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The canar-yi in the coal mine: The loss of yi in Zulu reduplication

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Abstract: This paper describes the loss of **-yi-** in Zulu reduplication and suggests a possible connection between the loss of **-yi-** and the potential for obsolescence of reduplication. The data presented are collected from 79 speakers, and clearly demonstrate the loss of **-yi-** is stratified along sociolinguistic lines. The absence of **-yi-** in reduplication is categorical among urban speakers, while it is beginning to be lost among younger rural speakers. Furthermore, some urban speakers are wholly unfamiliar with reduplication, exhibiting no knowledge of the process as a morphophonological phenomenon, nor with the semantic change it effects on the verb. While Zulu is far from being an endangered language, it is unsurprising that urban and rural varieties should show structural differences, and the phenomenon discussed here constitutes one such example.

Keywords: Bantu; sociolinguistics; morphology

ngesiZulu: Leliphepha likhuluma ngomahluko phakathi kwesiZulu sasedolobheni nesiZulu sasemakhaya ekusebenziseni impambosi yokwenzayenza (ukuphindaphinda). NgesiZulu sasemakhaya, kusasetshenziswa u“-yi-” ukuphindaphinda izenzo ezineziqu ezinohlamvu olulodwa, njengo -dla no -fa. Abadala basebenzisa u“-yi-” ukuphindaphinda kunabasha. Ukuphindaphinda, abasha basemakhaya basebensiza “-yi-” kancane kunabadala. Abanye abahlala emadolobheni abazi nhlobo ngokuphindaphinda. Loluhlobo lwesimo soshintsho lubizwa ngokuthi ushintsho olusaqhubekayo.

1 Introduction

Extensive work has been conducted on urban varieties of indigenous South African languages. In the multi-lingual Gauteng province with the bustling Johannesburg metropolis, Tsostsitaal, Flaaital and Iscamtho are codes that rely heavily on language mixing, drawing on Afrikaans, Zulu, Sotho, and English (Childs 1997; Ntshangase

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1995; Slabbert and Finlayson 2002). While the multilingualism of Gauteng is virtually absent in the KwaZulu-Natal province (KZN), where principally Zulu and English are spoken (along with small pockets of Afrikaans), the city of Durban and its surrounding townships present an urban environment that puts different sociolinguistic questions into play.

Contrasting with the relative linguistic homogeneity of KZN's rural areas, Durban, and the surrounding Zulu townships like Umlazi and KwaMashu are populated by residents who switch comfortably between Zulu and English. Consequently, much of the work on the urban Zulu spoken in and around Durban has focused on the interplay between Zulu and English, such as code-switching (de Kadt 2005; Zungu 1998), language attitudes (Rudwick and Parmegiani 2013; Rudwick 2008a, 2008b), and the potential issue of language shift (Kamwangamalu 2003; Posel and Zeller 2016; Posel et al. 2020). Some notable exceptions to this trend include the work of Cassimjee and Kisseberth 2001; Downing 2001b; Zeller et al. 2017, on the tonal domains of urban Zulu, work by Zungu and Barnes (1997) on its lexical features, and semantic change (Mathonsi 1999). As pointed out for Zimbabwe by Makoni et al. (2007), the notion of "pure" African languages is a product of colonialism, and the urban codes (e.g. Town Bemba, urban vernaculars in Zimbabwe, Tsotsitaal) that are seen to be "endangering" the pure rural varieties are in fact sites of transcendence of essentialist (and often arbitrary) colonial ethnolinguistic divisions.

Indeed, in KwaZulu-Natal, the push-and-pull is not just between Zulu and English; urban Zulu, sometimes called **isiTsotsi** (a slang register named for **utsotsi** 'a petty criminal') or **isiZulu sasedolobheni** 'Zulu of the city' is not merely **isiZulu esijulile** 'deep Zulu' mixed with English (Rudwick 2005). Although facility with English and code-switching are common among speakers of urban Zulu, there are structural differences between the two varieties of Zulu as well. As fieldwork undertaken between 2010 and 2015 reveals, one difference between urban and rural varieties of the language is the absence of the augmentative syllable **-yi-** (also called a "stabilizer") in reduplication among urban speakers, and among younger rural speakers. Moreover, some urban speakers are unfamiliar with reduplication at all as a productive process in the language.

Speakers' attitudes on reduplication on the whole reveal that this process is considered "old-fashioned" and a feature not merely of deep Zulu, but of its oldest and most conservative rural speakers (similar to what is discussed in Childs' 1996 for Zulu ideophones). It may in fact be possible that the loss of **-yi-** in reduplication is a harbinger of the obsolescence of the construction entirely. Obsolescence is used to describe the loss of a grammatical construction from the repertoire of speakers of a language. Rudnicka defines it as: "A situation in which a previously popular and productive construction is, often gradually, losing its productivity and popularity over time until the construction disappears or there are only residues or fossilized forms left" (Rudnicka 2019: 4). In addition to this useful definition, Rudnicka identifies five hallmarks of a construction that is undergoing obsolescence:

1) "Negative correlation between time and frequency of use
2) Distributional fragmentation (restriction or particular (typically formal) genres)
3) Paradigmatic atrophy (can appear in fewer combinations)
4) Competition at construction(al) level
5) Evidence of high-order motivations like socio-cultural processes"

(Rudnicka 2021: 60)

In what follows, I show the loss of **-yi-** in reduplication in rural Zulu is a change in progresss, as is the loss of the construction entirely in urban Zulu (Section 7, Rudnicka's point (1)). For rural Zulu, the loss of the morpheme reduces the productivity of the process overall (Rudnicka's (3)). Furthermore, there is considerable speaker evaluation of the process as archaic and outmoded ((2) and (5)) which, taken together, potentially point toward the obsolescence of reduplication as a productive process in Zulu, in both its urban **and** rural varieties. To be clear, the primary aim of this paper is to demonstrate the present synchronic differences between reduplication in rural and urban varieties of Zulu, but I also offer a prognostication that the current state of affairs may portend an obsolescence of the construction overall.

