

*LINGUISTIC DIVERSITY RESEARCH
AMONG SPEAKERS OF
ISINDEBELE AND SINDEBELE
IN SOUTH AFRICA*

STUDIA ORIENTALIA 120

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ISINDEBELE AND SINDEBELE
IN SOUTH AFRICA*

EDITED BY

LOTTA AUNIO & AXEL FLEISCH



Helsinki 2019

*Linguistic Diversity Research among Speakers of isiNdebele and
Sindebele in South Africa*

Edited by Lotta Aunio & Axel Fleisch

Studia Orientalia, vol. 120

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ISSN 0039-3282

ISBN 978-951-9380-95-7

PunaMusta Oy

Tampere 2019

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PREFACE

This volume is the result of a linguistic field excursion to South Africa in 2016. This excursion was the fourth field excursion carried out by Helsinki Area and Language Studies (HALS) during the years 2013–2016.¹ HALS was formed with the aim of exploring new avenues towards collaborative research in language documentation and descriptive linguistics, with an explicit goal of incorporating ethnolinguistic and historical insights. Area-specific academic traditions and practices differ from one area to another. Across different geographical spaces, we find separate research traditions, different kinds of available source material, and varying linguistic settings. Therefore, language documentation, descriptive linguistics, and language sociological approaches vary between research sites.

Our work on South African Ndebele varieties was initially sparked by a constellation of various factors. Several Nguni languages are rather well-documented. Some languages of this family with higher speaker numbers, in particular isiXhosa and isiZulu, have been grammatically described and analysed in considerable detail. Lexicographers have carried out extensive work. Language practitioners have long been working towards creating standard varieties and developing educational materials. Software products have followed suit and enable their widespread digital use. Such a backdrop of (socio)linguistic engineering and language planning interventions may have a unifying effect for some of the bigger varieties, but it also threatens dialect diversity and the status of less widely used varieties. These dynamics are by no means merely recent phenomena or products of modern times. Multilingualism and language contact have long affected the varieties under investigation in this volume of *Studia Orientalia* in many respects.

A significant point with regard to these contact scenarios is that they involve several closely related languages. In a project with the title “Stability and change

¹ For more on HALS, see <helsinki.fi/en/researchgroups/hals>. Proceedings of these field excursions have been published in the following volumes:

Shagal, Ksenia & Heini Arjava (eds) 2016. *Mordvin Languages in the Field*. (Uralica Helsingiensia 10) Helsinki: The Finno-Ugrian Society.

Makartsev, Maxim & Max Wahlström (eds) 2016. *In Search of the Center and Periphery: Linguistic Attitudes, Minorities, and Landscapes in the Central Balkans*. (Slavica Helsingiensia 49) Helsinki: Department of Modern Languages, University of Helsinki.

Gruzdeva, Ekaterina & Juha Janhunen (eds) 2016. *Crosslinguistics and Linguistic Crossings in Northeast Asia: Papers on the Languages of Sakhalin and Adjacent Regions*. (Studia Orientalia 117) Helsinki: Finnish Oriental Society.

in language contact: the case of southern Ndebele (South Africa)", a team of four people (Lotta Aunio, Thera Crane, Axel Fleisch, and Stephan Schulz) embarked on disentangling some of the Ndebele contact history. Project work started in late 2014, with the first fieldwork in 2015 in Pretoria and Moloto/Kwamhlanga. This work was possible due to a research grant from the Academy of Finland starting in September 2014. We acknowledge the financial support from the Academy and would also like to express our gratitude to the Faculty of Arts at the University of Helsinki, and in particular the staff of the Department of World Cultures, for their logistic as well as academic support on many occasions.

The research of the initial project team is related to the research cluster Helsinki Area and Language Studies (HALS). The launch of HALS in the spring of 2013 marked a crucial moment for the conceptual and logistic preparations of the Ndebele language contact project. We would like to thank HALS for the financial support that made the field excursion possible, but also draw attention to the intellectual impact our HALS colleagues had on our Ndebele research throughout. Our colleagues in the research cluster have significantly contributed through their engagement with HALS, for which we are grateful.

Many South African stakeholders are concerned with the Ndebele varieties. Academic peers, language practitioners, local activists, and cultural entrepreneurs, as well as many members of the Ndebele communities, have supported us in our research in various ways.

At the National Lexicography Unit (NLU) for isiNdebele, first the late Dr P.B. Skhosana, and now its current director Dr Sponono Mahlangu, have supported our work for a long time. We are indebted to their support and hope that the NLU will benefit from the work published in this special issue. The NLU has its physical headquarters at the University of Pretoria, where scholars like Prof. Danie Prinsloo and Prof. Elsabé Taljard have made significant strides into the lexicography of African languages, in particular Northern Sotho (apart from working on many other themes in applied linguistics and African languages). Such efforts have received additional impetus with regard to isiNdebele at the University of South Africa (UNISA), also physically based in Pretoria. Under the last two Chairpersons of the Department of African Languages, Prof. Sonja Bosch and Prof. Pinky Phaahla, more attention has been dedicated to isiNdebele. Among the lecturers and researchers recruited to the African Languages Department at UNISA are Dr Johanna Malobola-Ndlovu, Ms Nomsebenzi Malele and Mr Peter Mabena, all of whom have followed our work and assisted us on numerous occasions. Mr Mabena has collaborated very closely with our project and has also been actively involved in the HALS activities in Helsinki, where he joined us for in-depth research into the conceptual

architecture of isiNdebele. We benefitted greatly from his constant high level of precision and concentration during several weeks away from his usual work. We also need to thank his employer, UNISA, for granting the necessary research leave during his visit.

Upon our arrival in Pretoria, two short seminars were organised at both UNISA and the University of Pretoria. We would like to thank in particular Sonja Bosch, Chris van Vuuren and their teams at UNISA, as well as Danie Prinsloo, Elsabé Taljard and Sponono Mahlangu (University of Pretoria) for their effort and the insightful talks they offered. Towards the end of our field trip, Prof. Anne-Marie Beukes and Prof. Marné Pienaar (University of Johannesburg) arranged for a visit to the Black Afrikaans-speaking community in Onverwacht, in the vicinity of Cullinan (Gauteng). While its residents are not speakers of isiNdebele, they are neighbours to the Ndebele-speaking communities in the Mpumalanga-Gauteng border area. Their experiences of building linguistic identities against the backdrop of the complex South African setting illustrate how cultural and linguistic affiliation is more than an incidental feature. We are grateful to both of them, as well as to Ms Patricia Machobane, our local host in Onverwacht. We would also like to thank Prof. Matthias Brenzinger (at the time based at the University of Cape Town) and Dr Sheena Shah (then at SOAS, London), as well as Dr Eva-Marie Bloom Ström (then at Rhodes University, Grahamstown) for accompanying us during our visit to South Africa in May 2016. We benefitted from their expertise in field linguistics, language documentation and description in the South African context and are very grateful to these three colleagues.

Our research trip took us to two different areas, one in the Limpopo province, the other in Mpumalanga. In Limpopo, we visited Mokopane (Sindebele: ka Mungombani, formerly Potgietersrus) and various rural settlements in the Mokopane area as well as Ga-Mashashane (Sindebele: ka Mashashane) and Ga-Maraba (Sindebele: ka Maraba; formerly also known as Kalkspruit). Our initial contact with the Mandebele community in Limpopo was established through Prof. Chris van Vuuren, who directed us to Ms Maggie Siko Lebelo. She arranged for us to meet with Sindebele speakers in Mokopane for the first time in November 2015 and put us in contact with Musa Lebelo, who helped us during the first visits. Without their help, this line of research would have simply not happened. We are extremely grateful to both of them. Like Musa Lebelo, Mimi Masango (Tshwane University of Technology, Soshanguve) joined our research excursion in May 2016. Their help as translators, mediators, and coordinators of various activities has been invaluable. Jerry Simon Malebana from Mokopane also took it upon himself to assist us in many different ways during the field excursion and later. He spent six weeks in Finland assisting with the

analyses of the Sindebele data in spring 2017. We were very lucky to have all three in our team. Thank you.

In Mokopane (ka Mungombani), including the rural areas in its vicinity such as Mosesetjane, Bhabha Frans Makhafola (Sindebele: Makhafula) Lesetja and Bhabha Kenneth Madimetja Kolotsi (Sindebele: Ngoloti) were most helpful in arranging for a welcoming and functional setting for our stay in Limpopo. They were our first contact point to the Sindebele-speaking community: through them we entered into contact with the Mandebele National Organisation (MANO) ahead of our visit. We had the pleasure to work with many of them, from different areas. Among those based in the Mokopane area we would like to thank – in addition to our hosts Frans Makhafola Lesetja and Kenneth Madimetja Ngoloti – the following people: Bhabha Mmadi Alfred Kekana (Sindebele: Gegana) Bhabha Lesibana Lamola (Sindebele: Lusibana Lamula), as well as Sello Jonas Kekana (Sindebele: Gegana) and Katlego Emmanuel Ledwaba. They helped in different roles, as consultants, interpreters, by introducing us to the traditional authorities, and by connecting us to many of the residents in the rural Mokopane areas.

Members of MANO residing in Ga-Mashashane/ka Mashashane were equally active and supportive. They availed themselves for interviews and introduced us to members of the local Sindebele-speaking community. We express our sincere thanks to Ms Ramasela Phillipine Ledwaba, Nne Peggy Mogopa Mokone (Sindebele: Munguni), Bhabha Mfundisi Peter Ledwaba, Bhabha Mpho Moses Mathatho, Bhabha Malose (Sindebele: Malusi) Hosea Ledwaba, and Bhabha Gwangwa Malose (Malusi) Patrick. In addition to their work as direct language consultants, they put us in contact with many further speakers of Sindebele in ka Mashashane after an introduction to the local traditional authorities. We appreciate all these people's help and interest.

The third settlement area, Ga-Maraba/ka Maraba completed the range of our visit to the community of Sindebele speakers in the Limpopo province. As with the previous sites, we are grateful to the traditional authorities at the royal residence for receiving us and lending logistical support. Bhabha Lazarus Malose Mothoa (Sindebele: Malusi Muthwa) and Bhabha Lesibana Edwin Ledwaba deserve our sincere thanks for their collaboration and their key role in bringing together an impressive group of Sindebele-speaking residents of Ga-Maraba/ka Maraba.

We had the opportunity to speak to an impressive number of residents in these three areas. All of them have contributed in an important way to the research presented here. We owe them a big thank you, even though we cannot name every single person here individually. For their particular support with further material, deep insight into the history of Sindebele activism in the past and/or logistical support, we would like mention to Bhabha Dr Shashi Johannes

Ledwaba and Bhabha Ndile Joseph Ledwaba (Ga-Mashashane/ka Mashashane) as well as Bhabha Malose Harry Ledwaba (Mokopane/Mungombani).

The other principal area we visited was in westernmost Mpumalanga. We visited Emthambothini, Siyabuswa, and Thabana. We would like to thank in the first place Thumbile Cultural Heritage Projects, a small company based in Emthambothini, specialising in the design and construction of Ndebele homesteads and assisting higher institutions of learning globally when they want to undertake research in South Africa. The company is responsible for the design and construction of traditional Ndebele homesteads within South Africa and abroad, implementing Ndebele material culture in museums, cultural villages, and universities locally and globally. Our two main hosts in Emthambothini were Mr Godfrey Thubana and Ms Esther Mahlangu. Thank you for receiving us as your guests.

We visited many households in Emthambothini, Siyabuswa, and Thabana. Our interactions with members of the local communities were made possible by the help in directing and accompanying us, as well as the interpreting that we received from several people: Ms Leah Thubana, Mr Mthokozisi Mahlangu, Mr Sizi Ndala, Ms Busisiwe Thubana, Ms Nomzamo Jiyana, Ms Zanele Sithole, Mr Mduduzi Mahlangu, and Mr Nkosinathi Sindane deserve special thanks for this, and for being willing to be interviewed and recorded themselves. For logistic support and catering we would also like to express our thanks to Ms Sibongile Sithole and Ms Nokuphila Mahlangu.

We extend our gratitude to the Head of the Thubana family, Mr Thumbile John Thubana, and in fact to the entire family for lending general support and hosting researchers on various occasions, including the entire group during the three weeks in May 2016. It was at the home of the Thubana family that Thumbile Cultural and Heritage Projects sponsored and organised an official function: a reception on the occasion of our visit. It was an honour to attend the cultural performances and to be able to meet three guests of honour who were kind enough to address us on the occasion: Ms Nomsa Mtsweni, at the time MEC (Member of the Executive Council) for Social Development of the Mpumalanga Province; Ms Ruth Mathabe, then Mayor of the Dr J S Moroka Municipality; and Ms Esther Mahlangu, whose art has made Ndebele culture known internationally. We warmly thank the three of them as well as Mr Mikirosh Skhosana who led us through the event as the master of ceremony. Also present was Mr Memento Skhosana, a local businessman who organised an enjoyable evening for us at Memento's lifestyle, a local club he owns and runs in Kameelrivier.

In addition to all those mentioned thus far, numerous people have assisted us by answering our many questions, by being willing to be interviewed, and by participating in various research activities. We visited many households and

were warmly received in Emthambothini, Thabana, and Siyabuswa. We express our sincere gratitude to all of them; even if we cannot mention every individual person's name, we appreciate the help in every single instance.

In addition to the Ndebele project team (Aunio, Crane, Fleisch, Schulz), the group of participants from the University of Helsinki included three other staff members, Riho Grünthal, Riikka Länsisalmi, and Matti Miestamo, as well as 14 BA, MA, and PhD students: Heini Arjava, Andrei Dumitrescu, Kati Helenius, Jaakko Helke, Sami Honkasalo, Isalee Jallow, Markus Juutinen, Maikki Järvi, Jukka Kajala, Antti Laine, Aino Pesonen, Nailya Philippova, Lena Seppinen, and Niina Väisänen. We thank you all for fruitful cooperation during our excursion and afterwards. Ekaterina Gruzdeva and Juha Janhunen unfortunately could not join us in South Africa but were important advisors all along. We also thank the Finnish Oriental society for accepting this volume to *Studia Orientalia* and for the final steps of the publication; the reviewers for their careful reading and their many helpful suggestions and comments; and Thera Crane for language checking.

We are grateful to all the speakers of Sindebele and isiNdebele for sharing the insights of their languages with us. We have learned a lot and hope this work has sparked the interest of the academic community in these languages. At the same time, it is our hope that the communities will remain equally enthusiastic about their languages in the future, so that the South Africa Ndebele varieties may thrive for a long time to come.

Helsinki and Frankfurt, December 2019

Lotta Aunio and Axel Fleisch

INTRODUCTION: VENTURING INTO NDEBELE LANGUAGE RESEARCH

Axel Fleisch & Lotta Aunio

Two linguistic varieties from South Africa are the protagonists of this volume. They have many things in common – even their names, which are (almost) identical. They are called Sindebele and isiNdebele.

Sindebele is listed as S408 in Maho's (2009: 93) classification of the Bantu languages. It has often been referred to as Northern Transvaal Ndebele (Ziervogel 1959), a designation that makes reference to administrative boundaries during the times of apartheid and is therefore to be avoided. It is both offensive to its speakers, and obsolete. The Northern Region within the former Transvaal Province corresponds roughly to the present-day Limpopo Province, with Polokwane as its capital. Indeed, most speakers of this Ndebele variety reside relatively close to Polokwane and Mokopane. In some recent work, such as Wilkes (2001; 2007) and Skhosana (2009), it is referred to simply as "Northern Ndebele"; we avoid this term since it has also been used to refer to an entirely different variety, namely Zimbabwean Ndebele (labelled as S44 in Guthrie 1967/1971 and Maho 2009). The other variety, isiNdebele, is often referred to as "Southern Ndebele" (see, e.g. Wilkes 2001; 2007; Skhosana 2009). Maho (2009) lists this variety under the code S407. It is the dominant language in several local municipalities belonging to the Nkangala District Municipality in the western parts of the Mpumalanga Province.

The articles in this volume are the result of an Academy of Finland project (2014–2020) and an interdisciplinary field excursion in 2016 (described in more detail below). Throughout this volume, we will mostly follow the practice of including noun class prefixes with the language names. This is not an official convention of South African English, but it is the practice preferred by many South Africans. Furthermore, it affords us an easy way to distinguish between the two varieties, because it is in the shape of the noun class prefix that their names differ. Nouns in Sindebele do not have the augment – that is, an initial vowel preceding the noun class prefix – while isiNdebele nouns do carry the augment. In fact, as discussed in Miestamo, Helenius, and Kajala (this volume), they do so much more strictly and in more morphosyntactic contexts than any other of their sister Nguni languages.

Studia Orientalia 120 (2019), pp. 1–16

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ISSN: 0039-3282

Not all readers will be familiar with the South African context and may not find the slight difference in terms of the noun class prefix to be very salient. In addition to that, in the literature on the Ndebele varieties, there is a lot of confusion in terms of nomenclature, and in many publications, noun class prefixes are not used with language names. We have therefore also found it helpful at times to use two geographically inspired terms: Limpopo Ndebele for Sindebele, Mpumalanga Ndebele for isiNdebele.

The two Ndebele varieties share close genealogical ties. They belong to the Nguni group of Bantu languages, labelled as S40 by Malcolm Guthrie in his *Comparative Bantu* (1967/1971). In comparison to some neighbouring languages, they are relatively small in terms of speaker numbers. The most significant contact languages include other languages of the Nguni family such as siSwati and isiZulu, but also varieties of the Sotho-Tswana cluster, including Setswana and Northern Sotho dialects.

Notwithstanding the existence of many shared linguistic features and vocabulary, Sindebele and isiNdebele show significant differences, as well. One obvious difference, already noted above, is the use of the augment in isiNdebele, but not in Sindebele. At first sight this may not seem of such fundamental significance, but this feature, together with a few other features, has been used to sub-classify the Nguni language into two separate groups which were often held to represent an early split within the Nguni language family in historical linguistic terms. This separation of the Nguni languages into the Tekela and Zunda sub-groups has a long tradition going back to Grout (1849; 1859) and Bleek (1862), but is not without problems (see the detailed discussion in Ownby 1985). An assumed early binary split into two groups is interesting, because it would imply that the two South African Ndebele varieties are not particularly closely related. Irrespective of the similar names, they would not, under such a historical understanding, be sister languages on a relatively low level of the Nguni family tree. This is, in fact, exactly what Carolan Postma Ownby claims in her work *Early Nguni History* (1985). However, such a view possibly downplays the significance of language contact. Language contact, which may have affected each variety in very different ways, could be responsible for divergent developments. Under such a scenario, Sindebele and isiNdebele would currently appear less similar to one another than their arguably very close position in the family tree might suggest.

Today, the sociolinguistic settings of the two varieties are fundamentally different. Grünthal, Honkasalo, and Juutinen (this volume) have documented these differences between the varieties. We do not know the exact number of speakers of Sindebele. In fact, as early as 1959, Ziervogel insinuated that the language was on the demise. In the 1990s and the early 2000s, Philemon Buti

Skhosana and Arnett Wilkes worked with speakers, so the language had obviously not disappeared altogether. Our project team had its first opportunities to meet speakers of Sindebele in late 2015. We were pleased to find a small but vibrant community of speakers committed to preserving the language as well as the cultural practices and historical knowledge of this particular group.

IsiNdebele has far more speakers than Sindebele. Some sources point out that in addition to the more than one million native speakers, there are probably a significant number of language users who learned isiNdebele as a second language (Webb 2002: 78). IsiNdebele is recognised as one of South Africa's official languages. In areas of the Mpumalanga province where isiNdebele speakers live, it enjoys a significant public presence and is used in a wide range of domains.

The recent settlement history of this area bears the imprint of apartheid. Speakers of isiNdebele used to live in a wider area extending much further east into the province of Mpumalanga, the erstwhile Eastern Transvaal. The creation of the former homeland of KwaNdebele meant that few members of that community stayed in the originally more easterly settlement area – for instance, as farm labourers in the white-owned commercial farmland in the Eastern Transvaal, while most people were relocated to areas further west, onto land that was deemed agriculturally less profitable. In addition to that, there was less land available, which meant an increase in population density. Even before the creation of the homeland of KwaNdebele in 1981, many people depended on labour migration, but the new situation accentuated the need to seek paid employment, often in the city of Pretoria. Busses connect the towns of KwaMhlanga, Siyabuswa, and other places in the western Mpumalanga Province with Pretoria, allowing for a long, but feasible, daily commute. Since apartheid times, the people living in KwaNdebele have represented a labour reservoir for the urban areas of what is now the Gauteng Province.

WORK ON LANGUAGE CONTACT AMONG SOUTH AFRICAN NDEBELE VARIETIES

The small and relatively fragmented communities of Sindebele speakers were subsumed among the residents of the Lebowa homeland, characterised by the use of Northern Sotho as its dominant African language. Apart from mainly academically inspired work such as Ziervogel's short grammar (1959), Sindebele has received little attention. Only starting in 1994 did Wilkes and Skhosana produce additional work, mainly because of their interest in the linguistic difference and distance between the two South African Ndebele varieties. The southern variety isiNdebele fared slightly better in terms of language develop-

ment activities, although even in this case, practical work by language practitioners in public institutions started late. For instance, isiZulu language materials were relied on in the domains of education and teaching in the former homeland of KwaNdebele. Since then, however, matters have improved, and teaching as well as reference materials have been made available, most notably a dictionary (Iziko lesiHlathululi-mezwi sesiNdebele 2006).

With regard to the relationship between the Ndebele varieties, there are two striking points. First, despite close genealogical ties, much shared vocabulary, and many similar or near-identical grammatical categories, speakers often emphasise the importance of keeping different varieties apart and describe their own ability to tell them apart. Apparently, the intense contact situation has not led to an overall levelling of dialects or varieties. Second, there is no unanimous view with regard to how language contact affects two specific areas of linguistic structure: tone and prosody, on the one hand; and on the other hand, the lexical semantics and conceptual patterns underlying the functioning of grammar domains sensitive to lexical semantics, for example, the lexical and grammatical aspect interface for verbs. Our ambitious goal was to explore these areas from a contact linguistics point of view in order to pave the way towards integrating this insight into language historical reasoning. The rationale was approximately the following: prosody and semantics are two under-researched areas in contact linguistics, and the more we learn about how both domains of grammar behave in contact scenarios, the better our chances to derive language-historical insight from comparative work (beyond the reconstruction of proto-vocabularies and historical phonology).

Particularly tricky in this context is the widespread multilingualism prevalent among speakers of Ndebele varieties, along with a kind of pan-Nguni knowledge or sense of language. Practically all speakers of the Ndebele varieties are familiar with other languages of both clusters, Nguni and Sotho-Tswana. One could therefore question the choice of our research area. If the aim is to learn about the “behaviour in contact” of two specific grammatical domains, why choose a complex linguistic setting where one will need to juggle so many variables? One reason is that this kind of situation – multilingualism among related languages – is common and characterises many parts of Africa. Another reason is precisely what was pointed out earlier, namely, that despite similarity, some differences are meticulously upheld.

Summarising the most significant aspects of our Academy of Finland funded project work so far,¹ we can state the following point concerning complexity and

1 “Stability and Change in Language Contact: The Case of Southern Ndebele (South Africa)”

simplification as possible outcomes of language contact. With regard to both prosody and lexical semantic patterns, the Ndebele contact settings did not lead to simplification and dialect levelling. Given that we are dealing with a situation in which, at least historically, there must have been relatively stable long-term multilingualism, it is not surprising that contact should not lead to simplification. This corresponds to what Trudgill argues in his *Sociolinguistic Typology* (2011). If we were dealing with a contact situation characterised by many (imperfect) adult learners, we would expect to find tendencies towards simplification. Instead, Ndebele varieties are spoken in situations of genuine multilingualism with acquisition of various languages from an early age. Such a scenario, common in the linguistic setting of South Africa, would not have that effect. If anything, it should be expected to render the linguistic varieties involved in contact situations more complex. This, however, is also not necessarily the case. Possibly because the varieties involved in the contact scenarios are quite similar to each other to begin with, the potential for “complexification” of individual varieties is limited. But – arguably – the maintenance of rather fine-grained differences, sometimes hard to detect for outside observers, is due to a high degree of competence in the various varieties. For instance, Crane and Fleisch (this volume) highlight how isiNdebele and Sindebele maintain rather subtle differences in the expression of event structure.

This kind of analysis requires a thorough understanding of the grammar of the linguistic varieties involved, but also a good grasp of the sociological and demographic conditions of the respective communities, ideally including knowledge of their migration and settlement histories. This kind of rich documentation and collection of relevant information reflects an approach to language documentation typical for linguistic research conducted in the Helsinki tradition.

COLLABORATIVE WORK: HELSINKI AREA AND LANGUAGE STUDIES

A long-standing tradition in Finnish linguistics (see, e.g. Hovdhaugen et al. 2000) has matured into an ambitious approach that strives to produce comprehensive descriptions of languages based on the collection of original data in the field. Its theoretical foundation is functional rather than formal. The foremost aim is to yield an understanding of the linguistic varieties under study on their own terms. While the data-driven objective is thorough synchronic language description, the perspective taken in this approach is broader than that. It is informed by (and also, in return, feeds into) historical comparison and linguistic typology. Language ecological underpinnings stress the need for awareness of social condi-

tions surrounding language, linguistic practices, and communication. It is in this spirit that language documentation, preservation, and even revitalisation activities are approached, usually in close collaboration with members of the respective linguistic communities. Especially for students and junior scholars, having such a broad range of phenomena to tackle is interesting, but can also easily be experienced as overwhelming.

Among the Helsinki Area and Language Studies (HALS) research cluster at the University of Helsinki, we have found the format of field excursions particularly promising as a way to overcome this challenge in teaching and research. HALS had organised three such field excursions prior to our trip to South Africa. On each occasion, participants comprised students and researchers at different career stages and with expertise in different regions. For the sake of continuity, some more experienced researchers as well as some students participated on more than one occasion. This afforded the opportunity to transfer methods and data collection techniques that had been developed, tested, refined, and proved successful in specific geographical areas to regions and contexts where – often simply for arbitrary reasons relating to particular research traditions – they had previously not been applied.

The contribution by Heini Arjava and Andrei Dumitrescu in the present volume may serve as an example. In the context of the South African field excursion, Arjava and Dumitrescu worked on spatial conceptualisation among speakers of isiNdebele, relying on a three-dimensional stimuli technique which had already been used on the earlier occasion of a HALS field excursion to Russia, focussing on Erzya (Arjava 2016). How spatial relations are conceptualised is an intriguing question that has long attracted the attention of language philosophers because of its relevance to significant issues around language universals and linguistic relativity (see, e.g. Levinson 2003). Using non-verbal stimuli led Arjava and Dumitrescu to promising results, including a better understanding of the “division of labour” between motion verbs and locatives in isiNdebele. It is important to point out that in their case the familiarity with the method does not mean that it could be run as a routine technique irrespective of local contexts and language-specific conditions. The picture that they come up with for isiNdebele is rich and conveys a broad range of pragmatic factors which have often not received the attention they deserve.

In addition to the opportunity to transfer technical expertise from one geographical area to another, having a degree of familiarity with one another’s work enabled both intellectual support and practical support with specific tasks. This mutual support included, of course, daily discussion of insights during joint activities. But there also were practical synergy effects. Data collection strategies

that required larger numbers of respondents were carried out by a dedicated team, but the data were complemented by teams pursuing other tasks. Riho Grünthal, Sami Honkasalo, and Markus Juutinen conducted research that required broad evidence, based on a considerable amount of data. Practically all other members of the larger team collected survey information relevant to their area of interest. Therefore, the core information on sociological variables and the sociolinguistic profile of both Ndebele varieties has benefitted from the fact that this team worked embedded in a larger network of peers. This benefit was mutual, because the sociolinguistic survey information also fed into other teams' work.

A particularly interesting aspect of our collaborative research program has been that the current language dynamics and the sociolinguistic environment in South Africa were also tackled by another research team, consisting of Isalee Jallow, Maikki Järvi, Mimi Masango, Niina Väisänen, and Axel Fleisch. Their in-depth interviews with many members of the Sindebele speaker community contributed greatly to a better understanding of the current language dynamics in the wider Mokopane area. Relating their qualitative insight to the more quantitatively oriented study of Grünthal, Honkasalo, and Juutinen provided valuable information on the use of Sindebele and the language attitudes towards it. Perhaps one of the most significant insights concerns the fact that, although Sindebele has shrunk in terms of speaker numbers and is used in fewer and fewer contexts, there were still a considerable number second language learners of this variety until recently. This is because women who spoke another language (often of the Sotho-Tswana group) and married into a Sindebele-speaking household were supposed to use the language of the household. This practice must have had a significant effect on subsequent generations of learners – the children of such women without native proficiency of Sindebele. The imprint on the language is considerable: we find Sotho-Tswana substrate effects alongside heavy borrowing, mostly from northern Sesotho into Sindebele. This mix is intricate and difficult to disentangle in terms of historical linguistics.

Our most significant research bases were, on the one hand, small towns and townships in the vicinity of Mokopane in the Limpopo Province and, on the other hand, Siyabuswa, Emthambothini, and neighbouring villages in the Mpumalanga Province. All participants of the field trip visited both sites, but depending on their research questions, spent a different amount of time in either. For isiNdebele, more background knowledge was available, so that study teams investigating more specific questions in grammar and typology could delve into their work more straightforwardly. Matti Miestamo, Kati Helenius, and Jukka Kajala looked into the morphosyntactic environments in which the augment – the initial vowel of the noun class prefix in its default shape – is dropped. From

other Nguni languages we know that referentiality plays into this matter. It is often in the context of negation that the augment does not appear. Miestamo, Helenius, and Kajala focussed on isiNdebele. For Sindebele, which belongs to the so-called Tekela languages that do not have the augment at all, this topic could simply not be addressed meaningfully. In the future, a fuller analysis of Sindebele might reveal that an earlier (High) tone of the augment has left traces, but for now, we have no evidence of that. In fact, it is perhaps not even very likely, since the in-depth description of nominal tone in isiNdebele shows that in those contexts where the augment does not occur, there is no indication of a High tone that would have been retained if the vowel segment is dropped. Lotta Aunio, Stephan Schulz, Nailya Philippova, and Antti Laine dedicated special attention to nominal tone in isiNdebele. Despite the overall better documentation situation for that variety compared to Sindebele in Limpopo, no analyses of the isiNdebele tone system existed prior to this. Interestingly, tone spread rules in isiNdebele resemble those of the Sotho varieties spoken in the area rather than those of the Nguni relatives.

Also in the domain of phonology, Stephan Schulz, Antti Laine, Lotta Aunio, and Nailya Philippova present a contrastive analysis of Sindebele and isiNdebele, with emphasis on the latter. Their work on the variation of click pronunciation is highly relevant to questions of historical language dynamics in the research area. Sindebele has largely abandoned the use of clicks, which are marginal phonemes, if they have phonological status in that variety at all. A reasonable assumption appears to be that clicks have been replaced. The fact that fairly regular correspondences with cognate click-containing words in isiNdebele exist implies that clicks once existed but have been lost in Sindebele.

However, the speaker behaviour of isiNdebele speakers indicates that such a development is not necessarily unidirectional. Schulz et al. observe that younger speakers use extended and diversified click repertoires in ways that are conventionalised yet do not strictly correspond. This pattern of usage differs from that of isiNdebele speakers who were not schooled in that language. Schulz et al. suggest that adherence to normative notions of proper click articulation as stipulated, for example, by the National Lexicography Unit for isiNdebele, is indicative of language attitudes, formal education in isiNdebele, and linguistic awareness. Click variation is not necessarily an effect of language attrition, but appears to suggest rather the contrary in isiNdebele: language maintenance throughout the community.

Phonological work of this kind relies on the availability of sufficient lexical data. Jaakko Helke, another member of our joint field trip, dedicated considerable effort to the lexicography of both South African Ndebele varieties by

compiling available information and collecting data especially with regard to Sindebele in Mokopane, and by making these data available to others electronically. This enabled other participants in our short excursion to draw from this information when venturing into other thematic domains. Among these are colleagues who have not contributed to this special issue, but who collaborated in important ways. Riikka Länsisalmi was interested in colour terminology (in particular that of isiNdebele speakers, famed for their visual artistry). Working in Emthambothini, Länsisalmi followed research techniques used in cognitive linguistics and anthropology – not unlike Arjava and Dumitrescu, albeit in a different semantic domain. Aino Pesonen and Lena Seppinen also used a technique that relies on non-verbal stimuli. They initiated conversations with speakers of isiNdebele by relying on language portraits produced by their interlocutors. These conversations on language biographies yielded insights into the recent history and trajectories of people in Mpumalanga, dismantling some naïve perceptions of the ethnic and cultural belonging of these people.

STAKEHOLDERS IN SOUTH AFRICA WITH AN INTEREST IN LANGUAGE

Academic questions of theory and method were some of the main drivers behind the linguistically oriented research on the South African Ndebele varieties presented in this volume. Research investigations were carried out mainly by researchers from Helsinki, in collaboration with South African speakers of Ndebele. However, it is very significant that other South African stakeholders were involved, as well. They supported the Helsinki-based research group, and without this support, it would obviously not have been possible to carry out this type of research. As authors of this introduction and coordinators of this volume, we are immensely grateful to the people who helped us bring this initiative to fruition. However, the intention behind writing the following section of this introduction goes beyond acknowledging our gratitude to those who provided practical and intellectual support. We find it important to illustrate the complexity of the South African setting with regard to the research that is presented in the chapters of this special issue, because many people were involved, and they had very different roles and interests in the project.

It is only logical that, given the diversity among the South African stakeholders, there was no unified South African voice with regard to many of the questions addressed in this volume. Many issues around the South African Ndebele varieties are contested. This is true for Sindebele in Limpopo, because of its somewhat precarious status and an unclear future. But it is also true for isiNdebele in

Mpumalanga, even though it enjoys official recognition. Its path of development into a standardised variety based on widely accepted consensus decisions is an arduous one. We are convinced that these are not just political issues that stand apart from “core linguistic” questions. Clearly, language contact and multilingualism have shaped these varieties over long periods of time. Language contact is not just something that happens to speakers and leaves unintended imprints. These situations can also trigger conscious and active agency on the part of the speakers. Reactions and actions can differ substantially, and we need to be aware of this even if our core interest may be “simply” structural description and grammatical analysis.

This is perhaps best illustrated by telling the story of what has been an ambivalent contact situation in the Mandebele community. Trudgill (2011) differentiates between established societal multilingualism with two (or more) varieties being in long-term contact, implying that speakers come close to being L1 learners of both varieties, and contact situations where imperfect adult learning of the contact variety (or varieties) leads to a very different outcome in terms of the structural imprint on any possibly emerging contact varieties. For Sindebele, it seems as though both mechanisms have been operating in parallel for rather many generations. That is, Sindebele is spoken in an extremely interesting long-term, stable situation, with two kinds of contact that have very different predicted outcomes for linguistic structure. In addition, we must consider the fact that in such an environment, speakers are likely to adjust their variety to different communicative and stance requirements (either distancing themselves from or associating themselves with Nguni or Sotho-Tswana speakers, according to the speech situation). The controversies surrounding such complex scenarios, along with possibly contradictory mechanisms of maintenance and adaptive change and the need to keep language structures open enough to remain malleable, will have effects on core areas of language structure: speakers of Sindebele are able to draw on multiple lexical options, sociophonetic variations, and a broad inventory of grammatical constructions and categories. It should be obvious that a plain “mono-dimensional” description of the grammatical features and the lexicon of this language is likely to produce too static an impression.

These are considerations based on and feeding into sociolinguistic theory. They are matched by the concerns of language activists and members of the Mandebele community. MANO, the Mandebele National Organisation, consists of people who are concerned about the future of the cultural heritage, history and language dynamics of those associated with the Ndebele variety in use in the Limpopo province, in particular in Ga-Maraba, Ga-Mashashane, and Mokopane (including various settlements mostly in its northwestern outskirts). Their activism aims

at ensuring a future for this cultural community. Language plays a central role in this activism. The wish of MANO is for Sindebele to be recognised more widely, and for it to be standardised and used in more spheres of communication. In the anticipation of mutual benefits, the researchers whose contributions are part of this volume were welcomed by MANO and received a great deal of practical support from its members. The work on different lexical and grammatical aspects of Sindebele involved members of MANO as the key consultants. One should bear in mind that this cooperation had a significant impact on the external researchers' outlook on Sindebele in different respects. Since we were introduced directly to Sindebele-speaking households when travelling in the area, our impression of the vitality and geographic contiguity of Sindebele may be positively biased. In communicating with us, the speakers of Sindebele were aware of our interest in that variety and, in fact, our visit may have been a special moment during which the significance of Sindebele was emphasised by many. MANO certainly makes continued and persistent efforts to maintain community awareness and promote a positive attitude towards using Sindebele, but in the everyday lives of many speakers, the language is probably not as much at the forefront of most people's concerns as it was during the intensive days dedicated to Sindebele while the group of researchers visited the area.

For isiNdebele, the situation differs fundamentally with regard to political recognition. There are mandated bodies whose task it is to develop the language. This includes researching its grammatical properties, but perhaps even more work is dedicated to lexicography, to work on orthographic norms and conventions, and to the development of school material and other literature that aims to foster the active use of isiNdebele in a wide range of functional domains. The language board for isiNdebele monitors and promotes such activities, in close collaboration with other institutions instrumental in the development of isiNdebele. A fundamental institution in this respect is the National Lexicography Unit (NLU) for isiNdebele, which has its physical headquarters at the University of Pretoria. More recently, the language has also been introduced into the teaching programme of UNISA, bolstering future research on isiNdebele in these institutions.

The tasks of the South African scholars involved in isiNdebele research are daunting. They need to constantly bridge rather different mind-sets and exigencies: these include, on the one hand, a descriptive scholarly approach that needs to take into account variation, contact, and a high degree of fluidity in linguistic practices among speakers of isiNdebele; on the other hand, there are the prescriptive demands that emanate from the needs of teachers, translators, legal practitioners, and many others. It is important to bear in mind that both

perspectives are equally necessary, and that one should be explicit about one's function and position when writing about linguistic varieties like those tackled in this publication.

Many South African stakeholders are academics and language practitioners (especially in the case of isiNdebele) or cultural activists (mostly in the case of Sindebele), but these are not the only important actors. Private entrepreneurs seek to foster cultural activities in a combination of commercial interest and genuine concern about the future of their cultural heritage. This is a noteworthy point, because commercial use of ethnic heritage should not be underestimated. It might seem that the chances of lucrative commercial activity based on cultural heritage would be negligible and therefore not worthy of wider interest, but such an assumption would be incorrect. For one thing, in regions where income-generation remains difficult and many individuals struggle to meet basic needs, even relatively small-scale initiatives may provide income at a low yet significant level. In addition to that, Ndebele material culture and crafts(wo)manship are internationally known and recognized, so that their economic potential cannot be denied. While some people may have ambivalent ideas regarding commercial exploitation of cultural legacies, the interest in culture and language does create opportunities. A significant sign of this is the fact that regional politicians have been welcoming such initiatives. Like language practitioners and (cultural and language) activists, local politicians typically have a preservation and/or development agenda. Because of the potentially divergent interests and motivation behind linguistic research work, it is important to strive for a balanced collaborative setting. Again, this is not simply a matter of fair treatment and meeting the expectations of different research participants. While it is obviously the case that research output – publications like these – should be made available to those involved in the research process, one should ideally aim to go one step beyond and make this kind of material relevant for those involved. While it is of course legitimate to keep intellectual endeavour, practical application, and activism separate, ultimately all three are necessary for the continued support and sustainable language development of any linguistic variety.

This kind of support from a broad range of people, including private entrepreneurs, politicians, and administrators, as well as traditional authorities and individual members of the communities who take a particular personal interest in this kind of research, is paramount to successful academic work.

We also benefitted from the experience of three scholars working in South Africa: Eva-Marie Bloom Ström, at the time based at Rhodes University in Grahamstown, and Matthias Brenzinger and Sheena Shah, then at the University of Cape Town. They spent some time with us during our research activities in

Limpopo and Mpumalanga in 2016. They had earlier initiated linguistic research activities in southern Africa that are similar in essence to those of the HALS research group, also involving stakeholders of different backgrounds and aiming at language documentation and description as well as research into language contact and (micro-)variation.

At the time of the HALS excursion, Matthias Brenzinger and Sheena Shah had begun to conduct research into the sociolinguistic situation, language dynamics, and variation of Siphûthî in south-eastern Lesotho. Siphûthî resembles Sindebele in some striking ways: It is also a (Tekela) Nguni variety that is used in areas where speakers are in very close contact and, in fact, all bilingual with varieties of the Sotho-Tswana-cluster. This particular situation – Nguni minority varieties in fairly long-term contact predominantly with varieties of the Sotho-Tswana-cluster – complicates historical linguistic analysis. This is all the more the case because the Nguni-internal genealogical relations are also anything but clear. IsiZulu and isiXhosa are used by many more people than are the other Nguni languages, but their high significance at present may easily distort language-historical assessments. IsiZulu, with its wide current geographic distribution and demography, is the result of a fairly recent spread. For isiXhosa, it is certainly true that its internal diversity does not always receive due attention, suggesting a longer timespan during which it has consolidated in the southernmost areas inhabited by Nguni speakers. In order to learn about historical layers prior to the expansion and consolidation of these two varieties, in-depth work on languages exactly of the type of Siphûthî and Sindebele is invaluable. The major challenge here is to distinguish inherited features that are possibly retentions of non-typical Nguni features from much more recent, contact-induced features. In addition to that, these languages are endangered and spoken at best in small language islands, but often in even more scattered scenarios where speakers do not have much opportunity to use the language regularly in everyday situations beyond, perhaps, one's own family, if at all. It has been extremely important to bring together the insight from rather different teams – those conducting sociolinguistic work and those carrying out descriptive work and linguistic analysis of particular grammatical features – in order to pave a way towards a better understanding of the language-historical ramifications in the region.

In addition to insights gained through enlightening discussions with Matthias Brenzinger and Sheena Shah, the importance of multidisciplinary approaches became striking when both the survey-style work (Grünthal, Honkasalo, and Juutinen this volume) and the information collected by another team (Jallow et al. this volume) made it clear that Sindebele must have experienced a somewhat contradictory situation in terms of language dynamics. On the one hand, speaker

numbers have decreased for a considerable period of time, and a language shift to Northern Sotho has been underway for a long time now. Yet, throughout that time, women who married into this community were expected to learn and use Sindebele. In other words, we may find “language attrition” effects side by side with language substrate features introduced by these women. The putatively historically similar cases of Siphûti and Sindebele may be very interesting to contrast more systematically in the future.

The experience of a larger research group joining efforts for a short but intensive research excursion is still rather exceptional in linguistic fieldwork. Measuring the non-negligible effort in setting this up against the added value, we are convinced that this is a format to be pursued in future work. We advocate this approach not simply for practical reasons (like benefitting from complementary areas of expertise from different individuals), but also because it has direct implications for the scope and theoretical ramifications of the work itself. There is ample room for accidental small-scale demographic bottle-neck situations at specific points in time, possibly leading to a current linguistic map with seemingly haphazard distributions of linguistic features (including lexicon, which is rather obvious, but also features in a wide range of other areas of language structure, from phonetics, tone, and phonology all the way to morpho-syntactic categories and functions). We therefore hold it to be important that researchers do not just compare results, but that they share at least part of the actual field experience in order to build sufficiently rich descriptions that would allow to compare the sociolinguistic histories of these communities. Collaborative research in such areas is most fruitful if it does more than compiling the information and insight gained by larger teams of specialists in different relevant fields. Comparison of results is considerably more reliable if there is a shared understanding of how these results are arrived at, along with the possibility of intervening in the process of data collection as it unfolds (for an in-depth discussion of epistemological opportunities in trans- and interdisciplinary research, see Möhlig 2010).

Additional valuable work that has received some attention in similar sociolinguistic settings are questions of language acquisition. Surely there are Ndebele speakers whose language competence in their respective variety can be regarded as insufficient, deficient, or imperfect. And their use of that variety might, in that case, show what could be classified as attrition phenomena. We would like, once again, to draw attention to a different phenomenon: the *maintenance* of small distinctive features among otherwise fairly closely related languages. What this means is that young learners must be rather careful and attentive about such features, whether it be the use of tone, fine semantic nuances in the use of related grammatical categories, or any other. A multilingual setting in which everything

just mixes randomly is clearly *not* what we observe among the South African Ndebele varieties. Carefully keeping significant properties apart means cognitive work and effort in acquisition. We know little at this point about the process of acquisition of the relevant features. Investigating, for instance, the error patterns of language learners in multilingual environments involving closely related and similar languages like the Nguni languages of South Africa could lead to significant insights.

These are not simply theoretically driven points on the research agenda. Identity as expressed by or ascribed to individuals often rests on the linguistic markers associated with a particular person. The interplay of agency and languaging mechanisms, on the one hand, and involuntary effects such as accents and speech timbre, on the other, bear meaning for the members of different communities in South Africa, and South Africa at large. Here we see the potential to foster future research that is both theoretically novel and ground-breaking while being significant for the communities whose linguistic practices and languages are investigated. It is here that we also see the significance of reflective meta-research alongside the academically driven endeavours. Ideally, research should benefit communities, but even where there is no immediate socio-economic or cultural benefit, the research should at least matter to those who participate in the research and use the linguistic varieties under study. We hope that the contributions in this collection attest to this mindset and that speakers, scholars, and language practitioners will find it useful.

REFERENCES

- ARJAVA, Heini 2016. Experimenting on Spatiality: Elicitation with Three-Dimensional Toys in a Field Study of Erzya. In: K. SHAGAL & H. ARJAVA (eds), *Mordvin Languages in the Field* (Uralica Helsingiensia 10): 319–338. Helsinki: The Finno-Ugrian Society.
- BLEEK, Wilhelm H.I. 1862. *A Comparative Grammar of South African Languages*. Cape Town: Juta.
- GROUT, Lewis 1849. The Zulu and Other Dialects of Southern Africa. *Journal of the American Oriental Society* 1(4): 397–433.
- GROUT, Lewis 1859. *The isiZulu: A Grammar of the Zulu Language Accompanied with a Historical Introduction*. Pietermaritzburg: May and Davis.
- GUTHRIE, Malcolm 1967/1971. *Comparative Bantu: An Introduction to the Comparative Linguistics and Prehistory of the Bantu Languages*. Farnham: Gregg Press.
- HOVDHAUGEN, Even, Fred KARLSSON, Carol HENRIKSEN & Bengt SIGURD 2000. *The History of Linguistics in the Nordic Countries*. Helsinki: Societas Scientiarum Fennica.
- Iziko lesiHlathululi-mezwi sesiNdebele 2006. *IsiNdebele–English/English–isiNdebele: IsiHlathululi-mezwi/Bilingual and Explanatory Dictionary*. Cape Town: Phumelela.

- LEVINSON, Stephen C. 2003. *Space in Language and Cognition: Explorations in Cognitive Diversity*. Cambridge: CUP.
- MAHO, Jouni Filip 2009. *NUGL Online: The Online Version of the New Updated Guthrie List: A Referential Classification of the Bantu Languages*. Available at <brill.com/fileasset/downloads_products/35125_Bantu-New-updated-Guthrie-List.pdf>, accessed 25 Nov. 2019
- MÖHLIG, Wilhelm J.G. 2010. Towards Interdisciplinarity: An Introduction Based on Experiences of the Long-term Project ACACIA. In: W.J.G. MÖHLIG, O. BUBENZER & G. MENZ (eds), *Towards Interdisciplinarity: Experience of the Long-term ACACIA Project*: 1–20. Cologne: Rüdiger Köppe.
- OWNBY, Carolan Postma 1985. *Early Nguni History: The Linguistic Evidence and its Correlation with Archeology and Oral Tradition*. PhD dissertation, University of California, Los Angeles.
- SKHOSANA, Philemon Buti 2009. *The Linguistic Relationship between Southern and Northern Ndebele*. PhD dissertation, University of Pretoria. Available at <hdl.handle.net/2263/28563>, accessed 25 Nov. 2019.
- TRUDGILL, Peter 2011. *Sociolinguistic Typology: Social Determinants of Linguistic Complexity*. Oxford: OUP.
- WEBB, Victor N. 2002. *Language in South Africa: The Role of Language in National Transformation, Reconstruction and Development*. Amsterdam: John Benjamins.
- WILKES, Arnett 2001. Northern and Southern Ndebele: Why Harmonisation Will not Work. *South African Journal of African Languages* 21(3): 310–322.
- WILKES, Arnett 2007. The Multilingual Composition of Northern Ndebele. In: M.J. MOJALEFA (ed.), *Rabadia Ratšhatšha: Studies in African Language, Literature, Linguistics, Translation and Lexicography. Festschrift in Honour of P.S. Groenewald*: 159–175. Stellenbosch: Sun Press.
- ZIERVOGEL, Dirk 1959. *A Grammar of the Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa*. Pretoria: J.L. van Schaik.

LANGUAGE SOCIOLOGICAL TRENDS IN SOUTH AFRICAN NDEBELE COMMUNITIES: A PILOT SURVEY

Riho Grünthal, Sami Honkasalo & Markus Juutinen

This article presents the results of a 2016 language sociological survey focusing on the language choices and practices of two different Ndebele-speaking communities in Limpopo and Mpumalanga, the two north-eastern provinces of South Africa. The survey shows the prevailing dynamics in these multilingual environments, in both the private and public spheres. One of the main differences between the investigated groups is that in Mpumalanga, Ndebele is the dominating language in its surroundings, whereas in Limpopo, the local Ndebele variety is in the position of a minority language. From the perspective of daily practices and attitudes, Northern Sotho often dominates in this particular case. The different perceptions of the implementation of language policies, and the attitudes of individual speakers with respect to private and public use of the two Ndebele variants, suggest that further research is needed in order to shed more light on the language sociological status of Limpopo Ndebele in particular. The survey consisted of a pilot sample of three different groups: 1) speakers of the Mpumalanga Ndebele variety, which corresponds to isiNdebele and has official status in South Africa; 2) the significantly divergent Limpopo Ndebele, which does not have any official status; and 3) a control group sample from Mokopane town.

1. INTRODUCTION

This report is based on a language sociological survey which was carried out in the two north-eastern provinces of South Africa, namely Limpopo and Mpumalanga in May 2016.¹ The interviews providing the data analyzed below were made during the fieldtrip of the HALS (Helsinki Area and Language Studies) research

¹ We would like to express our deepest gratitude to the numerous people who gave their time to respond to the questionnaire and helped us with collecting the data. We are especially grateful to our local research assistants and coordinators Mmadi Kekana, Kenneth Ngoloti, Spanya Lebelo, Emmanuel Ledwaba, Jerry Malebana, Simon Ndalani, Stephane Mduduzi, and Godfrey Thubane. We appreciate highly our collaborators in the HALS team who were ready to share their time by filling the questionnaire with their informants while focusing on other linguistic and sociolinguistic issues. Thanks to members of the HALS team during the fieldwork in South Africa: Lotta Aunio, Axel Fleisch, Heini Arjava, Andrei Dumitrescu, Jaakko Helke, Kati Helenius, Jukka Kajala, Antti Laine, Riikka Länsisalmi, Matti Miestamo, Nailya Philippova, Stephan Schulz, Niina Väisänen, Maikki Järvi, Mimi Masango, Isalee Jallow, Aino Pesonen, and Lena Seppinen.

community by researchers and students of the University of Helsinki (Finland) in collaboration with local research assistants and coordinators. The general aim of the fieldtrip was to investigate the contemporary language situations of several linguistic varieties that are collectively referred to as South African Ndebele. Our specific objective was to conduct a sociological pilot study whose goal was to bring to light prevailing language practices and choices in a multilingual environment, in both private and public spheres.

While the main aim of the fieldwork trip was to investigate South African Ndebele varieties from different linguistic angles, this report focuses on the language sociological conditions in two different language communities which both identify themselves as Ndebele. Despite the common ethnonym, linguistic differences exist between the languages of the two Ndebele communities in the country, a fact that is mentioned in earlier works (Wilkes 2001; 2007; Ziervogel 1959: 3–6), but which has not been sufficiently researched so far. The difference between the two Ndebele languages was mentioned by some interviewees in the present study and, conceivably, is relevant in terms of the language sociological status of both variants. Although linguistic taxonomy as such does not imply any language sociological differences, in this case study, one of the issues demanding further investigation is the different language sociological conditions in the two Ndebele communities, their relationship to the local variant as a language of daily communication, and more detailed linguistic differences between the two Ndebele variants. From the perspective of daily practices and attitudes, one of the main differences is that in Mpumalanga, Ndebele is the dominating language in its surroundings, whereas in Limpopo the local Ndebele variety is in the position of a minority language in a context where Northern Sotho often dominates. Furthermore, the discussion of the status of individual languages and their local variants has special importance from the perspective of linguistic rights. IsiNdebele is recognized as one of South Africa's eleven official languages. However, the different perceptions of the implementation of language law and the relationship of individual speakers with respect to public use of the two Ndebele variants suggests that further research is needed in this area as well.

The interviews were first made in the surroundings of Mokopane in Limpopo, mainly in the villages of Mosesetjane, Ga-Mashashane, and Mosate, after which the work continued in the northern part of the province of Mpumalanga, mainly in the townships and villages of Siyabuswa and Emthambothini (Weltevrede) (see Figure 1 for the fieldwork locations). Linguistically, these two areas are divided between two different Ndebele varieties, as described in the following paragraph. Although these two provinces neighbor one another, historically, the Ndebele communities do not. The background of the two Ndebele groups is

different and, presumably, there have not been recent direct contacts between the two areas that influence the language. Both variants are used in a multilingual environment, as are all South African languages.

The South African Ndebele variety spoken in the Limpopo province, whose speakers call it Sindebele, is sometimes referred to as “Northern Ndebele”. Brenzinger (2017: 45), for instance, adheres to this use when writing about its lack of official status in South Africa. More commonly, however, the term



Figure 1 Settlements of Mpumalanga Ndebele and Limpopo Ndebele speakers visited by the HALS team in 2016.²

2. Map of South Africa from Wikimedia Commons (author Htonl): <https://commons.wikimedia.org/wiki/File:Map_of_South_Africa_with_English_labels.svg>; map of Mpumalanga and Limpopo regions © 2018 AfriGIS (Pty) Ltd, Google, the tags to the visited settlements with their accompanying names added by the authors.

“Northern Ndebele” is used to refer to the Zimbabwean Ndebele variety, also often simply labelled “Zimbabwean Ndebele” (e.g. van Wyk 1966). The South African and Zimbabwean varieties are spoken in different areas and are different Bantu languages – despite the misleading practice of calling both of them Northern Ndebele.

Ethnologue (Eberhard, Simons & Fennig 2019) lists two Ndebele languages: the first one referred to as Southern Ndebele, a statutory national language of South Africa spoken in Mpumalanga and Gauteng provinces with 1.1 million first language speakers; and the second one referring to Zimbabwean Ndebele, with an estimated 1.6 million speakers. The Limpopo variety, that is, the more northerly variety within South Africa, is not listed as a separate entry in this source.

The Zimbabwean Ndebele variety bears fairly close genealogical ties to isiZulu – more so than the linguistic varieties carrying the name Ndebele that are used in South Africa. Note that all linguistic varieties labeled as “Ndebele” as well as Zulu belong into the Nguni language cluster, a sub-family of southern Bantu languages.

Another important sociological factor that strongly influences the Ndebele communities in both Limpopo and Mpumalanga is rapid population growth. The high number of children and young adults plays an important role in the way language is used and transferred between generations. It also affects considerably the use of different languages in various daily activities. Compared to earlier language sociological settings, one of the main differences is that in the contemporary world, the models of language use are taken from a much larger array of alternatives, not only the nearest neighboring contacts. In addition to family, friends and relatives, school and education play an increasing role in the choice of greetings, words, phrases, and language. Hence, eventually, demography and population growth should also be taken into account in more detailed sociological analyses concerning the education, social structures, and language planning in the investigated areas and other similar environments. As regards the current study, parameters such as population size, density, and mobility cannot be considered systematically, because this would require more detailed population data.

1.1 Group identification and terminology

In multilingual communities, there are both group-internal and group-external ways of labeling a particular community and individual people on the basis of their language or other cultural characteristics. Ethnonyms such as English, Afrikaans, Zulu, Xhosa, and Tsonga that denote a language or its speakers have connotations indicating a special relationship between a language, geographical

area, and social and economic contexts. However, these kinds of labels emerge and are used in different ways in various areas and contexts.

Speakers of the two Ndebele varieties of South Africa do not distinguish them based on a geographical contrast between North and South. Locality and contrast with other local languages such as Northern Sotho, Tsonga, and English plays a more important role, as Ndebele speakers simply relate their language with other local languages instead of emphasizing a distant and often non-existent relationship with the other Ndebele community. In order to decrease ambiguity between different labels, we implement geographically based concepts of **Limpopo Ndebele** (corresponding to South African Northern Ndebele, alternatively Sindebele) and **Mpumalanga Ndebele** (Southern Ndebele, alternatively isiNdebele) in the following analysis.

1.2 The aim of the survey

The purpose of this report is to shed light on the South African Ndebele communities from a language sociological perspective on the basis of the information collected from people that use or have used Ndebele varieties. Like other branches of sociology, but unlike more theoretical linguistic approaches, we identify and describe everyday practices and attitudes affecting the Ndebele varieties through an extensive set of detailed questions. In principle, this kind of information – a snapshot of a specific language sociological scenario – can always be obtained from the members of a given speech community. However, times change, and people move, which has a direct influence on the position of an individual and his or her language in a community. Therefore, an academic study can give a larger picture in the form of a horizontal crosscut made at a limited time and point out the contexts of separate phenomena. Most commonly, people do not repeatedly consider their language choices while talking to people in different places. We may know what language people we meet are most likely to speak, and we may assume that a certain language is not used in a certain environment. Thus, the choice of language often emerges from our own experience. A cross-sectional analysis of different parameters in language choice is one of the most concrete results a language sociological analysis may produce. The results can be used in sustainable language planning that seeks to produce contemporary tools for a given language and to support language diversity as an invaluable part of cultural heritage. The main aims of the current paper and the pilot survey are the following:

- (1) To give a concise language sociological overview of prevailing language practices in two South African Ndebele communities, using the evidence of a fieldwork survey.

- (2) To contextualize the two investigated Ndebele variants in terms of South African language policies.
- (3) To show different language sociological trends of the two Ndebele communities as illustrated in the answers of different age cohorts and the data of the survey sample.

The fieldtrip of the HALS team in South Africa in May 2016 confirmed earlier impressions that instead of investigating one Ndebele language, as the current South African language policies suggest, the two Ndebele communities in Mpumalanga and Limpopo must be investigated separately. This decreased the total number of answers of one community, whereas an increase in variance between answers correlated with their different language sociological status.

The survey consists of a pilot sample of three different groups. These are: 1) speakers of the Mpumalanga Ndebele variety, which corresponds to isiNdebele and has official status in South Africa; 2) the significantly different Limpopo Ndebele variety, which does not have any official status; and 3) a randomly selected control group sample collected in Mokopane town, representing more broadly the occurrence of different languages spoken in the area and a more urban environment. The two first samples are the Ndebele communities focused in this report. The third sample is the smallest one and consists of a simple control test of how multilingualism is manifested in more general terms, and to what extent Limpopo Ndebele is represented among other languages of the area.

In language sociological studies, cross-comparison is normally done between variables such as age, sex, place of living, social status, language competence, and use of language in different domains. For this purpose, the size of the survey sample is not fully sufficient because a higher number of language sociological variables decreases the number of respondents matching the selected parameters. The number of male respondents, for instance, is higher than female. However, women traditionally play a significant role in the intergenerational transmission of language in language communities. Therefore, the answers must be interpreted with some caution. Finally, the information collected by means of the questionnaires could be compared with qualitative data collected during the interviews and other HALS fieldwork teams. This, however, will be done only in a very marginal way in this pilot survey.

1.3 The method of the survey sample

The data was collected through face-to-face interviews. The interviews were structured and conveyed following the order of questions in the questionnaire prepared for the fieldtrip and local language environment (see Appendix I). The

questionnaire applied the model of a considerably larger version originally used in the project ELDIR, European Language Diversity for all (for more details, see <eldia-project.org>; also the comparative report by Laakso et al. 2016; for case studies, cf. Karjalainen et al. 2013; Puura et al. 2013). This was an international comparative research project focusing on European minority languages. In the present case, the questionnaire was adjusted so that it would be relevant to the multilingual environment in South Africa. Thus, it included more specific questions concerning competence in and use of local languages. All information was gathered so that the anonymity of respondents was fully protected.

The questionnaire was structured so that metadata concerning the background of the informant was presented first, beginning with the place of the interview, age, sex, and place of living. This was followed by questions concerning language use with family members and the closest relatives. More specific attention was paid to language(s) used as the medium of instruction when the informant received their education. Additional questions were mainly directed to speakers of the two Ndebele variants. The informants were requested to self-evaluate their knowledge of the language. They also commented on their frequency of language use in roughly ten different contexts. An even longer list of contexts was given in a question dealing with language use in the public sphere.

Besides the statistical pilot survey, thematic interviews were made with speakers of the two Ndebele variants, language activists, and stakeholders. This kind of qualitative data is not systematically included in the current report. However, if additional information concerning the use of the Ndebele variants and attitudes influencing everyday choices of language is relevant to our discussion, we occasionally refer to conversations with individual informants as well.

Some of the interviews were made during appointments organized by local research assistants. However, the vast majority took place in random discussions on streets of Ndebele settlements and their surroundings, both in Mpumalanga and Limpopo.

Given that a statistically exhaustive sample should consist of a larger number of respondents than we interviewed, this report has to be taken as a pilot study based on a relatively narrow sample. However, we believe that as a pilot survey, it reveals significant language sociological trends and differences in the investigated communities. The data collected using structured questionnaires and interviews, for instance, shows some sociological variation between different age cohorts and divergence in the use of Ndebele in various contexts. The presence of the two Ndebele variants in public sphere is not uniform, showing dissimilarities in the use and relevance of the language outside of (for example) family and educational

contexts, which in turn has special importance for the parallel use of languages in everyday life.

1.4 The data and questionnaire

The fieldwork in the investigated area lasted less than three weeks. The participants of the HALS fieldtrip group focused on different topics and, accordingly, were divided into subgroups. Two subgroups mainly concentrated on language sociological issues. The authors of the current paper took the main responsibility of sampling the data and collecting basic language sociological information. Other HALS teams provided additional data in the form of filled questionnaires.

The data received from the questionnaires is drawn from 18 basic questions. The questionnaires were in English. In most cases the informants could directly respond to questions in English, although there were some individual cases in which a local fieldworker assisted with the translation. Some interviews were carried out in either one of the Ndebele variants. The declared competence in a given language is based on the self-evaluation of the informants.

Altogether, 209 responses were collected for the first section of the questionnaire, consisting of 61 respondents in Mpumalanga province, 113 respondents in peri-urban and rural areas of Limpopo, and 35 from the town of Mokopane. Additional information was drawn from five question sets which requested more detailed information about the use of Ndebele in different domains. In the control group and a few other cases, this information was elicited for other local languages as well. There was some variance between the research group in the degree to which a given question was repeated and the alternatives were emphasized. Generally speaking, the interviewees were very focused on their role and had a positive attitude with respect to the themes discussed during the interview on the basis of the questionnaire. The additional question sets consisted of 38 variables, of which over 30 had three to five alternatives. Finally, many but not all interviewees were asked to determine the important languages of the research area without any hints as to what they might possibly be.

Interviews were made in both private and public spaces; this difference had only practical importance. Given that the informants were selected randomly, the place and environment could just as well be a private yard as a public street. The latter space was the main context of the more limited Mokopane control group sample made in town. The overall role of Ndebele was much more marginal in the Mokopane control group sample than in the local target groups at Mpumalanga and Limpopo.

Interviewees were chosen in collaboration with local research assistants. This had special importance at Limpopo where the population is more mixed, and the main aim was to find Ndebele speakers, while at Mpumalanga almost everyone would speak the local variant of isiNdebele, the officially recognized language. Generally speaking, the sample focused on areas where Ndebele varieties are spoken, which was crucial for the selection of the given area as the target of the fieldtrip. People known to speak Ndebele were invited to participate in the survey sample in many places. Finally, people living in the same communities with the Ndebele speakers were also interviewed. In many cases, they spoke at least some Ndebele or had a Ndebele background.

After the fieldwork period, the data was organized so that the three different samples were kept apart from another in order to make comparisons between the three investigated groups. However, given that the same questionnaire was used in all interviews, the data also shows some general language sociological tendencies in the investigated area and is, within the limits of the local circumstances, an illustrative example of the perception and effects of language policies and contemporary multilingualism in South Africa.

Because it was not possible to collect the sample digitally and a mail survey was also out of the question, the organization and further elaboration of the data was done manually. The hypothesis behind the current study was that prevailing language sociological trends would be represented in the pilot survey despite the fact that from a statistical viewpoint, the size of the survey is not very big. Being fully aware of this fact, in addition to more general information about the Ndebele communities, basic sociological variables such as age, sex, education, place of living as well as language use with different generations were taken into account. In this case, too, the information concerning different age groups must be interpreted as somewhat tentative, due to the small sample size.

Structurally, the questionnaire consisted of five questions concerning the background of the informant (1–5), two questions focusing on the background of language use (6–7), ten questions concerning language use in the family of the informant (8–17), and one about language use at school (18). The language options listed in the questionnaire and mentioned during the interviews were Ndebele (unspecified), Afrikaans, English, Northern Sotho, Tswana and Zulu; that is, six of the eleven official languages of South Africa. Information was also requested concerning any other languages that the informant might know. Apart from the listed languages, Tsonga came up more frequently than other South African languages, which were mentioned only occasionally.

A more limited set of questions related to five language sociological variables were answered by a smaller part of the informants interviewed by the two

research teams who focused on language sociology. The question about learning a given language (i), which could be either Ndebele or some other language, included variables in place, such as home or school, and source, such as family members or neighbors. The informants were further asked to assess their language competence (ii) in speaking, understanding, writing, and reading, on the scale of five variables between “perfectly” and “not at all”. The frequency of the use of a given language (iii) in public and private domains was inquired on the scale of four parameters, varying between “regularly” and “never”. The fourth set of additional questions included statements about the desirability of the use of the given language with young or adult men or women (iv). Each of these included six answer options between the statements “I totally agree” and “I don’t agree at all”. Finally, the fifth thematic part was presented in the form of statements concerning the use of the given language in about fifteen different kinds of public domains (v). The three answer options were “yes”, “no”, or “I don’t know”.

Every questionnaire was filled out anonymously and assigned a unique number, along with a code indicating the research team. Only a few interviews were recorded during the fieldwork; some recorded interviews included additional qualitative information about the investigated topics, local languages and communities. The data is archived at the section of African Studies at the University of Helsinki.

1.5 The organization of this report

This report is organized as follows: we first give an overview of language policy in South Africa with special emphasis on the official and legislative status of Ndebele. Although the survey itself focused on the contemporary status and use of Ndebele, things related to language rights and the implementation of language policies often have a longer history. In South Africa, contemporary legislation is based on quite recent political changes and decisions, including constitutional support for multilingualism. The political history of South Africa is well documented and there are multiple descriptions of the rise and consequences of the power of white Dutch and British colonialists. While the recent development of political leadership and economic power is, to a large extent, a calque of establishing principally equal rights between white and black people, the history of language policies is much more difficult to follow. In practice, legislation determining language rights was prepared only in the 1990s after the political shift in 1994. The implementation of the formal principles of legislation has been underway only for slightly more than twenty years.

Basing the analysis on this background, sections 2.1 and 2.2 give a concise overview of the role of language as a political issue in South Africa as an introduction to the following sections. As mentioned above, during the fieldwork for the current pilot survey, interviews were first carried out among Limpopo Ndebele in the Mokopane area of Limpopo and the Northern Province, and were followed by the control group interviews in Mokopane and a similar survey at the province of Mpumalanga. In this report, we will proceed in the opposite order, presenting first the analysis of the Mpumalanga data, followed by discussion of the data collected in Limpopo. This order of presentation is motivated by the fact that the Ndebele variety spoken in Mpumalanga corresponds to the variety of Ndebele – called *isiNdebele* in the local language and also in the South African Constitution – that is recognized as one of the official languages of South Africa. The relationship between the northern variant at Limpopo – *Sindebele*, as the native speakers call it – and the official language Ndebele is more ambiguous and needs further investigation both in the light of the fieldwork and this report.

Section 3 reflects briefly on the main differences in the perception of the status of Ndebele in the two investigated communities. These reflections will later serve as a basis for the analysis of their language sociological asymmetry in the concluding sections (4.6 and 5).

The main outcome of the survey sample is presented in Section 4, based on the answers of the respondents and the division of the data into three subparts as described above in Section 1.3. The information is summarized in figures and tables. However, it must be emphasized again that it lacks statistical significance, and that further analyses on the same topic are needed.

2. THE NDEBELE LANGUAGE IN THE SOUTH AFRICAN SOCIETY

2.1 The main outlines of language policies in South Africa

The new Constitution of South Africa promulgated in 1996 commenced a new era in South African language policy. As written, the Constitution appears as one of the most democratic and progressive in the modern world (Heugh 2007: 187). From a linguistic viewpoint, it fundamentally contrasts with most constitutions in Africa that do not include as official languages the languages that are spoken by the majority of citizens (Brenzinger 2017: 41). Reflecting the prevalent multilingualism, South Africa currently has eleven constitutionally established official languages, granting them – in theory – equal status. Following the languages' own orthographies, the post-apartheid Constitution lists the eleven official

languages as Sepedi (Northern Sotho), Sesotho, Setswana, siSwati, Tshivenda, Xitsonga, Afrikaans, English, isiNdebele, isiXhosa, and isiZulu. It thus follows that while isiNdebele (Mpumalanga Ndebele) enjoys official recognition in the new Constitution, Limpopo Ndebele remains unrecognized. Curiously, this is despite the fact that the language was recognized during the apartheid regime (Stroud & Heugh 2003). As a result, the Northern Mandebele National Organisation has unsuccessfully carried out lobbying campaigns for the official recognition of the language (Stroud & Heugh 2003).

In reference to the officially recognized languages, the constitution (Chapter 1 Section 6, Article 2) stipulates that “the state must take practical and positive measures to elevate the status and advance the use of these languages”. In theory, the students have the linguistic right to receive education in any of the official languages, though this is qualified with the addition of “when reasonably practicable”. The actual situation in language practice differs from the stated policy ideal and has frequently been characterized by terms such as a “gap between intention and performance” (Beukes 2009) and “policy-practice gap” (Orman 2008: 94) when discussing South African language policy. This refers to the gap between the stated policy and its actual implementation. The top-down approach with little regard for community support is one of the factors behind the inconsistency between official aims and actual behavior (Yu & Dumisa 2015). Also, while South Africa is an international outlier in embracing linguistic diversity in a constitution, having a large number of official languages has made both developing and implementing meaningful language policies challenging (Brenzinger 2017: 52). As a side effect, having eleven official languages has in fact contributed towards the dominating position of English (Brenzinger 2017).

Despite its shortcomings, the new post-apartheid language policy has taken steps towards embracing linguistic diversity in the country. In contrast to the historical English-Afrikaans bilingualism at the level of official languages, the post-apartheid era has witnessed several official efforts for promoting linguistic pluralism in South Africa. This has taken place through legislation and the foundation of new organizations. For instance, the Pan South African Language Board (PanSALB), established in 1995, is responsible for the promotion of multiculturalism and developing the official languages in South Africa. Also, in 2012, the government issued the Use of Official Languages Bill aiming to elevate the status of South Africa’s indigenous languages.

Understanding the history and development of language policy in South Africa provides a background against which it is possible to examine the current and historical status of the two Ndebele variants. During the apartheid era, language was used as a political tool to define the ethnic groups and thus to strengthen

the system that aimed for separate development of the white and black populations. Rather than multilingualism, the national language policy was formulated to support Afrikaans-English bilingualism, with only those two languages having an official status in the country. The language policy during the apartheid era was highly centralized and local actors generally had only a limited say over matters concerning language policy not aligned with the state's official policies (Jon Orman, pers. comm. 5 July 2016).

During the apartheid regime, the state established "homelands" (Bantustans) for the black population, essentially with the aim of creating ethnic homogeneity. Crucially, the homeland policy was based on the trinitarian notion of language = culture = homeland (Williams 2008: 103). In other words, language was equated with ethnicity, and then a homeland was assigned to the conceptualized ethnolinguistic group. The implemented measures used language as a tool to establish barriers among the black population, with the aim of impeding political and intellectual engagement at a national level (Brenzinger 2017: 42). The historical trajectories of the two Ndebele groups diverge in terms of applied homeland policy. The area extending roughly from Siyabuswa to KwaMhlanga was consolidated into the KwaNdebele homeland with the intention to settle (Mpumalanga) Ndebele speakers in this homeland. In contrast, the speakers of Limpopo Ndebele were dispersed over a wide area, and they were frequently perceived as bilingual in Northern Sotho. The formation of a separate homeland was therefore deemed unnecessary (Herbert & Bailey 2003: 75).

