CONSTITUENCY, IMBRICATION, AND THE INTERPRETATION OF CHANGE-OF-STATE VERBS IN ISINDEBELE

Thera Crane & Axel Fanego

University of Helsinki & Goethe University Frankfurt

This paper describes the interplay of lexical and grammatical aspect with other grammatical phenomena in the interpretation of the aspectual suffix *-ile* (which we analyse as Perfective) in isiNdebele, a Nguni Bantu language spoken in South Africa. Crucial other phenomena include constituency-related factors such as the conjoint-disjoint distinction and (related) penultimate lengthening, along with morphophonological conditions that trigger different forms of *-ile*. These factors appear to interact differently in isiNdebele than they do in closely related Zulu, suggesting two different paths of grammaticalization, which we argue can change the interpretation of markers of grammatical aspect as they interact with lexical aspectual classes.

1. INTRODUCTION

Most recent work on aspect treats the aspectual interpretation of an utterance as the product of (at least) two components: a lexical aspectual structure consisting of phases and their boundaries, and grammatical aspectual operators that "select" from among them (see Sasse 2002; Croft 2012: 48–52; additional important components in aspectual interpretations may include, among other things, argument structure, adverbials, and taxis). Assuming such interactions between grammar and the lexicon, it must be the case that as aspectual markers undergo processes of grammatical change, they can also undergo changes in their selectional capacities as they interact with lexical aspect and other elements of the sentence. However, such historical developments are not frequently highlighted in studies of grammaticalization processes, and they are dealt with even more rarely in studies of interactions between lexical and grammatical aspect. This is especially true for studies of Bantu languages (but see, e.g. Drolc 1992; Botne 2010; Crane 2012; Dom, de Schryver & Bostoen 2018).

This paper describes the interplay of lexical and grammatical aspect with other grammatical phenomena in the interpretation of the aspectual suffix *-ile* in isiNdebele (S407, ISO 639-3: nbl),[1] a

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1 We make an exception to using English designations for Bantu language names by referring to isiNdebele (typically known in English as Southern Ndebele, a name that is frowned upon by at least some speakers). We use the term isiNdebele both to respect speaker preferences and to avoid confusion with Ndebele of Zimbabwe (isiNdebele, S44), and with Northern Transvaal Ndebele (Sindebele, S408), another Nguni language of South Africa.

Nguni Bantu language spoken in South Africa. We analyse the *-ile* suffix as marking Perfective aspect in isiNdebele. Crucial other phenomena include constituency-related factors such as the conjoint-disjoint distinction (see Buell 2006) and (related) penultimate lengthening, along with morphophonological conditions that trigger different forms of *-ile*. Due to the complex interplay of these diverse elements, a semantic regularity in the morphological expression of state change vs. current state readings, frequently reported for a cognate suffix in isiNdebele's close neighbour and relation Zulu (S42, ISO 639-3: zul), does not seem to be as clear-cut in isiNdebele.

Data for this paper were collected as part of a larger study of lexical aspect in isiNdebele and Sindebele (S408, no ISO code). We have been studying lexical aspectual phenomena in these languages since early 2015, using semi-structured interviews (see Crane & Fleisch 2019 for an overview) and a variety of context-based semantic elicitation methodologies (see, e.g. Matthewson 2004 and the papers in Bochnak & Matthewson 2015).[2] This article was inspired in part by ideas shared at the workshop "The semantics of verbal morphology in under-described languages", held at the University of Gothenburg on 2–3 June 2017 (see the Introduction to this volume).

The argumentation in this paper is structured as follows: in Section 2, we briefly introduce the aspectual suffix *-ile* and its functions, along with the most common analysis of "Perfective" aspect in Bantu, namely, that perfective marking usually references an ongoing state when combined with "change-of-state" (or "inchoative") verbs. Section 3 describes the *-ile* marker and its interpretations in Zulu: with change-of-state verbs, so-called "imbricated" forms (when morphologically possible) express an ongoing state, while non-imbricated forms express the transition into the state. Section 4 then endeavours to show that the interpretations of *-ile* are less straightforward in isiNdebele: they depend not only on the morphology of *-ile*, but also on information structure, and specifically the expression of (non-)constituency. Morphological and prosodic indicators of (non-)constituency in isiNdebele and other Nguni languages are sketched, along with references to more extensive descriptions. We then explore the interplay of constituency and *-ile* morphology in isiNdebele, concluding that both play a role in aspectual (and causal) interpretation. Section 5 briefly describes the most common ways of expressing unambiguous state changes in isiNdebele. Section 6 offers a sketch of a possible scenario of how isiNdebele's complex situation may have arisen through grammaticalization processes, and Section 7 concludes with general comments and proposals for future research.

2. *-ILE* AND THE INTERACTION OF LEXICAL AND GRAMMATICAL ASPECT IN BANTU

The suffix *-ile*, one of only a few aspectual suffixes common across Bantu (Nurse 2008: 37), has received considerable attention for its interesting morphophonological properties (see, e.g. Bastin 1983). In more recent years, its complex semantic and pragmatic properties – and their implications for grammaticalization theory – have also been the subject of study (Botne 2010; Crane 2012; 2013; Persohn 2017; Gunnink 2018; Kanijo 2019). Although it is typically described as a perfect/anterior or perfective suffix, scholarship seems to be converging on *-ile*'s historical origins as a resultative marker (see Crane 2012); indeed, markers of perfectivity in Bantu (and broader Niger-Congo) frequently still have a strong resultative component, as will be seen below.

Although the synchronic functions of *-ile* vary widely across Bantu, in its prototypical "perfective" functions, it is typically interpreted as a perfect(ive) with one set of verbs, and a present stative with another. Examples from Nyakyusa (M31, Tanzania) are given in (1). (1a) shows perfect and perfective readings (situation in the past of utterance time, often, but not obligatorily, with a sense of continuing relevance), while (1b), excerpted from a folk tale, shows a present stative reading.

(1) Nyakyusa (M31, ISO 639-3: nyy; Persohn 2017: 157−158)

   a. *Tʊ-job-ile.*
      2PL.SM-speak-PFV

      'We have spoken.'

      'We spoke.' (e.g. yesterday; B. Persohn pers. comm.)

   b. *Ee, nalooli n-dʊ-gan-ile.*
      yes really 1SG.SM-OM11-love-PFV

      'Yes, I really love him [spider].'

