Resolving hiatus in (isi)Ndebele: An optimality theoretic account

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ABSTRACT

Vowel hiatus is a dispreferred phenomenon in many languages. When vowel sequences arise through morphophonological concatenations in (isi)Ndebele, hiatus may be resolved in one of three processes: (i) one of the two vowels undergoes elision; (ii) one of the vowels (mostly the first vowel in the sequence) undergoes glide formation; and (iii) the two vowels undergo vowel coalescence — the merging of the two vowels into a neutral vowel that has the qualities of both the two initial vowels straddling a word boundary. This article examines these vowel hiatus resolution strategies in (isi)Ndebele, through the theoretical explications of Optimality Theory (OT) and CV Phonology. In (isi)Ndebele, the featural qualities of the two vowels straddling a word boundary and the morphological contexts at which the hiatal configurations occur determine what process repairs vowel hiatus. Hiatus resolution is also invariably ONSET and feature driven: driven by Preferred Syllable Structure Rules(PSSRs) and constraints.

1. Introduction — a brief history of (isi)Ndebele

The term 'Ndebele' has come to be used to refer to both the language and the people who speak it. Ndebele (also often referred to as isiNdebele) is a Southern Bantu language belonging to the Nguni cluster (Zone S40 in Guthrie's (1948) classification of Bantu languages). The cluster includes other languages such as Zulu, Xhosa, Transvaal Ndebele (often referred to as South African Ndebele) all spoken in South Africa, as well as Swazi/SiSwati, spoken in Swaziland and South Africa (Hadebe, 2002, 2006). In this study however, the term '(isi)Ndebele' is used to refer to the Zimbabwean variety of the language and the South African variety, if made reference to, shall be referred to as South African Ndebele. In Zimbabwe, the Ndebele language is largely spoken in the western as well as southern parts of the country. Hadebe (2002, 2006) and Cope (1993) postulate that the history of the language and its people dates back to the period around 1820 when the people who are currently referred to as the 'Zimbabwean Ndebele' broke away from the then powerful Zulu kingdom (presently the KwaZulu-Natal province of South Africa).

Hadebe (2006) posits that the initial breakaway group was provisionally referred to as the Khumalos because their then leader, Mzilikazi, was a descendent of the Khumalo clan. Around 1837, the breakaway group allegedly entered what is currently Zimbabwe and settled in the western and southern parts of the country known in contemporary Zimbabwe as the Matebelel and Province. Viewed as just a dialect of Zulu, (isi)Ndebele for a long time was largely neglected in the areas of research in favour of Zulu. This however, does not come as a surprise especially considering that the present day Ndebele speaking people of Zimbabwe and the Zulu speaking people of South Africa share a lot, that is, almost the same languages (since their languages are mutually intelligible), some common historical experiences and various cultural practices and beliefs (Cope, 1993: Hadebe, 2006). Interesting to note however, is that despite the Ndebele people and the Ndebele language having evolved independently of the other Nguni dialects, research has indicated that most people of Ndebele descent still identify themselves with Zulu history, culture and language.

2. (Isi)Ndebele vowel and syllable structure

(Isi)Ndebele, like many other Bantu languages is a five vowel phoneme system. There are no underlying long vowels in the language and neither are there long vowels that occur as a result of

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phonological processes such as elision and coalescence and/or other phonetic processes. Unlike in most Bantu languages, in (isi) Ndebele, there is no compensatory lengthening of vowels in either the Underlying Representations (URs) and/or the Phonetic Representations (PRs) resulting from attempts to preserve V-slots after phonological processes of deletion or merger (coalescence) of juxtaposed vowels. There are also no diphthongs in (isi)Ndebele. The low vowel [*a*] in (isi)Ndebele seems to match the cardinal vowel, the low central/a/. The qualities of the vowels [*e*] and [*o*] in (isi)Ndebele appear to match cardinal vowels 3 and 6 ([ɛ] and [ɔ]) respectively, fairly closely, rather than numbers 2 and 7 ([e] and [o]) respectively, in most environments. The mid front vowel [e] and the mid back vowel [o] are thus also articulated lower than their cardinal vowel equivalents, vowels 2 and 7 and articulated lower than those of other Bantu languages. The distinctive features of these vowels are represented in Table 1 below. The features diagram also supplies redundant values.