Against this backdrop, the homeland policy has had major repercussions for contemporary language policies in South Africa. In the post-apartheid era, in addition to Afrikaans and English, official status was given to the languages that had had an official homeland status during the apartheid era, leading to the exclusion of Limpopo Ndebele as a potential officially recognized language under the new Constitution. Consequently, the current linguistic policy indirectly reflects former apartheid-era views about language and ethnicity:

[T]he post-apartheid regime has carried over the linguistic categorization of the African population that was imposed upon it by the apartheid regime. In doing so, they have also implicitly valorized many of the putative ethnolinguistic identities that were so dubiously and controversially ascribed to the black population by the apartheid government. (Orman 2008: 92)

Seen from the perspective of Ndebele, the fundamental problem of the current South African language policy lies in its excessive reliance on the homeland framework whose "one territory one language" mapping, an ideology that has its roots in European history and does not accurately represent the linguistic

reality of South Africa. In sum, the marginalized status of Limpopo Ndebele in contemporary South Africa derives directly from the linguistic policies of the preceding apartheid state.

2.2 Historical remarks of the two investigated Ndebele communities: Mpumalanga and Limpopo

As previously noted in this survey, the glossonym Ndebele is polysemous. In a similar fashion, the ethnonym Ndebele is equally polysemous, the term being applied both to the Zimbabwean Ndebele and the South African (Transvaal) Ndebele that further subbranches into the Limpopo and Mpumalanga Ndebele groups (Skhosana 2009: 19). As an ethnonym, the generic name Ndebele has thus three possible major referents. Nevertheless, the history of the three groups abounds in uncertainties, and theories proposed by scholars often contradict each other. Consequently, rather than giving an accurate history of the investigated Ndebele communities, this section attempts to address the most pertinent questions pertaining to their history by including various viewpoints from previous scholarship. The main issues are the mutual relationship of the Zimbabwean and South African Ndebele communities at the macro level, and that of Mpumalanga and Limpopo Ndebele at the micro level and their original homeland prior to migration.

The issues of the South African Ndebele communities' relationship with the Zimbabwean Ndebele has invited plenty of confusion. Seen in a historical light, it nevertheless appears that the South African and Zimbabwean Ndebele communities lack a direct relationship on par with that of the two South African Ndebele communities. Rasmussen (1978: 162) argues that the South African Ndebele communities represent an earlier immigration wave and are essentially unrelated to the Zimbabwean Ndebele community. The Zimbabwean amaNdebele are commonly identified as the descendants of chief Mzilikazi who fled the Zulu kingdom of Shaka. Mzilikazi subsequently founded the Ndebele Kingdom in present-day Transvaal and later moved it to contemporary Zimbabwe. Since Mzilikazi migrated from KwaZulu-Natal centuries after the original Ndebele migrations, the link between the Ndebele groups of South Africa and Zimbabwe is tenuous at best. Nevertheless, the exact nature of ethnic relatedness between the Zimbabwean and South African Ndebele communities remains unsolved, thus requiring further research.

At the micro level, the historical relationship between Mpumalanga and Limpopo Ndebele deserves closer examination. The groups have been proposed to stem from a single ethnic group due to their putative descendancy from

the same ancestral chief, Musi (Skhosana 2009: 20). This view interprets the current division between the two as originating from a tribal split. The death of the ancestral chief Musi was followed by two of his sons struggling for power: the eldest son Manala was appointed as the future chief, but he was challenged by his brother Ndzundza. As a result of the power struggle, while Manala and his followers remained in place, Ndzundza was forced to emigrate. This power contest triggered further conflicts, as two other sons, Mthombeni (also known as Gegana or Kekana) and Dlomo, left the original Ndebele group as well. Consequently, the succession struggle among the six (or five in some narratives) sons of Musi caused the division of what now corresponds to South African Ndebele people into two major branches: Southern and Northern, which correspond to the Mpumalanga and Limpopo Ndebele communities surveyed in this study. While the speakers of Mpumalanga Ndebele are seen as descendants of Manala and Ndzundza, those of Limpopo Ndebele descend from Mthombeni's group that moved further North.

The supporters of Mthombeni established themselves in the north around the area of the contemporary towns of Mokopane and Polokwane, where they became ancestors of the Northern Ndebele of South Africa. After further splits between groups, the Mugombhane section migrated to the area of present-day Mokopane, where its descendants are settled at present (Ziervogel 1959). There, it ultimately gave its name to Mokopane Town (previously known as Potgietersrus, the Afrikaans name), which had been established by the Vortrekkers who also moved to the neighborhood of South Africa's Northern Ndebele. As latecomers to the new region, the Northern Ndebele absorbed considerable cultural influence from more dominant groups, such as the surrounding Northern Sotho groups. The followers of Manala in turn migrated to the area of present Mpumalanga, where they became the ancestors of the Southern Ndebele. The above-mentioned narrative, focusing on a tribal split as the explaining factor, is nevertheless contested by some scholars, such as Ziervogel (1959: 5), who has proposed that the Southern and Northern Ndebele of South Africa are genealogically separate and have distinct ancestral chiefs.

South African Ndebele are generally seen to originate from the region currently known as KwaZulu-Natal. While still in KwaZulu-Natal, they belonged to the main Hlubi tribe, according to Massie (1905: 33). This view has later been contested at least for some Ndebele sections: Ownby (1985) assumes that their ancestors may have never migrated into the lowveld, that is the current KwaZulu-Natal province. Conflicting views exist also on the specific location of the historical homeland in KwaZulu-Natal (Skhosana 2010: 140). The departure is estimated to have happened approximately between the years 1630 and 1670 when

particularly dry and harsh conditions of the so-called Little Ice Age prevailed in the region (Huffman 2004: 95–96). In any case, this historical connection to the Zulu homeland has been the factor to trigger the debate whether South African Ndebele can be seen as a dialect of Zulu (Khumalo 2017: 103).

2.3 A language sociological outline of Ndebele in Mpumalanga and Limpopo

Sociologically, the investigated area is highly dynamic, with a high birth rate and large cohorts of children. The dominance of younger generations, a characteristic of many African areas, has special significance for the long-term development of the language sociological situation, as present-day choices often turn to everyday practices in the future. The use of different languages at home, with friends and relatives at school, in the media and in public sphere counts a lot in terms of the languages' functional development and especially intergenerational transmission. Everyday life seldom triggers a detailed discussion of language choices, which are most typically made on sociological grounds without assessing their influence in the long run. Language practices between social networks and public authorities may diverge considerably, the former being individually ruled whereas the latter predominantly reflects collective hierarchies.

2.3.1 IsiNdebele in Mpumalanga

The most fundamental language sociological differences between Ndebele speakers in Mpumalanga and Limpopo arise from these sociological variables. Individual people experience them differently, but a survey sample satisfactorily demonstrates common trends in both areas. In the following we will first proceed by representing Mpumalanga Ndebele as the default study of Ndebele's current language sociological state and then continue with Limpopo Ndebele as the publicly less well-established variety of Ndebele.

The answers concerning fundamental basic languages skills showed a very high competence in Ndebele at the Mpumalanga sample. Only a very few respondents claimed that they do not have writing and reading skills in the language, whereas the vast majority reported that they can both speak and understand the language perfectly (Figure 2). Even those rare respondents who actually were second-language speakers claimed that they can speak and understand the language at least fairly well. This kind of uniform language competence typically shows a very strong position of the given language in the investigated area. The degree of literacy in the areas of writing and reading skills shows large-scale implementa-

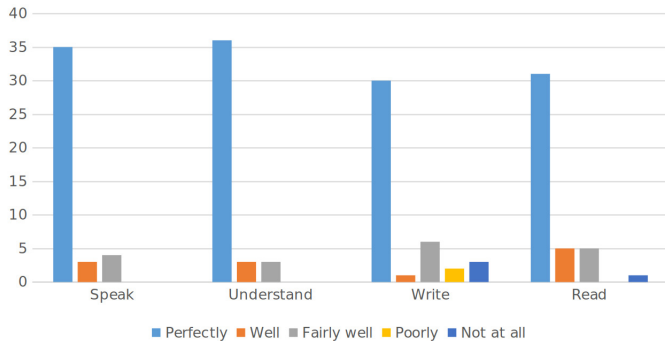


Figure 2 Basic language skills of the Mpumalanga Ndebele sample (sample size 42).

tion of the language as a literary variant as well. The minor differences in literary skills are mainly seen in the relatively higher number of respondents lacking literary skills among the older age cohorts.

Among the relatively few respondents of the older and middle-aged cohorts (Figures 3 and 4) fluent literary skills are not as self-evident as among younger ones. As noted above, the actual level of language knowledge was not tested. Consequently, the answers may partly reflect the somewhat hesitating attitude of the informants self-evaluating their skills. This kind of critical assessment of one’s own skills is reflected in the columns showing less perfect knowledge of writing and reading. However, in absolute numbers this is a very small group, showing a distribution that is typical of writing and reading skills in almost any language, including the world’s major languages.

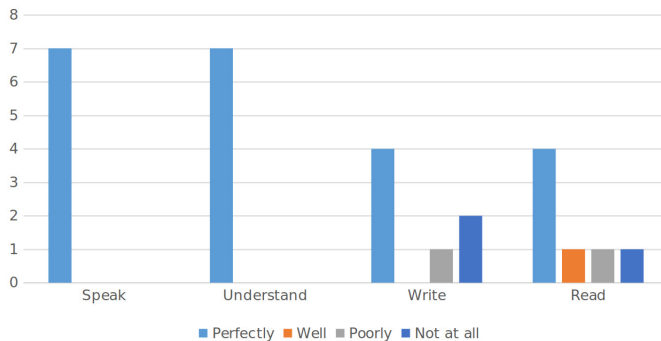


Figure 3 Basic language skills of the Mpumalanga Ndebele sample, age cohort 50–64.

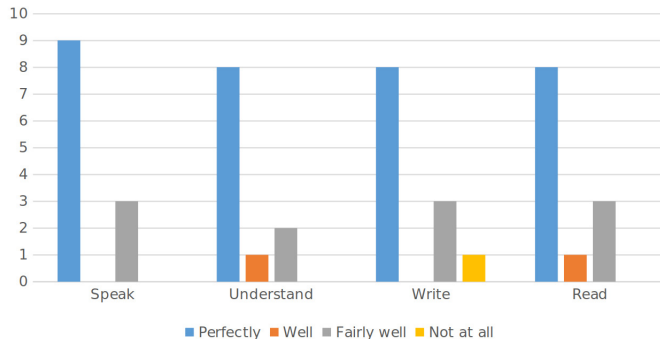


Figure 4 Basic language skills of the Mpumalanga Ndebele sample, age cohort 30–49.

As indicated in Figure 2, the overall language skills of Mpumalanga Ndebele speakers are very high, including literacy, which is strongest among the youngest age cohort consisting of young grown-up respondents (Figure 5). Here, too, some respondents maintain that their skills may be less than perfect and, in the case of randomly chosen respondents, some individuals turned out to be speakers of some other South African language instead. These kinds of highly uniform answers regarding basic language knowledge are, in principle, possible due to a publicly supported strong social position. The importance of public language services such as education involving the whole population play a key role in promoting basic skills in literary language.

In general, the information concerning both oral and literacy skills of Mpumalanga Ndebele speakers shows that its position as a vernacular language is strong. This observation will find further support in the investigation focusing on language use in private and public domains, below (see Section 3.1).

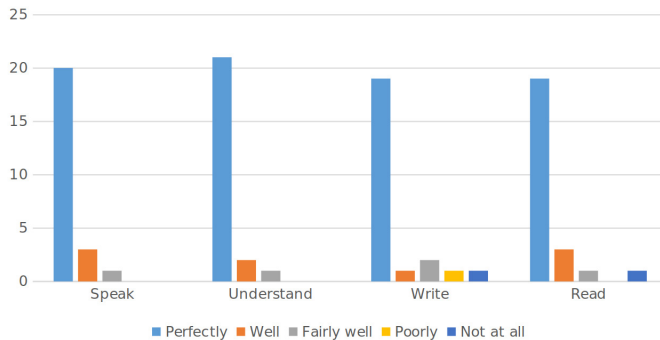


Figure 5 Basic language skills of the Mpumalanga Ndebele sample, age cohort 18–29.

The main contrast emerges in the comparison of the two different Ndebele populations, as the answers of the Limpopo Ndebele focus group yield more variance, especially in literacy skills. This, in turn, correlates with certain other divergences as illustrated by more detailed questions on language use (see Section 3.3.3).

2.3.2 *Sindebele in Limpopo*

Comparing the two Ndebele groups, the different language sociological status is most illustratively seen in charts indicating literary skills, both reading and writing (cf. Figure 2 above and Figure 6). In both target groups the respondents were purposively chosen on the basis of identifying them as Ndebele speakers, confirmed by native-speaking fieldwork assistants. The proportion of respondents lacking literary skills among Limpopo Ndebele survey participants is much higher than among the parallel survey at Mpumalanga. Furthermore, oral and literary skills show contrast at the Limpopo Ndebele sample as the vast majority of respondents claims that they have perfect or good oral skills in the language, whereas literary skills are significantly weaker, and mostly completely lacking.

The vast majority of the Limpopo Ndebele respondents consider their Ndebele speaking and understanding skills very fluent, mostly choosing the alternative “perfectly” (Figure 6). While speaking “well” might show the informants’ modest attitude and hesitation with respect to their individual skills, claiming that they speak “fairly well” or only “poorly” is a more unambiguous indication that they have stronger language skills in some other language.

Comparing different age cohorts of the Limpopo Ndebele respondents, there is some divergence in the division of basic language skills between different age cohorts. Every subgroup responds, as a rule, that their oral skills greatly exceed their literacy skills. This tendency is most transparent among the two oldest age

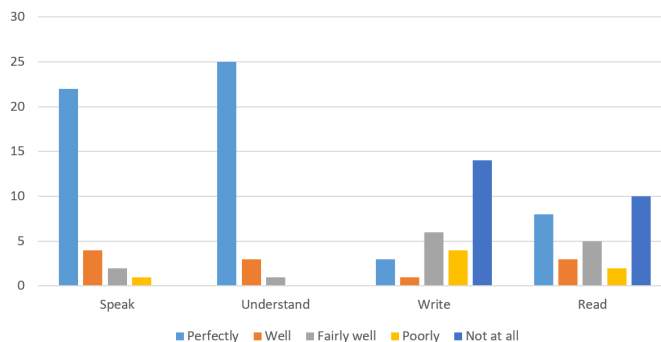


Figure 6 Basic language skills of the Limpopo Ndebele sample (sample size 29).

cohorts (Figures 7 and 8), although individual speakers may claim that they have some literacy skills as well, even perfect skills, which they have acquired through their own initiative without public support.

The pilot sample of older middle-aged speakers presents the most polarized contrast between oral and literacy skills, with respondents practically lacking any writing skills (Figure 8). A few respondents reported that they could read Ndebele fairly well, although the context of reading was not determined in more detail.

The experience of having read some texts in Ndebele or showing more interest towards a literary language, occasionally using written Ndebele in communications with friends, as well, for instance, increases the incidence of literacy skills among working-age adults (Figure 9) and young adults (Figure 10). Most notably, some respondents even claim that they can write and read the language perfectly, showing significant trends towards the increased literary use of their

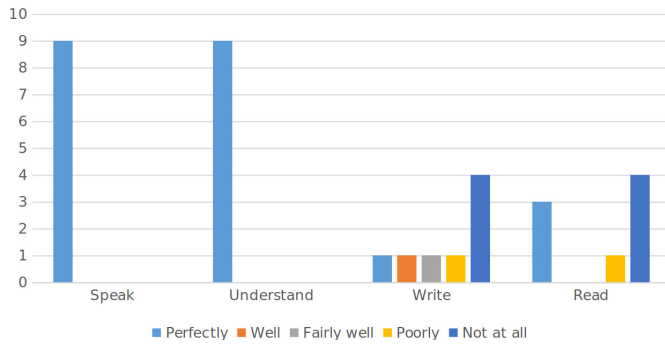


Figure 7 Basic language skills of the Limpopo Ndebele sample, age cohort 65–.

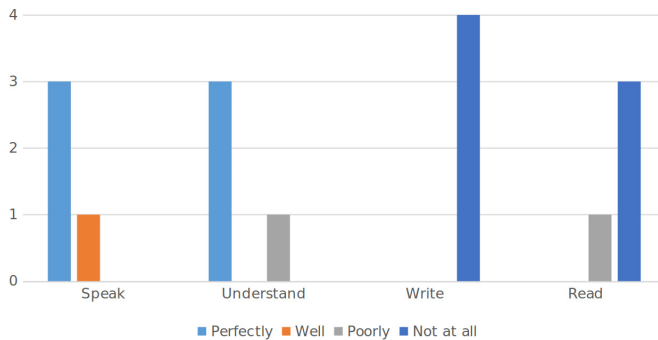


Figure 8 Basic language skills of the Limpopo Ndebele sample, age cohort 50–64.

language. This tendency increases even more among the target group of young adults (Figure 10).

Despite the common increase in literacy skills amongst the pilot sample population for the two youngest target groups, their charts in Figures 9 and 10 are far from uniform. Moreover, it must be emphasized that the size of the sample is small, and the overall picture is affected by individual speakers and their networks more than a larger sample would be. However, the preliminary result provided here suggests that the youngest group of Limpopo Ndebele speakers is most active in implementing oral skills also in writing (Figure 10). The self-assessment of how fluently they can use the language varies considerably, spanning the whole assessment scale, which corresponds to the lack of education and public support in the development of the literary and public use of Ndebele.

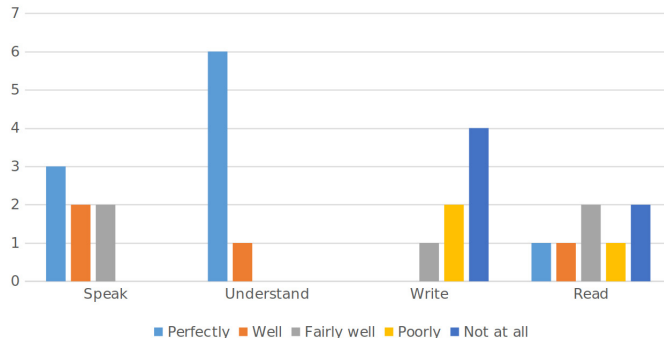


Figure 9 Basic language skills of the Limpopo Ndebele sample, age cohort 30–49.

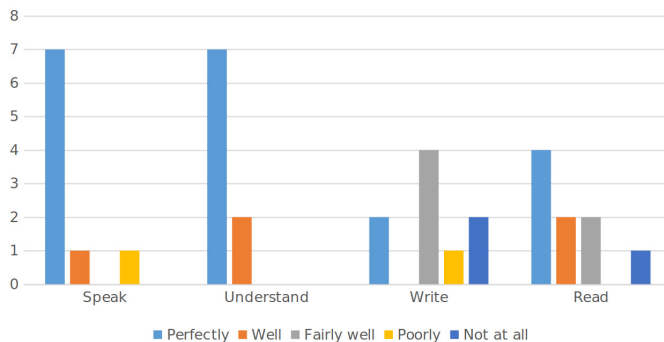


Figure 10 Basic language skills of the Limpopo Ndebele sample, age cohort 18–29.

Some informants from this particular group reported that a typical context for using Ndebele is the application of mobile phones in mutual communication, sending text messages in Ndebele, and so forth. Given the varying dynamics in the social trends of Limpopo Ndebele, language use in mobile communication and social media definitely needs further investigation, also in terms of possible effects on the development of oral skills.

3. LANGUAGE SOCIOLOGICAL SURVEY IN NDEBELE COMMUNITIES

This section will extend the language sociological pilot survey of two Ndebele speaking groups in Mpumalanga and Limpopo to the use of these two variants in both the private and the public sphere. As the results in the previous section show, oral skills are largely considered to be very strong among the speakers belonging to both target groups, which implies that the use of spoken language in its traditional social and geographical environments is common. Compared to this, there is a clear difference in literacy skills, as Limpopo Ndebele speakers can write and read their language considerably less commonly, whereas Mpumalanga Ndebele speakers live in a society in which the local Ndebele variant dominates in both the private and public spheres. Also, basic education in Mpumalanga Ndebele strongly supports early acquisition of literary skills in Ndebele. The language sociological differences among the two Ndebele groups correlate with the use of the language in the public sphere, as will be shown below, whereas in the private sphere the differences are smaller, though some differing tendencies can be observed there as well.

3.1 Statistical survey of the use of Mpumalanga Ndebele in the private sphere

In the Mpumalanga sample, Ndebele is the dominating language in the private sphere (Figures 11 and 12). Despite the statistical dominance, the multilingual nature of South Africa is reflected in families that speak other languages in parallel, as well. Among other languages, not a single one is absolutely more common than the others. Ndebele sa Moletlane refers to a variety not originally spoken in the area of the former homeland of KwaNdebele, from where three respondents had migrated to Siyabuswa where the survey was mainly carried out. It is different from the Limpopo Ndebele varieties spoken by the people that we interacted with in the areas of Mokopane and Polokwane (see Introduction, Section 1). Several respondents spoke Northern Sotho with their grandparents,

but fewer used it with parents in the Mpumalanga sample (Figure 11). Likewise, Northern Sotho is a language relatively frequently used in intermarriages, but this does not have a direct effect on language use with children, who clearly live in an environment in which Ndebele is the dominating language (Figure 12). As a rule, neither of the languages of white settlers in South Africa, namely Afrikaans and English, is used with close older relatives among the Mpumalanga Ndebele.

While Northern Sotho continues to be quite frequent in intermarriages, two other languages emerge in the multilingual context of Mpumalanga Ndebele when used with respondents' closest younger relatives, namely English and Zulu. The increased use of English, though not shaking the overall balance at

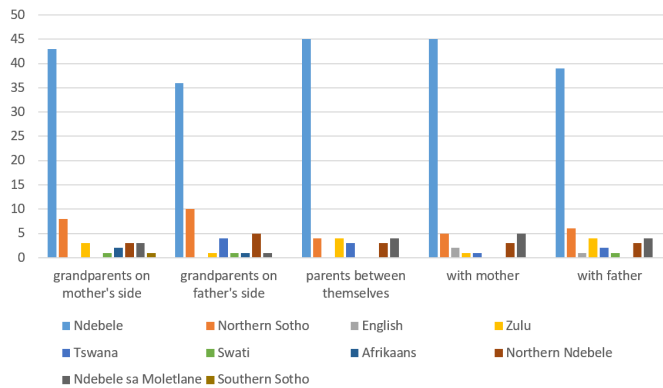


Figure 11 The languages used with closest older relatives, survey of Mpumalanga Ndebele.

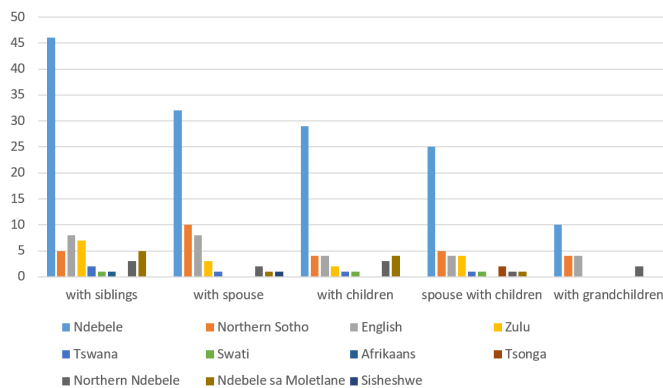


Figure 12 The languages used with closest younger relatives, survey of Mpumalanga Ndebele.

the investigated area, nevertheless reflects its high prestige and general visibility as the language of modern media. The same is partly true of Zulu, one of the most widespread languages in South Africa. However, in this case, Zulu is more typically a language descending from family-internal multilingual settings. More generally speaking, Ndebele is clearly the dominating language both with older and younger closest relatives at Mpumalanga, while the possible use of other languages is family-specific.

Compared to Mpumalanga, the multilingual context of the investigated Limpopo Ndebele areas is much more polarized. Besides Ndebele, Northern Sotho has a significant position as the second everyday language in the lives of many Ndebele speakers both in the private and especially the public sphere. In the private sphere, a language sociological difference can be noticed in the use of Ndebele and Northern Sotho with the respondents' closest relatives as, compared to use with older closest relatives (Figure 13), Northern Sotho is gaining a greater foothold as the language used with respondents' younger closest relatives (Figure 14).

A major contrast between the Mpumalanga and Limpopo Ndebele sample is seen in the use of other languages besides Ndebele in private sphere. While in Mpumalanga there are several languages that occur at random in the answers, in Limpopo, the strong position of Northern Sotho, reaching even an equal level of use with Ndebele in some charts, is striking. As regards language use with different age cohorts, there is a clear difference in the use of Ndebele and Northern Sotho with speakers' closest relatives. With older relatives, Ndebele is clearly used more often than Northern Sotho (Figure 13), one of the most publicly visible South African languages, whereas the proportionately greater use of Northern Sotho emerges clearly with younger relatives (Figure 14). Northern

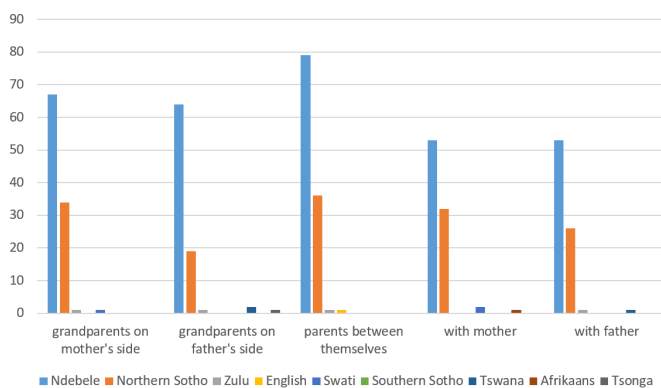


Figure 13 The languages used with closest older relatives, survey of Limpopo Ndebele.

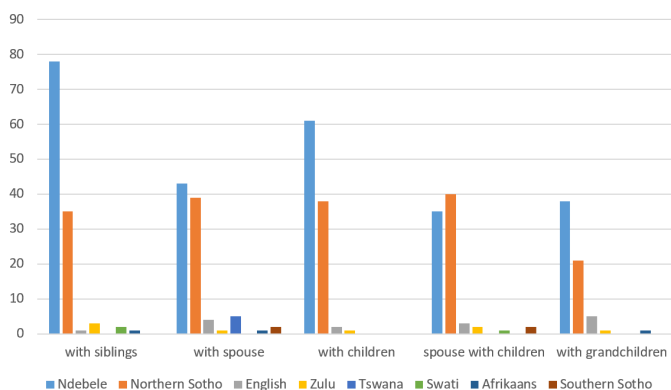


Figure 14 The languages used with closest younger relatives, survey of Limpopo Ndebele.

Sotho is used almost as frequently with spouses as is Ndebele, a trend evidencing the increasing number of linguistic intermarriages. Furthermore, Northern Sotho is much more commonly used with children than with parents or grandparents.

With grandparents and parents, other languages than Ndebele and Northern Sotho are very rarely used; with siblings, spouses, and children, they are used slightly, but not considerably more. Thus, the language sociological basic constellation focuses on the bilingualism between Ndebele and Northern Sotho.

Among other languages, English and Tswana were also mentioned as languages used with spouses, and in certain individual cases Southern Sotho and Zulu were also mentioned (Figure 14). However, these must be considered random coincidences that do not show any larger-scale tendencies. What Figures 13 and 14 show is the increasing importance of Northern Sotho as the language of communication within families among the Limpopo Ndebele.

3.2 Multilingual control group sample in Mokopane

As mentioned above, a randomly chosen and quantitatively even more limited control group pilot survey was carried out at Mokopane Town, the closest city to the Limpopo Ndebele speaking areas. This survey took place with some further methodological reservations, as local guides, with whom the team were working, sought to instinctively pick up people who might have Ndebele roots. Statistically, this data is inadequate and would need to be quantitatively more exhaustive.

Given that the overall number of Ndebele-speaking respondents was small, the Mokopane pilot sample, interestingly shows a different state of Ndebele as a language of communication in the private sphere with close relatives, a trend

which would most likely be seen in a larger sample, too. The dominating language in this sample is Northern Sotho as the default choice in all age cohorts. The local Ndebele variant, here labeled as Limpopo Ndebele, was more frequently mentioned as the “other” language used with one’s grandparents on the mother’s side, while otherwise, isiNdebele and Tsonga, the latter originally a language of more easterly areas, are the two languages that occur besides Northern Sotho in the Mokopane sample. Considering the three generations, Sindebele is more frequently used with grandparents and parents (Figure 15) than with younger relatives (Figure 16).

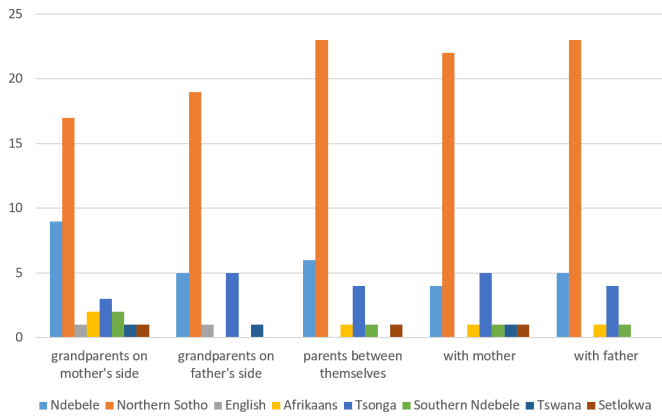


Figure 15 The languages used with closest relatives, control group of Mokopane Town.

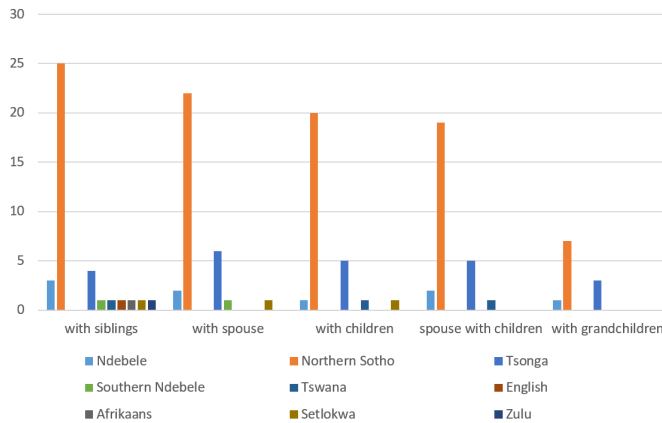


Figure 16 The languages used with closest relatives, control group of Mokopane Town.

In all three samples – Mpumalanga Ndebele, Limpopo Ndebele focus groups, and the Mokopane control group – there are individual families in which English is gaining a foothold as the language used with siblings or even with children. Other South African languages are mentioned less frequently; their use is mostly due to a family member originating from some other part of the country. Afrikaans, the politically dominating language during the twentieth century, is almost totally invisible: very rarely would people comment that they knew some Afrikaans. In some cases, these were the oldest respondents who had lived most of their life under an entirely different political system.

Languages mentioned in the randomly chosen pilot sample of Mokopane Town include Northern Sotho as the locally dominating language and other, less systematically reported languages such as Limpopo Ndebele (Sindebele), Xitsonga, Mpumalanga Ndebele (isiNdebele), Setswana, English, Afrikaans, Setlokwa, a variant of Northern Sotho, and isiZulu.

3.3 Statistical survey of the use of Ndebele in public sphere

This section discusses the findings concerning the use of Ndebele in the public sphere from a statistical perspective. Due to its importance for language use in the South African context, a subsection 3.3.2 is dedicated to offering background information on the domain of education.

3.3.1 School and education in South Africa

A recent World Bank survey found that since the end of the apartheid era, inequality in South Africa has increased, the country now having a Gini coefficient of 0.63, which indicates the highest income equality around the world (Sulla & Zikhali 2018). Similarly, contemporary South Africa is still reported to have one of the most unequal education systems in the world (Dzotsenidze 2018: 113). The system performs poorly, and many schools in predominantly black areas lack proper infrastructure and sufficient resources.

The roots of the current situation can be found in the apartheid era, the legacy of which continues to influence the current education system in South Africa. In the apartheid era, linguistic policy on education served the larger goals of the apartheid policies. Everyday literary events, such as the reading of books and newspapers, were conceptualized as a domain of white culture (Banda 2004: 13). Consequently, cultivating such domains among the black population was deemed unnecessary, a position that directly contributed to unequal education along racial lines. Also, at the macro level, language policies and practices at school were imposed on the black

population with little concern for their own desires and needs. In other words, policies determining the use of language in education for the black population of South Africa have historically never involved in their development the very people whom the policies directly concerned (Hartshorne 1995: 307).

Since the establishment of the Union of South Africa in 1910, the central issue in language policies and practices in the country has been the tripolar relationship between English, Afrikaans, and the indigenous African languages (Hartshorne 1992: 187). Shifts in the balance between the three elements have, at different historical stages, characterized their complex relationship. As a major watershed, the Bantu Education Act of 1953 (aka Black Education Act) both centralized black education and enforced racially determined education, thus, in practical terms, ending the missionary education that had been playing a central role in educating the black population (Desai 2012: 34). Since the Act made it a legal norm to provide white South Africans with better education, it essentially institutionalized pre-existing inequalities in education. Subsequently, the Act also paved way to the Soweto Uprising of 1976 against the 50/50 imposition of Afrikaans as the medium of instruction together with English. The Uprising was crushed brutally by the police, but had far-reaching consequences. The government was forced to abandon the policy, while English became the main language of instruction for black children from the fifth grade on (Desai 2012: 38).

Since the declaration of the 11 national languages that can be freely used in education, official racial segregation of schools ended in tandem with the dismantling of the structures of apartheid. As a result, some learners from black schools have moved into formerly colored or white schools, a process often also corresponding to movement of black students from rural to urban environments and change in the language of instruction from Afrikaans into English in some erstwhile white schools now dominated by black students (Banda 2004: 21). However, the new system has been implemented for barely more than two decades, and the legacy of inequality remains embedded in South African education. This inequality has further implications that have a bearing on the fulfillment of the country's democratic ideals. The Bill of Rights of the Constitution of South Africa enumerates domains, such as economic, political, and educational domains, in which it guarantees equal rights. Nevertheless, Banda (2004: 15) points out that if literacy functions as a barrier for accessing these domains, it thus also denies people their constitutional citizenship rights. Therefore, it can be said that unequal education puts citizens into unequal positions in practice, despite the rights guaranteed by the Constitution in theory.

The question of "mother tongue" education remains a contentious and emotionally charged issue in contemporary South Africa (Heugh 2002). From a historical

perspective, education of black South Africans has generally followed a pattern in which the initial stages are in “mother tongues”, followed by English, the introduction of English being different in different historical periods (Desai 2012: 25). Currently, mother tongue education ends after the Foundation Phase, namely grades one to three. Many parents, however, prefer to send their children straight to English-medium schools from grade one on.

Using English as the medium of instruction has been blamed for the poor performance of black students. Indeed, it is increasingly demonstrated that children learn better in their mother tongue (see, e.g. UNESCO 2008). At the same time, the actual preference of English at the expense of the ideal, the various indigenous African languages, has been justified using various arguments. First, further development of the indigenous languages, such as creating new scientific lexicon, and standardizing and modernization of the written languages, is urgently needed before they can fully serve as the media of instruction. Second, in the post-apartheid era with freedom of movement, interaction between speech communities is taking place more frequently, especially in cities, which emphasizes the need for English skills for communication between different communities. Furthermore, English often yields prestige, and is thus seen as the preferred language for a good future, a view also corroborated by the field interviews of this study. Finally, the ubiquitous presence of English, and the far higher availability of English written materials vis-à-vis materials in African languages portray it as the best choice for literacy. All in all, the circumstances discussed above contribute towards creating a wide gap between ideals and practices in language use in educational domains.

3.3.2 *IsiNdebele in Mpumalanga*

The questionnaire used during the fieldwork of this pilot survey included further questions concerning the everyday use of isiNdebele in the public sphere. These survey sections investigated whether isiNdebele is used in a more limited context. Other languages were not mentioned as options that the informants could choose. The alternatives and institutions that were mentioned included education, both printed and electronic media, parliament and ministries, police and tax authorities, hospitals and health organisations, regional and municipal officials and courts, and advertisements. The difference between the two investigated groups is striking and involves many more language sociological differences that were not as transparent in the private sphere. A major difference in the use of the two Ndebele varieties is seen in the fact that, in the Mpumalanga sample, Parliament was considered as the only institution in which less than 50%

of the respondents replied that Ndebele is used (Figure 17). In the Limpopo sample, no domain reached the threshold of 50% of positive answers, while only hospitals and ministries were reported by more than 40% of the respondents as places where Ndebele is used.

The strong language sociological position of Mpumalanga Ndebele is shown by the fact that a vast majority, over 80% of the informants, replied that the language is used at school and education, corresponding to contemporary South African language policies (Figure 17). Furthermore, a very high percentage, at least nine out of ten, answered that Ndebele is used by the police, at hospitals, and on the radio, the latter demonstrating the importance of local radio broadcasts. Compared to its use in radio, the visibility of Mpumalanga Ndebele was not as high in television media, though clearly noteworthy, whereas the lowest rate within media was reported for printed media, having the same level as advertisements, that is about 50%. The ratios of all domains are presented in Figure 17.

The degree to which isiNdebele is used in local contexts was scaled somewhat differently. The informants were asked to determine whether they use it regularly, sometimes or never, the overwhelming majority in all cases being that isiNdebele is used at least sometimes, while the number of instances where speakers virtually never use the language was very small (Figure 18). Somewhat surprisingly, isiNdebele is reported to be used with neighbors even more regularly than with friends and relatives. These statistics together show a state of highly frequent use of isiNdebele as a language of oral communication (cf. language used with closest relatives, Figures 11 and 12, above). This is also confirmed by ratios showing the regular use of isiNdebele at home in most cases, while the lowest rank, showing

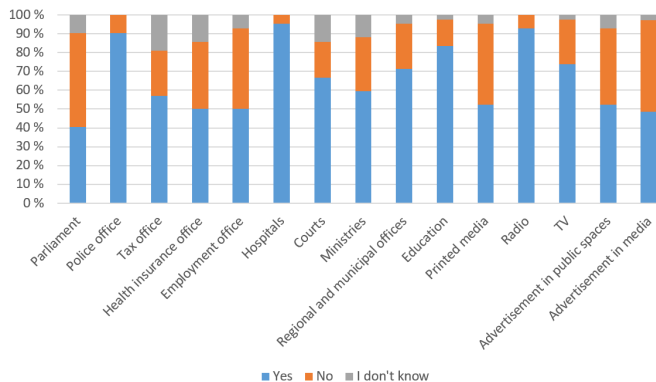


Figure 17 Reported use of isiNdebele in public domains: “Mpumalanga Ndebele is used in ...”

equal use between “regularly” and “sometimes” occurs in shops, which typically maintain a network that extends beyond local contacts and speech communities.

Besides shops, church is another institution that, in principle, is basically not local, but even there the frequent use of isiNdebele is reported in Mpumalanga. The same is valid for communication with public authorities, who still mainly consist of local people, and community events, bringing mostly local people together (Figure 18).

3.3.3 Sindebele in Limpopo

Compared to the use of Mpumalanga isiNdebele in public domains (cf. Figures 17 and 18) and the wide intergenerational applicability of Limpopo Sindebele in the private sphere (though showing some decrease in the use of Ndebele with younger relatives; cf. Figures 13 and 14 above), the use of Limpopo Ndebele in public domains stands in stark contrast.

The most frequent use of Sindebele in public domains in the Limpopo sample is found in hospitals and ministries and on the radio, showing the importance of local radio broadcasts in this area, as well. In these three domains, about 40% of the respondents reported that Sindebele was used. Around 30% of the survey sample replied that Ndebele is used in other domains in which local people largely determine the language they will speak for mutual communication, such as police and tax authorities, health insurance and employment officials, other regional and municipal officials. Apart from the federal level of Parliament, the lowest rates are seen within education, printed media and even advertise-

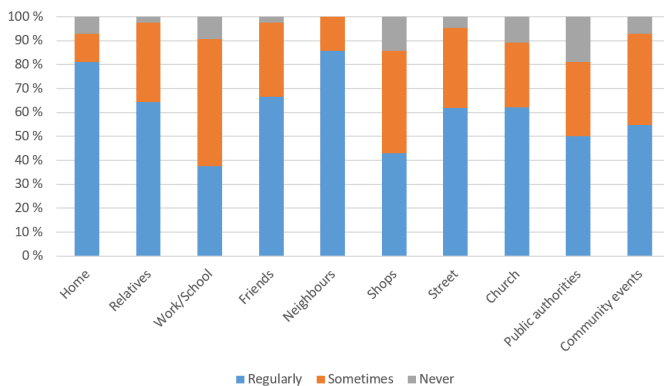


Figure 18 The use of isiNdebele in private and public space, Mpumalanga Ndebele sample.

ments, although these are not completely nonexistent, either. However, the low percentage of roughly 15% reporting the use of Ndebele in education probably reflects more the mutual communication of Ndebele speakers in school settings than the implementation of Sindebele as the primary language of education. The low frequency of Limpopo Ndebele used in education and printed media correlates with speakers professing weak or totally lacking literacy language skills (cf. Figures 6–10 above). This is also seen in the fact that Limpopo Sindebele is far less regularly used at work or school (Figures 19–20).

Considering the use of Sindebele in the private and public spheres, it is clearly more common in private contexts that favor the use of oral language. Thus, Sindebele is either regularly or at least sometimes used at home, with friends,

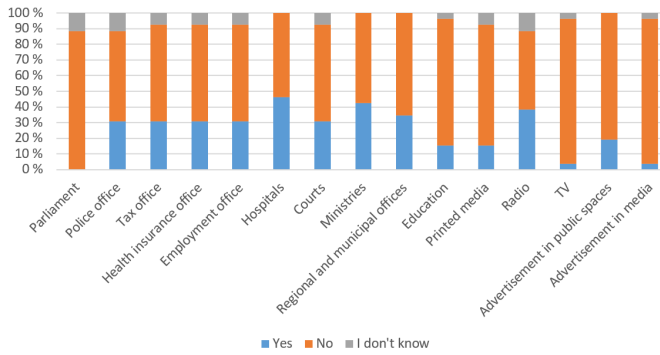


Figure 19 The use of Ndebele in public domains, Limpopo Ndebele sample.

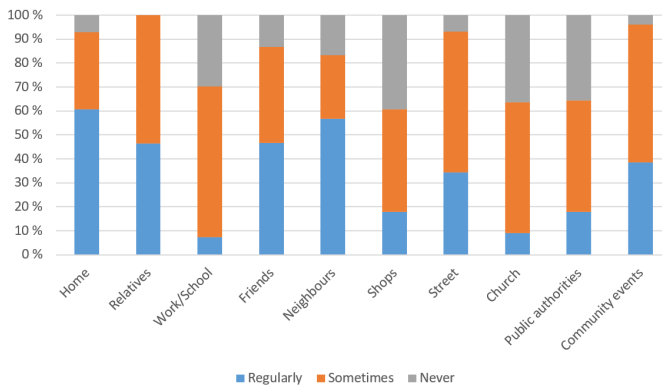


Figure 20 The use of Sindebele in public spaces, Limpopo Ndebele sample.

relatives and neighbors, and on the street, whereas in the public sphere it is far less regularly used (Figure 20). Only a few respondents claimed that Sindebele is regularly used at work or school or church, in shops and with public authorities. Instead of a possibility based on conscious language policies, this kind of use has a more concrete connection to the communication between individual people who happen to know the language background of their collocutor. Respondents claiming use of the language “sometimes” in various domains shows that it is widely used as a vernacular language, although there are obvious instances such as shops, public authorities, and even work/school where many respondents never use Sindebele.

3.3.4 Discussion

The pilot survey carried out among speakers of two Ndebele varieties in the Limpopo and Mpumalanga Provinces can be assessed both with respect to the prevailing language sociological situation and multilingual policies in South Africa, and case-specific pilot reports on local conditions. Although the coexistence of several languages and awareness of different Bantu groups was present during the interviews that were carried out face-to-face, this was never the primary context in which alternatives were scrutinized. When inquired, people could state without hesitation that isiXhosa, isiZulu, the respective Ndebele variety, and siSwati are all Bantu languages and are closely related to one another. However, as sociological issues often are, everyday language practices and community-level policies are predominantly a chain of routines revolving around language. Speakers of Ndebele varieties both in Mpumalanga and Limpopo are characteristically local residents, whereas their mobility does not tend to extend beyond the core area of the speech community. Local demography and population dynamics are more heavily affected by the high birth rate and the increasing importance of education and media during the past few decades.

While (southern) isiNdebele has a dominating position in the Mpumalanga sample, (northern) Sindebele of the Limpopo sample is influenced by a more unstable language sociological situation. While isiNdebele is the language that exhibits concretely South African multilingual policies in Mpumalanga, in Limpopo, public domains and even the private sphere to some extent often employ Northern Sotho as the default language.

Despite a shared ethnonym, Ndebele, the target groups are perceived as different communities, not only geographically but also linguistically. Although the parallel survey in two different areas was not directly addressed in the ques-

tionnaire, the informants either had no experience of the other language or described their unlike character.

Linguistically, the two languages undoubtedly share many grammatical and lexical features. However, it is equally easy to detect dissimilarities in the other examples, which proves that the claim of some Limpopo Ndebele speakers regarding the two as different languages is empirically based. Given that substantial differences in the essence of language are inevitably reflected in practical language policies, the availability of language products and public services, there are multiple reasons to investigate Limpopo Ndebele in more detail from different angles. It has special importance for the granularity of local conditions, while at a more general level, this particular area may show some relevant factors in terms of the sustainability of language policies in South Africa.

4. CONCLUSIONS

Divergent language sociological details are indispensable for an overview of the status of the two investigated Ndebele-speaking communities in Mpumalanga and Limpopo. In the given pilot survey these two particular groups were examined in the light of some basic language sociological parameters, which can be contrasted with one another in order to find out both case-specific and more general tendencies within the investigated communities. The main aims of this study consisted of (1) a parallel survey of two Ndebele focus groups in Mpumalanga and Limpopo, (2) contrasting the Limpopo focus group with a local Mokopane control group, (3) inquiring about oral basic language skills of the two focus groups, (4) inquiring about literal basic language skills, and surveying language use in (5) the private sphere and (6) the public sphere.

Language choice and the use of Ndebele at home and in various domains inseparably intertwine with other sociological models and trends. Population size, a very fundamental feature of sociological dynamics, for instance, was not taken into account in this survey. However, in the long run, more general demographic trends such as birth and death rate, migration, and economic conditions play a very important role in the development of any language community. In the Ndebele communities, the high birth rate and short intervals between generations in comparison with urban populations may trigger relatively rapid language sociological changes without any external catalyst.

The parallel survey of the two Ndebele groups by using an identical questionnaire showed some significant language sociological differences between the two groups. While Mpumalanga Ndebele is a fully viable language in terms of contemporary multilingual language policies of South Africa in most investigated

domains and the local environment of the speech community, the situation of Limpopo Ndebele is far more ambiguous and, as a matter of fact, several informants considered themselves as linguistically stigmatized, lacking basic language rights and public support.

Language planning and the implementation of language laws often depends on conceptualizing the crucial domains. In the case of Ndebele, the concept of Ndebele itself is ambiguous because it has a divergent semantic relationship with respect to language of a certain area, language of a more limited speech community, and language of everyday practices of a group of people. Consequently, the common ethnonym Ndebele partly blurs both language sociological and simple linguistic differences between the Mpumalanga Ndebele and Limpopo Ndebele. The current survey does not include any test of mutual intelligibility between these two variants. However, the alleged dissimilarity of the two Ndebele variants is strengthened by a different language sociological status and geographical distance disconnecting them areally.

The divergence in the results and language usage of Mpumalanga and Limpopo Ndebele reflect a fundamental language sociological difference. While Ndebele is the dominating language in Mpumalanga and has a stable status in everyday communication, Limpopo Ndebele has a much more limited sphere and language practices of individual speakers are strongly influenced by the dominance of Northern Sotho. Comparing intergenerational changes, some answers suggest that the local variant of Ndebele is being replaced by Northern Sotho in the long run. Some individuals emphasized the prestige of English but, in the given sample, this trend is not wide-spread.

In conclusion, we would like to state that in the light of the pilot survey, Mpumalanga Ndebele is a vital contemporary language, vital in the speech community in everyday life, including education and various other domains. The accessibility of any kind of language products such as written media and newspapers is not full-fledged yet, but this situation does not really hinder the development of the language in the contemporary world. It is also within this particular group that intergenerational transmission functions without interruption.

Limpopo Ndebele is facing a more challenging situation and lacks the public structures and support necessary for carrying out functions following the demands of the modern world. There is clear indication that this community is currently undergoing language shift as there are Ndebele families shifting to Northern Sotho, the locally dominant prestige language. While Northern Sotho is widely implemented as the medium of instruction at school, Limpopo Ndebele remains a means of oral communication, having a weaker foothold as a medium of education. However, in parallel with this trend, there are still many fami-

lies where Limpopo Ndebele is used with children, guaranteeing at least partial intergenerational transmission of the language even though it was claimed by some respondents that Ndebele children often prefer to use Northern Sotho in mutual interaction.

REFERENCES

- BANDA, Felix 2004. A Survey of Literacy Practices in Black and Coloured Communities in South Africa: Towards a Pedagogy of Multiliteracies. In: M.J. MUTHWI & A.N. KIOKO (eds), *New Language Bearings in Africa: A Fresh Quest*: 10–33. Clevedon: Multilingual Matters.
- BEUKES, Anne-Maria 2009. Language Policy Incongruity and African Languages in Post-Apartheid South Africa. *Language Matters* 40(1): 35–55.
- BRENZINGER, Matthias 2017. Eleven Official Languages and More: Legislation and Language Policies in South Africa. *Revista de Llengua i Dret/Journal of Language and Law* 67: 38–54.
- DESAI, Zubeida Khatoom 2012. *A Case for Mother Tongue Education?* PhD dissertation, University of the Western Cape.
- DZOTSENIDZE, Nino 2018. The School Decentralization Process in Georgia and South Africa Through the Lens of World Culture Theory: A Comparative Analysis. In: A.W. WISEMAN & P.M. DAVIDSON (eds) *Cross-Nationally Comparative, Evidence-Based Educational Policymaking and Reform*: 101–124. Bingley: Emerald Publishing.
- EBERHARD, David M., Gary F. SIMONS & Charles D. FENNIG (eds) 2019. *Ethnologue: Languages of the World*. 22nd edn. Dallas: SIL International. (Available online <ethnologue.com>, accessed 15 July 2019.)
- HARTSHORNE, Kenneth Brown 1992. *Crisis and Challenge: Black Education 1910–1990*. Cape Town: OUP.
- HARTSHORNE, Kenneth Brown 1995. Language Policy in African Education: A Background to the Future. In: R. MESTHRIE (ed.), *Language and Social History: Studies in South African Sociolinguistics*: 306–318. Cape Town: David Philip.
- HERBERT, Robert K. & RICHARD Bailey 2003. The Bantu Languages: Sociohistorical Perspectives. In: R. MESTHRIE (ed.), *Language in South Africa*: 50–78. Cambridge: CUP.
- HEUGH, Kathleen 2002. The Case Against Bilingual and Multilingual Education in South Africa: Laying Bare the Myths. *Perspectives in Education* 20(1): 171–196.
- HEUGH, Kathleen 2007. Language and Literacy Issues in South Africa. In: N. RASSOOL (ed.), *Global Issues in Language, Education and Development: Perspectives from Postcolonial Countries*: 187–217. Clevedon: Multilingual Matters.
- HUFFMAN, Thomas N. 2004. The Archaeology of the Nguni Past. *Southern African Humanities* 16: 79–111.

- KARJALAINEN, Heini, Ulriikka PUURA, Riho GRÜNTAL & Svetlana KOVALEVA 2013. *Karelian Language in Russia: ELDIA Case Specific Report*. (Studies in European Language Diversity 25) Mainz: Research consortium ELDIA. (Available online <phaidra.univie.ac.at/detail_object/o:314612>, accessed 12 Apr. 2019.)
- KHUMALO, Langa 2017. IsiNdebele. In: T. KAMUSELLA & F. NDHLOVU (eds), *The Social and Political History of Southern Africa's Languages*: 101–118. London: Palgrave Macmillan.
- LAAKSO, Johanna, Anneli SARHIMAA, Sia SPILIAPOULOU-ÅKERMARK & Reetta TOIVANEN 2016. *Towards Openly Multilingual Policies and Practices Assessing Minority Language Maintenance Across Europe*. Bristol: Multilingual Matters.
- MASSIE, R.H. 1905. *The Native Tribes of the Transvaal*. London: His Majesty's Stationery Office, printed by Harrison and Sons.
- ORMAN, Jon 2008. *Language Policy and Nation-Building in Post-Apartheid South Africa*. Dordrecht: Springer.
- OWNBY, Carolan Postma 1985. *Early Nguni History: The Linguistic Evidence and Its Correlation with Archeology and Oral Tradition*. PhD dissertation, University of California, Los Angeles.
- PUURA, Ulriikka, Heini KARJALAINEN, Nina ZAJCEVA & Riho GRÜNTAL 2013. *The Veps Language in Russia: ELDIA Case-Specific Report*. (Studies in European Language Diversity 25) Mainz: Research consortium ELDIA. (Available online <phaidra.univie.ac.at/detail_object/o:315545>, accessed 12 Apr. 2019.)
- RASMUSSEN, Kent 1978. *Migrant Kingdom: Mzilikazi's Ndebele in South Africa*. London: Rex Collings.
- SKHOSANA, Philemon Bhuti 2009. *The Linguistic Relationship between Southern and Northern Ndebele*. PhD dissertation, University of Pretoria.
- SKHOSANA, Philemon Bhuti 2010. The (ama)Ndebele of Africa and their Name "(ama)Ndebele". *Acta Facultatis filozofické Západočeské univerzity v Plzni* 2(10): 137–150.
- STROUD, Christopher & Kathleen HEUGH 2003. Language Rights and Linguistic Citizenship. In: J. FREELAND & D. PATRICK (eds), *Language Rights and Language Survival: Sociolinguistic and Sociocultural Perspectives*: 1–33. Manchester: St. Jerome Publishing.
- SULLA, Victor & Precious ZIKHALI 2018. *Overcoming Poverty and Inequality in South Africa: An Assessment of Drivers, Constraints and Opportunities*. Washington, DC: World Bank Group.
- UNESCO 2008. *Mother Tongue Matters: Local Language as a Key to Effective Learning*. Paris: UNESCO.
- WILKES, Arnett 2001. Northern and Southern Ndebele: Why Harmonisation Will Not Work. *South African Journal of African Languages* 21: 310–322.
- WILKES, Arnett 2007. The Multilingual composition of Northern Ndebele. In: M.J. MOJALEFA (ed.) *Ratšhatšha: Studies in African Language Literature, Linguistics, Translation and Lexicography. Festschrift in Honour of P.S.Groenewald*: 159–175. Sun Press: Stellenbosch.

- WILLIAMS, Colin H. 2008. *Linguistic Minorities in Democratic Context*. Houndmills: Palgrave Macmillan.
- VAN WYK, Egidius Benedictus 1966. *Die Bantoetale*. Pretoria: J.L. van Schaik.
- YU, Ke & Siphesihle DUMISA 2015. Community Support: The Missing Link in Indigenous Language Promotion in South Africa? *Per Linguam* 31(1): 60–73.
- ZIERVOGEL, Dirk 1959. *A Grammar of Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa*. Pretoria: J.L. van Schaik.

APPENDIX I: HALS-QUESTIONNAIRE

South Africa, May 2016

All information gathered with this questionnaire is confidential and for non-commercial research purposes only. No personal data will be given to third parties or for commercial uses.

The questionnaire is based on:

https://fedora.phaidra.univie.ac.at/fedora/get/0:301101/bdef:Container/get/Attachment_1_Revised_Questionnaire.pdf

Number of questionnaire _____

Researcher _____

Date and place _____

A. BACKGROUND DATA

1. The informant is:

Male Female

2. Tick box for the age of the informant:

18–29 years 30–49 years 50–64 years 65– years

3. The informant was born in

Country: _____

Town and village/suburb: _____

The informant now lives in (town and village/suburb): _____

since _____

(years)

4. Indicate your own **highest** level of education:

No school education at all

Basic education: primary school _____ years

Vocational / secondary education

I am a student at _____

Higher vocational or academic education

5. What describes your occupational situation best today?

- I work/study outside home
- I work at home (e.g. housewife, farmer)
- I am retired
- I am looking for work/unemployed
- Other situation, please specify:

B. BACKGROUND INFORMATION ABOUT LANGUAGE USE

6. What is/are your mother tongue(s) (the language(s) you learned first)?

- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

7. What other languages can you speak?

- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

LANGUAGE USE OF YOUR FAMILY

8. What language(s) do/did your **parents** use **between themselves**?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

9. What language(s) does/did your **mother** use with you?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other situation, please specify:

10. What language(s) does/did your **father** use with you?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other situation, please specify:

11. What language(s) did you / do you **normally** use with your siblings?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other situation, please specify:

12. What language(s) did/do your **grandparents** on your **mother's** side use with you?

- not applicable (my mother's parents were not alive or present in my life)
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

13. What language(s) did/do your **grandparents** on your **father's** side use with you?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

14. What language(s) do you **normally** use with your current spouse/partner?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

15. What language(s) do you **normally** use with your current spouse/partner?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

16. What language(s) do you **normally** use with your children?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

17. What language(s) does your spouse/partner **normally** use with your children?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

18. What language(s) do you **normally** use with your grandchildren?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

LANGUAGE USE AT SCHOOL

19. In the schools you attended, what language is/was the teaching medium?

- not applicable
- Ndebele
- Zulu
- Northern Sotho
- English
- Afrikaans
- Tswana
- Other, please specify:

NOTES

(I) WHERE HAVE YOU LEARNT LANGUAGE X?

- at home (from my mother, my father, my grandparents, or somebody else in my childhood family)
- from friends, neighbors, spouse/partner, or colleagues
- at school or in a language course
- in another way, please specify:
- not at all.

(II) LANGUAGE COMPETENCE

How would you evaluate your own knowledge of language X?

	Perfectly	Well	Fairly well	Poorly	Not at all
I can speak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I understand (when spoken)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can write in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can read in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(III) LANGUAGE USE

Indicate how often you use language X in the following contexts.

	Regularly	Sometimes	Never	The question doesn't apply to me
Home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work/School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neighbors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Church	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public authority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other domain, if relevant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(IV) STATEMENTS ABOUT THE USE OF LANGUAGE X WITH DIFFERENT CATEGORIES OF PEOPLE

It is usual that people of a certain age or sex prefer using a certain language rather than another. Indicate how much you agree with the following statements:

	I totally agree	I agree	Difficult to say	I don't quite agree	I don't agree at all
young boys should use language X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
young girls should use language X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
adult men should use language X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
adult women should use language X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(V) IS LANGUAGE X USED IN THE FOLLOWING DOMAINS (IN YOUR COUNTRY/REGION)?

	Yes	No	Don't know
Parliament	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tax office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health insurance office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employment office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospitals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Courts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ministries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regional and municipal offices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Printed media (newspapers etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advertisements in public spaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advertisements (commercials) in media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



LANGUAGE DYNAMICS

AMONG SPEAKERS OF SINDEBELE

*Isalee Jallow, Maikki Järvi, Niina Väisänen,
Mimi Nokuthula Masango & Axel Fleisch*

This short qualitative study of the language dynamics among speakers of Sindebele in the Limpopo province of South Africa is based on in-depth interviews and informal conversations with dozens of speakers, cultural experts, and activists in rural areas of Mokopane and Polokwane in May 2016. It is not a full-fledged survey of the sociolinguistic situation of Sindebele, but nevertheless clearly documents the threatened status of the language. Two main insights stand out. Firstly, parents use Sindebele to some extent with their children, but often shift to Northern Sotho in their homes when children enter pre-school. Because of this early rupture, natural language transmission is insufficient. Secondly, two contrary dynamics are at work. Native speakers adopt Northern Sotho properties into Sindebele. At the same time, individual Northern Sotho-speaking women are compelled to learn Sindebele in marriage, and then they transmit it to their children. This intricate interplay between massive borrowing and substrate effects has occurred over a long time. Against such a backdrop, the chances of long-term survival of Sindebele are difficult to assess. Local actors play a significant role, such as the activists of the Mandebele National Organization, who strive to preserve their cultural and linguistic heritage. In addition to drawing attention to the case of Sindebele as an interesting linguistic case of a Nguni Bantu language heavily influenced by contact, the article also intends to lend support to the concerns of the community through scientific evidence.

1. INTRODUCTION

In several small towns and rural settlements in the wider Mokopane area in South Africa, Sindebele, a language referred to as Northern Transvaal Ndebele in older literature, is still spoken by a considerable number of people – somewhat contrary to the impression evoked by the few publications available on this language and its speakers (cf. Simons & Fennig 2017; Hammarström, Forkel & Haspelmath 2018). Among Sindebele speakers, impressions concerning the vitality of the language are equally ambivalent. On the one hand, more than a few of the people we were able to interview state that they cherish the use of Sindebele and see it as significant for their identity as a cultural community. On the other hand, many people also spoke about low esteem for the language and a not-too-promising future outlook for Sindebele. Many of our interlocutors are

Studia Orientalia 120 (2019), pp. 63–89

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ISSN: 0039-3282

language activists, and others do not pay equal attention to questions of language. For these reasons, we became very interested in the different perceptions of Sindebele speakers concerning the vitality of their language.

It is important to recognize that there are a multitude of voices, with dissonance among them. Their existence, we believe, characterises the seemingly contradictory situation: the language, for now, forms a vibrant community, even though at the same time, a sense of its being on the demise has existed for a fairly long time.

In one sense, speakers paint a rather bleak picture, referring to what they perceive as a fundamental change after the mid-1990s: the exposure of children to a more public sphere of communication and interaction with others, meaning an earlier onset of contact with Northern Sotho that had, according to them, a negative effect on the acquisition of Sindebele by young children. But then there are other observations including the very fact that children still do speak Sindebele, contrary to what Ziervogel (1959) insinuated sixty years ago. A somewhat contradictory situation remains. Everything points towards use of Sindebele being discontinued, but in fact there is maintenance. With our contribution, we would like to complement the understanding of the sociolinguistic setting gained from questionnaire-based survey approaches such as Grünthal, Honkasalo & Juutinen (this volume). Our article has as its main objective to provide information on current language dynamics, speaker attitudes, and language activism among Sindebele speakers.

The Sindebele language variety and its speaker community have not been widely researched, but some literature is available. In addition to van Warmelo's (1930; 1935) ethnological publications, Ziervogel's grammatical sketch from 1959 is a significant contribution. It contains valuable insight into the structure of Sindebele and underscores its slightly hybrid status as a Nguni language that has come under significant influence from various contact languages, most notably of the Northern Sotho cluster. Only a few decades later, scholars conducted further research and published more studies of Sindebele, most notably Arnett Wilkes and Philemon Buti Skhosana. Wilkes (2001) details some of the linguistic evidence in support of the view that Sindebele and isiNdebele should not be viewed as variants of the same language. Wilkes (2007) and Skhosana (2009) discuss in particular the question of linguistic distance between Sindebele as used in the Mokopane area of Limpopo province, and isiNdebele to the south, both coming to the conclusion that the linguistic distance warrants viewing them as clearly separate linguistic units. Based on these insights and discussions, we began our own research, which took place during a field stay of approximately two weeks in the area where speakers of Sindebele live. While we did not have a chance to visit all the places where Sindebele speakers have been reported to

live, or have lived in recent times, a number of recurrent place names were given throughout the many interviews and informal conversations with members of the community. These places are shown on Figure 1.

Our insights stem from dozens of interviews with a broad range of people from among the Ndebele speaker community. This article is the result of analysis of close to 30 hours of recorded interviews, as well as our impression of even more, and longer, conversations with speakers and language practitioners relating to this Ndebele community. The interviews were held in Mosesetjane, Ga-Maraba, Mokopane, and Ga-Mashashane. The conversations that we recorded with individual members of the speaker community yielded basic socio-linguistic data collected using the questionnaire developed for the parallel survey study by Grünthal, Honkasalo & Juutinen (this volume). We complemented this



Figure 1 Places mentioned as significant for the Mandebele community

basic data by conducting expert interviews with several people who had a vested interest in language matters: activists, journalists from local newspapers, former teachers, and members of the local administration providing public services. For these, we followed an interviewing strategy that ranged from semi-structured to open, depending on our interlocutors. Our conversations – especially with some of the more senior and renowned members of the community – were sometimes guided by our interlocutor’s choice of topic. Among the people we approached, there were many language activists, most of whom are associated with the Mandebele National Organisation (MANO).¹ Since we had a chance to work with them very closely over many days, it was also possible to discuss matters with these experts on more than one occasion, building an incremental understanding of some of the core issues and concerns of the community.

This article is mostly a descriptive account of different sociolinguistic constellations and phenomena that have an impact on the status of Sindebele at present. Among the most crucial findings is probably the observation that many members of the Mandebele community have a fairly strong allegiance to Sindebele identity and a vibrant culture that is not always acknowledged.² The South African government, for example, has not recognized Sindebele as a language different from isiNdebele, implying that Sindebele is a variant of isiNdebele. Skhosana (2010) compiles some of the relevant views in this regard.

In the following, we will first discuss the status of Sindebele in terms of genealogical relations and some general observations concerning the current use and distribution of Sindebele in South Africa. We will then move into a discussion of language attitudes toward Sindebele and other relevant languages, before discussing current attempts at securing the survival of the language as a viable means of communication in the future.

2. THE LINGUISTIC POSITION OF SINDEBELE

Different names have been used in order to label the linguistic variety that is here referred to as Sindebele; this multiplicity of names contributes to the confusion surrounding the language’s status. In earlier literature, various Ndebele sub-

1 MANO is a community-based organisation that lobbies for better recognition of various concerns including linguistic and cultural rights of the Sindebele-speaking community in South Africa. We would like to thank MANO for their support throughout our stay in Mokopane and surrounding areas in the southern Limpopo province.

2 Sindebele refers to the name of the linguistic variety, and Mandebele is the demonym referring to the speakers of this variety; the terms are the ones chosen by members of the community to refer to themselves and their language variety.

groups are typically referred to by their political-genealogical affiliations. Without much reference to linguistic characteristics, Fourie (1921), for instance, speaks of the “amaNdebele of Fene Mahlangu” referring to one (southern) group; Jackson (1969) deals with the “Ndebele of Langa”. Oral accounts are replete with traditional chiefs’ names, providing a significant system of reference to a person’s identity in terms of (ethno)political affiliation, but it would be misleading to think of these terms as ethnonyms in a narrow sense, and no conclusions about (socio)linguistic realities can be drawn on these grounds. An alternative way of singling out and designating linguistic varieties is by way of regional-geographic designation.

What we call Sindebele, following speakers’ preferred current practice, became known first through the work of Ziervogel (1959) as Northern Transvaal Ndebele. This term maintained some currency, alongside the term Sumayela-Ndebele, which relies on yet another strategy: drawing on distinctive vocabulary (here: *-sumayela* ‘speak, talk’) that sets a variety apart from its nearest neighbours and relatives.

Sindebele has often been referred to simply as Ndebele. Other languages called Ndebele are Southern Ndebele (also known as isiKhethu or isiNdebele, spoken by the Ndzundza and Manala sections of the Ndebele people in South Africa) and (Zimbabwean) Ndebele (also known as Northern Ndebele, isiNdebele or – again – simply Ndebele: the naming of the different languages is often confusing and overlapping), spoken in Zimbabwe. Southern Ndebele or isiNdebele is an officially recognised language in South Africa.

Sindebele belongs to the group known as Nguni languages, together with isiZulu, isiXhosa, isiNdebele, the Zimbabwean Ndebele variety, and a range of other languages. Maho’s New Updated Guthrie List (2007: 93) lists it as S408, separate from “South Transvaal” isiNdebele, S407. The latter has the ISO 639-3 code “nbl”, and is listed by Hammarström, Forkel & Haspelmath (2018) as “south2808”, albeit with the erroneous label “Sumayela Ndebele”.

Sindebele’s exact relation to other Nguni languages – and in particular to other varieties also labelled as “Ndebele” – is disputed, in part because available documentation of the language is sparse (cf. Ownby 1985). Contrary to those striving to harmonise and combine Sindebele and isiNdebele as two dialects of one and the same Ndebele language (see Wilkes 2001: 311) based on a common historical genealogy (van Vuuren 1983; de Beer 1986), the view held by Wilkes (2001; 2007) and Skhosana (2009) emphasises their distinctness. This view would seem to be in line with Ownby’s (1985) proposal, which argues that, in terms of historical-genealogical classification, Sindebele represents an early offshoot of the main Nguni stock. It should be noted, however, that the historical-genealogical relations among the Nguni languages are not properly understood at this point. Some

properties that have been used in the past to subclassify the Nguni languages are weak indicators of historical genealogical family ties.

The Zunda-Tekela distinction that has been taken to represent a fundamental split between two sub-groups among the Nguni languages is a case in point. The distinction between “Zunda Nguni” and “Tekela Nguni” (Doke 1954) is based on a number of linguistic features. These include for instance the systematic phonological correspondence of Zunda /z/ to Tekela /t̪/. In contrast to such regular sound correspondences, which in principle call for an explanation on genealogical grounds, other features are typological in nature, and their distribution among the Nguni languages may be based on mechanisms other than regular historical change. The absence (in Tekela varieties) versus the presence (in Zunda varieties) of the augment as part of noun class prefixes is a case in point. The overall significance of such (mostly typological) features for genealogical classification is questionable.

According to the Zunda-Tekela classification system, the South African Nguni languages isiZulu, isiXhosa, and isiNdebele are Zunda languages, while siSwati (=Swazi) is a Tekela language. The noun class prefixes in the language names (*isi-* vs. augmentless *si-*) illustrate the emblematic difference with regard to the augment. The very name of the language siSwati contains an instance of the coronal consonant /t̪/ which corresponds to /z/ in the other languages mentioned here, responsible for its adoption into English as “Swazi” (via isiZulu). In contrast to its (near) namesake isiNdebele – allegedly its closest relative – Sindebele is a “Tekela language” (like siSwati and a number of other Nguni varieties spoken further to the south).

While this distinction has become enshrined in much of the discussion on the subject matter since the time of Doke, it clashes with Ownby’s (1985: 49) proposed classification, which is based on lexicostatistics. Both views have serious drawbacks: the reliance on typological properties in one case, the shortcomings of lexicostatistics in the other. On these grounds, the historical genealogy of Nguni remains unclear. Most importantly, hitherto, most views have been biased towards historical models that rely on diversification and its genealogical ramifications. Contact dynamics have not received due attention. Historical settings and language ecologies affecting the Nguni languages are not properly understood, but intense language contact must have played a significant role. For one, Afrikaans is a significant contact language. Even more profound effects, though, have resulted from the great influence that languages of the Sotho-Tswana group have exerted on Sindebele. Northern Sotho (Sesotho sa Leboa), also referred

to as Sepedi, is particularly important in this regard.³ Here it is important to bear in mind that contact-induced similarities between Sindebele and varieties of the Sotho-Tswana cluster may not only be due to heavy borrowing in intensive contact situations. The current situation of widespread shift from Sindebele to Northern Sotho implies bilingualism mainly on the part of Sindebele speakers. Such a situation would favour (unidirectional) borrowing of linguistic material from Northern Sotho into Sindebele. However, the interviews that we conducted (corroborated by Grünthal, Honkasalo & Juutinen, this volume) show another important process at work until fairly recent times, at least. Women who married Sindebele-speaking men would learn and use Sindebele in their family homes, teaching the language to their children, with possible “second-language” speaker features. Against the more general tide of a Sindebele to Northern Sotho shift, at the level of households and families, individuals are known to have acquired Sindebele as a second language in specific personal circumstances, which could imply that the opposite direction of shift needs to be reckoned with. Such language choices are discussed in more detail in Section 3 below.

Complex situations of large-scale borrowing intersecting with micro-level shifts (in the “unintuitive” opposite direction) may easily obfuscate the overall historical genealogical picture. Some features of Sindebele have led Ownby (1985) to assume that Sindebele is a rather conservative, “archaic” Nguni language. Ownby bases her view mainly on lexical items, but morphological and phonological evidence could also be mentioned in this regard, including some of the typical Tekela features: no augment, stops rather than sibilants in certain environments, and Sindebele’s seven-vowel-system. Based on the still sparse evidence, we cannot state with great certainty whether these are indeed necessarily old features that have been long preserved (in line with what Ownby 1985 suggests on the basis of lexical evidence), or whether the complex and intensive contact scenario with Sotho-Tswana varieties “reinstated” these features in what may, at some point in its history, have been a linguistic variety resembling core-Nguni languages more closely. The very close contact situation with Sotho-Tswana varieties and probably recurrent language shifts (in either direction, Nguni to Sotho-Tswana and vice versa) blurs the boundaries between adstrate and substrate effects.

