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(Im)perfectivity and actionality in East Ruvu Bantu

<https://doi.org/10.1515/stuf-2021-1044>

Abstract: Temporal/aspectual morphology often serves as a diagnostic for actional classes. Bantu languages are known for their highly developed tense, aspect (and mood) systems. The East Ruvu Bantu languages of Tanzania are unusual in that they exhibit a decidedly reduced set of temporal/aspectual morphemes. This paper contributes to the growing body of research on Bantu actionality in showing that despite not being encoded overtly, perfective distinguishes between at least two actional classes. We suggest, however, that imperfective, morphologically encoded by present and non-past tense morphology, does not clearly delineate between the two verb classes. This discussion highlights the complex interaction between tense and aspect.

Keywords: actionality; Eastern Bantu languages; imperfective; perfective; tense

1 Introduction

Temporal/aspectual (TA) morphology is often used as a diagnostic to distinguish among the actional classes of a given language (e.g., Dowty's 1979 claim that only non-statives occur in the English progressive). Various tests are language-specific (e.g., non-statives have habitual interpretations in simple present tense in English). Narrowing in on the role of aspectual morphology, Tatevosov (2002) proposes that while a large number of aspectual categories can be found cross-linguistically, an inventory of actional types can be determined based on the behaviour of verbs in combination with perfective and imperfective morphology. Tatevosov emphasizes the importance of aspectual morphology in distinguishing among actional classes: "actionality reveals its true character in interaction with aspectual grams rather than with grams expressing temporal reference and modality" (Tatevosov 2002: 343).

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Actional classes in languages of the Bantu family have been the focus of an increasing amount of recent research (e.g., Botne and Kershner 2008; Crane 2011; Kanijo 2019; Kershner 2002; Persohn 2017; Roth 2018, among others). These studies have yielded new perspectives on both the inventories of actional classes in Bantu, as well as the diagnostics used to classify them. Recent work on Bantu languages has suggested that further diagnostics are needed to capture actional classification across the Bantu language family (e.g., Crane and Fleisch 2019; Crane and Persohn 2019; Persohn 2019).

Bantu languages are known for their “extraordinarily rich” TA systems (Dahl 1985: 39). Though the minimum shape for the verb is the root and a final vowel,¹ the structure is generally more morphologically complex and includes numerous TA affixes. TA grammemes are often represented by split morphemes: formal markers occurring in different morphosyntactic slots in the verb phrase combine to express dozens of TA categories (see Nurse 2008). The East Ruvu Bantu (henceforth ER) languages, spoken in the Morogoro region in Tanzania, are highly unusual in the Bantu language family in that they exhibit a greatly reduced set of TA morphemes and paradigms. Reduced TA systems such as these raise an important question for the study of actionality: how does this reduction impact the application and results of diagnostics used in classifying actionality?

The goal of this paper is to explore the role that perfectivity and imperfectivity (henceforth (im)perfectivity) plays as a diagnostic for actional classes in the ER languages. In doing so we examine how (im)perfectivity is encoded and how (im)perfectivity interacts with verbs of different classes in these languages. We draw on comparisons with other South-East Bantu languages whose actional systems have been explored in detail. We show that despite the reduced TA systems, the perfective, encoded by the absence of tense morphology, distinguishes between verbs of different classes. However, imperfective, encoded by present and non-past tense morphology, does not clearly delineate between verb classes. This paper contributes to research on actionality in Bantu languages by revealing variation in the ways that (im)perfectivity is encoded across Bantu and further testing the cross-linguistic application of actional class diagnostics.

The six ER languages include Kagulu (ISO 639-3: kki, Guthrie Bantu code: G12), Kami (ISO 639-3: kcu, Guthrie Bantu code: G36), Kutu (ISO 639-3: kdc, Guthrie Bantu code: G37), Kwere (ISO 639-3: cwe, Guthrie Bantu code: G32), Luguru (ISO 639-3: ruf, Guthrie Bantu code: G35), and Zalamo (ISO 639-3: zaj, Guthrie Bantu code: G33). All six languages are under-described; Kutu and Kwere are completely undescribed

¹ The final vowel is the last segment of the verb and is occupied by the portmanteau morpheme *-a*, usually marking the indicative (as opposed to the subjunctive *-e*) (Nurse 2008: 75).

(though see Bloom Ström and Petzell forthcoming; Petzell and Hammarström 2013). This study is based on fieldwork data primarily collected in the Morogoro region in 2018 and 2019, though they are supplemented by data collected by Petzell 2014–2017 (see Jordan and Petzell, in press) and more recent digital communication. The speakers are all native speakers of the respective ER languages and were born in the area where the target languages are spoken. All speakers are bilingual in the national language Swahili. The central data collection method used is elicitation, including translations to/from English and to/from Swahili into the target languages, as well as acceptability judgments. A number of non-verbal stimuli were also used, including video clips, drawings and acted-out contexts.

This paper is organized as follows: we begin with a brief overview of the TA systems of the ER languages (Section 2). Next we examine (im)perfective as a diagnostic for actionality in two South-East Bantu languages. Taking Southern Ndebele (ISO 639-3: nbl, Guthrie Bantu code: S407), spoken in South Africa, and Nyakyusa (ISO 639-3: nyy, Guthrie Bantu code: M31), spoken in Tanzania, as case studies, we outline the readings that arise with (im)perfective morphology in verbs of two actional classes in those languages: activities and inchoatives (Section 3). In Section 4 we present our findings of (im)perfective as a diagnostic for actional classes in East Ruvu languages; we show that despite a reduced inventory of tense and aspect morphology, perfectivity still serves as a diagnostic for activities and inchoatives in East Ruvu, though imperfective only does so to a lesser extent. We conclude in Section 5 with a discussion of implications and remaining questions.