2 An overview of reduplication in rural Zulu

In Zulu, reduplication consists of a disyllabic constituent prefixed to the verb stem, that is, there is a disyllabicity requirement exerted on the reduplicant. Reduplication in Zulu is described in Doke (1927: 1992) and Downing (2009), and the process in mutually intelligible Ndebele is discussed in Downing (2001a), Sibanda (2004), and Hyman et al. (2009). The meaning of reduplication is the familiar Bantu semantics of performing the action denoted by the verb hastily and/or without skill, or intermittently (the "over and over" iterative meaning does not characterize reduplication in Zulu). When the verb stem is minimally disyllabic (CVCV), the reduplicant (Red) begins with the first segment of the stem (1). However, this paper will focus on cases in which the stem is sub-minimal, with a prosodic shape of CV like **-dla** 'eat', **-ma** 'stand', **-fa** 'die', along with VCV examples like **-enza** 'do, make', **-akha** 'build', **-eba** 'steal'. In the examples below, which show reduplication of fully disyllabic CVCV or prosodically larger (non sub-minimal) stems, the Red+base complex is bracketed, with Red on the left and the base on the right (tone is unmarked). I have provided translations using the somewhat idiomatic expression "here and there" to signal that this may come closest to the meaning of reduplication, although a "perfect" translation into English may not be possible. Note that this meaning is not just expressed in the reduplicant itself, but rather in the full Red + base complex.

(1) a. **u-funda** 'you study' → **u-[funda+funda]** 'you study here and there'
2SG-study
b. **ngi-pheka** 'I cook' → **ngi-[phek-a+phek-a]** 'I cook here and there'
1SG-cook
c. **ba-sebenza** 'they work' → **ba-[sebe+sebenza]** 'they work here and there'
3PL-work

Figure 1 shows the breakdown of the Bantu verb complex; significantly, while other work on reduplication in Zulu and closely related languages argues that the process is required to pull on material exclusively from the Macrostem, the data presented here show that what matters is not "Macrostem or not" status, but instead being left adjacent to the stem. Morphemes that would go under the INFL node in Figure 1 reduplicate productively for many speakers (see the examples in (5), for instance).

This paper focuses primarily on sub-minimal stems, which are by definition, smaller than CVCV. In these cases, the "copy" of the stem that is the core of the reduplicant will need to be augmented somehow to satisfy the disyllabicity requirement exerted on RED. For a verb complex consisting solely of a subject marker and stem, a CV sub-minimal stem like **-dla** 'eat' will be augmented with the empty morpheme **-yi-** (2a–c). VCV sub-minimal stems like **-enza** 'do/make' will have an epenthesized **y**- to break up the hiatus between the final vowel of RED and the initial vowel of the base (2d, e).

(2) a. **u-dla** 'you eat' → **u-[dla-yi+dla]** 'you pick at your food'
2SG-eat
b. **si-mba** 'we dig' → **si-[mba-yi+mba]** 'we dig here and there'
1PL-dig

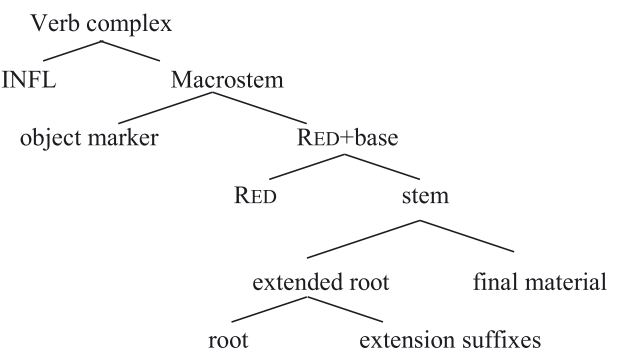

Figure 1: Morphosyntactic constituency/structure in the Zulu/Ndebele verb (from Downing 2001a: 35; Hyman and Mtenje 1999; Myers 1987).

c. **ba-ma** 'they stand' → **ba-[ma-yi+ma]** 'they stand here and there'
3PL-stand
d. **zi-enza** → **z-enza** 'they (cl.10) make' → **z-[enza+y-enza]**
'they make here and there'
SM10-make
e. **ngi-akha** → **ng-akha** 'I build' → **ng-[akha+y-akha]** 'I build here and there'
1SG-build

An important component of this paper is the discussion of speakers for whom **-yi-** is lost in reduplication. However, this **-yi-** augmentative morpheme (a 'dummy' morph) is present elsewhere in the grammar for all speakers, as a way of satisfying a disyllabic requirement that holds for the imperative. The imperative in Zulu is a bare verb stem and is subject to a disyllabic minimality requirement; for monosyllabic stems, disyllabicity is satisfied by prefixing **yi-**, as illustrated in (3). All speakers freely use **yi-** in forming the imperative of a monosyllabic verb, which appears as **y-** for VCV stems.

(3) a. **yi-dla** 'eat!' b. **yi-lwa** 'fight!' c. **yi-mba** 'dig!'
d. **y-eba** 'steal!' e. **y-ehla** 'get down!'

It is uncontroversial that this **yi-** is the "same" **-yi-** that is present in reduplication (albeit word-initially rather than word-internally), although in imperative formation it occurs to the left of the stem to form the unit that is subject to the minimality requirement, while in reduplication it is to the right (see Downing 2006 for a comprehensive review of this argumentation, focusing on Zulu and other closely related Southern Bantu Nguni languages).

For speakers who lack augmentative **-yi-** in reduplication, reduplications of the verb complexes in (2) are simply ineffable; this ineffability holds for both CV and VCV stems.[1] While the examples in (2) contain the minimum amount of morphological material – a subject marker and a verb stem – Zulu verb complexes often consist of more than just these two morphemes alone. A number of prefixal morphemes can occur between the subject marker and stem, and depending on a speaker's grammar of reduplication, these morphemes are allowed or disallowed from reduplicating when preceding sub-minimal stems (Cook 2013; Hyman et al. 2009).

1 Ineffability is also noted for Runyankore in the case of monosyllabic stems like **-sa** 'to grind' and **-ha** 'to give' (Poletto 1998: 194). Like Zulu (and many other Southern Bantu langugaes), an object marker is permitted to appear in RED, but no other prefixal morphemes may do so. Consequently, if a verb complex contains a monosyllabic stem without an object marker, reduplication is not possible – called 'reduplicative failure' in Poletto (1998: 194).