The basic syllable structure in (isi)Ndebele is the canonical CV structure. It however can be argued that the basic structure could also be the V(CV) structure in light of the fact that most nouns in the language begin in a vowel since the language utilises the IV (Initial Vowel) or pre-prefix as part of both is phonetic and orthographic inventories. This IV is the one whose existence we can argue to be diachronically responsible for triggering coalescence.

(1) *V(CV) structure*

    a) a.kha   'build'

    b) e.nza   'do'

    c) i.nja   'dog'

    d) o.ma   'get dry/get thirsty'

    e) u.ba.ba   'father'

(2) *CV structure*

    a) ma.ma   'mother'

    b) we.na   'you'

    c) mi.na   'me'

    d) lo.khu   'this'

    e) dhlu.la   'to pass by'

3. Glide formation as hiatus resolution strategy in (isi) Ndebele

Glide formation is a major hiatus resolution strategy in (isi) Ndebele. The most commonest example of contexts in which such a process occurs is when the high vowel [u] of the infinitive prefix/ uku-/'to' in Ndebele juxtaposed with vowel commencing verbal forms undergoes glide formation. In these contexts however, the high vowel [u] undergoes glide formation when juxtaposed with all other vowels save the mid − back vowel [o], in which case elision takes place (See example 9). Glide formation in (isi)Ndebele does not result in a compensatorily lengthened resultant vowel. The glide formation in (isi)Ndebele is morphophonemic change − a process which is in line with the [u→w/-back vowel] rule.

The rule that governs gliding in (isi)Ndebele as is the case with

Table 1
(Isi)Ndebele vowel features.

	i	e	a	o	u
Back	−	−	−	+	+
High	+	−	−	−	+
Low	−	−	+	−	−
Round	−	−	−	+	+

most Bantu languages is that a [+high, −low] vowel loses a mora (or glides) before another vowel. The second vowel in the sequence can be low, mid or high (but not back). Such a process is schematized as in (3) below:

(3) *Gliding of high vowels in Ndebele*

= [-cons, -low] [-cons]
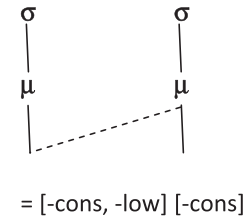
I argue here that this process is triggered by language internal phonological and/or morphophonological constraints that disprefer the surfacing of vowel sequences in the PRs of the language. Let us consider the following examples in (5). In the examples we can note that in (isi)Ndebele glide formation does not result in long surface vowels. This is in 'disregard' for place maintenance (in this regard vowel places) and thus in violation of the constraints MAX-V and MAX-IO.

(4) MAX-V: All vowel segments in the input should have corresponding segments in the output. (Mkochi, 2007; Sabao, 2013)
MAX-IO: All segments in the input should have corresponding segments in the output (Rosenthall, 1997).

(5)

a) uk**u**- **a**zi   [ukwazi]   /u$_1$#a$_2$/→ [w$_1$a$_2$] 'to know'
    inf- know

b) uk**u**- **a**kha   [ukwakha]   /u$_1$#a$_2$/→ [w$_1$a$_2$] 'to build'
    inf- build

c) uk**u**- **a**la   [ukwala]   /u$_1$#a$_2$/→ [w$_1$a$_2$] 'to refuse'
    inf- refuse

d) uk**u**- **e**sula   [ukwesula]   /u$_1$#u$_2$/→ [w$_1$e$_2$] 'to wipe/rub'
    inf- wipe/rub

e) uk**u**- **e**nza   [ukwenza]   /u$_1$#e$_2$/→ [w$_1$e$_2$] 'to do'
    inf- do

This kind of glide formation in which the high vowel [u] turns into a glide [w] in the face of all the other vowels except the mid back vowel [o] can also be schematized as in (6) below: