ counterpart to these forms.

It is worth noting that the account we develop is based on the assumption that the verb-auxiliary order in Rangi is an innovation rather than a Bantu inheritance: Firstly, comparative evidence shows that the verb-auxiliary construction is highly restricted geographically and has been identified in just six languages in the Bantu area. Secondly, even within Rangi, despite the presence of the verb-auxiliary order in the future tense, auxiliary-verb constructions are still found in other tense-aspect combinations as well as in the ‘inverted’ future tense constructions (see (13) – (16) above).

The preceding discussion shows that the historical origin of the innovative verb-auxiliary order in Rangi can be related to contact with head-final languages, as well as to language-internal processes of grammaticalisation. Rangi has been in sustained contact with speakers of the Cushitic languages Alagwa and Burunge which exhibit a rigid SOV word order. Although no obvious candidate for structural borrowing can be identified in Alagwa and Burunge, an analogous construction can be found in the Cushitic language Iraqw which is spoken in the linguistic area, despite not being a direct neighbour to Rangi. This ‘nominal verb+auxiliary’ construction in Iraqw could be considered to be the source of this unusual order in Rangi. However, since the auxiliaries involved in the construction in Rangi appear to be Bantu in origin this would represent borrowing of structure, not of form, and apart from the word order, the construction does not exhibit any other features which would suggest it has non-Bantu origins. In addition, there is evidence to support a language-internal pathway of change of the construction, which could have resulted from an older focus construction through a process of grammaticalisation which was motivated by considerations of information structure. Synchronic evidence from neighbouring languages which employ verb doubling (with an infinitive appearing before an inflected verb form) also supports this proposed development. These observations are summarised in Table 1 below.

Table 1: Verb-auxiliary constructions in Rangi

<b>Structure</b>	Typologically unusual word order for an SVO language such as Rangi	<i>Supports contact</i>
<b>Structure</b>	Plausible development through functional and information structure motivation	<i>Supports internal innovation/ grammaticalisation</i>
<b>Substance/Form</b>	All morphological forms of the construction are based on Bantu (i.e. Rangi) lexical sources	<i>Supports internal innovation/ grammaticalisation</i>
<b>Geography</b>	Restricted to a subset of Bantu languages all of which are in contact with non-Bantu languages	<i>Supports contact</i>
<b>Geography</b>	However, the only non-Bantu language of this area in which an analogous construction has been attested is Iraqw, where the construction is marginal, and which is no longer in contact with Rangi. Not found in contact languages of the Mara region (which are Nilotc, not Cushitic)	<i>Weakly supports contact</i>

In Table 1, three different aspects of the innovation of verb-auxiliary constructions are summarised: Morphosyntactic structure, substance of the morphological/lexical form, and geographical distribution. For each aspect, we consider relevant observations and assess whether the evidence supports a contact analysis, or an internal grammaticalisation analysis. As can be seen from Table 1, the evidence is in fact inconclusive. As we have shown, arguments relating to the structure of the construction are available for either analysis. Evidence from lexical forms supports an internal development, or at least structural/substrate borrowing, since the lexical forms involved are all of Bantu origin. The geographical distribution of the construction supports contact, but only weakly. The overall restriction of the construction to the north-eastern Bantu contact area could be considered to support a contact analysis, since this is an area of sustained contact between Bantu and non-Bantu languages. However, we could not find any specific evidence, in terms of particular constructions in relevant Cushitic languages, which could have served as a model for the Rangi construction, to further support this hypothesis.

In sum, the case for a contact analysis, which at the outset looked very straightforward, has turned out to be more complex on closer inspection. Probably the analysis most consistent with the facts is that the construction arose through an internal grammaticalisation process, but that language contact served as a catalyst in the process, and the presence of head-final structures in the contact languages of Rangi resulted in the faster development of available marked structures, and further development along the grammaticalisation path than would otherwise have happened. This understanding of the data would confirm Heine and Kuteva's (2005) proposal that grammaticalisation always plays a role in contact-induced processes of change.

#### 4. Clause-final negation

The second feature under discussion as a candidate for contact-induced change in Rangi is the sentence-final negation marker *toku*. In contrast to the previous example, here there is clear evidence for borrowing of lexical form, but ambiguous evidence as to the borrowing of structure.

Main clause negation in Rangi is formed of two elements: A pre-verbal negative marker *sí* and the negative marker *toku* which appears either post-verbally ((19)-(20)) or clause-finally (21).

- (19) Isiku vi-viiswi sí v-ój-ire toku.  
today 2-our.fellow NEG SM2-come-PFV NEG  
'Today our friends did not come.'

- (20) Sí n-íyó-dom-a toku na Dodoma.  
NEG SM1SG-PROG-go-FV NEG PREP Dodoma  
'I am not going to Dodoma.'

- (21) Nkuku sí jí-ri ku-tu-héer-a mayi toku.  
10.chicken NEG SM10-AUX INF-OM1PL-give-FV 6.eggs NEG  
'The chickens will not give us eggs.'

Bantu languages employ a range of different strategies to encode negation. However, main clause, sentential negation in Bantu is most commonly marked verbal-internally (cf. Meeussen 1967, Kamba Muzenga 1981, Güldemann 1999). Two positions are available for this verb-internal marking of negation: the pre-initial position (i.e. before the subject marker) and the post-initial position (i.e. after the subject marker). Some languages also mark negation in a post-verbal position, which has been suggested to historically be associated with non-main clause contexts such as infinitives, relatives and subjunctives (Güldemann 1996, 1999), as is still the case in many Bantu languages. The East African Bantu language Ha is an example of a language which employs both the pre-initial and the post-initial position, with the relative placement of the negative marker being dependent upon the clause type. Thus, declarative main clause negation involves the pre-initial position, as can be seen in example (22) where the negative marker *nti-* appears before the subject marker *tu-*. A dependent clause, such as the negative participial clause in (23), however, employs the post-initial position:

- (22) Nti-tu-róo-bón-an-a.  
NEG-SM1PL-FUT-see-RECP-FV  
'We will not see each other.' (Ha, Harjula 2004: 103)

- (23) N-tá-mu-bón-ye  
SM1SG-NEG-OM1-see-PRF  
'If I do not see him ...' (Ha, Harjula 2004: 117)

For negation in Rangi, a plausible analysis is that the negative marker *sí* is a reflex of the Proto-Bantu pre-initial negative marker \**til/ci*, reflecting the inherited pre-initial verb marker strategy for negation (Nurse 2008: 181). Kamba Muzenga (1981: 100-101) notes that Rangi is one of the Bantu languages in which an original negative marker *nka-/ha-* has been replaced by the negative copula

si. On the other hand, the post-verbal negative marker *tokv* could be seen as an innovation which has its origins in one of the Cushitic languages with which Rangi has been in contact.

Post-verbal negation is found in several Bantu languages, including Tumbuka (Malawi) and Kongo (Democratic Republic of Congo), as well as in a number of other East African Bantu languages such as Lubukusu (Kenya) (24), and Kuria (Tanzania and Kenya) (25):

- (24) Wakesa se-a-a-tim-a ta.  
          Wakesa NEG-1SM-PST-run-FV NEG  
       ‘Wekesa did not run.’ (Lubukusu, Wasike 2007: 243)
- (25) Te-bá-som-ere hai.  
       NEG-SM2-read-PFV NEG  
       ‘They have not read today.’ (Kuria, Cammenga 2004: 238)

Devos and van der Auwera (2013: 233) identify five common sources for post-verbal negative markers in Bantu: negative answer particles, other negative words, two types of locative pronouns, possessive pronouns and locative possessive pronouns. Examples of this can be seen in (26) below from Tumbuka in which the negative answer particle *chara* ‘no’ is used in the formation of a negative construction. In Kongo, the negative marker *ko* has its origins in a locative marker (27).

- (26) Chara kuti n-kuk-ku-pulika chara.  
       no       NEG     SM1SG-PROG-OM2SG-hear   NEG  
       ‘No, I do not hear you.’ (Tumbuka, Young 1932: 140)
- (27) Nzumba ka-lemb-a ma-dya ko.  
       Nzumba NEG.SM1-cook-PAST 6-meal NEG  
       ‘Nzumba did not cook the meal.’ (Kongo, Mbiavanga 2008: 148)

Although post-verbal negation is itself not unusual in East African Bantu languages, Gibson and Wilhelmsen (2015) propose that the Rangi negative marker *tokv* (and *tokó* in the closely related Mbugwe) represents an instance of lexical borrowing.

Many of the non-Bantu languages spoken in the area mark negation through the presence of a suffix on the verb or an element which occurs after the verb. In Iraqw, negation is achieved through the addition of the negative marker *-ka* to the verb stem (Mous 1993: 168). Sandawe expresses negation through the use of negative clitics which are placed immediately after the verb or, in the case of non-verbal negation, at the end of the clause (Steeman 2012: 114–116). Direct evidence for the external origin of the negative marker *tokv* is that the two primary contact languages for Rangi – Burunge and Alagwa – both have lexical items which are very similar in form to *tokv*. In Alagwa, negation is expressed by the addition of the negative marker *-basl*, which has its origins in the verb *basl* ‘refuse, deny’ ((28)–(29)). However, there is also the modifier *tuk<sup>u</sup>/tik<sup>u</sup>* ‘all, whole’ which expresses completeness or totality ((30)–(31)). In Burunge, negation is expressed through the addition of the negative suffixes *-ba* and *-basli*, which are used in declarative and interrogative contexts respectively (Kießling 1994: 201). However, again, the lexical modifier *tuk<sup>u</sup>* is used to express ‘totality’ (Roland Kießling, p.c. 2015), as in examples ((32)–(33)).

- (28) mandaasi-koo-basl  
snack-PRED-NEG  
'not a mandazi' (Alagwa, Mous 2016: 65)
- (29) do'-óo-g koo koo'-éé-basl  
house-M-2SG.POSS ANA.M M:1SG.POSS.PRO-PRED-NEG  
'This house of yours is not mine.' (Alagwa, Mous 2016: 66)
- (30) yaamu tuk<sup>u</sup>  
land all  
'the whole land' (Alagwa, Mous 2016: 196)
- (31) i-yaa doosl tuk<sup>u</sup>  
3-PAST cultivate:3M all  
'He cultivated all.' (Alagwa, Mous 2016: 197)
- (32) Yáa /agim| ya'áy gú daka'u tuk<sup>u</sup>  
S3.PAST eat 3SG.M M baobab all  
'He ate all the baobab fruits.' (Burunge, Roland Kießling p.c. 2015)
- (33) Háan dinu higwáa /agim| tuk<sup>u</sup>  
even honey S3-O3SG.M PAST.eat all  
'He even consumed all the honey.' (Burunge, Roland Kießling p.c. 2015)