3 In interviews, our interlocutors have often referred to this variety as Sepedi, rather than using the term *Sesotho sa Leboa* (which literally translates into English as Northern Sotho and is the currently preferred designation in official documents). Sepedi is one variety of Northern Sotho, in fact, the one on which much standardisation work is based. It is important to bear in mind that Northern Sotho shows considerable dialect variation, and when interviewees use the term “Sepedi” they may be referring to different varieties of the bigger cluster.

Guthrie's referential classification (1967/1971) groups the Nguni and Sotho-Tswana languages into zone S (as groups S30 and S40 respectively), implying a close genealogical relation between them. In *Glottolog* 3.0 (Hammarström, Forkel & Haspelmath 2018), the situation looks slightly different, in that the Sotho-Tswana and the Nguni languages are grouped separately from each other but together with various other languages at a lower level, and only "meet" at the somewhat higher node of Southern Bantu-Makua. Irrespective of these differences in the alleged genealogical positions of the Sotho-Tswana and Nguni languages, the two groups show considerable similarity in some key features: First, their segmental phonological inventories are quite complex, including clicks in the phonologies of several of these languages (not, however, Sindebele, which likely had clicks at an earlier stage, but replaced them in a regular fashion, as shown through comparison with other Nguni languages, see Schulz et al., this volume). Also, the morphology of these southern Bantu languages is fairly complex. This includes some features otherwise not very common in Bantu languages, such as nominal compounding or preverbs expressing phasal or temporal-aspectual notions. In terms of cultural practices ingrained in the linguistic makeup of these languages, avoidance strategies and respect registers come to mind. One example is the (not only) linguistic practice of *isihlonipho sabafazi* by which a married woman avoids or constrains links between herself and male in-laws (Finlayson 2002; Rudwick 2008), or more recent cultural-linguistic practices, such as the application of a writing system best known by its Sotho-Tswana name *Ditema tsa Dinoko*, also referred to as *IsiBheqe Sohlamvu* for Nguni, although it is not clear at this point how widespread this practice actually is. These are just some of the properties of these southern Bantu languages that illustrate their complexity; they have been chosen somewhat arbitrarily, with emphasis on those that are (near)exclusive or particularly prone to be emblematic features setting the Nguni and Sotho-Tswana languages apart from other Bantu languages in the wider region.

Missionaries who operated in the area were aware of the existence of Sindebele, but relied mostly on Northern Sotho (in addition to Afrikaans) in their interaction with members of the Mandebele community. Under the apartheid regime, Sindebele was regulated by the South Ndebele Language Board from 1976 onwards in an attempt to merge the two varieties. IsiNdebele, or South Ndebele, as it was referred to at the time, was introduced in primary schools in the 1980s. Since the democratic transition, the responsible body for language development has been the Pan South African Language Board (PanSALB), which has worked to further develop isiNdebele as well as to secure its position as an officially taught language and medium of instruction. PanSALB was established in 1996 as a provi-

sion of the Constitution of the Republic of South Africa, in order to promote and create conditions to enhance the development and use of the official languages of South Africa, and to promote and ensure respect for all languages commonly used by communities in South Africa. (Government of the Republic of South Africa, Department of Arts and Culture: Pan South African Language Board)

Arnett Wilkes (2001) argues in his paper “Why harmonization will not work” that Northern Ndebele and Southern Ndebele are different languages; he dismisses harmonization of these two languages as a solution to the so-called “Ndebele language controversy”. In addition to contrastive structural properties of the two varieties, he points out that very few of the speakers of Sindebele regard their language as a variant of Southern Ndebele or isiNdebele, and in fact see it as a completely different language and culture. Similarly, James (1990: 36) establishes that the community living in the Limpopo province (which she refers to as “Nebo Ndebele”) is “adamant that they would never accept the Ndebele Homeland”, thus arguing that the two groups consider themselves to be of different origins. The discussions with our consultants confirmed the speakers’ awareness of the differences between the two languages and ethnic identities. When asked for the Sindebele speakers’ own rough estimates, the degree to which isiNdebele and Sindebele speakers understand each other varied from 50 percent to 75 percent. A middle-aged male Sindebele speaker expressed his perception of the difference as being based on a significant lexical distance between the varieties: “Most words are not the same in the two languages” (Male informant, Mokopane, 17 May 2016). However, he personally assessed his own capacity to understand isiNdebele as good, possibly because he was originally from the south and had heard isiNdebele a lot. According to this consultant and another male consultant, both interviewed in Mokopane, the speakers of Sindebele can understand isiNdebele much more easily than isiNdebele speakers understand Sindebele. Therefore, it seems that there may be a degree of asymmetric intelligibility between the two languages. This could be due to the fact that speakers of the northern varieties have more exposure to (southern) isiNdebele, it being the more established and recognized language, with higher speaker numbers and presence in media. In contrast, speakers of isiNdebele typically have less exposure to Sindebele, if any.

When I started speaking Sindebele which is spoken in the north, the southern speakers of isiNdebele didn’t understand me all that well. (Male informant, retired, Mokopane, 17 May 2016)

According to Gooskens (2007), the main factors that affect the intelligibility of a closely related language are 1) the listener’s attitude towards the language, 2)

the listener's contact and other experience with the language, and 3) linguistic distance to the listener's language. It is not certain how much of isiNdebele speakers' reported inability to understand Sindebele is due to possible discriminatory attitude towards the language – that is, not wanting to acknowledge the Sindebele variety as a language in its own right – or how much the Sindebele speakers' perception of experienced hostile attitudes affect their own views of the situation. This matter is further discussed in Section 4.

3. THE SPEAKERS AND THE DOMAINS OF THE LANGUAGE USE

Sindebele is spoken amongst the Mandebele people in the province of Limpopo, South Africa. During our fieldwork we interviewed Sindebele speakers mainly in the villages of Ga-Mashashane, Mosesetjane, and Ga-Maraba, as well as some Sindebele-speaking individuals residing in Siyabuswa in the province of Mpumalanga, where isiNdebele is the dominant language. During our stay, we did not have an opportunity to interact with speakers of Sindebele in the Zebediela area (SE of Mokopane), except for a few speakers originally from Moletlane now residing outside Siyabuswa. Immediately upon arrival in the area, we were able to establish the existence of a vibrant Sindebele-speaking community, which seems to be spread out across a defined geographical area. A 94-year-old woman, interviewed in Mosesetjane on 15 May 2016, indicated that the Sindebele spoken in these areas could be further divided into more specific dialect varieties: that spoken in the village of Ga-Mashashane and others spoken in and around Mokopane; in the villages of Mosesetjane; and in Ga-Maraba. She herself considered the dialect of Ga-Mashashane to represent the “purest” form of Sindebele. Another female consultant, interviewed in Mosesetjane on 13 May 2016, explained that the language varies slightly between villages, making it possible to pinpoint where speakers are from.

In these Sindebele speaking areas, most people who identify with the Mandebele community know the language at least to some extent. However, the discussions with the people we spoke to showed that the language use varies significantly, firstly, between different age groups, and secondly, by domains. According to our interviewees, Sindebele is the primary language in two age groups: the older generation and young children below school age, in particular prior to pre-school. Especially for the older people, Sindebele is the main language of communication with everyone else in their home village. For the younger generations in the villages of Ga-Mashashane and Mosesetjane as well as in Thabana (Siyabuswa), Sindebele is first and foremost a home language. According to the interviewees,

children who have reached school age (6 or 7 years and higher) use Sindebele mostly with their older relatives, like grandparents, with whom the children stay during the day when older children attend school and parents go to work. Only a few children use it with their parents, and according to the data we gathered, it is very rare for young people to speak Sindebele with their peers. Many older interviewees claimed that young people often code-switch between Sindebele and Northern Sotho in contexts where Sindebele is expected. Based on the interviews we conducted it seems fairly common for young people not to use Sindebele with their Sindebele-speaking parents. Many parents seem not to expect their children to use Sindebele, even though several interviewees claimed that teaching Sindebele to their children was essential to their culture and heritage.

I feel obliged [...] with other languages I would be leading them astray.
 [...] Mandebele people must not become extinct. (Older male informant, Mosetjane, 13 May 2016)

The interviews indicate that many Sindebele-speaking men marry women who speak Northern Sotho. The wives speak their own mother tongue to the children as well as to their husbands, since it is the dominant, more widely used language around the community. This is different from the practices outlined above which held earlier, whereby women marrying into a Sindebele-speaking family would acquire that language, and, in fact, transmit it to her children. This change has led to a now-common scenario in which Northern Sotho has become the dominant language in mixed Ndebele-Sotho households, and many Mandebele men have not questioned their wives' choice to speak Northern Sotho with their children. This goes, in principle, against a certain cultural maxim. One of our interviewees phrased it very clearly: "The important language, when it comes to teaching kids, should be, in African culture, the father's language" (Male informant, Mokopane, 17 May 2016). However, this appears not to apply equally in language-dissonant couples. When a Sindebele-speaking woman marries a Sepedi-speaking man, it is commonly the case that Sepedi is the sole language used in the home. A Sepedi-speaking woman marrying into a Sindebele-using household will have (or gain) familiarity with Sindebele, but not necessarily use this language with her children. A possible explanation for this gender- and language-asymmetry was offered by some of our interviewees, who explained that even though men deem the choice of language important and state a preference for the husband's language as dominant in the household, the fact that Sepedi is used in schools and in all official domains makes it difficult to maintain Sindebele as dominant in the family.

The collected data indicate that the youngest speakers who clearly learned Sindebele as their initially dominant language were born in the mid-1990s and acquired Sindebele at home from their parents and/or grandparents. Since the 1990s, most parents have chosen to speak Northern Sotho to their children even though they themselves are Sindebele speakers. This being the case, the children who were born after 2000 usually speak Northern Sotho as their first language, and only use Sindebele when talking to their grandparents. Only a few of the older people stated that their grandchildren were not able to speak any Sindebele.

If somebody has five kids, you can sort of tell when the kids were born because the first ones born in late 80s and early 90s would be speaking in Sindebele, and the ones who born in mid 90s would speak Sotho. (Male informant, 33, Mokopane, 17 May 2016)

What, then, could have caused this language shift in the 1990s? Our research revealed a significant impact on language choice created by the education system. One reason given by interviewees concerning the question why children born after the mid-1990s do not speak Sindebele as their mother tongue is that they are the first ones to have gone to pre-school. Before this, children did not attend pre-school and were immersed in Sindebele at home up until they started primary education. Post-apartheid teaching policies gave schools the option to choose any of the official languages as a teaching language instead of English or Afrikaans. Northern Sotho had earlier been used in the former homeland of Lebowa, including the areas of Ga-Mashashane and Mosesetjane, but was later adopted as teaching language more widely, and in pre-schools children gained exposure to this language at an even earlier age. According to many of our interlocutors, since the policy change, parents have chosen to speak Northern Sotho to their children to ensure that their children would not have any disadvantage at school when studying alongside children whose first language was Northern Sotho. According to the interviewees, Sindebele-speaking children struggle at school at the beginning, but adapt quickly when they get accustomed to Northern Sotho. One female informant in Mosesetjane (interviewed 13 May 2016) explained that she would like to talk to her children in Sindebele, but since the children already began to speak Northern Sotho in pre-school, they have become accustomed to using that language and will not reply to their mother in Sindebele anymore. Now she speaks Sindebele only rarely, and her children reply in Northern Sotho. Based on the interviews it seems evident that the decline in the use of Sindebele happens when children enter the formal education system.

This thing of not having Sindebele in school is holding us back in the sense that when the child is at home, we address them in Sindebele, but when they go to

school they write in Sepedi, the teachers talk to them in Sepedi and in a sense, it holds the kids back [...] because Sepedi is a language that is foreign to them. (Male informant, 33, Mokopane, 17 May 2016)

When children use Northern Sotho in all other domains of life, limiting Sindebele as the home language to be used with their grandparents, the Sindebele used by younger generations becomes heavily influenced by elements of Northern Sotho. Many older people expressed their disapproval of the fact that their grandchildren did not know or could not remember all the words in Sindebele and instead code-switched regularly between Northern Sotho and Sindebele. Equally, our interpreters in their 20s and 30s were unable to translate some of the traditional songs and praises of their elders, stating that they were “in such deep Sindebele” that they could not understand it.

The domains in which Sindebele is used vary as well. It is important to note that even though most people in these areas know Sindebele, and for older people it seems to be their primary language, it is not commonly used in formal and official domains such as church or school, or in governmental institutions such as police stations or hospitals. One young man told us: “I use [Sindebele] on the streets, I usually greet people in Sindebele and if they respond, I keep on [...] Most of the older generation, they don’t change their language when they speak to somebody who is not a native speaker of Sindebele” (Mokopane, 17 May 2016). However, the same interviewee stated, “When I go to the bank, I speak Sotho”. A middle-aged man, in an interview in Mokopane on 17 May 2016, illustrated the fact that such language choices depend on experienced or expected reactions by non-Sindebele officials. “That becomes a problem when it comes to this [municipality offices, the police station, hospitals], because when they get there and they try to speak in Sindebele, the Sepedi-speaking people say one should rather speak English.”

As noted above, Sindebele is not an official teaching medium at schools, nor is any official Sindebele language education given to children living in these areas. Younger people very often use English alongside Northern Sotho in their everyday lives. According to a young male informant (Mokopane, 17 May 2016), especially starting in the mid-1990s, when the villages in the area got electricity, people have become more widely exposed to English through media. This exposure has led to the rise of English. However, according to a 15-year-old male informant from Mosetjane (15 May 2016), some students sometimes use Sindebele with each other during breaks between classes. He mentioned that there are cases where the teacher might even translate into Sindebele if there are children who do not understand Northern Sotho well enough. There were also examples of younger adults who mentioned that during informal student gatherings in university settings in

larger cities, they regularly spoke their language with speakers of other Nguni languages (notably isiZulu and isiXhosa) and were understood.

Middle-aged people would commonly mention in our interviews that most of them use Sindebele with the people who are known to share the same mother tongue, but in many public contexts, they use Northern Sotho or English. Yet according to several interviewees there were exceptions in Ga-Mashashane and Ga-Maraba, where priests in church preach in Sindebele, and funerals are sometimes held using the language (Ga-Maraba, 14 May 2016). The language selection process a Sindebele speaker goes through was described by a 27 year old woman: “If I go somewhere else, and when I get there and I feel that a person knows Sindebele, then I can communicate with that person but [...] I won’t just start speaking Sindebele, I’m going to speak Sepedi first, or English” (Mosesetjane, 15 May 2016).

4. LANGUAGE PRESTIGE AND ATTITUDES

Sindebele does not enjoy the status of an official language of South Africa. Therefore, as stated above, it plays a very limited role in the official domains of society. Due to the lack of an established orthography (see below), the language is mostly used in spoken form, making it difficult for people to use it in official matters requiring tasks such as filling out paper forms. As stated above, some researchers have also considered Sindebele to be a variant of isiNdebele. However, the discussions with our interviewees indicate that almost every Sindebele speaker strongly regards it as a language of its own; only one of the speakers interviewed saw Sindebele as a variant of isiNdebele stating that “they are the same [language]”. Along with the language itself, many interviewees also felt it important to emphasize that they saw the Sindebele community as carrying a distinct culture of its own, thus differing from isiNdebele language and culture. Such a sense of distinctiveness is also mirrored in the statement of a young female interviewee (Mosesetjane, 15 May 2016), who gave the following example: “Let’s just say, when I got to Pretoria and then they say, ‘Are you Ndebele?’ and [...] when I start speaking my Ndebele [...] they [are] astonished. ‘Your Ndebele is not known.’”

In our interviews, many of the people who speak Sindebele as a mother tongue expressed a feeling that the use of their own language is not encouraged by the local officials or the government of South Africa. Some of our interlocutors were outright accusatory of the South African government for intentionally “blocking the language development despite the initiatives” and preventing the use of Sindebele, as an older man phrased it (Ga-Maraba, 14 May 2016). This claimed discrimination has allegedly taken the form of continuously ignoring the

demonstrations, organized since 1994, in an attempt to improve the language's status; and of not encouraging community projects of after-school teaching and the creation of learning materials.

One of the oldest consultants interviewed in Mosesetjane remembered also facing strong discrimination in everyday life under the apartheid regime. According to the informant, the Mosesetjane community had been forced to give up their traditional herder lifestyle because of the Rinderpest epidemics. This idea of having lost a self-sustained economy is a recurrent theme. It was also brought up in the context of later experiences such as forced mobility and precarious employment opportunities, for instance on commercial farms during the times of apartheid and racial segregation. When trying to conduct official matters in municipality offices and institutions, the Mandebele were told to go home, as their language could allegedly not be understood (Young woman, Mosesetjane, 15 May 2016). The same woman points out that during the apartheid regime, similar situations were reported in shops around the community, where the Mandebele were allegedly ignored if they spoke their own language. According to several interviewees, Sindebele has always been mainly a home language and has faced discrimination throughout remembered history (Older speakers in Ga-Maraba, 14 May 2016). James (1990: 38) also notes some strong discriminatory attitudes towards the Mandebele in the 1980s when her fieldwork was conducted. According to her, the Northern Sotho speakers regarded the Mandebele as “primitive, backward and opposed to civilising influences”. The interviews are replete with notes on how some discriminatory attitudes still exist today. Referring to office employees, one woman's response interpreted to us into English points out that office employees “give you an attitude. In the offices, local government offices, they say ‘no, we don't hear you; what are you saying?’” (Young woman, Mosesetjane, 15 May 2016).

It is interesting to note, though, that according to some interviewees, the situation has improved at least on the community level. There seems to be less of a sense of actual discrimination based on belonging to a Mandebele community and speaking Sindebele: “Mostly they [didn't] get the services they want [...] now it's no longer happening, recently now they get services [...] now it's better.” (Female interviewee in her late 20s, Mosesetjane, 15 May 2016)

It is worth noting however, that Sindebele – as stated above – has largely been confined to the home environment. To which extent this is due to discriminatory practices and/or a sense of stigma is not totally clear. In any case, there is evidence that the use of Northern Sotho in the public sphere has not been strongly questioned or opposed by the people interviewed, whilst simultaneously conscious efforts have been made to preserve Sindebele in the homestead:

“When you are in the streets you can speak Sepedi or [...] even at school they were being taught Sepedi, but their father used to say that when you open the gate [to the house where you live] leave Sepedi outside, then pick up Sindebele.” (Female informant, age not recorded, Mosesetjane, 15 May 2016)

The data we gathered support the idea that self-consciousness is a relevant factor in many communicative domains. It seems evident that the absence of the language in public areas and the lack of official status affects Sindebele speakers' own attitudes towards their language. According to our research, it prevents younger people, in particular, from using Sindebele. We were often told that young people feel embarrassed to speak Sindebele and instead prefer to use Northern Sotho, which they see as more “useful”. A male 15-year-old we spoke to in Mosesetjane (15 May 2016) pointed out that many Sindebele speakers do not want to speak their language in front of speakers of other languages, and in these situations, they speak English or Northern Sotho. Interestingly, none of our interviewees said that they themselves would be embarrassed of the language, but described that as being the case for some other individuals.

The parents' attitude towards Sindebele greatly affects how their children regard it. Some interviewees, whose parents felt strongly that the language was important, had been more systematically exposed to Sindebele from an early age. We talked to young parents in the villages of Mosesetjane and Ga-Mashashane who speak Sindebele with their children in order to ensure that the children know their roots and culture. These young people told us that they were proud to use Sindebele. “My kids would never dare to speak to me in English”, a young mother pointed out to us. Another female consultant stated that “it's a must, not a hope” that her daughter keeps using Sindebele when she grows up. However, in general it can be concluded that young people's use of Sindebele is limited, and speaker attitudes likely play a significant role in this. The statements of two young men (in their 20s) state this very clearly. One of them says, “They don't want to speak in front of the people, because they think that those people are [...] better, if they speak the other language”, and the other one explains that this is “because they think they are going to embarrass themselves in front of those people” (both men interviewed in Mosesetjane, 15 May 2016).

Interestingly, several young male interviewees did not see Sindebele as a “romantic language”. According to them, Sindebele is not a good language to use when courting a woman, not even when she herself speaks Sindebele.

Many young people reacted with amusement to the suggestion of trying to approach a potential partner in their own language, that is, Sindebele. A possible explanation for this was provided by a male informant in his 30s who pointed to the lack of poetic language in Sindebele. Young people have been influenced by

Northern Sotho poetry and it is thus easier to “chat up a girl” in Northern Sotho. Likewise, the Northern Sotho soap operas that are broadcast on television give plenty of inspiration for romantic dialogue. Three young men’s statements (the first two interviewed independently in Mokopane on 17 May, the last one in Mosesetjane on the same day) illustrate these views.

When it comes to the dating thing, like people my age for instance, you would know that this girl is a Ndebele, because she comes from a [Mandebele] family and you heard her speak the language. But when you [are] trying to court her, asking her out, most of the time the practice is the person would change and speak Sotho.

I’ve heard many times people say it’s not romantic. How do you say something poetic?

Young guys like myself [...] when they meet girls they stop speaking Sindebele, they become ashamed and embarrassed to speak the language so they switch and speak [Northern Sotho] with them.

For many, the main reason for feeling embarrassed about using Sindebele stems from the lack of media, popular culture products, and newspapers. The lack of media in Sindebele was one of the biggest problems pointed out by the speakers themselves. According to some people, there had allegedly been sporadic television and radio programmes broadcast in Sindebele in prior years, but these have been discontinued. According to a male interviewee, a local radio station called Mokopane FM used to broadcast a one hour long programme in Sindebele, but it was cancelled due to hosting difficulties. Many interviewees mentioned that having radio and TV programmes in Sindebele would greatly improve the language’s prestige. Especially the older people felt that having more radio programmes in the language would improve its situation, while young people placed their hopes on television shows. A young woman pointed out that radio and TV shows would be particularly important due to the limited literacy rate in some of the areas:

Because a lot of people like to watch TV, I believe in TV first, then after, books [for] people who can read, like in this village there is a lot of people who cannot read, basically they do watch TV. It depends on where it’s going to be broadcasted; let’s just say in this village it can be TV and radio. And where I live, it’s a developed place, there’s a lot of people who like to read. (Female informant, 27, interviewed in Mosesetjane, 15 May 2016)

While this statement attests to a sense of popularity, especially of TV and radio broadcasts, in addition to these oral media disseminating in Sindebele, the written language is also seen as important. Issues related to the written form of Sindebele and the orthography development are detailed in the following section.

5. ORTHOGRAPHY

The lack of a standard written language with an established, widely known orthography was pointed out by our interviewees as one of the reasons for Sindebele's low prestige. Many of them felt that the lack of a standardized written form is the reason why Sindebele is seen as a primitive language and faces mocking and discrimination from speakers of other languages. In Mosesetjane, a female informant described her feelings:

Sometimes, when people hear [me] speak Sindebele and they ask [me] a question – How do you speak a language that is not written? [I] feel bad and am very angry to hear that – Why is the language not developed [...]? (Female informant, 30, Mosesetjane, 13 May 2016)

According to one male informant, some families prefer to speak Sepedi even at home because Sindebele is not a written language:

Even in certain homes people are no longer speaking Sindebele, they are using Sepedi, since they say Sepedi is a written language, ours [Sindebele] is not written. (Male informant, Ga-Mashashane, 18 May 2016)

According to many interviewees, the lack of orthographic rules is one of the biggest challenges in establishing a permanent official status for Sindebele in South Africa. According to the UNESCO Language Vitality and Endangerment framework, written materials and literacy in a language are key elements in keeping that language vital (UNESCO 2003: 12). The lack of an established orthography does not only cause practical problems for the use of Sindebele but also affects its status: it is not official and is of lower prestige compared to other languages spoken in the region.

There have been attempts at creating a standardised orthography for Sindebele. The short grammar sketch for Sindebele (Ziervogel 1959; referred to as Northern Transvaal Ndebele at the time) also includes orthographic rules. Based on those, Arnett Wilkes when collaborating with some of the more senior language consultants, promoted awareness of the proposed orthography among some speakers; our interaction especially with members of MANO attested to this. However, many people are not familiar with this proposed orthography, since they have not been taught to read and write in Sindebele, and the language does not form part of the linguistic landscape – at least not in a standardised written form. If short Sindebele statements or terms are seen in written form, their shape often follows orthographic conventions borrowed from Northern Sotho.

Our interlocutors often expressed their sorrow because of the lack of written Sindebele and told how having books written in the language would be extremely important for the community: “The dream would be to be able to pick up a book and notice that it is written in Sindebele” (Older female informant, Ga-Mashashane, 14 May 2016).

If we can get people to write in the language that would be a starting point to start promoting the language. (Older male informant, Ga-Maraba, 14 May 2016)

An elderly male informant, a pastor and a person of a high status in the community, had written several books about religion in English because they allegedly sell better than books published in an African language. However, he also expressed how being able to write in Sindebele would be the most important thing for aspirations to promote wider use of the language: “People would love to have books written in their own language.” (Ga-Mashashane, 14 May 2016)

Many people expressed their wish for an official orthography to rely on. Our interpreter, a fluent Sindebele-speaking young man, told us that he knew very few people who actually write Sindebele, and that even among them there are often disagreements concerning the rules of orthography: “I know hardly anyone [...] even teachers, who write the language. [...] They have all these arguments of how to spell words.” (Mokopane, 17 May 2016) His impressions are confirmed by an older language consultant stating that “some people try to write using it, but there’s no progress” (Mokopane, 18 May 2016).

Orthography plays a particularly important role in formal language education, as it is difficult to establish a framework for language teaching without uniform spelling rules. Nearly all our interlocutors mentioned that having proper language education for children in Sindebele would be the most efficient way of promoting the language.

According to the language activists in the area, the government of the time allegedly wanted to limit the development of the language, preventing locals from spreading the orthographic rules among the language users. Some of our interviewees point this out as the reason for why the orthography that had been created was not easily available for people, despite being published. Instead, they claim, it was buried in archives for many years. These descriptions of repressive actions on the part of the government are based on interviewees’ experiences and perceptions, but they do reflect quite adequately that the South African government at the time did little to promote Sindebele. The few existing publications were difficult to access outside academic circuits, and the political focus was on standardising the widely spoken official languages. The sense of disenfranchisement is certainly not unfounded.

Some interviewees pointed out that in 2001, a council of local teachers brought up the idea of developing more comprehensive orthographic rules for Sindebele again. This was the result of an initiative going back to the mid-1990s, when some of the older members of the Sindebele-speaking community sought to advance the development of their language. The interviewees mentioned to us that the climate felt more conducive to such an endeavour during the times when Nelson Mandela was president. The South African constitution makes provisions for the use of languages other than the 11 official languages, and in this spirit, a group of language activists felt motivated to form a Sindebele language board and establish a training scheme for language teachers. In the interviews we conducted, their activities were linked to the backdrop of national policies. It was pointed out that in 1999, when Mandela stepped down, the development of Sindebele started facing new setbacks and teacher training in Sindebele was suspended. Several people acting as language activists mentioned that a usable orthography does exist, but there are no resources for further development or actual implementation.

One of the activists, who had been a member of the group of teachers who worked to create an orthography for Sindebele in 2001, described how he felt threatened by government agents opposing the printing of a textbook that he had prepared. This perceived threat is keeping some from continuing their efforts as language activists. However, others continue to develop and promote the language. This task is currently shouldered by the local Mandebele communities and the few language activists who are willing to devote their time and energy to these activities. However, financial support from the government or official institutions would be needed in order to establish language education in school and to promote the orthography. According to a teacher we interviewed, the biggest problem is the lack of resources, along with the government's apparent disinterest in addressing the question. Also, according to Wilkes (2001), the attempts to promote the language have not been successful, mainly due to the prevailing perception among government officials and other decision makers that Sindebele is merely a variant form of isiNdebele. As an older male interlocutor phrased it in one interview, "the problem is our Department [of Education] and the government", referring to a situation where resources for even some of the official languages of South Africa are insufficient, diminishing the chances of any support at all for non-standardised, non-official varieties.

6. FUTURE OF THE LANGUAGE AND LANGUAGE ACTIVISM

Many interviewees stated that, on the one hand, they saw Sindebele as valuable and its survival as important for the communities. On the other hand, many admitted that they saw the future of the language as rather grim and uncertain. Younger people in the area, in particular, seem to abandon the language, even though older language activists claimed that young people still use Sindebele. Based on our observations in the field and the varying statements with regard to language vitality indicators, it is difficult to assess the situation. It is possible that some (in particular older) people deem it as more widely used than it is in reality, because young people still commonly use Sindebele when talking to their grandparents and other elders in the community. This might give a distorted impression of viable and vibrant language use, even though the actual contexts in which the language is used may be very limited, with younger people preferring to speak other languages such as Northern Sotho and English.

It seems evident from the data that, due to lack of official status and other problems mentioned above, the Sindebele language and its use are fading gradually. However, in the Sindebele speaking communities in Limpopo province, there certainly is also a strong motivation to revitalise the language, and according to many people interviewed, there is an interest in maintaining Sindebele in use – at least as an oral medium of communication, with some even expressing the wish of its being used in writing. There have been activities such as demonstrations and lobbying (e.g. by members of MANO, the Mandebele National Organization) to get Sindebele officially recognized as an independent official language. So far there has been no outcome.

In Ga-Maraba, it was pointed out to us that in 1997, a few thousand people associated with the Sindebele language group from the Limpopo province went on a protest march to the Union Building in Pretoria, the capital of South Africa (interview notes from Ga-Maraba, 14 May 2016). Their purpose was to deliver a memorandum to president Nelson Mandela detailing the discrimination they face as an ethnic group. The main aim was to achieve full recognition of the Sindebele language; financial support for its development into a written language which would be taught in schools; and recognition as South Africa's 12th official language. As mentioned above, according to the language's speakers, these kinds of demonstrations and activities have been largely ignored by the government. According to the interviewees, there has been no response to the protests.

After we came back, they say, “we will respond”. But until today [...] no response. We are still sidelined. It’s painful to us. Because we force our children to be taught in Sepedi [...]. (Elderly male informant, Mokopane, 18 May 2016)

Another attempt was made in 2002, when language activists, supported by community members, marched to Pretoria again in a similar protest, in order to present a memorandum asking for official recognition of the language. According to a young interviewee, the government responded that there they “already have a Ndebele” and it would not be economically feasible to fund the development of “another Ndebele” (interview in Ga-Maraba, 14 May 2016).

Interestingly, another young interviewee pointed out that responsibilities lie not only with governmental authorities. He characterized the situation of the language as being spoken in little “hubs”, that is, small communities of active speakers that are separated from each other in and around Mokopane, where people have come to realise its looming disappearance, if nothing is done to prevent its decline. According to this young man, it is not only the government, but also the local leaders and village chiefs who will need to support the communities’ efforts; local leaders should therefore refrain from internal political disputes that could undermine the cause. Also, another young man (interviewed in Mokopane, 17 May 2016) suggests that the proper way to advance the language issue would be through *indunas* (village chiefs) and local traditional authorities, as it is very difficult for common folk to try to solve the problem. However, the traditional authorities were described as very active regarding these concerns: “We cannot push it on ourselves, we need them [local leaders]. They should be the ones to push the memorandum further.” (Male interviewee, Ga-Maraba, 14 May 2016)

During our research we met several people who claimed to be very keen on language revitalisation. Most interviewees stressed the importance of the language for their identity and heritage, and many older people said that it would be crucial that the children receive education in their own language. One older interviewee (Ga-Maraba, 14 May 2016) linked this to his personal feeling of deprivation when schooled in Northern Sotho, stating: “We were forced to learn Sepedi simply because our language was not recognized by the authorities back then. So, I feel very strongly that now is the time that it can go back to basics and start using that at school.”

Many interviewees also mentioned things that they wished to have access to in their own language. Apart from media coverage and education, official papers and forms in Sindebele in places like government institutions and hospitals were

seen as a factor that would make the Mandebele feel more equal to speakers of other languages. One younger man (Ga-Maraba, 14 May, 2016) explained:

We would love to get forms in Sindebele because we've been using English and Afrikaans whereby sometimes I don't understand a word in English; Afrikaans, it's a disaster for me, and now I'll have to fill something that I do not understand properly. But if it has its own language as well it makes it easier.

The same person mentioned that there had been tentative plans in 2015 for a radio station in Sindebele, as well as for a local newspaper in the language. He also felt that apart from official education, getting television programmes such as cartoons for children would greatly help the younger generations to view the language as equal to other languages, and would improve its prestige as well as increase its usage. In the educational sector, there had been some cultural projects for children in the local schools led by activists in cooperation with MANO. These activists had organised cultural heritage days that aimed to empower Mandebele children by teaching about the Sindebele language, dances, and traditional attire. During these events, they used Sindebele alongside the official teaching language Northern Sotho.

The older people who we interviewed placed their hopes on younger people, who have the ability to promote the language in education and in official sectors. However, a young male interviewee (Mokopane, 17 May 2016) summed up the political situation surrounding Sindebele, as well as the necessary actions that would have to be taken in order to save the language, in the following way:

People meet and gather and share ideas on how we move forward from here, even though we still have our own problems like the chiefs not coming to party and allowing us to have this language. [... but] it's more of the media; if you are being shown something time and again you get used to it. It stays in your brain. [...] But now if only the elderly people use the language but they are not teaching the young ones, it becomes a problem because most of them are growing up speaking Sepedi more and going to English [...] it also goes back to parents at home; if they don't teach them from home that's where we can't survive.

7. CONCLUSIONS

From a linguistic point of view, defining the border between two languages is seldom straight-forward, and is more often a question of language ideology rather than linguistics per se. Our own interviews quite consistently show that Sindebele speakers have a strong sense of linguistic identity, based on their personal experiences as minority language speakers in a language environment

that is characterised in particular by Northern Sotho as the main language in use for most communication in public spaces, together with English and other South African languages that characterise the complex linguistic realities of their everyday life.

Our Sindebele-speaking interviewees overwhelmingly see their language as clearly distinct from these other languages, including also, and in particular, South African isiNdebele. This view expressed by members of the Mandebele communities resonates with research by Wilkes (2001) and Skhosana (2009), which points to specific differences in the lexicon and grammar of both varieties.

In our research, it has come to the fore that the vitality of Sindebele is severely endangered. Our interlocutors framed this in various ways: in terms of the limited domains in which the language is used and the fact, that Sindebele, contrary to other languages used in the area, does not enjoy official status. They pointed out that there is no Sindebele language education and that the language is practically absent from the media, including printed material, radio, and TV. Books are not available. At this point, speakers are not generally familiar with proposals towards a standardised orthography.

Arranging proper language education in Sindebele communities would require official support and governmental funding. Several interviewees expressed a hope for official recognition from the government. As of now, there have been no significant actions towards this kind of language promotion. The official stance of the government and the people involved in decision-making seems to be to regard Sindebele as a variant of isiNdebele, the latter of which enjoys the status of an official language of South Africa. Many stakeholders in language politics and education outside the Mandebele community see the promotion of Sindebele as insignificant and not urgent. Education in Sindebele speaking areas continues to be dominated by Northern Sotho and English.

Based on our research, it does not seem unlikely that the use of Sindebele will continue its decline and that young people will rely mainly and eventually even exclusively on languages like Northern Sotho and English, which are used more widely and enjoy higher prestige than Sindebele. The use of Sindebele appears to be increasingly limited to the domain of home. Younger people tend to be less active users of Sindebele, and the language is not passed on from parents and grandparents to younger people to an extent that would ensure the vitality of the language in the long term.

However, more than a few people in the area have persevered in the struggle to achieve a more widespread recognition for Sindebele. With consistent work and campaigning, most of all to change attitudes towards Sindebele language inside the communities themselves, a change in the tide is possible. An interviewee

described how the most important thing the language activists could do would be to achieve official, widespread recognition for Sindebele:

To put it on the map. To let it be there on top. If you say, ‘I’m speaking Ndebele’ ‘Which Ndebele?’ Ndebele from Mokopane’ ‘Oh!’, and then we can relate, people can relate to it. (Female interviewee, 27, Mosesetjane, 15 May 2016)

REFERENCES

Interviews


- A 30-year-old woman, Mosesetjane, 13 May 2016, interviewed by Fleisch, Jallow & Väisänen
 An elderly woman, Ga-Mashashane, 14 May 2016, interviewed by Jallow & Väisänen
 A 51-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 43-year-old female, Ga-Maraba 14 May 2016, interviewed by Järvi & Masango
 A 26-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 65-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 70-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 35-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 60-year-old male, Ga-Maraba, 14 May 2016, interviewed by Järvi & Masango
 A 79-year-old male, Ga-Mashashane, 14 May 2016, interviewed by Fleisch, Jallow & Väisänen
 A 94-year-old female, Mosesetjane, 15 May 2016, interviewed by Jallow, Järvi & Väisänen
 A 27-year-old female, Mosesetjane, 15 May 2016, interviewed by Jallow, Järvi, Väisänen
 A 15-year-old male, Mosesetjane, 15 May 2016, interviewed by Jallow, Järvi & Väisänen
 A 33-year-old male, Mokopane, 17 May 2016, interviewed by Jallow & Väisänen
 A 50-year-old male, Mokopane, 17 May 2016, interviewed by Jallow & Väisänen
 An elderly female, Ga-Mashashane, 18 May 2016, interviewed by Jallow & Väisänen
 A male interviewee, Ga-Mashashane, 18 May 2016, interviewed by Jallow & Väisänen
 A 62-year-old male, Mokopane, 18 May 2016, interviewed by Jallow, Masango & Väisänen
 A middle-aged male, Ga-Mashashane, 19 May 2016, interviewed by Fleisch, Jallow, Järvi & Väisänen

Literature

- DE BEER, Frederik C. 1986. *Groepsgebondenheid in die familie-, opvolgings- en erfreg van die Noord-Ndebele*. PhD dissertation, University of Pretoria.
- DOKE, Clement Martyn 1954. *The Southern Bantu Languages: Handbook of African Languages*. Oxford: OUP.
- FINLAYSON, Rosalie 2002. Women’s Language of Respect: “isihlonipho sabafazi”. In: R. MESTHRIE (ed.), *Language in South Africa: 279–296*. Cambridge: CUP.

- FOURIE, H.C.M. 1921. AmaNdebele van Fene Mahlangu en hun religieus'-sociaal leven. PhD dissertation, Rijksuniversiteit Utrecht.
- GOOSKENS, Charlotte 2007. The Contribution of Linguistic Factors to the Intelligibility of Closely Related Languages. *Journal of Multilingual and Multicultural Development* 28(6): 445–467.
- Government of the Republic of South Africa, Department of Arts and Culture: Pan South African Language Board. <dac.gov.za/pansalb>, accessed 26 Feb. 2018.
- GUTHRIE, Malcolm 1967/1971. *Comparative Bantu: An Introduction to the Comparative Linguistics and Prehistory of the Bantu Languages*. Farnham: Gregg Press.
- HAMMARSTRÖM, Harald, Robert FORKEL & Martin HASPELMATH 2018. *Glottolog 3.0*. Jena: Max Planck Institute for the Science of Human History. Available at <glottolog.org>, accessed 2 Mar. 2018.
- JACKSON, A.O. 1969. *The Ndebele of Langa*. Pretoria: Ethnological Publication, Dept. of Co-operation and Development, Rep. of South Africa.
- JAMES, Deborah 1990. A Question of Ethnicity: Ndzundza Ndebele in a Lebowa Village. *Journal of Southern African Studies* 16(1): 33–54.
- MAHO, Jouni F. 2009. *NUGL Online: The Online Version of the New Updated Guthrie List: A Referential Classification of the Bantu Languages*. Available at <https://brill.com/fileasset/downloads_products/35125_Bantu-New-updated-Guthrie-List.pdf>, accessed 25 Nov. 2019.
- OWNBY, Carolan Postma 1985. *Early Nguni History: The Linguistic Evidence and its Correlation with Archeology and Oral Tradition*. PhD dissertation, University of California, Los Angeles.
- RUDWICK, Stephanie I. 2008. Shifting Norms of Linguistic and Cultural Respect: Hybrid Sociolinguistic Zulu Identities. *Nordic Journal of African Studies* 17(2): 152–174.
- SIMONS, Gary F. & Charles D. FENNIG (eds) 2017. *Ethnologue: Languages of the World*. 20th edn. Dallas: SIL International.
- SKHOSANA, Philemon Buti 2009. The Linguistic Relationship between Southern and Northern Ndebele. PhD dissertation, University of Pretoria. Available at <https://repository.up.ac.za/handle/2263/28563>, accessed 24 Nov. 2019.
- SKHOSANA, Philemon Buti 2010. The (ama)Ndebele of Africa and their Name “(ama)Ndebele”. Unpublished paper, University of Pretoria. Available at <repository.up.ac.za/bitstream/handle/2263/17089/Skhosana_Ama%282010%29.pdf?sequence=1>, accessed 27 Oct. 2017.
- UNESCO 2003. Language Vitality and Endangerment: Internal Expert Meeting on UNESCO Programme Safeguarding of Endangered Languages, Paris 10–12 March, 2003. Available at <unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/pdf/Language_vitality_and_endangerment_EN.pdf>, accessed 28 Oct. 2017.
- VAN VUUREN, Chris J. 1983. Die Verstigtingspatroon van die Suid-Ndebele. MA dissertation, University of Pretoria.

- VAN WARMELO, Nikolaas J. 1930. *Transvaal Ndebele Texts*. (Ethnological Publication 1) Pretoria: Government Printers.
- VAN WARMELO, Nikolaas J. 1935. *A Preliminary Survey of the Bantu Tribes of South Africa*. (Ethnological Publication 5) Pretoria: Government Printers.
- WILKES, Arnett 2001. Northern and Southern Ndebele: Why Harmonisation Will not Work. *South African Journal of African Languages* 21(3): 310–322.
- WILKES, Arnett 2007. The Multilingual Composition of Northern Ndebele. In: M.J. MOJALEFA (ed.), *Rabadia Ratšhats̄ha: Studies in African Language, Literature, Linguistics, Translation and Lexicography: Festschrift in Honour of P.S. Groenewald*: 159–175. Stellenbosch: Sun Press.
- ZIERVOGEL, Dirk 1959. *A Grammar of the Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa*. Pretoria: J.L. van Schaik.



SPATIAL FORMS AND FUNCTIONS IN ISINDEBELE: A 3D-STIMULUS FIELD STUDY

Heini Arjava & Andrei Dumitrescu

In this article, we give an overview of the spoken practices of spatial grammar in the South African Bantu language isiNdebele. Based on field data obtained through elicitation using three-dimensional stimuli, we demonstrate how verbal and adnominal spatial marking are used in isiNdebele to encode basic, semantically determined spatial functions, both static and dynamic. We show that spoken isiNdebele features strategies of both typological types of satellite-framed and verb-framed languages, with the clear division of reserving prepositional marking to encode types of positions (localisations), and verbal semantics to encode boundaries in the trajectories of movement (local roles). We also note that inherent verb semantics and complex syntactic clause-linking strategies compensate for the lack of semantic information expressed by the primary Locative case marker *e-...-imi* in the expression of motion events, making isiNdebele typologically a representative of so-called role-indifferent languages. Finally, the data gives new evidence on how the secondary Locative case *nga-* expresses the function of non-contact, but the notable variation in the use of the prefix leaves room for further study about its degree of grammaticalisation. In broader terms, our study seeks to fulfil three goals: describing a significant semantic and grammatical domain of the heretofore understudied language isiNdebele; bringing the resulting typological case study into dialogue with wider typological and variationist discussions related to spatiality; and highlighting the significance of developing innovative and practical methodologies for the empirical study of spatial conceptualisation and expression.

1. INTRODUCTION

Theoretical aspects of spatial expressions in language have received much attention since the seminal studies by Leonard Talmy (e.g. 1985; 2000) and Stephen Levinson (e.g. 1996; 2003). Since the initial mapping of the theoretical foundations, the literature has seen the development of ever broader and more detailed typological profiles and types of spatial systems (see, for instance, Levinson & Wilkins 2006; Wälchli & Zúñiga 2006, among others). An increase in typological understanding helps us, in turn, to describe spatial systems in previously understudied languages more systematically. This article takes a close-up look at the system of spatial expressions in such a language, namely, isiNdebele.

Studia Orientalia 120 (2019), pp. 91–128

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ISSN: 0039-3282

Our article has two objectives, the primary one being to broaden our understanding of spatial grammar and vocabulary in present-day spoken isiNdebele (South Africa, Bantu).¹ The grammar of isiNdebele's close relative isiZulu has been described in some detail (e.g. Doke 1961; Gaines 2001), and there is a cursory grammar sketch of Zimbabwean Ndebele (Bownen & Lotridge 2002). Grammatical studies on isiNdebele, however, are still a work in progress, and are the topic of several ongoing research projects (see the Introduction to this volume). The spatial syntax and semantics of isiNdebele have barely been touched upon, except for the very detailed and insightful treatment of the expressions of the UPPER SPACE local domain given in Fleisch (2005). That article's scope is limited as well, however, and leaves open questions concerning the broader syntactic, semantic, and typological properties of isiNdebele's system of spatial expressions. We aim to fill these gaps to some extent, while acknowledging that a comprehensive treatment remains to be written.

Our secondary goal is to test and evaluate a three-dimensional elicitation method, in its pilot phases, as an instrument for the collection of linguistic data in the field.² Methodologically, spatiality has proven to be a challenging topic due to the three-dimensional nature of our surroundings and the variation in our conceptualisations of this mobile environment. The reduction of our perceptibly complex real-life surroundings and kinetic realities into simple depictions brings with it some difficulties for any researcher of spatiality who is aiming to implement natural and relevant research designs; we therefore also raise these methodological considerations in our article's discussion.

We opted for a functionally and semantically oriented approach to answering the questions posed in our study, differing thus from the more form-based corpus method of Fleisch (2005). Instead of trying to locate and elicit specific spatial lexemes and morphemes, we chose the above-mentioned stimulus method, accompanied by functionally motivated, formally unspecified questions. By employing this semantic approach, and by directing the questions to a larger group of speakers, we hoped to trigger the use of the most essential and prototypical forms and expressions in the language, and to make it easy to separate common expressions from the more infrequent ones.

We will start our own treatment by first describing our field data and reflecting on the method of elicitation (Section 2), and will then move on to

1 This study belongs to the findings of the Helsinki Area and Language Studies (HALS) field excursion of 2016, and continues the HALS fieldwork series begun in 2013. See Introduction to this volume.

2 Our particular method design was piloted in Arjava (2016), in a spatial field study of the Uralic language Erzya.

discuss the adnominal, verbal, and semantic aspects of the basic spatial grammar of isiNdebele (Section 3). We will base these analyses on some basic typological parameters given in the works of Talmy (2000), Fillmore (1971), and Wälchli & Zúñiga (2006). Previous theoretical assertions about isiNdebele (and, to an extent, wider Nguni) spatial expressions are re-evaluated in the light of our new field-elicited data.

2. FIELD DATA: SAMPLE AND METHOD

Our present study is based both on existing theoretical literature along with known, but not fully synthesised, facts about isiNdebele spatial grammar, and on empirical field data. An introduction to our data and method are thus in order. In the following, we will both describe our data sample, and evaluate how our toy stimulus method worked as an elicitation tool.

2.1 Gathering of data

Like the other groups of the 2016 HALS field expedition, we collected our data by interviewing native speakers of isiNdebele in the district of Emthambothini near the town of Siyabuswa. Our stay in the area yielded 16 recorded interviews and approximately 900 sentences produced by twenty speakers, whose basic demographic profiles are detailed in Table 1. A more detailed sociolinguistic study on the people of the Siyabuswa area can be found in Grünthal, Honkasalo, and Juutinen (this volume). Our ELAN-annotated data consists of over four hours of discussions, which are based on a modifiable question template (see Appendix I) and questions made with the help of a set of stimulus toys.

Table 1 Demographics of the informants

Age Groups	Children (8 to 15 years)	5 (persons)
	Young adults (20-30 years)	6
	Middle-aged and above (40+ years)	9
Sex	Women	13
	Men	7

Spatial relations are traditionally described as a relationship between two different entities, **Figure** and **Ground**, where the Figure is positionally related to the Ground serving as the background, for instance ‘a *person*’ (Figure), running ‘into a *house*’ (Ground). Both static and mobile relationships between Figures and

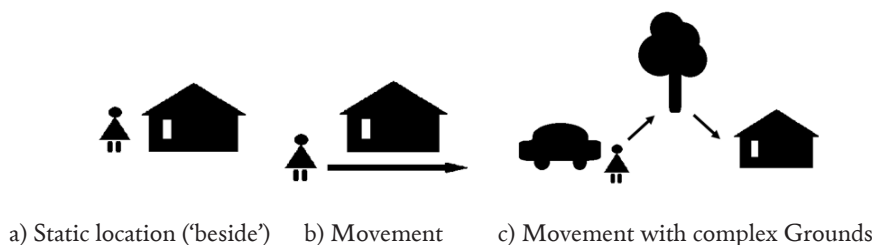


Figure 1 Elicitation settings with spatial relations

Grounds were included in our study, and examples of our settings, taking into account both positions and movement, are pictured in Figure 1.

Table 3 in Appendix I summarises all the spatial settings that we used in our experiment. We did not aim to achieve a perfectly symmetric table with a consistent set of semantic minimal pairs. Instead, we focused on contexts which, in our estimation, represented many of the most typical and salient types of spatial relations. In addition, some unnatural settings (such as a horse sitting on the top of a tree) were also included, in order to provide room for variation and the use of potentially unpredictable expressions.

The **elicitation method** used in our study involved interviewing the speakers with the aid of a toy-based stimulus set. Our set consisted of toy figures obtained mainly from Lego and Playmobil kits, part of which can be seen in Figure 2, and included animals, persons, clothing, vehicles, plants, and buildings. The objects



Figure 2 Parts of the toy stimulus kit

were arranged on a flat surface between the interviewer and the informant, and the questions were restricted to the simple static questions *Uphi/iphi?* ‘Where is (s)he/it?’, and the movement-related questions *wenzani/yenzani?* ‘What is (s)he/it doing?’. The only fixed framing that we thus allowed in these questions was placing the Figure in the grammatical subject position.

In addition to the elicitation method described above, we also asked four speakers to **evaluate** the grammaticality and semantic differences of fifteen sentences, consisting of five groups of three sentences each, and testing the use of the verbs *-ya* ‘go’, *-zomba* ‘go around’, *-suka* ‘leave by the side of’, *-phuma* ‘exit’, and *-yeqa* ‘jump’. Each group of sentences in this acceptability test was composed of the same subject and predicate, plus a noun that was tested for transitivity (1a), and two different Locative forms (1b & 1c), (described in more detail in following sections):

Intended meaning:

- (1a) (*)*Indoda isuka ikoloyi.* ‘The man is walking away from the car.’
- (1b) *Indoda isuka ekoloyini.* ‘The man is walking away from the car.’
- (1c) *Indoda isuka ngekoloyini.* ‘The man is (getting off the car and) walking away.’

It turned out that the speakers largely agreed on the (un)grammaticality of the sentences, but their semantic interpretations showed a less clear-cut picture, which will be commented to some extent in the main part of our article.

2.2 Evaluation of the toy stimulus method

A few words are in order to review how the toy elicitation method worked in the study of isiNdebele spatial expressions. As the method was partly in its pilot phases, we find it important to direct the attention of the reader to any gaps that may have been left by the incompleteness of the experiment. Simultaneously, we wish to promote the benefits of this stimulus method in field studies of spatiality.

By interviewing our informants with the aid of a movable toy stimulus kit, we aimed to avoid many of the typical challenges that can impede a study of this kind. The first challenge, as we argued in the Introduction, is that visibility, three-dimensionality, and versatility are necessary prerequisites for stimuli in the study of spatial relations; movable toys naturally fulfil these requirements.

Secondly, the visual method enables the researcher to avoid the problem of non-monolingual, translation-based elicitation, in which the metalanguage and the information structure of the original sentences risk substantially affecting the speakers’ choices. Even monolingual elicitation sometimes yields unnatural expressions or long explanations when speakers are asked to produce contexts

for pre-specified words or structure. On the other hand, non-verbal elicitation using stimuli leaves room for the emergence of unexpected expressions, especially useful at the early stages of grammatical research.

The semi-spontaneous experimental method also leaves the speakers free to choose the foci and syntactic structure of their answers, which may lead to interesting observations of the effects of deixis, animacy, or information structure, illustrated by the spontaneous variation in our data (2). Our data also showed that 3D stimuli may trigger interesting variation regarding animacy and information structure, illustrated by the verbal-adnominal variation which occurred uncontrolled by the researchers (see Section 3.3).

- (2a) *Umntazana uhlele ngaphandle kwendlu* ‘A girl is sitting outside a house.’
 (2b) *Indlu uhlele umntazana ngaphandle*(le) ‘Outside a house, a girl is sitting.’

Finally, as noted in Arjava (2016), a modifiable three-dimensional research setting has the additional advantage of engaging and keeping the interest of informants by asking them to process a visual medium in their own words. This is especially useful when working with children, and our field study gave further proof of the effectiveness of toys in overcoming shyness amongst the youngest speakers. The possibility of conducting field research with only elementary knowledge of the language may also be of assistance to an aspiring fieldworker.

There is, of course, an ample tradition of using non-verbal stimuli in linguistics. Previous stimuli-based studies include, for instance, Bowerman & Pederson’s (1992) classic “Topological relations picture series”; Levinson et al.’s (1992) “The Man and Tree Games” picture series; the “Pear story” films by Wallace Chafe (1980); and Skopeteas et al. (2006), with their pictures of movement resulting from physical contact.

We argue that, in contrast to these mostly photograph-based studies, the three-dimensionality of the toy stimuli enables the researcher to replicate actual dimensions and deictic realities better than two-dimensional pictures. Moreover, the modifiability of the toy stimuli enables the researcher to control the questions for different parameters, such as topology, deixis, or animacy; offers methodological room for experimentation; and makes it possible to locate fine-grained differences through slight alternations of the settings. Three-dimensional stimuli have also been used by, for instance, Zajceva (1991), Hickmann (2007), Danziger (2011), and Birjuk & Usačeva (2012).

The challenges that we encountered over the course of our field study included the occasional difficulty of getting informants to spontaneously include Grounds in their answers. A surprising result of the experiment was also the overall lack of deictic demonstratives: demonstratives are generally expected in spontaneous

descriptions of visual stimuli. These problems can, of course, be avoided by a slight increase in directions from the researcher.

It is important to systematically include many different Figures and Grounds, as well as possible combinations of localising and directional spatial relations, in the test settings (Appendix I). The Figures and Grounds can be controlled based on animacy, deixis, form, and other secondary parameters of the general spatial template. It is also useful to video-record the interviews in order to check for unintentional variations on the part of the researches, a possible by-product of the modifiable method.

3. SPATIAL MORPHOSYNTAX AND SEMANTICS OF ISINDEBELE: FORMS, FUNCTIONS, AND VARIATION

Talmy's (2000) classic syntactic classification of spatial structures narrows down motion predicate structures to so-called **satellite-framed** and **verb-framed** strategies, based on their constituent structures. In broad terms, satellite-framed strategies encode most of the locational or directional marking in adnominal constituents (3a), and verb-framed strategies encode the main spatial information in the semantic frame of the verb (3b). Both of these strategies can be found in isiNdebele:

- (3a) *um-ntazana u-khamba ngemva kw-e-ndlu*
 1-girl SM1-go behind 17-POSS.9-house
 'The girl is going behind the house.'

- (3b) *um-ntazana u-zomba i-ndlu*
 1-girl SM1-go.around 9-house
 'The girl is going around the house.'

Fleisch (2005: 144, 153) argues that classifying isiNdebele either as a clearly verb-framed or as a definitively satellite-framed language is inaccurate, because a lot of positional and directional information is encoded both in verbs and in their adnominal and adverb complements. Our data support this general claim, and we assume that some ostensible differences of interpretation between Fleisch and ourselves are mainly due to differences in the terminology used.³

3 For instance, Fleisch points out a scarcity of path-coding verbs in isiNdebele. Given that there are, in fact, verbs expressing actual direction of movement, we assume he can only refer to the positional relationship between Figure and Ground and full trajectories rather than just general path verbs.

Other key concepts of spatial relations are *localisation* (connected to types of contact) and *local role* (connected to movement and directions), which will be described in more detail in their respective subsections. In this section, we will give an overview of isiNdebele's morphological and syntactic spatial categories in the light of our data and previous literature. Following Wälchli & Zúñiga (2006), we consider in turn adnominal and verbal loci of expression. We will also make some brief selected comparisons between the isiNdebele forms and those of its Nguni relative, isiZulu.

3.1 Adnominal spatiality

We will start our grammatical overview by discussing the main strategies of encoding spatial relationships in nominal constituents. As will be argued in the sections below, all specialised adnominal spatial marking in isiNdebele is restricted to the expression of spatial **localisations** (a term introduced by Fillmore 1971), which conceptualise different types of contact between the Figure and the Ground, such as INSIDE, ABOVE, UNDER, OR NEAR (4).

- (4) *u-jame* (*nga*)*phambu*⁴ *kw-e-ndlu*
 SM1-stand.PFV (LOC2)in.front.of 17-POSS.9-house
 '(S)he is standing beside the house.'

In contrast, all specialised encoding of directional meanings in isiNdebele is expressed on verbs, as illustrated by (5) and discussed in Section 3.2.

- (5) *i-khuru* *i-ngena/-dlula/-phuma* *ngaphasu* *kw-e-bhlorbo*
 9-turtle SM9-enter/-pass/-exit under 17-POSS.9-bridge
 'The turtle is going/passing/coming from under the bridge.'

Nevertheless, there is also an adnominal form with directional functions, namely, the Locative case *e-...-ini*, which we will introduce in the beginning of this section.

3.1.1 Locative case *e-...-ini*

IsiNdebele nouns are marked for general unspecified location by the Locative form *e-...-ini* (glossed as LOC1 in our examples), which can synchronically be analysed as a circumfix. Morphophonologically, the prefix *e-* replaces the first

4 For discussion of the unusual morphophonological shape of *-phambu* in (4) and *-phasu* in (5), see p. 102.

vowel of the class prefix augment, while the first vowel of the suffix *-ini* coalesces with the last vowel of the noun (6):

(6) *isikolo* ‘school’ > *esikolweni* ‘at school’

When a subject concord marker is prefixed to the locative noun (7), the Locative *e-* becomes *se-*, thereby avoiding vowel hiatus (the so-called prelocative *-s-*, Fleisch 2005: 141):

(7) *u-se-si-kep-eni*
SM1-LOC1-7-boat-LOC1
(S)he is in the boat.’

Some nouns form the locative just by prefixing *e-*, without the suffix *-ini*. Examples from isiNdebele include *ekhaya* ‘at home’ from *ikhaya* ‘home’ and *ehloko* ‘on the head’ from *ihloko* ‘head’. A large group of similar nouns is also found in isiZulu (Doke 1961: 235).

A corresponding Locative form *e-...-ini* exists in other Nguni languages as well, and it has been variously called a “locative noun class” (Fleisch 2005: 140), a “locative case” (Bowerman & Lottridge 2002: 21), and a “locative adverb” (Doke 1961: 232). Because its relationship to the noun classes is mainly historical, we prefer to call it a case for the purposes of this article. Contrary to productive class concord agreement, the *e-...-ini* Locative does not replace the main class prefix of the head word (*e-m-th-ini* ‘LOC1-3-tree-LOC1’), nor does it trigger pronominal or possessive agreement (*e-hlangoth-ini l-endlu* ‘at the side of the house’, where the possessive Class 5 prefix *l-* agrees with the word *hlangothi*, Class 5, not the locative prefix).

Syntactic and semantic functions of the Locative case

The Locative case *e-...-ini* behaves as a very general locative marker in isiNdebele (cf. isiZulu where the same form stands for the meaning “with respect to something” Doke 1961: 232). The isiNdebele case is used in most locative constructions as a compulsory adverbial marker if the spatial complement is not specified for localisation with prepositions. The Locative case can feature independently in static expressions (8a), or in motion events (8b). Conjoined with the other synthetic Locative form, the *nga-*prefix (see next section), it can form extended locational meanings (8c).

- (8a) *isehlathini / usekoloyini / usesikepeni*
i-se-hlath-ini / u-se-koloy-ini / u-se-si-kep-eni
 SM9-LOC1-wood-LOC1 / SM1-LOC1-car-LOC1 / SM1-LOC1-7-boat-LOC1
 ‘It is in the forest / He is in the car / He is in a boat.’
- (8b) *u-tjbinga e-taful-eni*
 SM1-go.towards LOC1-table-LOC1
 ‘She is going to(wards) the table.’
- (8c) *u-jame nge-ndl-ini / u-nge-ndl-ini*
 SM1-stand.PFV LOC2.LOC1.9-house-LOC1 / SM1-LOC2.LOC1-house-LOC1
 ‘She is standing/is inside the house.’

In the Nguni languages, the Locative case marked on a Ground complement is not sufficient to express the direction of movement, only its presence (9a-b).

- (9a) Source:
u-suka e-ndl-ini
 SM1-leave LOC1-house-LOC1
 ‘(S)he is going away from the house.’
- (9b) Goal:
u-ya e-ndl-ini
 SM1-go LOC1-house-LOC1
 ‘(S)he is going to(wards) the house.’

This similar adnominal treatment of Source and Goal above makes isiNdebele a representative of a spatial strategy called **indifferent Source-Goal marking**, introduced by Wälchli & Zúñiga (2006). Areally, isiNdebele may be a particularly interesting case of the indifferent type, as all other sub-Saharan African languages in Wälchli and Zúñiga’s sample are represented as members of a separate, Mixed system. (It is noteworthy that isiZulu appears in their data as a Mixed language on the grounds that it features a “weakly grammaticalised secondary verbal Source marker” *vela* ‘(lit.) appear, emerge’ (Wälchli & Zúñiga 2006: 293, 299); any such auxiliaries are unattested in our data, however, and the status of the directional auxiliary in isiNdebele is undefined so far.)

As can be seen in the examples above, all directional (NB! not localising) information must be encoded in the verb. We will therefore continue our discus-

sion of the semantic and syntactic effects of Source-Goal indifference when we discuss verbs in Section 3.2.2.

As for the general unspecified locative sense of the Locative case, a small but possibly telling observation rises from our data, in contradiction to what is reported in Fleisch (2005: 151). We had very few instances of the Locative case marking the static localisation ‘on the table’, and Grounds with inanimate Figures (such as a cup, a teapot, and a carrot) were not marked with the Locative case. According to Fleisch, this would be expected from pragmatically unmarked Figures on a table. Instead, almost all attested expressions for these settings were formed with analytic construction *phezu kwa-* ‘on, over’. The form *etafuleni* ‘table(LOC1)’ did occur four times in the motion setting ‘woman puts teapot onto the table’, but ten speakers still produced the expression *phezu kwetafula*.

The Locative was nevertheless the predominant choice for ‘table’ in movement clauses such as *uya etafuleni* ‘she goes to(wards) the table’. As the bare Locative is chiefly excluded from the expressions of localisations and restricted mostly to the expression of local roles (Place, Source, Goal, or Path), we argue that the Locative may be becoming adnominally and semantically less independent, and more dependent on the syntax and semantics of the verb.

3.1.2 Relational nouns functioning as spatial prepositions

The prepositional phrase

Like other Nguni languages, isiNdebele has various spatial relational nouns that can be combined with locative-possessive nouns. Many of the spatial relational nouns are fossilized from the nowadays largely unproductive Locative classes 16 *pha-*, 17 *ku-*, and 18 *mu-*. These lexicalised constructions can work as phrasal prepositions and adverbs in modern isiNdebele (Fleisch 2005: 140). Examples of resulting prepositional phrases include *ngaphasi* (*kwa-*) ‘under’ (from *iphasi* ‘earth’), and *ngemuva* (*kwa-*) ‘behind’ (from *umuva* ‘back part’). The degree of grammaticalization of these words varies; for example, *phambili* ‘in front’ is historically but no longer synchronically related to *ibele* ‘(female) breast’ (Fleisch 2005: 140), whereas *ngeqadi* ‘at the side’ still has a plural form *ngemaqadi* ‘on both sides’. In this article, we will call the relational nouns simply phrasal prepositions (or shortly, prepositions) for the sake of brevity and convenience.

When functioning as phrasal prepositions, the majority of spatial nouns in isiNdebele – similarly to in isiZulu (cf. Doke 1961: 243–244) – require a possessive construction with the locative possessive prefix *kwa-* (10). Note that the possessive marker *-a-* coalesces with the class prefix *i-* of *itafula* ‘table’ to give *e-*:

- (10) *um-sana u-lele ngaphasu kw-e-tafula*
 1-boy SM1-lie.PFV under 17-POSS.9-table.

‘The boy is lying under the table.’

Another set of prepositions requires the noun following the preposition to be preceded by the comitative prefix *na-* ‘with’, for instance *hlangana* ‘between’ (see 11) and *kude* ‘far away’.

- (11) *i-komo i-dlula hlangana n-ezim-vu*
 9-cow SM9-pass between with-8-sheep

‘The cow is passing between the sheep.’

For some prepositions, however, this case valency is more inconsistent. In our data, the preposition *eduze* ‘near’, was used with both prefixes, though slightly more often with the locative possessive *kwa-* than with the comitative *na-* (12a–b).

- (12a) *u-jame eduze kw-en-dlu*
 SM1-stand.PFV near 17-POSS.9-house

‘She is standing near the house.’

- (12b) *u-seduze n-en-dlu*
 SM1-near COM-9-house

‘She is near the house.’

It may be noteworthy that *eduze kwa-* was the only choice in the story-telling exercise, the most spontaneous part of our interviews, whereas *eduze na-* featured in most of the shorter elicited sentences. Doke (1961: 244) reports similar variation for *eduze* in isiZulu, although, interestingly, *na-* seems to be more frequent in isiZulu.

Morphophonologically, several prepositions in our spoken data exhibit more or less free alternation between *-i* and *-u* as their last vowel, for example *ngaphasi* ~ *ngaphasu kwa-* ‘under’ and *phambi* ~ *phambu kwa-* ‘in front of’. As the labial *u*-final prepositions in our data were often (but not always) followed by the labial-initial locational prefix *kwa-*, this may be a result of analogy triggered by assimilation.

Most isiNdebele locational nouns can also function as adverbs. Some of them have the same form, such as *ngaphakathi* ‘inside’; others are slightly different, such as *phambi* (preposition) vs. *phambili* (adverb) ‘in front’, or *ngemuva* (adverb) vs. *ngemva* (preposition) ‘behind’. The shorter forms of prepositions are easy to explain by loss of syntactic and phonological independence. In our data, spatial

adverbs featured only in passing, and their deeper syntactic and semantic analysis falls out of the scope of this study.

Phrasal prepositions expressing localisations

In the following, we will present some of the main functions of phrasal prepositions attested in our data. In general, it is noteworthy that prepositions were used widely in all syntactic and semantic contexts alongside the Locative case, and in a number of occurrences they were clearly the preferable choice over the semantically vaguer Locative marking. As the expression of localisation (as opposed to motion or its direction) was found to be the only semantic function of the prepositions, we present them according to their respective semantic domains.

INSIDE SPACE

Of all the localisations, INSIDE SPACE was the only one clearly favouring case marking in addition to prepositional marking. In the static INSIDE setting ‘inside the house’ (13a), both synthetic Locative forms and the preposition *ngaphakathi kwa-* ‘inside’, were attested multiple times. In motional constructions, however, no prepositional adjuncts were attested for INSIDE SPACE (13b):

- (13a) *ujame ngendlini/ngaphakathi kwendlu* ‘She is standing in the house.’
 (13b) *ungena ngendlini/*ngaphakathi kwendlu* ‘She is entering the house.’
 (*unattested in our elicited data)

Combined with the disputability of the INSIDE meanings of the *nga*-Locative, discussed in the next section, this incompatibility of the verbs expression motion into an interior space (such as *-ngena* ‘enter’) with the INSIDE preposition – but not with the *nga*-Locative form, nor other prepositions – gives comparative material, currently only partially understood, regarding the analysis of the inherent ‘inside’ meanings of the isiNdebele spatial map. INSIDE SPACE is also discussed in the context of the Locative *nga*-prefix in 3.1.3, and of motion verbs in 3.2.1 below.

BETWEEN / IN THE MIDDLE OF

The two prepositions with the meaning ‘between’, *hlangana na* (derivationally related to the verb *-hlangana* ‘meet, unite, be in close contact, etc.’), and (*nga*) *phakathi kwa-* ‘inside, between’, occur in free variation with almost all BETWEEN-related Grounds of our study. (See also Fleisch 2005: 142, who mentions “some overlapping contexts” for these prepositions.) The forms *hlangana na-* and *phakathi kwa-* were usually used interchangeably, whether the Ground consisted of two or several bushes or animals, but it is noteworthy that for the static setting

‘standing among several bushes’, speakers almost exclusively used the preposition *phakathi kwa-*.

This distribution is compatible with the formal difference distinguishing the INSIDE and BETWEEN functions of *phakathi*: the variant *ngaphakathi* was not used in the meaning ‘between’, clearly being reserved to the meaning ‘inside’. It should also be noted that in the study stimuli involving bushes, the use of *phakathi* seems to express the idea of being among several individual plants, but not inside a forest. The more general Locative form *isehlathini* ‘it is in the forest’ was also commonly used, presumably to indicate location in an actual forest setting.

The INSIDE–BETWEEN prepositions in our data thus possibly indicate a semantic continuum, summarised in the Table 2.

Table 2 The prepositions of the INSIDE–BETWEEN continuum

	INSIDE	BETWEEN/AMONG	
		SEVERAL (BUSHES)	TWO (BUSHES)
STATIC	<i>ngaphakathi kwa-</i>	<i>phakathi kwa-</i>	
MOVEMENT	-	<i>phakathi kwa- / hlangana na-</i>	

IN FRONT OF *and* BEHIND

As a localisation, being or moving in front of a Ground seems to be a fairly salient relation in isiNdebele. Particularly in connection with a house, a Ground with clearly distinguishable sides, most informants used the specific prepositions *ngaphambu kwa-* or *phambu kwa-* ‘in front of’, instead of ‘beside’ or ‘outside of’. Although the localisation may have been emphasised in the house settings by the use of a toy house with an uneven width-length ratio which directs the focus on the front side, it must be noted that *ngaphambu* was also attested several times in connection with a tree or trees. The opposite of *ngaphambu kwa-*, the preposition *ngemuva kwa-* ‘behind’, was used consistently as well, both in static and in motional settings.

BESIDE

A striking feature of the semantically diverse localisation BESIDE is the amount of different adnominal forms (and verbs) used in this function in our isiNdebele data. The most frequent of these prepositions, *(ng)eqadi*, is derivationally related to *iqadi* ‘side’, while *(ng)ehlangothini* is directly derived from another word for ‘side’, *ihlangothi*. The prepositions *eduze* ‘near’, *ekhoneni* ‘at the corner of’,

and *ngaphandle kwa-* ‘outside’ were also attested several times; *ngceleni* (from *umngcele* ‘boundary’), which is a frequent word in isiZulu, featured as well, but only a few times.

Some of the variation can perhaps be explained by the fact that compared to some of the other basic localisations, being near – but not attached to – something in the horizontal domain provides a vast number of potential everyday contexts. Room for variation may also result from Grounds that have no clear inherently dominant side, such as geometrically symmetric houses or trees, both of which featured in many of our questions.

UNDER *and* OVER

There was virtually no formal and lexical variation in the expression of the localisations UNDER and ON/OVER in our data, which. To start with ‘under’, the settings ‘under the table’, ‘under the tree’, and ‘under the bridge’ all featured the preposition *ngaphasu kwa-*. This form was consistent irrespective of the verbs or the semantics of Figure and Ground.

As mentioned in the Introduction of our article, the most detailed description of the notion of UPPER SPACE in isiNdebele has been given by Fleisch (2005). Among other fine-grained observations, Fleisch (2005: 145) connects the bare form *phezu kwa-* strongly with the two-dimensional shape of the Ground. In our data, *phezu kwa-* certainly occurred with flat surfaces, such as tables and bridges, but it was equally frequent with clearly three-dimensional and pointed surfaces, such as vehicles, animals, tree-tops, pots, and body parts.

In contrast, our data contained only a few casual instances of the (supposed) non-contact variant *ngaphezu*, none of them in non-contact situations. The limitedness of our spatial settings, lacking positions of hanging or flying, makes the comparison difficult, but the overall lack of *ngaphezu* is telling, and may indicate that *phezu kwa-* is the dominant variant, at least in all the basic UPPER SPACE settings featured in our data.

Diversity of localising prepositions, overview

In conclusion to this section on prepositions, some of the variation of the prepositions used for each main localisation by the speakers of our study, partly discussed above, is summarised and illustrated in Figure 3.

A perhaps overly bold, but nonetheless tempting form–function connection suggests itself here: In isiNdebele, at least, the horizontal dimension and open space have both greater potential for mobility and greater variability of linguistic forms associated with them. In contrast, the vertical dimension and inside space

are more restrictive both in potential mobility and in the linguistic forms available to describe spatial relations.