The distinction between past event and present state readings is frequently explained as arising from differences in lexical aspectual structure. Specifically, certain verbs in many Bantu languages are construed as being inherently inchoative; that is, they encode both a state change and the resultant state. For example, the isiNdebele verb *-qina* 'be(come) strong/firm' can refer both to the state change (and, possibly, the process causing or leading up to that change) and to the state of being strong or firm. In this paper, we refer to such verbs as "change-of-state" (COS) verbs. Note that our definition is slightly narrower than the definition of inchoative verbs offered by Botne and Kershner (2000: 165), where they are construed as those verbs that "express a change of condition or location of the experiencer or patient, many expressing the change or transition from one state to another", regardless of whether a resultant state is part of the verb's lexical semantics (see, e.g. Botne 2003 for examples where a resultant state is entailed but not lexically encoded). We additionally only deal with those verbs in which the resultant state is ascribed to the grammatical subject, because, at least in the languages with which we are familiar, these are the only states that can be expressed with perfective morphology (which we take as a sign that the resultant states are lexically encoded; see Crane & Fleisch 2019 for details). Non-COS verbs roughly correspond to Vendler's (1957) categories of ACTIVITIES and STATES, that do not encode a state change or resultant state. Non-COS verbs can

also be Vendlerian ACCOMPLISHMENTS and, in some cases, ACHIEVEMENTS. Note that although accomplishments and achievements entail state changes, the resultant state does not always relate to the grammatical subject. For example, the prototypical accomplishment 'build a house' entails a resultant state in which a house is at least temporarily extant, but it does not encode a change for the grammatical subject, beyond the general experiential reading.

In the model of Bantu lexical aspect that currently enjoys the most widespread use, developed by Robert Botne and Tiffany Kershner (see, e.g. Botne 1983; Botne & Kershner 2000; 2008), the Perfective aspect is defined largely by the relationship of speaker viewpoint to the event NUCLEUS. Botne and Kershner (2000: 165), following Freed (1979), define the nucleus as the "characteristic and prominent feature of the event". Generally speaking, the nucleus encodes the point of change from one state to another in COS verbs, and the activity or state in non-COS verbs. The resultant state itself, when part of the verb's lexical semantics and not merely a real-world entailment, is represented by a lexically encoded CODA phase.

Botne and Kershner also discuss an optional ONSET phase leading up to the state change. In later models (e.g. Botne 2008) some accomplishment(-like) COS verbs also have temporally extended nuclear phases encoding the coming-to-be process up until the point of change; these contrast, in Botne and Kershner's model, with more ACHIEVEMENT-like COS verbs with punctual nuclear phases. Because the nature of the pre-change phase (whether onset or extended nucleus) is largely irrelevant to the discussion of *-ile*, it will not be dealt with further in this paper.

In many Bantu languages, perfective morphology with COS verbs can refer both to the (past) state change itself and to the (present) resultant state, with interpretations depending on context (2). These dual interpretive possibilities can be seen with the Nyakyusa inchoative verb *-kalala* 'be(come) angry'. Note that the *-ile* suffix "imbricates" into the stem *-kalala*; that is, it merges with the root itself, sometimes conditioning further morphological changes (see Bastin 1983 for an extensive overview of the phenomenon of imbrication; Section 2 below contains further discussion of imbrication as relevant to the present paper). Example (2) is adapted from Persohn (2017: 158).

(2) Nyakyusa (M31, ISO 639-3: nyy; Persohn 2017: 158)

   a. *Pa-bw-andɪlo*   **a-kaleele**   *fiijo,*   *ʊlʊ* *si-maliike.*
      16-14-beginning   SM1-be(come)_angry.PFV INTENS now SM10-finish.PFV

     'First **he got angry**, but now the anger is gone.'[3]

   b. *A-a-kaleele.*
      SM1-PST-be(come)_angry.PFV

     'S/he was angry.' (default reading)

Persohn (2017: 160) argues that, in (2a), the Perfective selects a "vantage point following the eventuality as a whole", giving the reading 'got angry', while in (2b), the vantage point falls within the extended coda phase, giving the stative reading.

Based on data like example (2), Botne (2010: 43) gives the following broad definition of perfective aspect in Bantu:

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3 In longer examples throughout this paper, we have bolded the words with the relevant morphology for the convenience of readers; we assume that these forms will be easy to spot in shorter examples and have therefore not made them bold.

> [Perfectives] make an assertion about a time of the situation subsequent to the endpoint of the situation nucleus that serves as reference anchor. That is, the characteristic phase, or nucleus, named by the verb is perceived as having been realised.

Thus, for non-COS verbs – that is, for verbs that do not lexically encode a resultant state – perfective markers such as *-ile* can only have past (=perfective/perfect) readings. In contrast, COS verbs can have readings that encode either the state change itself, or, when the perspective falls within the situation's coda phase, a present state reading. Botne (2010: 43) further notes that interpretations of Perfective forms depend on "the type of projective frame of reference adopted by the speaker".

Regardless of whether the definition of perfectivity given above turns out to be adequate for explaining the perfective/imperfective contrast as a whole[4] – a topic that is beyond the scope of this paper – it seems clear that, with COS verbs, Perfective *-ile* in languages such as Nyakyusa allows (at least) for either (i) an interpretation in which the resultant state still holds and is referred to by the Perfective form, or (ii) one in which it no longer (necessarily) holds, and the change itself is referred to. With this in mind, we can now turn to Zulu, for which it has been argued that these two "vantage points" are expressed by two *different -ile* markers.

3. *-ILE* IN ZULU

Descriptions of Zulu commonly observe that many COS verbs have different interpretations with *-ile*, depending on whether the marker imbricates or not (see, e.g. Taljaard & Bosch 1988: 56–58; Poulos & Msimang 1998: 265–270). Specifically, imbricated forms require a current state reading, while non-imbricated forms have only state change or other eventive interpretations. Examples are shown in (3), all derived from examples in Botne and Kershner (2000: 167–170), who in turn cite examples from Beuchat (1966).

(3) Zulu (S42, ISO 639-3: zul; Beuchat 1966, cited in Botne & Kershner 2000: 167–170)

	IMBRICATED	NON-IMBRICATED
a.	*ba-khathele*	*ba-khathal-il-e*
	sm2-become_tired.COMPL	sm2-become_tired-PFV-COMPL
	'they are tired'	'they got tired'
b.	*u-hlubule*	*u-hlubul-il-e*
	sm1-undress.COMPL	sm1-undress-PFV-COMPL
	'he is undressed'	'he got undressed'
c.	*u-lele*	*u-lal-il-e*
	sm1-sleep.COMPL	sm1-sleep-PFV-COMPL
	'he is asleep'	'he slept'[5]

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4 Indeed, Botne's work itself takes a more nuanced approach; see Botne (forthcoming) for an overview.

5 Interlinear glosses in this example and in examples (4)–(5) are derived from examples in Botne & Kershner (2000), with a few simple changes to conform to the abbreviation conventions used in this article. Although *-lala* is glossed by the authors in this particular example as 'sleep', Poulos & Msimang (1998: 269) suggest that the best translation might be 'fall asleep'; Botne & Kershner (2000: 168) also translate *-lala* as 'go to sleep' later in the article. The non-imbricated example in (3a) can therefore presumably also, in certain contexts, be translated as something like 'he went to sleep', in addition to 'he slept', although this precise translation is not given in

In a seminal paper, Botne and Kershner (2000) propose that there are two different *-il-* forms in Zulu, with distinct morphological and semantic properties. Each *-il-* form can combine with the final *-e*, which "indicates completeness" (Botne & Kershner 2000: 165). (Nurse 2008, in contrast, analyses Zulu *-ile* as primarily a near past, noting that it sometimes has perfect/anterior functions. Nurse does not appear to explicitly address the difference between imbricated and non-imbricated forms.)[6]

The first marker, *-i(l)*-1, imbricates into the roots of verbs with certain phonological structures (generally speaking, those ending in *-aC-*, except *-CVC-* roots ending in *-an-*) (Botne & Kershner 2000: 168). An example is seen in (4), which shows both the infinitive (class 15) form of *-lala* '(go to) sleep' (4a) and its imbricated Completive form, with a present state reading (4b).