Hyman et al. (2009) show that for mutually intelligible Ndebele, the object marker (OM), which, if present, always occurs immediately to the left of the stem (shown in Figure 1), can be included in reduplications of sub-minimal stems (Hyman et al. 2009: 12, their ex. (31)). The reduplication including the OM is one strategy of reduplicating sub-minimal stems, as is the **-yi-** augmentation shown in (2) above. The examples in (2) are grammatical for what has been described for Ndebele, as well as for many *rural* Zulu speakers. Obviously for speakers who reject **-yi-** in reduplication, the examples containing **-yi-** are ungrammatical. The full range of which strategies of reduplication are available for which speakers is discussed further in Section (6). Note that for all speakers, when an object marker is used in the present tense, the disjoint of the verb is required which is distinguished by the presence of **ya-** (see Halpert 2012 for a syntactic analysis of the distribution of **ya-**).[2]

(4) a. **u-ya-zi-dla** 'you eat them (cl.10) → **u-ya-[zi-dla+zi-dla]** OR
2SG-LF.PRES-OM10-eat **u-ya-zi-[dla-yi+dla]**

b. **ngi-ya-si-mba** 'I dig it (cl.7)' → **ngi-ya-[si-mba+si-mba]** OR
1SG-LF.PRES-OM7-dig **ngi-ya-si-[mba-yi+mba]**

c. **si-ya-wa-pha** 'We give them (cl.6) → **si-ya-[wa-pha+wa-pha]** OR
1PL-LF.PRES-OM6-give **si-ya-wa-[pha-yi+pha]**

d. **u-ya-zi-enza → u-ya-z-enza** 'you make them (cl.10)' →
u-ya-[z-enza+z-enza] OR
2SG-LF.PRES-OM10-do **u-ya-[z-enza+y-enza]**

However, more recent data from Zulu (Cook 2013) show that the prefixal morphemes that can be included in RED are *not* limited to the object marker alone. Provided that an object marker is absent, morphemes like the long-form present marker **ya-**, durative **sa-**, and infinitival **ku-** are allowed to appear in RED as well for some speakers (5a–d, with **dii** showing hiatus resolution of two adjacent vowels). Crucially however, a syllabic (non-glided) subject marker is not allowed to reduplicate (5e):

(5) a. **u-ya-dla** 'you eat' → **u-[ya-dla+ya-dla]** OR
2SG-LF.PRES-eat **u-ya-[dla-yi+dla]**

b. **ba-ya-mba** 'they dig' → **ba-[ya-mba+ya-mba]** OR
3PL-LF.PRES-dig **ba-ya-[mba-yi+mba]**

2 For formatting concerns and to avoid redundancy in the paper, I do not provide translations of the reduplicated verb complexes going forward. It is assumed that the reader can apply the productive translation formula in (1) for the other verb complexes if they wish to do so.

c. i. **ni-sa-fa** 'you (pl.) still die' → **ni-[sa-fa+sa-fa]** OR
2PL-DUR-die **ni-sa-[fa-yi+fa]**
ii. **ni-s(a)-ehla** 'you (pl.) still descend → **ni-[s-ehla+sehla]** OR
2PL-DUR-descend **ni-s-[ehla+y-ehla]**

d. i. **u-ku-sha** 'to burn (inf.) → **u-[ku-sha+ku-sha]** OR
AUG-INF-burn **u-ku-[sha-yi+sha]**
ii. **u-ku-eba** 'to steal (inf.) → **u-[kw-eba+kw-eba]** OR
AUG-INF-steal **u-kw-[eba+y-eba]**

e. i. **ni-lwa** 'you (pl.) fight' → **ni-[lwa-yi+lwa]** ONLY
2PL-fight * **[ni-lwa+ni-lwa]**
ii. **n(i)-enza** 'you (pl.) do' → **n-[enza+y-enza]** ONLY
2PL-do * **[n-enza+n-enza]**

The examples of reduplication given in (2–5) should not be taken as a static description of reduplication in Zulu; they are instead intended to provide as general a picture as possible of patterns of reduplication attested for sub-minimal stems among rural speakers who allow for reduplications with **-yi-**.

3 Variation and diachrony in Bantu reduplication

In Hyman et al.'s work on Ndebele (2009), the authors present a remarkable number of possible reduplications for a single verb complex. Indeed, reduplication seems to be fertile ground for variation/optionality, with a single verb complex renderable as a reduplicated form in several different ways. Despite this variation, a common thread is that what is targeted in reduplication is the verb root (plus the default Bantu final verb vowel, **-a**) (Hyman 2009: 181), but if motivated by phonological concerns (aka sub-minimality), other morphemes may be called on if there are minimality requirements exerted upon RED; but note that this is only in cases where there is insufficient prosodic content within the root itself (Hyman 2009: 185). Necessarily, we find the most variation in the context of these sub-minimal stems because there is less prosodic material within the root itself, meaning that speakers must find a way to augment the root as a reduplicant.[3]

The potential means of augmentation vary by language ((Hyman 2009) for a detailed discussion), but there are different strategies for different speakers, and the claim here is that these strategies are subject to sociolinguistic stratification

3 Even beyond prosodic augmentation, Hyman (2022) finds the most variation in the realization of tone in reduplications of monosyllabic stems in Runyankore, and he notes their "exceptionality" (p. 71) for the range of tonal patterns they can bear relative to prosodically larger stems.

(not surprising, given what Labovian sociolinguistics has revealed about patterns of language use and language change). Hyman's (2009) work on the diachronic development of reduplication in Bantu considers various possibilities of what reduplication in Proto-Bantu may have looked like, namely, whether Proto-Bantu had full verbal reduplication which developed into partial reduplication, or partial into full. It is my firm opinion that synchronic variation and diachronic change are simply flip sides of the same coin (as in Ringe and Eska 2013, specifically Chapters 2 and 3). Although this opinion is not a controversial one, making this link explicit is sometimes overlooked.

Indeed, in Hyman's important 2009 paper, which is strongly diachronic in its orientation, we find hints at synchronic variation when we look for them. In discussing Odden's (1996) work on Kikerewe, in which Odden found both full and partial reduplication, Hyman writes "[Odden] has caught Kikerewe in transition" (p. 184). Later, he cites Horton's (1949) work on Luvale (in Zambia)/Lwena (in Angola) "[H]e [(Horton)] adds that speakers "now frequently" use innovative forms such as…" and Hyman's citing of Horton goes on to identify an "older variant" (p. 196). This description is an invitation to follow-up data collection, but unfortunately the later sources I found on reduplication in Luvale all pull their data exclusively from Horton, and I was unable to find any new data collected or published subsequent to the 1949 date of the original publication. Nevertheless, wording in this vein is strongly indicative of a change in progress (see Section 8), and although the sociolinguistic component is not Hyman's focus, it clearly remains present in his presentation of the data. There is even an offhand reference to the connection between variation and historical change (on whether reduplication went from full to partial or the other way around) when Hyman writes: "Since both structures are motivated, the diachronic implication is that either should be able to change into the other" (p. 196). And again, later, discussing a pattern in Bukusu reduplication, we find the phrase "suggesting that this may be an innovation" (p. 203).

While reduplication is certainly characterized (speaker-internally) by variation in a way that is not common across constructions, it is also true that this variation is not homogeneous, i.e., forms that are grammatical to some speakers are ungrammatical for others, and vice versa. In Hyman (2022: 58, fn 9) we find "One reviewer indicated that Runyankore speakers s/he consulted did not accept multiple reduplication, which indicates possible variation among speakers or groups." While the specific phenomenon at play in this quote is "multiple reduplication" (as in Mutaka and Hyman's well-known 1990 Kinande paper, where we find constructions like **e-rí-swa-swa**+**swa** (p. 86) in which the verb 'grind' is essentially reduplicated twice to satisfy the minimality requirement exerted on RED), the takeaway is that grammars of reduplication exhibit variation from speaker to speaker; exactly the topic of the present paper, and that this variation can lead to diachronic change. Furthermore,

despite the fact that the link between interspeaker and intraspeaker variation is not universally accepted, there is a valid school of variationist research that considers them as essentially the same phenomenon (Guy 2005).

4 Rationale for current study

This section discusses the dramatic social and demographic changes that have taken place in South Africa since the end of apartheid (in the last three decades), and the bearing they might have on how rural and urban varieties of Zulu interact. As alluded to in Section 2, there is little agreement among Zulu speakers about what constitutes a "correct" grammar of reduplication. Although the preceding section discusses reduplication as a rich source of variation across Bantu, it is also possible that the variation around reduplication in Zulu is a relatively new phenomenon. In Doke's well-known grammar of the language (1927), the only way of reduplicating sub-minimal stems is with the **-yi-** repair (p. 149); and this account *does* describe some speakers' current grammars of reduplication. More revealing in my estimation is Isaac Sibusiso Kubeka's (1979) exhaustive and meticulous account of variation in Zulu. In this work, a wide range of phonetic, phonological, lexical, morphological, and syntactic variables are described according to 6 dialect regions in the KZN province – but reduplication is notably absent from his analysis. Since Kubeka was a native speaker of Zulu and a formally trained linguist, I take the absence of reduplication from his work as an indication that variation in reduplication was not present when he was conducting his fieldwork, rather than an omission of a linguistically interesting variable. As his work, which is careful, extensive, and detailed, focuses on variation, I believe the omission of reduplication is not an oversight, but rather that, at the time of his research, an assertion that variation in reduplication was neither present nor something interesting for a variationist analysis.

The fieldwork for Kubeka's thesis was undertaken in the mid 1970s, in a South Africa dramatically different from the current sociopolitical landscape of the nation. Apartheid was the law of the land, which circumscribed the areas Black South Africans were allowed to live and work. Literal and figurative movement of Black South Africans was severely restricted by the Group Areas Act of 1950 and the notorious pass laws which followed, along with apartheid era policies that blocked access to education and opportunities for socioeconomic advancement. At the time of Kubeka's fieldwork, 30 % of the Black population of South Africa were urban dwellers, while the proportion had grown to 50 % by 2010 (Todes et al. 2010: 333). Although these numbers are not specific to KZN, roughly similar figures can be asserted of the province that held for the country as a whole (Pauw 2005). Of equal

importance to the ratio of urban-rural residents is the physical freedom of movement that accompanied the end of apartheid in 1994.

The so-called "circular migration" patterns (Cox et al. 2004; Posel and Casale 2003), in which males from rural households travel to urban areas to find work has been a salient feature of the South African economy since gold mines were established in Johannesburg in the late nineteenth century, a crucial step in the process of Western capitalist exploitation of South African natural resources. To the point, the Zulu word for the city of Johannesburg is **eGoli** '(the place of) gold'. The reasons for these migration patterns are well-documented and beyond the scope of this paper, but essentially, economic opportunity lies in the urban areas, but there is inadequate housing and employment opportunities are unreliable, which together encourage labor migrants to retain a connection to a household in rural areas (Posel and Hall 2021). Furthermore, the pension paid to older South Africans, along with remittances from younger family members, allows grandmothers to care for children while parents temporarily re-locate for work (Ardington et al. 2009). As Hall and Posel (2019: 3) point out, South Africa has the lowest proportion of children residing with both parents of all nations. A number of factors contribute to this figure, notably the HIV/AIDS crisis and the entrenched circular labor migration patterns, which are interrelated phenomena.

Under apartheid, the "center" of Zulu culture was in the tribal homelands, the "Bantustans" created by the apartheid government; sometimes these coincided with areas where Black South Africans were already settled, but upward of three million people were forcibly and coercively re-located (Evans 2017). While modern Zulu culture acknowledges the role of rural life in defining "Zulu-ness," Zulu life and culture has become strongly entrenched in urban areas too (Rudwick 2008b). It is rare to find a rural household without a male member who works in an urban center (though it is becoming increasingly common for women to be labor migrants (Hall and Posel 2019)), and it is equally rare to find an urban, non-itinerant resident without a connection to the rural areas. This traveling and movement of Zulu speakers necessitates a movement of the language that is qualitatively different from the language dynamics that were in place prior to 1994, the year when South Africa held its first elections in which citizens could vote regardless of their race.

Footholds established in urban areas prior to the end of apartheid were often precarious and unsustainable; "(m)ovements of people between rural and urban areas in South Africa became entrenched in the economic system through a series of state interventions to mobilize and control labor as well as a range of measures that made permanent urban settlement impossible for most migrants" (Posel 2006: 280). These labor migration patterns persist, but the proportion of Zulu speakers who live primarily in the urban areas has increased substantially (Pauw 2005), while the connections to rural areas still hold. Under apartheid, male workers were expressly

forbidden from bringing their spouses and families from the Bantustans into the urban areas (Posel 2006).

It is unremarkable to encounter people who travel with ease between the two worlds, the rural and the urban, and the literature reports different notions of linguistic prestige reigning in each area (corroborated by my own fieldwork). Slabbert and Finalyson (2002) discuss the dichotomy between deep and urban varieties, with 'deep' Zulu being characterized as pure and uncorrupted by contact with other languages (specifically English), but also associated with cultural conservatism and traditionalism. Urban varieties, on the other hand, which are heavily inflected by English borrowings and code-switching, are "spoken by the more affluent, modernized urban individuals…and are associated with affluence and higher socio-economic status" (p. 242). Based on these characterizations, it is unsurprising that urban Zulu should be a site of dynamic change, with a push-and-pull between forces of rural traditionalism on the one hand, and urban hybridism on the other. As Rudwick (2008b) notes, "Even in KZN, a province characterized by considerable homoegeneity in terms of its Black ethno-linguistic landscape… strong identification with Zulu ethnicity and simultaneous embracing of Western norms and values… are by no means contradictory." (Rudwick 2008b: 157)

This dynamic is also present in the research described here; beyond collecting data from several dozen speakers and trying to make sense of interspeaker variation through a Labovian lens, the current study investigates the "urban-rural" divide that is common to languages throughout the Global South, and Africa south of the Sahara in particular. As Singler writes (his focus is on Liberian English, a creole):

> It is the case in most African nations that a strong polarity exists between city and country. The city has the power, and the city has the money – or at least the promise of money… The city flaunts its Western-influenced modernity and concepts and fads, while the countryside holds more to tradition. (Singler 1987: 121)

Specifically, rural speakers (typically poorer, with less access to the kinds of socio-economic and sociocultural capital afforded by urban areas' interface with the hegemonic Global North) speak a 'purer', more conservative variety than their urban counterparts. Spitulnik's (1999) trailblazing paper on Town Bemba makes a significant intervention on the mutually constitutive relationship between urban "hybridity" and the language practices of the Zambian city. Reading her description of Town Bemba, its overlap with the associations with urban Zulu are striking:

> [P]ositioned in contrast to a more "pure" rural Bemba…[Town Bemba] often carries the contradictory social values of being both a prestigious, cosmopolitan code *and* a corrupted, even devious code…[but] most of the time the use of Town Bemba is relatively unmarked: it is simply the normal "urban" and "modern" – and markedly "*not* rural" or "*not* old-fashioned" – variety. (Spitulnik 1999: 32)

There is an account of reduplication of loanwords in Bemba, which seems to encompass both urban and rural varieties (Kennedy 2019: 4).[4] We find examples including terms like **fashiti** 'fast' and **fashitifashiti** 'kind of hurry', **wanu** 'one' and **wanuwanu** 'one by one' and **shaina** 'shine' and **shainashaina** 'shine repeatedly' (Kennedy 2019: 212). Despite the fact that these examples are not explicitly pulled from Town Bemba (they could be, we just don't know from the information the author provides), they demonstrate that the process of reduplication can accommodate relatively newer entries into the lexicon, and that it occurs in varieties where the ordinal numbers are borrowings (as opposed to the Bemba Bantu form **-mo** for 'one'). Indeed, consulting with a native speaker of the language confirmed that Town Bemba productively reduplicates both English loanwords and "native" Bemba vocabulary (Moonde Kabinga, p.c.), so the association of reduplication with more conservative, rural language varieties does not hold across the region.

Given what we know about language contact and change, it is unlikely that urban Zulu is simply rural Zulu with smatterings of English sprinkled in (Ravindranath 2015). Urban Zulu (UZ) presents an interesting case study in how a language might change without it being endangered (Posel and Zeller 2016). The best-known example of such a change in UZ is described in work by Downing (2001b) and Cassimjee and Kisseberth (2001). In rural Zulu, a high tone shifts rightward to be realized on the antepenult, regardless of where it is sponsored, whereas in urban Zulu a prefixal high tone spreads to the antepenult, and a stem-internal high shifts to the penult. As an additional and unrelated locus of variation, fieldwork commencing in 2010 revealed that the "regular" and well-behaved picture of reduplication depicted in the literature didn't faithfully describe speakers' judgments.

Broadly speaking, there are two main dimensions to the variation, both referenced in examples (2–5) above:

1) Whether or not **-yi-** augmentation is available for sub-minimal stems
2) The availability of prefixal morphemes such as **ya-**, **sa-**, **ku-**, and object markers for reduplication.

The findings will be discussed more fully in the results (Section 6), but in the course of conducting the fieldwork described here, it rapidly became clear that there was essentially a single grammar of conservative reduplication (see Section 2), but the innovative grammar of reduplication is not so easily delineated or covered under a single description. The conservative approach was found in all of the older and some of the younger rural speakers, while the innovative approaches were found in some of the younger rural speakers and all of the urban ones. It is important to note that

4 Thanks to a reviewer for suggesting I look for reduplication in other urban varieties of Bantu languages such as Town Bemba.

due to the settlement and residency laws that were in place under apartheid, older urban speakers are not a well-represented population demographic. In the course of the research, I was unable to consult any speakers who matched this description, and as such, they are unfortunately absent from the findings.

5 Methodology and participants

As a linguistic phenomenon, it is rare to encounter reduplication "in the wild", that is, in naturally-occurring Zulu discourse. Although the gold standard for any sociolinguistic investigation are data collected in the course of a naturalistic interview (Labov 1981), this kind of approach is not feasible for reduplication in Zulu. Instead, the data presented here were collected through elicitation sessions, typically conducted one-on-one, but occasionally in group settings. After obtaining demographic information, I would first establish the speaker's familiarity with reduplication through straightforward examples (like those shown in (1)); I then explained that I was interested in this verb doubling process (for those speakers entirely unfamiliar with reduplication, the elicitation would end here, though they are still included in the sample of speakers). Sentences containing non-reduplicated verbs were written on index cards, and speakers picked up each card, read the sentence as written, and then read it with the verb reduplicated (3 speakers were illiterate, for these participants research assistants who were native speakers of Zulu read the sentences aloud). The elicitation set contained 50–60 examples for speakers to reduplicate (not all being target forms). As mentioned above, it is possible for some speakers to produce multiple acceptable reduplications for a single verb complex (see Hyman et al. 2009: 288–89, ex. (32a, b) for a more dramatic illustration of this point in Ndebele). For verb complexes where multiple acceptable forms were potentially possible (based on the literature or already-completed fieldwork), myself or a research assistant would prompt speakers as to whether another option was available, e.g. "Can you also say XXX?" For instance, if the card read **Ingane isadla isinkwa** "The child is still eating bread," the interviewee might respond **isadlayidla**, to which I would ask "Can you also say **isadlasadla** ?" and this is how the interview would proceed. For some forms, no variation was expected (and further, none was found); these functioned as filler to make the task less burdensome and included examples like **ngiyasebenza** "I am working" which reduplicates solely as **ngiyasebesebenza**.

Since the distinction between urban and rural speakers is of primary importance, the assignment of participants into one category or the other is a key part of the study as a meaningful independent variable. Occasionally speakers were interviewed at their homes, but the majority of interviews were conducted with students

Table 1: Demographic composition of participants (all native Zulu speakers from KZN) (of the 79 speakers, 3 were interviewed in the US, 23 during the summer of 2011 at UniZulu (in Richards Bay, KZN), 36 at UKZN Durban from 2014–2015, and the remaining 17 during a fieldwork trip around KZN in March 2015).

	Rural	Urban
Women	36	21
Men	17	5

at university, or employees of the university, and both of these groups were interviewed on campus (either at the University of Zululand in Ongoye, or the University of KwaZulu-Natal in Durban). In addition to assigning a tentative category based on the demographic information the participants provided, the question was asked "Would you say that you're from the urban or rural areas?" Remarkably, this question was answered unhesitatingly by all participants. Even those that hedged somewhat were comfortable locating themselves solidly on one side or the other, e.g. one participant who was 26 at the time responded "I live in Mlazi (a township) now while I'm attending UKZN, but I'm from Ulundi (a rural area), and I'd like to go back there and have a farm once I'm done with my degree." This self-reported information was used to sort speakers as urban or rural – after collecting demographic information, there was only one instance in which my categorization of a participant differed from his self-reported status (naturally, I deferred to his opinion!).

The fieldwork reported here spanned from 2010 to 2015. It began with Zulu speakers located in the US (2010), and continued with those located at UniZulu (2011), Durban (2014–2015), and rural areas around the province (2015). The 79 speakers break down as in Table 1.

6 Attested grammars of reduplication

As mentioned in Section 2, there is a single conservative grammar of reduplication while the dimensions of variation for innovative speakers are not so neatly captured. Conservative reduplication aligns with its description in Doke's grammar of the language, originally published in 1927. Speakers with a conservative grammar of reduplication reject the inclusion of *any* prefixal material in the reduplicant, including object markers. No material to the left of the verb stem is available for reduplication under any circumstances, and they must augment sub-minimal stems with **-yi-**. 31 participants, all rural speakers, fall into this category.

Next I discuss the innovative grammars. The definition of "innovative" used here simply means a grammar of reduplication that differs from that laid out in Doke, i.e. the conservative grammar mentioned above. Consequently, there are principally two main dimensions to an innovative grammar of reduplication (the mirror image and complement to those laid out at the end of Section 2):

1) a rejection of **-yi-** to augment a sub-minimal reduplicant
2) an inclusion of prefixal material in sub-minimal reduplicants.

Crucially, these two options can co-occur in speakers, leading to three distinct innovative grammars of reduplication. Table 2 lays out the relevant patterns.

To recap what's shown in the tables above:

a) Conservative speakers *only* augment sub-minimal stems with **-yi-.**
b) Innovative 1 speakers reject augmentation with **-yi-**, but follow a conservative grammar otherwise, i.e. no inclusion of prefixal material.
c) Innovative 2 speakers can include prefixal material, but follow a conservative grammar otherwise, i.e., accept augmentation with **-yi-.** For these speakers, multiple reduplications are grammatical, as shown with the two ✓ marks in the Innovative 2 row in the first table.
d) Innovative 3 speakers combine the ways that Innovative 1 and 2 differ from the conservative standard. For them, **-yi-** augmentation is not available, but inclusion of prefixal material is.

Of the 79 speakers, 9 had no familiarity with reduplication whatsoever, excluding certain lexicalized constructions such as **-hambahamba** 'to walk as though one is bewitched,' which are known to all speakers.[5] How, then, to interpret the results from the group unfamiliar with reduplication as a productive process? An argument could be made to exclude them from the analysis entirely, but seen from another angle, an absence of reduplication should be interpreted as constituting a fourth innovative variant.

Thinking conceptually about language change, if a variable is undergoing change and has multiple variants, is the complete absence of the variable an

5 A reviewer asks how the semantics expressed by reduplication would be realized if the construction were to undergo obsolescence and be lost. I consulted a native speaker who provided some alternative renderings, often involving the adverbial **kabi** 'badly'. However, an important issue with obsolescence, and indeed with language change overall, is that while the "loss" of a construction may seem significant to older/more conservative speakers and/or researchers, the language and its speakers (if indeed those are different things) adjust with seemingly no problem at all. An example from English includes the obsolescence of the *So*-adj-*a* construction, as in "So happy a marriage", which while not precisely translatable via non-outmoded expressions, does not seem to have affected the language or its expressive capabilities in any meaningful way (Rudnicka 2021).

Table 2: Conservative and 3 types of innovative reduplication (✓ = accept, * = reject).

ba-ya-fa 'they are dying' (phrase final)	**ba-ya-[fa-yi+fa]**	**ba-[ya-fa+ya-fa]**
Conservative:	✓	*
Innovative 1:	*	*
Innovative 2:	✓	✓
Innovative 3:	*	✓

ba-fa 'they are dying' (phrase medial) →	**ba-[fa-yi+fa] (no other option attested)**
Conservative:	✓
Innovative 1:	*
Innovative 2:	✓
Innovative 3:	*

Table 3: Conservative and innovative speakers by rural-urban orientation, along with cross-tabulated percentages for the ratio of rural/urban speakers belonging to each category.

	Rural (*n* = 53)	**Urban (*n* = 26)**
Conservative (**-yi-**, no prefixal material)	31 (58 %)	0 (0 %)
Innovative 1 (no **-yi-**, no prefixal material)	8 (15 %)	11 (42 %)
Innovative 2 (**-yi-** and prefixal material available)	9 (17 %)	0 (0 %)
Innovative 3 (no **-yi-**, but prefixal material available)	5 (10 %)	6 (23 %)
Innovative 4 (no reduplication at all, for any verbs)	0 (0 %)	9 (35 %)

additional variant? The answer seems to be, compellingly, yes. To exclude these speakers from the analysis presents an incomplete picture of the variable undergoing change. Based on the descriptive literature on Zulu, it is safe to assert that speakers unfamiliar with reduplication represent a change from an earlier stage of the language (in which reduplication was universally present); as such, speakers belonging to this group will be given the label Innovative 4. Table 3 shows the breakdown of speakers into each of the five groups ("conservative" and the four distinct "innovative" categories), further sub-divided by the rural–urban distinction laid out above.

One salient result revealed in Table 3 are the three cells containing zero speakers. We find no urban speakers demonstrating the conservative pattern of reduplication, nor any urban speakers with the Innovative 2 grammar, which is to say augmentation with either **-yi-** or prefixal material. Likewise, among rural

speakers, no speakers are entirely unfamiliar with reduplication; even if they have no way of reduplicating sub-minimal stems (Innovative 1), they are acquainted with the process, and can reduplicate disyllabic or prosodically larger stems.

7 A new look at the data

A primary motivation in splitting up the speakers into the five distinct groups (shown in Table 3) is to keep the patterns of reduplication separate. However, doing so obscures some trends that are otherwise revealed. For instance, it is meaningful for the data and a speaker's grammar if they can reduplicate by pulling prefixal material into the reduplicant but lack **-yi-** versus a speaker who is unable to reduplicate sub-minimal stems at all, i.e. the contrast between Innovative 3 and Innovative 1; shared between both groups is that many verb complexes are impossible to reduplicate.

What is hidden by the 5 groupings is what these speakers share (Innovative 1 + Innovative 3): namely, an absence of **-yi-** in reduplication. The tables below once again present the data from Table 3, but organized along different lines; Table 4 groups speakers based on availability of **-yi-** in reduplication, and Table 5 groups speakers based on inclusion of prefixal material. The nine speakers classified as Innovative 4, who lack any knowledge of reduplication, are excluded from these tables, as the tables here focus exclusively on dimensions of variation within speakers familiar with reduplication. Excluding these speakers takes the number of urban speakers down from 26 to 17, and the overall total from 79 to 70.

The ratios between rural and urban speakers are roughly equivalent in Table 5 ($26 \approx 35$, $74 \approx 65$) while the differences between the groups in Table 4 could not be

Table 4: Speakers grouped by availability of **-yi-** in reduplication.

	Rural (*n* = 53)	**Urban (*n* = 17)**
Include **-yi-** (Conservative + Innovative 2)	40 (83 %)	0 (0 %)
Reject **-yi-** (Innovative 1 + Innovative 3)	13 (17 %)	17 (100 %)

Table 5: Speakers grouped by inclusion of prefixal material in reduplication.

	Rural (*n* = 53)	**Urban (*n* = 17)**
Include prefixal material (Innovative 2 + Innovative 3)	14 (26 %)	6 (35 %)
Reject prefixal material (Conservative + Innovative 1)	39 (74 %)	11 (65 %)

more stark. The data in Table 4 demonstrate that the availability of **-yi-** in reduplication of sub-minimal stems is clearly stratified along sociolinguistic lines, with inclusion of the morpheme present among more than three quarters of rural speakers, but categorically absent for urban speakers.

8 Sociolinguistic stratification of the loss of -yi-

There are two primary options for how to interpret a data distribution like we see in Table 4. The first is stable variation, which predicts that the division between rural and urban speakers is stable over time, and crucially, will not change from one generation to the next (Houston 1985). If the phenomenon at work were indeed stable variation, generation after generation, urban speakers familiar with reduplication will be categorical on the absence of **-yi-** in reduplication, while it will continue to be rejected by ~25 % of rural speakers.

The alternative is that the distribution in the data reflects a change in progress (Chambers 2013; Cukor-Avila and Bailey 2013). In a change in progress, the proportions of variants of a particular variable within a speech community are changing over time, typically on the generational scale (Evans Wagner 2012). Figuring out whether variation is stable or a change in progress is best assessed with a real time study in which a population is interviewed over a period of many years, with sampling dates being 10–20 years apart (Sankoff and Blondeau 2007 for Montreal French). In lieu of a real time study, an apparent time study has been shown to be an adequate replacement (Cukor-Avila and Bailey 2013).

In an apparent time study, a population is sampled at a single point in time but a range of ages are included. Simplifying somewhat, if researchers assume that speakers' grammars are more or less set by the onset of adolescence (Labov 2001), testing a 30 year old gives insight into the language from roughly 15 to 20 years ago, testing a 50 year old, shows the language as it was 35–40 years ago and so forth. In sociolinguistics, it is well-established as "a surrogate for the real-time examination of data at different points in history… Linguistic differences among different generations of a population mirror actual diachronic developments in the language," (Cukor-Avila and Bailey 2013: 312). The chart below shows that the loss of **-yi-** in reduplication is a change in progress for rural speakers (since urban speakers are categorical for this feature, they are not included in the graph). Year of birth is given on the *x*-axis, speakers who accept/produce reduplications containing **-yi-** are the bottom series of dots, while the higher series are speakers whose grammar of reduplication does not contain **-yi-**.

The effect of age on the distribution of the variable is striking. Results for 53 speakers are charted on the graph, and of the 23 born 1979 and earlier, not a single

speaker has a grammar of reduplication lacking **-yi-**. 1980 marks the year of birth for the first speaker to lack **-yi-**, but in fact the data contains 4 speakers born in this year, and only one member of this cohort has the "non-yi" grammar. More notably, when we look at the 17 youngest speakers (born from 1987 to 1996), the majority of them (12/17, or 71 %) lack **-yi-** in reduplication.

The trend in the data portrayed in Figure 2 may be interpreted as a clue that the younger rural speakers are behaving more like urban speakers, but getting from here to the stronger (yet more narrow) claim of the paper – that reduplication is in the process of attriting from Zulu grammar entirely – is somewhat tricky. While the chart above points toward a loss of **-yi-** in the grammar of reduplication for rural speakers, an identical chart for urban speakers would be pointless because it would be a single series along the top of the chart, since no urban speakers accept **-yi-** in reduplication. A more informative chart for urban speakers is given below (Figure 3), instead of presenting speakers accepting **-yi-** versus speakers rejecting **-yi-**, it shows speakers rejecting **-yi-** versus speakers unfamiliar with reduplication; or put another way, among urban speakers, those who are familiar with reduplication versus those who are not.

Even a quick glance at the charts reveals an impressionistic similarity, for both, the top line seems to be more heavily concentrated toward the right. Indeed, this is because for both charts, the more innovative variant, a loss of **-yi-** among rural speakers and a loss of reduplication entirely among urban speakers, is presented on top, and these innovative variants are more common among the younger speakers in each population, a distribution strongly indicative of a change in progress.