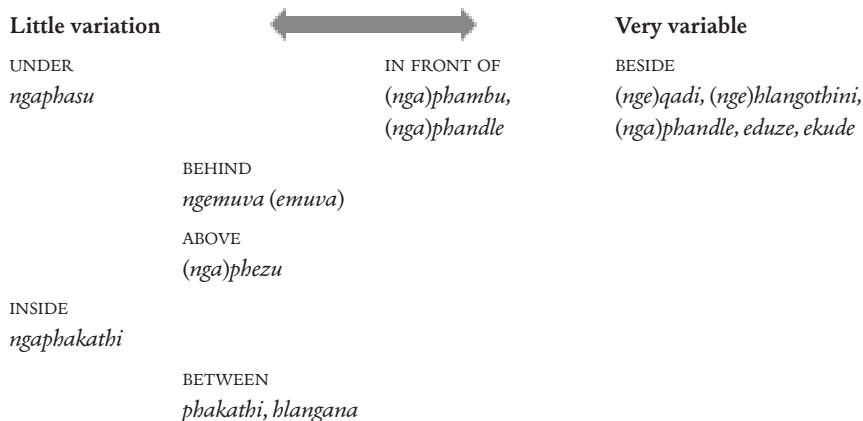


Figure 3 Variation of prepositions in the localising functions of the elicited data

3.1.3 The *nga*-Locative

Another productive and synthetic locational marker in isiNdebele is the prefix *nga-* (glossed in our examples as LOC2), which can be attached to both nouns (e.g. *ngendlini* ‘in(to) a house’) and prepositions/adverbs (e.g. *ngaphasi* ‘under’). The coalescence in isiNdebele of *nga-* and *e...* into *nge-* is a morphological difference from isiZulu, in which *nga-* requires the prelocative *-s-* when prefixed to a Locative form (e.g. *ngasecaleni kwendlu* ‘at the side of the house’, Doke 1961: 250). A shorter prefix *n-* is used in isiNdebele with a limited number of nouns which begin with the consonant *kh-* (e.g. *nkhaya* ‘at home’, Skhosana 2009: 305–307).

There is also a homonymous instrumental case *nga-* in isiNdebele, likewise found in isiZulu (Doke 1961: 247) and Zimbabwean Ndebele (Bowern & Lotridge 2002: 22). Our data contains a few examples of the *nga-* form for which it is difficult to tell if the prefix stands for locative or instrumental meaning; these include *ukhamba ngepera* ‘rides with/on a horse’, and *ngesandla* ‘in/with [her] hand’. As Fleisch (pers. comm.) points out, it is possibly exactly through such bridging concepts that one of the meanings derives from the other.

In isiZulu, the definition of the *nga-* prefix is that of *approximate space* (towards, roundabouts, vicinity, etc.) (Fleisch 2005: 141; Taljaard & Bosch 1988: 48). In isiNdebele, the functions of this locative prefix have so far been less clear-cut. Fleisch (2005), among others, states that the default function of the isiNdebele

nga-Locative, when prefixed to the plain locative, is the expression of INSIDE SPACE (14a), as opposed to OUTSIDE localisations (14b–c) (the examples are from our data):

(14a) *u-ng-e-ndl-ini / u-nga-phakathi kw-e-ndlu*
 SM1-LOC2-LOC1.9-house-LOC1 / SM1-LOC2-inside 17-POSS.9-house
 ‘She is in(side) the house.’

(14b) *u-ya e-m-th-ini* Localisation: BESIDE
 SM1-go LOC1-3-tree-LOC1
 ‘She is going to the tree.’

(**u-ya ng-e-m-th-ini*)
 (SM1-go.to LOC2-LOC1-3-tree-LOC1)

(14c) *u-dlula e-ndl-ini*
 SM1-pass LOC1.9-house-LOC1
 ‘She is passing the house.’

Many nouns and prepositional phrases containing the *nga*-Locative, however, are not saliently related to the INSIDE dimension at all, for instance *ngaphasu kwa-* ‘under’, *ngaphambu kwa-* ‘in front of’, and *ngaphandle kwa-* ‘outside’, which all featured abundantly in our data. This accords with the observation by Fleisch (2005: 143) that in addition to the localisation of INSIDE SPACE, *nga-* sometimes encodes also non-contact localisations in connection with the relational word *phezu(lu)*, possibly showing “the initial development of a more entrenched contact/non-contact distinction associated with *phezu* and *ngaphezu*” (Fleisch 2005: 148–149).

Of the *nga*-prefixed prepositions in our data, *phasu kwa-* ‘under’ was almost without exception preceded by the *nga*-prefix, whereas for instance *phambu* and *ngaphambu* ‘in front of’ occurred in seemingly free variation. This flexibility in the use of *nga-* with the isiNdebele *pha-* prepositions is comparable to the optional use of *nga-* with *pha-* words in isiZulu (Taljaard & Bosch 1988: 49). There is, however, also some evidence of the above-mentioned non-contact function of the *nga*-Locative. Compare, for instance, how the four settings UNDER/ON TABLE OR TREE differ in detachment between Figure and Ground (15): the detached UNDER localisation was always marked with *nga-*, the undetached ON localisation always without it (see also example 29b below).

- (15a) *u-nga-phasu* *k-omu-thi* / *kw-e-tafula*
 SM1-LOC2-under 17-POSS.3-tree / 17-POSS.9-table

‘She is under the tree / the table.’

- (15b) *u-phezu* *k-omu-thi* / *kw-e-tafula*
 SM1-above 17-POSS.3-tree / 17-POSS.9-table

‘She is on the top of the tree / the table.’

It seems to us that the *nga*-Locative is especially integral to the general marking of the word *indlu* ‘house’. On the one hand, the house is the clearest case in our elicitation toolkit of a Ground with a bounded interior space, that is, a prototypical container; on the other hand, the extensive use of the *nga*-Locative in almost all contexts connected to it makes it very difficult to tell if the default meaning of the prefix is that of INSIDE, or if the use of the affix is simply conventionalised or has another meaning.

Although both *nga*-Locatives and bare Locative forms were attested with ‘house’, the *nga*-Locative clearly dominated the marking of this lexeme, both with INSIDE meanings (16a) and without them (16b–d). Moreover, even in the INSIDE context the *nga*-Locative is actually redundant in this meaning, as the INSIDE localisation belongs to the inherent semantic frame of the two default verbs *-ngena* ‘enter’ and *-phuma* ‘exit’.

- (16a) *u-ngena* / *u-phuma* *nge-ndl-ini*
 SM1-enter / SM1-exit LOC2.LOC1.9-house-LOC1

‘She is entering / exiting the house.’

- (16b) *u-ya* / *u-suka* *nge-ndl-ini*
 SM1-go / SM1-leave LOC2.LOC1.9-house-LOC1

‘She is going to / leaving the house (standing beside it).’

- (16c) *u-yame* *nge-ndlu*
 SM1-lean.PFV LOC2.9-house

‘She is leaning against the house.’

- (16d) *zi-cale* *nge-ndl-ini*
 SM10-look.PFV LOC2.LOC1.9-house-LOC1

‘They looked towards the house.’

In contrast to the *nga*-augmented forms of ‘the house’, the bare Locative form *endlini* was barely attested, against expectations (cf. Fleisch 2005: 141). *endlini*, governed by the approximative verbs *-ya* ‘go to’ and *-suka* ‘leave from’ was accepted by three speakers in evaluation (though deemed “isiZulu” by one of them), but spontaneously it was produced only a handful of times in total. Even then it was optional, and always belonged to a clause-linking chain (see Section 3.2.2). In the independent sentences ‘go beside / leave the house’, a prepositional phrase seemed to be preferred (17):

- (17) *u-suka / u-ya hlan’ kw-e-ndlu*
 SM1-leave / 1-go beside 17-POSS.9-house
 ‘She is leaving / going to the (side of the) house.’

Evidence for possible lexical fixedness between *nga*-Locative and ‘house’ may also be seen in the comparison of *indlu* ‘house’ to the words *ihlathi* ‘forest’ and *ikoloyi* ‘car’. The latter two could theoretically be expected to behave like the house as clearly outlined structures, but they typically appeared without the *nga*-Locative in the data (18):

- | | |
|--|-----------------------------|
| (18) Attested: | Unattested: |
| <i>usekoloyini</i> ‘she is in a car’ | * <i>usendlini</i> |
| <i>usehlathini</i> ‘she is in a forest’ | * <i>(u)ngehlathini</i> |
| <i>ungena ehlathini</i> ‘she is going into the forest’ | * <i>udlula ngehlathini</i> |
| | (-dlula ‘pass’) |

Note also that evaluating different sentences, three of four speakers did not report any semantic differences between the two Locative-marked variants of *ihlathi* ‘forest’, in (19):

- (19) *um-sana u-zomba (ng-)e-hlath-ini*
 1-boy SM1-go.around (LOC2)-LOC1.9-forest-LOC1
 ‘The boy is going around in the forest.’

In conclusion, we note that there is a good deal of wavering in the semantic functions of the *nga*-Locative, and we suggest that the substantial variation in the data at hand may lend tentative support to the theory that the semantic INSIDE dimension of the *nga*-Locative is only marginal, and may be restricted to closed hollow structures, or partly governed by lexical and stylistic factors. On the other hand, determining the exact functional paradigm of LOC2 requires further research.

3.2 Spatial verbs: Semantic and syntactic functions

Discussing dynamic and directional aspects of spatiality requires also considerations of the **semantic make-up of spatial verbs**. Following Wälchli & Zúñiga (2006), we use Tesnière's (1959) term **displacement verb** to refer to motion verbs denoting a change of location, often, but not always, including a reference to its direction (cf. 'enter', vs. 'pass'). It should be emphasised that Talmy (2000) and Fleisch (2005) use the slightly less transparent but more established term *path* when referring to displacement; we, however, make our terminological choice in order to avoid confusion between Talmy's very general directional *path* and Fillmore's (1971) descriptively more explicit local role Path (see below).

Wälchli and Zúñiga (2006: 286) point out that, in some languages, the directionally vaguer *light movement verbs* 'go' and 'come' behave in a manner that differs from other motion verbs. Unfortunately, they are often ignored in the literature discussing motion verbs in specific languages. In isiNdebele, the default 'come' and 'go' verbs *-za* and *-ya* behave in most ways like the other displacement verbs, not warranting a light verb class of their own, but the verb *-khamba* 'go, walk', shows features that distinguish it from the other displacement verbs; we will comment on these features in Section 3.2.3.⁵

The **local roles** Place, Source, Goal, and Path (e.g. *through*, *along*, or *over* the Ground) introduced by Fillmore (e.g. 1971) are directional terms used mainly to analyse adnominal spatial semantics, but we will use the role terms also to describe **verbs** if displacement meanings are encoded in their respective semantic frames. We thus classify the displacement verb *-jama* 'stand' as a Place verb, *-phuma* 'exit' as a Source verb, *-ngena* 'enter' as a Goal verb, and *-dlula* 'pass' as a Path verb. We also include 'going around something' in the Path relations, as such motion lacks a clear starting or ending point of movement.

3.2.1 INSIDE SPACE *localisation in verbs*

The difference between inner or outer space in the horizontal domain is the only attested distinction of localisation made by spatial verbs in our data. The verbs *-phuma* 'exit' and *-ngena* 'enter', were for the most part used to describe leaving or entering the inside of a house, or leaving or entering a group of bushes or a forest (20a), but they were also occasionally used to encode swimming under a bridge (20b) or crawling under a table. The INSIDE verbs in isiNdebele seem thus to be

⁵ Note that *-khamba* also belongs to a third important class of motion verbs, those of manner, which encode types of movement, such as 'run', 'swim', or 'fly' (see, e.g. Talmy 2000; Slobin 2006). These verbs are not the focus of the present article.

used to denote crossing the boundaries of a clearly defined area, even if that area is not physically enclosed.

(20a) *u-ngena e-blath-ini*
 3SG-enter LOC1-forest-LOC1
 ‘She is going into the forest.’

(20b) *i-phuma nga-phasu kw-e-bhlorho*
 SM9-emerge LOC2-under 17-POSS.9-bridge
 ‘It is appearing from under the bridge.’

The INSIDE localisation is sometimes curiously emphasised in some isiNdebele expressions (see example 14a above). Despite the INSIDE localisation belonging inherently to the semantic frame of the verbs *-phuma* ‘exit’ and *-ngena* ‘enter’, their nominal complements were often reinforced by the *nga*-prefix, resulting in a double-marked spatial construction with the literal meaning ‘enter inside’.

In the most prototypical closed INSIDE settings, this redundant double-marking seems to be present, however, only with the adnominal *nga*-prefix. The prepositional use of the prefix with (*nga*)*phakathi kwa*- ‘inside, in the middle of’ was virtually unattested with the two INSIDE verbs. With the additional lexical enforcement provided by the preposition, this is not very surprising; the localisation is already denoted twice in these clauses, making the *nga*-prefix even more redundant. However, this behaviour additionally shows that the prefix has not grammaticalised into all contexts.

3.2.2 Source and Goal verbs: semantics and syntax

Inherent semantics of Source and Goal verbs

A direct consequence of indifferent adnominal role marking (see 3.1.1) is that – despite the presence of overt adnominal spatial marking – most of the displacement-relevant information must be encoded in the *semantic frame of the verb*. Due to the adnominal vagueness discussed above, this information can be expected to be consistent, and we argue that our data shows that verbs in this group belong to either the Source or to the Goal class, but not to both.

The verbs of this group (examples listed in 21) are semantically inherently connected with either the Source or the Goal role, because they govern no obligatory adnominal marking of their own (as opposed to, e.g. English ‘come out of’). A shared syntactic feature of these verbs is that they always govern their Ground complement with the Locative case *e-...-ini*.

- (21) Attested inherent Source/Goal verbs
- | | | |
|--------|------------------|-------------------------------|
| Source | <i>-phuma</i> | ‘go out of’ |
| Source | <i>-suka</i> | ‘go from (the vicinity of)’ |
| Source | <i>-tjhida</i> | ‘move away from’ |
| Goal | <i>-ngena</i> | ‘go inside’ |
| Goal | <i>-ya</i> | ‘go (to)’ |
| Goal | <i>-za</i> | ‘come (to)’ |
| Goal | <i>-buyela</i> | ‘return back to’ |
| Goal | <i>-tjhidela</i> | ‘come closer, move towards’ |
| Goal | <i>-tjhinga</i> | go to a particular direction’ |

Wälchli & Zúñiga (2006: 290) point out that Source is typically the more marked of the two roles; in other words, it is linguistically less relevant and more often implied without overt marking than Goal. This may be the reason for the greater number of different Goal than Source verbs in our data. Markedness may also explain why the Goal-focused verb *-ya* ‘go’ was dominant in our data, although the speakers have no overt impediment to use the semantically more Source-focused *-za* ‘come’, and it was attested at least once.

Complex Grounds: Verbs compensating Source-Goal ambiguity

In settings where there are several Grounds in the same displacement setting, such as a girl going from a car to a house via a tree (Figure 4), the syntactic structure of the spatial clause may also increase in complexity. In isiNdebele, the indifferent Source-Goal marking affects and restricts how Ground complements can be combined in a sentence.

isiNdebele features a syntactic behaviour attested in other languages with indifferent Source-Goal marking (Wälchli & Zúñiga 2006: 289–290). In languages with adnominal Source-Goal differentiation such as English, it is natural to produce one-verb sentences such as ‘She walked from the tree to the house’, where the verb does not need to be repeated even when the displacement role

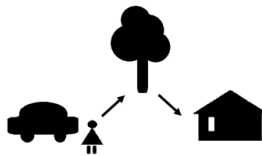


Figure 4 Movement with complex Grounds (1c revisited)

changes from Source to Goal, and a new motion event starts. But in a language like isiNdebele where adnominal marking does not encode directions, such a verbal ellipsis with a non-directional verb easily leads to ambiguity (22):

- (22) **uya emthini endlini*
walk tree.LOC house.LOC

(Intended meaning) ‘to walk from the tree to the house’

(Lit.) ‘to walk in the direction of the tree in the direction of the house’

Source-Goal indifferent languages can avoid this ambiguity with a clause-linkage strategy (Wälchli & Zúñiga 2006: 289) where every change of direction or displacement is indicated by a new verb. This strategy was used systematically by our isiNdebele informants, as well, as illustrated in examples (23a-b) below.

Sentence structures associated with the use of multiple verbs, however, were far from consistent in our data, showing that only the general strategy of clause-linking, rather than its particular structure, is grammaticalised in isiNdebele. In the complex displacement setting *Starting point without a Ground* > *B* > *C* (where the letters stand for concrete Ground objects), the middle element on the path (*B*) was treated as a Source by some speakers (23a), and a Goal by others (23b).

- (23a) *u-suka e-mth-ini, u-ya ng-e-ndl-ini*
3SG-leave LOC1-tree-LOC1 3SG-go LOC2-LOC1.9-house-LOC1

‘She is going from the tree to the house.’ [The speaker omits the clearly shown start of the walk and begins from the middle, focusing on the Source Ground.]

- (23b) *u-ya e-mth-ini, u-ya e-taful-eni*
3SG-go LOC1-tree-LOC1 3SG-go LOC1-table-LOC1

‘She is going to the tree (and then) to the table.’

That speakers of isiNdebele may parse complex motion events according to the actual movement (verbs), and not their endpoints (nouns), might be indicated by the fact that motion events that had starting points without actual Ground objects behaved basically in the same way as the events having a Ground of departure. Note how similar examples in (24) are to the ones in (23) above. The examples in (24) were produced to describe the slightly more complex setting *A* > *B* > *C*, where the additional Ground *A* was included as a starting point. Under this scenario, the variations attested included structures like Source > Goal > Goal (24a), and Source > Goal = Source > Goal (24b).

- (24a) *u-suka e-koloy-ini u-ya e-mth-ini wa-ya e-taful-eni*
 3SG-leave LOC1-car-LOC1 3SG-go LOC1-tree-LOC1 3SG.CON.S-go LOC1-table-LOC1

‘She is goes from the car to the tree, and then goes to the table.’

- (24b) *u-suka hlango motoro u-ya e-mth-ini, u-suka*
 3SG-leave beside car 3SG-go LOC1-tree-LOC1 3SG-leave
e-mth-ini u-ya hlango i-ndlu
 LOC1-tree-LOC1 3SG-go beside 9-house

‘She goes from the car to the tree and from the tree to the house.’

Interestingly, only one speaker produced clauses without Source/Goal repetition, using instead the structure Source > Path > Goal (25). As can be seen, this strategy is, from a grammaticality perspective, entirely possible in isiNdebele. However, it was not favoured by most of the speakers.

- (25) *u-suka e-koloy-ini ya-ma-polisa, u-dlula e-mth-ini*
 3SG-leave LOC1-car-LOC1 9.GEN-6-police 3SG-pass LOC1-tree-LOC1
u-ya ng-e-ndl-(ini)
 3SG-go LOC2-LOC1.9-house-(LOC1)

‘She goes from the police car, passes the tree and goes to the house.’

The Source and Goal appear thus to be the default role choices for spatial clause-linkage in isiNdebele, Path being a secondary option. Explaining this preference, however, requires further research.

3.2.3 Transitive spatial verbs with a complete trajectory

Spatial verbs that can be used transitively in isiNdebele (i.e. verbs that encode their Ground complement as a direct object) typically denote movement **around** or **over** something. As they are not defined by any specific localisation, nor a single inherent edge point, we assign these verbs to the local Path domain.

The transitive spatial verbs denote the complete trajectory that the Figure uses to overtake the Ground as a whole, more or less following its contours (cf. Svorou 1994: 19), either with or without direct contact between Figure and Ground. More tests would help to elaborate the strictness of these conditions; meanwhile, some of the consistently used transitive spatial verbs in our data are listed in (26):

- (26) Attested inherent Path Verbs with a completed trajectory and Direct Object valence

<i>-zomba</i>	‘go around’
<i>-zombe(le)za</i>	‘go around, surround’
<i>-bhoda</i>	‘go around’
<i>-ronta</i>	‘go around’
<i>-khwela</i>	‘go over, ride, climb’
<i>-eqa</i>	‘jump’
<i>-yama</i>	‘cross a river’

The classification of the group of verbs above is based on their grammatical valence: all of them govern their Ground complement with an unmarked Direct Object (27). Semantically, they cover motion actions with both a clear starting point and a clear ending point, that is, with a completed trajectory.

- (27) *in-doda i-zomba umu-thi*
 9-man 9-circle 3-tree
 ‘The man is going around the tree.’

On the other hand, both the elicited data and acceptability tests showed that the transitive use of inherent Source/Goal verbs such as *-ya* ‘go’, *-suka* ‘come/go from’, or *-phuma* ‘come/go out of’ is ungrammatical (28). The clearly differentiated marking shows that in isiNdebele there are not only semantic but also syntactic differences between the Path category and the Source and Goal notions.

- (28) **in-doda i-suka i-koloyi*
 9-man SM9-leave 9-car
 (Intended:) ‘The man is walking away from the car.’

It is striking that in the motion expressions, our data contained chiefly transitive verbs and extremely few applicative derivatives. One possible explanation is that Applicatives abound in verb-adverb constructions (29a), which encode motion events without Grounds (cf. Fleisch 2005: 144), whereas in our study adnominally expressed Ground elements were prominent. Only one speaker in our study used the Applicative combined with an adverb (i.e. not an adnominal adverbial) (29b). As noted above, most displacement notions were expressed by verbs having adnominal complements with transitive or Locative marking.

- (29a) ... *na-yi-phaph-el-a* *phezulu*
 ... when-9-fly-APP-FV up
 ‘... when it (the bird) is flying high (in the sky)’
 (constructed from Fleisch 2005: 144)

- (29b) *eq-el-a* *ngale*
 jump-APP-FV over/to the other side
 ‘[the horse] jumps over to the other side’

All the same, it is noteworthy that applicative derivatives featured as interchangeable variants to the transitive Path verbs in our data. The examples of attested occurrences include a few instances of partly or completely lexicalised applicative derivatives in the AROUND verbs *-zombezeza* ‘circle’ (< *-zomba* ‘circle, go around’) and *-bhodela* (< *-bhoda* ‘go around’) (30). Other lexicalised applicatives attested were *-buyela* ‘return’ and *-tjhidela* ‘move closer’.

- (30) *u-bhod-el-a* *ng-emva* *kw-e-ndlu* (single occurrence)
 1-go.around-APP-FV LOC2-behind 17-POSS.9-house
 ‘He is going behind the house.’ [He is going round to the back of the house, in a paraphrase that represents the event structure more literally.]

These rare occurrences of the Applicative did not notably add semantic or syntactic information to the clause, and they were attested mainly in the speech of educated young adults, whom we knew to be sensitive to grammatical nuances and thus likely to aim for officially maximally correct language. Consequently, we suggest that spatially, the use of applicative forms with adnominal phrases may be simply an example of hypercorrective usage (cf. similar findings in Schulz et al., this volume).

The transitive spatial verbs may also change their valency. The Path verbs *-zomba* ‘go around’ and *-eqa* ‘jump’, for instance, could be used with a Locative adjunct (e.g. *ehlathini* ‘LOC1.forest.LOC1’, *etafuleni* ‘LOC1.table.LOC1’) but interestingly, speakers disagreed on the meanings of these constructions.

Inherent transitivity implies that the directional local roles (Source, Goal, or Path) are firmly implemented in the semantic frame of the verb. The inner structure of this semantic frame, however, is not always straightforward. Three speakers translated the phrase *yeqa etafuleni* with ‘jumps down from the table’ (Source), while the fourth connected the sentence with the meaning ‘jumps onto the table’ (Goal). This indicates that the local roles are not explicitly fixed in the semantic frame of the Path verb *-eqa*, unlike the Source verb *-suka* ‘go from’

or the Goal verb *-ngena* ‘go inside’. The lack of firmly established orientation, combined with the Source-Goal indifference, creates some semantic confusion in the use of this less frequent verb, and possibly of other similar but unattested verbs, as well.

Another syntactically versatile verb of the Path class with slightly inconsistent semantic interpretations is *-zomba* ‘go around’. In addition to the Transitive-Applicative alternation described above, the three sentences in (31) below were interpreted differently by speakers in the acceptability test:

(31a) *Umsana uzomba ihlathi.*

‘The boy is walking around the forest.’ (outside the forest)

(31b) *Umsana uzomba ehlathini.*

(31c) *Umsana uzomba ngehlathini.*

‘The boy is going around in(side) the forest.’ (31b–c)

For two speakers, (b) and (c) conveyed the same meaning; for one speaker (a) and (b) were identical; and the last speaker considered all three synonymous. However, the first three speakers stated that the difference in meanings between (a) and (c) was clear: the verb in (a) meant ‘go around the (whole) forest’, while the verb in (c) stood for ‘going around inside/in the middle of the forest’. This shows that at least the semantic difference between transitive and LOC2-marking is clear-cut for most speakers.

Another verb varying in its valency, *-khwela* ‘climb, ride’, is used transitively for ‘riding a horse or vehicle’, whereas when used with the spatial meaning ‘climb or sit on top of a tree’, it governs an adnominal adjunct (typically *phezu kwa-*). More interestingly, however, in the meaning ‘cross a bridge’, the government of *-khwela* varied between a direct object *ibhlorho* ‘bridge’ (32a) and the prepositional adjunct *phezu kwebhlorho* ‘over the bridge’ (32b). Note that with the very similar vertically oriented verb *-eqa* ‘jump’ (32c), such variation was unattested, and in other contexts *-eqa* was used consistently with a Direct Object.

(32a) *u-khwela ibhlorho*

1-climb 9-bridge

‘She is passing over the bridge’

(32b) *u-khwela phezu kw-e-bhlorho*

1-climb over 17-POSS.9-bridge

‘She is passing over the bridge’

(32c) (unattested)

? *i-eqa phezú kw-e-ngolovani*
 ? 9-jump over 17-POSS.9-wheelbarrow

(Intended meaning:) ‘It is jumping over the wheelbarrow.’

The spatial verbs denoting definite Path trajectories discussed in this section thus show a continuum of syntactic variation from strictly transitive constructions and optional lexicalised derivative extensions to prepositional adverbial adjuncts. At the same time, it is clear that Path is a semantic category like the other local roles Source and Goal, as evidenced by the bare transitive marking and the lack of adnominal expressions specifically marking Path.

Drawing broader conclusions from the discussions of Section 3 above, it may be relevant to comment on Fleisch (2005: 144, 153), who argues that the orientational Applicative derivations of some displacement verbs on the one hand, and the existence of adnominal spatial phrases on the other, show that isiNdebele uses a mixture of verb-framed and satellite-framed strategies, and is possibly in the process of becoming increasingly satellite-framing. While we agree that both verbs and adnominal phrases are indeed important in expressing displacement, we would place isiNdebele closer to the verb-framing languages on the basis that verbs carry a light syntactic, but heavy directionally oriented, semantic load (‘leave from’, ‘going around’), while no directional information is encoded by adnominals, which only express static localisations (‘under’ and ‘beside’, but not ‘over’ or ‘around’).

3.2.4 *Inherent Path verbs with an indefinite trajectory: cases of -dlula and -khamba*

The verb *-dlula* ‘pass’ and *-khamba* ‘walk, go’ differ from the other verb groups discussed above. Semantically, they represent unspecified movement: displacement detached from Grounds (*-dlula*), or versatile general movement (*-khamba*). Of all the verbs in the data, they are the ones most often used with a specifying spatial preposition (as in 33a), although for *-dlula*, a couple of instances with the Locative case *e-...-ini* were also attested (33b–c).

(33a) *u-dlula phambu kw-e-ndlu*
 1-pass in.front.of 17-POSS.9-house

‘(S)he is passing [the front of] the house.’

- (33b) *u-dlula e-ndl-ini*
 1-pass LOC1.9-house-LOC1

‘(S)he is passing the house.’

- (33c) *u-dlula e-bhlorho-ini*
 1-pass LOC1.9-bridge-LOC1

‘(S)he is crossing the bridge.’

The strong (speaker) preference for using prepositions to add localising information implies that the only semantic function of *-dlula* is that of the combined approaching and leaving of a Ground (Path), and all other relations, even the easily implied ‘by, beside’, is preferably expressed with prepositions.

The verb *-khamba* ‘go, walk’ has even less specialised directional content: in our data, it only governs prepositional adjuncts. Despite encoding ‘walking’, however, it is clearly not restricted semantically only to the manner of motion, but, based on its frequency in the data, behaves like a very general displacement verb without inherent directional roles, comparable to ‘go’ in English. If *-khamba* is used with a Ground, it requires a specifying preposition of role or localisation (34), except for some occurrences in the Place role (e.g. *-khamba ehlathini* ‘walk in the forest’).

- (34) *u-khamba ng-emva kw-e-ndlu*
 1-walk LOC2-behind 17-POSS.9-house

‘He is going behind the house.’

On the other hand, *-khamba* appears to be an example of a generic motion verb with multiple functions, combining both manner and displacement features (35). In our data, it could be used independently as the only (displacement) motion verb (see 34 above), but it was also very typical for speakers to provide a comment regarding manner in the form of a seemingly redundant additional *-khamba* before or after the main displacement verb (cf. English ‘She came running into the house’).

- (35) *u-ya-khamba* [without a pause] *u-suka e-ndl-ini*
 1-DJ-walk 1-leave LOC1-house-LOC1

‘She is walking [and] leaving the house.’

The verb *-khamba* was attested in most of the displacement contexts of our study, interchangeably with more specialised verbs (36a), but never adopting their argument structure (36b).

- (36a) *u-zomba / u-khamba e-m-th-ini*
 1-circle / 1-walk LOC1-4-tree-LOC1
 ‘She is walking around among trees.’

- (36b) *uzomba imithi (tree.DO) usuka etafuleni*
 **ukhamba imithi *ukhamba etafuleni*

The manner-displacement continuum, expressed by syntactically and semantically vague light motion verbs such as *-khamba*, could offer further interesting syntactic insights if looked at in more detail, in isiNdebele as well as in other languages (as pointed out by Wälchli & Zúñiga 2006).

3.2.5 Reciprocal movement

Another example of movement without a clear-cut Figure-Ground dichotomy is reciprocal movement. When two (or more) people move simultaneously, it is possible to treat one of them as Figure and another as Ground (e.g. ‘A boy is walking behind his sister’), or both of them reciprocally as simultaneous Figures and Grounds (e.g. ‘The children are following each other’). All main verbs of reciprocal movement shown in our data (i.e. verbs expressing people moving in relation to each other) contain the typical Bantu reciprocal suffix *-an-* (see, e.g. Mchombo 1999):

- (37) Attested reciprocal verbs:

Walking one after the other	<i>-landelana</i>	‘follow each other’
Passing each other	<i>-dlulana</i>	‘pass each other’,
	<i>-phambana</i>	‘cross each other’
Meeting each other	<i>-hlangana</i>	‘meet, assemble’

Variation in lexical choices occurred only in the setting ‘pass each other’, with a slight preference for *-dlulana* over *-phambana*. Overall, isiNdebele encodes reciprocal movement almost exclusively in verbs; adnominal expressions, like in the sentence *Umma ukhamba phambi kwendoda* ‘Mother is walking ahead of the man’, only occurred three times in the context of ‘following each other’.

This scarcity of adnominal expressions in reciprocal movement underlines the verb-centred displacement role profile of isiNdebele. As the specific Reciprocal verbal marker is readily available in isiNdebele, its use is hardly surprising, but its integral role in isiNdebele spatial grammar is further supported by the fact that it was used spontaneously, without formal triggers, by all speakers to encode reciprocal movement.

3.3 Variation in the encoding of culture-specific Figures and Grounds: accessories and vehicles

After the more formally and functionally oriented sections on spatiality above, we conclude our examples and analysis with a few selected semantic domains regarding features of interest other than the basic formal or functional spatial parameters. Expressions that relate clothing and vehicles spatially to people are more culture-specific than the more universal spatial orientations, and they tend to be lexicalised in different ways across languages (Choi & Bowerman 1991).

Accessories: hat and handbag, attested forms

- Hat on head: *e-hloko* ('LOC1-head'), *phezu kwehloko* (on 17.POSS.9.head), Verb + Object ('wear a hat')
- Bag in hand ~ on shoulder: *e-sandle-ni* ('LOC1-hand-LOC1'), *e-mahlombe* ('LOC1-shoulder'), *ng-esandla* (INSTR/LOC2-hand), Verb + Object (*-phatha* 'carry')

The spatial expressions connected with body parts merit separate notice for two reasons. First, placing focus on an inanimate Figure on an animate Ground creates a marked information structure, as human agents are more prototypical than inanimate agents (see, e.g. Nichols, Peterson & Barnes 2004). Therefore, many speakers expressed the human Ground as an agent with a transitive verb, although we asked about the location of the accessory with the trigger question, "Where is the hat/bag?"

Additionally, human topology is universal on the one hand, and irregular on the other, which may be reflected by the variation of attested expressions above (see these settings also in Erzya, as detailed in Arjava 2016). Morphologically, the expressions attested in our data stand out because of their occasional omission of the latter part of the Locative circumfix *e-...-ini*, a phenomenon typical of isiZulu as well (Doke 1961: 235). It should also be noted that the simple Locative was used interchangeably with the heavier analytical form *phezu kwehloko* 'on head'.

Persons in vehicles, attested forms

- Person in a car: Verb + Object (various verbs meaning driving or riding), (LOC2)-LOC1 (*nge-...-ini*), *ngaphakathi kwa-* ('LOC2.inside'), *phezu kwa-* ('on')
- Person(s) in a boat: *ngaphakathi kwa-* ('LOC2.inside'), Verb + Object (verbs of driving), (LOC2)-LOC1
- Person on a bicycle: Verb + Object (*-khwela/-reya* 'ride'), *phezu kwa-* ('on')

- Person on horseback: Verb + Object (*-khwela* ‘ride’), (rare:) *phezu kwa-* (‘on’)
- Teapot in a plane wagon: *phezu kwa-* (‘on’), LOC2-LOC1, *ngaphakathi*, (once:) *ngaphezu kwa-* (‘LOC2.on’)

It is notable that out of the various means of transport, the spatial expressions used for the rare, animate one – sitting on horseback – were the most uniform, while the spatial expressions connected with everyday motor vehicles featured a lot of variation in both lexical and syntactic choices.

We introduced all settings featuring vehicles with the question *Uphi?* ‘Where is (s)he?’, but the speakers interpreted the agency of the Figure in different ways. People sitting in a boat triggered verbless adnominal expressions the most often, possibly because they were more easily attributed a non-agentive passenger status (38a). Sitting in a car produced more variation between the Verb + Direct Object type (‘ride a car’) and adnominal (‘be in, inside’) marking, indicating a spatially more complex situation (38b).

(38a) *u-nga-phakathi kw-e-sikepe*
 1-LOC2-inside 17-POSS.9-boat
 ‘He is in a boat.’

(38b) *u-khwela i-motoro / u-se-koloy-ini*
 1-ride 9-car / 1-LOC1.9-car-LOC1
 ‘He is riding a car.’ / ‘He is in a car.’

Finally, expressions of sitting on a bicycle showed a very similar profile compared to those of sitting on horseback, except that the speakers opted exclusively for the verb *-khwela* ‘ride, climb’ for the horse, but varied between the verbs *-khwela* and *-reya* for the bicycle.⁶

4. CONCLUSIONS

In this article, we have discussed the spatial grammar and lexicon of isiNdebele, considering in turn adnominal marking, verbal semantics and constituent structures, as well as how the formal constructions encode the main functional domains of spatiality. We now move on to draw together some of the main threads of our empirical, field-based study.

6 *-reya* is likely borrowed from Afrikaans < *ry* (*n fiets*) ‘ride a bicycle’ (Fleisch, pers. comm.).

Adnominal spatial marking in isiNdebele includes the general **Locative case** *e...-ini*, the more specialised but semantically slightly unpredictable **Locative** *nga-*, and **phrasal prepositions** grammaticalised from old relational nouns. The spatio-semantic functions of these constructions are clearly differentiated: all **localisations** (i.e. types of static relation between Figure and Ground) are expressed by prepositions, which are used productively in all kinds of spatial contexts. In contrast, the general Locative *e...-ini* is closely connected to **local roles** (i.e. types of dynamic directional positions), **motion events** and verbal **constituent structure**, having in reality more syntactic than semantic functions (of which the local role Place is the chief one). The *nga*-Locative falls functionally somewhere in between; prototypically, it is thought to encode INSIDE localisations, but what the ‘inside’ entails is not clear-cut, and the functions of the *nga*-Locative also extend to other domains, such as presence or absence of contact between Figure and Ground in some cases, and conventionalised uses with certain nouns and *pha*-prepositions in others. The full functional scope of the *nga*-Locative is a subject for future research.

The spatial verbs of isiNdebele cannot express localising contact meanings; instead, they encode all the displacement information of spatial relations (i.e. the directional local roles Source, Goal, and Path) in their semantic frame (e.g. *-phuma* ‘exit’, *-ngena* ‘enter’, and *-dlula* ‘pass’). The vague semantic content of adnominal marking in the encoding of motion events is reflected in the rich semantic specialisation of motion verbs and makes isiNdebele a representative of a **Source-Goal indifferent** language. Adnominal role indifference also contributes to complex verb-repetition strategies in the expression of multiphase motion events. Moreover, the spatial verbs of isiNdebele also vary in their valency and argument structure.

In broader typological terms, isiNdebele thus shows features of both traditional **satellite-framed** and **verb-framed** strategies. The interesting point is that the formal domains are functionally clearly differentiated into localising (satellite-marking) and displacement (verb-marking) functions.

In addition to grammatical generalisations, we observed a good deal of lexical and structural variation in the utterances of the speakers of our study. We attested free variation in the use of, for instance, *nga*-forms, applicative derivations, and prototypical spatial prepositions. Such variation may help us to pinpoint possible diachronic processes such as depth of grammaticalisation, but it often remains unobserved in the more theoretical and standardised treatments frequently found in dictionaries and grammars.

Finally, the use of a three-dimensional stimulus set has shown that semi-spontaneous elicitation can result in an abundance of the formal, functional, and

semantic variations mentioned above, and their interactions, all in one simple study setting. At the same time, we accept that some crucial pieces of comparative information may have been overlooked, which could have been found in a formally more meticulous research design. In addition to the basic spatial mapping we conducted, the similar stimulus set could also be used, with some adjustments, to study deictic forms and categories, such as demonstratives, and could also be complemented by more traditional elicitation methods.

Although our article on its surface presents a case study of a local South African language variant, broader perspectives regarding spatial relations can and should be drawn. Besides offering insights into expedient methodologies of spatial study in general, we also wish to emphasise the importance of a good theoretical and typological background when considering language-specific research frames. Typology can illuminate the relevance of observed micro-variation, and language-specific micro-variation can in turn feed constructively into typological and theoretical studies.

ABBREVIATIONS

APP	Applicative	LOC1	Locative case
COM	Comitative	LOC2	<i>nga</i> - relational marker
CONS	Consecutive	PFV	Perfective
DJ	Disjoint	POSS	Possessive
DO	Direct object	SG	Singular
FV	Final vowel	SM	Subject Marker
INSTR	Intransitive		

Single numbers indicate Bantu noun classes.

REFERENCES

- ARJAVA, Heini 2016. Experimenting on Spatiality: Three-Dimensional Toy Elicitation in a Field Study of Erzya. In: K. SHAGAL & H. ARJAVA (eds), *Mordvin Languages in the Field* (Uralica Helsingiensia 10): 319–338. Helsinki: Finno-Ugrian Society.
- BIRJUK Olga L. & Maria N. USAČEVA 2012. Diskursivnye faktory, vlijajuščije navybor meždu posleložnoj I posleložno-padežnoj formoj v besermjanskom dialekte udmurtskogo jazyka [Discourse Factors Influencing the Choice between the Case Form and the Postpositional Construction in Beserman Udmurt]. In: A.I. KUZNECOVA (ed.), *Finno-ugorskije jazyki: fragment grammatičeskogo opisanija: Formalnyj i funkcionalnyj podhody* [Finno-Ugric Languages: The Fragments of Grammatical Description: Formal and Functional Approaches]: 607–646. Moscow: Russkije slovari.

- BOWERMAN, Melissa & Eric PEDERSON 1992. Topological Relations Picture Series. In: S.C. LEVINSON (ed.), *Space stimuli kit 1.2*: November 1992: 51. Nijmegen: Max Planck Institute for Psycholinguistics.
- BOWERN, Claire & Victoria LOTRIDGE (eds) 2002. *Ndebele*. Munich: Lincom Europa.
- CHAFE, Wallace (ed.) 1980. *The Pear Stories: Cognitive, Cultural, and Linguistic Aspects of Narrative Production*. Norwood, New Jersey: Ablex.
- CHOI, Soonja & Melissa BOWERMAN 1991. Learning to Express Motion Events in English and Korean: The Influence of Language-Specific Lexicalization Patterns. *Cognition* 41(1–3): 83–121.
- DANZIGER, Eve 2011. Distinguishing Three-Dimensional Forms from Their Mirror-Images: Whorfian Results from Users of Intrinsic Frames of Linguistic Reference. *Language Sciences* 33(6): 853–867.
- DOKE, Clement M. 1961. *Textbook of Zulu Grammar*. 6th edn. Johannesburg: Longmans Southern Africa.
- FILLMORE, Charles J. 1971/1975. *Santa Cruz Lectures on Deixis, 1971*. Bloomington: Indiana University Linguistics Club.
- FLEISCH, Axel 2005. A Cognitive Semantic Approach to the Linguistic Construal of UPPER SPACE in Southern Ndebele. *Southern African Linguistics and Applied Language Studies* 23(2): 139–154.
- GAINES, Richard 2001. On the Typology of Directional Verbs in Bantu. In: R. BOTNE & R. VONDRASEK (eds), *Explorations in African Linguistics* (Indiana University Working Papers in Linguistics 3): 1–12. Bloomington: Indiana University Linguistics Club.
- HICKMANN, Maya 2007. Static and Dynamic Location in French: Developmental and Cross-Linguistic Perspectives. In: M. AURNAGUE, M. HICKMANN & L. VIEU (eds), *The Categorization of Spatial Entities in Language and Cognition*: 205–231. Amsterdam: John Benjamins.
- LEVINSON, Stephen C. 1996. Frames of Reference and Molyneux's Question: Crosslinguistic Evidence. In: P. BLOOM, M.A. PETERSON, L. Nadel & M.F. GARRETT (eds), *Language and Space*: 109–169. Cambridge: MIT Press.
- LEVINSON, Stephen C. 2003. *Space in Language and Cognition: Explorations in Cognitive Diversity*. Cambridge: CUP.
- LEVINSON, Stephen C., Penelope BROWN, Eve DANZIGER, Lourdes DE LEON, John B. HAVILAND, Eric PEDERSON & Gunter SENFT 1992. Man and Tree & Space Games. In: S.C. LEVINSON (ed.), *Space Stimuli Kit 1.2*: November 1992: 7–14. Nijmegen: Max Planck Institute for Psycholinguistics.
- LEVINSON, Stephen & David WILKINS (eds) 2006. *Grammars of Space: Explorations in Cognitive Diversity*. Cambridge: CUP.
- MCHOMBO, Sam A. 1999. Quantification and Verb Morphology: The Case of Reciprocals in African Languages. *Linguistic Analysis* 29: 182–213.
- NICHOLS, Johanna, David A. PETERSON & Jonathan BARNES 2004. Transitivity and Detransitivizing Languages. *Linguistic Typology* 8(2): 149–211.

- SKHOSANA, Philemon Buti 2009. The Linguistic Relationship between Southern and Northern Ndebele. PhD dissertation, University of Pretoria.
- SKOPETEAS, Stavros, Ines FIEDLER, Sam HELLMUTH, Anne SCHWARZ, Ruben STOEL, Gisbert FANSELOW, Caroline FÉRY & Manfred KRIFKA 2006. *Questionnaire on Information Structure: Reference Manual*. (Interdisciplinary Studies on Information Structure 4) Potsdam: Universitätsverlag.
- SLOBIN, Dan Isaac 2006. What Makes Manner of Motion Salient? Explorations in Linguistic Typology, Discourse, and Cognition. In: M. HICKMANN & S. ROBERT (eds), *Space in Languages: Linguistic Systems and Cognitive Categories* (Typological Studies in Language 66): 59–81. Amsterdam: John Benjamins.
- SVOROU, Soteria 1994. *The Grammar of Space*. (Typological Studies in Language 25) Amsterdam: John Benjamins.
- TALJAARD, P.C. and Sonja E. BOSCH 1988. *Handbook of Isizulu*. Pretoria: J.L. van Schaik.
- TALMY, Leonard 1985. Lexicalization Patterns: Semantic Structure in Lexical Forms. In: T. SHOPEN (ed.), *Language Typology and Syntactic Description, III: Grammatical Categories and the Lexicon*: 57–149. Cambridge: CUP.
- TALMY, Leonard 2000. *Toward a Cognitive Semantics, I & II*. Cambridge, MA: MIT.
- TESNIÈRE, Lucien 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- WÄLCHLI, Bernhard & Fernando ZÚÑIGA 2006. Source-Goal (In)Difference and the Typology of Motion Events in the Clause. *Sprachtypologie und Universalienforschung* 59(3): 284–303.
- ZAJCEVA Galina L. 1991. *Daktilologija: Žestovaja reč* [Cheirology: Sign speech]. Moscow: Prosveshčenie.

APPENDIX I: THE SPATIAL SETTINGS USED IN THE STUDY

The experiment additionally included two complex static scenes with multiple Figures and Grounds; in order to include questions with no predetermined foci in the study, we asked the informants to describe these scenes in their own words.

Localisation		Local role			
Ground	Figure	Place	Source	Goal	Path
IN(SIDE)					
House	Person	x	x	x	
Bushes	Person/animal	x			x
Hand	Bag	x			
IN FRONT OF					
House	Person	x	x	x	x
BEHIND					
House/table	Person	x	x	x	x
BESIDE					
House/table	Person	x	x	x	
Tree	Person/animal	x			
ON/OVER					
Bicycle	Person	x			
Bridge	Bicycle	x			
	Person		(x)		x
Wheelbarrow	Horse				x
Table	Carrot	x			
	Person	x			
	Teapot	x		x	
Teapot on table	Cup	x			
Tree	Person/animal	x			
Horse	Person	x			
Head	Hat	x			

Localisation		Local role			
Ground	Figure	Place	Source	Goal	Path
UNDER					
Table	Cup	x			
	Person	x			
Bridge	Turtle				x
Tree	Person/animal	x		x	
BETWEEN					
Bushes	Animal(s)	x			
Lambs	Cow	x			x
AROUND					
Tree/house	Person/animal				x
Bushes	Person/animal				x
IN/ON VEHICLES					
Car		x			
Boat		x			
Plane wagon		x			
COMPLEX GROUNDS					
A > B	Person	–	x	x	
A > B > A	Person	–	x	x	(x)
> B > C	Person	–		x	x
A > B > C	Person	–	x	x	x
NO GROUND, RECIPROCAL MOVEMENT					
Persons walking one after another		x			
Persons passing each other					x
Persons meeting each other				x	

TOWARDS A FIELDWORK METHODOLOGY FOR ELICITING DISTINCTIONS IN LEXICAL ASPECT IN BANTU

Thera Marie Crane & Axel Fleisch

While analyses of lexical aspect have traditionally relied on Vendler's (1957) typology and expansions thereof, more recent work has shown Vendler's classes to be insufficient for characterising event types in many languages. This is particularly true for Bantu languages, which typically have large classes of "change-of-state" (COS) verbs (or verbal predicates), and which are under-represented in cross-linguistic studies of lexical aspect. Understanding the nuances of lexical aspect in isiNdebele requires a toolkit that goes beyond the traditional Vendlerian tests, many of which produce misleading results in isiNdebele. During our 2016 fieldwork, we developed and refined a battery of tests aimed at teasing apart key distinctions within COS and other lexical aspect classes in isiNdebele. We then adapted the tests to Northern Transvaal Ndebele (Sindebele), which allowed us to make a direct cross-linguistic comparison of the construal of various events, and to see potential effects of language contact on event construal. However, even a detailed and robust series of tests can easily miss crucial phenomena related to event construal (often available to native-speaker linguists through introspection, but less easily accessed by linguists working on languages other than their own). To mitigate this issue, much of our research involved long, ethnographic-style discussions with Ndebele speakers of the potential meaning(s) and use(s) of verbs in various linguistic frames. Although this style of research is less amenable to producing neat categorisations of verbs that can be directly compared between languages, we argue that it both reduces artificially straightforward analyses, and allows us to discover which distinctions are actually worth comparing. In this paper, we describe our research strategies, and suggest how they might be adapted for use with other languages and in cross-linguistic comparison.

1. INTRODUCTION

Studies of contact linguistics have shed much light upon phenomena such as lexical borrowing and phonological change. Less is known, however, about the borrowing of semantic information. We set out to investigate the potential influence on semantics in isiNdebele and Sindebele, both spoken in long-term and intensive contact situations involving the Nguni and Sotho-Tswana language clusters.

We identified the lexical aspectual structure (also known as situation type, actionality, or aktionsart, among other labels) of verbs as a fruitful area for

Studia Orientalia 120 (2019), pp. 129–179

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ISSN: 0039-3282

investigations of contact-induced semantic change. Because of its intimate interactions with grammatical aspect, lexical aspect is a domain in which infinite meaning possibilities – lexical verbs and the way the actions they describe unfold across time – meet a closed set of grammatical categories; understanding these interactions is a step towards bringing the cognitive semantic “architecture” of eventualities to light.

As described in detail below (Section 3), Bantu languages typically have systems of lexical aspect that cannot be adequately captured using the classification described by Vendler (1957). Even across Bantu languages, verbs that are the nearest translation equivalents to one another may have different lexical aspectual structures in different languages. The questions that motivated our research therefore relate to such differences in semantic and conceptual structure and how they play out in language use, as well as how multilingual speakers negotiate such conceptual differences. To approach these questions, we needed to modify and expand existing methodologies for uncovering lexical aspectual distinctions (see, e.g. Bar-el 2015).

Lexical aspect is notoriously difficult to categorise. As noted by Sasse (2002) and others, aspect is not merely made up of the interactions between lexical and grammatical systems, but comprises many layers and dimensions up to the level of discourse. Further, speakers are very good at construing or coercing meanings to resolve seeming infelicities (e.g. the famous *i'm lovin' it* [sic] marketing campaign). There seem to be as many exceptions as rules – or even more – when applying standard tests of lexical aspect cross-linguistically (see Bar-el 2015 for numerous examples).

Despite these important cautions, we believe that lexical aspectual structure can (and should) be meaningfully compared across languages. In this paper, we describe our investigations of lexical aspect in isiNdebele; our adaptation of the tests we developed to a related language, Sindebele; and some of the subtle semantic differences that were revealed between the two languages. We argue that developing and applying lexical aspect tests requires long, almost ethnographic-style discussions with speakers regarding the potential meaning(s) and use(s) of verbs in various linguistic frames. Although this style of research is less amenable to quickly producing neat categorisations of verbs, we argue that it both helps us to avoid artificially straightforward analyses and allows us to discover which distinctions are worth comparing.

The purpose of this paper is, therefore, not to offer definitive theories of the systems of lexical aspectual classification in the languages discussed – such studies are ongoing – but rather to describe the investigative processes and the insights that emerged, in the hope that some of our experiences and the research

principles we suggest will be of use to researchers of lexical aspectual semantics in other languages.

The remainder of this paper is organised as follows: In Section 2, we discuss basic principles and challenges related to the investigation of lexical aspect. Section 3 briefly describes the most common research strands on lexical aspect in Bantu languages. In Section 4, we develop the basis of a research methodology for studying lexical aspect in isiNdebele, based on principles that can apply to studies of lexical aspect in other languages, as well. We describe research desiderata for obtaining robust results (Section 4.1) and the semi-structured interview process we used for eliciting most of our data (Section 4.2). Section 5 describes the adaptation of our tests to a related language, Sindebele, the challenges encountered, and some of the insights gained in the adaptation process. Adapting the tests allowed not only for fine-grained comparisons of the lexical aspectual “structures” associated with particular verbs in each of the languages, but also for deeper insights into the workings of the tense and aspect systems of each language. The paper concludes in Section 6.

We write isiNdebele sentences using the standard orthography for that language (see Mahlangu 2016); for Sindebele, where the standard orthography is still being developed and disseminated, we attempted to conform to speaker preferences. One area of divergence is in our treatment of the verbal word. Sindebele speakers tend to adopt more disjunctive writing practices, in which inflectional verbal morphemes are often written as separate words; this mirrors practices in languages like Sesotho sa Leboa, the most influential Bantu language in the areas where Sindebele is spoken. Despite this tendency, we write Sindebele examples conjunctively (i.e. as single verbal words) in this paper so they more closely mirror their isiNdebele counterparts in portraying verbal elements as unified or separate words. We have not yet made a thorough analysis of Sindebele phonology, and in particular, have not resolved all of the issues regarding vowel quality, but we have aimed for internal consistency. Sindebele transcriptions should thus be taken with a phonological grain of salt. In Sections 2 and 3, all examples are from isiNdebele. Starting in Section 4, where both languages are discussed, examples are labelled either isiNdebele or Sindebele. Verbal glosses for isiNdebele are taken, where possible, from the isiNdebele–English dictionary. Sometimes these glosses transparently indicate the change-of-state nature of the verbs (see 2.1), while other times, the relationship between translations and lexical aspectual structures remains more opaque.

2. INVESTIGATING LEXICAL ASPECT

2.1 *Some challenges*

Analyses of lexical aspect have traditionally relied on Vendler's (1957) typology and expansions thereof (e.g. Smith 1997; Croft 2012). Vendler's original classification included states (e.g. *love*), activities (e.g. *run*), accomplishments (e.g. *eat an apple, run a mile*), and achievements (e.g. *reach the summit, arrive*). Smith added the category of semelfactive, for verbs like *cough* and *kick* that usually have iterative meanings in the progressive. However, much recent work has shown Vendler's classes to be insufficient, in terms of both specificity and ontology, for characterising event types in many languages (see Bar-el 2015 for an overview).

This is certainly the case for Bantu languages, which typically have large classes of "change-of-state" (COS) verbs (or verbal predicates) (Botne & Kershner 2000; Kershner 2002; Nurse 2008; Persohn 2018; Crane & Persohn 2019a). COS verbs, generally speaking, have as part of their meaning the subject's change from one state to another; they can often also depict the result state following the change. Many Bantu languages have relatively small, closed adjective classes, and adjectival meanings are often expressed with COS verbs. Frequently, COS verbs are interpreted as present states when paired with past or perfect(ive) aspectual morphology, as seen in the contrast between the isiNdebele examples in (1) and (2). Although the dictionary translates *kwata* as 'be angry, be furious, be unhappy', a more precise translation would incorporate the notion of getting angry – that is, of transition into the state – as well.

- (1) *Ngi-ya-kwat-a*
1SG.SM-DJ-be.angry-FV
'I am getting angry'

- (2) *Ngi-kwat-ile*
1SG.SM-be.angry-PFV
'I am angry'

1 The present and perfective paradigms in isiNdebele exhibit a morphological contrast between "conjoint" and "disjoint" forms, where conjoint morphology indicates shared constituency with the following element. See Buell (2006) for details. In this article, we gloss the present-tense disjoint marker as DJ (the conjoint form is not segmentally expressed). The disjoint perfective form is "long" *-ile*, while the conjoint perfective is "short" *-e*. This distinction is not explicitly indicated in our interlinear glosses, and both forms are glossed as PFV. The perfective marker sometimes "imbricates" (see Bastin 1983) into the stem, conditioning vowel changes; these imbricated forms are also glossed as PFV. See Crane & Fleisch (*forthcoming*) and Botne & Kershner (2000) for more details.

COS verbs are frequently classified as “achievement” or “punctive” verbs in the Bantu literature (see, e.g. Kershner 2002; Botne 2003; Persohn 2017), due to the posited punctual nature of the change from one state to another, in addition to a potential run-up phase and resultant state. However, many of these verbs represent meanings quite different from the prototypical examples of achievements usually given in Vendlerian classifications (e.g. *reach the summit* and *win the race*). Furthermore, COS verbs are not a monolithic group. For example, some verbs in isiNdebele contrast with *-kwata* ‘get angry’ above in that they do not lexically encode a coming-to-be phase leading up to the state change. When used with the present tense, such verbs have habitual readings (3a) or even have conventionalised figurative meanings (3c). That these verbs can be considered COS verbs is shown in (3b,d), where the perfective forms have present stative readings.

- | | |
|---|---|
| <p>(3a) <i>U-ya-thul-a</i>
1.SM-DJ-keep.quiet-FV
‘S/he keeps quiet’</p> | <p>(3b) <i>U-thul-ile</i>
1.SM-keep.quiet-PFV
‘S/he is quiet / he is being quiet’</p> |
| <p>(3c) <i>U-ya-lamb-a</i>
1.SM-DJ-be.hungry-FV
‘S/he is poor’</p> | <p>(3d) <i>U-lamb-ile</i>
1.SM-be.hungry-PFV
‘S/he is hungry’</p> |

Given these basic facts, it is clear that more detailed investigation of lexical aspect in Bantu languages is warranted. Bantu languages are excellent laboratories for studies of lexical aspect, both because of their (typically) large classes of COS verbs and because of their (typically) extensive inventories of verbal tense and aspect markers. However, relying on standardly cited tests for Vendlerian lexical aspectual types is unlikely to produce sufficiently nuanced results, and may even be misleading, for several reasons.

The first, and lesser, problem is with the tests themselves. As has been repeatedly noted (and is convincingly demonstrated in Bar-el 2015), lexical aspect tests do not function the same way in every language, or even for all predicates in the same “class” within a language, including English. Below, we give a few examples of how Vendlerian tests fail or are misleading in isiNdebele.

In English, temporal adverbials are said to distinguish activities and accomplishments (see, e.g. Smith 1997; Van Valin 2006), as in (4).

- (4) The knight fought dragons for five years / # in five years. (activity)
The knight wrote a letter to the prince for two days / in two days.
(accomplishment)

IsiNdebele, however, the bare form of duration temporal adverbials such as *iimveke ezimbili* ‘two weeks’ can be translated into English either as (e.g.) ‘for two weeks’ or ‘in two weeks’, depending on the context. In (5b) the most natural reading absent other context is ‘in two weeks’, but both readings are possible; in (5c), both readings seem to be about equally natural.

- (5a) *U-khamb-e iimveke ezimbili*
 1.SM-go-PFV 10.week 10.two
 ‘S/he left (i.e. was gone) for two weeks’
- (5b) *U-tlol-e incwadi iimveke ezimbili*
 1.SM-write-PFV 9.letter 10.week 10.two
 ‘S/he wrote a book in (/ for) two weeks’
- (5c) *U-dl-e umengo imizuzu elitjhumu*
 1.SM-eat-PFV 3.mango 4.minute 4.ten
 ‘S/he ate (the) mango in / for ten minutes’

With some predicates, the *-ile* form does not combine naturally with a durative temporal adverbial, although the predicates are durative. For example, *-khohlela* ‘cough’ can describe either a semelfactive event (one cough) or a temporally extended (iterative) activity. The latter seems to be the preferred reading without additional context in the present disjoint form in (6a).

- (6a) *U-ya-khohlel-a*
 1.SM-DJ-cough-FV
 ‘S/he is coughing’
- (6b) *?U-khohlel-e iimveke ezimbili*
 1.SM-cough-PFV 10.week 10.two
 intended: ‘S/he coughed for two weeks’
 (Speaker comment: “Then what? Did he die?”)²

2 As pointed out by an anonymous reviewer, the perfective entails some sort of termination or post-state, but the reviewer also wonders why this would render the sentence awkward. Our hunch here is that the awkward semantics result from combining a construction implying not just termination, but also completion with a non/telic verb and a durative adverb, but we do not have sufficient comparable examples to substantiate this impression sufficiently at this point.

The natural way of expressing ‘s/he coughed for two weeks’ is as in (7), with a past imperfective form.

- (7) *Be-ka-khohlel-a* *iimveke* *ezimbili*
 be.PFV-1.SM-cough-FV 10.week 10.two
 ‘S/he coughed for two weeks’

In fact, isiNdebele – unlike many other Bantu languages – has a morphological means for expressing ‘in X time’, namely with the “inner-space” (Fleisch 2005) locative adverbial prefix *nga-*, as in *ngemizuzu elitjhumu* ‘in ten minutes’. However, even this does not reliably distinguish between translations of English activity verbs like ‘sing’ and accomplishment verbs like ‘eat a mango’. This is because speakers seem to easily construe (elided) bounding objects for potentially transitive verbs in such contexts. Note that such elisions are also possible in English, with sufficient context; however, they seem to us to be at least somewhat more natural in isiNdebele.

- (8a) *U-dl-e* *umengo* *ngemizuzu* *elitjhumu*
 1.SM-eat-PFV 3.mango LOC.4.minute 4.ten
 ‘S/he ate a/the mango in ten minutes’
- (8b) *U-cul-e* *ngemizuzu* *elitjhumu*
 1.SM-sing-FV LOC.4.minute 4.ten
 ‘S/he sang in ten minutes’ (e.g. a song, or the set program)

These and other examples raise the question of whether the activity/accomplishment distinction is less important in isiNdebele, or whether it simply needs to be captured using other tests. (See, e.g. Wilhelm 2007 for further discussion on the language specificity of properties such as telicity and durativity.) It’s worth noting that even in English, (8b) is completely acceptable if a specific singing program is already contextually invoked. Although the temporal adverbial test does not straightforwardly distinguish activities and accomplishments, as it is said to do in English, acceptability judgments and translations into English, taken carefully, can still shed light on aspectual properties of different predicates.

More insidiously challenging to apply is a test like the imperfective paradox, which in English distinguishes activities from accomplishments (and possibly achievements).

- (9a) Siphó was eating ENTAILS Siphó ate [activity]
 (9b) Siphó was eating a mango DOES NOT ENTAIL Siphó ate a mango
 [accomplishment]
 (9c) Siphó was reaching the summit DOES NOT ENTAIL Siphó reached
 the summit [achievement]

In isiNdebele, this test has several potential pitfalls. While it works as expected for activity verbs, as in (10), objects are not necessarily quantized, so that many predicates are ambiguous between activity and accomplishment readings. The entailment test can therefore depend on which interpretation is salient in the speaker's mind (see interpretation (i) vs. (ii) in 10c); great care must thus be taken to specify the appropriate context.³

- (10a) *USiphó be-ka-cul-a* ENTAILS *U-cul-ile*
 1A.Siphó be.PFV-1.SM-sing-FV 1A.Siphó 1.SM-sing-PFV
 'Siphó was singing' 'He sang'

- (10b) *USiphó be-ka-akh-a indlu*
 1A.Siphó be.PFV-1.SM-build-FV 9.house
 'Siphó was building a house'

DOES NOT ENTAIL *Wa-akh-e indlu*
 1.SM.PST-build-PFV 9.house
 'He built a house'

- (10c) *USiphó be-ka-dl-a umengo*
 1A.Siphó be.PFV-1.SM-eat-FV 3.mango
 i 'Siphó was eating a mango'
 ii 'Siphó was eating mango'

³ We tried several methodologies for employing this test in isiNdebele. For example, we said (using English as a framing language), "I know that *Siphó bekacula*. In other words, *Siphó uculile*, right?" We also tested (without using English) the felicity of the PFV BUT NOT PFV frame, as well as several other contexts; all proved rather difficult in elicitation, with different speakers responding more intuitively to different tests, but the results were nevertheless sometimes enlightening, when interpreted with caution.

COULD ENTAIL *U-dl-e* *umengo*
 1.SM-eat-PFV 3.mango
 ‘He ate a mango’
 ‘He ate mango’

(Speaker’s comment regarding this example: “They’re [the two sentences] not the same. Actually, they’re similar. They’re basically the same.”)

Furthermore, the test seems to work for some achievement-like verbs (11a), but it is difficult to construct with many other change-of-state verbs, as in (11b), where the predicates *bekalamba* and *ulambile* are not straightforwardly related.

(11a) *USipho be-ka-khamb-a*
 1A.Sipho be.PFV-1SG.SM-leave-FV
 ‘Sipho was leaving’

DOES NOT ENTAIL *U-khamb-ile*
 1.SM-leave-PFV
 ‘He left’⁴

(11b)	<i>USipho be-ka-lamb-a</i>	???	<i>U-lamb-ile</i>
	1A.Sipho be.PFV-1SG.SM-be.hungry-FV		1.SM-be.hungry-PFV
	‘Sipho used to get hungry’ /		‘He is hungry’
	‘Sipho was poor’		

With many COS predicates, the perfective *-ile* form is ambiguous between a state-change reading (e.g. ‘got fat’) and a current state reading (e.g. ‘is fat’), which makes the test even more difficult to reliably apply. In any case, this test – like adverbial tests – is instructive, but must be applied with great care.

Even if the tests were perfected for application within a particular language, their success in elicitation contexts would not be assured. For example, a speaker might reject an utterance outright because not enough contextual information is provided, as in (12). (See Matthewson 2004 for arguments that in semantic elicitation, sentences should never be presented for translation without additional contextual information.)

⁴ Note that *-khamba* also means ‘go’, ‘travel’ or ‘walk’, so this test is only meaningful if speakers have the COS meaning ‘leave’, rather than the ongoing activity meanings, in mind.

- (12) *U-pheze wa-fik-a* (utterance offered for judgment)
 1.SM-nearly 1.SM.PST-arrive-FV

Intended: ‘S/he almost arrived’

Speaker judgment: “You can’t say that. You should say *upheze weza* ‘he almost came’.”

Subsequent context provided to the speaker: “What would you say if Siphso was climbing a mountain and almost reached the top, but didn’t quite make it?”

Speaker response: “*Upheze wafika.*”

A more serious issue in relying on tests used to distinguish Vendler’s lexical aspectual types in English is the underlying assumption that the categories themselves are universal. We return to this point throughout the following sections.

2.2 Which characteristics need to be investigated?

A first step in investigating lexical aspect is determining what semantic properties of a lexical expression have the potential to make aspectual contributions relevant for grammar and the interpretation of utterances. Since we do not want to assume the universality of Vendlerian distinctions a priori, we need to take a more basic approach. As noted by Bar-el (2015: 105), “what may be universal is an inventory of building blocks that languages use to construct aspectual classes”. Therefore, one of our starting points was the idea that both phases (and the transitions between them) and the internal “structures” or characteristics of phases can be linguistically significant (see also Croft 2012 and references therein). The following discussion describes ways of understanding these components and some of their potential variations.

Botne (2003) shows that languages can construe the phasal structure of events quite differently, even when the verbs encoding them are translational equivalents. To illustrate, he shows differences in an apparently canonical achievement verb ‘to die’ across languages. Botne posits that achievement verbs like ‘die’ can maximally encode the following phases: (A) a pre-state; (B) a dynamic stage leading up to (C) the nucleus, which in achievement verbs represents the “pivot” or point of transition; (D) the “denouement”, representing entry into (E) the result state (see Botne 2003: 237 for a schematic depiction). Botne gives illustrations of different languages encoding different combinations of these phases, although all encode at least the nucleus phase. In general, the nucleus represents the primary lexical content of an expression; in the words of Botne and Kershner (2000: 165), the “characteristic and prominent feature of the event”. The key

feature of achievement verbs, Botne argues, is that the nucleus (the point of transition, in this verb type) is construed as temporally punctual; other phases may or may not be lexically encoded. In other verb types, with the exception perhaps of semelfactives, the nucleus is not construed as punctual, but rather as extended in time. For example, an activity verb like *run* might consist solely of a temporally extended nucleus phase (Table 1).

Table 1 Graphic depictions of some verb types in the Onset-Nucleus-Coda framework (e.g. Botne 2003)⁵

	<p>“Transitional achievement”: Onset + Nucleus + Coda</p>
	<p>“Resultative achievement”: Nucleus + Coda</p>
	<p>“Inceptive achievement”: Onset + Nucleus</p>
	<p>“Acute achievement”: Nucleus only</p>
	<p>Activity verb: Extended Nucleus</p>

As noted above, Botne shows that languages differ significantly as to which phases are lexically encoded (i.e. can be linguistically targeted by grammatical forms) in an achievement verb like ‘die’. Noting that, in general, only three major phases – onset (A/B), nucleus (C), and coda (D/E) – are necessary in the analysis of verbs like ‘die’, Botne (2003: 238) proposes four major types of achievements: “acute” (only the nucleus is encoded), “inceptive” (onset phase + nucleus), “resultative” (nucleus + coda phase), and “transitional” (onset + nucleus + coda).

⁵ The formats of the graphics in Table 1 take inspiration from graphics originally created by Bastian Persohn (e.g. 2017). See Crane & Persohn 2019a; 2019b for further discussion of how the Botne and Kershner lexical aspectual framework works and how it interacts with grammatical aspect.

These types are largely consonant with the types of “punctive” verbs proposed in Kershner (2002); see Section 3 below for further discussion. Botne and Kershner treat most Bantu change-of-state verbs as achievement verbs encoding a punctual nucleus, possibly along with lexically encoded onset and coda phases (see the online appendix of Crane & Persohn 2019a for more detailed discussion). Botne and Kershner’s Onset-Nucleus-Coda scheme has been the most widely adopted framework for understanding verb categories in Bantu (see Section 3), and it includes the important underlying ideas that verbs can encode more than one phase, and that these phases are not always identical across nearest translational equivalents. As noted in Section 3 below, recent work suggests some open questions in this framework; because of both its crucial insights regarding Bantu lexical aspect and its widespread adoption, we will also follow this framework in referring to onset, nucleus, and coda phases.

Table 1 gives schematic depictions of some of Botne’s (e.g. 2003) proposed verb types, using the Onset-Nucleus-Coda structure. For change-of-state verbs (roughly, “achievements” in this table), roughly speaking, the onset phase (if there is any) represents the phase in which the change takes place; the nucleus phase indicates the (often subjectively construed) point of change, and the coda phase represents the state resulting from the change. With activity verbs, for example, the temporally extended nucleus represents the occurrence of the activity itself (e.g. English *running*).

An additional consideration with potential grammatical ramifications is the internal structure of phases. Croft’s (2012) treatise on verbal aspectual and causal structure argues that aspectual structure must be understood as two-dimensional: the phases as they are instantiated across time, (*t* dimension) and the internal qualitative structure of the phases, including a qualitative change in state (*q* dimension).

For example, Croft distinguishes two types of activities: “directed” and “undirected” (or cyclic) activities. Directed activities (also known as “degree achievements”; see, e.g. Dowty 1979) such as ‘the soup cooled’ have a “continuous” or “incremental” qualitative change across time, while undirected activities like ‘the girls chanted’ do not have a directed qualitative change over time (Croft 2012: 60–61; see Croft’s text for visual depiction of the differences).

Accomplishments are analogous to activities, except that they are bounded by a completion phase. Croft argues that accomplishments “profile” three phases: “the inception and the completion phase as well as the directed change phase” (Croft 2012: 62). Some accomplishments (in Croft’s terms, “incremental accomplishments”, e.g. ‘I ate an apple pancake’) involve continuous change towards the result phase; others (“runup achievements” or “nonincremental accomplish-

ments”, e.g. ‘Harry repaired the computer’) profile an undirected activity leading to the result state (Croft 2012: 62).

States and achievements have similarly analogical structure; some qualitative distinctions in evidence include whether the state (or result state) is the result of a state change or not, and whether the state change is permanent or reversible.

Verbs in isiNdebele may be sensitive to the contrast between incremental and non-incremental coming-to-be phases. This can be seen in the contrast between two senses of the verb *-phola*, which can mean both ‘cool down’ and ‘recover’ (13). It is compatible with persistive marker *-sa-* ‘still’ in the present tense only with the meaning ‘cool down’. Whether this contrast has to do with incrementality – cooling down being incremental and recovery non-incremental – or some other, yet-to-be-identified quality feature is still under investigation, but the need to distinguish quality within coming-to-be phases is clear.

(13a) *USipho u-ya-phol-a*
 1A.Sipho 1.SM-DJ-get.well-FV
 ‘Sipho is recovering’

(13b) *Umratha u-ya-phol-a*
 3.porridge 3.SM-DJ-cool.down-FV
 ‘The porridge is cooling’

(13c) *#USipho u-sa-phol-a*
 1A.Sipho 1.SM-PERS-get.well-FV
 Intended: ‘Sipho is still recovering’

(13d) *Umratha u-sa-phol-a*
 3.porridge 1.SM-PERS-cool.down-FV
 ‘The porridge is still cooling’

The permanency or irreversibility of the result state similarly makes a semantic difference, and it is also testable with *-sa-*. COS verbs with a temporary result state are compatible with *-sa-* and an *-ile* ending (14).

(14a) *U-sa-lamb-ile*
 1.SM-PERS-be.hungry-PFV
 ‘S/he is still hungry’

(14b) *U-sa-phakam-ile*

1.SM-PERS-rise.up-PFV

‘S/he is still standing / in a place of prominence / angry’

Verbs that do not allow targeting of a result state – both non-COS verbs and COS verbs without lexically encoded result states – are incompatible with *-sa-* and perfective *-ile*, at least with a current-state reading. An example is the semelfactive-like *-khohlela* ‘cough’ (15).

(15) *#U-sa-khohlele*

1.SM-PERS-cough.PFV

Intended: ~ ‘S/he has still coughed’

Also infelicitous are irreversible COS verbs, where the result state is permanent (16).

(16) *#?Inja i-sa-f-ile*

9.dog 9.SM-PERS-die-PFV

Intended: ‘The dog is still dead’ (only allowed if a resurrection is expected; this predicate is possible with idiomatic uses of *fa* to indicate e.g. flat batteries)

Note that the result state need not be linked to a process leading to that state, at least not as such processes are typically construed in human understanding (17). Jerro (2017) suggests that the (non-)requirement of reference to the state change preceding the result state may also be an important behavioural distinction between types of COS verbs.

(17a) *Ilitje li-qin-ile*

5.stone 5.SM-be(come).strong-PFV

‘the rock is hard / solid / strong’

(17b) *Umntwana u-beleth-iwe a-hlubule*

1.child 1.SM-give.birth-PASS.PFV 1.SM.SUBORD-undress.PFV

‘the child was born naked’

Croft’s inventory of aspectual types applies at the level of utterances, while we take a radical selection approach (see Sasse 2002) and are therefore more

concerned with the aspectual potential of particular lexical items.⁶ Despite this important difference in approaches, we take from Croft the important insight that the internal qualitative structure of phases plays a significant role in the interaction between lexical and grammatical aspect.

3. A BRIEF RESEARCH HISTORY OF LEXICAL ASPECT IN BANTU

As noted in the introduction, Bantu languages frequently have a large class of verbs that (in the unmarked case) receive a present state interpretation when marked with perfect(ive) (/anterior) aspect; that is, they describe a resultant state. Literature on Bantu tense and aspect has therefore had to reckon with these kinds of verbs, and various approaches have been taken to account for their behaviour. This section details, briefly, several of the more recent descriptions of lexical aspect in Bantu languages, and the approaches they take.⁷

An explicit description of change-of-state verbs is given by Botne & Kershner (2000: 165), who characterise isiZulu “inchoative” verbs as “express[ing] a change of condition or location of the experiencer or patient, many expressing the change or transition from one state to another”. In this classificatory system, inchoative verbs contrast with non-inchoative verbs, the latter of which correspond to “Vendler’s activities, accomplishments, and states” (Botne & Kershner 2000). Other work (e.g. Botne 2008; Persohn 2017) groups some COS verbs with Vendlerian achievements (Botne & Kershner 2000) and other COS verbs with accomplishments, thereby mirroring more closely the widely assumed telic/atelic dichotomy where achievements and accomplishments group together in contrast to activities and states. An important and seldom explicitly asked question is whether COS verbs comprise subtypes of one or more Vendlerian categories, or whether they have some crucial property that both groups them together and separates them from the more prototypical accomplishment and

6 Croft also approaches this question through a computational analysis of the interplay of “lexical aspectual potential” and grammatical aspect, using multidimensional scaling (Croft 2012). Such an approach may ultimately prove enlightening in isiNdebele and other Bantu languages.

7 See also Crane & Persohn (2019a; 2019b) for further discussion along the lines of this section; a portion of the contents of this section are similar to the contents of those references.

achievement lexical types.⁸ If the former is true, then we can (at least in this instance) maintain Vendlerian categories and simply argue for subcategorisations within them. If the latter turns out to be true, the Vendlerian framework cannot be applied to languages with COS verbs.

Regardless of what is assumed or argued regarding their relationship to Vendler's categories, most work on lexical aspect in Bantu languages has focused on understanding and subcategorising COS verbs. One of the most rigorous studies is Kershner (2002). Kershner's work is based on a framework outlined in Botne (1983) and Botne & Kershner (2000), which in turn takes inspiration from Freed (1979). Kershner systematically investigates approximately 200 verbs in Sukwa (M301 in Maho's 2009 classification of the Bantu languages). Kershner proposes three overall categories of lexical aspect (states, punctives, and duratives), including four major categories of "punctive" COS verbs, the latter of which may differ on whether an onset and/or coda phase is encoded in addition to the point of state change. As noted in Section 2.1, Botne (2003) shows that Kershner's four-way classification of COS verbs (which he subsumes under "achievements") has cross-linguistic relevance.

Botne & Kershner's system is adopted, modified, and expanded upon in Seidel (2008), who collapses Kershner's tripartite basic distinction into a two-way distinction between "durative" and "change-of-state" verbs in Yeyi (R41). Seidel uses tests similar to those set out in Kershner, and finds evidence for a somewhat different sub-classification of COS verbs. Crane's (2011) study of Totela (K41) also adopts the bipartite "durative" vs. "change-of-state" distinction and illustrates that these macro-categories have distinct sub-classes within them, but does not offer a maximal set of possible lexical aspectual types. After a detailed comparison of various classifications of lexical aspect in Bantu, Lusekelo (2016) echoes Kershner (2002) and Botne (2003) in proposing for Swahili (G42) three macro-categories (stative, inchoative, and activity) and four subcategories of inchoative verbs, based on whether the onset and coda phases are lexically encoded.

Following in part Botne (2008), Persohn (2017: 117–140) proposes seven lexical aspectual classes in Nyakyusa (M31), the last two of which are somewhat putative, as each class has only one member in Persohn's sample of fifty verbs: activity, simple accomplishment (as in Vendler, extended nucleus with inherent

8 A rigorous answer to this question will have to take into account the role of participant structures. For example, are 'Jack baked a cake' and 'The cake cooled to room temperature' fundamentally different apart from the affected object in the former and the affected subject in the latter? We do not attempt to address this question in this paper, but see Crane (in prep.) for an approach to this and similar questions in isiNdebele, and Croft (2012) for an extremely thorough treatment of aspect and causal structure in English.

terminal point), transitional accomplishment (extended nucleus phase plus result (coda) state), transitional achievement (extended onset phase, punctual nucleus, and result state), resultative achievement (punctual nucleus plus result state), inceptive achievement (extended onset phase plus punctual nucleus), and acute achievement (punctual nucleus only). Recent work by Kanijo (2019b) on Nyamwezi (F22) also employs the Botne and Kershner framework, while noting that language-specific properties require some modifications to it. Kanijo (2019b) is exemplary in employing a rigorous battery of tests to a fairly large number of lexical verbs, and in including detailed information on how each verb responds to each test.

Ongoing work (see Crane & Persohn 2019b) suggests that extended onset and nucleus phases may not necessarily be ontologically distinct, but may instead be distinguished by other features (e.g. dynamicity and participant roles). Tests therefore need to take such factors into account, as well. For the purposes of this paper, we will use the onset-nucleus-coda structure, as this is most frequently employed in recent descriptions of lexical aspect in Bantu (Persohn 2017; 2018; Lusekelo 2016; Seidel 2008; Kanijo 2019a; 2019b). However, we recognize that several assumptions of this theory still require further investigation, including, for example, whether there is a need to distinguish between extended onset and extended nucleus phases (see Crane & Persohn 2019b). In the present article, with COS verbs, extended “onset” phases can be understood as encoding the coming-to-be phase; “codas”, the resultant state; and the “nucleus”, the (sometimes subjectively construed) point of change itself.

Although most works on Bantu lexical aspect have followed the Botne and Kershner model, there are a few important exceptions (see Crane & Persohn 2019a for more detailed discussion). For example, Fleisch (2000) bases his classifications on the categorizations in Sasse (1991) and Breu (1984; 1994), along with insights from Dik (1989). Fleisch proposes that the classification of verb types in Lucazi (K10, Angola) is based not only on phases and their boundaries (following Sasse and Breu), but also on the characteristics of those phases, such as dynamicity and subject control. Fleisch posits three major classes in Lucazi: Actions, which are dynamic events that are usually controlled by their logical subjects (this class includes motions, activities, and verbs of communication, along with weather events); Processes, which do not have an agentive/controlling subject, and depict telic events leading to a result state, which Fleisch claims is not lexically encoded but rather pragmatically implicated (this class includes verbs of perceptions, of mental faculties and attitudes, and physical conditions; modal expressions also belong to this class); and Situations, a small, atelic class with verbs that encode a subject’s physical position, or character or some other

quality. These classes, Fleisch argues, are confirmed by their divergent behaviour with various tense/aspect forms and partially regular interactions with derivative verbal extensions, the latter leading to a situation where in some cases formal properties strongly suggest the verbal lexical item is of a particular lexical aspect type.

The classifications discussed in this section are some of the few significant exceptions to the general tendency in Bantu language descriptions of either making no mention of lexical aspect, or merely noting the distinction between change-of-state and other verbs. This lack of attention is unfortunate for several reasons, but especially because the semantics of grammatical aspect cannot be fully understood without a clear picture of how grammatical aspectual forms interact with lexical event types. Furthermore, as suggested by Nichols' (2015) pilot typological study of resultative constructions, inchoative (state-change) forms, rather than the corresponding states, are basic (less morphologically marked) in many languages and language families. Nichols (2015: 25) concludes that "the received view of event structure may be Eurocentric", and that "transitions", rather than "states", may be "basic to lexical meaning" (note that not all the languages in question necessarily have the kind of complex lexical structures as Bantu, which seems to lexically encode both the coming-to-be phase and the result state in the same lexical verb). Nichols (2015: 24) further tentatively suggests that languages in which inchoative forms are more basic may also tend to have restrictions on the adjective word class; this is certainly the case for many Bantu languages.

4. DEVELOPING AND APPLYING TESTS FOR LEXICAL ASPECT, THE ROLE OF THE RESEARCHER, AND TRACTABILITY

In this section, we describe our preliminary research on lexical aspect in isiNdebele, and, more broadly, the kind of research methodologies we think are called for in investigating this intersection of finite grammar and infinite meaning.

In developing models of lexical aspect, logical considerations have led theoreticians to formulate models intended to have universal applicability and to cover the maximal set of possible situation types (Vendler 1957; Smith 1997; Croft 2012). However, just as Smith (1997) added a category of "semelfactives" overlooked by Vendler (1957) and Croft (2012) showed that the internal nature of phases (and not just phase length or inherent boundaries) also leads to crucial differences between types of situations, we suspect that these "maximal" sets may still be missing significant ingredients (see also Bar-el 2015). Even more, we consider it

likely that different languages may have different and incommensurate systems of categorising lexical aspectual types (see, e.g. Nichols 2015 for a typological study pointing in that direction). The interaction of lexical and grammatical aspect is surely language specific. Current theoretical debate on aspect therefore provides us with a range of conceptual tools for understanding the mechanics of lexical-grammatical aspect interactions, but not for testing these interactions straightforwardly. In our fieldwork, we thus turned to an inductive-empirical approach, aiming to avoid imposing theoretical moulds too early and thereby missing important insights.

The only way to approach our research, then, was to engage in in-depth interviews. This high-resolution process of semantic understanding is time consuming and data driven, and is, in some ways, closer to ethnographic work than to traditional linguistic elicitation, because – in addition to necessitating careful elicitation techniques – it requires us to attempt to gain a relatively deep understanding of cultural assumptions underlying the concepts behind verbs.⁹

The insights gained through the interview process then require systematic framing, so that natural categories of lexical aspect become apparent. We believe that lexical aspectual types are more like prototype categories than clear-cut classes (Croft 2012). Even so, general categories do emerge, and making predictions about behaviour regarding grammatical tense and aspect becomes reasonably possible.

Once this point is reached, we believe that one can more confidently propose an empirically substantiated and accurate view of lexical aspectual categories in an individual language, and, furthermore, frame it in a way that allows for a rich contrastive and even comparative analysis of lexical aspect across languages, especially, as in our study, across geographically and genetically proximate languages.

9 A reviewer rightly points out that much of our discussion is framed around better elicitation techniques, rather than reflecting a genuinely ethnographic approach. We appreciate this note and believe that semantic elicitation and ethnographic work are not only both important, but also intertwined. Copland & Crease (2015: 27) describe linguistic ethnography as “investigating the linguistic sign as a social phenomenon open to interpretation and translation but also predicated on convention, presupposition and previous patterns of social use”. We believe that the deepest research on lexical aspect therefore incorporates not only speakers’ reactions to a set of tests, but also speakers’ cultural knowledge and usage intuitions related to the lexemes in question. Such information cannot be gleaned simply by going through a rote battery of tests; freer conversation is also needed. Ultimately, coarser-grained classifications may be needed to make broad cross-linguistic comparison feasible, but an overly superficial investigation of how lexical items are used within a particular language risks missing the very contrasts that make the lexemes interesting. We certainly have not yet achieved such a deep understanding of every lexical item we looked at in isiNdebele or Sindebele – nor do we expect others to do so in the languages they investigate – but we nevertheless view this type of approach as ultimately more meaningful, even, perhaps, in forming broadly construed classifications, than straightforwardly test-based methods.

The remainder of this section mirrors the process described in the preceding paragraphs. We first discuss the considerations that went into developing our tests, interwoven with some results that helped us both to refine our understanding of what we were testing for in each instance, and to develop further tests. We then describe our fieldwork interviews, showing that our most interesting results were obtained when we went beyond a checklist-style interview and took a more ethnographic approach. Throughout, we attempt to integrate our narrative with discussion of what we believe is needed for a broader framework for eliciting lexical aspect, and for achieving a balance between research tractability and completeness.

4.1 Avoiding circularity and other pitfalls

Most studies of lexical aspect that aim to examine separately the contributions of lexical and grammatical aspectual meaning are plagued by a serious problem. Because lexical and grammatical aspect always interact, and each is hardly interpretable without reference to the other, the question of circularity is – or should be – always at the forefront. That is, lexical aspectual structure is determined through lexical items' interactions with grammatical morphemes, and the functions of the grammatical morphemes are in turn analysed in terms of how they interact with various lexical aspectual types. In fact, we do not believe that the lexical and grammatical aspect exist as purely independent systems, so in a sense, this kind of circularity in understanding each is necessary, and does not preclude trying to extrapolate the nature of each through observing their systematic interactions. We also attempted to avoid the worst kind of circularity by making our tests both rich and redundant, and by employing tests from outside of the verbal tense/aspect system.¹⁰ See also Tatevosov (2002: 345–347) for discussion of a framework for avoiding circularity by defining grammatical tense, aspect, and mood categories separately from the lexical aspectual characteristics of verb classes.

The richness of the tense-aspect systems in isiNdebele and Sindebele led to some useful redundancies in testing: in many cases, more than one aspectual marker targets the same phase or transition in verbs' lexical aspectual structures. For example, in (18), the past perfective form of an *-ile*-marked COS verb describes a state that held at a particular time in the past.¹¹

¹⁰ As noted by Sasse (2002) and others, aspect is not merely made up of the interactions between lexical and grammatical systems, but comprises many layers and dimensions, and communication of aspect is also built up across discourse.

¹¹ The prefix *be-*, grammaticalized from the perfective form of 'be', selects a reference time in the past of the utterance time; we gloss it here as "imperfective" as a type of shorthand, because

(18) isiNdebele

- a. *Abantu be-ba-hlangene*
 2.person be.PFV-2.SM-come.together.PFV
 ‘People were meeting’
- b. *Be-ka-lamb-ile*
 be.PFV-1.SM-be.hungry-PFV
 ‘S/he was hungry’

With verbs that are not as clearly COS, such forms seem only to be licit if a relevant result state can be construed. In such cases, they translate best as pluperfects, as in (19). Speakers tend to reject these forms with many verbs, or at least struggle to provide a reasonable context (19b–d).

(19) isiNdebele

- a. *USipho be-ka-wu-dl-ile umengo*
 1A.Sipho be.PFV-1SG.SM-3.OM-eat-PFV 3.mango
 ‘Sipho had (already) eaten the mango’

- b. *?Be-ka-tlol-e incwadi*
 be.PFV-1SG.SM-write-PFV 9.letter

‘S/he had written a letter’

(Speaker comment: “Maybe you’re reading an obituary. Before he killed himself, he wrote a letter explaining why he died. *Bekatlole incwadi ethi “Ndidiniwe!”* ‘He wrote a letter saying, *I’m tired/fed up!*’”) (isiNdebele)

- c. *?#Be-ka-khohlele*
 be.PFV-1SG.SM-cough.PFV

Intended: ‘S/he had coughed’

(Speakers attempted to construe a context but were not able to imagine a rich enough scenario.)

the forms in which it occurs can encode the typical range of imperfective meanings. However, imperfective-type meanings are really derived from the full constructions, rather than being encoded by this single morpheme.

- d. ?#*Be-ka-buyele* *ikukhu*
 be.PFV-1SG.SM-slaughter.PFV 9.chicken

Intended: ‘S/he had slaughtered a chicken’ (isiNdebele)

(Speakers reject this example but in attempting to construe a construct, muse that this could perhaps be an answer if the subject killed a chicken by accident, and you ask, “Why is he running away?”)

Therefore, this form seems to test for a result coda state in COS verbs, and the possibility of construing or coercing a reasonably relevant post-nuclear phase in other verbs.

Another form, discussed briefly in Section 2.1 above, tests more explicitly for a (non-permanent) lexically entailed coda phase (20). (Note that the test only works in the context of the present stative ‘still’ reading; other readings may be possible with some predicates, as discussed in Section 4 below.)

(20) isiNdebele

- a. *Ba-sa-blangene*
 2.SM-PERS-come.together.PFV
 ‘They are still together / in the meeting’
- b. *U-sa-lamb-ile*
 1.SM-PERS-be.hungry-PFV
 ‘S/he is still hungry’
- c. *USipho* *u-sa-khamb-ile*
 1A.Sipho 1.SM-PERS-go-PFV
 ‘Sipho is still out there’
- d. #*U-sa-yi-tlol-ile* *incwadi*
 1.SM-PERS-9.OM-write-PFV 9.letter
 Intended: ~‘S/he has still written the letter’¹²
- e. #*U-sa-khohlele*
 1.SM-PERS-cough.PFV
 Intended: ~‘S/he has still coughed’

12 Note that these examples are also awkward in their English translations. In fact, we did not have an “intended” meaning in mind, and the translations of these infelicitous examples merely show one possible, fairly literally translated interpretation.

- f. #U-sa-bulal-e ikukhu
 1.SM-PERS-slaughter-PFV 9.chicken

Intended: ~‘S/he has still slaughtered a chicken’

Thus, the *-sa...-ile* form and the past perfective-*ile* form seem to be in a nearly implicational relationship, where the former requires a lexically entailed coda state, while the latter strongly prefers one, but can also construe such a phase given a rich enough contrast. The relationship is not totally implicational, however, because the *-sa...-ile* form requires that the coda state be temporary, or at least potentially so, while the past perfective *-ile* form seems to allow any coda state (21).

(21) isiNdebele

- a. ?#Inja i-sa-f-ile
 9.dog 9.SM-PERS-die-PFV

Intended: ‘The dog is still dead’
 (only allowed if a resurrection is expected)

- b. Inja be-yi-f-ile na-si-fik-a-ko
 9.dog be.PFV-9.SM-die-PFV SIT-1PL.SM-arrive-FV-REL

‘The dog was dead when we arrived’

Another way to mitigate the circularity of lexical and grammatical aspect is by using other types of tests, including adverbials (such as ‘slowly’ or ‘yesterday’) and verbal constructions that specifically target either phases or phasal transition, for example, ‘start to X’, ‘finish X-ing’, ‘nearly X’, ‘stop X-ing’, or ‘when we arrive(d), he X(ed)’. These, too, are subject to the circularity criticism. Adding adverbials or inserting verbs into more complex constructions may indeed change the aspectual interpretation of the utterance. But together with grammatical aspectual forms, such tests can at least strongly suggest the aspectual structure of a lexical form. See Crane & Fleisch (2016) for more detailed descriptions of some of the tests we used and their outcomes. We will not treat them in greater detail here because of their language specificity, but many examples can be seen in Section 5 below, which describes adapting the tests to Sindebele.

Circularity is not the only issue in investigating lexical aspect. We also needed, for example, to carefully distinguish lexical entailments from implicatures (see, e.g. Smith 1997; Bar-el 2015). We did so by attempting to cancel or deafease the implicatures in cases of doubt. We also needed to pay careful attention to quantized vs. non-quantized subjects and objects (Croft 2012) and interpret results accordingly. For the most part, we tried to constrain our tests to singular subjects

and objects, but such a condition is not easy to fulfil with all verbs (e.g. *-hlangana* ‘gather, come together, become mixed up, meet’), and, as seen in (5c) above, singular nouns are not always inherently quantized. Therefore, we also had to pay close attention to the effects of (non-)quantization, especially when working with transitive verbs.

We also had to take care that our own language intuitions, paired with English translations of isiNdebele forms, did not interfere with our interpretation of isiNdebele verbal semantics. Our thesis that lexical aspectual classifications are not purely based on world knowledge necessarily means that translations cannot always be exact. To some extent, the issue of researcher-native-language interference is mitigated by the redundancies in tests. We further attempted to avoid this pitfall by (à la Matthewson 2004; Bar-el 2015) making our discussions rich in contextual information, and, when possible, incorporating simple visual props (movable “characters” as participants, drawings) or physically acting out situations. Other clues of significant semantic differences between isiNdebele and English came in the form of awkwardly phrased English forms as our consultants tried to capture the meaning of isiNdebele sentences. For example, we think that *-khamba* ‘leave, walk’ lexically encodes a coda phase on the ‘leave’ meaning. The speaker translated a relevant example as in (22).

(22) isiNdebele

USipho be-ka-khamb-ile
 1A.Sipho be.PFV-1.SM-leave-PFV

Most natural-sounding English translation: ‘Sipho had left’

Translation by speaker: ‘Sipho was already left’

The use of a stative ‘be’ form in the English translation, rather than the pluperfect, suggests that the construction targets a stative coda phase. This finding is confirmed by other tests (see, e.g. 14–16 above).

We also had the fortunate research situation of having two different mother tongues ourselves: Axel is a native speaker of German, and Thera of American English. In cases in which our intuitions about isiNdebele verbs differed, we took it as an indication that our native intuitions might be interfering, and that we should take another look at the isiNdebele data and frame our elicitation questions more precisely.

4.2 The interview process

An important first note about the interview process is that it is, at least initially, quite time consuming. A discussion of a particular verb could easily last an hour or more – a fascinating, but mentally exhausting, time. We believe that such lengthy interviews are a necessity at the beginning of the research process. With time, the researchers will come to understand what the important contrasts (or, in Bar-el’s 2015 terms, the “building blocks” of lexical aspect) are in the language being investigated, and the elicitation process can be streamlined. To attempt to streamline the system too soon is risky, because pre-conceived notions of what is important can act as significant blinders and result in a partial or even faulty understanding of the system.¹³

Some streamlining will happen naturally as the researchers and consultants deepen their understanding of the material and the process. Since we started with an imperfect knowledge of tense and aspect in isiNdebele, streamlining also happened for us as we corrected our misperceptions about the system. For example, we initially spent a great deal of time attempting to elicit past-tense forms in the frame *nasifikileko*, which we took to be a situative perfective form meaning something like ‘when we had arrived’ (cf. untensed *nasifikako* ‘when we arrived / regularly arrive / arrive (in the future)’). Our polite consultants did their best in trying to make sense of these confusing forms, until we finally realised that *nasifikileko* (like other situative-marked perfectives) always has a non-past orientation, meaning ‘when we have arrived’. We were subsequently able to eliminate these examples from our tests, saving both time and needless frustration.

In our experience, the most productive elicitation sessions in the early stage take the form of “semi-structured interviews”. The researcher’s goal is to hold the thread of the elicitation goal and make sure that all of the test frames are elicited, while also allowing for conversational detours, which are likely to provide additional insights.

One particularly vivid example of this came in a discussion with a Sindebele-speaking consultant, Jerry, who is a professional actor and community organiser. The target sentence was (23), which Jerry eventually judged as infelicitous.

¹³ Of course, all understanding will inevitably be partial; the goal is to be initially as open as possible to the range of potential contrasts, and especially to welcome surprises.

(23) Sindebele

#U-les-e ku-tsh-a / #U-les-ele ku-tsh-a
 1.SM-stop-PFV INF-burn-FV 1.SM-stop-PFV INF-burn-FV

Intended: 'S/he stopped burning'

Jerry spent some time mulling this example over, at one point evoking the image of a religious person engaging in self-immolation, but decided that even in this case, (23) would be infelicitous. Two important insights came out of our somewhat tangential discussion. First, the verb *-lesa* 'stop', at least when used with agents, conveys a sense of intentionality: you can only stop doing something you are intentionally doing. Second, *-tsha* 'burn (intr.)' is in a sense analogous to a door's opening: once the door has opened even a bit, it is open, although it might continue to open further. In Jerry's words, "Once you're burned, you're burned."

This kind of elicitation is cognitively hard on the interviewer, who has to allow for genuine and interesting conversation, while also keeping constant track of things like the theoretical ground that still needs to be covered, and of instances in which verb meanings and uses do or do not match with our hypotheses. Without this kind of record keeping, the interviews stop being meaningful. Without genuine conversation, though, the interviews can quickly revert to a rote exercise in filling out a paradigm, which are far less engaging and risk losing the crucial focus on real-life meaning and usage.¹⁴ When the researcher and consultants can maintain both strands, the results are often fantastic. Everyone can work longer, the work is more interesting, and, despite many double-checking questions and requests for repetition, all parties remain alert.

The conversational interview style can be augmented when more than one linguistic consultant is involved. Many new meanings, and meaning nuances, emerge when consultants converse with each other, and such conversations can be a rich source of semi-targeted, naturalistic language data, as well. Consultants also can serve as a check on each other's potential natural tendencies to be either too literal or too liberal in their interpretations (for example, one of our consultants might say to another, "Well, *you* might say that, but normal people wouldn't!"), and, working together, they frequently come up with contexts where initially rejected forms would be felicitous.

The following excerpt (24) is roughly transcribed from an interview between Axel (A) and Sindebele consultants Jerry (J) and Mmadi (M). Although the inter-

14 We do believe there is a place for this kind of interview, even in investigating lexical aspect, but especially in the initial stages, the more elicitation sessions can be like a natural conversation, the better.

action is very simple, it illustrates several important advantages to working with two consultants at a time.

Axel's goal was to find out whether the persistive perfective form of *-blonipha* 'respect' is felicitous, and what it means. First, Jerry gives an example of a context in which the form might be used, and then Jerry and Mmadi enact the scene described by Jerry. In line 25, Mmadi produces the present persistive form *usahlonipha* rather than the target form *usahloniphile*. He is subsequently corrected by Jerry (line 26) and the ensuing discussion shows that the two forms have at least some overlap in their usage domains. Further investigation was necessary to start to pin down the subtle differences in usages, but even this small interchange is of significance. In a more traditional one-on-one elicitation setting, the investigator might also suggest a correction such as Jerry's in line 26, but the consultant's response is far more likely to be ambiguous or confusing; for example, the consultant might agree to the correction out of politeness, or more easily misinterpret the investigator's intent. In contrast, a second native speaker's correction is less intrusive, and shows that the construction in question is, in fact, felicitous in this context, a judgment that is reinforced by the discussion in lines 29–33. Additionally, several interesting constructions are introduced (e.g. *abakuhloniphi nokuhlonipha* in line 24) that might have been less likely to surface in one-on-one elicitation between a non-native investigator and a native speaker.

(24) Sindebele

1. A: *Usahloniphile*.
2. J: Same situation, you know, there are three boys, and yeah, and then...maybe someone generalizes. He says, "those boys don't respect. they just enter the house and they...don't take their hats off". And you would say *Lisiba usahloniphile*. You know, because, once again, you know, he took off his hat.¹⁵
3. A: Can you try, now I'm asking you to become actors. Can you try to enact that? Because basically I think what you did...
4. J/M: Okay, alright
5. A: I think what you just suggested is that
6. J/M: Yeah
7. A: Uh, one person complains,
8. J: Yeah
9. M: Mm
10. A: that that these three guys

¹⁵ Note that here, Jerry also potentially invokes another reading of the *-sa-...-ile* construction, namely, of doing something again (see example 25 below).

11. M: that they're rude (?)
12. A: They didn't respect
13. J/M: Yes
14. A: And then the other person says, well, there was one of them who did, right
15. J/M: Yeah
16. A: So Lisiba did.
17. J: Yeah.
18. A: Can you do, let me just check the vo...the noise...
19. ...
20. A: ...Okay, now I try...I would like you to become actors.
21. J: Okay
22. A: And try to enact this particular situation.
23. J: Alright
24. J: Okay. *Batlhangana laba abaphumekala. Abakuhloniphi nokuhlonipha.*
[‘Those boys aren’t successful(?). They don’t respect you’]
25. M: *Kodwa Lisiba usahlonipha.*
[‘But Lisiba is still respectful’]
26. J: *Usahloniphile.*
[‘He is still being respectful’]
27. M: *Usahloniphile.*
[‘He is still being respectful’]
28. J: Yeah.
29. A: You preferred the other one in this sentence...
[J&M indicate visually that they don’t prefer one or the other.]
30. A: Both work.
31. M: Yeah both
32. J: Yeah they [both work.
33. M: [they are interchangeable.
34. A: Can you do it once again?
35. J: *Batlhangana laba abaphumekala. Abasahloniphi nokuhlonipha.*
[‘Those boys aren’t successful(?). They don’t respect anymore’]
36. M: *Kodwa Lisiba usahloniphile.*
[‘But Lisiba is still being respectful’]
37. A: Okay, thank you so much.

5. ADAPTATION TO SINDEBELE AND RESULTS

Since testing for lexical aspectual structure is so fraught with difficulties even within a particular language, attempts to compare structures across languages must be made with even greater care. Potential problems are obvious: if we take seriously the possibility that lexical aspectual categories do not map one-to-one across languages, we must certainly also recognize that lexical aspect tests may function differently, and that markers of grammatical aspect, even if superficially similar, may in fact “target” different phases of the verb. Simply translating tests from one language to another and expecting speaker judgments to produce reliable results is foolhardy.

Still, as we said in the introduction, we believe that cross-linguistic studies of lexical aspect are both feasible and valuable. The so-called “Southern” and “Northern” Ndebele languages (isiNdebele and Sindebele, respectively) are particularly well suited to comparative study. They are relatively closely related, although their genetic status is far from settled, and therefore have many cognate forms and fairly similar verbal morphology. On the other hand, they have significant differences in the size of their speaker communities, their official recognition, and their contact situations, as discussed in several other papers in this volume. Therefore, if contact-induced change can influence the semantics of lexical aspectual structures, we might reasonably expect to see differences between isiNdebele and Sindebele.

As a starting point in adapting the isiNdebele tests to Sindebele, after exploring basic Sindebele TAM morphology, we attempted – with the above caveats in mind – to directly translate the isiNdebele tests to Sindebele. Because the tests had proved useful in exploring lexical aspectual structure in a closely related language, we wanted to see how (and if) they would work in translation.

5.1 Tests with similar morphology

In most cases, adapting morphological tests involved similar or identical morphology. Examples are shown in Table 2.

Table 2 Comparative TAM morphology in isiNdebele and Sindebele

isiNdebele	Sindebele
USipho...	Sipho...
<i>u-ya-phakam-a</i> 1.SM-DJ-rise.up-FV 'he stands/is standing up' 'he gets/is getting angry' 'he rises / is rising to prominence'	<i>u-ya-jam-a</i> 1.SM-DJ-stand.up-FV 'he stands up'
<i>u-ya-khohlol-a</i> 1.SM-DJ-cough-FV 'he is coughing'	<i>u-ya-khohlol-a</i> 1.SM-DJ-cough-FV 'he is coughing'
<i>u-phakam-ile</i> 1.SM-rise.up-PFV 'he is standing / angry / prominent'	<i>u-jam-ile</i> 1.SM-stand.up-PFV 'he is standing'
<i>u-khohlol-ile</i> / <i>u-khoblele</i> 1.SM-cough-PFV 1.SM-cough.PFV 'he coughed'	<i>u-khohlol-ile</i> / <i>u-khohlole</i> 1.SM-cough-PFV 1.SM-cough.PFV 'he coughed'
<i>be-ka-phakam-ile</i> be.PFV-1.SM-rise.up-PFV 'he was standing / angry / prominent'	<i>ube</i> <i>a-jam-ile</i> 1.SM.be.PFV 1.SM.SUBORD-stand.up-PFV 'he was standing'
<i>#be-ka-khohlol-ile</i> / <i>#be-ka-khohlolele</i> be.PFV-1.SM-cough-PFV IPFV-1.SM-cough.PFV	<i>#be-ka-khohlol-ile</i> / <i>#be-ka-khohlole</i> / <i>#ube a-kholole</i> etc. (all forms are variations on be.PFV-1.SM-cough-PFV)
<i>u-sa-phakam-a</i> 1.SM-PERS-rise-up-FV 'he still stands up / gets angry / is rising in prominence'	<i>u-sa-jam-a</i> 1.SM-PERS-stand-up-FV 'he is still getting up / he still stands (is able to stand)'
<i>u-sa-khohlol-a</i> 1.SM-PERS-cough-FV 'he still coughs / is coughing'	<i>u-sa-khohlol-a</i> 1.SM-PERS-cough-FV 'he still coughs / is coughing'

However, there were also cases in which the same morphology had the potential for slightly different meanings in the two languages, at least for some speakers. For example, *-sa-* still + final *-ile* (see Section 4 above) in Sindebele was interpreted by at least one speaker as meaning 'did X again' (25).

(25) Sindebele

- a. *Jabu u-sa-tjh-ile*
 1A.Jabu 1.SM-PERS-burn-PFV
 ‘Jabu got burned again’ (Oh, that Jabu!) [does not mean: he is still burned]
- b. *Jabu u-sa-bulele nyoka?*
 1A.Jabu 1.SM-PERS-kill.PFV 9.snake
 ‘Has Jabu killed yet another snake?’

Several other Sindebele speakers did not seem to arrive at this reading with similarly non-COS predicates, such as *-gula* ‘get sick’, which – despite also having an inchoative sense – has a present state reading with imperfective, and not perfective morphology; and *-thenga* ‘buy’, which does not seem to lexically encode a result state (26).

(26) Sindebele

- a. *#Lindiwe u-sa-gul-ile*
 1A.Lindiwe 1.SM-PERS-get.sick-PFV
 Intended: ‘Lindiwe got sick again’
- b. *#Malose u-sa-theng-e tibhanana*
 1A.Malose 1.SM-PERS-buy-PFV 10.banana
 Intended: ‘Malose bought (yet) more bananas’

This difference may either reflect a semantic extension of the use of *-sa-* (from ‘still’ to ‘again’) for some speakers, or its lack of availability to other speakers may indicate that the ‘again’ meaning was simply not salient enough to be triggered for this latter group of speakers in the context of our elicitation situations.

In isiNdebele, speakers identified a different reading for similar constructions: the notion that something has ‘only’ occurred to a certain extent. The two readings are not entirely unrelated, although their effects seem to be somewhat opposite. ‘Only’ cancels the presupposition that something happened more frequently, or to a greater extent (although it maintains the presupposition that the event is expected to occur more, or again, in the future; see Poulos & Msimang 1998 for similar examples). In contrast, ‘(yet) again’ cancels the presupposition that something would *not* occur any more. Examples from isiNdebele are given in (27).

(27) isiNdebele

- a. *U-Jabu u-sa-bulele inyoka #(eyodwa)*
 1A-Jabu 1.SM-PERS-kill.PFV 9.snake 9.one

‘Jabu has only killed one snake’ (Maybe he’s going to kill another one.)

- b. *Umnganami uJohn ngi-sa-m-bon-e kabili*
 1.my.friend 1A.John 1SG.SM-PERS-1.OM-see-PFV twice

‘My friend John, up to now, I’ve seen him (only) twice’ (I expect to see him again.)

- c. *Ngi-sa-dl-e kancani nje*
 1SG.SM-PERS-eat-PFV little now

‘I’ve just eaten a little portion for now’ (I expect to eat more.)

The ‘again’ reading may also be available in isiNdebele, but does not appear to be as salient, at least to the speakers we interviewed.

5.2 Translating morphological markers to lexical items, and other non-cognate forms

Some morphological markers in isiNdebele can only be translated as full lexical items in Sindebele. For example, isiNdebele has a situative marker *na-(...-ko)*, best translated as ‘when’ (and sometimes ‘if’) in English. Situatives form a temporal subordinate clause. The situative-marked eventuality is not marked for tense (although it can have an *-ile* ending as in 28e–f), and derives its tense interpretation from the main-clause, as seen in the examples below. We used this context to select a single point in time against which the temporality of the main clause could be evaluated. Present-tense main clauses are evaluated as habitual/generic or futurate (as in 28a–b and 28e–f); perfective main clauses (28e) are evaluated as commencing at the time of arrival (and, generally speaking, being completed within a reasonably short time thereafter); imperfective clauses (including those with resultative-like perfective interpretations) are interpreted as ongoing at the time of arrival (28d).

(28) isiNdebele

- a. *Abantu na-ba-hlangan-a-ko, ba-ya-phumelel-a*
 2.person SIT-2.SM-come.together-FV-REL 2.SM-DJ-succeed-FV

‘When people come together, they succeed’

- b. *USipho na-ka-phol-a-ko, si-y-a ePitori*
 1A.Sipho SIT-1.SM-get.well-FV-REL 1PL.SM-go-FV LOC.Pretoria
 ‘When Sipho recovers, we’re going to Pretoria’
- c. *Na-wu-fik-a-ko ngi-wahl-e izandla*
 SIT-2SG.SM-arrive-FV-REL 1SG.SM-clap-PFV 8.hand
 ‘When you arrived, I clapped my hands’
- d. *Na-wu-fik-a-ko be-ngi-ku-lind-ile*
 SIT-2SG.SM-arrive-FV-REL be.PFV-1SG.SM-2SG.OM-wait.for-PFV
 ‘When you arrived, I was waiting for you’
- e. *Na-si-thuthumb-ile-ko, si-ya-nuk-a*
 SIT-1PL.SM-explode-PFV-REL 7.SM-DJ-smell-FV
 ‘When it has exploded, it smells bad’
- f. *Na-ka-lamb-ile-ko, a-ka-cabang-i*
 SIT-1.SM-be.hungry-PFV-REL NEG-1.SM-think-FV.NEG
 ‘When he is hungry, he doesn’t think’

Although Sindebele lacks this situative marking, it forms if/when clauses in a similar fashion, with the subordinating conjunction *lokhwa* ‘if, when’ and an untensed verb in the participial form (29).

(29) Sindebele

- a. *Lokhwa Sipho a-khohlol-a, u-phum-a tinyembeli*
 when 1A.Sipho 1.SM.SUBORD-cough-FV 1.SM-come.out-FV 10.tear
 ‘When Sipho is coughing, tears come out’
- b. *Lokhwa Jabu a-fik-a, banrwana eba-dlaluk-a*¹⁶
 when 1A.Jabu 1.SM-arrive-FV 2.child 2.SM.IPFV-play-FV
 ‘When Jabu arrived, the children were playing’

¹⁶ This form seems like it may be a shortened form of *babe badlaluka* (2.SM.be.PFV 2.SM.play.FV), but we do not yet fully understand its morphology or its complete range of functions.

- c. *Lokhwa Jabu a-bulele nyoka, ku-lung-ile*
 if 1A.Jabu 1.SM-kill.PFV 9.snake 17-be(come).good-PFV
 'If Jabu has killed a snake, it's fine'

Although the 'when/if' forms in Sindebele are lexical rather than morphological, the constructions are similar and no meaning differences were observed, so the test was easily translatable. That is, the functional equivalence of testing frames is more significant than their formal correspondence.

Some lexical items (such as auxiliary verbs) are non-cognate, but nevertheless exhibit no significant differences in meaning. For example, in tests involving 'start to X' we substituted isiNdebele *-thoma* 'begin, start' with Sindebele *-kxwala* 'begin, start' and obtained comparable results. Other lexical non-cognates reflected significantly different grammaticalization histories. For example, in isiNdebele 'almost do X' is expressed with an adverbial form *pheze* 'nearly, almost' inflected with a subject marker, followed by a consecutive-marked main verb, as in (30).

(30) isiNdebele

- U-pheze wa-gul-a*
 1.SM-nearly 1.SM.CONS-get.sick-FV
 'he almost got sick'

Sindebele expresses the concept of 'almost do X' quite differently, using a perfective form of the lexical verb *-funa* 'want, look for, need' followed by an infinitive verb, as in (31a); compare with (31b–c).

(31) Sindebele

- a. *Lucky u-fun-e ku-gwal-a ligwalo*
 1A.Lucky 1.SM-want-PFV INF-write-FV 5.letter
 'Lucky nearly wrote a letter' (never started)
- b. *Lucky u-fun-a ku-gwal-a ligwalo*
 1A.Lucky 1.SM-want-FV INF-write-FV 5.letter
 'Lucky wants to write a letter'
- c. *Bull e-fun-e ku-f-a*
 1A.Bull 9.SM-want-PFV INF-die-FV
 'Bull [a dog] nearly died'

Although the above ‘almost’ constructions can also have the meaning ‘wanted to X’ but didn’t, there are clear signs of semantic bleaching; for example, the form can also be used with non-agentive subjects. There is at least one other way of expressing ‘almost’ in Sindebele, illustrated in (32). Further investigation is needed to determine whether, and how, the forms differ in their semantics and pragmatics.

(32) Sindebele

<i>Lucky</i>	<i>u-phos-e</i>	<i>a-gwal-e</i>	<i>ligwalo</i>
1A.Lucky	1.SM-throw?-PFV	1.SM-write-PFV	5.letter

‘Lucky nearly wrote a letter’ (same as *ufune* – almost started but didn’t)

There were also cases in which different lexical items introduced significant complications in the tests. For example, we used the adverb *buthaka* ‘slowly’ in isiNdebele to test whether there was a (non-coda) phase that could be construed as both extended in time and non-stative, that is, involving activity or change. (Which phase is targeted is a – sometimes pragmatic – function of the interaction between tense/aspect marking and lexical aspectual structures.) With non-COS states, *buthaka* is infelicitous (33).

(33) isiNdebele

a. # <i>USipho</i>	<i>u-gul-a</i>	<i>buthaka</i>
1A.Sipho	1.SM-get.sick-FV	slowly

Intended: ‘#Sipho is sick slowly’ (state)

b. # <i>USipho</i>	<i>u-gul-e</i>	<i>buthaka</i>
1A.Sipho	1.SM-get.sick-PFV	slowly

Intended: ‘Sipho was/got sick slowly’ (state)

With active, temporally extended nuclear phases, *buthaka* is licit and has the meaning that the active phase is carried out slowly (34).

(34) isiNdebele

a. <i>USipho</i>	<i>u-cul-a</i>	<i>buthaka</i>
1A.Sipho	1.SM-sing-FV	slowly

‘Sipho sings slowly’ (active, extended nuclear phase)

- b. *U-tlol-e* *incwadi* *buthaka*
 1.SM-write-PFV 9.book slowly

‘S/he wrote a book slowly’ [he took a long time to write it] (active, extended nuclear phase)

- c. *U-bulele* *ikukhu* *buthaka*
 1.SM-kill.PFV 9.chicken slowly

‘S/he killed the chicken slowly’ [the knife wasn’t sharp, so s/he really had to saw] (active, extended nuclear phase)

Similarly, with COS verbs, if the onset phase is extended, *buthaka* is licit, as in (35a–b). Without extended onset phases, *buthaka* is infelicitous or more difficult to construe (35c–d), although with some verbs, it may be used in certain contexts such as the habitual (35e–f).

(35) isiNdebele

- a. *U-phakam-e* *buthaka*
 1.SM-rise.up-PFV slowly

‘S/he stood up slowly’ [like an old man] (extended, active onset/ coming-to-be phase)

- b. *U-lele* *buthaka*
 1.SM-sleep slowly

‘It took him time to sleep [fall asleep]’ (extended, non-active onset/ coming-to-be phase)

- c. *#U-lamb-a* *buthaka*
 1.SM-be.hungry-FV slowly

Intended: ‘S/he gets hungry slowly’ (apparently, no extended onset (or nuclear) phase)

- d. *#U-fik-e* *buthaka*
 1.SM-arrive-PFV slowly

Intended: ‘S/he arrived slowly’ (apparently, no extended onset or nuclear phase)

- e. #Sipho u-jam-a kugasigenge
1A.Sipho 1.SM-stand.up-FV slowly

Intended: ‘Sipho stands up slowly’

- f. #Jabu u-bulele nyoka kugasigenge
1A.Jabu 1.SM-kill.PFV 9.snake slowly

Approximate meaning: ‘Jabu killed the snake, but he didn’t kill it enough’

- g. #Jabu u-fik-e kugasigenge
1A.Jabu 1.SM-arrive-PFV slowly

Intended: ‘Jabu arrived slowly’

(Speaker comment: “You can’t arrive a little – you arrive!”)

- h. #Lucky u-gwal-e ligwalo kugasigenge
1A.Lucky 1.SM-write-PFV 5.letter slowly

Intended: ‘Lucky wrote a letter slowly’

(Speaker comment: “You can’t write *kugasigenge*”)

One speaker offered what may have been a closer equivalent to isiNdebele *buthaka* ‘slowly’. *Gegunyana* is a Sesotho sa Leboa borrowing meaning ‘slowly’ (37).

(37) Sindebele

- Jabu u-bulele nyoka gegunyana
1A.Jabu 1.SM-kill.PFV 9.snake slowly

‘Jabu killed the snake slowly’

However, because speakers frequently had strong feelings against using known borrowings from Sesotho sa Leboa and other languages, we did not conduct extensive testing with *gegunyana*. Instead, we added a test with *gambila* ‘quickly, early’ which – while still not behaving identically to *buthaka* – gave more comparable results. In many cases, interpretation as ‘quickly’ or ‘early’ gave clues as to whether a targeted phase was active and extended (38).

(38) Sindebele

- a. Jabu u-fik-e gambila
1A.Jabu 1.SM-arrive-PFV early

‘Jabu arrived early / #quickly’ (no extended phase)

- b. *Sipho u-jam-a gambila*
 1A.Sipho 1.SM-stand.up-FV quickly
 ‘Sipho stands up quickly / #early’ (active, extended onset phase)
- c. *Sipho u-bin-e gambila*
 1A.Sipho 1.SM-dance-PFV quickly/early
 ‘Sipho danced quickly / early’ (active, extended nuclear phase)
- d. *#Lindiwe u-gul-e gambila*
 1A.Lindiwe 1.SM-get/be.sick-PFV quickly/early
 Intended: ‘Lindiwe got/was sick quickly’ (NB: this utterance would be possible in unusual situations, e.g. if you planned to make Lindiwe sick at 4 pm., but she already got sick at 1 PM and had already recovered by 4 pm.: ‘Lindiwe got/was sick early’) (state: no active phase)

Although neither test was a perfect match for the isiNdebele *buthaka* test, using both (*ku*)*gasigenge* and *gambila* allowed us to test similar facets of a verb’s lexical aspectual structure, and also gave us additional insights into Sindebele verbal (and adverbial) semantics.

5.3 Discarded tests

Finally, no direct Sindebele equivalent could be found for at least one TA marker in isiNdebele. The “inceptive” prefix *se-* in isiNdebele has a strong contrastive sense (as in ‘this situation holds now, and it did not hold previously’; 39). Speakers sometimes also translate it as ‘already’, especially for non-COS verbs in non-present tenses (39d–f). Both isiNdebele and Sindebele have a longer preverbal form *sele* (from *-sala* ‘remain behind’) with related ‘already’ semantics, but it is not clear whether the meanings of the prefix and the auxiliary form are completely mappable.

- (39) isiNdebele
- a. *Se-ka-ya-cul-a*
 INC-1.SM-DJ-sing-FV
 ‘S/he is now singing’ (s/he wasn’t before)
- b. *Se-ka-ya-gul-a*
 INC-1.SM-DJ-get.sick-FV
 (S/he wasn’t sick, but) ‘s/he’s now sick’

- c. *Se-ka-ya-dan-a*
 INC-1.SM-DJ-become.disappointed-FV
 ‘S/he now becomes sad/disappointed’ (as a habit – s/he previously didn’t have this habit)
- d. *Se-ka-cul-ile*
 INC-1.SM-sing-PFV
 ‘S/he has already sung’
- e. *#?Se-ka-gul-ile*
 INC-1.SM-get.sick-PFV
 Intended: ‘S/he has already been/become sick’
- f. *Se-ka-dan-ile*
 INC-1.SM-become.disappointed-PFV
 ‘S/he’s now/already sad’ (she wasn’t sad the last time you saw her)

The semantics of *se-* marking and their interactions with lexical aspect are complex and interesting. However, because we found no equivalent marker in Sindebele, we had to abandon this test as a comparative tool.

5.4 Summary and initial results

As noted above, it is important not to assume that cognate forms have identical meanings and identical interactions with lexical aspect. To mitigate this possibility, we tried to test with enough verbs that at least some redundancies would be introduced, so that we could see whether differences were due to different meanings of specific lexical items, or whether they were systematic. Conversely, the built-in redundancies of our tests (see Section 4.1) helped to test for the possibility that there could be systematic differences between lexical aspectual classes. That is, if lexical aspectual classes are systematically different between isiNdebele and Sindebele, we would expect lexical items in that class to behave in the same way (and differently between the two languages) with all tests that target a certain facet of lexical aspect. If, on the other hand, adverbial tests give similar results in both languages, but a morphological TA marker gives systematically different results between the two languages, we can assume that the cognate TA marker has different semantics in isiNdebele and Sindebele, but that the lexical aspectual types themselves are similar.

It should be noted that we had not previously conducted extensive research into the meaning of tense and aspect forms in Sindebele. An experienced researcher of a language would presumably already have a good understanding of the meanings of tense and aspect morphemes in that language, and could therefore avoid some of the potential pitfalls in adapting the tests. On the other hand, systematic testing of lexical aspectual contrasts at the beginning of a study of tense and aspect will likely prove invaluable in developing a robust understanding of the roles of TA forms. Many of a TA form's meanings emerge naturally through this kind of testing, so we contend that extensive previous study of the tense/aspect system a language – while valuable – is not an absolute prerequisite, especially in languages like these, where the interactions between lexical aspectual type and grammatical aspectual forms such as the perfective are so striking.

The methodology we followed proved useful for investigating semantic differences and potential contact-induced changes between two closely related languages. Although investigations involving more distantly related languages, or languages from different families, would likely encounter far greater challenges regarding translatability, we believe that following the general principles described in this study – introducing redundancies in testing; developing tests that incorporate (at least) adverbial constructions, auxiliary verbs, and tense/aspect marking; and testing for both temporal phases (and boundaries) and qualitative changes – will provide insights into contrasts in lexical aspectual structures and lexical aspectual classes even between quite different languages. (See also Bar-el 2015 for further ideas about contrasts that can be tested.)

Indeed, when we compared the two languages, several subtle but basic differences in lexical aspectual structures emerged. Two will be illustrated here.

First, consider the COS verbs meaning expressing 'get/be hungry' in the two languages (40)–(41).

(40) isiNdebele

U-lamb-ile

1.SM-be.hungry-PFV

'S/he is hungry'

(41) Sindebele

U-phethwe

ndlala

1.SM-hold.PASS.PFV 9.hunger

'S/he is hungry'

As discussed above, the isiNdebele word *-lamba* ‘[get/]be hungry, starve’ does not, in general, seem to encode an extended onset phase. When used in the present tense, it receives a habitual reading which in isiNdebele has been conventionalized with the metaphorical meaning ‘be poor, be lacking’ (42).

(42) isiNdebele

USipho u-ya-lamb-a
 1A.Sipho 1.SM-DJ-be.hungry-PFV
 ‘Sipho is poor’

One speaker suggested that (42) could also mean ‘Sipho is getting hungry’, but this reading is marginal at best; some speakers reject it outright.

In Sindebele, in contrast, the onset phase seems to be accessible in common usage, as seen in the default reading of (43).

(43) Sindebele

Frans u-phath-w-a ndlala
 1A.Frans 1.SM-hold-PASS-FV (?COP.)9.hunger
 ‘Frans is getting hungry (lit. “is getting held by hunger”)

The isiZulu form *-lamba* ‘get hungry’ is cognate to the isiNdebele form, while it seems that the Sindebele form is most likely a calque from Sesotho *sa Leboa -swarwa ke tlala* ‘be held by hunger’ (*-swara* ‘hold’). With the adoption of a different form came also a different aspectual structure.

Differences in aspectual structure can also be observed with the stem *-khamba*, which is cognate in both languages. The isiNdebele dictionary (Iziko lesiHlathululi-mezwi sesiNdebele 2006) translates *-khamba* as ‘go, travel, walk’. Speaker interpretations suggest that it has at least two different aspectual construals, depending on which meaning is intended. One is that of a durative, activity-like verb (walking, going, traveling) with an extended nucleus. This use is seen with the persistive *-sa-* marker (44).

(44) isiNdebele

USipho u-sa-khamb-a
 1A.Sipho 1.SM-PERS-go-FV
 ‘Sipho is still walking’

In another construal of *-khamba* ‘leave’, there is no onset phase, but rather a punctual nucleus and an extended coda phase (45).

(45) isiNdebele

USipho u-sa-khamb-ile
 1A.Sipho 1.SM-PERS-go-PFV
 ‘Sipho is still gone’

-khamba in Sindebele behaves quite differently. Although the nuclear phase can also be construed as either punctual or extended (46a), the *-sa-* form can only target a pre-nuclear phase (46b), while the *-sa...-ile* form is illicit, at least in the ongoing-state context (46c); the form does not seem to allow for an extended coda phase.

(46) Sindebele

- a. *Madimedja u-khamb-a kable*
 1A.Madimedja 1.SM-go-FV well
 ‘Madimedja is going well’ (e.g. on foot, by car, or on a bicycle)
- b. *Madimedja u-sa-khamb-a*
 1A.Madimedja 1.SM-PERS-go-FV
 ‘Madimedja will still go’ (i.e. he hasn’t left yet)
- c. *#Madimedja u-sa-khamb-ile*
 1A.Madimedja 1.SM-PERS-go-PFV
 Intended: ‘Madimedja is still gone’ (Sindebele)

While further study of the relevant verb in Sesotho sa Leboa is needed to establish semantic borrowing, the dictionary translations are also suggestive. A Northern Sotho–English dictionary translates *sepela* as ‘walk, leave/go’.¹⁷ It may be, then, that the ‘leave’ sense is more salient in Northern Sotho and Sindebele, while isiNdebele construes *-khamba*’s departure sense as the beginning of a coda state of being away.

6. CONCLUSION

We hope that as more detailed investigations of lexical aspect are carried out across a variety of Bantu (and non-Bantu) languages, the investigative toolkit will grow both in size and robustness, and that we can deepen our understanding of

¹⁷ <nso.oxforddictionaries.com/translate/northernsotho-english/sepela>, accessed 26 Feb. 2018.

lexical aspectual structures both within languages and as a phenomenon subject to contact-induced change. Our study attempted to increase the set of possible contrasts to examine when investigating lexical aspectual contrasts, but we are surely overlooking important criteria, and we hope that further research will bring more of these to light.

We also want to take seriously the possibility that different tense/aspect categories might not only interact differently with lexical aspectual types, or target different features in their conceptual architecture, but might rather “conceptualize” the entire system of lexical aspect differently. Nichols (2015) noted that some languages privilege “transitions” and others “states” in their lexical aspectual systems; we wonder whether, somewhat akin to languages with split ergativity, some tense/aspect forms even within a single language could interact with a transition-based system of lexical aspect, and others with a state-based system. This is both a question for future research and an important starting point in investigations of lexical aspect: one should not assume a priori that a language’s system will behave totally uniformly in context.

One final, non-theoretical point that we would like to make is that our methodology did not require that we work with the stereotypical fieldwork of “ideal” (near-)monolingual native speakers. In fact, in the populations that speak isiNdebele and Sindebele (and most other languages of South Africa), such speakers are virtually non-existent. Rather than attempting to reify a language and explore it in a sterile, unnatural context, we hope that methodologies like these (along with many described in, e.g. Bochnak & Matthewson 2015) allow for the exploration of languages in their beautiful complexity, without losing the ability to draw generalizations and identify meaningful patterns.

We are encouraged that a number of systematic studies of lexical aspectual systems in Bantu languages are currently underway, and we hope that the experiences and ideas we describe in this paper will be helpful in stimulating continued research, both within particular varieties and comparatively, on this important but understudied topic.

ABBREVIATIONS

1A	Noun class 1a (referring to personal names)	OM	Object marker
		PASS	Passive
CJ	Conjoint	PERS	Persistive marker (“still”)
CONS	Consecutive	PFV	Perfective
COP	Copula	PL	Plural
DJ	Disjoint	PST	Past
FV	Final vowel	REL	Relative
INC	Inceptive	SG	Singular
INF	Infinitive	SIT	Situative marker (“when”)
IPFV	Imperfective	SM	Subject marker
LOC	Locative	SUBORD	Subordinative
NEG	Negation, negative		

Single numbers indicate Bantu noun classes.

REFERENCES

- BAR-EL, Leora 2015. Documenting and Classifying Aspectual Classes Across Languages. In: M.R. BOCHNAK & L. MATTHEWSON (eds): 75–109.
- BASTIN, Yvonne 1983. *La finale verbale -ide et l'imbrication en bantou*. Tervuren: Musée Royal de l'Afrique Centrale.
- BOCHNAK, M. Ryan & Lisa MATTHEWSON 2015. *Methodologies in Semantic Fieldwork*. Oxford: OUP.
- BOTNE, Robert D. 1983. On the Notion “Inchoative Verb” in Kinyarwanda. In: F. JOUANNET (ed.), *Le Kinyarwanda: études linguistiques*: 149–180. Paris: SELAF.
- BOTNE, Robert 2003. To Die Across Languages: Toward a Typology of Achievement Verbs. *Linguistic Typology* 7(2): 233–278.
- BOTNE, Robert 2008. *A Grammatical Sketch of Chindali (Malawian Variety)*. Philadelphia: American Philosophical Society.
- BOTNE, Robert & Tiffany L. KERSHNER 2000. Time, Tense, and the Perfect in Zulu. *Afrika und Übersee* 83: 161–180.
- BREU, Walter 1984. Handlungsgrenzen als Grundlage der Verbalklassifikation. In: W. LEHFELDT (ed.), *Slavistische Linguistik 1984: Referate des X. Konstanzer Slavistischen Arbeitstreffens* (Slavistische Beiträge 184): 9–34. München: Otto Sagner.
- BREU, Walter 1994. Interactions between Lexical, Temporal and Aspectual Meanings. *Studies in Language* 18(1): 23–44.
- BUELL, Leston 2006. The Zulu Conjoint/Disjoint Verb Alternation: Focus or Constituency? *ZAS Papers in Linguistics* 43: 9–30.

- COPLAND, Fiona & Angela CREESE 2015. *Linguistic Ethnography: Collecting, Analysing and Presenting Data*. London: SAGE.
- CRANE, Thera Marie 2011. *Beyond Time: Temporal and Extra-Temporal Functions of Tense and Aspect Marking in Totela, a Bantu Language of Zambia*. Berkeley: University of California at Berkeley.
- CRANE, Thera Marie *in prep.* Notes on Lexical Aspect and Participant Structure in isiNdebele.
- CRANE, Thera Marie & Axel FLEISCH 2016. Event Type Lexicalization Across Language Boundaries: Verbs in South African Ndebele Varieties. Paper presented at the 6th International Conference on Bantu Languages, Helsinki, Finland.
- CRANE, Thera Marie & Axel FLEISCH *forthcoming*. Constituency, Imbrication, and the Interpretation of Change-of-State Verbs in IsiNdebele. To appear in a special issue of *Studia Orientalia Electronica*.
- CRANE, Thera Marie & Bastian PERSOHN 2019a. What's in a Bantu Verb? Actionality in Bantu Languages. *Linguistic Typology* 23(2): 303–345.
- CRANE, Thera Marie & Bastian PERSOHN 2019b. A Model-Theoretic Discussion of Bantu Actionality. *Africana Linguistica* 25: 27–63.
- CROFT, William 2012. *Verbs: Aspect and Causal Structure*. Oxford: OUP.
- DIK, Simon 1989. *The Theory of Functional Grammar, I: The Structure of the Clause*. Dordrecht: Foris.
- DOWTY, David R. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ*. Dordrecht: Reidel.
- FLEISCH, Axel 2000. *Lucazi Grammar: A Morphosemantic Analysis*. Cologne: Rüdiger Köppe.
- FLEISCH, Axel 2005. A Cognitive Semantic Approach to the Linguistic Construal of UPPER SPACE in Southern Ndebele. *Southern African Linguistics and Applied Language Studies* 23(2): 139–154.
- FREED, Alice F. 1979. *The Semantics of English Aspectual Complementation*. Dordrecht: Reidel.
- Iziko lesiHlathululi-mezwi sesiNdebele 2006. *IsiNdebele–English/English–isiNdebele: IsiHlathululi-mezwi/Bilingual and Explanatory Dictionary*. Cape Town: Phumelela.
- JERRO, Kyle 2017. Change of State in Kinyarwanda: A Study in Root Meaning. *Proceedings of the Linguistic Society of America* 2(25): 1–15.
- KANIJO, Ponsiano Sawaka 2019a. The Interactions of $-\emptyset$ -...-ile with Aspectual Classes in Nyamwezi. In: S. LOTVEN, S. BONGIOVANNI, P. WEIRICH, R. BOTNE & S.G. OBENG (eds), *African Linguistics across the Disciplines: Selected Papers from the 48th Annual Conference on African Linguistics*: 281–308. Berlin: Language Science Press.
- KANIJO, Ponsiano Sawaka 2019b. Aspectual Classes of Verbs in Nyamwezi. PhD dissertation, University of Gothenburg.
- KERSHNER, Tiffany L. 2002. The Verb in Chisukwa: Aspect, Tense, and Time. PhD dissertation, Indiana University.
- LUSEKELO, Amani 2016. Lexical Semantics and Selection of TAM in Bantu Languages: A Case of Semantic Classification of Kiswahili Verbs. *International Journal of Society, Culture & Language* 4(1): 89–102.

- MAHLANGU, Katjie Sponono 2016. The Growth and Development of IsiNdebele Orthography and Spelling (1921–2010). University of Pretoria.
- MAHO, Jouni Filip 2009. *NUGL Online: The Online Version of the New Updated Guthrie List: A Referential Classification of the Bantu Languages*. Available at <brill.com/fileasset/downloads_products/35125_Bantu-New-updated-Guthrie-List.pdf>, accessed 25 Nov. 2019.
- MATTHEWSON, Lisa 2004. On the Methodology of Semantic Fieldwork. *International Journal of American Linguistics* 70(4): 369–415.
- NICHOLS, Johanna 2015. State-Based vs. Transitional-Based Lexical Event Structure. Paper presented at Workshop on Resultative Constructions, Stockholm University, November 2015.
- NURSE, Derek 2008. *Tense and Aspect in Bantu*. NY: OUP.
- PERSOHN, Bastian 2017. *The Verb in Nyakyusa: A Focus on Tense, Aspect and Modality*. Berlin: Language Science Press.
- PERSOHN, Bastian 2018 Aspectuality in Bantu: On the Limits of Vendler's Categories. *Linguistic Discovery* 16(2): 1–19.
- POULOS, George & Christian T. MSIMANG 1998. *A Linguistic Analysis of Zulu*. Cape Town: Via Africa.
- SASSE, Hans-Jürgen 1991. Aspekttheorie. In: H.-J. SASSE (ed.), *Aspektsysteme* (Arbeitspapier Nr 14 N.F.): 1–35. Cologne: Institut für Sprachwissenschaft, Universität zu Köln.
- SASSE, Hans-Jürgen 2002. Recent Activity in the Theory of Aspect: Accomplishments, Achievements, or Just a Non-Progressive State? *Language Typology* 6: 199–271.
- SEIDEL, Frank 2008. *A Grammar of Yeyi: A Bantu Language of Southern Africa*. Cologne: Rüdiger Köppe.
- SMITH, Carlotta S. 1997. *The Parameter of Aspect*. 2nd edn. Dordrecht: Kluwer Academic Publishers.
- TATEVOSOV, Sergej 2002. The Parameter of Actionality. *Linguistic Typology* 6(3): 317–401.
- VAN VALIN, Robert D. 2006. Some Universals of Verb Semantics. In: R. MAIRAL & J. GIL (eds), *Linguistic Universals: 155–178*. Cambridge: CUP.
- VENDLER, Zeno 1957. Verbs and Times. *The Philosophical Review* 66: 143–160.
- WILHELM, Andrea 2007. *Telicity and Durativity: A Study of Aspect in Dëne Sųłiné (Chipewyan) and German*. (Outstanding Dissertations in Linguistics Series) NY: Routledge.

APPENDIX: INITIAL LIST OF TESTS

Below is a list of the initial tests we developed for checking the interactions of lexical aspect with grammatical aspect and adverbials in isiNdebele, along with their approximate equivalents in Sindebele. As noted in the main body of this paper, not all tests produced the expected results, and not all were straightforwardly translatable into Sindebele. However, all were enlightening, both for a deeper understanding of isiNdebele and Sindebele verbal systems and their grammar/lexicon interactions, and for developing a (smaller) refined set of forms for testing against a larger group of verbs.

In the table below, we list each test we used in isiNdebele, its rough equivalent in Sindebele, and a simplified “approximate target”. However, as shown in the paper, interactions with tests are complex and the listed “targets” should not be taken as comprehensive analyses or even as fully accurate descriptions of how the tests function. A more complete description of the tests and their interactions with various lexical aspectual types is in preparation, and we continue to refine our understanding of them.

Test name	Form in isiNdebele (3SG)	Form in Sindebele	Approximate target
Present disjoint	<i>u-ya-R-a</i> 1.SM-DJ-R-FV	<i>u-ya-R-a</i> 1.SM-DJ-R-FV	Extended onset / nucleus vs. punctual nucleus
Present conjoint	<i>u-R-a + ___</i> 1.SM-R-FV	<i>u-R-a + ___</i> 1.SM-R-FV	Extended onset / nucleus vs. punctual nucleus
Perfective disjoint	<i>u-R-ile</i> 1.SM-R-PFV.DJ	<i>u-R-ile</i> 1.SM-R-PFV.DJ	Past vs. extended coda (NB: we also tested for so-called “imbri- cated” forms of the perfective ending; see Crane & Fleisch <i>forthcoming</i>)
Perfective conjoint	<i>u-R-e + ___</i> 1.SM-R-PFV.CJ	<i>u-R-e + ___</i> 1.SM-R-PFV.CJ	Past vs. extended coda
Perfective + 'yesterday'	<i>u-R-e / u-R-ile</i> 1.SM-R-PFV(CJ/DJ) <i>izolo</i> yesterday	<i>u-R-e / u-R-ile</i> 1.SM-R-PFV(CJ/DJ) <i>kwitolo</i> yesterday	Phase targeted with past “container” adverbial

Test name	Form in isiNdebele (3SG)	Form in Sindebele	Approximate target
Past imperfective	<i>be-ka-R-a</i> be.PFV-1.SM-R-FV	<i>u-be</i> 1.SM-PST <i>a-R-a</i> / 1.SM.SUBORD-R-FV <i>be-ka-R-a</i> be.PFV-1.SM-R-FV	Extended onset / nucleus vs. punctual nucleus
Past perfective	<i>be-ka-R-ile</i> be.PFV-1.SM-R-PFV.DJ	<i>u-be</i> 1.SM-PST <i>a-R-ile</i> / 1.SM.SUBORD-R-PFV.DJ <i>be-ka-R-ile</i> be.PFV-1.SM-R-PFV.DJ	Presence of extended coda
Situative	<i>na-ka-R-a=ko</i> SIT-1.SM-R-FV=REL	<i>lokhwa Siph</i> when Siph <i>a-R-a</i> 1.SM.SUBORD-R-FV	see 5.2
Situative perfective	<i>na-ka-R-ile=ko</i> SIT-1.SM-R-PFV.DJ=REL	<i>lokhwa Siph</i> when Siph <i>a-R-ile</i> 1.SM.SUBORD-R-PFV.DJ	see 5.2
Persistent (“still”)	<i>u-sa-R-a</i> 1.SM-PERS-R-FV	<i>u-sa-R-a</i> 1.SM-PERS-R-FV	Extended onset / nucleus vs. punctual nucleus
Persistent perfective	<i>u-sa-R-ile</i> 1.SM-PERS-R-PFV.DJ	<i>u-sa-R-ile</i> 1.SM-PERS-R-PFV.DJ	Presence of extended coda
“Finished” (conjoint form)	<i>u-qed-e</i> 1.SM-finish-PFV.CJ <i>uku-R-a</i> INF-R-FV	<i>u-kvedj-e</i> 1.SM-finish-PFV.CJ <i>ku-R-a</i> INF-R-FV	Telicity / inherent endpoint of nuclear phase
“Finished” (disjoint form)	<i>u-qed-ile</i> 1.SM-finish-PFV.DJ <i>uku-R-a</i> INF-R-FV	<i>u-kvedj-ile</i> 1.SM-finish-PFV.DJ <i>ku-R-a</i> INF-R-FV	Telicity / inherent endpoint of nuclear phase
“Stopped” (disjoint form)	<i>u-lis-ile</i> 1.SM-stop-PFV.DJ <i>uku-R-a</i> INF-R-FV	<i>u-lis-e</i> / <i>u-lis-ile</i> 1.SM-stop-PFV(CJ/DJ) <i>ku-R-a</i> INF-R-FV	Extended onset / nucleus (see also 4.2)
“Almost” did X	<i>u-pheze</i> 1.SM-nearly <i>wa-R-a</i> 1.SM.CONS-R-FV	<i>u-fun-e</i> 1.SM-want-PFV.CJ <i>ku-R-a</i> INF-R-FV	Process preceding culmination

Test name	Form in isiNdebele (3SG)	Form in Sindebele	Approximate target
Bare temporal adverbial	<i>u-R-e</i> 1.SM-R-PFV.CJ (e.g.) <i>iimveke ezimbili</i> 10.week 10.two 'in/for two weeks'	<i>u-R-e</i> 1.SM-R-PFV.CJ (e.g.) <i>iri ganyye</i> hour one 'in/for one hour'	Telicity / inherent endpoint; also presence of onset and coda phases (NB: temporal adverbials used varied based on context)
Nga-marked temporal adverbial	<i>u-R-e</i> 1.SM-R-PFV.CJ (e.g.) <i>ngemveke ezimbili</i> LOC.10.week 10.two 'in two weeks'	N/A	Telicity / inherent endpoint; also presence of lexically encoded onset phases
'When we arrived' + perfective	<i>Na-si-fik-a=ko</i> , SIT-1PL.SM-arrive-FV=REL <i>u-R-ile</i> 1.SM-R-PFV.DJ	<i>lokhwa si-fik-a</i> when 1PL.SM-arrive-FV <i>a-R-a</i> 1.SM.SUBORD-R-FV	Activity and state-change (semi-punctual changes)
"Started to"	<i>U-thom-e</i> 1.SM-start-PFV.DJ <i>uku-R-a</i> INF-R-FV	<i>U-kxwal-ile / U-kxwal-e</i> 1.SM-start-PFV(DJ/CJ) <i>uku-R-a</i> INF-R-FV	Onset vs. nucleus (e.g. 'started to become' vs. 'started to be/do')
Past imperfective entails perfective	(various)	(various)	Inherent telicity
Inceptive present	<i>Se-ka-ya-R-a</i> INC-1.SM-DJ-R-FV	N/A	With COS verbs, can target extended onsets
Inceptive perfective	<i>Se-ka-R-ile/-e</i> INF-1.SM-R-PFV(CJ/DJ)	N/A	Verbs with coda states can have ongoing-state readings
'When we arrived, we found [him/her]' + perfective	<i>Na-si-fik-a=ko</i> , SIT-1PL.SM-arrive-FV=REL <i>si-m-thol-e</i> 1PL-1.OM-find-PFV.CJ <i>a-R-ile</i> 1.SM.SUBORD-R-PFV.DJ	<i>Lokhwa si-fik-a</i> , when 1PL.SM-arrive-FV <i>se-(mo)-fumene</i> 1PL.SM-(1.OM)-FIND.PFV. IMBR <i>a-R-ile</i> 1.SM.SUBORD-R-PFV.DJ	Verbs with coda states can have ongoing-state readings
'When we arrived, we found [him/her]' + present	<i>Na-si-fik-a=ko</i> , SIT-1PL.SM-arrive-FV=REL <i>si-m-thol-e</i> 1PL-1.OM-find-PFV.CJ <i>a-R-a</i> 1.SM.SUBORD-R-FV	<i>Lokhwa si-fik-a</i> , when 1PL.SM-arrive-FV <i>se-(mo)-fumene</i> 1PL.SM-(1.OM)-FIND.PFV. IMBR <i>a-R-a</i> 1.SM.SUBORD-R-FV	Ongoing process or change (targets temporally extended nucleus phases or lexically encoded onset phases)

Test name	Form in isiNdebele (3SG)	Form in Sindebele	Approximate target
Perfective + 'slowly'	<i>U-R-e</i> 1.SM-R-PFV.CJ <i>buthaka</i> slowly	<i>U-R-e</i> 1.SM-R-PFV.CJ <i>(ku)-gasigenge /</i> (17)-slowly/a.little.bit <i>gambila</i> quickly/early	Process or change (targets temporally extended nucleus phases or lexically encoded onset phases)
"Always"	<i>U-blal-a</i> 1.SM-stay-FV <i>a-R-a</i> 1.SM.SUBORD-R-FV	<i>U-blal-a</i> 1.SM-stay-FV <i>a-R-a</i> 1.SM.SUBORD-R-FV	Repeated processes / change

USE OF THE AUGMENT IN NEGATIVES AND OTHER IRREALIS CONTEXTS IN ISINDEBELE

Matti Miestamo, Kati Helenius & Jukka Kajala

The paper examines the use of the augment in isiNdebele, a Nguni language spoken in South Africa. Inspired by typological work on the effects of negation on the marking of noun phrases, special attention is paid to the use of the augment under negation and in other irrealis contexts. It is hypothesized that the augment is connected with the marking of referentiality and might therefore be more readily omitted in negatives and other irrealis contexts. The paper is based on data collected in the field with a questionnaire designed for this study. The results show that the augment is dropped only in negated existential and possessive predications expressed with the associative copula. Thus, the absence of the augment is much more restricted in isiNdebele than it is in other Nguni languages.

1. INTRODUCTION

This paper examines the use of the augment (also known as preprefix in Bantu linguistics) in negatives and other irrealis contexts in isiNdebele (also known as Southern South African Ndebele).¹ It is a Nguni language spoken by approximately 1.1 million people around and to the north of Johannesburg in South Africa. It is one of the eleven official languages of the Republic of South Africa. Despite its official status, descriptive linguistic work has been rather limited – there is no full grammar of isiNdebele to date – and it can clearly be considered an underdocumented language.²

The augment is an intriguing feature in Bantu morphosyntax (see Halpert *in press* for an overview). It can be described as a morpheme that precedes the noun class prefix and most commonly consists of a single vowel (e.g. isiNdebele *a-ba-ntwana* AUG2-NCP2-child ‘children’, vs. *ba-ntwana* without the augment,

1 We would like to thank Thera Crane and the anonymous referee, as well as Eva-Marie Bloom Ström and the editors of this volume for their valuable comments on the manuscript. A special thanks is due to the isiNdebele language consultants without whom this study would not have been possible.

2 For Sindebele (Northern South African Ndebele) there is a short grammar (Ziervogel 1959) available.

and *i-ncwadi* AUG9-book ‘book’ where the noun class prefix is zero, vs. *ncwadi* without the augment). In this study, we are especially interested in the use of the augment under negation and other irrealis contexts. It has been observed that the use of the augment is sensitive to polarity in closely related languages, for example, isiXhosa and isiZulu, as well as a number of Bantu languages beyond Nguni, for example Bemba, and furthermore, it has been noted that the augment is involved in marking of the (non-)referentiality of NPs (see, e.g. von Staden 1973; Givón 1978; cf. Petzell & Köhl 2017: 42). In a broader typological perspective, effects of negation on the marking of NPs and their referentiality have been studied by Miestamo (2014). The main research questions addressed in the present paper are as follows: To what extent is the augment used on nouns under the scope of negation vs. in affirmative declaratives? How does it work in other irrealis contexts such as interrogatives? To what extent can we see referentiality as a conditioning factor? Very little is known about the behaviour of the augment in isiNdebele, and it is this gap in our knowledge that this article aims to bridge.

The article is structured as follows. Section 2 outlines the effects of negation on the marking of NPs in a broad typological perspective, addresses the connection between negation and referentiality, and takes a brief look at the behaviour of the augment under negation in Nguni languages. Section 3 introduces our research material and method. Section 4 presents the results of the study. These results are discussed in Section 5, which also concludes the paper. Appendix I presents the questionnaire used to collect the data, which is given in full in Appendix II.

2. BACKGROUND AND HYPOTHESES

Let us start by putting the relationship between negation and the use of the augment in Bantu languages in a larger typological context. Negation has been found to affect the marking of nouns and noun phrases in a number of languages; in a broader context, such effects constitute one way in which negatives can show structural asymmetry vis-à-vis affirmatives (see Miestamo 2005). Miestamo (2014) surveyed the effects of negation on the marking of NPs in a sample of 240 languages. The starting point in that study were the well-known case alternations in negatives vs. affirmatives in Finnic, Baltic, and Slavic languages. In the Finnish examples in (1), the affirmative makes a meaning difference by selecting either genitive or partitive case (1a,b), but the negative has to use the partitive (1c).

- (1) Finnish (constructed examples)³
- a. *söin banaani-n*
eat.PST.1SG banana-GEN
'I ate {a/the} banana.'
- b. *söin banaani-a*
eat.PST.1SG banana-PAR
'I {ate some / was eating {a/the}} banana.'
- c. *en syönyt banaani-a*
NEG.1SG eat.PST.PTCP banana-PAR
'I {didn't eat / wasn't eating} {a/the} banana.'

The function of the genitive in these examples is to mark total objects and perfective aspect, whereas the partitive marks partial objects and imperfective aspect. Similar case changes are also found in existential and possessive predications, in which the existential or possessive NP is marked with the nominative in the affirmative but with the partitive in the negative.

In many Baltic and Slavic languages, transitive objects alternate between accusative and genitive: the accusative marks total objects and the genitive marks partitive objects. The genitive appears more often in the negative, and the affirmative usually has accusative marking. Similarly, existential and possessive NPs are marked by the genitive in the negative. It is worth noting that the closely related Baltic languages Latvian and Lithuanian behave differently in this respect. In Lithuanian the case alternation is found both with transitive objects and with existential and possessive predications, whereas in Latvian only existential and possessive predications exhibit case alternations between affirmatives and negatives, while transitives do not.

In French, we find an alternation between indefinite articles in the affirmative and the marker *de* in the negative, as illustrated in (2).

- (2) French (constructed examples)
- a. *je vois un chien*
I see.1SG INDF.M dog
'I see a dog.'

³ Note that in Finnish the distinction between genitive and accusative has been lost in noun paradigms, and the genitive in these examples goes back to an earlier accusative.

- b. *je ne vois pas de chien*
 I NEG see.1SG NEG DET dog
 ‘I do not see a dog.’

These alternations are well-known in linguistic literature, but Miestamo’s survey shows that parallels can be found in other parts of the world as well. In many Oceanic languages, for example, indefinite NPs under the scope of negation are marked by determiners referred to as partitive in many sources. This is the case in Araki (3), spoken in Vanuatu.

- (3) Araki (Alexandre François, pers. comm.)
- a. *nam les-i-a jau lo leŋa*
 1SG.R see-OBJ.REF-3SG coconut.crab LOC ground
 ‘I’ve seen a/the coconut crab on the ground.’
- b. *nam je les re jau lo leŋa*
 1SG.R NEG see PAR coconut.crab LOC ground
 ‘I haven’t seen a/any coconut crab on the ground.’
- c. *nam je les-i-a jau lo leŋa*
 1SG.R NEG see-OBJ.REF-3SG coconut.crab LOC ground
 ‘I haven’t seen the coconut crab on the ground.’
 [but not *‘I haven’t seen a coconut crab on the ground.’]

In realis affirmatives (3a), the verb shows referential object and person-number cross-reference, and nominal objects are unmarked noun phrases. In the negative in (3b), the verb has no cross-reference marking and the object is preceded by the partitive marker *re*. Negatives may also show referential object marking, and cross-reference on the verb. In such cases *re* does not appear, but this results in a definite reading (3c). It is worth noting that the irrealis (expressing, e.g. future) can also take *re* and no referential marking on the verb in the affirmative, which places it somewhere between negatives and realis affirmatives in this regard.

All in all, effects of negation on the marking of NPs are not very common in the 240-language sample examined in Miestamo’s (2014) survey, but they are found in different parts of the world. Common to many of the alternations is that they have to do with the referentiality of the NPs. Very often, the marking that appears in indefinite NPs under negation can be identified as non-referential marking. The connection is clear in cases like Araki, but non-referentiality can also be shown to play a role in the case alternations found in the Finnic, Baltic,

and Slavic languages, as well as in the alternation in the use of the indefinite article in French.

In the languages discussed above, the effects of negation on the referentiality of indefinite NPs have been grammaticalized in different ways. In most languages, however, the effects of negation are not seen as clearly in grammatical constraints, but they may be visible in semantics and pragmatics. Following Givón (1978; 2001), we may note that the referentiality of the object is typically implied in *fact modalities*. The majority of verbs, including *have*, carry inherent realis modality, and they create fact modality when used in past or present tense declaratives. Thus in (4a) the NP *a dog* receives a referential reading – there is a particular dog that Chris has.

- (4) English
- a. *Chris has a dog.*
 - b. *Chris wants a dog.*
 - c. *Chris doesn't have a dog.*

The situation is, however, different in non-fact modalities such as negation or other irrealis contexts. The irrealis context created by the inherent irrealis verb *want* in (4b) allows either a referential or a non-referential reading; there may be a specific dog that Chris wants or then Chris may just want to become a dog owner but has no specific dog in mind yet. Under negation (4c), the indefinite NP gets a non-referential reading; Chris does not have any dog, there is no dog such that Chris has it. Note that we are talking about indefinite NPs here – definite NPs are referential under all modalities (unless interpreted generically). The connection between negation and non-referentiality can be explained by discourse factors, as argued by Givón (1978). Negatives are not used to introduce new participants into discourse. Referential NPs under the scope of negation have already been introduced by a preceding affirmative (or are otherwise known in the context) and thus referential NPs in the scope of negation tend to be definite rather than indefinite. These pragmatic factors can be seen as motivating the connection between negation and non-referentiality, and a functional explanation can be proposed to Miestamo's (2014) typological findings along these lines.

Coming back to Bantu languages and more specifically to the Nguni subgroup, we may note that the effects of negation on the use of the augment are included as one type of effect of negation on the marking of NPs in Miestamo's typological survey. In isiXhosa, the augment appears in the affirmative (5a) but is absent in the negative (5b).

- (5) isiXhosa (Taraldsen 2010: 1526–1527)
- a. *ndi-bon-a a-ba-fundi*
1SG-see-FV AUG2-NCP2-student
'I see the/some students'
- b. *a-ndi-bon-i ba-fundi*
NEG-1SG-see-FV NCP2-student
'I don't see any students'
- c. *a-ndi-ba-bon-i a-ba-fundi*
NEG-1SG-OM2-see-FV AUG2-NCP2-student
'I don't see the students' / 'There are some students I don't see.'

The augment may be present in the negative as well (5c) but then, again, the reading is specific and usually definite with object marking appearing on the verb. There is some variation in the use of the augment within Nguni. Earlier observations of the use of the augment in isiNdebele suggest that the augment is almost always present and dropped in very limited contexts; what the nature of the contexts are has not been systematically studied before. In contrast, Sindebele, a language variety spoken by the Ndebele people in the Mokopane region, has been reported to lack the augment altogether (Ziervogel 1959). Other Nguni languages, for example, isiZulu and isiXhosa, seem to fall between these extremes, the presence vs. absence of the prefix being connected to polarity and referentiality in different ways.⁴ Recent studies of the use of the augment in Nguni languages include Buell (2009), Carstens & Mletshe (2016), and Bloom Ström & Miestamo (*forthcoming*). Note that the latter two studies have observed that there is an ongoing change in Nguni languages whereby the augment is losing its function of marking referentiality and its distribution is becoming primarily syntactically determined.

In this section, we have observed that in a number of languages, indefinite NPs in the scope of negation are marked as non-referential in various ways. In many Bantu languages, including (earlier stages of) the close relatives of isiNdebele within the Nguni group, this non-referential marking is realized by dropping the augment. Much less is known about the behaviour of the augment in isiNdebele,

4 Note that the augment may be dropped in some non-clausal contexts as well, e.g. in some derivational processes and after demonstratives, but these are not in the scope of our study. Instead, we are interested in the effects of polarity and referentiality in clauses.

but on the basis of what we know from other languages, we can propose the hypothesis that non-referential nouns will occur without the augment in isiNdebele as well. If it turns out to be the case that there are a limited number of contexts in which the augment is absent, we can hypothesize that these would be connected to non-referentiality. Typical contexts to find non-referential readings for nouns are, first and foremost, negatives, as shown by Miestamo's typological survey and Givón's discourse considerations. These studies additionally suggest that other irrealis contexts may also be interesting in this regard. Therefore, to test the hypothesis, we prepared a questionnaire that systematically elicits sentences varying between realis and irrealis to produce referential and non-referential readings for nouns, which would then, according to the hypothesis, show variation between presence and absence of the augment. The next section will discuss the questionnaire and the ways in which the data for this study were collected. The actual data and results will be presented in Section 4.

3. MATERIAL AND METHOD

The study is based on primary fieldwork by the authors. We prepared a translation questionnaire consisting of a list of sentences in English to elicit noun phrases in various environments relevant to the research questions; these include NPs in the scope of direct negation but also in other irrealis contexts, as well as corresponding affirmative declaratives. We included the affirmative forms in order to reveal the differences that negatives and other irrealis contexts might show vis-à-vis their unmarked counterparts. The questionnaire is available in Appendix I. The research material consists of elicitations using this questionnaire, recorded and transcribed in South Africa by our team in May 2016. The majority of the recordings were made in the South African province of Mpumalanga, in the town of Siyabuswa. Additional data was elicited in April 2017 in Helsinki with a visiting isiNdebele speaker.

All in all, the questionnaire contains 58 sentences to be translated by the language consultants. Each sentence is preceded by another sentence providing a background context. The questionnaire aims to elicit sentences corresponding to a number of relevant variables. From the point of view of realis vs. irrealis, our sentences are divided into affirmative and negative declaratives and positive interrogatives, all with past time reference, and then affirmative declaratives with future reference. The most typical realis contexts are affirmative declaratives with past time reference. Negativity, interrogativity, and future reference lead to different degrees of irrealis in the reading. On another axis, as different syntactic positions may

behave differently with respect to the marking of NPs, our questionnaire contains a number of different sentence types: intransitive, transitive, existential/locative, and possessive predications; the latter types are interesting to examine separately as they have been observed to behave differently in some languages, for example in Latvian vs. Lithuanian as mentioned in Section 2. In each of these clause types, we observe whether or not the augment is present on the relevant noun constituent in the different realis and irrealis contexts. The relevant noun constituents are as follows: the subject in intransitives, the object in transitives, and the predicate noun in existential/locative and possessive predications. For some sentence types, we also elicited animate and inanimate nouns separately to see if any differences would emerge along this variable. Differences in the behaviour of different noun classes are not systematically addressed in the questionnaire, as testing sentences with nouns from all or most noun classes would have increased the amount of material to be elicited beyond what was possible within the limits of this study. The presentation of the results in Section 4 is ordered according to the four main sentence types found in the questionnaire.

The elicitation sessions were first recorded and then transcribed with the help of the consultants. The full questionnaire was elicited from five consultants altogether, four in Siyabuswa in May 2016, and one in Helsinki in April 2017. In Appendix I the sentences are given in order from 1 to 58. Because this order presents closely related sentences next to each other, the order of the sentences was randomized for the elicitation sessions. Although it was not strictly necessary, all informants also translated the background sentence. The recorded data therefore consists of 58 pairs of sentences that provide first the background context and then the actual stimulus sentence in which the (non-)occurrence of the augment was tested; transcriptions exist for the actual stimulus sentences only. The elicited data from our five main consultants is available in Appendix II. The recordings are archived by the Helsinki Ndebele project⁵ and are available for research purposes upon request.

It is clear that our research questions cannot be fully answered on the basis of elicited data. Referentiality and definiteness are highly context-dependent phenomena, and to get a complete picture of how these and other factors influence the use of the augment, a thorough discourse study with extensive corpora should be conducted. Such extensive materials are, however, not available at the moment. What the elicitation study does allow is the systematic manipulation of the stimuli, which would not be possible using corpus data, and it thus gives us a

⁵ Stability and Change in Language Contact: The Case of Southern Ndebele (South Africa) funded by the Academy of Finland.

good initial picture that can later be completed with systematic corpus study when it becomes possible. Some currently available textual materials were examined to evaluate the questionnaire-based results (see discussion in Section 5). Further methodological caveats include the usual potential problems encountered when using elicitation with translation questionnaires, such as problems of interference from metalanguage. One concern would naturally be the consultants' skills in the metalanguage of elicitation, English; that is, whether they know English well enough to be able to understand the relevant distinctions in the stimuli. Our consultants all had excellent command of English, so we are confident that this is not a problem in our study. It should also be noted that detailed tonal analysis is beyond the scope of this paper; in most cases the segmental analysis is clear, but the usefulness of tonal information will be brought up at some points. With these caveats in mind, we now move on to the presentation of the results.

4. RESULTS

In this section we will go through the data systematically, observing the presence vs. absence of the augment with respect to the relevant variables. The order of presentation follows the sentence types outlined above: transitives (4.1), intransitives (4.2), existentials and locatives (4.3), and possessives (4.4). Section (4.5) is a short interim summary. In the analysis, explicit reference is made to the sentence numbers in the questionnaire (these are always given following the letter S, i.e. S1, S2, S3 etc.; see Appendix I for the sentences to be translated and Appendix II for the translations given by the consultants). While the complete data can be seen in the appendix, only a selection of interesting examples will be discussed in the main text. These examples are numbered with plain numbers without a preceding letter; the number of the questionnaire sentence that the example corresponds to is given with each example.

4.1 Transitive

The first sixteen stimuli in the questionnaire (S1–S16) are transitive sentences. We are interested in the behaviour of the object noun's augment. The examples in (6) give the most typical responses to sentence stimuli S1–S4, which are meant to elicit declarative affirmatives with indefinite vs. definite and animate vs. non-animate objects. As can be seen in the complete data in the Appendix II, there is some variation between the consultants, but the general picture holds that the augment is always present and that definiteness seems to be expressed by the presence of the object prefix on the verb. No difference is found between

animate and non-animate objects used in the elicitation stimuli. Note that for noun classes 5 and 9 in *ibhubezi* and *incwadi*, the noun class prefix is zero, so the only overt prefix in these examples is the augment.

- (6a) *Ba-thol-e i-bhubezi izolo*
SM2-find-PFV AUG5-lion yesterday
‘They found a lion yesterday.’ (S₁)
- (6b) *Ba-thol-e i-ncwadi izolo.*
SM2-find-PFV AUG9-book yesterday
‘They found a book yesterday.’ (S₂)
- (6c) *Ba-li-thol-ile i-bhubezi izolo*
SM2-OM5-find-PFV AUG5-lion yesterday
‘They found the lion yesterday.’ (S₃)
- (6d) *Ba-yi-thol-ile i-ncwadi izolo*
SM2-OM9-find-PFV AUG9-book yesterday
‘They found the book yesterday.’ (S₄)

Looking at the corresponding negatives (7), we find a less clear picture and more variation. The object prefix may occur regardless of definiteness vs. indefiniteness (7a,b) – as shown in the translations, these examples are given as responses to both indefinite and definite stimuli, S₅/S₇ and S₆/S₈, respectively.⁶ An alternative construction with negation expressed by an auxiliary preceding a positive verb form is given by some consultants (7c–e) and in those examples animacy seems to show some effect on the presence of the object marker (cf. 7c with 7d vs. 7e). But most importantly, the augment is present in all cases, indicating that transitive objects under the scope of negation do not drop the augment.

- (7a) *A-ba-ka-li-thol-i i-bhubezi izolo*
NEG-SM2-NEG-OM5-find-NEG AUG5-lion yesterday
‘They didn’t find a/the lion yesterday.’ (S₅/S₇)

6 The role of the object prefix in expressing definiteness and referentiality in isiNdebele is still unclear and more research is needed.

- (7b) *A-ba-ka-yi-thol-i* *i-ncwadi* *kizolo*
 NEG-SM2-NEG-OM9-find-NEG AUG9-book yesterday
 ‘They didn’t find a/the book yesterday.’ (S6/S8)
- (7c) *A-zange* *ba-li-thol-e* *i-bhubezi izolo*
 NEG-AUX.NEG SM2-OM5-find-PFV AUG5-lion yesterday
 ‘They didn’t find a/the lion yesterday.’ (S5/S7)
- (7d) *A-zange* *ba-thol-e* *i-ncwadi* *izolo*
 NEG-AUX.NEG SM2-find-PFV AUG9-book yesterday
 ‘They didn’t find a book yesterday.’ (S6)
- (7e) *A-zange* *ba-yi-thol-e* *i-ncwadi* *izolo*
 NEG-AUX.NEG SM2-OM9-find-PFV AUG9-book yesterday
 ‘They didn’t find the book yesterday.’ (S8)

The sentence stimuli with positive interrogative and future meanings (S9–S16), aiming to bring in non-negative irrealis contexts, do not present any surprises. As can be seen in the responses to these stimuli in Appendix II, the marking of the object is quite similar to what was seen with affirmatives and negatives above. It is perhaps worth noting that object marking occurs on the verb with definite objects as well as with indefinite objects. Crucially for our hypothesis, the augment is present in all cases.

4.2 Intransitive

The following ten stimuli in the questionnaire (S17–S26) are intransitive sentences. In these cases, we are interested to see whether the subject shows any variation as to the presence of the augment. Sentences S17–S20 contain indefinite and definite subjects in affirmative and negative declaratives. The definites are by default referential, but for the indefinites there is variation: the affirmative (S17 ‘Some children arrived yesterday.’) is meant to elicit a specific reading whereas the negative (S19 ‘No children arrived yesterday.’) should be non-specific, and (S20 ‘The children didn’t arrive yesterday.’) should be specific. Example (8a) is given by two consultants in response to S17 and by all five in response to S18. Two consultants presented alternative ways to explicate the indefiniteness of the subject in S17, either adding an indefinite quantifier ‘one’ (8b) or by using an existential and a relative construction (8c). Example (8d) was given as a translation of S19, the negation of the subject being expressed by the combination of a

negated existential and a relative construction. Example (8e) was given for S20 by several consultants and for S21 by one.⁷

- (8a) *A-be-ntwana ba-fik-ile izolo*
 AUG2-NCP2-child SM2-arrive-PFV yesterday
 ‘Some/the children arrived yesterday.’ (S17/S18)
- (8b) *A-ba-ntwana a-ba-nye ba-fik-e kizolo*
 AUG2-NCP2-child AUG2-NCP2-one SM2-arrive-PFV yesterday
 ‘Some children arrived yesterday.’ (S17)
- (8c) *Ku-n-a-ba-ntwana a-ba-fik-e izolo*
 SM17-ASCOP-AUG2-NCP2-child REL-SM2-arrive-PFV yesterday
 ‘Some children arrived yesterday.’ (S17)
- (8d) *A-ku-na-be-ntwana a-ba-fik-ile-ko izolo*
 NEG-SM17-ASCOP-NCP2-child REL-SM2-arrive-PFV-REL yesterday
 ‘No children arrived yesterday.’ (S19)
- (8e) *A-be-ntwana a-ba-ka-fik-i izolo*
 AUG2-NCP2-child NEG-SM2-NEG-arrive-NEG yesterday
 ‘The/Some children didn’t arrive yesterday.’ (S20/S21)

The augment is clearly present in examples (8a,b,e). Looking at the two relative constructions (8c,d) more closely, we can see that the presence vs. absence of the augment is not entirely clear, as the associative copula ends in *a* and the augment for class 2 is *a* as well – has the augment been lost or have the two consecutive vowels been fused? Tonal analysis could help to decide the matter, as the high tone of the augment might show on the remaining vowel in case of fusion, but detailed tonal analysis is beyond the scope of this study (we will come back to the behaviour of tone with the associative copula and with the augment in Section 5). As will be seen in the following section, the associative copula construction is the only construction in which the augment has been observed to be lost under negation, but not in affirmatives. Thus, following this pattern, the most plausible analysis seems to be that in the affirmative (8c) there is fusion and in the negative (8d) the augment has been lost; the glossing follows this analysis. In any

⁷ The forms *kizolo* and *izolo* seem to be in free variation, some speakers preferring one and others the other. The form *be* for the class 2 prefix in (8a,d,e) is also a case of speaker variation.

case, these examples do not provide evidence for the augment being absent in the affirmative. Note also that the behaviour of the augment in the two examples under discussion (8c,d) is not a property of simple intransitive sentences, but rather something that happens in associative copula constructions, of which we will see more examples in the following section. So our conclusion here is that the augment is not dropped in plain intransitives.

Sentences S22–S26 add other irrealis contexts: positive interrogatives and futures, again with indefinite and definite variants. Here, too, we find variation between different consultants as to how the constructions are used, but the augment is present in all cases. Since these data do not change the picture in any way, we will not give glossed examples here, but all relevant data are available in Appendix II.

4.3 Existential and locative

Next we will look at existential and locative predications (S27–S34 and S43–S50 in the questionnaire).⁸ These stimuli come in pairs of indefinite and definite subject, or existential and locative predication, respectively. S27–S28 are affirmative declaratives and S29–S30 negative declaratives, S31–S32 are interrogatives, and S33–S34 are affirmative declaratives with future reference. S43–S50 show the same distinctions but with plural NPs. The examples in (9) show responses to the first four sentences (S27–S30).

- (9a) *Ku-ne-ncwadi* *etafuleni*
 SM17-ASCOP.AUG9-book table.LOC
 ‘There is a book on the table.’ (S27)
- (9b) *I-ncwadi* *i-phezu* *kwetafula*
 AUG9-book SM9-top LOC.table
 ‘The book is on the table.’ (S28)

8 Note that with two consultants, an earlier version of the questionnaire was used, and in this earlier version the word ‘lion’ appeared instead of the word ‘book’ in the sentences eliciting existential and possessive predications (S27–58). One reason for the change was that in some cases ‘lion’ tended to elicit something else than simple existential or possessive constructions, e.g. constructions with the verbs ‘keep’ and ‘capture’. Even more importantly the presence of the augment is not always easy to see because the augment in noun class 6, the plural class for the word ‘lion’, has the same vowel quality as the associative copula (cf. also the discussion of tone in Section 5).

- (9c) *A-ku-na-ncwadi* *etafuleni*
 NEG-SM17-ASCOP-book table.LOC

‘There is no book on the table.’ (S29)

- (9d) *I-ncwadi* *a-yi-kho* *phezu kwetafula*
 AUG9-book NEG-SM9-be top LOC.table

‘The book is not on the table.’ (S30)

As can be seen, the augment is absent in the negation of the existential expressed with the associative copula (9c), whereas it is present in all other cases. The presence of the augment in example (9a) is shown by the fusion of the vowel *a* of the associative copula *na* with the vowel *i* of the augment, resulting in *e* (*kunencwadi*); compare to (9c) where the augment is absent and the vowel of the associative copula *na* is preserved as *a* (*akunancwadi*).

As regards sentence stimuli (S31–S34) with positive interrogative and future meanings, the picture is straightforward and the augment is always present, see Appendix II. Finally we can observe that the plurality of the noun does not make a difference: the augment is present in all cases but the negative existential expressed with the associative copula, in which the noun referring to the entity whose existence is negated is, again, without the augment (see the responses to sentence stimuli S43–S46 in 10).⁹

- (10a) *Ku-nee-ncwadi* *etafuleni*
 SM17-ASCOP.AUG10-book table.LOC

‘There are books on the table.’ (S43)

- (10b) *Ii-ncwadi* *zi-phezo* *kwetafula*
 AUG10-book SM10-top LOC.table

‘The books are on the table.’ (S44)

- (10c) *A-ku-na-ncwadi* *etafuleni*
 NEG-SM17-ASCOP-book table.LOC

‘There are no books on the table.’ (S45)

⁹ Note that in class 10, which marks the plural for nouns that have their singular in class 9, the augment is a long *ii* (contrasting with a short *i* in class 9).

- (10d) *Ii-ncwadi a-zi-kho phezu kwetafula*
 AUG10-book NEG-SM10-be top LOC.table
 ‘The books are not on the table.’ (S46)

In (10a,b,d) the augment is present; in (10a) it has been fused with the vowel of the associative copula (*na+ii* > *nee*). In the negative existential with the associative copula (10c) the augment is absent.

4.4 Possessive

The final sentence type that we pay attention to in the questionnaire are possessive predications. These are expressed with the associative copula *na*. Stimulus sentences (S35–S42) are possessive predications with singular possessees and (S51–S58) are the corresponding sentences with plural possessees. Again, the stimulus sentences come in pairs of indefinite and definite noun (possessee), and are of four types: affirmative declaratives (S35–S36, S51–S52), negative declaratives (S37–S38, S53–S54), interrogatives (S39–S40, S55–S56), and sentences with future time reference (S41–S42, S57–S58). All responses to the stimuli are available in Appendix II. In (11) we can see examples given in response to affirmative and negative declarative stimuli with singular reference (S35–S38).

- (11a) *Ba-ne-ncwadi*
 SM2-ASCOP.AUG9-book
 ‘They have a/the book.’ (S35/S36)
- (11b) *Ba-na-yo i-ncwadi*
 SM2-ASCOP-PRON9 AUG9-book
 ‘They have the book.’ (S36)
- (11c) *A-ba-na-ncwadi*
 NEG-SM2-ASCOP-book
 ‘They don’t have a/the book.’ (S37/S38)
- (11d) *A-ba-na-yo i-ncwadi*
 NEG-SM2-ASCOP-PRON9 AUG9-book
 ‘They don’t have a/the book.’ (S37/S38)

As we can see, the definiteness distinction does not come out very clearly in these examples. There seems to be a preference to translate the examples with a defi-

nite possessee by a sentence including a pronominal marker (-yo in class 9, see 11b,d) followed by an augmented noun even in negative clauses. For the indefinites, there seems to be a preference for a construction without the pronominal marker, and the following noun then lacks the augment in the negative (11c). The positive interrogative and future tense stimuli do not present any surprises and the augment is always present. Finally, it can be noted that there is no essential difference between singular and plural nouns: just like in the singular, stimuli with plural nouns produce examples without the augment only when the possession of an indefinite noun is negated.¹⁰

4.5 *Interim summary*

In this section we have discussed the data elicited through our questionnaire. We have observed the presence vs. absence of the augment in nominal participants in four different sentence types: transitive, intransitive, existential/locative, and possessive, in each case looking at affirmative and negative declaratives, positive interrogatives, and sentences with future reference as well as the properties of the relevant nouns as singular vs. plural and definite vs. indefinite. The general picture has emerged that the augment is always present except in negated existential and possessive predications expressed with the associative copula construction, especially when the relevant noun has indefinite status. Illustrative examples (11a,c) are repeated here as (12a,b).

(12a)	<i>Ba-ne-ncwadi</i> SM2-ASCOP.AUG9-book 'They have a book.' (S35)	(12b)	<i>A-ba-na-ncwadi</i> NEG-SM2-ASCOP-book 'They don't have a book.' (S37)
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In the following section, we will discuss these results in more detail and relate them to the hypotheses and to the observations in earlier literature.

5. DISCUSSION AND CONCLUSION

In this final section we will discuss the results from different perspectives. We will begin by addressing the adequacy of the data for drawing conclusions about the use of the augment and bringing in some additional examples from other sources. We will then place the results in the wider context of Nguni languages, and then come back to the typological and functional considerations that origi-

¹⁰ Note that the same sentence, namely example (11c), was given by one consultant as response to both S53 (plural noun) and S37 (singular noun).

nally prompted our research questions. Finally, we will point to open questions and future research possibilities, and then conclude the paper.

The results reported above were based on data systematically elicited through a questionnaire designed specifically for answering the research questions posed in this article. Using elicited data has benefits as well as obvious problems. With a questionnaire we can elicit data that are highly relevant for answering the research questions and that take into account different contexts systematically. This is an obvious advantage and our data do indeed cover a wide variety of contexts relevant for the use of the augment. On the negative side, as the presence vs. absence of the augment is hypothesized to be sensitive to the referentiality status of the noun, it would be useful to see the wider discourse context of the examples to be analysed. This cannot be achieved with elicited data even if our questionnaire does include a sentence clarifying the context for each stimulus sentence; naturally occurring data would be needed. Another problem with our data is that although we have questionnaire data collected from five different consultants, some of their responses contain alternative structures that are not directly relevant and do not allow us to make inferences about the presence vs. absence of the augment in the intended context; therefore the number of relevant examples is somewhat limited. To complement the data provided by the questionnaire, we searched the database of the Helsinki Ndebele project for additional examples instantiating relevant contexts for the possible absence of the augment. Other materials, such as available Bible portions, were also examined, somewhat less systematically, to find further relevant examples.

Our results in Section 4 show that the augment is present in the nouns in all affirmative contexts and in almost all negative and irrealis contexts. There are only two contexts in our data in which the augment is dropped: negative existential and possessive predications expressed by the associative copula construction. The additional sources consulted confirm this picture: the augment is absent in negative existential and possessive predications expressed by the associative copula construction and present in all other contexts relevant to the hypothesis tested in this paper. In (13) we provide additional examples in which the augment is absent in the negated associative copula construction (Aunio et al. in this volume which also includes tonal information and marks surface penultimate lengthening).

- (13a) *A-ngí-ná* *muu-ntu*
 NEG-1SG-ASCOP NCPI-person

'I don't have a person.' (Aunio et al. in this volume, example 30)

- (13b) *A-ngí-ná* *paaka*
 NEG-1SG-ASCOP wild.cat

'I don't have a wild cat.' (Aunio et al. in this volume, example 8a)

- (13c) *A-ngí-ná* *be-saana*
 NEG-1SG-ASCOP NCP2-boy

'I don't have boys.' (Aunio et al. in this volume, example 8a)

The augment is absent in all three examples; the forms with the augment would be *u-mu-ntu*, *i-paka* and *a-be-sana*, respectively. Looking at the tones marked in (13), we can see that the vowel *á* of the associative copula *ná* carries high tone. This is, however, not a remnant of the augment absent on the following word, but is most likely contributed by the negative prefix on the associative copula (see Aunio et al. this volume for discussion). According to Lotta Aunio (pers. comm.), no cases have been found in isiNdebele in which the high tone of the augment is preserved when the augment has been dropped, although such effects are found in some other Bantu languages. These facts about the behaviour of tone make it quite clear that tone will not give any indication of the presence of the augment in cases where the vowel of the dropped augment would be identical to the vowel of the preceding associative copula, e.g. in example (8d), see discussion in Section (4.2), or in example (13c) where the augment would also be *á*-. In addition to the additional data examined, consultant PM, who spent time in Helsinki after the fieldtrip, confirmed the absence of the augment in negated associative copula constructions and its presence in other contexts when presented with examples from the questionnaire data. These facts give further support to our preliminary conclusion that, in isiNdebele, the augment is absent in nouns under the scope of negation in negative existentials and in negative possessives expressed with the associative copula construction, whereas it is present in all other contexts covered by our questionnaire.¹¹

Within the wider context of Nguni languages, our results confirm earlier observations about the limited number of contexts in which the augment is absent in isiNdebele. It has thereby been shown that isiNdebele occupies one extreme in the cross-Nguni variation evident in the use of the augment: in isiNdebele the

¹¹ The augment is absent in some other clausal contexts as well, e.g. with copulas (both positive and negative; Thera Crane, pers. comm.), but these are not addressed by our questionnaire. Since the absence of the augment in the copula construction concerns both affirmatives and negatives, its motivations are likely found somewhere else than polarity and (non-)referentiality, and it is therefore not directly relevant to the present paper.

augment is used in a higher number of contexts than in other Nguni languages. In other words, isiNdebele is the clearest case of a default-augmented language within the Nguni subgroup. Regarding the other extreme, during the field trip our team also gathered recordings from speakers of Sindebele. We observed that the augment is indeed always omitted regardless of the context, thus confirming Ziervogel's (1959) observations. It should, however, be noted that a closer tone analysis would be required to see if the augment has left some traces in the tone patterns of the prefixes in that variety. As to the contexts in which the augment is dropped in isiNdebele, these are indeed contexts that typically involve non-referential NPs. From the perspective of Nguni, we can observe that the contexts form a subset of the contexts in which the augment is dropped in isiXhosa and isiZulu. In isiNdebele, the augment is absent in negative possessives and negative existentials, whereas in isiXhosa and isiZulu, the contexts of its absence additionally include objects of negated transitive sentences for example.

An interesting typological parallel can be observed in Baltic languages. As discussed in Section 2, many languages around the Baltic Sea (Finnic, Slavic, Baltic) show differences in case marking in affirmatives vs. negatives. These differences involve both transitive objects under the scope of negation and the predicate NPs ("subjects") of existential and possessive sentences. Recall, however, that the relatively closely related Baltic languages Lithuanian and Latvian behave differently in this respect. In Lithuanian the effects of negation on case marking are present in transitives, existentials and possessives, but in Latvian these effects are limited to existentials and possessives (see Miestamo 2014), in parallel with what happens with the augment in isiNdebele.

In this paper, we have tested the hypothesis that if the augment is absent in some contexts in isiNdebele, the contexts will be those that typically involve non-referential NPs. The hypothesis was motivated by functional and typological considerations, as explained in Section 2. The hypothesis has been confirmed, and isiNdebele has been shown to conform to the typological tendency in which the effects of negation on the marking of NPs tend to relate to the (non-)referentiality of the NPs under the scope of negation. The effects are not very strong or clear in isiNdebele: many contexts that induce non-referential readings retain the augment; but, taking the opposite perspective, we may conclude that those contexts that drop the augment are among the contexts in which non-referential readings are induced.

However, due to the limitations of the data discussed in the beginning of this section, these results must be considered somewhat tentative and preliminary, or at least as not revealing the whole picture or bringing out all factors relevant to the behaviour of the augment. To gain a more complete picture in future work,

the data underlying the generalization must be increased both in sheer quantity as well as regarding the types of data considered. The questionnaire should be elicited using nouns from different noun classes. More contexts should be included in the questionnaire, for example, negative questions and further types of irrealis contexts. Questionnaire data should be collected from a higher number of speakers. And most importantly, data types should be expanded to cover proper corpus work to ensure that enough naturally occurring data complement the questionnaire based elicited data. In the corpus work, since the presence of the augment seems to be the default case in isiNdebele, a good methodological strategy could be to start by collecting all examples in which the augment is absent and then analyse the properties of those examples. The next step would be to investigate examples with otherwise similar properties but with the augment present, to tease out the relevant factors. Unfortunately, the availability of corpora for isiNdebele is still rather limited, so more extensive corpus work will have to wait until more corpora become available.

ABBREVIATIONS

ASCOP	Associative copula	OM	Object marker
AUG	Augment	PAR	Partitive
AUX	Auxiliary	PFV	Perfective
DET	Determiner	PRON	Pronoun
FV	Final vowel	PST	Past
GEN	Genitive	PTCP	Participle
INDF	Indefinite	R	Realis
LOC	Locative	REF	Referential
M	Masculine	REL	Relative
NCP	noun class prefix	SG	Singular
NEG	Negative/negation	SM	Subject marker
OBJ	Object		

Numbers preceding an abbreviation refer to person (e.g. 1SG, 2PL, 3SG). Numbers following an abbreviation refer to noun class (e.g. AUG5, OM5).

REFERENCES

- BLOOM STRÖM, Eva-Marie & Matti MIESTAMO *forthcoming*. The Use of the Augment in Nguni Languages with Special Reference to the Referentiality of the Noun. In: E.-M. BLOOM STRÖM, H. GIBSON, R. GUÉROIS & L. MARTEN (eds), *Current Approaches Morphosyntactic Variation in Bantu*. Oxford: OUP.
- BUELL, Leston 2009. The Distribution of the Nguni Augment: A Review. Paper presented at the Bantu Augment Workshop, Leiden University.
- CARSTENS, Vicki & Loyiso MLETSHE 2016. Negative Concord and Nominal Licensing in Xhosa and Zulu. *Natural Language and Linguistic Theory* 34: 761–804.
- GIVÓN, Talmy 1978. Negation in Language: Pragmatics, Function, Ontology. In: P. COLE (ed.), *Syntax and Semantics* (Pragmatics 9): 69–112. NY: Academic Press.
- GIVÓN, Talmy 2001. *Syntax: An Introduction*, I. Amsterdam: John Benjamins.
- HALPERT, Claire *in press*. The Augment. In: L. MARTEN, N.C. KULA, J. ZELLER & E. HURST (eds), *The Oxford Guide to the Bantu Languages*. Oxford: OUP.
- MIESTAMO, Matti 2005. *Standard Negation: The Negation of Declarative Verbal Main Clauses in a Typological Perspective*. Berlin: Mouton De Gruyter.
- MIESTAMO, Matti 2014. Partitives and Negation: A Cross-Linguistic Survey. In: S. LURAGHI & T. HUUMO (eds), *Partitive Cases and Related Categories*: 63–86. Berlin: Mouton De Gruyter.
- PETZELL, Malin & Karoline KÜHL 2017. The Influence of Non-Linguistic Factors on the Usage of the Pre-Prefix in Luguru. *Linguistic Discovery* 15(1): 35–48.
- VON STADEN, Paul M.S. 1973. The Initial Vowel of the Noun in Zulu. *African Studies* 32: 163–181.
- TARALDSEN, Knut Tarald 2010. The Nanosyntax of Nguni Noun Class Prefixes and ConCORDS. *Lingua* 120: 1522–1548.
- ZIERVOGEL, Dirk 1959. *A Grammar of Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa*. Pretoria: J.L. van Schaik.

APPENDIX I: QUESTIONNAIRE

- S1. What did they find yesterday? They found a lion yesterday.
- S2. What did they find yesterday? They found a book yesterday.
- S3. Did they find the lion yesterday? They found the lion yesterday.
- S4. Did they find the book yesterday? They found the book yesterday.
- S5. Did they find something yesterday? They didn't find a lion yesterday.
- S6. Did they find something yesterday? They didn't find a book yesterday.
- S7. Did they find the lion yesterday? They didn't find the lion yesterday.
- S8. Did they find the book yesterday? They didn't find the book yesterday.
- S9. They were looking for animals. Did they find a lion yesterday?
- S10. They were looking for things. Did they find a book yesterday?
- S11. They were looking for the lion. Did they find the lion yesterday?
- S12. They were looking for the book. Did they find the book yesterday?
- S13. What will they find tomorrow? They will find a lion tomorrow.
- S14. What will they find tomorrow? They will find a book tomorrow.
- S15. Will they find the lion tomorrow? They will find the lion tomorrow.
- S16. Will they find the book tomorrow? They will find the book tomorrow.
- S17. Who arrived yesterday? Some children arrived yesterday.
- S18. Did the children arrive yesterday? The children arrived yesterday.
- S19. Did some children arrive yesterday? No children arrived yesterday.
- S20. Did the children arrive yesterday? The children didn't arrive yesterday.
- S21. Were there some children that arrived yesterday? Some children didn't arrive yesterday.
- S22. There were people arriving yesterday. Did some children arrive yesterday?
- S23. There were people arriving yesterday. Did any children arrive yesterday?
- S24. The children were supposed arrive. Did the children arrive yesterday?
- S25. Who will arrive tomorrow? Some children will arrive tomorrow.
- S26. Will the children arrive tomorrow? The children will arrive tomorrow.
- S27. What is there on the table? There is a book on the table.
- S28. Where is the book? The book is on the table.
- S29. What is there on the table? There is no book on the table.
- S30. Where is the book? The book is not on the table.
- S31. I'm seeing something on the table. Is there a book on the table?

- S32. The book is somewhere here. Is the book on the table?
- S33. What will there be on the table? There will be a book on the table.
- S34. Where will the book be? The book will be on the table.
- S35. What do they have? They have a book.
- S36. I don't know where the book is. Do they have the book? They have the book.
- S37. What do they have? They don't have a book.
- S38. The book is somewhere here. Do they have the book? They don't have the book.
- S39. They have some things. Do they have a book?
- S40. The book is somewhere here. Do they have the book?
- S41. What will they have? They will have a book.
- S42. Will they have the book? They will have the book.
- S43. What is there on the table? There are books on the table.
- S44. Where are the books? The books are on the table.
- S45. What is there on the table? There are no books on the table.
- S46. Where are the books? The books are not on the table.
- S47. I see something on the table. Are there books on the table?
- S48. I don't know where the books are. Are the books on the table?
- S49. What will there be on the table? There will be books on the table.
- S50. Where will the books be? The books will be on the table.
- S51. What do they have? They have books.
- S52. I don't know where the books are. Do they have the books? They have the books.
- S53. What do they have? They don't have books.
- S54. I don't know where the books are. Do they have the books? They don't have the books.
- S55. They have some things. Do they have books?
- S56. I don't know where the books are. Do they have the books?
- S57. What will they have? They will have books.
- S58. Will they have the books? They will have the books.

APPENDIX II: DATA

This appendix contains the questionnaire answers given by the five consultants:

- a. MM (interviewed 16 May 2016)
- b. ZLS (interviewed 17 May 2016)
- c. MS (interviewed 18 May 2016)
- d. FS (interviewed 19 May 2016)
- e. PM (interviewed 19 April 2017)

As mentioned in Section 4.3, an earlier version of the questionnaire was used with consultants a and b. The difference is that for the existential and possessive sentences, the word 'lion' was used instead of 'book'. The transcriptions have not been normalized to the official orthography. Obvious transcription errors made by the consultants have been corrected based on the recordings, but speaker variation for example, in vowel elision, vowel qualities and whether morphemes/words are written separately vs. together has not been systematically unified.

S1. What did they find yesterday? They found a lion yesterday.

- a. Bathole ibhubezi kizolo.
- b. Bathole ibhubezi izolo.
- c. Bathole ibhubezi kizolo.
- d. Bathole ibhubezi izolo.
- e. Bafumene ibhubezi izolo.

S2. What did they find yesterday? They found a book yesterday.

- a. Bathole incwadi kizolo.
- b. Bathole incwadi izolo.
- c. Bathole incwadi kizolo.
- d. Bathole incwadi izolo.
- e. Bafumene incwadi izolo.

S3. Did they find the lion yesterday? They found the lion yesterday.

- a. Baltholile ibhubezi kizolo.
- b. Baltholile ibhubezi izolo.
- c. Balitholile ibhubezi kizolo.
- d. Balitholile ibhubezi izolo.
- e. Balifumene ibhubezi izolo.

S4. Did they find the book yesterday? They found the book yesterday.

- a. Baytholile incwadi izolo.
- b. Baytholile incwadi izolo.
- c. Bayitholile incwadi kizolo.
- d. Bayitholile incwadi izolo.
- e. Bayifumene incwadi izolo.

- S5. Did they find something yesterday? They didn't find a lion yesterday.
- Abakaltholi ibhubezi kizolo.
 - Abakaltholi ibhubezi izolo.
 - Abakalitholi ibhubezi kizolo.
 - Azange balithole ibhubezi izolo.
 - Azange bafumane ibhubezi izolo.
- S6. Did they find something yesterday? They didn't find a book yesterday.
- Abakaytholi incwadi kizolo.
 - Ababaytholi incwadi izolo.
 - Abakatholi incwadi kizolo.
 - Azange bathole incwadi izolo.
 - Azange bafumane incwadi izolo.
- S7. Did they find the lion yesterday? They didn't find the lion yesterday.
- Abakaltholi ibhubezi kizolo.
 - Abakaltholi ibhubezi izolo.
 - Abakalitholi ibhubezi izolo.
 - Azange balithole ibhubezi izolo.
 - Azange balifumane ibhubezi izolo.
- S8. Did they find the book yesterday? They didn't find the book yesterday.
- Abakaytholi incwadi kizolo.
 - Abakaytholi incwadi izolo.
 - Abakayitholi incwadi kizolo.
 - Azange bayithole incwadi izolo.
 - Azange bayifumane incwadi izolo.
- S9. They were looking for animals. Did they find a lion yesterday?
- Balitholile ibhubezi izolo?
 - Baytholile ingwenyama izolo na?
 - Balitholile ibhubezi kizolo na?
 - Balitholile ibhubezi izolo na?
 - Balifumene ibhubezi izolo na?
- S10. They were looking for things. Did they find a book yesterday?
- Niytholile incwadi kizolo?
 - Baytholile incwadi izolo na?
 - Bayitholile incwadi kizolo na?
 - Bayitholile incwadi izolo na?
 - Bayifumene incwadi izolo na?
- S11. They were looking for the lion. Did they find the lion yesterday?
- Baltholile ibhubezi kizolo?
 - Baltholile ibhubezi izolo na?
 - Balitholile ibhubezi kizolo na?
 - Balitholile ibhubezi izolo na?
 - Balifumene ibhubezi izolo na?

- S12. They were looking for the book. Did they find the book yesterday?
- Bayitholile incwadi kizolo?
 - Baltholile incwadi izolo na?
 - Bayitholile incwadi kizolo na?
 - Bayitholile incwadi izolo na?
 - Bayifumene incwadi izolo na?
- S13. What will they find tomorrow? They will find a lion tomorrow.
- Bazokthola ibhubezi ksasa.
 - Bazokthola ibhubezi ksasa.
 - Bazokuthola ibhubezi kusasa.
 - Bazokuthola ibhubezi ksasa.
 - Bazokufumana ibhubezi kusasa.
- S14. What will they find tomorrow? They will find a book tomorrow.
- Bazokthola incwadi ksasa.
 - Bazokthola incwadi ksasa.
 - Bazokutho incwadi ksasa.
 - Bazokuthola incwadi ksasa.
 - Bazokufumana incwadi kusasa.
- S15. Will they find the lion tomorrow? They will find the lion tomorrow.
- Bazolthola ksasa ibhubezi.
 - Bazolthole ibhubezi ksasa.
 - Bazolithola ibhubezi kusasa.
 - Bazolithola ibhubezi ksasa.
 - Bazolifumana ibhubezi kusasa.
- S16. Will they find the book tomorrow? They will find the book tomorrow.
- Bazoythola incwadi ksasa.
 - Bazoythola incwadi ksasa.
 - Bazoyithola incwadi ksasa.
 - Bazoyithola incwadi ksasa.
 - Bazoyifumana kusasa incwadi.
- S17. Who arrived yesterday? Some children arrived yesterday.
- Abanye abantwana bafike kizolo.
 - Abentwana bafikile izolo.
 - Abantwana abanye bafike kizolo.
 - Abentwana bafikile izolo.
 - Kunabantwana abafike izolo. / Kunabantwana abafikileko izolo.
- S18. Did the children arrive yesterday? The children arrived yesterday.
- Abantwana bafikile kizolo.
 - Abentwana bafikile izolo.
 - Abentwana bafikile kizolo.
 - Abentwana bafikile izolo.
 - Abantwana bafike izolo. / Abantwana bafikile izolo.

- S19. Did some children arrive yesterday? No children arrived yesterday.
- Akuna bantwana abafikilelo kizolo.
 - Akunabentwana abafikileko izolo.
 - Akunabentwana abafikileko kizolo.
 - Akunabentwana abafikileko izolo.
 - Akunabentwana abafike izolo.
- S20. Did the children arrive yesterday? The children didn't arrive yesterday.
- Abakafiki abantwana izolo.
 - Abentwana abakafiki izolo.
 - Abentwana abakafiki kizolo.
 - Abentwana azange bafike izolo.
 - Abantwana azange bafike izolo.
- S21. Were there some children that arrived yesterday? Some children didn't arrive yesterday.
- Abanye abantwana abakafiki kizolo.
 - Abentwana abakafiki izolo.
 - Abentwana abanye bafikilo kizolo.
 - Abentwana azange bafike izolo.
 - Abanye abantwana azange bafike izolo.
- S22. There were people arriving yesterday. Did some children arrive yesterday?
- Bafikile abantwana izolo?
 - Bakhona abentwana abaikileko izolo na?
 - Bafikile abentwana kizolona?
 - Kunabentwana abafikileko na?
 - Kukhona abantwana abafike izolo na?
- S23. There were people arriving yesterday. Did any children arrive yesterday?
- Ingabe kunabantwana abafikileko kizolo?
 - Kukhona abantwana abafikileko izolo na?
 - Bafikile abentwana kizola na?
 - Kunabentwana abafikileko izolo na?
 - Kukhona abantwana abafike izolo na?
- S24. The children were supposed arrive. Did the children arrive yesterday?
- Bafikile abantwana kizolo?
 - Abentwana bafikile izolo na?
 - Abentwana bafikile izolo na?
 - Abentwana bafikile izolo na?
 - Bafikile abantwana izolo na?
- S25. Who will arrive tomorrow? Some children will arrive tomorrow.
- Kuzoba nabentwana abefikako ksasa.
 - Abentwana bazokfika ksasa.
 - Abanye abentwana bazokufika ksasa.
 - Kunabentwana abazokufika ksasa.
 - Kunabantwana abazokufika kusasa.

S26. Will the children arrive tomorrow? The children will arrive tomorrow.

- a. Bazokfika ksasa abantwana.
- b. Abentwana bazokfika ksasa.
- c. Abentwana bazokufika kusasa.
- d. Abentwana bazokufika ksasa.
- e. Abantwana bazokufika kusasa.

S27. What is there on the table? There is a book on the table.

- a. Kune bhubezi nge mva.
- b. Kunebhubezi ngemua kwendlu.
- c. Kunencwadi phezu kwetafula.
- d. Kunencwadi etafuleni.
- e. Kunencwadi etafuleni.

S28. Where is the book? The book is on the table.

- a. Inge muva ibhubezi.
- b. Ibhubezi lingemua kwendlu.
- c. Incwadi iphezu kwetafula.
- d. Incwadi iphezu kwe tafula.
- e. Incwadi isetafuleni.

S29. What is there on the table? There is no book on the table.

- a. Akuna bhubezi nge muva.
- b. Akunabhubezi ngemua kwendlu.
- c. Akunancwadi phezu kwetafula.
- d. Akunancwadi etafuleni.
- e. Akunancwadi etafuleni.

S30. Where is the book? The book is not on the table.

- a. Alikho ibhubezi nge muva.
- b. Ibhubezi alikho ngemua kwendlu.
- c. Incwadi ayikho phezu kwetafula.
- d. Incwadi ayikho phezu kwe tafula.
- e. Incwadi ayisisetafuleni.

S31. I'm seeing something on the table. Is there a book on the table?

- a. Ingabe kune bhubezi emuva?
- b. Likhona ibhubezi ngenwa na?
- c. Kunencwadi etafulenapho na?
- d. Kunencwadi phezu kwetafula na?
- e. Kunencwadi etafuleni na?

S32. The book is somewhere here. Is the book on the table?

- a. Ingabe kune bhubezi ngemuva?
- b. Ibhubezi lingemua kwendlu na?
- c. Incwadi iphezu kwetafula na?
- d. Incwadi ikohna phezu kwe tafula na?
- e. Incwadi isetafuleni na?

- S33. What will there be on the table? There will be a book on the table.
- Kungenzeka kuthi kune bhubezi emuva.
 - Kuzoba nebhubezi ngemua kwendlu.
 - Kuzobe kunencwadi phezu kwetafulapho.
 - Kungaba nencwadi etafuleni.
 - Kuzoba nencwadi etafuleni.
- S34. Where will the book be? The book will be on the table.
- Ibhubezi lizoba nge muva.
 - Ibhubezi lingaba ngemua kwendlu.
 - Incwadi izobe iphezu kwetafula.
 - Incwadi ingabe phezu kwe tafula.
 - Incwadi izokuba setafuleni.
- S35. What do they have? They have a book.
- Bane bhubezi.
 - Baphtethe ibhubezi.
 - Baphethe incwadi.
 - Banencwadi.
 - Banencwadi.
- S36. I don't know where the book is. Do they have the book? They have the book.
- Baltolile ibhubezi.
 - Balphethe ibhubezi.
 - Bayiphethe incwadi.
 - Banayo incwadi.
 - Banencwadi. / Banayo incwadi.
- S37. What do they have? They don't have a book.
- Abakaltholi ibhubezi.
 - Abakaphathi ibhubezi.
 - Abakaphathi incwadi.
 - Abanayo incwadi. / Abanancwadi.
 - Abanancwadi.
- S38. The book is somewhere here. Do they have the book? They don't have the book.
- Abakaltholi ibhubezi.
 - Abakaltholi ibhubezi.
 - Awa abakayitholi.
 - Abanayo incwadi. / Abanancwadi.
 - Abanayo incwadi.
- S39. They have some things. Do they have a book?
- Bane bhubezi?
 - Balphethe ibhubezi na?
 - Bayiphethe incwadi na?
 - Banayo incwadi na?
 - Banencwadi na?

- S40. The book is somewhere here. Do they have the book?
- Baltholile ibhubezi?
 - Balphethe ibhubezi na?
 - Bayiphethe incwadi na?
 - Banayo incwadi na?
 - Banencwadi na?
- S41. What will they have? They will have a book.
- Bazobe bane bhubezi.
 - Bazobe balphethe ibhubezi.
 - Bazobe balphethe incwadi.
 - Bazokuthola incwadi.
 - Bazabe banencwadi.
- S42. Will they have the book? They will have the book.
- Bazobe bane bhubezi.
 - Bazobe balphethe ibhubezi.
 - Bazobe bangakayiphathi incwadi.
 - Bazoba nayo incwadi.
 - Bazoba nayo incwadi.
- S43. What is there on the table? There are books on the table.
- Kunama bhubezi emuva.
 - Libhubezi ekungemua kwendlu.
 - Kuneencwadi phezu kwetafula.
 - Kuneencwadi etafuleni.
 - Kuneencwadi etafuleni.
- S44. Where are the books? The books are on the table.
- Ange muva amabhubezi.
 - Amabhubezi angemua kwendlu.
 - Iincwadi ziphezo kwetafula.
 - Iincwadi zisetafuleni.
 - Iincwadi zisetafuleni.
- S45. What is there on the table? There are no books on the table.
- Akunama bhubezi nge muva.
 - Akunamabhubezi ngemua kwendlu.
 - Akunancwadi phezu kwetafula.
 - Akunaancwadi etafuleni.
 - Akunancwadi etafuleni.
- S46. Where are the books? The books are not on the table.
- Amabhubezi awekho ngemuva.
 - Amabhubezi awekho ngemua kwendlu.
 - Iincwadi azikho phezu kwetafula.
 - Iincwadi azikho phezu kwe tafula.
 - Iincwadi azisisetafuleni.

- S47. I see something on the table. Are there books on the table?
- Ingabe kunama bhubezi ngemuva?
 - Kunamabhubezi ngemua kwendlu na?
 - Kuneencwadi phezu kwetafula na?
 - Kuneencwadi etafuleni na?
 - Kuneencwadi etafuleni na?
- S48. I don't know where the books are. Are the books on the table?
- Ingabe kunama bhubezi nge muva?
 - Ingabe amabhubezi angemua kwendlu na?
 - Iincwadi ziphezu kwetafula na?
 - Iincwadi ziphezu kwe tafula na?
 - Kuneencwadi etafuleni na?
- S49. What will there be on the table? There will be books on the table.
- Kuzoba nama bhubezi nge muva?
 - Kungaba namabhubezi ngemua kwendlu.
 - Kuzobe kuneencwadi etafuleni.
 - Kungaba neencwadi etafuleni.
 - Kuzoba neencwadi etafuleni.
- S50. Where will the books be? The books will be on the table.
- Amabhubezi azoba nge muva.
 - Amabhubezi angaba ngemua kwendlu.
 - Iincwadi zizobe ziphezu kwetafula.
 - Iincwadi zingaba phezu kwe tafula.
 - Iincwadi zizoba setafuleni.
- S51. What do they have? They have books.
- Baphethe amabhubezi.
 - Baphethe inbhubezi.
 - Baphethe iincwadi.
 - Baneencwadi.
 - Baneencwadi. / Baphethe iincwadi.
- S52. I don't know where the books are. Do they have the books? They have the books.
- Banama bhubezi.
 - Bawaphethe amabhubezi.
 - Baziphethe iincwadi.
 - Banazo iincwadi.
 - Banazo iincwadi.
- S53. What do they have? They don't have books.
- Abakawatholi amabhubezi.
 - Abakaphathi amabhubezi.
 - Abakaphathi iincwadi.
 - Abanazo iincwadi.
 - Abanancwadi.

S54. I don't know where the books are. Do they have the books? They don't have the books.

- a. Abakawatholi amabhubezi.
- b. Abakawaphathi amabhubezi.
- c. Abakaziphathi incwadi.
- d. Abanazo iincwadi.
- e. Abanazo iincwadi. / Abakaphathi iincwadi.

S55. They have some things. Do they have books?

- a. Balitholile ama bhubezi?
- b. Bawaphethe amabhubezi na?
- c. Baziphethe iincwadi na?
- d. Banazo iincwadi na?
- e. Baneencwadi na?

S56. I don't know where the books are. Do they have the books?

- a. Kunama bhubezi?
- b. Bawaphethe amabhubezi na?
- c. Baziphethe iincwadi na?
- d. Banazo iincwadi na?
- e. Banazo iincwadi na? / Baphethe iincwadi na?

S57. What will they have? They will have books.

- a. Bazokthola amabhubezi.
- b. Bazobe baphethe amabhubezi.
- c. Bazobe baphethe iincwadi.
- d. Bazokuthola iincwadi.
- e. Bazoba neencwadi.

S58. Will they have the books? They will have the books.

- a. Bazoba nawo amabhubezi.
- b. Bazoba nalo ibhubezi.
- c. Bazobe banazo iincwadi.
- d. Bazozithola iincwadi.
- e. Bazoba nazo incwadi.

CLICK VARIATION AND REACQUISITION IN TWO SOUTH AFRICAN NDEBELE VARIETIES

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This article deals with click consonants in two Nguni varieties of South Africa, namely isiNdebele, or Southern Ndebele, as it is better known outside of South Africa; and Sindebele, or Northern Transvaal Ndebele. We review previous research on the topic, in which isiNdebele been described as having a somewhat reduced click inventory compared to better described Nguni languages, and Sindebele has been claimed to have lost clicks completely. We also review previous research on click loss, variation, and acquisition. We then describe the current situation of both language varieties regarding clicks. For Sindebele, we observe that while clicks indeed seem to have been almost completely replaced by other consonants, some speakers still do produce clicks in isolated words, possibly as a result of recent contact with isiZulu. In isiNdebele, we find that the lateral click has been lost almost completely, while the distinction between dental and postalveolar has been lost for some speakers (with most of them preferring the dental click), whereas some speakers still maintain the distinction. We propose a tentative correlation between increasing formal education in the isiNdebele language and the tendency to maintain the two clicks as distinct, but generally find the functional load of the distinction to be very low, at least on a lexical level.

1. INTRODUCTION

The language varieties known as Ndebele belong to the Nguni branch of the Southern Bantu languages. All Nguni languages are spoken in South Africa, with the exception of Northern Ndebele (or Zimbabwean Ndebele), which is spoken in Zimbabwe. Southern Ndebele (sometimes known as Transvaal Ndebele, or isiNdebele, used below) is spoken to the east of Pretoria in the former apartheid-era homeland of KwaNdebele. However, the Northern Ndebele of Zimbabwe is, despite its name, more closely related to isiZulu than to isiNdebele.

A third Ndebele language is Sumayela Ndebele (sometimes called Northern Transvaal Ndebele) or Sindebele (used below), spoken in Limpopo, in and around the town of Mokopane. While sometimes considered a dialect of isiNdebele, Sindebele is quite distinct from it and is under considerable influence from neighboring Sotho-Tswana languages. In fact, even the position of Sindebele within the Nguni branch is an open question.

Studia Orientalia 120 (2019), pp. 213–282

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ISSN: 0039-3282

This study looks at the two Ndebele varieties spoken in South Africa, to the exclusion of Northern Ndebele in Zimbabwe. While isiNdebele has approximately 1.1 million speakers and is one of the official languages of South Africa, Sindebele lacks any official recognition and is only spoken by some thousands of people.

Click consonants are a prevalent feature of the Nguni languages, but both South African Ndebeles have been described as having reduced click inventories – isiNdebele with only two phonemic series clicks and Sindebele with none. This study seeks to investigate the variation in click use (or non-use) in these languages as well as the sociolinguistic factors affecting it.

The main research topic for isiNdebele is the variation in the place of articulation of click consonants, and the research questions investigated are as follows:

1. How does production of click consonants vary in isiNdebele?
2. How many phonemic clicks are in the consonantal inventory of isiNdebele?
3. Does varying familiarity with other Nguni languages with larger click inventories correlate with varying realizations of clicks?
4. Does the age of speakers correlate with variations in click realization?
5. Does the level of education of speakers correlate with variation?

For Sindebele, the relevant inquiries can be stated as follows:

1. Are there cognate lexemes in Sindebele with clicks in their isiNdebele equivalents?
2. Which speech sounds in Sindebele correspond to the clicks of isiNdebele?
3. Can earlier descriptions of the above be confirmed?

2. PRELIMINARIES

In the following sections we will present an outline of some common features of the phonological systems of the Nguni languages with a focus on their click consonant inventories, along with an overview of what has been previously reported regarding click consonants in Sindebele and isiNdebele. We also include discussion of previous research on click loss and variation, and review some of the relevant sociolinguistic literature.

2.1 Click consonants in the phonological systems of the Nguni languages

Unusually among Bantu languages, Southern African languages, and the Nguni languages in particular, are known to have relatively large consonant inventories. Some of the less typical features – at least for Bantu languages – include, in addition to the click consonants, lateral fricatives and affricates, numerous places of articulation (up to six in isiNdebele and isiXhosa) and a three-way contrast in manner of articulation for plosives and affricates. All of the Nguni languages are tonal. They are known for a relatively well studied interaction between the segmental and

prosodic levels of the phonological system known as tonal depression, in which a set of mainly obstruent consonants known as depressor consonants causing the pitch of the following mora to lower (along with other language dependent changes).

With the sole exception of Sindebele, all the Nguni languages have clicks. Three series of clicks – dental, postalveolar, and lateral – are found in Siphûthî (Donnelly 2007: 63–65), isiXhosa (Doke 1967: 93; Gowlett 2003: 615–616), Zimbabwean Ndebele (Sibanda 2004: 4–7), and isiZulu (Khumalo 1987: 102–106). Manners of articulation range from four in Siphûthî to six in isiXhosa. The isiXhosa set includes plain, aspirated, slack or breathy voiced, and nasalized, as well as slack voiced nasal and glottalized nasal clicks, while isiZulu and Zimbabwean Ndebele lack the glottalized nasal series.¹ The click inventory in siSwati is reduced to one place of articulation (dental, but with idiolectal variation) with four accompaniments: plain, aspirated, voiced, and nasalized (Lanham 1960: 57–60).² The situation in isiNdebele, which is similar to that of siSwati, will be discussed in detail in subsequent sections.

It should be pointed out that descriptions of Southern Bantu languages variously refer to the postalveolar click series as alveolar (e.g. Khumalo 1987: 102–106 for isiZulu), palatal (e.g. Poulos & Msimang 1998: 481, again, for isiZulu, and Donnelly 2007: 64–65 for Siphûthî), or as being located somewhere between these two places – for example as postalveolar (e.g. for Zimbabwean Ndebele by Sibanda 2004: 5–7) or palato-alveolar (e.g. Skhosana 2009: 73 for isiNdebele, and Doke 1967: 35 for all the Southern Bantu languages that have clicks). While there may well be variation between languages regarding the place of articulation of this series of clicks, the seeming confusion in terminology is not very surprising, given that no Nguni or other Southern Bantu language makes a four-way distinction in place of articulation of click consonants. There is thus no great functional pressure to clearly distinguish between alveolar and palatal places of articulation – the speakers would have no need to be exact in their pronunciation regarding the place of articulation of this click series. This would, in turn, allow for more free variation between and within idiolects, as well as conditioned variation due, for example, to the influence of the tongue positions required by surrounding vowels. Thus, it would be quite plausible for clicks of this series to average out as being produced somewhat between the alveolar and palatal places of articulation commonly found in the non-Bantu click languages of southern

1 Doke (1967: 93) claims the glottalized nasal series occurs (though rarely) in isiZulu, and that isiXhosa even has a seventh series, with a voiced glottal fricative following click release. Neither claim can be substantiated by later descriptions of those languages.

2 *Accompaniment* is how the specialist literature commonly refers to the various manners of articulation and co-articulations that click consonants display.

Africa. We have chosen to refer to this series of clicks as postalveolar, as this fits our observations of isiNdebele best.

2.2 *No (more) clicks in Sindebele*

The phonological system of Sindebele has been described by Ziervogel (1959) and later Msimang (1989) and Skhosana (2009) as not having clicks. Ziervogel, however, states that there was a time when clicks were present in the language, as recalled by his older informants. He also mentions a handful of plant names, still in use at the time of his writing, that contain clicks (Ziervogel 1959: 33). According to Skhosana (2009: 71), these click words are no longer in use, and words similar to ones in Northern Sotho are used instead.

Ziervogel (1959: 33) notes similarities between Sindebele words and equivalent words in other Nguni languages with clicks in them. In his examples, the ejective velar affricate /kx'/ corresponds to non-nasal clicks, while nasal clicks are represented by the velar nasal /ŋ/ in Sindebele.

Sindebele has a set of fricative and affricate consonants which are not typically found in Nguni languages. In addition to the ejective velar affricate mentioned above, an aspirated velar affricate /kx^h/ as well as an aspirated labio-palatal affricate /pf^h/ are attested, along with the fricatives /x/ and /χ/. All these sounds are more widely found in the Sotho-Tswana languages, with which Sindebele has been in intensive contact since at least the seventeenth century (the region is mainly Sepedi-speaking; see, e.g. Doke (1967) for more on Sotho-Tswana consonants).³

2.3 *Clicks in isiNdebele*

In earlier literature, the click inventory of isiNdebele is described as more or less similar to that of isiZulu, with the same three places of articulation – that is, dental, postalveolar, and lateral – and five accompaniment types, although they are not always presented as being distributed evenly (see, e.g. Potgieter 1950; Skhosana 2009: 53–54, 73–74). However, the lateral series is seen as very marginal by Skhosana (2009: 54, 74), only occurring with the nasal accompaniment on some ideophones and verbs derived from them.

3 See Loubser (1994) for a treatment of the archaeological evidence of Mandebele presence in the Transvaal, as well as an overview of relevant ethnographic information. Especially relevant for the claim made here of centuries of contact with Sotho-Tswana speaking populations is the discussion of ceramic traditions in archaeological sites associated with Mandebele groups, showing a strong presence of ceramics of the Moloko tradition, associated commonly with Sotho-Tswana speakers, throughout the assumed Mandebele occupation, alongside ceramics of the Letaba tradition, associated especially with Venda sites elsewhere (Loubser 1994: 138–141).

The same situation can be seen in the bidirectional isiNdebele–English dictionary (Iziko lesiHlathululi-mezwi sesiNdebele 2006), in which only two words with a lateral click occur, both nasalized. The dental and postalveolar series are, however, both represented in the dictionary, each with all five accompaniments.

However, in the other dictionary available for isiNdebele, an English–isiNdebele unidirectional dictionary (Shabangu & Swanepoel 1989), instances of the lateral click are more numerous, with 40 entries attested, representing approximately 20–30 different roots with four accompaniment types.⁴

When comparing the dictionaries, we found that the entries containing lateral clicks in the English–isiNdebele dictionary either corresponded to roots containing a dental click in the isiNdebele–English dictionary or had no corresponding lexemes in the isiNdebele–English dictionary. Out of 22 roots we compared with <x>, we found no corresponding entry in the isiNdebele–English dictionary for eleven of them; for six, the corresponding click was represented with <c>; for two, it was represented as <q>; and for one root, <-xol->, which has numerous derivations in both dictionaries, we found reflexes with both <c> and <q>, for example <icolo>, <iqolo> ‘forgiveness’ and <-colela>, <-qolela> ‘forgive’. Reflexes of derivations of <-xol-> with (only) <c> were more common, for example <-colisa> ‘ask for forgiveness’ and <ukucolelwa> ‘amnesty’.

Finally, there were two forms for which no direct correspondence was found, but for which possible cognates nonetheless suggested themselves. The first, <-xabana> ‘quarrel’ seems to be a reciprocal derivation from the root <-qaba> ‘block across, cross’ – this is corroborated by the isiZulu cognate <-xabana>, derived from <-xaba> which as one of its meanings has ‘block the way, stand crosswise’ (Doke & Vilakazi 1953: 858). The second, <ixhaphozi> ‘vlei’ (a small, shallow, marshy lake or wetland) might be conceived as derived from <-chapha> ‘splash, stain’. Although that root is represented in the English–isiNdebele dictionary by two lexemes with <c>, <-chaphazela> ‘blot’ and <ichaphazana> ‘dot’, the isiZulu comparison might again point in the direction of a connection. In isiZulu both the roots <xapha> and <capha> exist, and both have one of their meanings relate to liquids or wetness (Doke & Vilakazi 1953: 109, 862). However, the connection here is less certain, both between the roots with different clicks, as well as between <ixhaphozi> and the underived root <xapha>. The full comparison can be found in Appendix I.

4 No examples of words with the non-nasalized depressor lateral click <gx> were found in any of our sources, but the other possibilities, i.e. plain <x>, aspirated <xh>, nasalized <nx>, and prenasalized depressor <ngx>, could all be found in Shabangu & Swanepoel (1989).

It thus seems that the common reflex of <x> in the English–isiNdebele dictionary and also of the historical lateral click /l/ is <c>, representing the dental click /l/. The historical connection can be supposed on the basis of isiZulu and isiXhosa reflexes of the <x> containing roots, as these also commonly represent the clicks in question with an <x> (when a cognate could be determined easily), which is indeed a lateral click in those languages.

Examples of each type of click found in the dictionaries are given in Table 1.⁵

Table 1 Examples of click containing words in isiNdebele dictionaries

	Dental	Postalveolar	Lateral
Plain	<ukucacisa> /ukulalisa/ 'to make clear'	<ukuqaqada> /uku!a!aḡa/ 'to climb up steep'	<ukuxabana> /ukullaḡana/ 'to quarrel'
Aspirated	<ukuchoba> /uku ^h oḡa/ 'to crush'	<ukuqhuba> /uku! ^h uḡa/ 'to prolong'	<ixhaphozi> /i!l ^h aḡozi/ 'a vlei'
Depressor	<isigcino> /isi ^ḡ lino/ 'an end'	<isigqila> /isi ^ḡ !ilo/ 'a slave'	
Nasal	<ukuncancabeza> /uku ^ḡ !a ^ḡ !aḡeza/ 'to apologize'	<umnqopho> /um ^ḡ ! ^ḡ oḡo/ 'an aim'	<ubunxemu> /ubu ^ḡ !lemu/ 'a squint'
Nasal depr.	<ingcenyē> /iŋ ^ḡ !eḡe/ 'a part'	<ingqondo> /iŋ ^ḡ ! ^ḡ ondo/ 'a mind'	<ingxoxo> /iŋ ^ḡ ! ^ḡ ollo/ 'a chat'

5 Click accompaniments are transcribed in the examples as follows: *plain* clicks only have the symbol for their respective click (dental l, postalveolar !, lateral ll; in the standard Nguni orthographies, such as that of isiNdebele, this is represented by any of the letters for the click consonants, <c>, <q>, or <x> by themselves), *aspirated* click are followed by the standard superscript *h* (dental l^h, postalveolar !^h, lateral ll^h; in the orthography, this is represented by the letter of the click consonant followed by an <h>: <ch>, <qh>, <xh>), *depressor* clicks are preceded by a superscript voiceless *g* (dental ḡ, postalveolar ḡ!; in the orthography this is indicated by a <g> preceding the click letter: <gc>, <gq>), *nasal* clicks are preceded by a superscript velar nasal (dental ḡ, postalveolar ḡ!, lateral ḡll; orthographically indicated by a preceding <n>: <nc>, <nq>). (Pre-)nasalized depressor clicks are phonetically realized in two significantly different ways, which are, accordingly, represented differently: either as preceded by a velar nasal and a superscript voiceless *g* (dental ḡ^ḡ!, postalveolar ḡ^ḡ!, lateral ḡ^ḡll) or in the same way as the (non-depressor) nasal clicks; in the orthography the (pre-)nasalized depressor clicks are represented by the digraph <ng> preceding the click letter itself: <ngc>, <ngq>, <ngx>.

It was noted as early as Potgieter (1950: 44) that not only was the inventory of click containing words in isiNdebele apparently significantly smaller than in isiZulu, but also that the realizations of some clicks had gotten, in his words, “confused” (Afrikaans *deurmekaar*). Potgieter does not elaborate much on what he means by this, but he does present some examples of isiNdebele words containing clicks for which the cognate isiZulu word has the click produced at a different place of articulation.

Of Potgieter’s eleven examples of isiNdebele words with clicks, six contain one or more dental clicks, three contain palatal clicks, and two have lateral clicks. Of his dental click words, Potgieter compares *-cina* ‘become strong’, *-ceda* ‘finish’, and *-chacha* ‘rip’ (<-qina>, <-qeda>, and <-chacha> in the modern orthography) to their palatal containing isiZulu equivalents *-qina*, *-qeda*, and *-qhaqha*; similarly, *-qimeza* (<-cimeza> in the modern orthography), with its palatal click, is compared to the (underived) isiZulu form *-cima*. The differences between some of the clicks as appraised by Potgieter compared to their presentation in the modern isiNdebele orthography show that the issue is not as simple as the clicks in some words having changed from their original Nguni forms (and as, presumably, still kept intact in isiZulu). Some of the lexemes have, in the dictionaries and in the modern orthography, clicks that differ from those given for them by Potgieter, and instead are similar to the isiZulu forms. Changes in place of articulation first in one direction (prior to Potgieter’s work) and then back within less than a century since seem improbable. Furthermore, there is a definite lack of regularity in the sound correspondences between the isiNdebele and isiZulu forms as compared by Potgieter. Considering this, a completed change of place of articulation does not present itself as a viable explanation for the variable pronunciations given for the isiNdebele forms in different sources, nor their varying differences from the isiZulu forms.

Our previous observations of click production among isiNdebele speakers point in a similar direction to that seen in Potgieter’s description. The speakers often do not consistently produce the same click during repetitions of the same lexical item, and there are differences between speakers in their frequency of use of the dental versus the palatal clicks, with different speakers producing one or the other more frequently and consistently. This variation is investigated in Section 4.2.

2.4 Previous research on click loss and variation

That some southern African languages were losing click phonemes has been noted by researchers since the nineteenth century (see Traill & Vossen 1997: 25–28 for an overview of the observations and their proper interpretation). The languages in question were mainly moribund Khoe languages which have since disappeared

due either to language shift to Afrikaans or to the death of all remaining speakers, and Traill & Vossen (1997: 28) claim that these cases of “sound system instability” and resultant click loss can be attributed to well-known processes of language attrition preceding language death.

More detailed research into the phenomenon of click loss or reduction itself has, however, only been conducted starting in the last few decades of the twentieth century. The first two studies of this kind were Traill (1986), who studied click loss in the Khoe languages, and Vossen (1991), whose study focused on the implications of click loss for the reconstruction of the Kalahari branch of the Khoe languages. Vossen also investigated the sociolinguistic settings of the languages in question.⁶ More detailed work on the sociolinguistics of click loss of the Kalahari languages can also be found in Wilmsen & Vossen (1990).

The main findings of Traill’s (1986) article are summarized by Traill & Vossen (1997: 28) as follows:

click loss systematically affected the alveolar and palatal influxes and [...] loss of the latter implied loss of the former [...]. In most cases they were replaced with “cognate” velar and palatal non-click stops (oral or nasal) respectively [...] The accompaniments were preserved in almost every case.⁷

Of the results in Vossen’s (1991) and Wilmsen & Vossen’s (1990) studies, the ones of most interest regarding our current work are those pertaining to the sociolinguistics of click loss. According to Traill & Vossen (1997), Vossen (1991) found that the Kalahari varieties in which click replacement had taken place were those spoken in areas in which archeological evidence points to a long-time interaction between foragers (as the Kalahari speakers at least initially would have been) and agropastoralists (likely Bantu-speaking).

After presenting the results of these earlier works, Traill & Vossen move on to discuss some cases of click loss for which they present older data supplemented by their own newer data. These come from the Kx’a language Northern Ju (called Angolan !Xū by Traill & Vossen 1997: 35–40) and the Tuu language !Xegwi (Traill & Vossen 1997: 41–42). An in-depth discussion of these cases is not possible here, but, in short, different types of clicks in these languages

6 The Kalahari branch of the Khoe languages is also known by the names Tshu-Khwe languages or Non-Khoekhoe languages, the latter used also by Traill & Vossen (1997), but the term “Kalahari languages” is chosen here simply due to its being less unwieldy than the other two nomenclatures.

7 Clicks with glottal stop accompaniments were an exception to this tendency, but as that accompaniment type does not occur in the languages examined in this study, we need not go into the details of Traill & Vossen’s analysis of this exception.

have ultimately been replaced by palatal or velar obstruents via various steps of weakening. Importantly, both languages were already in advanced stages of language shift or loss due to the influence of neighboring Bantu languages when the observations on click replacement and loss were made.

Based on their analysis, Traill & Vossen categorize clicks into two wider articulatory categories: dental or lateral clicks form a natural class of *affricated clicks*, whereas alveolar and palatal clicks constitute the natural class of *abrupt clicks*. Traill & Vossen propose that the abrupt clicks are articulatorily particularly demanding speech sounds, and to counteract this, the clicks may be “weakened” by reducing area of tongue contact with the palate, resulting in more noisy, affricated versions at similar places of articulation. These weakened clicks, however, are now perceptually less distinct from the already present affricated clicks, resulting in reduced perceptual salience of the system. A further change of the weakened clicks to non-click sounds increases distinctiveness again, and the perceptual salience of the system is restored.

Finally, Traill & Vossen (1997: 51–51) discuss some sociolinguistic considerations regarding the affected languages. That discussion mainly strengthens the sociolinguistic considerations already provided in the shorter descriptions by Vossen (1991) and Wilmsen & Vossen (1990), emphasizing the roles of intense long-term language contact and bilingualism of the speakers of the language undergoing click reduction or loss. One further point of discussion is added in Traill & Vossen (1997): if (as argued by Wilmsen & Vossen 1990) avoidance of being seen as “peculiar” by neighboring Bantu speakers was indeed the reason for click loss, why did the click loss almost exclusively affect just two out of the four to five click series (by place of articulation)? No definite answer to the question is provided,⁸ but it is proposed instead that the initiation of the process of click reduction or loss may well be due to sociolinguistic pressures, but that the way the process unfolds is the result of phonetic factors such as those described above.

All of the research discussed above has dealt with non-Bantu languages of southern Africa in various stages of language attrition, shift, or death. These examples may nevertheless help shed some light on the situation of the Bantu language Sindebele, which has also long been experiencing intense language contact with Sotho-Tswana languages, as well as with Afrikaans for the last couple of hundred years. Speakers of Sindebele are typically (at least) bilingual in Sindebele and a

8 In Wilmsen & Vossen (1990), the idea that dominant Nguni speakers in the area contributed to the retention of clicks found in their languages is dismissed due to the facts that the presence of Nguni speakers in the area at the relevant times cannot be reliably attested, and that the click inventories of Nguni languages (mostly) also contain the alveolar click, which has been lost in most of the languages in question (Traill & Vossen 1997: 51–52).

Sotho-Tswana language. It may turn out that the click loss observed in Sindebele follows similar patterns to click loss in the languages described above, due to the similar sociolinguistic context. Less attention has been paid to variation in click production in languages that are not experiencing such significant language shift, attrition, or death; isiNdebele is such a language.

Herbert (1990) discusses the possible markedness differences between the different places of articulation of clicks. Herbert bases his analysis of differences in markedness on the comparison of the different click inventories of Southern Bantu languages, on the one hand, and on the earlier research on click loss in Khoe languages by Traill (1986), on the other. Herbert's analysis also considers earlier work by Köhler (1963), also on Khoe languages. Herbert concludes that the two groups of click languages differ notably in terms of which clicks seem to be the most and least marked in them. The Khoe languages seem to lose their palatal and alveolar clicks much more easily than the lateral and dental ones (the abrupt and affricated clicks, respectively, to use Traill's terminology). It thus seems that for the Khoe languages, the palatal and alveolar clicks are marked in contrast with the lateral and dental ones. The Bantu data, in contrast, indicates to Herbert that among the Southern Bantu languages, the click which they seem most likely to retain in their inventories is the palatal click,⁹ followed by the dental click, with the lateral click as the least common type to occur. This indicates that the palatal (postalveolar) clicks are the least marked, with the lateral clicks as the most marked ones. While his article does not really deal with variation in click production within any single language, nor the actual processes of click loss as such, Herbert's ideas of the relative markedness of different clicks in the different language groups may be useful when dealing with click loss and variation. The same is true for his observation that click loss or reduction of click inventories does not seem to proceed in the same manner in all languages.

More recently, cases of click borrowing and loss – but also cases of click insertion into non-borrowed lexemes as well as variation in place of articulation of clicks – have been discussed in an article by Gunnink et al. (2015) about Bantu-Khoisan language contact and its effects on the Bantu languages of the Kavango-Zambezi transfrontier area in southwestern Africa, and in sections of Gunnink's PhD dissertation about the Botatwe language Fwe (Gunnink 2018: 27–32, 448–449). Regarding the variation in click pronunciation in Fwe, Gunnink (2018: 28) states the following:

9 The varying nomenclature of the non-dental, non-lateral series of clicks in descriptions of Southern Bantu languages is dealt with in Section 2.1.

Fwe uses different click types, the dental, lateral, and post-alveolar, but click type is not contrastive; the same word may be realized with a dental, lateral or post-alveolar click without change in meaning.

- (71) kùlápùrà ~ kù#àpùrà ~ kùllápùrà
 ku-lapur-a
 INF-tear-FV
 ‘to tear’

Which click type is used depends mainly on the speaker, with the dental click being the most common. Of the thirteen speakers interviewed for a contrastive study, the majority only used the dental click, and those who used a click type other than the dental, would also use the dental click.

Gunnink’s observation is relevant to our work for several reasons. First, it seems to parallel the situation in siSwati (a Nguni language spoken in Eswatini – before known as Swaziland – as well as northeastern South Africa), as described by Lanham (1960: 57–60). Second, it holds for some speakers of isiNdebele, according to our research, regarding the number of phonemic distinctions made in place of articulation of clicks. Finally, it challenges Herbert’s ideas about the markedness of clicks. Gunnink’s (2018) and Lanham’s (1960) descriptions of clicks in Fwe and siSwati run counter to Herbert’s examples of Bantu languages typically resorting to the palatal (postalveolar) place of articulation, if only one series of clicks is distinguishable, and so do our observations on isiNdebele, as will be related further below.

2.5 Click acquisition

In addition to click loss and variation, the ways in which languages acquire click consonants are of relevance to the research at hand. Specifically, we are concerned with how Bantu languages with clicks – excluding those languages in which they are *marginal phonemes*, defined by Pakendorf et al. (2017: 5) as “occurring in a handful of lexical items at most, often ideophones” – acquire clicks. We are less concerned with the origin of clicks in language in general, or with how click phonemes might have arisen in formerly non-click languages that were not spoken in contact with click languages. It appears fairly certain that all of the southern African Bantu languages with clicks originally acquired them as borrowings from other click languages, either Khoisan or Bantu. After their initial borrowing into the system, clicks may then have innovatively spread to native lexemes (Pakendorf et al. 2017: 7–8), as in the case of click insertion in Fwe described by Gunnink et al. (2015: 205–206). Unfortunately, research on the origins of the various click-containing lexemes in the Nguni languages

is quite sparse. Pakendorf et al. (2017: 8) summarize the general state of this research as follows:

The [Southern Bantu] languages have adopted significant numbers of lexical items with clicks from now-extinct varieties of the Khoekhoe branch of the Khoe family, which were spoken by pastoralists (see, e.g. Anders 1937; Bourquin 1951; Louw 1977a,b). Evidence for loans into [Southern Bantu] from Tuu languages spoken by foragers is far more limited – possibly due to the lack of documentation of these forager languages. Languages belonging to the !Ui branch of Tuu are historically known to have been spoken in the Eastern Cape, and possible !Ui sources for certain Nguni words are attested (du Plessis 2016). There are often unexplained phonological mismatches between the !Ui and [Southern Bantu] items, however, so that it is unclear if these are really loanwords.

The etymologies of click-containing words in isiNdebele or the cognates of click-containing words in Sindebele have so far not been systematically investigated. The number of words with clicks is lower in isiNdebele than for example in its close relative isiZulu – Pakendorf et al. (2017: 10) give the proportions of click containing words as 6.6% and 22% for isiNdebele and isiZulu respectively. At least according to our superficial impressions, a majority of the isiNdebele click lexemes have cognates in isiZulu and often isiXhosa, although idiosyncratic differences between the cognate lexemes and sets of lexemes are also often present. This state of affairs means that it will be difficult to determine whether any given lexeme is shared with other Nguni languages due to common origin (either as borrowed from a Khoisan language or as a shared innovation) or due to later borrowing.

The issue of *hlonipha* – taboo-avoiding language – and its role in introducing or spreading click consonants in the Nguni languages, as proposed for example by Herbert (2002), is also of no concern for this paper. The discussion mainly relates to developments presumably quite far in the past of the languages in question. No noticeable role of such avoidance practices in click use has been observed in our work on either of the Ndebele varieties as currently spoken.

2.6 Sociolinguistic preliminaries

Variationist sociolinguistics, as established especially by William Labov beginning in the 1960s (Labov 1963; 1966; 1972a; 1972b), is a sociolinguistic approach aiming to understand language change, not only through categorical, but also through variable processes. The key insight is that synchronic variation in languages is not random, and that correlations can be established between

linguistic features and social variables, the latter meaning social attributes of the speakers, such as age, gender, or social status (Bayley 2013).

In this study, we are mainly concerned with the effects of education on the production of the click consonants. Al-Wer (2002) cites numerous studies of Arabic varieties in which education was used as a social variable and where correlations were found between the speakers' level of education and their language use. Al-Wer points out, however, that education is often what she calls a "proxy variable", reflecting changes involved in acquiring an education (and especially higher levels of education), such as leaving one's home area and interacting with a wider circle of people speaking different language varieties. However, we are presently interested in how a standard language taught in schools affects the speakers' adherence to its prescriptive rules. The assumption that more literate or more highly educated speakers of a language tend to follow its standardized rules more closely, at least in certain settings, seems to be taken for granted in mainstream sociolinguistics. We are, at least, not aware of any explicit studies of this kind. We have noted this phenomenon in earlier fieldwork elsewhere,¹⁰ and the situation in isiNdebele is discussed further in Sections 4 and 5.

3. DATA AND METHODS

The analysis presented in this article is based on data collected by the authors on a field trip to the Limpopo and Mpumalanga provinces of South Africa in May 2016, supplemented by data collected by the primary author on three fieldtrips to the provinces of Gauteng and Mpumalanga in the previous year. The data for Sindebele was collected entirely on the 2016 trip, in several locations around Mokopane, Limpopo. The data for isiNdebele comes from all four trips and was recorded in Pretoria, Gauteng and in several locations in Mpumalanga. All of the data was recorded in interviews with self-identified L1 speakers of the language varieties in question.¹¹

Most of the consultants were interviewed individually, but in some cases, pair or group interviews were conducted due to time constraints. The main data collection method was elicitation of selected lexical items in a number of frames. The main wordlist used in elicitation was compiled by gathering lexical items containing

¹⁰ While conducting fieldwork on Erzya (one of the two languages in the Mordvinic branch of Uralic), we noticed a tendency for more educated (and usually young) speakers to use forms more in line with the norms of the standard variety, whereas older, less educated speakers used both more dialectal forms and displayed more Russian influence, both in morphosyntax and lexicon.

¹¹ A few L2 speakers were also interviewed during the course of the fieldwork, but their data is not used in this study.

clicks from two different isiNdebele dictionaries. Attention was paid mostly to the structure of the words, so that as many different types of clicks as possible could be elicited in as many different positions within the words as possible. Another wordlist was used for collecting data on nominal tone in isiNdebele (see Aunio et al. in this volume). This list also contained many words with clicks, and data gathered with it is therefore extensively used in this study as well. Finally, the data are also supplemented by earlier elicitations of isiNdebele data, some of which were also explicitly aimed at collecting data with click consonants.

The elicitations were mainly carried out as speaker translations from English into the target varieties, but if this approach led to too few of the expected items, the interviewees were also queried directly for the isiNdebele words (including Sindebele informants, who were occasionally prompted to provide Sindebele words that were similar to the given isiNdebele forms).

3.1 Sindebele data

Our Sindebele data presented here was collected in May 2016 in the town of Mokopane, and the village of Kalkspruit (also known as Ga-Maraba) in the Capricorn District of Limpopo. The data is limited to informants who were available during a restricted time period, and, due to the small sample size, should be considered highly preliminary. The data used is from a group of five men and one woman, aged between 18 and 64 years. Everyone interviewed in Kalkspruit was a native of that town, though one of them was born in Polokwane. Informants from Mokopane were born in various villages in western Limpopo. Two of the informants had bachelor's degrees, and only one did not have any college experience. Occupational activities included entrepreneurship and on-going college studies, in addition to unemployment at the time. One informant was retired.

All informants reported Sindebele as their mother tongue, or the first language they learned, except for one, who reported a mother tongue of Sepedi (that speaker had also acquired Sindebele as a child through the father's language use). All informants also spoke Sepedi and at least a little bit of English. Tswana was spoken by three informants, and Afrikaans, by two. Some of the informants reported at least a limited knowledge of siSwati, Xitsonga, Tshivenda, isiXhosa, or isiZulu.

Sindebele was used as the main language of the home by all speakers, though one informant's partner was still reported to be learning the language. For more information on the sociolinguistic situation in Sindebele-speaking areas, see Grünthal, Honkasalo & Juutinen in this volume.

3.2 *isiNdebele data*

The main isiNdebele data in this paper was also collected during May 2016, in the village of Emthambothini/Weltevrede, a suburb of Siyabuswa in northwestern Mpumalanga. The area around Siyabuswa is one of the centers of amaNdebele culture and the isiNdebele language, as it has a relatively large and dense population, the majority of whom are isiNdebele speakers – 71.24% for Siyabuswa itself and 88.14% for neighbouring Mapoch, where Emthambothini is located, according to the 2011 Census (Statistics South Africa 2012).¹² The village of Emthambothini also houses one of the two amaNdebele kingly residences, that of the king of the Ndzundza Ndebele. The area in general is still far from monolingually isiNdebele speaking, as can be seen from research presented in this volume (Grünthal, Honkasalo & Juutinen in this volume). Even in Emthambothini, where the population overwhelmingly speaks isiNdebele as their first language, fluency in multiple languages is the norm rather than the exception.

Some earlier data recorded at Moloto was also used in the analysis presented here. Moloto is located on the border of Mpumalanga and Gauteng, close to the second major amaNdebele cultural hub of Kwamhlanga and the other amaNdebele kingly residence, that of the amaManala king. We additionally made use of data recorded in Helsinki with a visiting isiNdebele speaker. The speaker recorded in Helsinki lived in Pretoria at the time of recording.

The data used in the analysis was collected from twelve persons speaking isiNdebele as their first language, five of them female and seven, male. The ages of consultants at interview time range from 23 to 60, while educational levels range from six years of primary school to university education. The number of languages that the consultants speak varied between four and seven. A summary of the main social variables used in this study can be found in Table 2. When coding the social variables for quantitative analysis, for the multilingualism variable each language spoken counted for one point unless specified as spoken “a little”, “not very well” or similar, in which case half a point was counted.

12 Siyabuswa, population 36,882 according to the 2011 Census (Statistics South Africa 2012), and Mapoch, population 9,169, are both Main Places of the Dr JS Moroka Local Municipality in the Nkangala District Municipality of the Mpumalanga Province of South Africa.

Table 2 IsiNdebele speaker metadata

No. of consultants	Gender		No. of languages spoken					
	f	m	3.5	4.5	5	6	6.5	7
	5	7	2	3	2	3	1	1
No. of consultants	Age			Education level				
	20–29	40–49	50+	Pri.	Sec.	Voc.	Some univ.	Postgrad
	6	3	3	2	2	4	3	1

The values given for different levels of education can be found in Table 3. The different categories we used are as follows: at least six years of primary education; completed secondary education; some higher vocational or professional education; completed higher vocational or professional education; some higher academic education; and postgraduate education. The divisions of no formal education, fewer than six years of primary education, and some secondary education have not been coded because they did not come up in the sample. The division between vocational, professional, and academic higher education was not always very clear, and some arbitrary decisions in grouping consultants into either of these groups may have taken place during the survey or while interpreting the survey results for coding. Unfortunately, we did not collect precise data on how much time each consultant had spent in which type of education, thus precluding a more precise coding. During initial statistical tests, a weighted coding of different levels of education was used, as seen in Table 3. Academic education was coded higher than vocational education based on the assumptions that it is often more difficult to get access to and more demanding during studies, and that language use typically plays a more important role in academic education than vocational education.

Table 3 Values for the education variable

Pri.	Sec.	Some h. voc.	Compl. h. voc.	Some univ.	Postgrad
1	2	2.5	3	3.5	4

As we found this coding to be somewhat arbitrary, and as it furthermore does not take into account whether formal isiNdebele language instruction was part of a speaker's education, a different coding system was used for further tests. In this system, each speaker was assigned binary values in regard to a range of education variables. For level of education, these variables are as follows: secondary education, tertiary education (irrespective of type), vocational tertiary education, and university education, as shown in Table 4.

Table 4 Metadata for general level of education

	Highest level of education attained				
	Primary	Secondary	Any tertiary	Tertiary, voc.	Tertiary, univ.
No. of consultants	2	11	8	4	4

For formal isiNdebele instruction, we coded the following values: isiNdebele subject education during primary or secondary education (unfortunately, the collected metadata does not account for the difference between primary and secondary education) and having studied isiNdebele as a subject at university. These variables are cumulative, so that someone educated in isiNdebele in primary and secondary school, and then continuing on to study the language at university would have a value of 1 (TRUE) for both.¹³ This information is provided in Table 5.

Table 5 Metadata for formal education in isiNdebele¹⁴

	Formal isiNdebele education		
	None	Subject in pri./sec. ed.	University
No. of consultants	3	9	1

The language data itself was coded so that for each lexical item of each speaker, the place of articulation and accompaniment type are indicated as either 1) always the same; 2) one type preferred with other(s) also occurring; 3) equal occurrence (of dental and palatal clicks, and/or various combinations of accompaniment types). For the place of articulation there is also 4) a variable place of articulation averaging on alveolar. The tables containing this data can be found in Appendix II.

The obtained data on place of articulation preference was further processed during the statistical analysis in such a way that each speaker–lexical item pair has a numerical value indicating occurrence of each place of articulation. A value of 1.0 indicates 100% occurrence, a value of 0.75 indicates preferred occurrence (i.e. more than half of cases), 0.5 indicates equal occurrence between two clicks or, for some items of one speaker, a place of articulation between dental and

¹³ Except for the combined tertiary education variable and the differentiated vocational and university variables for general level of education – the first was not used in the same calculations as the latter two.

¹⁴ Due to the cumulative nature of the variables, the totals here add up to 13, not 12 – the speaker with formal university education in isiNdebele also has been counted in the column for isiNdebele subject education in primary/secondary school.

postalveolar, 0.25 indicates dispreferred occurrence (i.e. less than 50%), and 0.0 indicates no occurrence. Thus, in this study, no exact frequencies of occurrence were counted, only relative preferences. As this was an exploratory study, and we did not know beforehand which words work well in elicitation and which do not, the lists of obtained lexical items are not normalized and there is wide variation in which items could be elicited from each person.

4. ANALYSIS

In the following sections, we will analyze the data, starting in brief with Sindebele in Section 4.1. The more substantive isiNdebele analysis follows in 4.2, including more detailed quantitative and qualitative analyses in 4.2.1 and 4.2.2, respectively. These subsections focus on the sociolinguistic aspects of the observed variation.

4.1 Sindebele

The analysis of the Sindebele data began with the identification of possible cognate forms with isiNdebele words which have clicks in them. The segments in Sindebele corresponding to the clicks were then analyzed and compared to their isiNdebele counterparts.

The non-nasal clicks in isiNdebele correspond in many of the clearer cognates to the ejective velars (either the stops or the affricates) in Sindebele. The nasal clicks, on the other hand, typically correspond to the velar nasal, except for the word /gaxape/ ‘aside’, in which a voiced velar fricative occurs instead. These instances are listed in Table 6.

Table 6 Sindebele words with their corresponding click words in isiNdebele

Sindebele	isiNdebele	Translation
/ekx'a/	/e!a/ <-eqa>	jump (v)
/lekx'anda/	/i!anda/ <iqanda>	egg
/βok'op ^h o/	/ubul ^h op ^h o/ <ubuchopho> or <ubuqhopho>	brain
/k'enesa/	/!inisa/ <-qinisa>	stiffen (v)
/sejele/	/bu ^h llele/ <bunxele> ¹⁵	left
/ɲani/	/ ^h lani/ <-ncani>	small
/muɲaza/	/umlasa/ <umcasa>	rabbit
/gaxape/	/nga ^h lape/ <-ngancanye>	aside

15 The current isiNdebele word is *isincele* with a dental click, though.

It should be noted that the in isiNdebele *umcasa* ‘rabbit’, the click itself is not nasalized despite the adjacent nasal consonant. However, the Sindebele translation still has a velar nasal corresponding to the click.

In some isolated instances, further peculiarities can be found. With three lexemes, Sindebele informants actually produced clicks. For ‘crowbar’, isiNdebele *umgqala* is attested in Sindebele [mu!^wa:la]. This word is a likely borrowing and is also found in isiZulu, as *umgxala*. Another word is the interjection ‘sorry’, or *ncancabe* in isiNdebele (*ncancabeza* ‘to apologize’). In Sindebele, [ʔa:be] is found, with a dental click as in isiNdebele. Again, a similar interjection is also present in isiZulu: *ncephe* or *ngxephe*.

The third case is the verb ‘to finish, to complete’. It is found in isiZulu as *-pheza*, in isiNdebele as *-feza* and in Sepedi, a Sotho-Tswana language, as *-fetša*. In Sindebele, two variants of this word were found: [p^hε:ṯ^ha] and, rather surprisingly, [ʔε:ṯ^ha] with a nasalized dental click.

4.2 IsiNdebele

The observed variation in the production of click consonants was analyzed in two stages. The first stage consisted of mapping the individual click inventories of the speakers. The number and types of distinct click phonemes for each speaker was determined, along with any variation within a specific phoneme. This included measuring the consistency of each speaker and determining the contexts in which any observed inconsistencies are most likely to occur. The results of this analysis were checked for internal correlations and presented statistically. The second stage of analysis was to see how the results of the first stage correlate with known social and sociolinguistic variables, such as age, gender, level of education, and active multilingualism.

When determining the types of clicks used by speakers and how they are grouped into phonemes, we paid more attention to place of articulation than to accompaniment types. This decision followed from our observation that while variation is observable for both parameters, the variation observed in place of articulation is much more transparent and definable, whereas the variation in accompaniment type is much more difficult to classify and analyze and is mostly idiolect-centered; that is, generalizations to the wider speaker sample are difficult to make. Also, significant variation in accompaniment types is mostly restricted to possible observable differences between clicks classified as depressors and those that are not. This relates to a much larger phenomenon in the isiNdebele language, namely, the phonologization of the depressor effect, which is outside the scope of this article. For the sake of completeness, a description of the preva-

lence and parameters of variation observed in accompaniment types is provided in the following.

Four types of click accompaniment are found in our data that can be said to be clearly distinct for most speakers, while a fifth is not as evidently distinct. The four indisputable types of click accompaniment are shown below in Table 7.

Table 7 The distinct click accompaniment types of isiNdebele

	Dental	Postalveolar
Plain/tenuis	<c> [k]	<q> [kʰ] ¹⁶
Aspirated	<ch> [kʰ]	<qh> [kʰ]
Nasal	<nc> [ŋ]	<nq> [ŋʰ] (rare)
Prenasalized depressor	<ngc> [ŋk]~[ŋǰ]	<ngq> [ŋkʰ]~[ŋǰʰ]

For the plain clicks, see examples (1) and (2); for the aspirated clicks, see (3) and (4) below. The nasal clicks have audible nasal airflow before, during, and after the click burst, with the following vowel being initially nasalized, as in (5) and (6).¹⁷ The prenasalized depressor clicks have nasal flow usually only until the beginning of the click burst, with an oral stop secondary release, such as non-nasal clicks have after the click burst, and no nasalization of the following vowel. This can be seen in examples (7) and (8) The last type is depressor consonants, so a high tone may not be realized on the mora immediately following the click. The realization of the prenasalized depressor clicks is not consistent for all speakers, as some speakers may sometimes, or even frequently, produce them as segmentally indistinguishable from nasal clicks, differing only in tonal depression; see example (9) for the same word produced with a prenasalized depressor and a nasal depressor click.

- (1) Plain dental click <c> (2) Plain postalveolar click <q>
- a. <icici> (S1)¹⁸ a. <isiqu> (S3)
- [ili:li] [isi:u]
- ‘an earring’ ‘a stem’

16 In the examples 1–9 below exemplifying the different accompaniment types, we have used data in which <q> was actually pronounced as postalveolar, except in a few cases where all instances were pronounced as dental, in which case the transcription reflects this.

17 Of the nasalized clicks, <nq> [ŋʰ] occurs only rarely.

18 The consultants whose speech this study is based on are here labeled S1–S12.

- b. <ukubhaca> (S8)
[uyupa:la]
'to hide (something)'
- b. <ukukhiqiza> (S3)
[uyuk^hili:za]
'to produce'
- (3) Aspirated dental click <ch> (4) Aspirated postalveolar click <qh>
- a. <isichaka> (S1)
[isi^ha:ka]
'a poor person'
- a. <iqhegu> (S9)
[i^he:ku]
'an old man'
- b. <ukuchichima> (S5)
[uyu^hi^hi:ma]
'to overflow'
- b. <ukuqhaqhazela> (S3)
[uyu^ha^haze:la]
'to shiver'
- (5) Nasal dental click <nc> (6) Nasal postalveolar click <nq>
- a. <inceba> (S6)
[in^ɰē:βa]
'a wound'
- a. <inqaba> (S2)
[in^ɰla:βa]
'a castle'
- b. <ukuncinza> (S7)
[uyu^ɰi^hn·za]
'to pinch (something)'
- b. <ukunqopha> (S5)
[uyu^ɰo:p^ha]
'to intend'
- (7) Nasal depr. dental click <ngc> (8) Nasal depr. postalveolar click <ngq>
- a. <ungci> (S4)
[uŋ^ɰi]
'full stop'
- a. <ingqondo> (S4)
[iŋ^ɰ!o·n·dro]
'a mind'
- b. <ukungcwaba> (S1)
[uyuŋ^ɰ!w:a:βa]
'to bury'
- b. <ungqongqotjhe> (S9)
[uŋ^ɰ!oŋ^ɰ!o:ɿ^he]
'cabinet minister'
- (9) Nasal depr. dental click <ngcw>
- a. <bayangcwaba> (S5)
[baja^ɰ!w:a:βa]~[bajan^ɰ!w:a:βa]
'they are burying [someone]'

The fifth type of click, non-nasalized depressor clicks <gc> [l]~[ɛ̃l] and <gq> [k!]~[ɛ̃!], incur the same restriction on the following mora. They also tend to have a somewhat shorter voice onset time on average than the plain clicks, although this varies a lot between speakers, with some making no noticeable distinction in that respect.

In other Nguni languages, the depressor clicks are sometimes described as breathy or slack voiced,¹⁹ and, indeed, for some speakers of isiNdebele, the vowels following these clicks may be somewhat breathy. An interpretation of the clicks themselves as being underlyingly breathy voiced synchronically is not tenable, however, since the same speakers often have breathy voice in any context where there is no high tone, regardless of whether a depressor is present. Furthermore, when the breathiness starts after the depressor, it usually happens only in contexts in which the pitch-lowering effect of the depressor is realized. In these cases, there is usually a delay between the click and both the pitch drop and the concurrent breathiness. Conversely, when there is no high tone before the click and no pitch drop is necessary after the click, there is generally no breathiness. Exceptions to this generalization are speakers for whom low pitch and breathiness co-occur regularly, independent of depressors. For a majority of the speakers on whose data this research is based, breathiness does not occur, or only occurs very occasionally and weakly, in any conjunction with depressor clicks.²⁰

In example (10) below, two very different realizations of the same click can be seen, pronounced by the same speaker. In (10a) the click duration is overall quite short – depending on the instance, 20–25 ms from the start of the click burst until voicing starts and a further 5–10 ms until the vowel begins. There is no clear secondary release, but rather a gradual opening of the uvular closure. After this, the vowel starts as creaky voiced and with a somewhat higher pitch, turning to breathy voice after some 40–70 ms, with the pitch dropping at the same time.

In (10b), the plural form of the same word, there is a clear secondary release soon after the click burst, the voice onset time is somewhat longer (36 ms), and there is neither creaky nor breathy voicing on the vowel, even though the pitch contour of the vowel remains similarly falling, albeit with a somewhat higher starting point.

19 But see Traill, Khumalo & Fridjhon (1987) for isiZulu and Jessen & Roux (2002) for isiXhosa, for sceptical analyses of the breathy voice interpretation of depressors.

20 The prenasalized depressor seems to associate with breathiness even more rarely, if at all.

- (10) (S4)
- | | |
|---|---|
| a. <umgqala>
[um̩ḡ!aḡa]
'a crowbar' | b. <imigqala>
[imi!a:la]
'crowbars' |
|---|---|

Other weak effects are sometimes observable with the depressor clicks that do not occur as frequently with the non-depressors. For example, we observed gradual or fricative secondary release with depressor clicks, and unexpected weak to moderate labialization of orthographically non-labialized depressor clicks.²¹ These effects may also sometimes be observed with the prenasalized depressor clicks. These features are, however, produced only by some speakers and even then, often not consistently, and sometimes gradual or fricative release, especially, also occurs with non-depressors, for some speakers.

One speaker (S12) who did have noticeable breathiness on the vowels following some depressor clicks also produced an unusual effect that did not occur with any other interviewed speakers. S12's depressor clicks that were realized with following breathiness sometimes also had a more or less noticeable aspiration before the breathiness (example 11), in which case the breathiness might be analyzable phonetically as being caused by the clicks themselves. Although there was no noticeable voicing during the aspiration, the aspiration after the click seems to differ in quality from aspiration observed on the actual aspirated clicks of the same speaker. This fact lends itself to an analysis of S12's depressor clicks actually being breathy voiced clicks like the depressor clicks of other Nguni languages, as they are sometimes described.

- (11) (S12)
- | | |
|---|---|
| a. <umgqomu>
[um!ḡḡ:mu]
'a water container' | b. <umgqala>
[um!ḡḡ:la]
'crowbar' |
|---|---|

S12's uncommon realization of the depressor clicks in isiNdebele is also evidenced in the fact that the speaker's aspirated depressor clicks have a noticeably longer voice onset time than do the plain clicks. This speaker's longer onset times for aspirated depressor clicks stands in contrast to the tendency measured in many other speakers for depressor clicks to have a slightly shorter voice onset time than

²¹ Labialization is a secondary articulation that can affect most non-labial consonants of isiNdebele, but which is then reflected in the orthography of the word in question as a <w> and is usually more clearly audible than the kind of labialization that occurs with these clicks.

plain clicks. S12's aspirated versions of depressor clicks were also more common in the first instances of elicited words, which were isolated dictionary forms. Later instances, embedded into phrases or sentences, mostly did not display aspiration, longer voice onset times, or much breathiness on the vowels, as can be seen in example (12).

- (12) (S12)
- a. <anginamgqomu olungileko>
 [aŋgina-m!omu luŋgile:ɣo]
 NEG.1SG.have-CL5.water.container CL5.straight
 'I don't have a suitable water container.'
- b. <ngibona umgqala kuhle>
 [ʰgiβona um!ala ɣu:ɬe]
 1SG.see CL5.crowbar CL15.good
 'I see the crowbar well.'

This all means that the plain clicks and non-nasalized depressor clicks are not consistently and reliably distinguishable from each other by their phonetic features, at least not for all speakers. Even when they are, the distinguishing features vary between speakers and within the speech of one speaker, so that no definite feature or set of features of the clicks themselves can be indicated to distinguish them. The only reliable, consistent way of distinguishing between these two click types is by their effect on tone, and even that is not possible in all contexts, for example, on utterance final syllables, since these are usually not distinctive for tone.

The lateral series of clicks, <x> [l], is left out of most of our analysis, as we were only able to elicit examples of these clicks in very few instances, confirming the observation by Skhosana (2009: 54, 74) of the lateral series being a marginal one. From our observations, it seems to be so marginal as to be absent from most speakers' inventories completely. Mostly, speakers did not even recognize the lexical items that should have contained a lateral click, and even for those speakers who knew words written with an <x>, it was hardly ever pronounced with a lateral place of articulation. One speaker even stated outright that <q> and <x> are pronounced the same, both as postalveolar clicks.²²

22 This statement did hold true for that speaker's pronunciation of the clicks, but not consistently for the other speakers from whom we were able to elicit words with <x>. The same speaker did produce one instance of <x> with a seemingly lateral pronunciation, as well.

Two broad categories of speaker click inventories are observable in the data: those speakers who distinguish clicks phonemically by place of articulation, and those who do not. The first category includes all those speakers who appear to distinguish the two places of articulation, dental and postalveolar. This type is not easily divisible into discrete groups, as the main variable here is consistency of production at the expected place of articulation, which forms a continuum from more to less consistent. In most cases in which a distinction is observed, the speakers produce the clicks consistent with their spelling, that is, as dental when written with a <c>, and as postalveolar when written with a <q>. There were also some cases of speakers clearly making a distinction, but sometimes producing clicks consistently against what would be expected from the orthographic forms. Some examples of these unexpected pronunciations are discussed in more detail below.

The main criterion used for determining whether a speaker distinguishes places of articulation phonemically is consistency.²³ That is, if a speaker produces clicks at clearly different places of articulation, we ask whether each click is pronounced consistently using the same place of articulation throughout occurrences of the same lexeme or root. Then, if it can be ascertained that the clicks are consistent, it is further necessary to see whether the choice of place of articulation depends on the surrounding phonetic context. The difference between clicks can be safely argued to be phonemic only if the place of articulation is both consistent and independent of context. Examples (13) and (14) present one speaker's inconsistent pronunciations of the supposed dental click <c> and the supposed postalveolar click <q>, respectively.

(13) (S4)

- | | |
|---|---|
| <p>a. <nginegcwetha elihle>
 [ʰgine-k!ʷet^ha eli:ɬe]
 1SG.have.CL9-CL9.advocate CL9.good
 'I have a good advocate.'</p> | <p>b. <ngibona igcwetha kuhle>
 [ʰgiβona ikl^we:t^ha xu:ɬe]
 1SG.see CL9.advocate CL15.good
 'I see the advocate well.'</p> |
|---|---|

23 Of course, to make definitively sure that a distinction is phonemic, allophony with complementary distributions, also producing consistent patterns, has to be ruled out. This process is, however, omitted in this paper, as the phonemicity of these clicks has been unproblematically assumed for other Nguni languages and described similarly (even if with some variation) for isiNdebele in the previous literature. Our data matches well with those descriptions – or rather, when there is variance (with what can be expected from the earlier and other Nguni sources) in the place of articulation of clicks, it is inconsistent and thus indicative of free variation – and so we see no need to delve into detailed phonemic analysis in this paper.

(14) (S4)

- | | |
|--|--|
| <p>a. <nginamaqanda amahle>
 [ʰgina-mak!anda ama:ɬe]
 1SG.have.CL6-CL6.egg CL6.good
 ‘I have good eggs.’</p> | <p>b. <anginamaqanda amahle>
 [aŋgina-mak!anda ama:ɬe]
 NEG.1SG.have-CL6.egg CL6.good
 ‘I don’t have good eggs.’</p> |
|--|--|

Expected, consistent pronunciations of both clicks by another speaker can be seen in examples (15) and (16) below.

(15) (S12)

- | | |
|--|---|
| <p>a. <le yingcenyelungileko>
 [le jɪŋ^ɰlɛ̃ne eluŋgile:yo]
 that.CL9 COP.CL9.part CL9.straight
 ‘That is a good part.’</p> | <p>b. <anginayoyingcenyelungileko>
 [aŋginajo iŋ^ɰlɛ̃ne eluŋgile:yo]
 NEG.1SG.have.CL9 CL9.part CL9.straight
 ‘I don’t have a good part.’</p> |
|--|---|

(16) (S12)

- | | |
|---|--|
| <p>a. <leli liqephe elilungileko>
 [leli lik!ep^he elilungile:yo]
 that.CL5 COP.CL5.shell CL5.straight
 ‘That is a good shell.’</p> | <p>b. <ngibona iqephe kuhle>
 [ʰgiβona ik!ep^he yu:ɬe]
 1SG.see CL5.shell CL15.good
 ‘I see the shell well.’</p> |
|---|--|

Also of interest are cases in which the criteria for phonemic status are fulfilled, but the clicks produced by the speakers go against etymological or lexicographic expectations – that is, when the speaker’s clicks do not correspond to those of cognate forms in related languages or the forms found in the dictionaries. Below are a few examples of this kind. Example (17) comes from a speaker who was not completely consistent for all words, but who still seemed to have total consistency for many lexemes. Sometimes, this speaker’s consistently produced lexemes had places of articulation contrary to expectation, as can be seen below, where the expected dental <c> was consistently pronounced as postalveolar.

(17) (S4)

- | | |
|--|---|
| a. <le yincwadi ehle>
[le: ji ^ɓ !w ^ɔ ati e:ɬe]
that.CL9 COP.CL9.book CL9.good
'That's a good book.' | b. <nginencwadi ehle>
[^ɓ gine- ^ɓ !w ^ɔ ati e:ɬe]
1SG.have.CL9-CL9.book CL9.good
'I have a good book.' |
|--|---|

As for example (18), the speaker was all in all very consistent, with pronunciation that also matched the expected standard forms to a high degree. But there was one interesting case in which the standard form had an aspirated postalveolar click <qh>, but the speaker pronounced it as a dental. The speaker also later stated that in isiNdebele there is no <qh>, only <ch> or <xh>. Unfortunately, we did not at that time test the speaker's aspirated clicks further, which might have allowed us to check whether the aspirated postalveolar clicks had indeed been regularly replaced by aspirated dental clicks.²⁴

(18) (S12)

- | | |
|---|---|
| a. <anginalo iqhezu elilungileko>
[aŋgina:lo il ^h ezu elilungile:ɣo]
NEG.1SG.have.CL5 CL5.fraction CL5.straight
'I don't have a good half.' | b. <ngibona iqhezu kuhle>
[^ɓ giβona il ^h ezu yu:ɬe]
1SG.see CL5.fraction CL15.good
'I see the half well.' |
|---|---|

Studying the possible reasons why these mismatches between expectation and observation occur is beyond the scope of this article. Still, relating the occurrence of clicks that are produced against expectations, and how this varies between speakers, to the other kinds of variation described here does provide additional data for the analysis of how these phenomena cluster. This, in turn, allows for a more fine-grained basis for further work.

²⁴ This speaker was also one of the few who actually produced lateral clicks. A word, given in the dictionary as <icatjhaza>, but which the speaker claimed as being written with <xh>, was actually pronounced with a lateral click, without aspiration but with a very long voice onset time, noticeably longer than with any other non-aspirated clicks. The speaker, however, also claimed that words with <x> were pronounced the same as words with <q>. We tested some other lexemes written with an <x> with this consultant, and for these, the speaker's pronunciation was consistently dental in one case, consistently postalveolar for two others.

The second speaker category includes all those speakers who do not seem to distinguish click phonemes by place of articulation. This type is further divided into the following three subtypes:

1. speakers who more or less consistently produce clicks at only one place of articulation, which in our sample is always dental. These speakers have a very strong preference for dental clicks, usually producing above 90% of their clicks as dental;
2. speakers who don't have a clearly delineated place of articulation for their clicks;
3. speakers who produce clicks at two distinct places of articulation, without a phonemic distinction.

To count a speaker into the subcategory of those producing clicks at only one place of articulation consistently, the speaker must have done the following:

1. produced each click occurring in a particular lexical item at that place of articulation on a majority of repetitions of said lexical item;
2. produced only that click for a majority of lexical items...
3. ...especially including a significant number of cases where, according to the orthography and known cognates, another place of articulation would have been expected.

Three possibilities for the single consistent place of articulation present themselves concerning the speakers who fulfill these criteria: they might produce their clicks at one of the two expected places of articulation, or they might produce them at some third, unexpected place, such as laterally. Of these possibilities, only one is found in the data, however. All the speakers in this group consistently produced only dental clicks. An example of such a speaker's pronunciations can be found in example (19).

(19) (S1)

- | | |
|--|--|
| a. <cacisa!> ²⁵
[lali:sa]
'clarify!' | b. <bayagcugcuzela>
[baya luluze:la]
'they encourage [someone]' |
| c. <qopha!>
[lo:p ^h a]
'wash yourself!' | d. <ingqondo>
[ij ^ɛ !o·n·dro]~[ij ^ɔ !o·n·dro]
'a mind' |

The two other subgroupings in the category of speakers with a single phonemic series of clicks share one quality that also makes them somewhat difficult to distinguish, in that they both produce clicks at varying places of articulation. But

25 This verb was part of the original dataset, and was used in the preliminary phonetic work, but was accidentally omitted during the collection of the database used for the quantitative analyses, and because of this, it does not appear in the data table in Appendix II.

by careful phonetic analysis of the clicks in question, we were able to determine that most speakers who produced clicks in variable places of articulation did so at two relatively distinct places; one speaker clearly differed from this pattern.

This individual's clicks were sometimes also identifiable as dental or postalveolar, but in addition to those, in many instances the clicks were not clearly either, but rather, on closer analysis, alveolar, that is, located between the two expected places of articulation. The speaker used each of the three places with approximately equal frequency, and there was overlapping variation between them, making the place of articulation often hard to determine. The clicks were not at all consistently produced in one place for any single lexical item. We thus came to the conclusion that this individual's clicks did not seem to have a narrowly delineated central locus, but that their place of articulation was anywhere on the area from the upper teeth to the back of the alveolar ridge. Some of the pronunciations are presented in example (20) below.

(20) (S10)

- | | |
|--|--|
| a. <kancani>
[ka ^ɰ !a:ni]
'small' | b. <iqiniso>
[ilini:so]
'the truth' |
| c. <ukubhinca>
[uyupi-n ^ɰ !a]~[uyupi-n ^ɰ !a]
'to sing' | d. <iqanda>
[ila-n·dra]~[i!a·n·dra]
'an egg' |
| e. <icici>
[i!i:i]~[ili:i]
'an earring' | f. <iqhegu>
[i! ^h e:ku]~[i! ^h e:ku]
'an old man' |
| g. <inciliba>
[iɲ ^ɰ ili:βa]
'an ostrich' | h. <ukuguqa>
[uɣuku:la]
'to kneel' |

As for those speakers who produce clicks at two different places of articulation but for whom these are not distinct phonemes, it is most important to define the criteria by which to distinguish them from those speakers who might have two phonemically distinct places of articulation in their clicks. As described above, the main criterion used in this paper is consistency of pronunciation – for speakers that distinguish between places of articulation, the clicks are produced consistently in one place of articulation for any given lexeme, whereas those

speakers, whose clicks are in free variation between the two places of articulation have their clicks varying in place between occurrences of the same lexeme. Some examples of such a speaker were provided in (13) and (14) above.

Something that would certainly have been interesting, but did not fit within the scope of the current study, would have been to also try to check whether the two places are completely in free variation, or if the speakers have a preferred place of articulation, and whether such a preference is contextually determined – from a purely phonological point of view the variation is certainly free, but we do not know whether there might be, for example, factors of discourse or higher level prosody affecting the choice of place of articulation.

4.2.1 *Quantitative analysis of clicks*

The main variables analyzed concerning the clicks of each speaker were preference of place of articulation, consistency, and correspondence to standard forms (i.e. the forms found in the dictionaries). Speaker preferences for the two main places of articulation attested a range from 30 to 100 percent for the dental click <c>, with a mean value of 74% and a median value of 89%, whereas for the postalveolar click <q>, the range is 0 to 66 percent, with a mean of 25% and a median of 11%. This indicates a strong preference for the dental clicks for about half the speakers, with the rest producing dental clicks between approximately one third and two thirds of the time. There is only one speaker clearly preferring postalveolar clicks over dentals, with 66% of words with a postalveolar preferred click, whereas dentals are preferred (significantly over 50% of words with a dental pronunciation preference) by eight speakers, that is, two thirds of the sample, ranging between 63–100% preference.

The correspondence of speakers' forms to dictionary forms varies from 35 to 100 percent, with a mean value of 58% and a median value of 53%. Most of the speakers match the expected forms between 35% and 65% of the time, with two matching much more frequently, at 86% and 100%, respectively.

Measures of speaker consistency of click production in the sample vary from 21% (only a fifth of click words are consistently produced) to 100% (each word is consistently produced with the same click), with a mean value of 84% and a median value of 95%. Most speakers produce clicks with significant consistency, with half of them being consistent 95% or more of the time, while all but one of the rest are consistent 60% or more of the time. The one very inconsistent speaker (S10), with only 21% consistency, is the speaker whose place of articulation does not seem to be fixed.

When these results are checked against each other, as shown in Figure 1, some observations can be made. First of all, there seems to be a correlation between strength of preference for dental clicks over postalveolars and consistency of click production. For the more extreme cases of preference, this is hardly surprising. When a speaker only produces dental clicks, they are necessarily consistently dental.

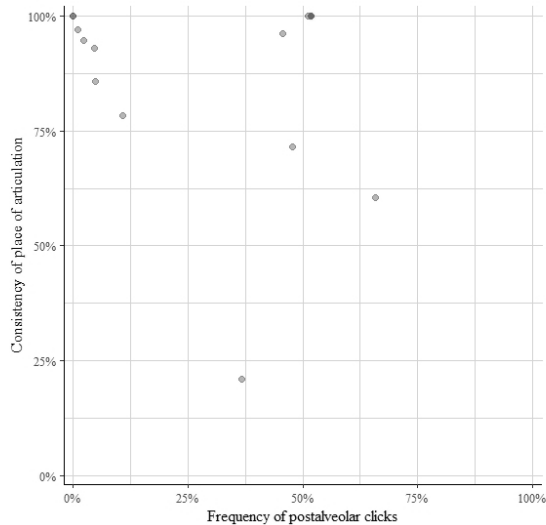


Figure 1 Consistency of place of articulation compared to frequency of production of postalveolar clicks

Consistency drops for those who prefer dentals but occasionally produce postalveolars. These speakers can be interpreted as having the postalveolar click as an inconsistently occurring, dispreferred allophone.

Another peak of consistency occurs for most of those speakers who produce approximately equal amounts of dental and postalveolar clicks. This is not that surprising either, as the vocabulary set that the recorded words were drawn from is also approximately balanced between words containing dental and postalveolar clicks, and on average, the set of words recorded with each speaker was also balanced.

There are two outliers that do not neatly fit into these patterns. One is the aforementioned speaker (S10) whose clicks are underspecified for exact place of articulation, and the other is a speaker who, contrary to the general trend, preferred postalveolar clicks irrespective of their expected place of articulation. The second observation that can be made is that the occurrence of words with

preferred postalveolar click pronunciation seems to correlate with correspondence of produced forms to expectations based on dictionary forms, as can be seen in Figure 2. This would not be the case if many speakers overpreferred postalveolar clicks, but as preference is rather skewed towards dental clicks, a correlation between high correspondence with standard forms and higher than average use of postalveolar clicks can almost be expected.

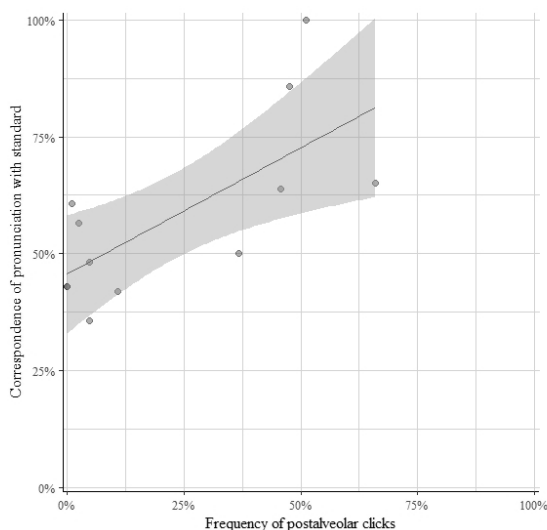


Figure 2 Correspondence of pronunciation with standard compared to frequency of production of postalveolar clicks

This result can be interpreted to mean that most forms not corresponding to dictionary forms are, for most speakers frequently employing such deviating forms, due to overpreference of dental clicks. The speakers who use postalveolar clicks more frequently can then be inferred to be using them mostly where expected. Even the one speaker clearly overpreferring postalveolars matches the standard forms 65% of the time, whereas the three other frequent, but more balanced, postalveolar click users (postalveolar occurrence at 47.6–51.1%, close to the percentage of dictionary forms with <q> occurring in the sample, 51.8%) match the dictionary forms 63.9%, 85.7%, and 100% of the time, respectively.

4.2.2 Quantitative sociolinguistic analysis

The numerical results on click realization acquired in the data analysis were further compared to some social and sociolinguistic variables. The variables discussed here are those which, as formulated in our relevant research questions,

are hypothesized to possibly correlate with and have some explanative power over the phenomena of click realization observed. These include age, number of languages spoken, and level of education. Because of the somewhat arbitrary way the values of the variable for the level of education were originally determined, we then did some further tests in which we used the different binary variables relating to a speaker's education. These included the four level of education variables (participation in) secondary, tertiary, vocational and university education, as well as the two formal isiNdebele instruction variables isiNdebele subject education at school and isiNdebele as a subject at university. As the number of variables is quite large and thus difficult to compare with the single level of education variable used in the earlier tests, we also did some tests using the composite variable *total level of education*.

Gender, social status, and issues of identity are not discussed here. Even though some slight differences along gender lines are possibly detectable even in the current, very limited, sample, and qualitative observations lend some support to a hypothesis of identity, gender, and/or social status playing some role in click production, the issue is complicated and deserves a more thorough treatment than would be possible to provide in this article. The issue is briefly taken up again in Section 5, however. Also, gender was still used as a variable in multiple regression analyses performed on the data.

Age was not found to correlate with any of the measures of click realization arrived at in the previous section. This result is not unexpected, due to the limits of the sample. Only five of the twelve speakers interviewed were above the age of 30, and there is great variation in the click production among those five – there are just too few data points for ages above 30 to arrive at any useful conclusions. Especially limiting is the fact that there are only two speakers above the age 50, the group that would certainly have not had any mother tongue subject education in isiNdebele. Those two, however – interestingly enough – are two of the three speakers who completely consistently produce only dental clicks, 100% of the time.

The number of languages spoken by a speaker is also not a good predictor of click realizations. Two very slight trends – decreasing preference for dentals (or rather increasing preference for closer to equal occurrences of dentals and postalveolars) and increasing correspondence to standard forms with increasing number of languages spoken – can be gleaned. However, the variation is too great, with outliers mostly in the middle of the scale, and the number of data points so small, that these trends cannot be viewed as very useful observations.

More interesting results can be observed when looking at the speakers' level of education. Even here, the small number of data points makes the results very preliminary, but the observed trends are nevertheless more noticeable than for

the number languages. The measures for which there seems to be a correlation with the level of education as well as the direction of the trends are exactly the same two as already mentioned for the number of languages spoken, that is, decreasing preference for dental click realizations and increasing correspondence to standard forms.

As can be seen from Figure 3, even though there is still significant variation, the downward trend of dental click production with increasing level of education is quite noticeable. In a 4-variable (age, number of languages spoken, level of education, and gender) *linear regression* test,²⁶ dental click preference was found to correlate with level of education with a value of -0.41 with a significance of $p = 0.022$ *.²⁷

The rising trend for correspondence to standard forms in Figure 4 is not quite as strong, but it is somewhat clearer, with not quite as much variation. In a similar 4-variable linear regression test, correspondence with pronunciation as expected from dictionary forms was found to correlate with level of education with a value of 0.303 with a significance of $p = 0.019$ *.

26 Linear regression was chosen as the method here, as in the initial stages of research we had only a vague idea as to which social factors might be of relevance regarding our data, and linear regression provided a simple way to test which if any of our proposed variables show a discernible effect. It was then used in the further tests to be consistent. Our small dataset and limited metadata restrict the statistical power of any test results.

27 *Regression analysis* is a statistical technique used to analyze the relationship between two or more variables, and *linear regression* is a variant of it, that tries to model the relationship of a dependent variable (in this case preference for dental clicks), to one or more independent variables (in this case age, number of languages spoken, level of education and gender) with a *linear model* – put simply, the model compares how well the values of the dependent variable related to the values of a given independent variable map onto a straight line. The closer the fit to a straight line, the better the independent variables are deemed to predict the behavior of the dependent variable.

Correlations are given as a value (the correlation coefficient r) ranging from -1 to 1, where -1 means a perfect negative correlation, 0 means no correlation at all, and 1 means a perfect positive correlation – these ideal values rarely occur. Instead, values above -0.3 but below 0.3 are usually interpreted as no correlation, values between -0.5 and -0.3 or between 0.3 and 0.5 are seen as weak correlation, values between -0.7 and -0.5 or between 0.5 and 0.7 as moderate correlation, and values at or below -0.7 or at or above 0.7 as strong correlation.

The statistical significance of results is given as a p -value, indicating the probability that the results obtained in the statistical test would be equal to or more extreme than the actual observed results, assuming that the null hypothesis (that is, the hypothesis that “nothing is happening”, that there is no relation between the variables observed and tested) is true. Put more simply, if the results obtained seem very improbable, should the null hypothesis be true, the null hypothesis may be rejected, and the results are statistically significant. As our research is rather prospective, we use no definitive cut-off point (or *significance level*) for the desired p -values, but rather indicate different levels of significance with asterisks after the p -value: $p \leq 0.05$ *, $p \leq 0.01$ **, $p \leq 0.001$ ***. These are all viewed as significant results, with more asterisks meaning more significant. Results of $p < 0.1 > 0.05$ are mentioned as interesting but not very significant. Results of $p \geq 0.1$ are rejected as insignificant.

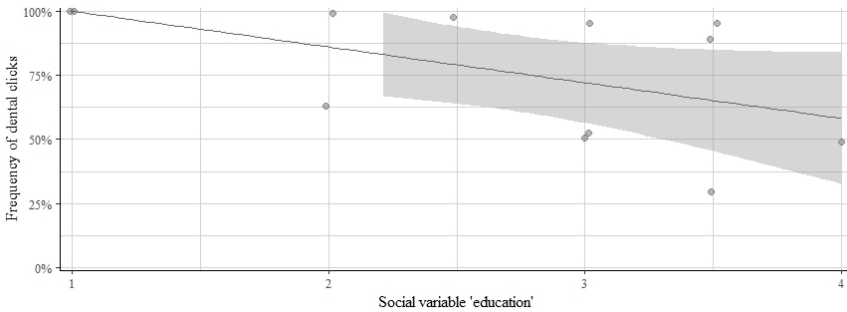


Figure 3 Social variable “level of education” and preference for dental clicks

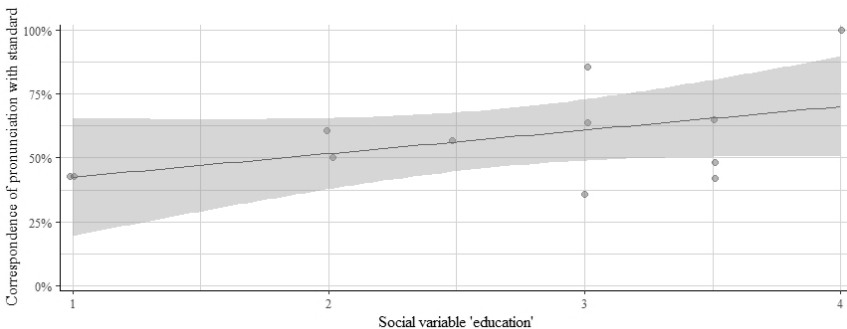


Figure 4 Social variable “level of education” and correspondence to standard

However, the further tests performed with the binary education variables gave somewhat different results. First of all, we found that the limits of the small size of the dataset were accentuated with the simple binary variables. When we tested using the separate binary variables, we found that higher levels of education (both general education and formal isiNdebele education) correlated, to some degree, with both decreasing overpreference for the dental click and production of clicks that more closely matched dictionary forms. These findings were, however, mostly statistically non-significant. Especially problematic was the fact that the cumulative nature of education could not be captured this way.

Thus, we employed two composite variables, one for the general level of education and one for formal isiNdebele education, calculated simply through addition of the values of the respective binary variables. Thus, the composite level of education variable can have values 0 (has not attended secondary or tertiary education), 1 (has attended secondary but not tertiary education), and 2 (has attended secondary and tertiary education). The composite isiNdebele education variable can have

values 0 (has not attended any formal isiNdebele education), 1 (has attended isiNdebele education in primary and/or secondary school), and 2 (has attended isiNdebele education both in primary/secondary school and at university).

Using these composite variables, we found that overpreference for dental clicks still might correlate negatively with general level of education. In a 5-variable linear regression test using the new composite variables in addition to the original variables for age, gender, and multilingualism, the occurrence of dental clicks was found to correlate with general level of education at an estimated value of -0.42 , although with $p = 0.096$ this finding cannot be considered very significant. However, looking at the plot in Figure 5, a better claim would be that the variability of click production increases with general level of education, with all education level groupings having a significant number of speakers with a high preference for dentals. The extent of divergence from the dental preference as well as the number of speakers diverging from it increase among the speakers with a higher level of education.

However, no correlation at all was found between general level of education and the tendency to produce clicks corresponding to dictionary forms. Instead, we found that a speaker's individual consistency of click production, along with their tendency to match dictionary forms, correlates with the formal isiNdebele education composite variable. In similar 5-variable linear regression tests, we found that the level of isiNdebele education correlates with the speaker's own

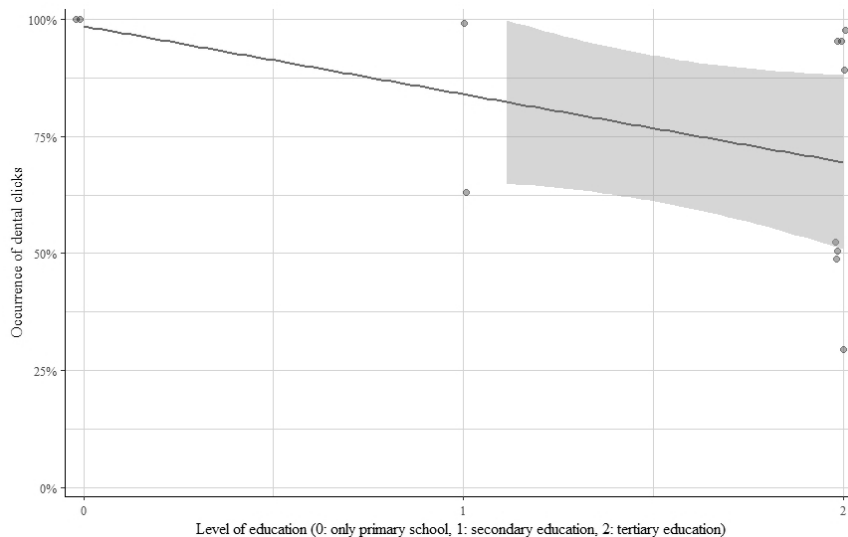


Figure 5 Level of education and preference for dental clicks

consistency in click production at an estimated value of 0.46, with a significance of $p = 0.0098^{**}$, and with the correspondence with dictionary forms at a value of 0.30 with a significance of $p = 0.008^{**}$.

This observation led us to formulate another composite variable, namely that of *consistent correspondence with standard forms* (or, shorter, *consistent correspondence*), calculated by multiplying the values for corresponding with standard/dictionary forms with the values for a speaker's consistency. In another 5-variable linear regression test, this new composite variable was found to correlate with formal isiNdebele education more strongly than either of its components, at an estimated value of 0.54 with a significance of 0.00105^{**}. As this is our most statistically significant finding, and yet the dataset is so restricted, we did a few additional tests to see how this finding would hold out against these tests. First, Figure 6 shows the trend visible in a plot of the consistent correspondence variable against the formal isiNdebele education variable.

Second, we calculated the *Pearson product-moment correlation coefficient* for the consistent correspondence variable and the formal isiNdebele education variable to measure their linear correlation. The correlation coefficient was found to be $r = 0.72$ with a p-value of 0.008^{**}, which seems to support the results of the linear regression test, even indicating a rather strong correlation. However, the small sample size means that r is not an unbiased estimate of the population, and thus has low statistical power. The low resolution of our education metadata also

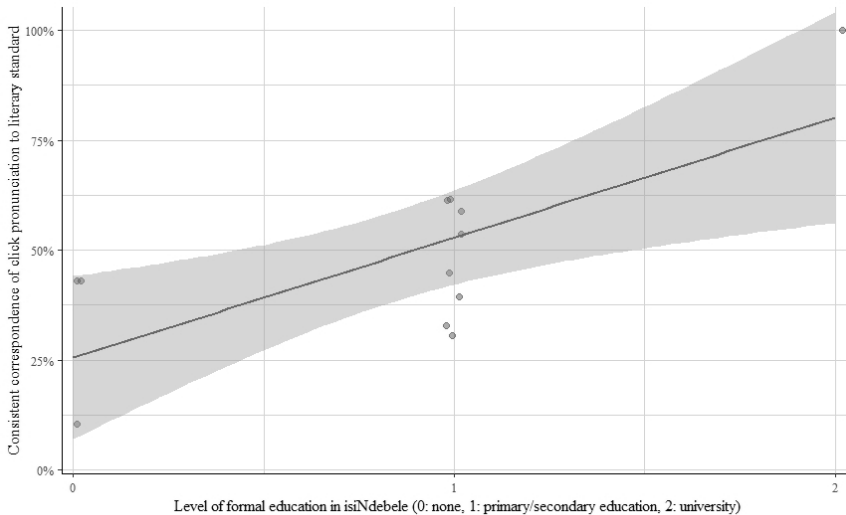


Figure 6 Level of formal education in isiNdebele and consistent correspondence to standard

means that although, for example, level of education is in reality a variable with a continuous probability distribution, in our sample it behaves as if it had a discrete distribution. This is also not the ideal case for relying on a Pearson correlation coefficient.

Therefore, we also calculated the *Spearman's rank correlation coefficient* for these variables, as it is more appropriate for discrete variables. Here, we found the correlation coefficient to be $r_s = 0.56$, but with a p-value of 0.06, that is, not as significant as the previous results. This high p-value might partially be explained by the fact that two thirds of the observations of the formal isiNdebele education variable come from speakers with the middle rank value of that variable.

In any case, although only two of three tests gave statistically significant results, the third was not far above $p = 0.05$, and all the tests indicated at least a moderate positive correlation of more than 0.5. Thus, the main caveat is the small sample size, which makes all of these results still very uncertain, due to the significant effect even one additional divergent observation could have on them.

In conclusion, it can be said that while the limited sample makes all these results initial and somewhat speculative, the data does seem to point towards a correlation between level of formal isiNdebele education and tendency to produce clicks (in elicitation, at least) according to how they are represented in the written standard. As for the other variables, we were unable to find discernible effects, except for the modest negative correlation between general level of education and preference for dental clicks. The number of languages spoken seems not to be a relevant variable for variation in click production for the language, whereas our sample's limitations preclude making any inferences about whether age or gender play a role in how speakers pronounce clicks.

4.2.3 *Qualitative observations*

In addition to our quantitative analysis, we gathered some qualitative information in the form of isiNdebele speaker attitudes and opinions on click consonants, as well as our own impressions of phenomena that we do not have enough data on to analyze qualitatively. First of all, a few speakers expressed their uncertainty about how to write some click-containing words and asked us to show them how they were written in the dictionaries. The problem was summarized by one of them as not always knowing whether a given word is written with a <c> or a <q>. These speakers belonged to the group who produced dental and postalveolar clicks inconsistently for the same words.

Furthermore, when interviewing speaker S9, who teaches isiNdebele at university level and is very knowledgeable about the ways the language is used

in different parts of the isiNdebele speaking region, in addition to elicitation, we discussed the articulation of click sounds. The speaker told us, that in everyday speech, some speakers pronounce some words typically with dentals while others produce them with postalveolars, and that which way one produces them does not matter in informal discussion. The speaker also told us that while for the elicitation they pronounced the clicks according to the orthography, in everyday speech they tend to quite freely mix the clicks. They added that speakers don't really care whether someone produces dental or postalveolar clicks in a given context, and that the choice of place of articulation does not affect understanding.

A final interesting observation is the seeming tendency for some speakers to use postalveolar clicks more frequently during initial pronunciation of lexemes during elicitation, and during some observed speech events where careful speech was used, like public speeches. Our first impression is that this tendency is especially typical of male speakers. However, no systematic analysis of the phenomenon has been performed yet. A proper treatment of this possible phenomenon would require a full study of its own.

5. DISCUSSION

The Sindebele data, while being highly preliminary, seems to largely agree with Ziervogel's (1959) observations about the consonant correspondences to the isiNdebele clicks, with the addition of the ejective stop /k'/ occasionally corresponding to the non-nasal clicks. No pattern regarding this alternation can be established based on the scarce data available, the main problem being the small number of cognates found. Further research should also be carried out in terms of mapping possible regional and individual variation. Another departure from Ziervogel's original analysis is our finding of a voiced velar fricative /ɣ/ corresponding to a nasal click, but this is an isolated incident and, again, merits more investigation in the future.

Comparing this to the findings on click loss by Traill & Vossen (1997) is complicated by the fact that very little is known of the clicks in Sindebele prior to their assumed loss. There are no palatal stops in our data, but the velars, as Traill & Vossen predict for the accompaniments, do seem to preserve nasality. As for Angolan !Xū and !Xegwi, similar results (loss of "abrupt" series of clicks only, or earlier than the other series) are not attested in our data, but it should be noted that the sociolinguistic situation is quite different in comparison – Sindebele, while endangered, is not in a similar stage of language shift. There may also be a considerable difference in the time depth of the phenomena – we do not know

when the Sindebele clicks were lost, or indeed much at all about the historical developments within the language.