(4a) Zulu (S42, ISO 639-3: zul; Botne & Kershner 2000: 168)

> *uku-lal-a*
> INF-sleep-FV
> 'go to sleep'

(4b) Zulu (S42, ISO 639-3: zul; Beuchat 1966: 27, cited in Botne & Kershner 2000: 167)

> *u-lel-e*
> SM1-sleep.COMPL-COMPL
> 'he is asleep'

Other examples include the verb *-khathala* 'become tired', which has the imbricated form *-khathele* 'be tired', and *-phatha* 'get hold of, carry', with imbricated *-phethe* 'hold, carry' (Botne & Kershner 2000: 168).

The second marker, labelled *-il*-2 by Botne and Kershner, does not imbricate into the root, so instead of *-lele*, *-khathele*, and *-phethe* for the above-mentioned forms, they surface with *-il*-2 as *-lalile* 'slept, fell asleep', *-khathalile* 'got tired', and – presumably, although Botne and Kershner do not show the example – *-phathile* 'took hold of', respectively.

Botne and Kershner analyse the first, imbricating *-i(l)-* marker as marking "Completive" aspect. With COS verbs, the event structure itself (including at least the change of state and the resultant coda state) forms the entirety of the performative domain of the speech act, with the stationary speaker "viewing" the event moving past him or her. The Completive marker locates the aspectual perspective in the coda phase, that is, the resultant state (Botne & Kershner 2000).

The second, non-imbricating *-il-* marker, in contrast, marks "Perfective" aspect. According to Botne and Kershner (2000), with the Perfective, the event is viewed externally, as a situation that transpired earlier in the performative domain; this *-ile* ending describes the traversal of the state change into the coda state at an earlier time within the performative domain. See Botne and Kershner (2000) for graphic depictions and a more detailed explanation of the proposed contrast.

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the sources. In our view, *-lala*, like other COS verbs, encodes both the change and the resultant state, although these phases are targeted by different grammatical constructions and in different contexts. Examples in Botne & Kershner (2000) show that the non-imbricated perfective forms of *-lala* in Zulu can additionally refer to the entire period of sleeping, as in *ulale endlini* 'he slept in a house' (Beuchat 1966: 27, cited in Botne & Kershner 2000: 168). In most cases, then, glosses such as 'fall asleep/be asleep/sleep' for *-lala*, and 'become/be tired' for *-khathala* would probably be the most accurate.

6 See also Nurse's online appendices to the 2008 volume, available for download at <faculty.mun.ca/dnurse/ Tabantu/>, accessed 6 May 2018. The entry for isiZulu is in Appendix 1.

Botne and Kershner argue that even those roots that do not allow imbrication have this distinction, although the surface forms are not morphologically distinct. In example (5), the interpretation in (5a) corresponds to the Completive ($-i(l)-_1$), and the interpretation in (5b) to the Perfective ($il-_2$).

(5) Zulu (S42, ISO 639-3: zul; Beuchat 1966: 78, cited in Botne & Kershner 2000: 167)

    a. *Ba-lamb-ile*   (*kakhulu*).
       SM2-become_hungry-COMPL (very)

       'They are (very) hungry.'

    b. *Izolo*   *ba-lamb-il-e.*
       yesterday   SM2-become_hungry-PFV-COMPL

       'Yesterday, they got hungry.'

Botne and Kershner (2000: 170) additionally note that verbs that do not denote state changes (e.g. *-thenga* 'buy') may also have this contrast in perspectives, but that the contrast, if present, is so subtle that they were not able to elicit its effects.

There is one final important contrast to point out regarding the morphology and use of *-ile* endings in Zulu, as well as in isiNdebele, namely, that non-imbricated Perfectives themselves have two forms: "long" or "disjoint" *-ile* (e.g. *izilo balambile* 'yesterday, they got hungry') and "short" or "conjoint" *-e* (e.g. *balambe izolo* 'they got hungry yesterday'). The forms are selected based on factors such as syntactic constituency and information structural concerns. Note that the conjoint forms do not condition imbrication, as seen in the difference between imbricated *ukhathele* 's/he is tired' and conjoint *ukhathale* 's/he got tired'. Conjoint and disjoint forms are discussed further in Section 4.2.

4. *-ILE* IN ISINDEBELE

4.1 The interpretation of *-ile*'s (non-)imbricated forms with COS verbs

The interpretation of *-ile* in isiNdebele, while showing many surface similarities to Zulu, has significant differences that are seen upon deeper probing. These differences are not entirely surprising, because despite their close genetic relationship, heavy contact, and mutual intelligibility, the two languages show important differences at virtually every linguistic level, including the semantics of cognate morphemes (Fleisch 2005; Crane & Mabena 2019; Crane & Fleisch 2019). Whether these differences run along strict language-based lines, or whether they are more areal in nature, remains to be explored more deeply.

Examples (6)–(7) show interpretations that are as predicted by the Zulu model.[7]

(6a) *Ama-nzi a-futhumal-ile.*
     6-water   SM6-become_warm-ILE

    'The water got warm.'

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7 Although we argue below that all *-ile* forms in isiNdebele, regardless of imbrication, can be glossed as Perfective (with the important caveat that the true functions of "Perfective" aspect in isiNdebele are still under investigation), we gloss the *-ile* morphemes in this section as ILE and ILE.IMBR, for the non-imbricated and imbricated morphemes, respectively, for expository convenience. The "short", conjoint form of *-ile* is glossed ILE.CJ in this section.

(6b) *Ama-nzi   a-futhumele.*
     6-water   sm6-become_warm.ile.imbr

     'The water is warm.'

(6) shows the contrast between the non-imbricated ending (6a) and the imbricated ending (6b) with the stem -*futhumala* 'to get warm'. As predicted under Botne and Kershner's model, the default interpretations are of a change of state in the non-imbricated form, and a current state in the imbricated form. A similar effect is seen in (7), where (7b), the non-imbricated form, was judged as infelicitous in the context given.

(7) Context (from a narrative-based elicitation plan; see Louie (2015) for details on this methodology):
     My son has locked himself into a bathroom of a guest house with a skeleton key and can't turn it to get back out. The owner tries to call her friends in town to assist, but they're unable to come.

   a. *#Boke   ba-hlangan-ile.*
      2.all   sm2-come_together-ile

      '#They have all met.' (infelicitous in this context)

      Speaker comment: "That sounds like they've met and finished their meeting."

   b. *Boke   ba-hlangene.*
      2.all   sm2-come_together.ile.imbr

      'They're all in a meeting.'(felicitous in this context)

Interpretations of intensive forms show the same pattern, as seen in (8). Unlike most isiNdebele utterances, intensive forms do not exhibit phrase-final penultimate lengthening, and they occur in the conjoint form without any following constituents. See Section 3.2 for more details on the conjoint/disjoint distinction in isiNdebele and other Nguni languages.

(8a) *Ngi-khathal-e!*
     1sg.sm-become_tired.ile.cj

     'I got so tired!'

(8b) *Ngi-khathele!*
     1sg.sm-become_tired.ile.imbr

     'I'm so tired!'

However, deeper investigations show that the interaction of imbrication and aspectual interpretation in isiNdebele is not so straightforward. Recall that, according to Botne and Kershner (2000: 168), in Zulu, "[t]he -*il.e* [non-imbricating] form cannot have the stative present reading (thus, -*khathal-il.e* cannot be interpreted as 'is tired'), nor can the -*i…e* [imbricating] form be interpreted as recent past (thus, -*khathe:-l-e* cannot be 'got tired')." In isiNdebele, while these are often the default interpretations (see (6)–(8) above), the other interpretations are at least possible in many cases. For example, (9) shows an imbricated form, together with the alterative phasal polarity prefix *se-* (meaning roughly 'now, as opposed to previously', or 'already'), and a past eventive reading.

(9) *Se-ba-hlangene*   *manje*   *ekuseni.*
    ALT-SM2-come_together.ILE.IMBR   now   in.the.morning

    'They('ve) already met this morning.'

A similar example, given in (10), comes from the isiNdebele Bible (2012).

(10) *Ngambala*   *u-Herode*   *no-Pontiyasi*   *Pilatu*   ***ba-hlangene***
     indeed   1A-Herod   COM.1A-Pontius   Pilate   **SM2-come_together.ILE.IMBR**

     'Indeed, Herod and Pontius Pilate **met**

     nabezizwe   *naba-ntu*   *ba-kwa-Israyel*   *emzini*   *lo* […].
     COM.nations   COM.2-person   2A-1A.CON-Israel   LOC.3.town.LOC   DEM

     together with the Gentiles and the people of Israel in this city […].' (NIV) (Acts 4:27a)[8]

Similarly, most non-imbricated forms can have present stative readings, as in (11), with the stem *-phakama*, defined in the isiNdebele dictionary (IsiNdebele Dictionary Unit 2006) as "1 stand up, rise up 2 get promoted 3 become well known 4 lose temper". (11a) gives a language consultant's initial translations of the isiNdebele sentence. (11b) shows that the imbricated form *uphakeme* has the same readings.

(11a) *U-Sipho*   *u-phakam-ile.*
      1A-Sipho   SM1-rise_up-ILE

      'Sipho is tall/gigantic.'

      'Sipho is standing.'

      'Sipho is prominent.'

      'Sipho is angry.'

(11b) *U-Sipho*   *u-phakeme.*
      1A-Sipho   SM1-rise_up-ILE.IMBR

      'Sipho is tall/gigantic.'

      'Sipho is standing.'

      'Sipho is prominent.'

      'Sipho is angry.'

Furthermore, many non-imbricated forms with *-ile* can co-occur with Persistive ("still") *-sa-*, which is generally only compatible in the Perfective aspect with verbs denoting resultant states (see Crane & Persohn 2019).

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8 Throughout this article, Bible examples are taken from the isiNdebele Bible *Ibhayibheli elicwengileko* (2012); English translations (with the authors' clarifying notes in square brackets) are taken from the New International Version Anglicised, which has the following copyright information: "Scripture quotations [marked NIV] taken from the Holy Bible, New International Version Anglicised Copyright © 1979, 1984, 2011 Biblica. Used by permission of Hodder & Stoughton Ltd, an Hachette UK company. All rights reserved. 'NIV' is a registered trademark of Biblica UK trademark number 1448790. Accessed online at <https://www.bible.com/versions/113>."

    The NIV was used as a source in first pass translations of the Bible into isiNdebele, along with other versions, before it was checked against original source languages and with a panel of isiNdebele speakers. Therefore – short of quoting the Greek and Hebrew texts – we take NIV translations as providing a reasonable English equivalent of the isiNdebele texts in most cases.

(12) *Ama-kosi   a-sa-hlangan-ile.*
6-chief   SM6-PER-come_together-ILE

'The chiefs are still meeting (in the meeting).'

'The chiefs are still together (united).'

Although the imbricated form *asahlangene* would be preferred in (12), the example is neither ungrammatical nor infelicitous, and the interpretation is clear. Further examples are seen in (13)–(14).

(13) *U-Sipho   u-sa-phakam-ile.*
1A-Sipho SM1-PER-rise_up-ILE

'Sipho is still angry / prominent / standing / gigantic …'

(14) *Ama-nzi   a-sa-futhumal-ile.*
6-water   SM6-PER-become_warm-ILE

'The water is still warm.'

Contrast the examples in (13)–(14) with the non-COS verbs in (15)–(17) which, without further context, are infelicitous with persistive *-sa-* in the Perfective aspect.

(15) *#U-Sipho   u-sa-cul-ile.*
1A-Sipho   SM1-PER-sing-ILE

~'#Sipho has still sung.'[9]

(16) *#U-Sipho   u-sa-gul-ile.*
1A-Sipho   SM1-PER-be_sick-ILE

~'#Sipho has still been sick.'

(17) *#U-Sipho   u-sa-dl-e   u-mengu.*
1A-Sipho   SM1-PER-eat-ILE.CJ 3-mango

~'#Sipho has still eaten a mango.'

These examples strongly suggest that non-imbricated forms in isiNdebele, in contrast to what has been reported for Zulu, can describe ongoing states. Examples (9)–(10) show that imbricated forms can also refer to state changes or completed states.

Importantly, with many verbs in isiNdebele, either the imbricated or the non-imbricated form is preferred for both kinds of meaning (i.e. state change and ongoing state). For most (but not all) verbs, the preferred form is the imbricated one. In such cases, speakers often commented that the less-preferred form sounded "more like Zulu", so this may be an important area of contrast between the two languages. For example, speakers rejected the form *-lal-ile* to mean 'fell asleep', although one speaker offered the translation 'he *did* sleep'. Instead, the imbricated form *-lele* is used with both stative and change-of-state meanings. Numerous other examples follow the same pattern: the imbricated form is preferred with both change-of-state and current state readings.

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9 The tilde (~) in the English examples indicates an attempted approximate translation, in cases where the isiNdebele form (whether felicitous or not) cannot easily be translated into meaningful English. The hash tag (#) indicates infelicity in either isiNdebele or in English.

(18) Context: My son is still locked in the bathroom, crying hysterically. We sing to him to help him calm down, and he falls asleep, exhausted from the trauma. He is still asleep when the firemen arrive, break the door, and rescue him.

    a. Context: What happened when you sang to Jack?
    U-lele.
    SM1-sleep.ILE.IMBR

    'He fell asleep.'

    b. Context: The firemen ask, "What is the boy doing?"
    U-lele.
    SM1-sleep.ILE.IMBR

    'He is sleeping / he is asleep.'

Even when the subject does not undergo a state change, imbricated forms are frequently preferred in the relevant phonological contexts, as with -*bulala* 'kill' (19).

(19) *U-Sipho u-bulele   i-nyoka.*
    1A-Sipho SM1-kill.ILE.IMBR   9-snake

    'Sipho (has) killed a snake.'

At least some speakers strongly prefer the form in (19) to the non-imbricated (conjoint) form *u-bulal-e inyoka* 'he (has) killed a snake'. Some consultants suggested that there may be generational differences, with younger speakers preferring the non-imbricated forms, but this tendency has not yet been verified. In any case, all speakers accept, and some prefer, the imbricated form in (19), and there is no indication that a resultant state relevant to the subject is invoked. Overall, it seems clear that isiNdebele morphophonology plays at least as important a role as semantics in determining the choice of imbricated vs. non-imbricated endings, and the semantic differences between the endings are not absolute.

In addition, preliminary evidence shows that post-verbal constituency also plays an important role in determining ongoing state vs. state change readings with -*ile*. Before presenting this data, we take a brief excursion to discuss the morphological and prosodic indicators of constituency in isiNdebele and other Nguni languages.

4.2 The conjoint/disjoint distinction, penultimate lengthening, and constituency in Nguni

A salient feature of Nguni languages (along with numerous other Bantu languages; see, e.g. van der Wal & Hyman 2017; van der Wal 2017; and other papers in that volume) is the distinction between so-called CONJOINT and DISJOINT morphological forms. In Nguni, conjoint forms indicate a shared constituency with the following sentence element (i.e. the verb and what follows are in the same *v*P), while the disjoint form indicates that any additional material is *v*P-external (see, e.g. Buell 2006; Zeller, Zerbian & Cook 2017).

In isiNdebele, present tense disjoint verb forms are marked with preverbal -*ya*-. Conjoint forms are unmarked. The contrast is shown in (20). As seen in the preferred translations of the examples in (20), which were volunteered by speakers, the conjoint/disjoint distinction, by indicating constituency, can also be used to express differences in focus, aspect, and mood. (20a,b) show that only the disjoint form can occur utterance finally. When followed by a lexical object, the disjoint form is only licit when the verb is marked with an object prefix, thus

extraposing the lexical object (20c–e). (20f) shows that the conjoint form cannot extrapose the lexical object, because the conjoint form cannot, in general, be phrase final.

(20a) *Ngi-**ya**-dl-a.*
1SG.SM-DJ-eat-FV

‘I eat. / I am eating.’

(20b) **Ngi-dl-a.*
1SG.SM-eat-FV

Intended: ‘I eat. / I am eating.’

(20c) *Ngi-dl-a   u-mengo.*
1SG.SM-eat-FV   3-mango

‘I am eating (the/a) mango. / I eat mango.’

(20d) **Ngi-**ya**-dl-a   u-mengo.*
1SG.SM-DJ-eat-FV 3-mango

Intended: ‘I am eating (the/a) mango. / I eat mango.’

(20e) *Ngi-**ya**-wu-dl-a   u-mengo.*
1SG.SM-DJ-OM3-eat-FV 3-mango

‘I *do* eat mango. / I *am* eating (the/a) mango. / I (can) eat mango.’ lit. ‘I eat it, (the) mango.’

(20f) **Ngi-wu-dl-a   u-mengo.*
1SG.SM-OM3-eat-FV   3-mango

Intended: ‘I am eating the mango (other interpretations, e.g. those in (20e), are also ruled out).’

Disjoint forms can be followed by other words, as long as they are not within the *v*P (Zeller, Zerbian & Cook 2017: 297 and references therein). An example from Zulu is given in (21), in which an adverbial form follows a conjoint (21a) and disjoint (21b) form, respectively. Example (21) is adapted from Buell (2006: 21; cited in Zeller, Zerbian & Cook 2017: 297–298).

(21) Zulu (S42, ISO 639-3: zul; Buell 2006: 21; cited in Zeller, Zerbian & Cook 2017: 297–298)

a. *Ba-dlal-a   phandle.*
SM2-play-FV   outside

‘They’re playing outside.’

Can answer a question like, “Where are they playing?”

b. *Ba-**ya**-dlal-a   phandle.*
SM2-DJ-play-FV   outside

‘They’re playing outside.’

Can answer a question like, “What are they doing outside?” (Zulu; note that *phandle* ‘outside’ cannot be in focus in this example.)

With *-ile* forms, the disjoint form is *-ile*, while the conjoint form is *-e* (without any imbrication effects). At least in isiNdebele, the co-occurrence restrictions pattern somewhat differently from those of the present tense, although the constituency effects appear to be the same. Specifically, while disjoint present *-ya-* forms cannot be followed by a direct object unless the

verb is marked with an object prefix, disjoint ("long") *-ile* forms can be followed by a direct object, with or without overt object marking on the verb itself (22c).[10] When the disjoint *-ile* forms are followed by a direct object, speakers typically interpret them as emphasizing the truth value of the utterance, as in 'X *did* happen'.

(22a)   *U-Sipho   u-tlol-**ile**.*
        1A-Sipho SM1-write-ILE.DJ

        'Sipho wrote.'

(22b)   *U-Sipho   u-tlol-e   i-ncwadi.*
        1A-Sipho SM1-write-ILE.CJ 9-book

        'Sipho wrote a book.'

(22c)   *U-Sipho   u-tlol-**ile**   i-ncwadi.*
        1A-Sipho SM1-write-ILE.DJ 9-book

        'Sipho did write a book.'

In addition to the overt morphological marking, disjoint forms are marked with some degree of penultimate lengthening, which – with a few exceptions; see, for example, (8) above – occurs at the right edge of prosodic phrases in isiNdebele and other Nguni languages, and which also correlates with special tone patterns (see Zeller, Zerbian & Cook 2017 and references therein). Zeller, Zerbian, and Cook show that in Zulu, verbal penultimate lengthening and tone can contrast *v*P-internal from *v*P-external material following the verb even in tenses that do not morphologically distinguish conjoint and disjoint forms.

Although the details of isiNdebele tone, prosody, and constituency are still under investigation, it is clear that the system is at least largely comparable to that of Zulu, and so we assume that penultimate lengthening of imbricated forms, in which the conjoint/disjoint distinction with *-ile* could otherwise be masked, also indicates lack of shared constituency with the post-verbal material. As will be seen in the next section, this distinction turns out to be important in the interpretation of imbricated *-ile* forms as targeting either a state change or an ongoing state.