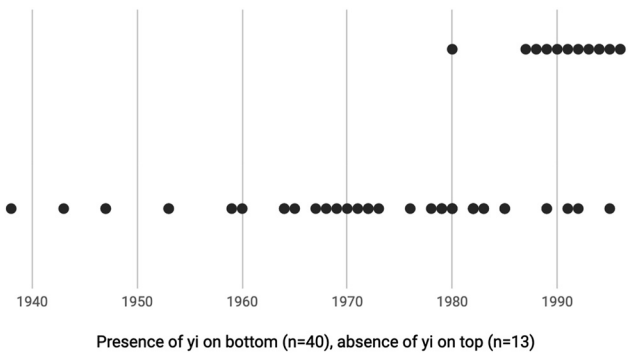

Figure 2: Availability of **yi** in reduplication by year of birth (rural speakers only).

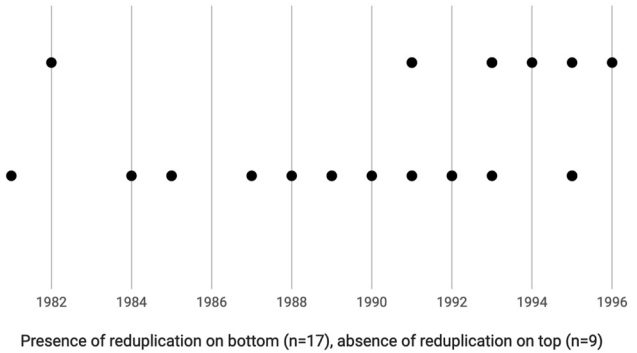

Figure 3: Availability of reduplication by year of birth (urban speakers only).

That said, there are several important differences between Figures 2 and 3. An important critique would point out that the urban and rural samples are not symmetrically structured with respect to age. This consideration is certainly valid, as 23 rural speakers (43 % of the rural sample) are born before 1980 and they have no true counterparts, controlling for age, among the urban speakers, all of whom were born after 1980. As noted in Section 3, in the KwaZulu-Natal province under apartheid, only a very small percentage of the Black population lived in urban areas (Pauw 2005). A small proportion of the urban population to begin with (Todes et al. 2010), Black people were prohibited from living in Durban proper by the Group Areas Act of 1950 which effectively exiled former urban residents to the rural areas and newly established townships. Townships have been in existence in KZN since roughly the middle of the 20th century, but in this province in particular (as opposed to the Western Cape and Gauteng), their populations were relatively small and/or transitory until the end of apartheid.[6] All this is to say that the proportion of native Zulu speakers who would be classified as urban is not the same across time, and constitutes a more significant proportion of the population in the 80s and subsequently than it did earlier. Even acknowledging the gap in the data for older urban speakers (i.e. born prior to 1980), we nonetheless find that the data point toward a change in progress among both groups, urban and rural speakers.

6 Although the population is small, collecting data from these speakers would be a valuable addition to the project. Such a group would be comprised of early residents of KwaMashu and Umlazi, as well as from the residents of Mkhumbane, a shanty town settlement in Cato Manor (Edwards 1989). Relative to the groups discussed in this paper, these numbers would be small, but would shed additional light on the question of the extent to which obsolescence is a function of age versus urban/rural orientation.

9 Conclusion: grammatical obsolescence, reduplication, and sociolinguistic change

Relying on data collected from 2010 to 2015, this paper has demonstrated that the availability of **-yi-** in Zulu reduplication is undergoing obsolescence, and this same fate may await the construction as a whole. These claims are based principally on a comparison between speakers of a range of ages and rural/urban orientations, with data showing how reduplication behaves in the grammar of speakers with different demographic characteristics, showing that the loss of **-yi-** in reduplication is tied to younger and urban speakers, and that some young urban speakers are unfamiliar with reduplication entirely. While a broad understanding of obsolescence as "the loss of a construction" is suitable, Rudnicka's (2019: 4) formal definition is "[a] situation in which a previously popular and productive construction is, often gradually, losing its productivity and popularity over time until the construction disappears or there are only residues or fossilized forms left". The comment on "residues or fossilized forms" is relevant for reduplication in Zulu since there are certain constructions (e.g. **-hambahamba** noted in Section 6), that are entrenched in the lexicon, but the existence of the process as a productive part of the grammar is waning, and as the data here show, is fully absent from the grammar(s) of many urban speakers. Returning also to Rudnicka's 5 markers of obsolescence cited in the introduction,

1) "Negative correlation between time and frequency of use
2) Distributional fragmentation (restriction or particular (typically formal) genres)
3) Paradigmatic atrophy (can appear in fewer combinations)
4) Competition at construction(al) level
5) Evidence of high-order motivations like socio-cultural processes",

(Rudnicka 2021:60)

it is safe to assert that (1), (2) and (5) clearly describe reduplication in Zulu: for (1) we see strong age effects in play with the construction; for (2), it is associated more with older, rural speakers; and for (5), it strikes speakers as old-fashioned and conservative (clearly linked with (2) as well). In the case of (3), speakers without **-yi-** are unable to reduplicate verb complexes consisting solely of a syllabic subject marker and a monosyllabic stem (e.g. **si-dla** 'we eat'), meaning that the loss of **-yi-** in reduplication has introduced ineffability. This then seems to be an affirmation of the principle in (3), in that reduplication can appear in fewer combinations because certain verb complexes are ineffable as reduplications. The issue in (4) is slightly more difficult to assess (as is also addressed in footnote 7). There are certainly

adverbial substitutes/workarounds, such as the more general adverb **kabi** 'badly' to express the meaning of reduplication, but whether these are true "competitors" has a less straightforward answer, and would be difficult for a non-native speaker such as myself to assess.

Kranich and Breban (2021: 5) pose an interesting question: Is obsolescence the mirror image of emergence and spread of a sociolinguistic variant? If so, does that need to be squared with the idea proposed here that obsolescence of reduplication should be treated as sociolinguistic change? While it is not the case that reduplication is necessarily being replaced by another variant, we best understand the change targeting reduplication by relying on the insights of how sociolinguistic changes spread, i.e. the absence of reduplication *is* the innovative variant (Marcos Rohenas-Madrazo, p.c.). Taken together, the increasing loss of **-yi-** for rural speakers constitutes a clear sociolinguistic harbinger of the impending loss of **-yi-** in reduplication, and the loss of reduplication overall among urban speakers may similarly signal a process of obsolescence for reduplication in Zulu.

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