2 A brief overview of the East Ruvu TA systems

Unlike most Bantu languages, which have extensive TA categories (Dahl 1985: 176), the ER languages have significantly reduced inventories of TA morphology (see Petzell and Aunio 2019 on Kami; and Petzell and Khül 2017 on Luguru). For example, there are no morphologically marked temporal remoteness distinctions in any of the six languages, which are otherwise present in 80% of the Bantu languages (Nurse 2008: 103). In this section we provide a brief overview of some of the ways in which TA is encoded in the ER languages.

2.1 Tense in ER

The ER languages show some degree of variation in their tense systems. Kami, Kutu, and Zalamo exhibit a two-way tense contrast: verbs with overt tense

morphology have non-past (present or future) interpretations, as in (1)–(2),² while verbs without overt tense morphology have past tense interpretations, as in (3)–(4). Unlike most Bantu languages where tones are lexically and/or grammatically distinctive (Marlo and Odden 2019), there is no lexical or grammatical tone in the ER languages; hence there is no tone marking in the examples in this paper. The plus sign (+) in the interlinear gloss indicates a phonological merger between vowels.³

- (1) Kami
Tu+o-gend-a.
 SM.1PL+NON.PST-go-FV⁴
 ‘We are going.’/‘We will go.’
- (2) Kutu and Zalamo
Tu+o-chol-a.
 SM.1PL+NON.PST-go-FV
 ‘We are going.’/‘We will go.’
- (3) Kami
Tu-gend-a.
 SM.1PL-go-FV
 ‘We went.’
- (4) Kutu and Zalamo
Tu-chol-a.
 SM.1PL-go-FV
 ‘We went.’

Kwere and Luguru have a three-way tense contrast: constructions without overt tense morphology receive past tense interpretations, as in (5)–(6), while present tense (examples (7)–(8)) and future (examples (9)–(10)) are encoded by different morphology, *o-* and *za-/tso-*, respectively:

- (5) Kwere
Chi-hit-a.
 SM.1PL-go-FV
 ‘We went.’

² The non-past morphology can also yield present habitual interpretations.

³ We use the plus sign (+) notation as there is no established notation to capture this phonological merger in the Leipzig glossing rules.

⁴ Abbreviations are found at the end of the paper. Null morphemes are not glossed.

- (6) Luguru
Tu-gend-a.
 SM.1PL-go-FV
 ‘We went.’
- (7) Kwere
Chi+o-hit-a.
 SM.1PL+PRS-go-FV
 ‘We go/are going.’
- (8) Luguru
Tu+o-gend-a.
 SM.1PL+PRS-go-FV
 ‘We go/are going.’
- (9) Kwere
Chi-za-hit-a.
 SM.1PL-FUT-go-FV
 ‘We will go.’
- (10) Luguru
Tu-tso⁵-gend-a.
 SM.1PL-FUT-go-FV
 ‘We will go.’

Kagulu lies somewhere in between the two aforementioned systems. Like Kami, Kutu, and Zalamo, verbs with no overt tense morphology have past tense interpretations (11),⁶ while verbs with overt tense morphology have non-past (present or future) interpretations (12).

- (11) Kagulu
Chi-gend-a.
 SM.1PL-go-FV
 ‘We went.’

5 The Luguru future marker *tʃa-* is sometimes realized as *tʃo-* due to vowel harmony (see Petzell 2020).

6 Kagulu also has a non-obligatory past tense prefix *ha-* that seems to signal a slightly more remote past (hesternal and further back in time).

- (12) Kagulu
*Chi-ku⁷-gend-a.*⁸
 SM.1PL-NON.PST-GO-FV
 ‘We go/are going./We will go.’

However, like Kwere and Luguru, Kagulu also has a distinct future morpheme (13):

- (13) Kagulu
Chi-ka-lim-a.
 SM.1PL-FUT-cultivate-FV
 ‘We will cultivate.’

In all the ER languages, sentences without overt tense morphology encode past tense interpretations, as illustrated in examples (3)–(6), and (11) above. This is unusual, not just for Bantu languages, in which we find extensive remoteness distinctions in the past (see Botne 2012), but also cross-linguistically. In their language sample, Bybee et al. (1994) find that “[p]erfective is sometimes zero-marked, but past is not” (95).

2.2 Aspect in ER

While the inventory of tenses vary across the Bantu language family, the number of aspect markers is more restricted (Nurse and Devos 2019: 211). Nurse and Devos propose that six aspectual categories are widespread in Bantu: perfective, imperfective, perfect, progressive, persistive and habitual/iterative. They suggest that while few of the languages in their database exhibit all six categories, the perfective and imperfective are attested in every language in the sample (Nurse and Devos 2019: 212).

2.2.1 Perfective

In Bantu languages in which the perfective is overtly encoded, it is typically encoded by the suffix *-ile*. Nurse labels the suffix ‘anterior’ but adds that it is also used as a (past) perfective (Nurse 2008: 264). Nurse (2008) suggests that 66% of Bantu languages exhibit the suffix *-ile* or variations thereof. *-ile* typically renders simple past/perfective and/or perfect translations in English, as seen in (14) below.

⁷ This marker could originate from class 15 *ku-*, cf. Petzell (2008: 108).

⁸ This form is also realized as *chogenda*.

- (14) Southern Ndebele [adapted⁹ from Crane and Persohn 2019]
uSipho u-cul-ile.
 Sipho SM1-sing-PFV
 ‘Sipho sang.’/‘Sipho has sung.’

-ile (and its associated constructions) has been labeled both perfective and perfect/ anterior in previous Bantu literature (see e.g., Nurse 2008 and Botne 2010 for discussion).

In ER languages, *-ile* is not used in simple constructions (see Petzell 2008 for Kagulu; Petzell and Aunio 2019 for Kami; Mkude 1974 and Petzell 2020 for Luguru). This was noted by Guthrie who stated that there are some languages in this region where *-ile* behaves atypically in that it does not occur in ‘regular’ affirmative sentences (Guthrie 1948: 49). The ER data suggest that *-ile* is only used in dependent and in negative clauses; our language consultants do not produce *-ile* in simple constructions in any of the languages. Sentences in the past (i.e., without overt tense morphology) with perfective interpretations (15), perfect interpretations (16), or either (17) cannot be suffixed with *-ile*.¹⁰ If they were, they would be interpreted as dependent clauses.

- (15) Kutu
Amina ka-fagil-a jana.
 Amina SM1¹¹-sweep-FV yesterday
 ‘Amina swept yesterday.’
- (16) Kutu
Amina vi-a-ingil-e mgati ka-vik-a Sarah ka-fagil-a
 Amina TEMP-SM1-enter-FV inside SM1-find-FV Sarah SM1-sweep-FV
mwaka.
 already
 ‘When Amina entered she found that Sarah had already swept.’

⁹ Source glossing has been simplified for the purpose of this paper.

¹⁰ The verb stem meaning ‘enter’ (e.g., in example 16 and elsewhere) is lexicalized as *ingil* (potentially with a remnant of the applicative), which may misleadingly resemble *-ile* when the final vowel (FV) is *-e*. Similarly, the verb stem *fagil* ‘sweep’ with the final vowel *-e* may resemble *-ile*. While there may be historical explanations for these similarities, there is no evidence that *fagil* or *ingil* should be analyzed in these examples as morphologically complex verb stems consisting of the *-ile* suffix.

¹¹ Subject and object markers for noun class 1, as in all the singular classes, are the equivalent of third person singular (3SG), but since the subject may belong to another noun class, the Bantu noun class numbers are used in the glossing in this paper.

- (17) Kagulu
Amina ka-imb-a
 Amina SM1-sing-FV
 ‘Amina sang’/‘Amina has sung’

In the ER languages, *-ile* only occurs in more “complex” constructions, such as conditionals, relative and temporal clauses, the negated past, and with some auxiliaries, as in examples (18)–(23) below.

- (18) Kagulu
Amina ha-ka-bilim-a fo-ya¹²-i-on-ile i-simba.
 Amina PST-SM1-run-FV TEMP-SM1.DEP-OM9-see-ILE¹³ 9-lion
 ‘Amina ran when she saw a/the lion.’

- (19) Kami
Fi-ni-fik-ile Amina ka-andus-a ku-som-a.
 TEMP-SM.1SG-arrive-ILE Amina SM1-start-FV INF-read-FV
 ‘When I arrived Amina started to read.’

- (20) Kutu
Amina ka-kimbil-a vi-ya-m-on-ile simba.
 Amina SM1-run-FV TEMP-SM1.DEP-OM1-see-ILE lion
 ‘Amina ran when she saw a/the lion.’

- (21) Kwere
Hu-lim-ile m-gunda w-ako igolo.
 SM.2SG.NEG-cultivate-ILE 3-farm 3-POSS.2SG yesterday
 ‘You did not cultivate your farm yesterday.’

- (22) Luguru
Ha-fvik-ile si-lim-ile bae.
 TEMP.SM1-arrive-ILE SM.1SG.NEG-cultivate-ILE NEG
 ‘When s/he arrived, I was not cultivating.’

- (23) Zalamo
Amina ka-kimbil-a vi-ya-m-on-ile simba.
 Amina SM1-run-FV TEMP-SM1.DEP-OM1-see-ILE lion
 ‘Amina ran when she saw a/the lion.’

¹² This subject marker for class 1 is used instead of *ka-* in dependent clauses such as conditionals, relatives and with some auxiliaries in all the ER languages.

¹³ Since *-ile* does not function as a perfective marker in the ER languages, it is glossed as *-ILE*.

We take the restriction of *-ile* to complex constructions, and the lack of any other morpheme that yields specifically perfective or past meaning, as evidence that ER languages lack an overt perfective morpheme. Although we are not committed to a particular analysis of perfective as a null aspect marker (or as encoded in null past), for simplicity in this paper, we will refer to perfective in ER as \emptyset .

2.2.2 Imperfective

The most common imperfective morpheme across Bantu is the affix *-ag* which occurs in almost all Bantu languages (Nurse 2008: 262). The affix *-ag* is “largely attested” (Meeussen 1967: 110) in Bantu languages and yields progressive and habitual interpretations. The *-ag* affix does occur in each of the ER languages, and it appears in both progressive (24) and habitual (25) contexts.

- (24) Kagulu
*Ha*¹⁴*-ni-tung-ag-a* *salu* *fo-ya-ing-ile*
 PST-SM.1SG-bead-IPFV-FV 9.bead TEMP-SM1.DEP-enter-ILE
 ‘I was beading beads when s/he entered’

- (25) Luguru
Amina ka+o-fagil-ag-a *chila* *siku*
 Amina SM1+PRS-sweep-IPFV-FV every 9.day
 ‘Amina sweeps every day’

However, *-ag* is not required for either reading. This is illustrated in the examples below in which *-ag* does not appear in a progressive context, as in (26)–(27), nor in a habitual context, as in (28)–(29):

- (26) Kagulu
Amina ya-ku-onel-a.
 Amina SM1-NON.PST-be/get_happy-FV
 ‘Amina is (in the process of) becoming happy.’

- (27) Zalamo
Amina ka-fagil-a (kibigiti) vi-ni-vik-ile.
 Amina SM1-sweep-FV (when) TEMP-SM1-arrive-ILE
 ‘Amina was sweeping when I arrived.’

14 The morpheme is not obligatory, but is used by some speakers for hesternal and more remote past interpretations, see fn. 6.

- (28) Luguru
Ni+o-lim-a *m-gunda* *gw-angu* *chila* *siku*.
 SM.1SG+PRS-cultivate-FV 3-farm 3-POSS every 9.day
 ‘I cultivate my farm every day.’
- (29) Kwere
Chila siku chilugulu Amina ka+o-legal-a.
 every 9.day at.6pm Amina SM1+PRS-be/get_tired-FV
 ‘Everyday at 6pm Amina becomes tired’

Furthermore, in some ER languages, *-ag* seems to be restricted to habitual readings.

While there are other ways that imperfective meanings are encoded in Bantu languages (e.g., auxiliaries), we suggest that imperfective meaning in ER languages is also encoded by tense morphology. Recall that two of the ER languages have present tense morphology: Kwere and Luguru (see example (7)–(8) above, repeated below):

- (30) Kwere
Chi+o-hit-a.
 SM.1PL+PRS-go-FV
 ‘We go/are going.’
- (31) Luguru
Tu+o-gend-a.
 SM.1PL+PRS-go-FV
 ‘We go/are going.’

The remaining ER languages have non-past morphology that encode present and future meanings (see examples (1)–(2) and (12) above). Thus, although the ER languages exhibit the *-ag* imperfective morpheme, for the purpose of examining diagnostics for actionality in ER languages, we focus here on the morphology that results in present tense interpretations, namely present tense and non-past morphology.

3 (Im)perfectivity as an actionality diagnostic in Bantu

Actionality has been the focus of extensive research from several different theoretical approaches and within several different languages and language families. A

growing body of work focusing on the classification of actional classes in Bantu languages has emerged in recent years (e.g., Botne and Kershner 2008; Crane and Fanego 2020; Crane and Fleisch 2019; Crane and Persohn 2019; Crane 2011; Kanijo 2019; Kershner 2002; Persohn 2017, 2019; Roth 2018, among others). While these studies have yielded new perspectives on both the inventories of actional classes as well as the diagnostics used to classify them, our focus in this section is a brief overview of the role of (im)perfectivity in the classification of actionality in two South-East Bantu languages. As Crane and Persohn (2019: 338) suggest “[t]he complex tense/aspect systems typical of Bantu languages can be exploited” to test for actional classes and their internal structures. But what about Bantu languages that lack a typical complex TA system?

We set aside the question of how many actional classes there are in ER languages (or Bantu languages more generally). Instead, we take two classes of verbs as a starting point: activities and inchoatives. These two verb types behave differently both in the Bantu literature, as well as in ER languages. Although the literature points out that even in closely related languages verbs can vary in their classification, Nyakyusa (Persohn 2017) and Southern Ndebele (Crane and Persohn 2019) serve here as sample comparative languages given the detailed descriptions of their actional systems and of the detailed comparisons between activity and inchoative verbs in these languages.

3.1 Perfective in Southern Ndebele

Perfective in Southern Ndebele is morphologically encoded by the suffix *-ile*. Perfective constructions encode “a past state of affairs” (Crane and Persohn 2019: 305). In Southern Ndebele, activity verbs with the perfective suffix *-ile* “can be rendered in English as Perfect or Simple Past”. Crane and Persohn suggest that the difference between the two renderings is determined by context.

- (32) Southern Ndebele [adapted from Crane and Persohn 2019]
uSipho u-cul-ile
 Sipho SM1-sing-PFV
 ‘Sipho sang.’/‘Sipho has sung’

An inchoative verb in Southern Ndebele has a “present state reading” (Crane and Persohn 2019: 306) when it appears with perfective morphology. In fact, this is described in the literature as the most common way to express a present state reading in Bantu.

- (33) Southern Ndebele [adapted from Crane and Persohn 2019]
uSipho u-lamb-ile
 Sipho SM1-get_hungry¹⁵-PFV
 ‘Sipho is hungry’

The perfective in Southern Ndebele also allows for a state change reading in which “the process leading to the state is highlighted” (Crane and Persohn 2019: 306).

- (34) Southern Ndebele [adapted from Crane and Persohn 2019]
ikomo i-non-ile
 9cow SM9-grow_fat-PFV.DJ¹⁶
 ‘The cow is fat.’/‘The cow got fat (e.g., last year)’

When combined with another perfective prefix, inchoative verbs in Southern Ndebele depict “a state that held at a particular time in the past” (Crane and Fleisch 2019: 148).

- (35) Southern Ndebele [adapted from Crane and Fleisch 2019: 149]¹⁷
Be-ka-lamb-ile.
be.PFV-SM1-be.hungry-PFV
 ‘S/he was hungry.’

In sum, the perfective in Nyakyusa and Southern Ndebele, illustrated here in Southern Ndebele, distinguishes at least two classes of predicates. Perfective *-ile* encodes a past state of affairs with activity verbs, and present state or past state with inchoative verbs. This is summarized in Table 1:

Table 1: Perfective in combination with Southern Ndebele activities and inchoatives.

	<i>-ile</i> [perfective]
Activities	– Past state of affairs (rendered in English as Perfect or Simple Past)
Inchoatives	– Present state
	– Process and state change also possible
	– [be.PFV + <i>-ile</i>] Past state

¹⁵ Inchoative/change-of-state/statives are glossed in different ways in the literature. We retain the glossing conventions for these types of verbs from the sources.

¹⁶ See Van der Wal (2017) for discussion on conjoint/disjoint in Bantu.

¹⁷ Crane and Fleisch refer to this language as isiNdebele in this publication. They also refer to inchoative verbs as “change of state” verbs and this construction as “past perfective”. See also Crane and Fleisch (2019: fn. 11) for discussion of the *be-* prefix as imperfective.

3.2 Imperfective in Nyakyusa

The simple present in Nyakyusa, morphologically encoded by a present tense prefix *ku-*, is considered the “imperfective counterpart to the present perfective” (Persohn 2017: 152). Depending on the context, *ku-* with activity verbs yields a “continuous/progressive reading” (152), can be used in “habitual and generic statements” (153), and can refer to future eventualities.

- (36) Nyakyusa [adapted from Persohn 2017: 152]
tu-ku-job-a
 SM.1PL-PRS-speak-FV
 ‘We speak/are speaking.’

Present imperfective inchoative verbs in Nyakyusa yield state changes in progress, or a “coming-to-be reading”. For states that can recur (e.g., get angry, grow fat), a habitual reading is also available:

- (37) Nyakyusa [adapted from Crane and Persohn 2019]
i-ku-kalal-a
 SM1-PRS-be/get_angry-FV
 ‘S/he is getting angry.’/‘S/he gets angry (regularly).’

Some inchoative verbs do not permit the state change in progress reading, but are restricted to habitual (and future) readings:

- (38) Nyakyusa [adapted from Crane and Persohn 2019]
i-ku-hobok-a
 SM1-PRS-be/get_angry-FV
 ‘S/he becomes happy (regularly).’ #‘S/he is becoming happy.’

In sum, the imperfective in Nyakyusa and Southern Ndebele, illustrated here with Nyakyusa, also distinguishes between at least two actional classes. Activity verbs in the imperfective yield events in progress or habitual event readings. Inchoative verbs in the imperfective yield habitual state changes and, for some verbs, state changes in progress. This is summarized in Table 2.

Table 2: Imperfective in combination with Nyakyusa activities and inchoatives.

	PRS [imperfective]
Activities	– Event in progress – Habitual event
Inchoatives	– √/# State change in progress – Habitual state change

3.3 Summary

We have evidence in some South-East Bantu languages, illustrated by Nyakyusa and Southern Ndebele, that (im)perfectivity serves as a diagnostic to distinguish between (at least) two actional classes. Perfective, overtly encoded by the suffix *-ile*, depicts a past state of affairs, rendered in English as Perfect or Simple Past with activities. With inchoatives, the perfective yields present stative and state change readings; with additional morphology, the perfective yields past stative readings with inchoatives. Imperfective, encoded by the simple present construction, yields event in progress or habitual event readings for activities, and habitual state changes and, for some verbs, state changes in progress for inchoatives. This is summarized in Table 3 below.

Table 3: Perfective and imperfective in Nyakyusa and Southern Ndebele.

	<i>-ile</i> [perfective]	PRS [imperfective]
Activities	– Past state of affairs (rendered in English as Perfect or Simple Past)	– Event in progress – Habitual event
Inchoatives	– Present stative – Process and state change also possible – [be.PFV+ <i>-ile</i>] Past stative	– √/# State change in progress – Habitual state change

In the following section we examine (im)perfectivity in the ER languages and show that despite the reduced TA systems, (im)perfectivity can still serve as a diagnostic for actional classes.

4 (Im)perfectivity as an actionality diagnostic in ER languages

Recall that ER languages have reduced TA morphology as compared to other Bantu languages. ER languages do not morphologically encode perfective with the suffix *-ile* and the imperfective marker *-ag* is not obligatory. Two of the six ER languages (Kwere and Luguru) have present tense morphology, while the remaining four languages (Kagulu, Kami, Kutu, Zalamo) have non-past morphology that encodes present as well as future. In this section we examine the readings associated with perfective in ER (verbs without overt tense/aspect morphology), and the readings associated with imperfective in ER (verbs with overt non-past or present tense morphology). The goal is to determine whether (im)perfectivity in these languages

is a useful diagnostic between actional classes. Tatevosov (2002: 344) suggests that “[t]ypically there is no difficulty to identify a language specific-gram as manifesting either perfective or past, as the range of uses of the former forms a subpart of the range of uses of the latter”. He thus uses perfective as a diagnostic if available, and in absence of perfective, he uses past. As languages vary with respect to the manifestation of progressive, imperfective and present, Tatevosov opts for present or general imperfective as a diagnostic. As a comprehensive exploration of actional classes in ER languages has not yet been undertaken, for the purpose of this discussion and for comparison with other Bantu languages, we focus on two types of verbs and take them to be representative of activity verbs and inchoative verbs. Further research will confirm the number and types of actional classes in ER languages. This analysis will thus serve as a starting point.

4.1 Ø in ER languages [past, perfective]

ER activity verbs without overt tense morphology are translated into English Simple Past, as in (39)–(40), or Perfect (41):¹⁸

- (39) Kami
Ku-lim-a m-gunda ako jana.
 SM.2SG-cultivate-FV 3-farm 3.POSS.2SG yesterday
 ‘You cultivated your farm yesterday.’

- (40) Kutu
Amina ka-kimbil-a jana.
 Amina SM1-run-FV yesterday
 ‘Amina ran yesterday.’ Speaker’s comments: “something bad happened and she ran”.

- (41) Kagulu
Amina ka-genda-a hambiya
 Amina SM1-leave-FV now
 ‘Amina has just left (now).’

The presence of *hambiya* ‘now’ in the Kagulu example in (41) above is revealing. The sentence otherwise lacks overt tense morphology, meaning it is a past tense

¹⁸ There is at least one example in our database in which an eventive verb without tense morphology is used in an imperfective context. Data such as these are complicated by the fact that when attempting to disambiguate readings, speakers often add non-obligatory morphology that emphasizes perfective/imperfective interpretations. We leave this for future research.

construction. In fact, if ‘now’ is added to a clause with an activity verb that lacks overt tense morphology in any of the ER languages, it yields English Perfect translations, as in (42)–(43) below:

- (42) Kwere
Sambi vino ni-lim-a m-gunda w-angu.
 now DEM SM.1SG-cultivate-FV 3-farm 3-POSS.1SG
 ‘I have just now cultivated my farm.’

- (43) Luguru
Amina ka-gend-a sambi.
 Amina SM1-leave-FV now
 ‘Amina has left now.’

That said, the verbs without overt tense morphology seem to encode only that the event took place, not that a result state holds. In at least two of the ER languages, a clause containing a verb lacking overt tense morphology can be followed with a clause indicating that the result state no longer holds at speech time, without inducing a contradiction or an infelicity due to a tautology. This is illustrated in (44)–(45) below.

- (44) Kagulu
Amina ka-fik-a digulo lowo hambiya ka-ha-ichak-a.
 Amina SM1-start-FV yesterday but now SM1-LOC-lack-FV
 ‘Amina arrived yesterday but now she is not here.’

- (45) Kutu
Ni-agiz-a simu y-angu ila ni-on-a.
 SM.1SG-lose-FV 9.phone 9-POSS.1SG but SM.1SG-see-FV
 ‘I lost my phone but I have found it.’

ER inchoative verbs without overt tense morphology yield present state readings, as in (46)–(49):

- (46) Kagulu
Ku+onel-a
 SM.2SG+be/get_happy-FV
 ‘You are happy.’

- (47) Kami
Amina ka-ipf-a
 Amina SM1-be/get_tired-FV
 ‘Amina is tired.’

- (48) Kutu
Amina ka-donh-a sambi
 Amina SM1-be/get_tired-FV now
 ‘Amina is tired now’. [Speaker’s comments: “you see her right now”]
- (49) Kutu and Kwere
Juma ya-ng’hali ka-neneh-a
 Juma SM1.DEP-still SM1-be/get_fat-FV
 ‘Juma is still fat.’

Inchoative verbs without overt tense morphology can also get past state readings in the ER languages when combined with a past adverbial:¹⁹

- (50) Kami
Amina ka-ipf-a jana
 Amina SM1-be/get_tired-FV yesterday
 ‘Amina was tired yesterday’
- (51) Kutu
Amina ka-gevuzik-a jana
 Amina SM1-be/get_angry-FV yesterday
 ‘Amina was angry yesterday’
- (52) Kwere
Ni-legel-a igolo
 SM.1SG-be/get_tired-FV yesterday
 ‘I was tired yesterday’

An inchoative verb without overt tense morphology can also be translated as a state change:²⁰

- (53) Kami
Ni-dyon-a dibwa mitondo ino ni-fuk-a.
 SM.1SG-see-FV dog morning DEM SM.1SG-be/get_scared-FV
 ‘When I saw the dog this morning I got scared.’

19 There is only one Kagulu example in our database of a verb without overt tense morphology getting a past state reading. This may be a result of the fact that Kagulu exhibits the temporal prefix *ha-* (see fn. 6 above). We leave this for further research.

20 The examples in (50)–(52) may also have state change readings. This is complicated by the difficulty in distinguishing between state change and past stative readings in clauses without context. Likewise, the sentences in (53)–(54) may also have past state readings, but the state change readings are more salient in these contexts. We leave confirmation of the additional readings for these examples for further research.

- (54) Kutu
Amina *ka-gevuzik-a* *kabili*
 Amina sm1-be/get_angry-FV again
 ‘Amina became angry’ (from English ‘Amina got angry again’)

In sum, activity verbs lacking overt tense morphology can be translated into English as Simple Past or Present Perfect, while inchoative verbs either get a present stative or a state change reading. Inchoative verbs without overt tense morphology are also compatible with past stative readings in combination with past adverbials. This is summarized in Table 4:

Table 4: Activity and inchoative verbs without overt tense/aspect morphology in ER languages.

	∅ [past, perfective]
Activities	– Past event (rendered in English as Perfect or Simple Past)
Inchoatives	– Present state
	– Past state
	– State change

4.2 Non-past/present in ER languages [imperfective]

Recall that the ER languages exhibit different ways of encoding present tense: three of the languages (Kami, Kutu, Zalamo) have a non-past morpheme (which encodes present and future), two of the languages (Kwere and Luguru) have a present morpheme (which encodes present tense only), and Kagulu has both a non-past morpheme as well as a future morpheme. While the presence of a separate future morpheme in the Kagulu system might impact the meanings encoded by the non-past morpheme in the language, the Kagulu non-past yields future readings, thus we treat it on a par with the other three ER languages that have a non-past morpheme.

Activity verbs with a non-past tense morpheme, as in (55)–(58), or present tense morpheme, as in (59)–(60), yield events in progress:²¹

²¹ For Kami, Kagulu, Kutu and Zalamo, ‘now’ can be replaced by ‘tomorrow’ to yield future readings. We follow Tatevosov (2002) by focusing on ongoing situations in the present, setting aside the question of whether these futurate meanings encode imperfectivity.

- (55) Kagulu
Ni-ku-lim-a mu-gunda w-angu hambiya.
 SM.1SG-NON.PST-cultivate-FV 3-farm 3-POSS1SG now
 ‘I am cultivating my farm now.’
- (56) Kami
Amina ka+o-som-a sambi bahano
 Amina SM1+NON.PST-read-FV now DEM
 ‘Amina is reading right now.’ (translated from Swahili *anasoma* [present];
 context: I’m watching her reading now as we speak.)
- (57) Kutu
Rozadina ka+o-tung-a u-salu sambi
 Rozadina SM1+NON.PST-bead-FV 14-bead now
 ‘Rozadina is beading a necklace now.’
- (58) Zalamo
Amina ka+o-fagil-a
 Amina SM1+NON.PST-sweep-FV
 ‘Amina is sweeping’/‘Amina will sweep’
- (59) Kwere
Amina ka+o-kimbil-a vino sambi
 Amina SM1+PRS-run-FV DEM now
 ‘Amina is running right now’
- (60) Luguru
Amina ka+o-tsum-a sambi
 Amina SM1+PRS-run-FV now
 ‘Amina is running now’ [from context: right now; speaker adds *sambi*]
- Non-past and present morphology are also compatible with habitual event interpretations:
- (61) Kami
Amina ka+o-kimbil-a chila saa kumi na mbili imihe
 Amina SM1+NON.PST-run-FV every 9.time twelve²² evening
 ‘Amina runs every day at 6pm.’

²² Swahili time is measured from sunrise to sunset, so that 7 am is ‘one o’clock’ (the first hour of the day) and 6 pm is ‘12 o’clock’.

(62) Kwere
Ni+o-lim-a *m-gunda* *w-angu* *chila* *siku.*
 SM.1SG+PRS-cultivate-FV 3-farm 3-POSS.1SG every 9.day
 ‘I cultivate my farm every day.’

(63) Luguru
Ni+o-lim-a *m-gunda* *gw-angu* *chila* *siku.*
 SM.1SG+PRS-cultivate-FV 3-farm 3-POSS.1SG every 9.day
 ‘I cultivate my farm every day.’

(64) Zalamo
Amina ka+o-fagil-a *ma-zuwa* *g-ose*
 Amina SM1+NON.PST-sweep-FV 6-day 6-all
 ‘Amina sweeps every day.’

Inchoative verbs with non-past morphology (Kagulu, Kami, Kutu, Zalamo), as in (65), or present morphology (Kwere and Luguru), as in (66)–(67), are interpreted as state changes in progress:

(65) Kami
Amina ka+o-kwipf-a *sambi* *baha.*
 Amina SM1-NON.PST-be/get_tired-FV now DEM
 ‘Amina is getting tired right now.’

(66) Kwere
Amina ka+o-legel-a
 Amina SM1+PRS-be/get_tired-FV
 ‘Amina is getting tired’

(67) Luguru
Amina ka+o-neneh-a *lugaluga*
 Amina SM1+PRS-be/get_fat-FV slowly
 ‘Amina is getting fat bit by bit’

They can also yield habitual state change interpretations:

(68) Kutu
Amina ka+o-dong’h-a *yahavikaga* *saa 12*
 Amina SM1+NON.PST-be/get_tired-FV when.it.reaches twelve
ichungulu.
 at.6pm
 ‘Amina becomes tired everyday at 6pm.’

(69) Kwere

Chila siku chilugulu Amina ka+o-legel-a
 every 9.day at.6pm Amina SM1+PRS-be/get_tired-FV
 ‘Everyday at 6pm Amina becomes tired.’

In sum, activity verbs morphologically encoded by the imperfective in ER languages (non-past tense morpheme in Kagulu, Kami, Kutu, Zalamo; present tense morpheme in Kwere and Luguru) yield events in progress or habitual events. Inchoative verbs yield state change in progress and habitual state change readings. This is summarized in Table 5:

Table 5: Imperfective (non-past/present) activity and inchoative verbs in ER languages.

	NON.PAST/PRS [imperfective]
Activities	– Event in progress – Habitual events
Inchoatives	– State change in progress – Habitual state change

4.3 Summary

A comparative summary of the readings that arise with (im)perfective activity and inchoative verbs in ER languages and Nyakyusa and Southern Ndebele is given in Table 6:

Table 6: A comparison of (im)perfective activity and inchoative verbs in East Ruvu and Nyakyusa and Southern Ndebele.

	East Ruvu		Nyakyusa and Southern Ndebele	
	∅ [past, perfective]	NON.PAST/PRS [imperfective]	-ile [perfective]	PRS [imperfective]
Activities	– Past event (rendered in English as Perfect or Simple Past)	– Event in progress – Habitual event	– Past state of affairs (rendered in English as Perfect or Simple Past)	– Event in progress – Habitual event
Inchoatives	– Present state	– State change in progress	– Present stative	– √/# State change in progress
	– Past state	– Habitual state change	– Process and state change also possible	– Habitual state change
	– State change		– [IPFV + -ile] Past stative	

Focusing on the perfective, we see that Nyakyusa and Southern Ndebele exhibit overt perfective morphology, *-ile*, which distinguishes between activity and inchoative verbs in that it yields different readings when combined with verbs of the two classes. ER languages, on the other hand, lack overt perfective morphology, yet the readings that arise for activity and inchoative verbs without overt tense morphology are different between the two classes, parallel to other Bantu languages: activity verbs yield past events while inchoative verbs yield present state and state change readings. While *-ile* with inchoative verbs in Southern Ndebele can yield a past stative reading when combined with an imperfective prefix, ER languages have no such prefix yet can get a past stative interpretation, typically with the addition of a past temporal adverbial. This suggests that despite the fact that it is not encoded overtly, perfectivity in ER languages serves as a diagnostic for actionality, distinguishing between at least two classes of verbs: activities and inchoatives.

The imperfective, morphologically encoded by a tense category in ER languages, seems to behave the same as it does in Bantu more generally: imperfective activity verbs yield events in progress as well as habitual events, while imperfective inchoative verbs yield state change in progress and habitual state change readings. However, we suggest that the readings that arise are in effect the same across the two classes of verbs – an in progress reading and a habitual reading. Thus, imperfective alone does not distinguish between actional classes in ER languages (and perhaps for Bantu more generally), though perfective does.