4.3 Imbrication, penultimate lengthening, and the interpretation of COS verbs in isiNdebele

In Section 3.1, we demonstrated that the interpretation of *-ile* forms with isiNdebele COS verbs is not strictly determined by imbrication or lack thereof. In this section, we suggest that prosodically indicated constituency also plays a crucial role in the interpretation of *-ile* with COS verbs. The data in this section are somewhat preliminary – they were collected through work with a single speaker, although the trends were confirmed by a speaker of Sindebele, a related Nguni language – but they indicate both that constituency plays an important role in aspectual interpretation, and that the semantic and pragmatic effects merit a much closer look.

(23) shows four versions of the same sentence with *-ile* forms of *-phakama* 'rise up' (see also (11) above) and a specified point in time (*nasifikako* 'when we arrived').[11] In all cases, the

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10 Buell (2006: 10, fn. 1) notes that "[s]ome, but not all, speakers" of isiZulu accept long present-tense *-ya*-forms followed by a constituent, "with what appears to be an assertion of truth value", e.g. 's/he IS doing X'.
11 Situative forms like *nasifikako* 'when we arrive(d)' derive their past or non-past temporal interpretation from the temporal orientation of the main clause verb. With *-ile* forms, situative forms specify a past time, behaving similarly to the past adverbial *izolo* 'yesterday' in example (25) below.

temporal clause forces a state change reading; the difference between the utterances in (23) is in the interpretation of causality between the event depicted in the adverbial clause and the main clause event. This difference appears to be conditioned by constituency.

(23a) and (23b) both exhibit penultimate lengthening, indicating separate constituency from the following temporal adverbial clause. (23c,d) both show some degree of connection with the temporal adverbial; this is either a causal connection, with the imbricated form, or a temporal specification with the non-imbricated form (see also (23c) above). The length shown on (23c,d) indicates slight lengthening of the final vowel of the verb in these contexts. Such lengthening seems to be optional; instrumental studies are still underway (e.g. Schulz n.d.; Aunio, Crane & Kerbs n.d.; see also Zeller, Zerbian & Cook 2017: 296, footnote 3, and the referenced discussion in their Section 5).[12] Note in particular that even when the conjoint/disjoint distinction is only indicated by (non-)lengthening (23b,c), the effects persist.

(23a) Non-imbricated with penultimate lengthening (disjoint)

U-Sipho u-phakam-i:le   na-si-fik-a-ko.
1A-Sipho SM1-rise_up-ILE.DJ SIT-1PL.SM-arrive-FV-REL

'Sipho did {stand up / get angry / gain prominence} when we arrived.'

Speaker comment: There is a connection between our arrival and the situation, but our arrival is not necessarily the cause. If he gained prominence, it could be because of us: for example, he gained confidence after we arrived. Or if Sipho is accused of not being respectful, we could say, no, we saw this [respectful] behaviour: he did stand up when we arrived.

(23b) Imbricated with penultimate lengthening (disjoint)

U-Sipho u-phake:me   na-si-fik-a-ko.
1A-Sipho SM1-rise_up.ILE.IMBR.DJ SIT-1PL.SM-arrive-FV-REL

'Sipho did {stand up / get angry / #rise to prominence} when we arrived.'

Speaker comment: We arrived, then he got angry. Not necessarily because of our arrival.

(23c) Imbricated without penultimate lengthening (conjoint)

U-Sipho u-phakeme: na-si-fik-a-ko.
1A-Sipho SM1-rise_up.ILE.IMBR.CJ SIT-1PL.SM-arrive-FV-REL

'Sipho {stood up / got angry / rose to prominence} when we arrived.'

Speaker comment: What made him angry (or caused his rise to prominence) was our arrival.

(23d) Non-imbricated without penultimate lengthening (conjoint)

U-Sipho u-phakam-e: na-si-fik-a-ko.
1A-Sipho SM1-rise_up-ILE.CJ SIT-1PL.SM-arrive-FV-REL

'Sipho {stood up / got angry / rose to prominence} when we arrived.'

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12 In examples (23)–(26), we mark those imbricated forms with penultimate lengthening as disjoint, and those without lengthening as conjoint, although further study is needed to understand whether constituency and other effects are exactly the same with imbricated and non-imbricated forms. The difference between (23c) and (23d) suggests that there may indeed be some differences. Speaker comments are slightly paraphrased throughout (23) and in other examples.

Speaker comment: He got angry when we arrived, but not necessarily because of our arrival. [Similarly for standing up.] This sounds like someone asked, "When did this happen?" It tells more about the time. [With the meaning of 'rose to prominence', our arrival still seems to have some kind of causal connection in this example.]

The many semantic issues raised by the subtle differences in interpretation between the four examples in (23a–d) require further study. Crucially for this discussion, all four variants indicate that a change in state took place at the time indicated in the adverbial clause; none is restricted to a current state, as Botne & Kershner's (2000) model would predict if it applied strictly to isiNdebele.

Verbs without imbricated forms also show constituency effects with regard to whether the focus is on the current state (24a) or, for example, on the state change occurring at a particular time (24b) (with an interpretation similar to (23d) above).

(24a)   Penultimate lengthening (disjoint)

U-Sipho   u-dan-i:le   nje.
1A-Sipho   SM1-become_disappointed-ILE.DJ   now

'Sipho is disappointed now.'

(24b)   Without penultimate lengthening (conjoint)

U-Sipho   u-dan-e   nje.
1A-Sipho   SM1-become_disappointed-ILE.CJ   now

'Sipho just now became disappointed.'

As noted in Section 3.2, an adverbial located within the *v*P (24b) is interpreted as an answer to a question about the adverbial content itself; in the case of (24b), 'When did Sipho become disappointed?' (Future studies will investigate whether contexts can be constructed in which a conjoint form followed by a present temporal adverbial can indicate an ongoing state; tautological questions that target the ongoing state, such as 'When is Sipho disappointed?' (in the non-habitual reading), do not seem to be pragmatically licensed.) In contrast, the form in (24a) uses *nje* 'now' to give additional information, but not to describe the time of the 'becoming disappointed' event itself; it could be omitted without a major change in interpretation.

Further evidence for the role of conjoint/disjoint in interpretation can be seen in (25), with the imbricating root -*hlunama* 'become sad'. At first glance, (25a,b), the non-imbricated form, would seem to indicate a past state change, while the imbricated form indicates a current state, as would be predicted under the two-*ile* analysis. However, (25c), which has at least roughly the same interpretation as (25b), shows that it is not primarily (non-)imbrication that plays a role, but rather the constituency and focus differences seen in the conjoint/disjoint distinction. Note that the difference in temporal frames between the extraposed adverbials leads to opposite interpretations of (24a) 'is now disappointed' and (25a) 'became sad yesterday [and is no longer sad]', despite their identical tense/aspect morphology.

(25a)   Non-imbricated with penultimate lengthening (disjoint)

U-Sipho   u-hlunam-i:le   izolo.
1A-Sipho   SM1-become_sad-ILE.DJ   yesterday

'Sipho did become sad yesterday.'

Speaker comment: It's more like he's not sad anymore, but at a particular point yesterday he became sad.

(25b)   Imbricated without penultimate lengthening (conjoint)

U-Sipho   u-hluneme   izolo.
1A-Sipho SM1-become_sad.ILE.IMBR.CJ yesterday

'Sipho has been sad since yesterday.'

(25c)   Non-imbricated without penultimate lengthening (conjoint)

U-Sipho   u-hlunam-e   izolo.
1A-Sipho SM1-become_sad-ILE.CJ yesterday

'Sipho has been sad since yesterday.'

Similarly, the non-imbricated and imbricated (disjoint) forms of *-luphala* 'grow old; age' with penultimate lengthening have the same meaning (26a,b), in opposition to the non-lengthened form (26c). Again, the distinction is not between imbricated and non-imbricated forms, but rather between conjoint and disjoint forms. Note that the imbricated form is preferred in all cases; it is also shown phrase finally in (26d).

(26a)   Non-imbricated with penultimate lengthening (disjoint)

?U-Sipho u-luphal-i:le   u-mnyaka   o-phel-ile-ko.
1A-Sipho SM1-grow_old-ILE.DJ 3-year   SM3.REL-end-PFV-REL

'Sipho got (/did get) old last year.'

Speaker comment: Only if he rejuvenated. (NB: The non-imbricated form is less preferred overall than the imbricated form in (26b) in terms of morphology, although both forms are of questionable felicity in this context.)

(26b)   Imbricated with penultimate lengthening (disjoint)

?U-Sipho u-luphe:le   u-mnyaka   o-phel-ile-ko.
1A-Sipho SM1-grow_old.ILE.IMBR.DJ 3-year   SM3.REL-end-PFV-REL

'Sipho got (/did get) old last year.'

Speaker comment: Only if he rejuvenated.

(26c)   Imbricated without penultimate lengthening (conjoint)

#U-Sipho u-luphele   u-mnyaka   o-phel-ile-ko.
1A-Sipho SM1-grow_old.ILE.IMBR.CJ 3-year   SM3.REL-end-PFV-REL

Intended: 'Sipho got old last year.'

Speaker comment: It should be *uthome ukuluphala* 'he started to get old', because it is a continuing process.

(26d)   Imbricated with penultimate lengthening (phrase finally, disjoint)

U-Sipho   u-luphe:le.
1A-Sipho SM1-grow_old.ILE.IMBR.DJ

'Sipho is/got old.' (default reading: 'Sipho is old.')

It is not surprising that constituency would play a role in aspectual interpretation; indeed, this interplay is already seen with the conjoint and disjoint present forms in (20). We hope this

section makes it clear that constituency effects deserve a closer look in the interpretation of (non-)imbricated *-ile* forms in isiNdebele, as well.

5. UNAMBIGUOUS STATE CHANGE EXPRESSIONS IN ISINDEBELE

In addition to the data showing the ambiguity of *-ile* forms, it should be pointed out that in isiNdebele literature, and probably in much natural discourse, *-ile* forms are seldom needed to indicate changes of state in isiNdebele. Instead, state changes are usually indicated using a form frequently described as CONSECUTIVE or NARRATIVE morphology (27), while *-ile* forms, imbricated or otherwise, seem to refer mainly to ongoing states when used with state change verbs (28).

(27) *Kuthe   ba-sa-thay-a   njalo   u-Jesu   **wa-lal-a**.*
      DM   SM2-PER-float-FV that_way(ADV) 1A-Jesus   SM1.CSC-sleep-FV

      'As they sailed, he [Jesus] **fell asleep**.' (Luke 8:23)

(28) *...wa-thi: "Phum-a=ni   noke!   Um-ntazana*
      SM1.CSC-say   go_out-FV.IMP=2PL.IMP   2PL.all 1-girl

      '...he said, "Go away. The girl

      *a-ka-ka-f-i,   **u-lele**."*
      NEG-SM1-NEG.PST-die-FV.NEG   SM1-sleep.ILE.IMBR.DJ

      is not dead but **asleep**."' (Matthew 9:24a)

Even outside of narrative contexts, a narrative-like form is available that targets the state change, as shown in (29). This form can point to state changes even in verbs for which it is very difficult to get state change readings with *-ile*, such as *-lamba* 'get hungry'. The form consists of an aspectual prefix *fe-* 'come to the point of' – tentatively glossed as "inceptive" but requiring further investigation – followed by consecutive morphology. Roughly speaking, *fe-* seems to be a perfective aspectual selector that targets a moment of change, so that it describes changes into states (for both COS states and non-COS states) (29a–c), or, for non-states, coming to the moment for their occurrence (29d).

(29a) *U-Sipho fe-wa-dan-a*   (*izolo*).
       1A-Sipho INC-SM1.CSC-become_disappointed-FV   yesterday

       'Sipho got disappointed (yesterday).'

(29b) *U-Sipho   fe-wa-gul-a.*
       1A-Sipho INC-SM1.CSC-be_sick-FV

       'Sipho became sick.'

       Speaker comment: The greatest possibility is that he became better.

(29c) *I-komo fe-ya-non-a.*
       9-cow   INC-SM9.CSC-become_fat-FV

       'A/the cow became fat.'

(29d) *U-Sipho* *fe-wakh-a*   *i-ndlu.*
       1A-Sipho INC-SM1.CSC.build-FV 9-house

'Sipho built [came to the moment of building] a house.'

Speaker comment: He built the house. It's complete. The moment came for him to build a house (the whole thing) so he built it. [NB: The completion implicature can be cancelled.]

The *fe-* prefix may be a grammaticalization of the conjoint Perfective form of *-fika* 'arrive', that is, *-fike* (30).

(30) *U-Sipho* *u-fik-e*   *wakh-a*   *i-ndlu.*
      1A-Sipho SM1-arrive-PFV SM1.CSC.build-FV 9-house

'Sipho came [arrived] and built a house.'

These forms seem most felicitous when a point in time is already introduced in the discourse. So far, only one verb has been judged as infelicitous, with the marker (*-khula* 'grow'), but *fe-* has only been tested with a relatively small set of verbs and needs further study. In any case, it is clear that isiNdebele has a number of resources that it can exploit to express the point of change into a state, and two distinct forms of *-ile* are not necessarily needed for this purpose.

6. DEVELOPMENT OF *-ILE* READINGS IN ISINDEBELE AND ZULU

Based on the data presented here, it seems reasonable to posit that in isiNdebele, in contrast with what has been described by multiple scholars for Zulu, the current state/past state change distinction may, at least in part, be an epiphenomenon of the effects of constituency with disjoint vs. conjoint forms. Especially with the present adverbial (*ma*)*nje* 'now', the relationship between constituency and state change vs. present state interpretations comes into focus. The same effects are seen in non-imbricated forms as in imbricated forms. Example (31) shows the four-way contrast, with imbricated and non-imbricated forms in both disjoint and conjoint contexts. Although the state is at least implicated to hold in all examples, conjoint forms highlight a change that occurred in the immediate past, while disjoint forms describe a present state.

(31a) Imbricated with penultimate lengthening (disjoint)

       U-Sipho *u-hlune:me*   *nje.*
       1A-Sipho SM1-become_sad-ILE.IMBR.DJ now

       'Sipho is sad now.'