With reference to common grammaticalisation paths of negation, Gibson and Wilhelmsen (2015) propose that these 'totality' modifiers in Alagwa and Burunge are possible sources of lexical borrowing for the post-verbal negative marker in Rangi. They propose that historically Rangi employed only the negative marker *sí*, which is still used today. However, the modifier *tuk<sup>u</sup>/tik<sup>u</sup>* was adopted from one of the neighbouring Cushitic languages to convey emphasis on the negative polarity of the clause. This lexical item may have been introduced by native speakers of Burunge or Alagwa who acquired Rangi as a second language. For first language speakers of Rangi, this structure would not be in conflict with the presence of the negative marker *sí* which appears in the pre-verbal position and as such would not be competing for the same structural position.

Assuming the well-described grammaticalisation path of Jespersen's cycle (after Jespersen (1917) and Dahl (1979)), the presence of *tokv* was initially optional, serving to add greater force to the negative polarity of a sentence by emphasising the extent ('totality') of the negation, while over time the use of *tokv* developed into the standard way to encode negation in Rangi. The process of change may also have been aided by the high prevalence of post-verbal negative marking in the other languages of the region, as noted above. In other words, the presence of post-verbal negation strategies across East African Bantu languages may have facilitated the integration of this borrowed morpheme into Rangi since it would not have been at odds with the otherwise widespread post-verbal negation strategies with which the speakers of Rangi (or indeed the relevant Cushitic languages) may also have been familiar.

An alternative route of change is also plausible: *tokv* may have been introduced into Rangi by Rangi speakers with some knowledge of Burunge or Alagwa who borrowed this lexical item from the Cushitic language in question. Again, this particle would not have been in conflict with the presence of the pre-verbal, verb-internal markers of negation. However, as noted above, there are more first language speakers of Alagwa and Burunge who speak Rangi as an additional language

than Rangi speakers speaking Alagwa or Burunge. This makes it more likely that the form was introduced by second language speakers of Rangi.

Before proceeding it might be worth considering briefly an alternative scenario of contact, namely that the lexical item *toku* was borrowed not into Rangi, but from Rangi into Alagwa and Burunge.

In a study of negative existential constructions across Bantu, Bernander et al. (2018), observe that a widespread source of negative existentials is an adjectival or adverbial form which is a reflex of the Proto-Bantu reconstructed stem \*-tópó ‘only, empty, vain’ (Bastin et al. 2002, Angenot-Bastin 1977).<sup>5</sup> It could therefore be proposed (contra Gibson and Wilhelmsen 2015) that the Rangi negative word *toku* and the Mbugwe negative marker *tokó* are in fact reflexes of this Proto-Bantu stem, rather than loanwords from Cushitic. However, this route seems less likely, given the restricted distribution of the form in Bantu: *toku* appears only in Rangi and the neighbouring Bantu language Mbugwe (as *tokó*). Such an analysis would also involve a sound change from /p/ to /k/ which is not attested in any of the relevant forms in Bernander et al.’s (2018) study, and which would seem typologically unusual. Given that there is little evidence for the existence of forms like Rangi *toku* and Mbugwe *tokó* in Bantu beyond these two languages, the form appears to be restricted in its distribution to the two languages with a clear history of contact. Furthermore, in terms of grammaticalisation, it seems more likely to assume that a term meaning ‘all’, which is the meaning in Cushitic, has developed into a negative marker (after having been borrowed into Rangi and Mbugwe), than a negative marker developing into a quantificational adverbial, or to assume that an older meaning ‘all’ (which was borrowed into Cushitic) has been lost in Rangi.

We thus assume that *toku* has been borrowed from Cushitic into Rangi. Under this account of change, the presence of the post-verbal negative marker *toku* in Rangi represents an instance of borrowing of substance, in which the lexical item itself has been borrowed, rather than the negation strategy or the structure as a whole. The situation is summarised on Table 2.

Table 2: Post-verbal negation in Rangi

<b>Structure</b>	The development of a negative strategy from an intensifier is a typologically common path of development (Jespersen’s cycle)	<i>Supports internal innovation/ grammaticalisation</i>
<b>Substance/Form</b>	A likely lexical source for Rangi <i>toko</i> can be found in neighbouring Cushitic languages Alagwa and Burunge where <i>tuk<sup>u</sup></i> and <i>tuk<sup>u</sup></i> express ‘totality’ and ‘all’	<i>Supports contact</i>
<b>Geography</b>	Clause-final negation is reasonably widespread in Bantu, although not in a coherent area	<i>Supports internal innovation/ grammaticalisation</i>
<b>Geography</b>	Clause-final negation is also prevalent in the non-Bantu languages of the area	<i>Supports contact</i>

<sup>5</sup> Other languages in the Bernander et al. (2018) sample with a negative existential derived from \*-tópó are Bende (F12) *hátuhú* ~ *kútuhú*; Nyamwezi (F22) *hadóhó* ~ *ndóhó*; Luguru (G35) *muduhu*; Luba (L33) *patupu* ~ *kutupu* ~ *mutupu*; Kisanga (L35) *patupu* ~ *kutupu* ~ *mutu(pu)*; Matumbi (P13) *patopo* ~ *kutopo* ~ *ntopo* and Ngindo (P14) *haduhu*.

As in our first example, the evidence presented in Table 2 is ambiguous overall: The specific structure to express negation by clause-final particle is likely to be an internal innovation, while the form used to encode this strategy results from contact. Evidence from the geographic distribution of the negation strategy supports either analysis: There are examples of clause-final negation found across the Bantu area, supporting internal innovation, but, on the other hand, final negation is also a feature of the contact zone, supporting a contact analysis. The most likely scenario is similar to our first example, namely that contact and internal innovation interact. However, in the present case, it is the structure which constitutes an internal innovation, and the form of expression is a contact feature – the opposite to what we found with the verb-auxiliary order, where the structure of the construction was due to contact, but the expressions used were inherited.

The development of clause-final negation in Rangi therefore provides another good example of the interaction between grammaticalisation and contact, and how the two processes feed into each other, even though the details differ from our first example.

## 5. Deictic particles

The third Rangi feature under examination in the current paper is the presence of three particles used within the verb form to encode direction. These deictic particles – *tóó-*, *joo-*, and *koo-* – are prefixed to the verb and can be used alongside both motion and non-motion verbs. The particle *tóó-* is used to encode movement away from the deictic centre. As can be seen upon examination of the examples below, the prefix occurs immediately before the verb stem and can be added to either an inflected verb form (34) or an infinitival verb form which appears without subject agreement (35).<sup>6</sup>

- (34) N-óó-tóó-koow-a                      lo-uj-íi.  
          SM1SG-PROG-DIR-wash-FV        11-river-LOC  
          ‘I am going to the river to wash [there].’

- (35) Lamútóondo    tóó-súm-ul-a                      ndi-ri                      vi-ryo.  
          9.tomorrow     DIR-collect-SEP-FV        SM1SG-AUX        8-millet  
          ‘Tomorrow I will [go to] collect the millet [there].’ (Stegen 2006: 11)

The particle *joo-* has a ventive function and is used to encode movement towards the deictic centre. This can be seen in example (36) where the deictic centre is the location of the speaker and the particle *joo-* is used with the verb *-loola* ‘marry’. In addition, *joo-* has undergone a process of grammaticalisation and has come to encode temporal meaning. This can be seen in example (37) where *joo-* does not appear to encode a directional meaning but rather conveys a future tense interpretation.

- (36) Siku i-mwi maa a-kooj-a                      mo-tavana w-a mo-kaaya    ku-joo-mo-lool-a.  
          9.day 9-one then SM1.PAST-come-FV 1-boy        1-of 1-neighbour INF-VENT-OM1-marry-FV  
          ‘One day, the boy of the neighbour came to marry her.’ (Stegen 2011: 418)

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<sup>6</sup> A feature of infinitival verb forms in Rangi is that they can regularly occur without the standard class 15 infinitival prefix *kv-*. The precise criteria that motivate the presence versus absence of the infinitival prefix remain to be established, but it appears to be determined by at least phonological form and specificity (Stegen 2006, Gibson 2012)

- (37) Saa            jo-joosi        víi        joo-kwaat-w-a        u-ri.  
       10.times      10-any        just       DIR-catch-PASS-FV      SM2SG-AUX  
       'You will be caught at any time.' (Gibson and Belkadi 2018)

The third particle *koo-* is used to convey the meaning 'go and VERB' or that the action or event described by the verb takes place at a location removed from the utterance. Thus, in examples (38) and (39) below the events described by the non-motion verbs *-shirwa* 'have ground' and *-cheta* 'clear' are contained within larger motion events.

- (38) A-dom-ire        na        mashin-íi        koo-shir-w-a        nkua.  
       SM1-go-PERF      CONN      9.machine-LOC      DIR-grind-PASS-FV    10.maize  
       'S/he has gone to the mill to have the corn ground.'
- (39) Hara        kali        taáta        a-dom-áa        noo        koo-chet-a.  
       16. DEM      PAST      1.father      SM1-go-HAB      COP      DIR-clear\_bush-FV  
       'In times of old, father used to go and clear the bush [there].' (Stegen 2011: 369)

This particular three-way distinction of encoding deixis within the verb form appears to be quite restricted in Bantu languages, including in those of East Africa, although a comparable three-way system is found in the Bantu language Digo spoken in Kenya. In Digo, the marker *-enda* encodes movement away, *-edza* encodes movement towards a dialectic centre and *cha-* indicates an action or event that takes place 'at a distance' (Nicolle 2002). In view of the absence of comparative evidence, we do not consider the three-way system of encoding of deixis attested in Rangi to be a Bantu inheritance.

However, while the three-way system as a whole may be more unusual across the language family, the individual strategies for encoding deixis can be shown to have parallels in Bantu more broadly. There are also similarities with neighbouring non-Bantu languages, but they are not specific enough to support a contact-based analysis and so ultimately, we will develop an account in which the system is the result of independent innovation in Rangi.

We will first consider the possibility that the presence of these markers in Rangi is the result of contact-induced interference from non-Bantu languages. Directional markers are found in a number of Cushitic languages of the broader East African region, including Oromo, Rendile, Boni, and Dahalo, all of which have hither/thither distinctions encoded by the presence of particles or 'selectors' (Mous 2005: 321), as well as Somali (Saeed 1999: 126, Bourdin 2005). Geographically closer to Rangi, all modern West Rift languages exhibit a verbal proclitic ventive marker which has been reconstructed as \**ni* for Proto-West-Rift (Kießling 2002: 368). Reflexes of this can be seen in the forms *n-* (for 'hither') in Alagwa, *ni-/ti-* (for 'hither' and 'thither' respectively) in Burunge, and *ni* (for 'hither') in Iraqw. The Nilotc language Datooga which has been spoken in the same region as Rangi for a sustained period of time, also has a system which encodes itive and ventive meanings through verbal derivation (Rottland 1982: 184). Kießling (2015) notes the presence of what he terms 'associated locomotion' in Datooga, in which the verbal derivational system is used to indicate that the action or event described by the verb happens against the background of a motion event with a specific orientation in space. The opposition in Datooga is between centrifugal (i.e. andative and itive) and centripetal (i.e. ventive) marking (Kießling et al. 2008, Rottland 1982: 184).

However, none of the potential contact languages exhibit a three-way verbal deictic distinction of the type that is found in Rangi, and the form of the relevant markers in neighbouring Cushitic

languages is very different from the Rangi markers. As a result, we propose that the development of the Rangi system can be understood through comparative evidence and by assuming two independent grammaticalisation processes.

Comparative evidence shows that the itive marker *koo-* can be related to a similar marker *ka-* which is found throughout Bantu, where a number of languages use this marker within the verbal form to indicate the ‘location of the event away from the deictic centre’ (Botne 1999). In these constructions, the marker *ka-* is most commonly prefixed to the verb form, resulting in the interpretation ‘go and VERB’. This can be seen in the example from Nyamwezi in (40) below.

- (40) A-ku-ka-mala  
 SM1-FUT-ITV-finish  
 ‘He will go and finish’ (Nyamwezi, Maganga and Schadeberg 1992: 108)

The marker *ka-* across Bantu fulfils a wide range of functions, including as an itive marker, as a narrative marker, and for the encoding of both future and past tenses. In semantic terms, it seems reasonable to suggest a connection between an itive function – the location of the event away from the deictic centre – and the narrative function which involves a temporal move from the deictic centre (Nurse and Philippson 2006). These *ka*-itive constructions are found more broadly across the Bantu languages. In their survey of common tense-aspect markers across Bantu, Nurse and Philippson (2006) observe the presence of *ka*-itives in at least 33% of the languages in their sample. The itive marker *ka-*, in alternation with *za-* and *sa-*, is also found in the mixed language Ma'a/Mbugu also spoken in Tanzania (Mous 1994: 183).<sup>7</sup>

The *koo*-based construction in Rangi could have its origins in the prefix *ka-* which was affixed to a verb stem and possibly used in an imperative or subjunctive construction to encode a narrative/consecutive meaning. This is further supported by Botne (1999) who suggests that a subjunctive form with a meaning of ‘go (in order) that you may X’ may have been a common point of origin for *ka*-itive constructions. However, in Rangi this interpretation of the imperative ‘go and X’ grammaticalised to encode a function in which the motion and the direction of the motion is an inherent part of the information conveyed by the marker.

The development of the remaining two particles *joo-* and *tóó-* cannot readily be related to comparative evidence, although a ventive construction formed with the marker *ja-* exists in the neighbouring Bantu language Mbugwe (Wilhelmsen 2018) and two-way encoding of deictic distinctions is found in a number of languages across the Bantu languages, including those of East Africa (Guérois et al. 2018). However, the forms are transparently derived from the lexical verbs *-oja* ‘come’ and *-íita* ‘go’ respectively (Stegen 2006) and can be considered independent innovations in Rangi. The development of GO-verbs such as *-íita* into itive markers is a commonly attested pathway of grammaticalisation, including in the Bantu family, and so there appears to be good motivation for considering the particles to be representative of an instance of internal grammaticalisation.

In terms of distribution, the use of *ka*-itives has been associated with a broad area of sub-Saharan Africa in which Rangi is found, making this structure a relatively common distinction from a geographic perspective. What appears to be unusual, however, is the encoding of the specific

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<sup>7</sup> Ma'a/Mbugu is a ‘mixed’ language in that it has been observed to combine a Bantu grammar with largely Cushitic vocabulary. Moreover, there are two varieties of this language – one which can genuinely be thought of as mixed and one which is essentially Bantu and closely resembles the Bantu language Pare spoken in the region (Mous 2003).

oppositions found in Rangi: The three-way distinction in which one of three particles can appear in the verbal form to encode three distinct directional interpretations is to our knowledge not found outside of Rangi and Digo, and it is this system which causes the language to stand out from a broader comparative perspective. The different aspects of the constructions are summarised in Table 3 below.

Table 3: Deictic particles in Rangi

<b>Structure</b>	Encoding of motion within the verb form is relatively common cross-linguistically	<i>Supports internal innovation/grammaticalisation</i>
<b>Structure</b>	The use of <i>koo-</i> in Rangi can be related to <i>ka-</i> itives in other Bantu languages	<i>Supports internal innovation/grammaticalisation</i>
<b>Substance/Form</b>	Lexical sources for <i>tóó-</i> and <i>joo-</i> are Bantu/Rangi verbs	<i>Supports internal innovation/grammaticalisation</i>
<b>Geography</b>	A three-way verbal deictic distinction is unusual in Bantu, although also found in Digo (Kenya)	<i>Supports either internal innovation/grammaticalisation or contact</i>
<b>Geography</b>	Itives (and to a lesser extent ventives) are found across the Bantu area	<i>Supports internal innovation/grammaticalisation</i>

The case of the deictic particles in Rangi provides the clearest example of language-internal innovation in our discussion so far. The two structural criteria and the formal substance of the three deictic particles support an internal innovation/grammaticalisation scenario. Only the fact that a three-way deictic distinction as seen in Rangi is not found in Bantu languages other than Rangi and Digo casts some doubt on an innovation analysis – could such a distinction reflect contact influence from non-Bantu languages? However, as we have seen, no languages of the contact area have such a distinction. Moreover, Digo has not been in sustained contact with non-Bantu languages, which appears to support a language-internal process of change for this language at least. The most parsimonious analysis is thus to assume that individual grammaticalisation processes in Rangi have resulted in the innovative deictic particle system seen in the language today.

In fact, the proposal of two parallel grammaticalisation pathways further adds strength to this account. The development of *koo-* from the narrative/consecutive prefix *ka-* represents a single language-internal pathway of change, whilst the development of the markers *tóó-* and *joo-* represents a distinct process of change in line with common cross-linguistic patterns (with GO and COME verbs regularly part of the grammaticalisation of ventive and itive forms) and being transparently grammaticalised from Bantu verb forms. This may well have been aided by the presence of analogous systems of verbal deixis in the neighbouring non-Bantu languages in the area, despite no contact language having exactly the same system as is found in Rangi.

## 6. Inclusive/exclusive distinction in personal possessive pronouns

The final feature under discussion in the current paper is the inclusive/exclusive distinction found in Rangi personal possessive pronouns. As is common across Bantu languages, Rangi exhibits an extensive system of agreement which is apparent in the verbal and nominal domains. Nouns are divided into noun classes, each with their own agreement pattern. In addition, ‘discourse participants’ – that is, first and second persons – are morphologically distinguished. There are also specific pronominal forms for participants and for classes 1 and 2 (typically containing human nouns), as well as possessive pronominal stems. Table 4 shows the Rangi personal pronouns, subject markers, and possessive pronominal stems.<sup>8</sup>

Table 4: Personal pronouns, subject markers and possessive pronominal stems

	<b>Personal pronoun</b>	<b>Subject marker</b>	<b>Possessive pronominal stem</b>
<b>1st person singular</b>	niíni	n-	-ááni
<b>2nd person singular</b>	weéwe	o-, w-	-ááko
<b>Class 1</b>	yeéye	a-, i-, y-, o-	-ááchwe
<b>1st person plural</b>	suúsu	t-, tw-, tó-	-íítu [exclusive] -ííswi [inclusive]
<b>2nd person plural</b>	nyuúnyu	mō-, mw-	-áanyu
<b>Class 2</b>	voóvo	va-	-áávo

The examples show that there are different forms of personal pronouns and of subject markers for each participant and for classes 1 and 2. However, personal possessive pronouns show an additional distinction in the first person plural, in which the choice of pronoun relates to a distinction between inclusive and exclusive possession. Whilst in all other person and number combinations, there is just a single possessive pronominal stem, in the first person plural two forms are found: *-íítu* and *-ííswi*.

The possessive stem *-íítu* is used to denote possession in which the entity being referred to belongs to the speaker and not to the listener – exclusive possession – as can be seen in examples (41)-(43).

- (41) Isiko na-mo-kál-ir-y-e taáta w-íítu.  
 9.today SM1SG-OM1-anger-APPL-CAUS-FV 1.father 1-our  
 ‘Today I angered our [excluding you] father.’

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<sup>8</sup> The form of the subject marker is phonologically conditioned and is dependent on the vowel of the following element.

- (42) Kooni wa-fík-ire kaáyi kw-iitu...  
 if SM2SG-arrive-PRF 9.home 17-our  
 'If you have arrived at our [excluding you] home...' (Stegen 2011: 383)

- (43) Na-sim-irwa ní taáta w-iitu aha kali.  
 SM1SG-tell-PASS.PERF COP 1a.father 1-our DEM-16 old  
 'I was told by our [excluding you] father in times of old.' (Stegen 2011: 374)

In contrast, the possessive stem *-íiswi* is used to denote possession in which the hearer is also included – inclusive possession – as can be seen in examples (44)-(46) below.

- (44) Ki-riro ch-á mo-ndugu w-íiswi Kondoa  
 7-death 7-of 1-relative 1-our Kondoa  
 'The death of our [including your] relative in Kondoa'

- (45) V-oosí v-á eneo r-íiswi  
 2-elders 2-of 5.area 5-our  
 'The elders of our [including your] area'

- (46) Nkuku ní j-íiswi na mbóri ní j-íiswi.  
 10.chicken COP 10-our CONN 10.goat COP 10-our  
 'The chicken are ours and the goats are ours.' (Stegen 2011: 385)

Since this distinction between inclusive and exclusive possession is not marked on the verb nor in absolute personal pronouns, and is not found in any other Bantu language, it is likely to be an innovation.

Pronominal stems have been reconstructed for Proto-Bantu (Guthrie 1967-71, Meeussen 1967: 107). Guthrie (1967-71, Vol IV: 190) notes the complexity of first person plural forms in Bantu and proposes five inter-related comparative series: \*-cúé or \*-cúé (C.S. 395), \*-tíé (C.S. 1810), \*-yícú (C.S. 2032), \*-yítú (C.S. 2097), and \*-yítúé (C.S. 2099). He also notes that in some languages, both forms are found, e.g. one form as a personal pronoun, and another as a possessive stem. The Rangi first person plural pronoun forms can thus be related to different comparative forms, most likely -íítu to \*-yítú (C.S. 2097), -íiswi to \*-yítúé (C.S. 2099), and the personal pronoun form *suúsu* to \*-yícú (C.S. 2032). Rangi is therefore unusual in that three of Guthrie's five different forms are represented. Furthermore, the two possessive forms fulfil a distinct and innovative function, distinguishing between inclusive and exclusive reference.

While the different forms of the Rangi first person plural forms are found throughout Bantu, no other Bantu languages in the area exhibit an inclusive/exclusive distinction. We therefore assume that this is not an inherited feature. However, there is also no obvious non-Bantu candidate for the development of this grammatical distinction. The Cushitic language Somali (as well as the Semitic language Amharic) exhibit a distinction between inclusive and exclusive possession. On geographic grounds however, these languages are unlikely contact languages for Rangi as they are found well outside of the contact zone.

From a wider cross-linguistic perspective, pronominal systems with an inclusive/exclusive distinction are comparatively common. For example, in independent pronouns, the distinction is found in 63 out of 200 languages in the sample of Cysouw (2013). Bickel and Nichols (2008) note

that inclusive-exclusive distinctions are common in the Americas, near universal in Australia, common in East Asia, rare in the rest of Asia and fairly rare in Africa. The absence of the distinction in Bantu, as well as in the Rift Valley contact area, plus the typological plausibility of such a system to develop, makes the most likely analysis of the system an independent innovation in Rangi.

Table 5: Inclusive/exclusive pronominal distinction in Rangi

<b>Structure</b>	This is a typologically common distinction, but it is not found in any of the other languages of the area	<i>Supports internal innovation</i>
<b>Substance/Form</b>	The forms of the possessive pronominal stems can be related to those of Proto-Bantu	<i>Supports internal innovation/ grammaticalisation</i>
<b>Geography</b>	Not found in other Bantu languages	<i>No preference?</i> <i>Supports contact?</i>
<b>Geography</b>	Not common in the non-Bantu languages of the immediate linguistic area	<i>Does not support contact?</i>

In summary, the development of an inclusive/exclusive distinction in the possessive pronominal system in Rangi is an innovation which is not found in other Bantu languages, nor in neighbouring non-Bantu languages. The structure is thus best analysed as an independent innovation unrelated to language contact. However, this example further shows the challenges involved in untangling possible contact features and the centrality of embedding any possible account within both comparative and wider typological contexts. What at first glance appears as a clear candidate for a contact feature – with the inclusive/exclusive distinction not otherwise attested across East African Bantu – may be better analysed as a feature of independent innovation since there are no obvious candidates for structural transfer from neighbouring non-Bantu languages. But it is only through detailed unpacking of such examples that this conclusion can be reached.

## 7. Summary and conclusions

The preceding discussion has focussed on four particular morphosyntactic features of the Bantu language Rangi: head-final verb-auxiliary word order, clause-final negation, deictic particles, and an inclusive/exclusive pronominal distinction. Some of these features are also found in other Bantu languages, while others are found in neighbouring non-Bantu languages. However, there is strong comparative evidence that these features do not represent Bantu inheritance but rather are likely to be innovations, resulting from language-internal processes of innovation and grammaticalisation and/or from contact with neighbouring non-Bantu languages. Rangi is spoken in Northern Tanzania in part of the Rift Valley linguistic contact zone, where Bantu, Cushitic, Nilotc and ‘Khoisan’ languages have been spoken for centuries, and Rangi continues to be in a close contact situation with the Cushitic languages Alagwa and Burunge. Given the sociolinguistic situation, innovation through language contact is thus a distinct possibility in Rangi. The aim of the paper then was to take these four case studies of Rangi innovation and to investigate whether they can be related to contact influence, or are better analysed as independent processes of internal innovation or grammaticalisation. The discussion was based on three parameters, or domains of evidence: the

morphosyntactic structure of the innovation, the lexical or morphological substance or form used in the expression of the structure, and the geographic distribution of the feature. The findings for each case study, based on the three parameters, are summarised in Table 6.

Table 6: Innovative morphosyntactic features in Rangi

Example	Summary
V-Aux word order	<p><b>Structure:</b> Typologically unusual word order for an SVO language like Rangi. <i>Supports contact</i></p> <p><b>Structure:</b> Plausible development through functional and information structure motivation. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Substance/form:</b> All morphological forms of the construction are based on Bantu/Rangi lexical sources. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Geography:</b> Restricted to a subset of Bantu languages all of which are in contact with non-Bantu languages. <i>Supports contact</i></p> <p><b>Geography:</b> However, the only non-Bantu language of the area where the order is found is Iraqw, where it is marginal and the language is no longer in contact with Rangi. Not found in contact languages of Mara region (which are Nilotc, not Cushitic). <i>Weakly supports contact</i></p>
Post-verbal negative marker	<p><b>Structure:</b> The development of a negative strategy from an intensifier is a typologically common path of development (Jespersen's cycle). <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Substance/form:</b> A likely lexical source for Rangi <i>tokv</i> can be found in neighbouring Cushitic languages Alagwa and Burunge where <i>tuk<sup>u</sup></i> and <i>tuk<sup>u</sup></i> express ‘totality’ and ‘all’. <i>Supports contact</i></p> <p><b>Geography:</b> Clause-final negation is reasonably widespread in Bantu, although not in a coherent area. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Geography:</b> Clause-final negation is also prevalent in the non-Bantu languages of the area. <i>Supports contact</i></p>
Deictic particles	<p><b>Structure:</b> Encoding of motion within the verb form is relatively common cross-linguistically. <i>Supports internal innovation/grammaticalisation</i></p>