5 Conclusions

Bantu languages, with their extensive TA morphology, have been shown to be ideal places to test the limits of actional classes and the diagnostics used to categorize them. The ER languages, with their reduced TA morphology, are also an important testing ground. Thus far, examination of the ER languages has revealed that regardless of the complexity of the TA system, the readings associated with (im)perfectivity seem to yield the same results as in the two sample South-East Bantu languages that have been investigated. Perfective and past are not overtly encoded in ER (Bantu perfective marker *-ile* is absent from independent clauses); however, verbs from two actional classes, activities and inchoatives, behave differently in clauses lacking overt tense or aspect morphology. In other words, even in absence of overt morphology, perfective can distinguish between actional classes. Imperfective in ER languages is morphologically encoded by present/non-past tense. While ER imperfective verbs yield similar readings to other South-East Bantu languages, we suggest that as a diagnostic for actional classes, the

imperfective does not clearly delineate the two classes; activity and inchoative verbs encode similar meanings when combined with the imperfective.

The ER data presented in this paper have a variety of implications for our understanding of actionality in Bantu languages and for our understanding of TA systems more broadly. Here we highlight two issues: (i) the change in role of the Bantu perfective *-ile*, and (ii) the impact of the absence of morphology on temporal distinctions. As we have shown, *-ile* is not used as a perfective marker in the ER languages, but is only used in dependent clauses or in past negative clauses. In negative clauses, the subject marker is replaced by a negation subject marker and the tense marker does not surface. Compare present/imperfective (70) and present negated (71) below:

(70) Kutu
Ni+o-lim-a.
 1SG.SM+PRS-cultivate-FV
 ‘I am cultivating.’/‘I cultivate.’

(71) Kutu
Si-lim-a.
 SM.1SG.NEG-cultivate-FV
 ‘I am not cultivating.’

Recall that in independent clauses, past tense and perfective aspect is not encoded overtly (72). In past negative clauses, again the subject is replaced by a negation subject marker, but there is no tense marker to delete. Instead, the *-ile* suffix surfaces (73):

(72) Kutu
Ni-lim-a.
 1SG.SM-cultivate-FV
 ‘I cultivated.’/‘I have cultivated.’

(73) Kutu
Si-lim-ile.
 SM.1SG.NEG-cultivate-ILE
 ‘I did not cultivate.’

In other words, since tense morphology does not surface in a negative clause, it is *-ile* that distinguishes between the present (71) and the past (73) for activity verbs in the negative. That is, *-ile*, which is considered an aspectual morpheme throughout Bantu, is doing the work of tense in these negated clauses in ER languages.

The second implication of this discussion relates to the role of the absence of aspectual morphology in blurring temporal distinctions. For instance, ER inchoatives lacking overt tense morphology (i.e., past/perfective) can be interpreted as present states (74) or past states (75):

- (74) Zalamo
Amina ka-neneh-a sambi.
 Amina SM1-be/get_fat-FV now
 ‘Amina is fat now.’
- (75) Zalamo
Amina ka-neneh-a (mu-lao u-bit-ile).
 Amina SM1-be/get_fat-FV (3-year SM3-pass-ILE)
 ‘Amina was fat (last year).’

It is the addition of the temporal adverbial (‘now’ or ‘last year’) that distinguishes the temporal interpretations. Similarly, present tense readings arise with inchoatives prefixed by present tense morphology (76) as well as with verbs lacking overt tense morphology (example (49) above, repeated as (77) below):

- (76) Kwere
Juma ya-ng’hali ka+o-neneh-a
 Juma SM1.DEP-still SM1-PRS-be/get_fat-FV
 ‘Juma is still getting fat.’
- (77) Kutu and Kwere
Juma ya-ng’hali ka-neneh-a
 Juma SM1.DEP-still SM1-be/get_fat-FV
 ‘Juma is still fat.’

Regardless of the tense marking, both have present tense interpretations. The difference, however, is aspectual: present tense encodes a present state change in progress while past encodes a present state.

We close with an issue for further research. The analysis presented in this paper, that neither past tense nor perfective aspect is overtly encoded in ER languages, coupled with the proposal that imperfective is encoded by tense morphology, raises a question as to whether the category distinguishing among actional classes is tense, rather than aspect.²³ While we leave the exploration of

23 An anonymous reviewer suggests that aspect is more “basic” than tense and consequently the ER languages could be analyzed as perfective/imperfective systems being used in past/non-past tense functions. We are intrigued by this proposal and leave exploration of it for future research.

these issues for further research, these data provide further evidence that, as Nurse (2003: 102) reminds us, “aspect and tense are interlocking members of a system”.

Abbreviations

1, 2, 3 ...etc.	Bantu noun class
1, 2.SG/PL	person
DEM	demonstrative
DEP	dependent clause
ER	East Ruvu Bantu
FUT	future
FV	final vowel
INF	infinitive
IPFV	imperfective
LOC	locative
NEG	negative
NON.PST	non-past
OM	object marker (the number that follows represents the Bantu noun class)
PFV	perfective
PL	plural
POSS	possessive
PRS	present tense
PST	past
SM	subject marker (the number that follows represents the Bantu noun class) subject marker
SG	singular
SM	subject marker
TA	temporal/aspectual
TEMP	temporal/conditional marker

Acknowledgments: We are grateful to Thera Crane, Johanna Nichols and Bastian Persohn for organizing the session “A cross-linguistic perspective on the role of the lexicon in actionality” at the 13th Conference of the Association for Linguistic Typology (ALT), and for editing this special issue. We also wish to thank the audience at ALT and two anonymous reviewers for invaluable feedback. Finally, our deep appreciation goes to the speakers of East Ruvu Bantu languages, without whom this work would not be possible.

Research funding: The study was supported by Riksbankens Jubileumsfond (P15-0341:1).

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