(31b) Non-imbricated with penultimate lengthening (disjoint)

       U-Sipho *u-hlunam-i:le*   *nje.*
       1A-Sipho SM1-become_sad-ILE.DJ now

       'Sipho is sad now.'

(31c) Imbricated without penultimate lengthening (conjoint)

       U-Sipho *u-hluneme*   *nje.*
       1A-Sipho SM1-become_sad.ILE.IMBR.CJ now

       'Sipho just now became sad.'

(31d)   Non-imbricated without penultimate lengthening (conjoint)

U-Sipho   u-hlunam-e   nje.
1A-Sipho   SM1-become_sad-ILE.CJ now

'Sipho just now became sad.'

Interestingly, as seen in the previous section, the present state implicature is reversed with past adverbials, but constituency effects are also explanatory: the disjoint form answers a question like, "What happened yesterday?", where the answer asserts that a state change occurred in the past, with the adverbial giving additional (and possibly old) information about the time of the change. The conjoint form, in contrast, can answer the question, "When did this state change occur?" Differences in interpretation between temporal adverbials that appear to share constituency (conjoint forms) and those that do not share constituency (disjoint forms) are summarized in Table 1, with references to relevant examples from Section 4.3.

Table 1 Interpretations with temporal adverbials based on constituency effects

Constituency	Temporal adverbials	Functions	Examples
Shared constituency with temporal adverbials (conjoint)	Past adverbials e.g. *izolo* 'yesterday'	(i) target the time of the state change (state often understood as still holding)	IMBR: (23d), (25b) NON-IMBR: (25c)
		(ii) highlight a causal relationship between temporal information and the state change	IMBR: (23c), (26b) NON-IMBR: (26a), one interpretation of (23d)
	Present adverbial (*ma*)*nje* 'now'	Describe a change in the immediate past ('just now')	IMBR: (31c) NON-IMBR: (31d), (24b)
Non-shared constituency: temporal adverbials extraposed (disjoint)	Past adverbials e.g. *izolo* 'yesterday'	Give additional information about the time of change, without a necessarily causal relationship (state often understood as no longer holding)	IMBR (23a) NON-IMBR: (23b), (25a)
	Present adverbial (*ma*)*nje* 'now'	Assert that a state holds at utterance time	IMBR: (31a) NON-IMBR: (31b), (24a)

We further suggest that the distinction between imbricated and non-imbricated forms, with non-imbricated forms lacking a current state reading in the default interpretation, may stem from a Gricean implicature. An example is given in (32), repeated from (6).

(32a)   *Ama-nzi   a-futhumal-ile.*
            6-water   SM6-become_warm-ILE

           'The water got warm.'

(32b)   *Ama-nzi   a-futhumele.*
            6-water   SM6-become_warm.ILE.IMBR

           'The water is warm.'

If imbricated forms are generally preferred, as they are with many verbs in isiNdebele, the use of a special, non-imbricated *-ile* form indicates separate constituency and therefore focus on the verb and the state change itself. This may lead to the implicature that the state no longer holds at

the time of the utterance's evaluation. Non-imbricated conjoint forms are similarly "marked" (i.e. less expected) when used with verbs that are usually imbricated, and may therefore also receive a marked interpretation, that is, state change rather than current state. Importantly, as also shown in Table 1 and throughout the paper, there is by no means a restrictive system in which imbricated forms must be interpreted as current state, while non-imbricated forms are restricted to state change meanings. Instead, there is flexibility of interpretation with both kinds of forms.

Based on data reported for Zulu and data collected for isiNdebele, we can tentatively posit two different pathways of development. In Zulu, imbricating and non-imbricating forms came to be interpreted as maximally distinct, encoding two different aspectual meanings, as proposed by Botne and Kershner (2000). That is, semantic interpretations seem to have been regularized to match morphological differences: where both an imbricated form and a non-imbricated form are available, the imbricated form indicates a current state, and the non-imbricated form a past state change.

In isiNdebele, in contrast, while such a distinction is also evident, it is subordinate to other factors, such as distinctions in verbal constituency. In isiNdebele, then, it is not easy to make a case for two separate lexical items for *-ile*, one imbricating and the other not. Rather, we argue, both imbricated and non-imbricated forms mark Perfective aspect in isiNdebele, with many complex factors influencing their interpretations. In isiNdebele, over the course of the grammatical, semantic, and pragmatic development of the *-ile* marker, there was quite possibly a historical regularization of interpretations of imbricated vs. non-imbricated forms of *-ile* with COS verbs. However, as the two *-ile* markers continued to interact with other factors – prosody and the corresponding interpretations of (non-)constituency, the availability of other forms that more clearly denote state changes, and a growing preference for imbricated forms over non-imbricated forms – the differences between imbricating and non-imbricating *-ile* may have become irregular once again.

7. CONCLUSION AND DIRECTIONS FOR FUTURE STUDY

Sasse (2002: 263) notes that a number of factors – including, among other things, lexical and grammatical aspect, quantification, phasal aspectual markers, and thematic roles – determine the ultimate aspectual interpretation of a sentence. It should therefore not be surprising that the interpretation of isiNdebele COS verbs with Perfective *-ile* is also dependent upon multiple conditions.

The interpretive framework in isiNdebele (and in other Nguni languages) is probably extremely complex, not least because of the multilingualism of virtually all speakers of isiNdebele and their regular exposure to languages such as Zulu, in which the distinction may be understood differently. Both languages, but especially Zulu, are spoken across wide areas of South Africa, and there may well be additional dialectal differences that are not captured in grammatical descriptions; urban varieties, for example, generally exhibit numerous divergences from the varieties spoken in areas that are (or are at least perceived to be) more linguistically homogeneous. Such diverse linguistic communities, and their intense contact, probably allow for repeated processes of regularization, reanalysis, complexification, and even (inter)subjectification, such as those proposed in this article.

We hope that this study will spur further research into the interplay of imbrication and the conjoint/disjoint distinction in the semantics of verbs denoting state change in Nguni and other Bantu languages with morphological conjoint/disjoint distinctions. Such research promises a better understanding of how complex lexical and grammatical factors interact as languages

develop and change. A broader picture of interpretive patterns across South African Bantu languages will further allow for important insights into how similar languages, spoken in heavy contact, can interact and stimulate (or inhibit) morphological, semantic, and information structural changes.

ABBREVIATIONS

~	an attempted approximate translation		
#	indicates infelicity in either isiNdebele or in English		
1(A)	noun class 1(A)	INC	inceptive
2	noun class 2	INF	infinitive
ALT	alterative	INTENS	intensifier
ADV	adverb	LOC	locative
CJ	conjoint	NEG	negative
COMPL	completive	OM	object marker
COM	comitative	PL	plural
CON	connective	PFV	perfective
CSC	consecutive	PER	persistive
DEM	demonstrative	PST	past
DJ	disjoint	REL	relativizer
FV	final vowel	SG	singular
IMBR	imbricated	SM	subject marker
IMP	imperative	SIT	situative

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