	<p><b>Structure:</b> The use of <i>koo-</i> in Rangi can be related to <i>ka-itives</i> in other Bantu languages. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Substance/form:</b> Lexical sources for <i>tóó-</i> and <i>joo-</i> are Bantu/Rangi verbs. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Geography:</b> A three-way verbal deictic distinction appears to be quite marked in Bantu. <i>Supports either internal innovation or contact</i></p> <p><b>Geography:</b> Itives (and to a lesser extent ventives) are found across the Bantu area. <i>Supports internal innovation/grammaticalisation</i></p>
Inclusive/exclusive possession	<p><b>Structure:</b> This is a typologically common distinction, but it is not found in any of the other languages of the area. <i>Supports internal innovation</i></p> <p><b>Substance/form:</b> The forms of the possessive pronominal stems can be related to Proto-Bantu forms. <i>Supports internal innovation/grammaticalisation</i></p> <p><b>Geography:</b> Not found in other Bantu languages. <i>Supports contact</i></p> <p><b>Geography:</b> Not common in the non-Bantu languages of the immediate linguistic area. <i>Supports internal innovation/grammaticalisation</i></p>

The distribution of the relevant evidence shows different results for the four case studies. In the first two case studies – head-final word order and clause-final negation – results are ambiguous with good evidence for and against contact-induced change. In these cases, we have proposed that the most likely interpretation is a combination of external and internal factors, and so that the innovations are motivated internally, but also triggered by language contact, which can be seen as a catalyst for change for these two innovative features. Interestingly, both these two contact-related innovations are related to linear order, resulting in the development of domain final structures.

In contrast, the second two case studies provide only a limited amount of evidence for the role of contact in the development of the innovative structures. The main support for a potential contact analysis comes from the fact that 1) the relevant structures – a three-way distinction of deictic particles and a pronominal distinction between inclusive and exclusive reference – are not found elsewhere in Bantu, and 2) that Rangi is spoken in a highly multilingual contact area. However, on closer inspection it turns out that the innovations are best analysed without recourse to contact, despite the fact that the linguistic ecology makes this a plausible explanation, and so we have proposed that they are most likely to be internal, independent innovations.

Comparing the difference between the two sets of case studies, it would appear that based on our small sample of Rangi innovations, language contact plays a more important role in syntactic

innovation, for example in word order, than in morphological innovation such as the development of paradigmatic distinctions in verbal deixis or pronominal clusivity.

More generally, the findings show that what looks like contact-induced morphosyntactic change at the outset, may turn out to be hard to demonstrate as such upon closer inspection. Rangi is an excellent example for such an enquiry, because the language has come to the attention of linguists due to a number of features it exhibits which are unusual in the context of East African Bantu – including the four features examined here. Since Rangi has been in sustained contact with a number of non-Bantu languages spoken in central Tanzania, including the Cushitic languages Iraqw, Burunge and Alagwa, innovations in Rangi are potentially likely to result from language contact. However, as we have shown, the situation is more complex, and it seems that the picture in Rangi cannot be captured simply by reference to a contact-induced change or a language-internal process of change. In some cases, external and internal processes are intertwined, while in others, no specific external influence could be found.

The results of the case studies issue a call for caution when analysing language contact and language change. Not only is it important that potential candidates of structural transfer are accompanied by the appropriate socio-historical context in which such transfer could have occurred, but additional evidence in support of influence from the neighbouring language(s) is needed, for example in terms of the three parameters we have used in our study. It may seem that in the context of high linguistic diversity and the sustained interaction with non-Bantu languages, as is the case in Rangi, a language contact account may be an available option to describe any ‘unusual’ features found in the language. In reality, however, these two routes of change should also not be examined in isolation since language contact may be considered as one of a number of factors that can give rise to a structure or may function as a catalyst for language-internal processes of grammatical change. Or indeed, as we have shown in some of our case studies, despite the sociolinguistic likelihood, contact may not have played a role for a given innovation at all. Languages are, after all, complex systems, and their development therefore involves complex scenarios.

## Abbreviations

Glossing conventions follow the Leipzig Glossing Rules with the following additional abbreviations:

1, 2, 3 etc.	Noun Class Number	OM	Object Marker
1, 2, 3 SG/PL	Person	PP	Personal Pronoun
ANA	Anaphoric Pronoun	PRES	Present
AUG	Augment	PRO	Pronoun
CON	Converb	O	Object
CONN	Conjunction	PST1	Recent Past
DIR	Directional	PTV	Perfective
FV	Final vowel	RECP	Reciprocal
HAB	Habitual	RVRS	Reversive
ITV	Itive	SEP	Separative
O	Object		

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