As for the clicks actually produced by Sindebele speakers, they are only found in loanwords. These seem to be mainly of isiZulu origin and were only attested for speakers with at least some knowledge of isiZulu. Further research is needed to establish the extent of such loans – it is possible that, at least in the form of loanwords, clicks might be in the process of being (re)introduced to Sindebele.

As for isiNdebele, although the small speaker sample makes it hard to draw any strong conclusions, some results seem to suggest themselves. First of all, the issue of the non-distinctiveness of the segmental qualities of the plain clicks as opposed to the non-nasalized depressor clicks raises the question of whether these two types of clicks are in fact distinct phonemes at all. This question ties into wider issues of apparent weakening of distinctive features of depressor consonants and of the phonologization of the depressor effect, as well as the possibly related issue of the simplification of lexical tone patterns in isiNdebele (see Aunio et al. in this volume), topics very much beyond the scope of this paper. Suffice to say, it does indeed seem as if the remaining segmental differences between the two click types discussed here are only marginally relevant, with the tonal distinction caused by the depressor effect taking on much of the functional load. Should the depressor effect become fully phonologized and reanalyzed as independent of the consonants preceding it, the two clicks might indeed proceed to fully merge.

The observation that dental clicks are highly preferred by about half of the speakers, and not dispreferred by any but one of the other speakers, is interesting in the light of Herbert's (1990) claim that the postalveolar (or palatal, in his terminology) click is the least marked in the Southern Bantu languages. As already indicated by Gunnink's (2018) Fwe data, this claim cannot be said to hold for all Bantu click languages, nor, based on our data, even for all Southern Bantu languages. The tendency for lateral clicks to be lost, also discussed by Herbert, does, however fit with our data as well.

Another interesting observation we have made relating to this issue is the phenomenon, mentioned in Subsection 4.2.3, of some speakers tending to use postalveolar clicks in contexts possibly assumed to be of higher importance, such as public speeches and initial moments of elicitation. This tendency might also point to some sort of identity-signaling role for the postalveolar click. Our preliminary hypothesis is that the very intense and loud character of the postalveolar click as compared with the dental one might make it more suitable for signaling emphasis or identity. As click consonants do not occur in most of the languages commonly spoken by the neighbors of the isiNdebele speaking communities, with isiZulu being the exception (and a latecomer to the area at that) clicks

might be viewed as something typical of isiNdebele as opposed to other languages of the area. Thus, it might be used to signal and enforce identity, for example, as an isiNdebele speaker valuing the language and amaNdebele culture. This might affect linguistic analysis for example if speakers tended to reinforce or accentuate the kinds of features that show group distinctions in elicitation situations. It might even be that similar phenomena occur in other Bantu languages with clicks as well, and that these might have influenced analyses of their click preferences. All of this should, however, still be viewed as highly hypothetical.

The correlation of correspondence of click realizations to standard forms with decreasing preference for dental clicks and respectively increasing preference for postalveolar clicks, and the correlation of each of those measures with the socio-linguistic variables of exposure to isiNdebele subject education and general level of education are especially noteworthy. Based on these findings, some preliminary confirmation may be found for the hypothesis that the click inventory of isiNdebele (or some varieties of it) seems at some earlier stage to have been at least partially reduced to a single – dental – place of articulation, but that the situation is again changing with speakers' increasing exposure to and education in the standard literary form of the language.

Our study does not give any good answers as to why the general level of education seems to correlate more strongly with a weaker preference for dental clicks than does the level of exposure to formal isiNdebele education. One hypothesis to investigate could be that any exposure to the literary standard language increases the probability of a speaker having the postalveolar realization in their active articulatory repertoire.²⁸ But higher exposure and, possibly as a result of this, higher adherence to the standard, would then limit this realization to only those forms where the postalveolar variant is found in the standard. This would result in a wider variance of occurrence of postalveolar clicks with those speakers who have had some level of formal isiNdebele education below university level compared either to those who have had no formal isiNdebele education or to those who have gone on to pursue further education in the language. However, a larger, more detailed study would be needed to investigate this hypothesis.

The spread of the written standard may be a key factor in explaining some of the variation found in the pronunciation of click consonants in isiNdebele. Exposure to the written standard (and, possibly, to forms based on the written standard, such as might be used in more official or highly public domains like the media or larger organizations or institutions) increases with increasing level of isiNdebele subject

²⁸ And possibly exposure to related languages, which have preserved the dental–postalveolar distinction more clearly.

education. Access to these normative spoken forms is also facilitated by education. Speakers more familiar with the standard language seem to be more likely to produce forms corresponding to the standard, whereas less educated speakers tend to prefer one place of articulation, usually dental, over the other.

This leads to a sort of diglossia of phonemic inventories: some speakers clearly only have one phonemic place of articulation, whereas others have two, at least in some speech registers. Intelligibility between speakers does not seem to be hampered by this situation, as can be observed from the description of click use and variation provided by one consultant (S9) above in Subsection 4.2.3; this situation is not surprising given the low number of minimal pairs existing for the two click series. The dictionary *Iziko lesiHlathululi-mwezi sesiNdebele* (2006) gives twelve apparent exact minimal pairs. However, eight of these have the same meaning (sometimes with a somewhat different choice of words for the English translation); one pair has basically the same meaning expressed somewhat differently; one has different specific meanings that are derived from the same root; and two have completely different meanings. These last two are also completely different parts of speech, with both dental examples being verbs and both of the postalveolar ones being nouns. These minimal pairs are illustrated in Table 8.

No convincing confirmation was found for the hypothesis that exposure to other Nguni languages with larger click inventories might be influencing the click realizations of isiNdebele speakers. The number of languages spoken did show slight correlation with increased occurrence of postalveolar clicks, but the variable can, in hindsight, be considered too general to be useful in measuring influence of other click containing languages on isiNdebele. This is because the number of languages spoken usually contained two to three languages without clicks (most commonly English, Northern Sotho, and Afrikaans) as well. Furthermore, it is not a completely independent variable, correlating noticeably with the level of education of a speaker, although speakers had frequently learned many of the languages outside of educational contexts.

Even measuring knowledge of other Nguni languages would, in all probability, not give confirmation for this idea, as in the study sample all but the oldest two speakers indicated that they speak isiZulu at least. In a larger sample this variable might still be tested successfully. One problem might still remain, however, namely, disentangling the not-quite-independent variables of age, multilingualism, and education. Older speakers of the language seem to be – on average – less well educated and less familiar with other languages. These factors might cumulatively cause a steep difference between those generations that grew up and settled down before the fall of apartheid – especially those who were schooled before the introduction of isiNdebele language teaching in the

1980s – and younger generations. For younger speakers, the factors of education and multilingualism might actually be more independent, and in future studies it might make sense to also analyze different age groups independently in relation to them.

Table 8 IsiNdebele minimal pairs with clicks

Word with <c>	Translation	Word with <q>	Translation	Notes
-bhaca	'to hide'	-bhaqa	'to hide'	
i-cabazi	'[yard] ²⁹	i-qabazi	'yard'	
-caca	'to be clear'	i-qaqa	'polecat, skunk'	different PoS
-catha	'to administer edema'	i-qatha	'hoof'	different PoS
-choba	'to crush between fingernails'	-qhoba	'to crush between fingernails'	
ubu-chopho	'brain'	ubu-qhopho	'brain'	Also found as <i>ubu-qopho</i>
-cima	'to put out fire'	-qima	'to extinguish'	
-cobela	'to fill a pipe/gun'	-qobela	'to cut up and mix (as stew)'	³⁰
-colela	'to forgive someone'	-qolela	'to forgive'	
um-condo	'scraggy legs'	um-qondo	'thin legs'	
i-condo	'position with bent knees'	i-qondo	'bended knee'	
um-sucwa	'kraal manure'	um-suqwa		

Possibly significant variables that were left out of this study completely were location (of birth, of residence) and mobility, as well as linguistic environments at home, in educational institutions, and at work (assuming that other environments are not as significant, as significantly less time is spent there). These variables could not be tested because the sample was too homogeneous regarding location and the linguistic environment at home, as all but three speakers lived in the same area in primarily isiNdebele speaking homes, and too little data was available for the rest.

²⁹ 'flat piece of ground in front of a house in an African homestead' i.e. 'yard'

³⁰ Probably both derived from *-qoba* 'to cut into small pieces', cf. *-cobelela* 'to cut into small pieces'.

It must also be noted that even for those variables for which there was more usable and variable data, the study sample is often not representative of the population of the area. According to the 2011 census of South Africa (Statistics South Africa 2012), people aged 40 or more only represent a little over 10% of the population of Mpumalanga, and only a little over 5% had any education of a higher level than secondary.

In conclusion, while the current situation regarding click consonants in both Sindebele and isiNdebele broadly corresponds to what has been described in earlier literature – complete replacement of clicks with pulmonic velar consonants in Sindebele and clicks with two main places of articulation in isiNdebele – variation within, and exceptions to, the general pattern occur in both languages. We further propose some tentative sociolinguistic factors that might help in explaining the variation observed. In the case of Sindebele, most of the sporadically occurring and probably recently reacquired clicks can plausibly be explained as borrowings from isiZulu. As for isiNdebele, the extent of isiNdebele subject education (and thus exposure to the written standard) appears as a likely candidate for explaining at least some of the variation found in whether speakers use dental clicks only or both dental and postalveolar ones. IsiNdebele subject education seems to correlate negatively with dental click preference and positively with the adherence of click production to the dictionary forms of words. These results are, however, tentative, and for both languages more research is needed, if more reliable conclusions are to be drawn about the effects of social dynamics on click variation and reacquisition. Further variables, such as geographic location, domains of language use, and identity signaling might also play a role, and accounting for these would also require additional research, designed specifically to account for these topics.

ABBREVIATIONS

CL	Noun class
COP	Copula
FV	Final vowel
NEG	Negation, negative
SG	Singular
INF	Infinitive

Numbers preceding an abbreviation refer to person (e.g. 1SG). Numbers following an abbreviation refer to noun class (e.g. CL5).

REFERENCES

- AL-WER, Enam 2002. Education as a Speaker Variable. In: A. ROUCHDY (ed.), *Language Contact and Language Conflict in Arabic: Variations on a Sociolinguistic Theme*: 41–53. London: Routledge.
- ANDERS, H.D. 1937. Observations on Certain Sound Changes in Xhosa Derivatives from Khoisan. *South African Journal of Science* 33: 921–925.
- BAYLEY, Robert 2013. Variationist Sociolinguistics. In: R. BAYLEY, R. CAMERON & C. LUCAS (eds), *Oxford Handbook of Sociolinguistics*: 11–30. Oxford: OUP.
- BOURQUIN, Walther 1951. Click-words which Xhosa, Zulu and Sotho Have in Common. *African Studies* 10(2): 59–81.
- DOKE, Clement Martyn 1967 [1954]. *The Southern Bantu Languages*. London: International African Institute.
- DOKE, Clement Martyn, Daniel McKenzie MALCOLM & Jonathan M.A. SIKAKANA 1958. *English and Zulu Dictionary: English–Zulu*. Johannesburg: Witwatersrand University Press.
- DOKE, Clement Martyn & Benedict W. VILAKAZI 1953. *Zulu–English Dictionary*. Johannesburg: Witwatersrand University Press.
- DONNELLY, Simon Scurr 2007. *Aspects of Tone and Voice in Phuthi*. PhD dissertation, University of Illinois at Urbana-Champaign.
- GOWLETT, Derek 2003. Zone S. In: D. NURSE & G. PHILIPPSON (eds), *The Bantu Languages*: 609–638. London: Routledge.
- GUNNINK, Hilde 2018. *A Grammar of Fwe: A Bantu Language of Zambia and Namibia*. PhD dissertation, Ghent University.
- GUNNINK, Hilde, Bonny SANDS, Brigitte PAKENDORF & Koen BOSTOEN 2015. Prehistoric Language Contact in the Kavango-Zambezi Transfrontier Area: Khoisan Influence on Southwestern Bantu Languages. *Journal of African Languages and Linguistics* 36(2): 193–232.
- HERBERT, Robert K. 1990. The Relative Markedness of Click Sounds: Evidence from Language Change, Acquisition and Avoidance. *Anthropological linguistics* 32(1/2): 120–138.
- HERBERT, Robert K. 2002. The Sociohistory of Clicks in Southern Bantu. In: R. MESTHRIE (ed.), *Language in South Africa*: 297–315. Cambridge: CUP.
- Iziko lesiHlathululi-mezwi sesiNdebele 2006. *IsiNdebele–English/English–isiNdebele: IsiHlathululi-mezwi/Bilingual and Explanatory Dictionary*. Cape Town: Phumelela.
- JESSEN, Michael & Justus C. ROUX 2002. Voice Quality Differences Associated with Stops and Clicks in Xhosa. *Journal of Phonetics* 30: 1–52.
- KHUMALO, James Steven Mzilikazi 1987. *An Autosegmental Account of Zulu Phonology*. PhD dissertation, University of the Witwatersrand.
- KÖHLER, Oswin 1963. Observations on the Central Khoisan Language Group. *Journal of African Languages* 2(3): 227–234.

- LABOV, William 1963. The Social Motivation of a Sound Change. *Word* 19(3): 273–309.
- LABOV, William 1966. *The Social Stratification of English in New York City*. Washington, DC: Center for Applied Linguistics.
- LABOV, William 1972a. *Language in the Inner City: Studies in the Black English Vernacular*. Philadelphia: Philadelphia University Press.
- LABOV, William 1972b. *Sociolinguistic Patterns*. Philadelphia: Philadelphia University Press.
- LANHAM, Leonard Walter 1960. *The Comparative Phonology of Nguni*. PhD dissertation, University of the Witwatersrand.
- LOUBSER, JOHANNES H.N. 1994. Ndebele archaeology of the Pietersburg area. *Navorsinge van die Nasionale Museum* 10(2): 61–147.
- LOUW, Jacobus Abraham 1977a. The Adaption of Non-Click Khoi Consonants in Xhosa. In: A. TRAILL (ed.), *Khoisan Linguistic Studies* 3 (Comm. from the African Studies Inst. 6): 74–92. Johannesburg: University of the Witwatersrand.
- LOUW, Jacobus Abraham 1977b. Clicks as Loans in Xhosa. In: J.W. SNYMAN (ed.), *Bushman and Hottentot Linguistic Studies 1975* (Miscellanea Congregalia 2): 82–100. Pretoria: University of South Africa.
- MSIMANG, Christian Themba 1989. *Some Phonological Aspects of the Tekela Nguni Dialects*. PhD dissertation, University of South Africa.
- PAKENDORF, Brigitte, Hilde GUNNINK, BONNY SANDS & KOEN BOSTOEN 2017. Prehistoric Bantu-Khoisan Language Contact. *Language Dynamics and Change* 7(1): 1–46.
- DU PLESSIS, Menán 2016. Notes on Qing's Own Language. In: J. HOLLMANN, M. DU PLESSIS, J.M. DE PRADA-SAMPER, J. WEINTROUB, J. WINTJES & J. WRIGHT (eds), *On the Trail of Qing and Orpen*: 103–123. Johannesburg: Witwatersrand University Press.
- POTGIETER, Ewart F. 1950. *Inleiding tot die klank- en vormleer van isiNdundza: 'n dialekt van Suid-Transvaalse Ngoeni-Ndebele*. PhD dissertation, University of South Africa.
- POULOS, George & Christian T. MSIMANG 1998. *A Linguistic Analysis of Zulu*. Cape Town: Via Afrika.
- SHABANGU, Thos M. & J.J. SWANEPOEL 1989. *Isibhathululimezwi: An English–South Ndebele Dictionary*. Cape Town: Maskew Miller Longman.
- SIBANDA, Galen 2004. *Verbal Phonology and Morphology of Ndebele*. (PhD dissertation, University of California, Berkeley) Ann Arbor: University of Michigan.
- SKHOSANA, Philemon Buti 2009. *The Linguistic Relationship Between Southern and Northern Ndebele*. PhD dissertation, University of Pretoria.
- STATISTICS SOUTH AFRICA 2012. *Census 2011*.
- TRAILL, Anthony 1986. Click Replacement in Khoe. In: R. VOSSSEN & K. KEUTHMANN (eds), *Contemporary Studies on Khoisan: In Honour of Oswin Köhler on the Occasion of His 75th Birthday* (Quellen zur Khoisan-Forschung 5): 301–320. Hamburg: Helmut Buske.
- TRAILL, Anthony & Rainer VOSSSEN 1997. Sound Change in the Khoisan Languages: New Data on Click Loss and Click Replacement. *Journal of African Languages and Linguistics* 18(1): 21–56.

- TRAILL, Anthony, James S.M. KHUMALO & Paul FRIDJHON 1987. Depressing Facts about Zulu. *African Studies* 46(2): 255–274.
- VOSSEN, Rainer 1991. What Do We Do with Irregular Correspondences? The Case of the Khoe Languages. *History in Africa* 18: 359–379.
- WILMSEN, Edwin N. & Rainer VOSSEN 1990. Labour, Language and Power in the Construction of Ethnicity in Botswana. *Critique of Anthropology* 10(1): 7–37.
- ZIERVOGEL, Dirk 1959. *A Grammar of Northern Transvaal Ndebele: A Tekela Nguni Dialect Spoken in the Pietersburg and Potgietersrus Districts of the Transvaal Province of the Union of South Africa*. Pretoria: J.L. van Schaik.

APPENDIX I: COMPARISON OF CLICK WORDS CONTAINING A LATERAL CLICK IN SHABANGU & SWANEPOEL (1989) WITH IZIKO LESIHLATULULI-MEZWI SESINDEBELE (2006), WITH ISIZULU COMPARISONS FROM DOKE & VILAKAZI (1953) AND DOKE, MALCOLM & SIKAKANA (1958)

Dictionary: Eng-Nbl	Dictionary: Nbl-Eng	Translation	Note	isiZulu comparison
unoxhaka	unoxhaka	(mouse)trap	Nbl-Eng: isichaka is something completely different, 'a poor person'	unoxhaka
-ngxamile	-ncama	serious(ness)		-ngxamile
-xhwalileko	isiqhwala	sickly vs. cripple/ chronically sick person		-xhwalile
-nxele	incele	left, left-handed (person)		-nxele
inxeba	inceba	wound		i(l)inxeba
-xolo	-colo, -qolo	forgiveness, apology		-xola (and derived forms)
-xolisa	-colisa	apologise		'(be) peaceful, calm, at peace'
-xolelwa	-colelwa	amnesty		
-xolela, ixolelo	-colela, -qolela	forgive, excuse		
-xoxa	-coca	chat, narrate		-xoxa
ingxoxo	ingcoco	Eng-Nbl: chat, essay; Nbl-Eng: narration	Eng-Nbl: iqqoqo: summary, collection related?	

Dictionary: Eng-Nbl	Dictionary: Nbl-Eng	Translation	Note	isiZulu comparison
nganxanye	ngancanye	aside	Eng-Nbl: ngancanye: one-sided, sideways	nganxanye 'on/to one side'
inxenye	-ncenye, -ngcenye	part, side, aside etc.	Depressor difference between part and side/half?	inxenye
-nxande	-	rectangle, rectangular	Other similar geometrical words with a nxa-element also don't appear in the other dictionary, but the nxa-element is found as nca- for example in ngancanye above	
isixuku	-	cluster		isixuku
-nxephezela / isinxephezelo	-	compensation		-nxephezela 'sympathize etc.'
-xilonga	-	diagnose		xilonga ukwazi isifo 'diagnose a disease'
isithixo	-	god, idol		isithixo
-xhawulana	-	shake hands		-xhawula 'grip with / shake by the hand'
isigaxa	-	lump, nodule		isigaxa
-xabana	-	quarrel	Probably related to Nbl-Eng qaba 'block across, to cross', c.f. isiZulu comparison	-xabana from -xaba 'place in difficulties, block the way, stand crosswise etc.'

Dictionary: Eng-Nbl	Dictionary: Nbl-Eng	Translation	Note	isiZulu comparison
-bhoxobhoxo/ -mboxomboxo	-	slime/slimy	Descriptive/ideophonic, probably neither dictionary covers all of this type	bhoxo '(ideophone) of walking in the mud, mixing up'
umxhantela	-	sprout		umxhantela
ubunxemu/-nxwema	-	squint		-nxemu, -nxwemu, -nxwema
ixhaphozi	-	vlei	might be related to Nbl-Eng chapha 'splash, stain', although that is represented in Eng-Nbl as chaphazela 'blot'	ixhaphozi; possibly from xhapha '(ideophone) of boiling / bubbling up, squelching mud, etc.; might in turn be related to chapha '(ideophone) of dropping/splashing liquid'
-rhexisa	-	withdraw		hoxisa, from hoxa 'with-draw etc.'
xege-xege	-	(ideophone) of wobbling		umxexege 'loose/rickety/unsteady animal or thing', from xege '(ideophone) of looseness/unsteadiness/shakiness'

APPENDIX II: PLACE AND MANNER OF ARTICULATION ANALYSIS DATA

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S1	-ceba	dental	plain			100%
S1	-chaphaza	dental	aspirated			100%
S1	-chaza	dental	aspirated			100%
S1	-chichima	dental	aspirated	dental	aspirated	100%
S1	-chisa	dental	aspirated			100%
S1	-choba	dental	aspirated			100%
S1	-cimeza	dental	plain			100%
S1	-citha	dental	aspirated			100%
S1	-cobelela	dental	plain			100%
S1	-cwayisa	dental	plain, labialized			100%
S1	-cwebezela	dental	plain, labialized			100%
S1	-cwenga	dental	plain, labialized			100%
S1	-cwilisa	dental	plain, labialized			100%
S1	-gcina	dental	plain, depressor			100%
S1	-gcuguzela	dental	plain, depressor			100%
S1	-gcwala	dental	depressor, no voicing, labialized			100%
S1	-ncancabeza	dental	nasal	dental	nasal	100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S1	-ncenga	dental	nasal			100%
S1	-ncinza	dental	nasal			100%
S1	-nciphisa	dental	nasal			100%
S1	-ngcwaba	dental	prenasalized, depressor, labialized			100%
S1	-nqophu	dental	nasal			0%
S1	-qala	>50% postalveolar	plain			75%
S1	-qaqada	dental	plain	dental	plain	0%
S1	-qeda	dental	plain			0%
S1	-qephula	dental	plain			0%
S1	-qhaqhazela	dental	aspirated	dental	aspirated	0%
S1	-qhuba	dental	aspirated			0%
S1	-qhuqhumba	dental	aspirated	dental	aspirated	0%
S1	-qima	dental	plain			0%
S1	-qintela	dental	plain			0%
S1	-qopha	dental	plain			0%
S1	-qothula	dental	plain			0%
S1	-qunga	dental	plain			0%
S1	-ququbala	dental	plain	dental	plain	0%
S1	amancina	dental	nasal			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S1	ichibi	dental	aspirated			100%
S1	icici	dental	plain	dental	plain	100%
S1	incwadi	dental	nasal, labialized			100%
S1	ingcenywe	dental	nasal, depressor			100%
S1	ingqondo	dental	sometimes prenasal, sometimes nasal, depressor			0%
S1	iqolo	>50% dental	plain			25%
S1	iqwatjhi	>50% dental	plain, labialized			25%
S1	isichaka	dental	aspirated			100%
S1	isigqila	dental	plain, depressor			0%
S1	isiqa	dental	plain			0%
S1	isiqhwala	dental	aspirated, labialized			0%
S1	isiqu	dental	plain			0%
S1	ubuchopho	dental	aspirated			100%
S1	ugcwetha	dental	depressor, no voicing, labialized			100%
S1	umgqala	dental	plain, depressor			0%
S1	umgqomu	dental	plain, depressor			0%
S1	umngcwabo	dental	prenasalized, depressor, labialized			100%

Speaker	Lexeme	First click in lexeme		Accompaniments and other manners		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners			
S1	ummqopho	dental	nasal					0%
S1	umqondo	dental	plain					0%
S1	umqwwebu	dental	plain, labialized					0%
S1	ungci	dental	nasal, depressor					100%
S2	-cola	dental	plain					100%
S2	-cupha	dental	plain					100%
S2	-eqa	dental	plain					0%
S2	-guqa	dental	plain					0%
S2	-qeda	dental	plain					0%
S2	ichibi	dental	aspirated					100%
S2	icici	dental	plain		dental		plain	100%
S2	incwadi	dental	nasal					100%
S2	ingqondo	dental	prenasalized, depressor					0%
S2	inguquko	dental	plain					0%
S2	inqaba	dental	nasal					0%
S2	iqanda	dental	plain					0%
S2	iqhawe	dental	aspirated					0%
S2	umngcwabo	dental	prenasalized, depressor					100%
S3	-bhaca	dental	plain					100%
S3	-cabanga	>50% postalveolar	plain					25%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S3	-caca	postalveolar	plain	postalveolar	plain	0%
S3	-casula	postalveolar	plain			0%
S3	-chaza	>50% postalveolar	aspirated			25%
S3	-cima	>50% dental	plain			75%
S3	-citha	dental	plain			100%
S3	-eqa	>50% postalveolar	plain			75%
S3	-gcina	dental	plain, depressor			100%
S3	-khiqiza	>50% dental	plain			25%
S3	-ncancani	>50% postalveolar	nasal	>50% postalveolar	nasal	25%
S3	-ncinza	postalveolar	nasal			0%
S3	-ngcola	postalveolar	nasal or prenasalized, depressor			0%
S3	-qala	postalveolar	plain			100%
S3	-qaleka	postalveolar	plain			100%
S3	-qaqada	postalveolar	plain	postalveolar	plain	100%
S3	-qatjha	postalveolar	plain			100%
S3	-qhaqhazela	postalveolar	aspirated	postalveolar	aspirated	100%
S3	-qhulana	postalveolar	aspirated			100%
S3	-qinisa	>50% postalveolar	plain			75%
S3	-qobezela	postalveolar	plain			100%

Speaker	Lexeme	First click in lexeme		Accompaniments and other manners		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners			
S3	-xabana	postalveolar, lateral	plain					25%
S3	-yingcosana	dental	prenasalized, depressor					100%
S3	amagqibu	postalveolar	plain, depressor					100%
S3	gqi	dental	plain					0%
S3	icebo	>50% dental	plain					75%
S3	igqatiha	postalveolar	plain					100%
S3	ingenye	50% dental, 50% postalveolar	nasal					50%
S3	inqwaba	>50% postalveolar	nasal, labialized					75%
S3	iqatha	postalveolar	plain					100%
S3	iqembu	>50% postalveolar	plain					75%
S3	isichaka	>50% postalveolar	aspirated					25%
S3	isinqumo	postalveolar	nasal					100%
S3	isiqa	postalveolar	plain					100%
S3	isiqongolo	>50% postalveolar	plain					75%
S3	isiqu	postalveolar	plain					100%
S3	isiquntu	>50% postalveolar	plain					75%
S3	isithixo	lateral, postalveolar	plain					75%
S3	ugcinazithathe	>50% postalveolar	plain					25%
S3	umaqobola	postalveolar	plain					100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S3	umgcino	postalveolar	plain			0%
S3	umgqomu	postalveolar	plain			100%
S3	ungqongqotjhe	dental	prenasalized, depressor, slightly voiced release	dental	prenasalized, depressor	0%
S4	-coca	dental	plain	dental	plain	100%
S4	-cola	>50% postalveolar	plain			25%
S4	Gqibelo	>50% postalveolar	sometimes plain, sometimes no audible release, depressor, sometimes breathy			75%
S4	icici	dental	plain	dental	plain, sometimes no audible release	100%
S4	incayesincele	dental	nasal	dental	nasal	100%
S4	incayesokudla	dental	nasal			100%
S4	incitlba	dental	nasal			100%
S4	incwadi	postalveolar	nasal, labialized			0%
S4	ingqondo	>50% postalveolar	sometimes prenas. sometimes nasal, depressor			75%
S4	iqanda	>50% postalveolar	plain, sometimes unexpectedly depressor			75%
S4	iqimiso	>50% postalveolar	plain			75%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S4	isigqila	postalveolar	depressor, no voicing, labialized			100%
S4	ubuqopho	postalveolar	plain			100%
S4	ugqwetha	>50% postalveolar	plain, labialized			75%
S4	umcoco	dental	plain	dental	plain, sometimes no audible release	100%
S4	umgqala	postalveolar	plain			100%
S4	umgqekezi	postalveolar	plain			100%
S4	umngcele	dental	prenasalized, depressor			100%
S4	umqasa	postalveolar	plain			100%
S4	umucu	dental	plain			100%
S4	ungci	dental	prenasalized, depressor			100%
S5	-ceba	dental	plain			100%
S5	-chaphaza	dental	aspirated			100%
S5	-chaza	dental	aspirated			100%
S5	-chichima	dental	aspirated	dental	aspirated	100%
S5	-chisa	dental	aspirated			100%
S5	-choba	dental	aspirated			100%
S5	-cimeza	dental	plain			100%
S5	-citha	dental	plain			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S5	-cobelela	dental	plain			100%
S5	-cwayisa	dental	plain, labialized			100%
S5	-cwebezela	dental	plain, labialized			100%
S5	-cwenga	dental	plain, labialized			100%
S5	-cwilisa	dental	plain, labialized			100%
S5	-eqa	>50% dental	plain			25%
S5	-gcina	dental	plain, depressor			100%
S5	-gcugcuzela	dental	plain, depressor			100%
S5	-gcwala	dental	depressor, no voicing, labialized			100%
S5	-ncancabeza	dental	nasal	dental	nasal	100%
S5	-ncenga	dental	nasal			100%
S5	-ncinza	dental	nasal			100%
S5	-nciphisa	dental	nasal			100%
S5	-ngcwaba	dental	sometimes prenas. sometimes nasal, depressor			100%
S5	-nqophha	dental	nasal			0%
S5	-qala	dental	plain			0%
S5	-qaqada	dental	plain	dental	plain	0%
S5	-qeda	dental	plain			0%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S5	-qephula	dental	plain			0%
S5	-qhaqhazela	dental	aspirated	dental	aspirated	0%
S5	-qhuba	dental	aspirated			0%
S5	-quqhumba	dental	aspirated	dental	aspirated	0%
S5	-qima	dental	plain			0%
S5	-qintela	dental	plain			0%
S5	-qopha	dental	plain			0%
S5	-qunga	dental	plain			0%
S5	-ququbala	dental	plain	dental	plain	0%
S6	-cola	dental	plain			100%
S6	Gqibelo	dental	plain, depressor			0%
S6	icici	dental	plain	dental	plain	100%
S6	inceba	dental	nasal			100%
S6	inciliba	dental	nasal, one instance depressor and breathy			100%
S6	incwadi	dental	nasal, one instance depressor and breathy			100%
S6	ingqondo	dental	prenasalized, depressor, one instance breathy			0%
S6	iqanda	>50% postalveolar	plain			75%

Speaker	Lexeme	First click in lexeme		Accompaniments and other manners	Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners		Place of articulation	Accompaniments and other manners	
S6	iqhegu	dental	aspirated				0%
S6	iqiniso	dental	plain				0%
S6	isigqila	dental	plain, depressor				0%
S6	ubuqopho	dental	plain				0%
S6	umgqekezi	dental	plain, depressor, sometimes breathy				0%
S6	ungci	dental	prenasalized, depressor				100%
S7	-bhaca	dental	plain, sometimes no audible release				100%
S7	-cabanga	dental	plain				100%
S7	-caca	dental	plain		dental	plain	100%
S7	-casula	dental	plain				100%
S7	-chaza	dental	aspirated				100%
S7	-cima	dental	plain				100%
S7	-citha	dental	plain				100%
S7	-khiqiza	dental	plain				0%
S7	-ncinza	dental	nasal				100%
S7	-ngcola	>50% dental	prenasalized, depressor				75%
S7	-qala	dental	plain				0%
S7	-qaleka	dental	plain				0%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S7	-qangi	>50% dental	plain			25%
S7	-qaphela	dental	plain			0%
S7	-qaqada	dental	plain	dental	plain	0%
S7	-qaqamba	dental	plain			0%
S7	-qatjha	dental	plain			0%
S7	-qeda	dental	plain			0%
S7	-qhaq hazela	dental	aspirated	dental	aspirated	0%
S7	-qhulana	dental	aspirated			0%
S7	-qinisa	dental	plain			0%
S7	-qothula	dental	plain, one instance nasalized			0%
S7	-qotjha	>50% dental	plain			25%
S7	-quntula	>50% dental	plain			25%
S7	ekugcineni	dental	plain			100%
S7	icebo	dental	plain			100%
S7	igqatjha	dental	plain, depressor, somewhat breathy			0%
S7	inqwaba	>50% postalveolar	nasal, labialized			75%
S7	iqatha	dental	plain			0%
S7	iqephe	dental	plain			0%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S7	isichaka	dental	aspirated			100%
S7	isinqumo	>50% postalveolar	nasal			75%
S7	isiqa	dental	plain			0%
S7	isiquнту	dental	plain			0%
S7	umgqomu	dental	plain			0%
S7	umqhele	>50% postalveolar	aspirated			75%
S7	umqwayiba	>50% postalveolar	plain, unexpected depressor, labialized			75%
S8	-bhaca	dental	plain			100%
S8	-cabanga	dental	plain			100%
S8	-caca	dental	plain	dental	plain	100%
S8	-chaza	dental	aspirated			100%
S8	-cima	dental	plain			100%
S8	-cwebezela	dental	plain, labialized			100%
S8	-khiqiza	dental	plain			0%
S8	-ncinza	dental	nasal			100%
S8	-qala	>50% dental	plain			25%
S8	-qaleka	dental	plain			0%
S8	-qanda	dental	plain			0%
S8	-qatjha	dental	plain			0%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S8	-qeda	dental	plain			0%
S8	-qhulana	dental	aspirated			0%
S8	-qinisa	dental	plain			0%
S8	-qothula	dental	plain			0%
S8	-qotjha	>50% dental	plain			25%
S8	-quntula	dental	plain			0%
S8	icebo	dental	plain			100%
S8	iggatjha	dental	plain			0%
S8	iqatha	dental	plain			0%
S8	iqembu	dental	plain			0%
S8	isichaka	dental	aspirated			100%
S8	isiqongolo	dental	plain			0%
S8	isiquntu	dental	plain			0%
S8	umgqomu	dental	plain			0%
S8	umqhele	>50% dental	aspirated			25%
S8	umqwayiba	>50% dental	plain, labialized			25%
S9	-bhinca	dental	nasal			100%
S9	-chaza	dental	aspirated			100%
S9	-coca	dental	plain	dental	plain	100%
S9	-cola	dental	plain			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S9	-eqa	postalveolar	plain, labialized			100%
S9	-gcina	dental	plain, depressor			100%
S9	-gugcuzela	dental	plain, depressor	dental	plain, depressor	100%
S9	-gwala	dental	plain, depressor, labialized			100%
S9	-gqekeza	postalveolar	plain, depressor			100%
S9	-guqa	postalveolar	plain			100%
S9	-qaqada	postalveolar	plain	postalveolar	plain	100%
S9	-qhaqhazela	postalveolar	aspirated	postalveolar	aspirated	100%
S9	icebo	dental	plain			100%
S9	icici	dental	plain	dental	plain	100%
S9	inceba	dental	nasal			100%
S9	inciliba	dental	nasal			100%
S9	incwadi	dental	nasal, labialized			100%
S9	ingceny	dental	nasal, depressor			100%
S9	ingqondo	postalveolar	sometimes prenas. sometimes nasal, depressor			100%
S9	iqanda	postalveolar	plain			100%
S9	iqatha	postalveolar	plain			100%
S9	iqembu	postalveolar	plain			100%
S9	iqhegu	postalveolar	aspirated			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S9	iqiniso	postalveolar	plain			100%
S9	isichaka	dental	aspirated			100%
S9	isigqila	postalveolar	plain, depressor			100%
S9	isinqumo	postalveolar	nasal			100%
S9	isiqa	postalveolar	plain			100%
S9	isiqu	postalveolar	plain			100%
S9	ubuchopho	dental	aspirated			100%
S9	ubuqopho	postalveolar	plain			100%
S9	ugcwetha	dental	plain, labialized			100%
S9	ugqwetha	postalveolar	plain, labialized			100%
S9	umaqobola	postalveolar	plain			100%
S9	umcabango	dental	plain			100%
S9	umcasa	dental	plain			100%
S9	umcoco	dental	plain	dental	plain	100%
S9	umgqala	postalveolar	plain, depressor			100%
S9	umgqekezi	postalveolar	plain, depressor			100%
S9	umgqomu	postalveolar	plain, depressor			100%
S9	umngcele	dental	prenasalized, depressor			100%
S9	umqasa	postalveolar	plain			100%
S9	umucu	dental	plain			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S9	ungci	dental	prenasalized, depressor			100%
S9	ungqongqotjhe	postalveolar	nasal, depressor	postalveolar	prenasalized, depressor	100%
S10	-bhinca	>50% dental	nasal			75%
S10	-cola	>50% postalveolar	plain			25%
S10	-eqa	postalveolar	plain, depressor			100%
S10	-guguczela	“in-between”/alveolar	plain, depressor	>50% postalveolar	plain	50%
S10	-gcwala	>50% postalveolar	plain, labialized			25%
S10	-gqekeza	>50% dental	plain			25%
S10	-guqa	“in-between”/alveolar	plain			50%
S10	-ncani	dental	nasal			100%
S10	-ncibilika	>50% dental	nasal			75%
S10	-qeda	>50% postalveolar	plain, depressor-like			75%
S10	amancina	“in-between”/alveolar	nasal			50%
S10	icici	>50% postalveolar	plain			25%
S10	inceba	“in-between”/alveolar	nasal	>50% dental	plain	50%
S10	inciliba	“in-between”/alveolar	nasal			50%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S10	incwadi	postalveolar	nasal, labialized			0%
S10	iqanda	>50% dental	plain, depressor			25%
S10	iqhegu	>50% postalveolar	aspirated			75%
S10	iqiniso	dental	plain			0%
S10	umcabango	>50% dental	plain			75%
S11	-cola	dental	plain			100%
S11	-cupha	dental	plain			100%
S11	-eqa	dental	plain			0%
S11	-guqa	dental	plain			0%
S11	-qeda	dental	plain			0%
S11	ichibi	dental	aspirated			100%
S11	icici	dental	plain	dental	plain	100%
S11	incwadi	dental	nasal			100%
S11	ingqondo	dental	prenasalized, depressor			0%
S11	inguquko	dental	plain			0%
S11	inqaba	dental	nasal			0%
S11	iqanda	dental	plain			0%
S11	iqhawe	dental	aspirated			0%
S11	umngcwabo	dental	prenasalized, depressor			100%
S12	-bhaca	dental	plain			100%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S12	-cabanga	dental	plain			100%
S12	-cabanga	dental	plain			100%
S12	-chaza	dental	aspirated			100%
S12	-cima	dental	plain			100%
S12	-eqa	postalveolar	plain			100%
S12	-ncinza	dental	nasal			100%
S12	-qala	dental	plain			0%
S12	-qaleka	dental	plain			0%
S12	-qaqamba	postalveolar	plain	postalveolar	plain	100%
S12	-qatjha	postalveolar	plain			100%
S12	-qotjha	dental	plain			0%
S12	-xabana	dental	plain			0%
S12	-xola	postalveolar	plain			0%
S12	-xoxa	postalveolar	plain	postalveolar	plain	0%
S12	icatjhaza	lateral	plain, very long VOT as if aspirated			0%
S12	ingcnye	dental	nasal			100%
S12	iqatha	postalveolar	plain			100%
S12	iqephe	postalveolar	plain			100%
S12	iqhezu	dental	plain			25%

Speaker	Lexeme	First click in lexeme		Second click in lexeme		Match dictionary
		Place of articulation	Accompaniments and other manners	Place of articulation	Accompaniments and other manners	
S12	iqhezu	>50% dental	plain			0%
S12	isinqumo	dental	plain			0%
S12	isiqandiso	postalveolar	plain			100%
S12	isiqongolo	postalveolar	plain			100%
S12	ugqwetha	postalveolar	plain, labialized			100%
S12	umggala	postalveolar	plain, depressor			100%
S12	umgqomu	postalveolar	aspirated/breathy, depressor			100%

NOMINAL TONE IN ISINDEBELE

Lotta Aunio, Stephan Schulz, Nailya Philippova & Antti Olavi Laine

IsiNdebele is a Nguni Bantu language spoken in South Africa. While the tone systems of many other Nguni languages are well described and analysed, this paper presents the first description of the isiNdebele nominal tone system. The isiNdebele tone system is typical of Bantu languages in that Low tones are the default tones, added after phonological rules have been applied, and only High tones undergo any phonological rules. It is well known in the literature of Nguni languages that H tone spread/shift targets the antepenultimate and penultimate syllables, but isiNdebele differs from other Nguni languages in that the H tone spreading/shifting target is one syllable further, that is, the penultimate and the final syllable.

1. INTRODUCTION

Tones of Nguni languages have attracted the attention of phonologists for decades, and the tone systems of several Nguni languages are well described (see, e.g. Cassimjee & Kisseberth 2001; Cloughton 1992; Cope 1970; Donnelly 2009; Jokweni 1995; Khumalo 1987; Rycroft 1980b; 1983; Sibanda 2004). In addition, Nguni tone systems have inspired the development of phonological theories (see, e.g. Cassimjee 1998; Cassimjee & Kisseberth 1998; Downing 1990; 2001a; 2001b; 2009; Goldsmith, Peterson & Drogo 1989). While isiNdebele tones are mentioned in passing in relation to other Nguni languages, a comprehensive account of the isiNdebele tone system remains to be written. This paper addresses this gap by presenting a description of the isiNdebele nominal tone system.

IsiNdebele has a typical Bantu privative tone system (Hyman 2001). That is, only High (H) tones are involved in tone rules, while Low (L) tones are the default tones on any tone bearing units that do not have a H tone. IsiNdebele makes use of both lexical and grammatical tones. Lexical tone, the topic of this paper, is a lexical property of both noun and verb stems. In addition to lexical tones, nouns can have another underlying H tone, namely, the H tone of the augment or pre-prefix (see Miestamo, Helenius & Kajala in this volume). Grammatical tones are part of verbal inflection and not discussed in this paper.

Studia Orientalia 120 (2019), pp. 283–311

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ISSN: 0039-3282

The data presented in this paper has been collected by our project team during several visits to South Africa during 2014–2017,¹ and partly during the HALS fieldwork excursion in 2016 (see Introduction to this volume).² Therefore, the data covers a rather large part of the Ndebele area. Altogether, 240 nominal stems were recorded and transcribed in different contexts with up to ten speakers each. In this sample, there are about 30 monosyllabic stems, 100 bisyllabic stems, 50 trisyllabic stems, and 60 4-syllabic stems. The sample was constructed so that it covers cognates for all tone types in Proto-Bantu and includes depressor consonants, that is, consonants that have lowering effects on tones, in different positions in the stem.

The paper is organized as follows. Section 2 outlines the basics of the isiNdebele tone system. Since bisyllabic stems form the core of the nominal system, these are presented first in Section 3. Then monosyllabic noun stems (Section 4) and longer noun stems (Section 5) are presented. Only monomorphemic stems are treated in this paper because there are further processes affecting the tonal realizations in compound, derived, and reduplicated stems that fall out of the scope of this paper. In the final section (6), the isiNdebele tone patterns are compared to Zimbabwean Ndebele and isiZulu nominal tone patterns.

2. ISINDEBELE TONES

Nguni languages typically show spreading and/or shifting of H tones towards the end of the word (or even the phrase/utterance) (Cassimjee & Kisseberth 2001). IsiNdebele is no exception to this, as H tones undergo High Tone Spread or Shift (HTS), depending on the context. In this paper spreading and shifting are both analysed as spreading, but in the latter process the H tone is delinked from the original Tone Bearing Unit (TBU) after spreading (Zerbian & Barnard 2008: 242–243). IsiNdebele prefix H tones are not delinked from the TBU contributing the H tone, but with stem tones the delinking is optional.

IsiNdebele differs from the other Nguni languages in that the target of the HTS is one mora further to the right. A H tone contributed by any syllable before the ante-penult (pre-APU) targets the penult while H tones contributed by ante-penult (APU) or the penultimate syllable (PU) target the final, whereas

¹ “Stability and Change in Language Contact: The Case of Southern Ndebele (South Africa)” funded by the Academy of Finland.

² The authors would like to thank the whole HALS excursion team and especially the numerous speakers of isiNdebele for fruitful cooperation in data collection and analysis. We would also like to thank Prof. Laura J. Downing for her theoretical and Nguni-specific insights that have advanced the analysis, and the reviewers for their helpful comments.

other Nguni languages typically target the ante-penult and the penult (Cassimjee & Kisseberth 2001; see Section 6 for comparison). In isiNdebele, the final syllable is excluded as the target when in utterance-final position.

Surface H tones are marked with an accent in this paper, and underlying H tones are marked with underlining of the vowel contributing the H tone. Underlyingly toneless vowels as well as vowels that receive the default surface tone (L) are not marked. The left edge of the verb stem is marked with “[” to show whether the vowel contributing the H tone is in the prefix or the stem. The TBU is most often the vowel, but syllabified nasals can also bear tone in some contexts, for example with noun class 10 prefix (see page 296 below). Lengthened vowels are represented as double vowels.

HTS is first exemplified here with verb forms that typically have more syllables than the most common nouns and therefore show the spreading effects more clearly. Verb stems have a binary lexical tone contrast between H-toned and toneless stems. In these examples, penultimate syllables have long vowels indicating utterance-final position (the utterance-medial forms are presented with the noun stems below). If the H is contributed by the antepenultimate (APU) or the penultimate (PU) stem syllable, the PU syllable is realized with a level H tone (1a&b). If the H is contributed by a pre-APU syllable, which can be either a stem tone (2a) or a prefix tone (2b&c), the PU is realized with a falling tone.

- (1a) *sí[tjéllíile* ‘we told’
 (1b) *síya[tjééla* ‘we tell’
 (2a) *sí[sikéliile* ‘we cut for’
 (2b) *úku[hlékiisa* ‘to make laugh’
 (2c) *bá[fikiséene* ‘they arrived together’

A H tone contributed by a pre-APU syllable targets the penult, and the result is a falling tone on the long PU, as seen in (2a–c) above. Level H on the PU is created when the H tone is contributed by the APU or the PU stem syllable, as in (1a&b) above (see Section 3 for a more detailed discussion). In (1a) and (2a) the stem tone is delinked from the syllable contributing the H tone (H Tone Shift). This delinking is optional in isiNdebele – (1a) can also be pronounced as *sí[tjéllíile* – or the first stem syllable is higher in pitch than the prefix syllable but lower than the PU (cf. similar “gradient shift” effects in other Nguni language, e.g. “X-sequences” in isiXhosa as labelled by Claughton 1992). With prefix tones the H tone is not delinked from the H-contributing syllable (2b&c).

When there are two H tones within the same word, the prefix H spreads until the second H and there is no Downstep between the two H tones (3). These two

adjacent H tones form an OCP (Obligatory Contour Principle) violation which is resolved by fusing the two tones. The left edge behaves like the prefix H tones, that is, there is no delinking (cf. example 2 above), while the right edge shows that it is the stem H that is realized on the PU (cf. example 1 above). In the presence of a prefix H tone, the stem H tone is not delinked from the syllable contributing it.

(3a) *úku[síika* ‘to cut’

(3b) *úku[bóníisa* ‘to show’

Since both prefix and stem tones form a falling tone on the PU if the lexical H is contributed by a pre-APU, the lexical tone difference is neutralized in many longer forms. As seen above, bisyllabic and trisyllabic infinitives of toneless stems have a falling tone on the PU as they spread the pre-APU H tone until the first mora of the PU (4a). These contrast with a level H tone on the PU with bisyllabic and trisyllabic H stems (4b). But with 4-syllabic stems, both toneless (5a) and H stems (5b) have a falling tone on the PU, since the contributors of both prefix and stem H tones are pre-APU and only spread to the first mora of the long penult.

(4a) *úku[hléeka* ‘to laugh’ *úku[hlékiisa* ‘to make laugh’

(4b) *úku[síika* ‘to cut’ *úku[bóníisa* ‘to show’

(5a) *úku[fikéléela* ‘to reach’

(5b) *úku[bónákáala* ‘to be visible’

The analysis thus far can be summarized as follows:

(6) H tones contributed by stems (utterance-final form)

- a) If contributed by the APU or PU, the H tone target is the second mora of the lengthened PU.
- b) If contributed by a pre-APU syllable, the H tone target is the first mora of the lengthened PU.
- c) Delinking from the H-contributing syllable is optional when no other H tone precedes, but does not apply in the presence of a prefix H.

(7) H tones contributed by prefixes (utterance-final form)

- a) The target of the H tone is the first mora of the lengthened PU.
- b) Delinking does not apply.
- c) Spreading can be stopped by a stem H tone. The two adjacent H tones are fused, and the fused H behaves like a prefix H at the left edge (no delinking) and like a stem H at the right edge.

As is typical for Nguni languages, isiNdebele has a set of consonants called depressor consonants (see, e.g. Downing 2009). IsiNdebele depressor consonants are, in orthographic symbols, **bh**, **d**, **g**, **dz**, **dlh**, **j**, **z**, **dl**, and **gq** (depressor consonants are bolded in the examples below). While the phonetic properties of these consonants vary (see Schulz *forthcoming* for an account), they have a unified effect on the tone of the syllable in question. In addition, all sonorant consonants can be depressors, and the depressor and non-depressor sonorants are distinguished only by tone. The depressor effects on nominal stems are discussed with each nominal tone pattern below.

3. BISYLLABIC NOUN STEMS

Bisyllabic noun stems make up the most common stem type for nouns in Bantu languages, and isiNdebele is no exception. Many Nguni languages, for example isiZulu (Clark 1988) and Siphúthi (Donnelly 2009), have four contrastive stem tone patterns for bisyllabic noun stems. IsiNdebele has a tone system that deviates from this pattern: for bisyllabic stems, only two underlying – that is, contrastive – patterns are identified, although several other patterns are found in the surface forms.

Since the augment contributes a H tone in addition to the possible lexical H tone of the noun stem, we will first have a look at forms in which the augment is not found. In isiZulu, forms without the augment are frequently found in negative phrases. However, isiNdebele augment is also found in many negative phrases, but it is not present in the negative possessive constructions and negated existential predications (see Miestamo, Helenius & Kajala in this volume on augments).

Because the augment – the vowel together with its H tone – is absent in the negative possessive construction, toneless (\emptyset) bisyllabic nominal stems are realized as all L, as in (8a), while the H-toned stems are realized with a level H on the long penultimate vowel, because the H tone is contributed by the PU of the stem, as in (8b). These two surface stem tone patterns for bisyllabic stems are represented here as LL.L and HH.L, with syllable boundaries marked with full stops.

- (8a) \emptyset : a-ngi-na abe-sana → *angíná be-saana* ‘I don’t have boys’
 \emptyset : a-ngi-na i-paka → *angíná paaka* ‘I don’t have a wild cat’
- (8b) H: a-ngi-na aba-tlhami → *angíná ba-tlháámi* ‘I don’t have storytellers’
 H: a-ngi-na i-ketsi → *angíná kéétsi* ‘I don’t have a greyhound’

If the syllable that is supposed to manifest the surface tone has a depressor consonant (depressor consonants bolded), the surface tone pattern is altered. When the

depressor consonant is the onset of the first syllable of the bisyllabic noun stem (9a) and when a depressor consonant is the onset of both stem syllables (9b) the H tone is realized as a rising tone on the long penultimate syllable. When only the second syllable has a depressor consonant, the surface pattern is the same as without depressors, that is, a level H on the PU, as the tone does not target the final syllable in utterance-final forms (9c).³

- (9a) H: a-ngi-na i-bhesi → *angíná bheési* ‘I don’t have a bus’
 (9b) H: a-ngi-na i-bhaji → *angíná bhááji* ‘I don’t have a jacket’
 (9c) H: a-ngi-na i-tlago → *angíná tlóógo* ‘I don’t have a clock’

As seen in the previous examples, the TBU following the depressor consonant is delinked from the H. This generalization holds for all noun stems and data with depressor consonants is included in the discussion of different stems types below to prove this. The surface tone patterns presented so far are summarized in Table 1.

Table 1 Surface stem tone patterns with depressor consonants in different positions in bisyllabic noun stems with long penultimate syllables.

	Surface	Underlying
No depressors	HH.L	H
	LL.L	∅
1st depressor	LH.L	H
	LL.L	∅
2nd depressor	HH.L	H
	LL.L	∅
1st&2nd depressor	LH.L	H
	LL.L	∅

The two-way (H vs. ∅) contrast is also maintained when the augment, together with its H tone, is present, but the augment H affects the surface realizations of the nominal stems. As presented above (see 6 and 7 above), a pre-APU H tone contributed by either the prefix or the stem is realized as a falling tone on the long PU, unless it is blocked by another H, and stem H tones contributed by the APU or PU syllables are realized as level H tones on the long PU. Therefore, with

³ See Downing & Aunio 2018 for a more detailed account of tone changes caused by depressors in isiNdebele.

toneless stems, the augment H targets the first vowel of the penultimate long vowel, and the first syllable of the stem has a falling tone (10a). With H-toned stems, the augment H and the stem H are fused and the penultimate syllable is realized with a level H tone (10b). In both cases, there is no delinking since the leftmost H is contributed by a prefix.

- (10a) Ø: abe-sana → ábésáana ‘boys’
 Ø: isi-tete → ísítéete ‘marsh’
 (10b) H: i-ketsi → íkéétsi ‘greyhound’
 H: aba-tlhami → ábátlháámi ‘storytellers’

The same stem tone patterns are realized even when the augment vowel is merged with the vowel of the preceding word: toneless stems have a falling tone (11a) and H-toned stems a level H tone (11b). Merging of the augment *i-* with the last vowel of the previous word (*a*) changes the final *a* into *e*, as in (11a), from which the H tone is delinked but the H tone is manifested on the following underlyingly toneless nominal prefix and the stem.

- (11a) Ø: ngi-na isi-tete → ngin_e sítéete ‘I have a marsh’
 (11b) H: ngi-na aba-tlhami → ngin_a bátlháámi ‘I have storytellers’

Toneless bisyllabic noun stems with a short noun class prefix *i(N)-* show that the prefix Hs target the first vowel of the PU, even when contributed by the APU, and form a falling tone on the long PU (12a). Some speakers also optionally use the falling tone pattern on toneless stems when the augment is *not* present (12b), which may be evidence of reinterpretation: in isiNdebele, nouns most often appear with an augment, and the stem patterns occurring with the augment are interpreted as stem tone patterns and maintained even when the augment – that is, the only morpheme contributing a H tone – is not present.

- (12a) Ø: i-paka → ípáaka ‘wild cat’
 (12b) Ø: a-ngi-na abe-sana → anginá be-saana/be-sáana ‘I don’t have boys’

The augment H spreads to the stem syllable with toneless stems if there is no depressor consonant on the first syllable of the stem, that is, when there are no depressors at all (as in 10a above) or the depressor is on the second syllable (13a). If the depressor occurs in the first syllable, as in (13b), or in both syllables, as in (13c), the augment H tone is delinked from the TBU following the depressor.

- (13a) \emptyset : i-ncwadi → *íncwáadi* ‘book’
 (13b) \emptyset : i-gama → *ígaama* ‘name’
 (13c) \emptyset : ama-doda → *ámááooda* ‘husbands’

H-toned stems with depressors have the same tone patterns with the augment (see (9) above) and without it, because it is the stem tone that is realized on the stem: the stem tone pattern is LH.L when the first syllable has a depressor (14a) and when both syllables have depressors (14b), but HH.L when only the second syllable has a depressor (14c).

- (14a) H: i-bh̄esi → *íbh̄éési* ‘bus’
 (14b) H: i-bh̄aji → *íbh̄aáji* ‘jacket’
 (14c) H: i-tlogo → *ítlóógo* ‘clock’

With the first syllable as a depressor, we found one tonal minimal pair (15). Table 2 is extended from Table 1 above to show the surface stem tone patterns when the augment is present in utterance-final forms.

- (15) \emptyset : i-zinyo → *íziinyo* ‘name’
 H: i-zinyo → *íziínyo* ‘tooth’

Table 2 Surface stem tone patterns with depressor consonants in different positions in bisyllabic utterance-final noun stems with and without an augment

	w/o Aug	with Aug	Underlying
No depressors	HH.L	HH.L	H
	LL.L	HL.L	\emptyset
1st depressor	LH.L	LH.L	H
	LL.L	LL.L	\emptyset
2nd depressor	HH.L	HH.L	H
	LL.L	HL.L	\emptyset
1st&2nd depressor	LH.L	LH.L	H
	LL.L	LL.L	\emptyset

The tone patterns of bisyllabic nominal stems match those of bisyllabic infinitive stems: toneless stems have a falling tone on the lengthened PU unless first stem syllable has a depressor consonant in the onset position (16a), while H-toned stems have either a level H tone or a rising tone on the lengthened PU (16b).

- (16a) Ø: uku-fik-a → úkúfika 'to arrive'
 Ø: uku-bhac-a → úkú**bb**haaca 'to hide'
 Ø: uku-tjhad-a → úkútj**há**ada 'to marry'
 Ø: uku-gez-a → úkú**g**eeza 'to wash'
- (16b) H: uku-tjel-a → úkútj**é**la 'to tell'
 H: uku-dans-a → úkú**da**ansa 'to dance'
 H: uku-theng-a → úkú**thé**nga 'to buy'
 H: uku-bhag-a → úkú**bb**aága 'to bake'

We now turn to **phrase-medial** forms in which the PU of noun stems is not lengthened and refine the analysis presented above, since the target environment is now different. The forms without the augment again show the underlying tone patterns more clearly. As with the utterance-final forms presented above, in toneless stems the whole stem is toneless (L.L), as in (17a), but H-toned stems show H tone on both of the stem syllables and not only on the PU (H.H), as in (17b).

- (17a) Ø: a-ngi-na um-sana wábo → angíná msana wáabo
 'I don't have their boy'
 Ø: a-ngi-na abe-sana bábo → angíná besana báabo
 'I don't have their boys'
- (17b) H: a-ngi-na um-tlhami wábo → angíná mtlhámí wáabo
 'I don't their their storyteller.'
 H: a-ngi-na aba-tlhami bábo → angíná batlhámí báabo
 'I don't have their storytellers'

Adding the augment again modifies the surface tone pattern of toneless stems, but not H-toned stems. With toneless stems, the only H tone is, again, the H contributed by the augment; this prefix H targets the PU (18a). In H-toned stems, the stem H targets the final syllable of the noun (18b), as it does in the forms without the augment in (17) above.

- (18a) Ø: abe-sana aba-khulu → ábésána ábákhúulu 'big boys'
 Ø: um-sana om-khulu → úmsána ómkhúulu 'big boy'
- (18b) H: aba-tlhami aba-khulu → ábátlhámí ábákhúulu 'big storytellers'
 H: um-tlhami om-khulu → úmtlhámí ómkhúulu 'big storyteller'

The stem tone patterns in phrase-medial position with the augment are H.L for toneless stems and H.H for H-toned stems. With these examples we may summarize the analysis for phrase-medial forms as follows:

(19) H tones contributed by stems (phrase-medial form)

a) If contributed by the PU, the H tone target is the final syllable.

(20) H tones contributed by prefixes (phrase-medial form)

a) The H tone target is the PU.

b) Delinking does not apply.

c) Spreading can be stopped by a stem H tone, which leads to two adjacent H tones and subsequent fusing of the two H tones.

Comparing these to the analysis presented for utterance-final forms in (6) and (7) above enables us to make further generalizations about the HTS targets. The H tones contributed by the prefixes always target the PU, but the H tone is not spread to the second mora of the PU when the PU is lengthened in utterance-final forms, resulting in a falling H on the lengthened PU. The behaviour of stem H tones contributed by the APU or PU in lengthened and non-lengthened forms can be unified by postulating a non-finality restriction for the utterance-final forms: the target of these H tones is the final syllable, but in utterance-final forms the H tone is delinked from the final syllable resulting in a level H tone on the lengthened PU. The separate analyses presented above (6&7 and 19&20) can be combined as follows:

(21) H tones contributed by stems

a) If contributed by the APU or the PU, the target of the H tone is the final.

b) If contributed by a pre-APU syllable, the target of the H tone is the PU.

c) In utterance-final position, the H tone is delinked from the final syllable.

d) Delinking from the H-contributing syllable is optional when no other H tone precedes it, but does not apply in the presence of a prefix H.

(22) H tones contributed by prefixes

a) The target of the H tone is the PU.

b) In utterance-final forms, the H tone does not spread to the second mora of the lengthened PU.

c) Delinking does not apply.

d) Spreading can be stopped by a stem H tone, which leads to two adjacent H tones and subsequent fusing of the two H tones.

When a H-toned stem in phrase-medial position has a depressor consonant on its first syllable, the stem H is realized only on the stem-final syllable, as it is delinked from the TBU following the depressor onset (23a). When there is a depressor consonant on the final stem syllable, the stem H is realized on the first stem syllable only (L.H; 23b). When both stem syllables have depressor consonants, the stem is realized as L.L (23c).

(23a) H: $\underline{u}m\text{-}d\underline{l}ul\underline{i} \text{ } \underline{o}m\text{-}khulu \rightarrow \acute{u}m\underline{d}l\underline{u}l\underline{i} \acute{o}m\underline{k}h\underline{u}l\underline{u}$ 'big person'

(23b) H: $\underline{a}ba\text{-}f\underline{u}nd\underline{i} \text{ } \underline{a}ba\text{-}khulu \rightarrow \acute{a}b\underline{a}f\underline{u}nd\underline{i} \acute{a}b\underline{a}k\underline{h}u\underline{l}u$ 'big pupils'

(23c) H: $\underline{i}\text{-}m\underline{b}o\underline{n}g\underline{i} \text{ } \underline{e}\text{-}khulu \rightarrow \acute{i}m\underline{b}o\underline{n}g\underline{i} \acute{e}k\underline{u}l\underline{u}$ ⁴ 'big poet'

In toneless stems the prefix H spread to the PU is delinked when that syllable has a depressor; therefore, the surface realization of the stem is L.L when there is a depressor in the first syllable (24a) or in both the first and the second syllables (24b). When the depressor is in the last syllable only, the realization is the same as without depressors (H.L; 24c; cf. 18a above). Table 3 (on the following page) summarizes all the stem tone patterns discussed so far.

(24a) Ø: $\underline{i}\text{-}g\underline{a}m\underline{a} \text{ } \underline{e}l\underline{i}\text{-}khulu \rightarrow \acute{i}g\underline{a}m\underline{a} \acute{e}l\underline{i}k\underline{h}u\underline{l}u$ 'big name'

(24b) Ø: $\underline{a}m\underline{a}\text{-}d\underline{o}d\underline{a} \text{ } \underline{a}m\underline{a}\text{-}khulu \rightarrow \acute{a}m\underline{a}d\underline{o}d\underline{a} \acute{a}m\underline{a}k\underline{h}u\underline{l}u$ 'big husbands'

(24c) Ø: $\underline{i}\text{-}n\underline{c}w\underline{a}d\underline{i} \text{ } \underline{e}\text{-}khulu \rightarrow \acute{i}n\underline{c}w\underline{a}d\underline{i} \acute{e}k\underline{u}l\underline{u}$ 'big book'

The forms discussed so far are found either in the position where the penultimate syllable is typically lengthened in Nguni languages, usually rendered as phrase-final, or in phrase-medial position in which the penultimate lengthening does not apply. Most accounts of Nguni tonology only account for these two positions (see, e.g. Cassimjee & Kisseberth 2001: 328; Downing 1990). However, Donnelly (2009: 302) mentions a “discourse emphasis” strategy in Siphûthî and other Nguni languages in which the present indicative long form (*ya-*) is used utterance-medially with a short PU vowel but behaves tonally as a phrase-final form: the tone target is the APU. Cassimjee & Kisseberth (2001: 355–356) write that a *ya*-marked verb in isiXhosa shows the lengthened final forms “even though

4 The first stem consonant of the adjective is deaspirated when preceded by class 9 or 10 prefix. This is due to a common restriction among Nguni languages that nasals may not be followed by aspirated consonants. The nasal of the class prefix is not present on the surface in these examples but nevertheless conditions deaspiration (Skhosana 2009: 84).

Table 3 Surface stem tone patterns of bisyllabic noun stems in utterance-final and phrase-medial positions, with and without an augment, with depressor consonants in different positions.

	Utterance-final	Utterance-final	Phrase-medial	Phrase-medial	Underlying
	w/o Aug	with Aug	w/o Aug	with Aug	
No depressors	HH.L	HH.L	H.H	H.H	H
	LL.L	HL.L	L.L	H.L	∅
1st depressor	LH.L	LH.L	L.H	L.H	H
	LL.L	LL.L	L.L	L.L	∅
2nd depressor	HH.L	HH.L	H.L	H.L	H
	LL.L	HL.L	L.L	H.L	∅
1st&2nd depressor	LH.L	LH.L	L.L	L.L	H
	LL.L	LL.L	L.L	L.L	∅

it is not literally final”, that is, not utterance-final, but phrase-final. Zeller, Zerbian & Cook (2017) investigate syntactic phrasing in isiZulu and find that phrase-final, but utterance-medial, forms induce lengthening that is not as salient as that found utterance-finally. Nevertheless, this “medial position” behaves tonally like the utterance-final forms, blocking H tone movement to the penultimate position (Zeller, Zerbian & Cook 2017: 317).

The “medial position” is found in isiNdebele as well, but it seems to differ tonally from the patterns seen in the initial study of isiZulu by Zeller, Zerbian & Cook (2017). More research is needed to define what exactly constitutes the phonological and syntactic phrase in isiNdebele, but the three positions can be described as 1) **utterance-final**, that is, the forms presented above in which the PU is fully lengthened and the final vowel is excluded as the target; 2) **phrase-medial** with short PU vowels presented above – for example, when nouns are followed by a modifier; and 3) **phrase-final but utterance medial** – for example, when the noun is followed by an adverb which does not belong to the same phonological phrase as the noun but is in the same utterance.

The vowel length of the penultimate vowel of the “medial position” form appears to be somewhere between the fully lengthened utterance-final form and the short phrase-medial form – as is also the case for the forms tested by Zeller, Zerbian & Cook (2017) for isiZulu – but no detailed study has been performed on the phonetics and conditioning factors of vowel length in isiNdebele. However, this position in isiNdebele is marked by different surface tone patterns for H-toned stems: final H tones are realized just like in the short phrase-medial

forms (25; cf. 17b and 23 above), while in isiZulu the “medial position” matches tonally with utterance-final forms. In isiNdebele, the PU vowel is longer to indicate the phrase edge, but utterance-medial position makes it possible for the word-final H tones to be realized. The prefix H tone of toneless stems again targets the PU and is not affected by the lengthening of the PU vowel (26; cf. 17a and 24 above). This further proves that the target of the stem H tone is the final syllable, but final H tones are not allowed in utterance-final position.⁵

- (25a) H: *ngi-nyeny-a um-tlhami khulu* → *nginyenya úmtlháámí khúúlu*
‘I dislike a storyteller a lot’⁶
- (25b) H: *ngi-nyeny-a i-bhēsi khulu* → *nginyenya íbheésí khúúlu*
‘I dislike a bus a lot’
- (25c) H: *ngi-nyeny-a um-fundi khulu* → *nginyenya úmfúúndi khúúlu*
‘I dislike a pupil a lot’
- (25d) H: *ngi-nyeny-a i-bhaji khulu* → *nginyenya íbhaáji khúúlu*
‘I dislike a jacket a lot’
- (26a) Ø: *ngi-nyeny-a um-sana khulu* → *nginyenya úmsána khúúlu*
‘I dislike a boy a lot’
- (26b) Ø: *ngi-nyeny-a i-dolo khulu* → *nginyenya ídoolo khúúlu*
‘I dislike a knee a lot’
- (26c) Ø: *ngi-nyeny-a i-ncwadi khulu* → *nginyenya incwáadi khúúlu*
‘I dislike a book a lot’
- (26d) Ø: *ngi-nyeny-a in-doda khulu* → *nginyenya indooda khúúlu*
‘I dislike a man a lot’

Noun class prefixes of classes 8 *izi-* and 10 *ii(N)-* have a complex allomorphic distribution and these classes have partly merged into the same class in isiNdebele (see Crane et al. 2019 for more details). Prefix *izi-* mostly occurs with monosyllabic stems (see Section 4 below) and with vowel-initial stems (see Section 5 below), but some speakers allow for class 8 plural for a few consonant-initial stems, such as *izi-tete* ‘marshes’. The depressor at the onset of the pre-PU syllable lowers the tone of that syllable but otherwise the tone pattern is not altered: *ízitéete* (cf. *ísitéete* ‘marsh’ in 10a above).

5 Some speakers actually pronounce the final H tone also in utterance-final position, but this needs more investigation.

6 The “medial position” vowels are written with double vowels in examples (25) and (26) to make it easier to compare the tone patterns to the fully lengthened forms.

Interestingly, prefix *ii(N)*- also shows depressor effects although there is no overt depressor consonant in the prefix. However, in isiZulu the class 10 prefix is *izi(N)*-, and therefore we can assume that isiNdebele has reduced the segmental shape of the prefix but maintained the depressor quality of the prefix (see Aunio & Schulz 2018 for further details). Although the orthography presents the prefix with two vowels, phonetically, it consists of a short vowel and a long, syllabified nasal [in:] with depressor qualities. The plural of *i-ncwadi* ‘a book (cl. 9)’ → *incwáadi* (see (13) above) is *ii-ncwadi* ‘books (cl. 10)’ → *inncwáadi*; the plural differs from the singular in that the nasal is longer and the pitch of the nasal is lowered while the pitch of the nasal in the singular is H (not marked in the transcription since the nasal in the singular is not syllabic and is therefore not a tone bearing unit).⁷

4. MONOSYLLABIC NOUN STEMS

Monosyllabic noun stems show the same two contrastive stem tone patterns as bisyllabic stems, that is, toneless versus H-toned, but since the syllable contributing the lexical tone is the final syllable, the surface realizations show patterns not seen with the bisyllabic stems discussed above. In the following, we first present the patterns we found, and then discuss a possible analysis.

In toneless stems in utterance-final position, the surface pattern is a level H on the long PU, both without and with a depressor consonant on the noun stem (27a). In H-toned stems the long PU has a falling tone (27b). The stems are realized with a L tone in both cases, but the tone difference is manifested on the lengthened vowel of the noun class prefix. Note that the surface patterns are now opposite to what is found with bisyllabic stems: level H surfaces with the toneless stems, and falling tone surfaces with the H-toned stems.

(27a) Ø: *umu-ntu* → *úmúúntu* ‘person’

Ø: *umu-zi* → *úmúúzi* ‘house’

(27b) H: *umu-thi* → *úmúúthi* ‘tree’

H: *ili-hlo* → *íliihlo* ‘eye’

H: *umu-da* → *úmúúda* ‘line’

⁷ In class 9 and 10 the nasal of the prefix has been historically reanalysed as part of the stem. See Crane et al. 2019 for more details.

The same two patterns emerge with shorter prefixes of the shape V-, namely, level H on the long vowel when the stem is toneless (28a) and falling tone when the stem is underlyingly H-toned (28b).

- (28a) Ø: i-so → *íiso* 'kidney'
 Ø: i-ngwe → *íingwe* 'leopard'
 (28b) H: i-mvu → *ímvu* 'sheep'⁸

Monosyllabic infinitives show the same two patterns as monosyllabic nouns (29).

- (29a) Ø: uku-b-a → *úkúúba* 'to become'
 Ø: uku-lw-a → *úkúúlwa* 'to fight'
 Ø: uku-z-a → *úkúúza* 'to come'
 (29b) H: uku-ph-a → *úkúupha* 'to give'
 H: uku-f-a → *úkúufa* 'to die'
 H: uku-dl-a → *úkúudla* 'to eat'

Without the augment, the lexical tone pattern is neutralized, as both toneless and H-toned nouns are realized as L on both the prefix and the stem (30). Although the surface realizations are identical, the underlying forms are different: toneless nouns simply do not have an underlying H to be realized when the augment H is not present, while the H of the H-toned stems cannot be realized since it is utterance final.

- (30) Ø: a-ngi-na umu-ntu → *angíná muu-ntu* 'I don't have a person'
 Ø: a-ngi-na umu-zi → *angíná muu-zi* 'I don't have a homestead'
 H: a-ngi-na umu-thi → *angíná muu-thi* 'I don't have a tree'
 H: a-ngi-na ili-hlo → *angíná lii-hlo* 'I don't have an eye'

In phrase-medial forms, the augment H of the toneless stems spreads all the way to the nominal stem (31a), while with H stems, the augment H does not spread to the final (31b). In these cases, the stem syllable of the toneless stems is realized as H, while the H-toned stems are realized as L. When the stem syllable has a depressor, the tonal difference is again neutralized (31c&d).

⁸ Since there is a limited number of monosyllabic noun stems, a H monosyllabic stem without a depressor consonant in class 9 forms an accidental gap in the data.

- (31a) Ø: umu-ntu om-khulu → *ú*múntú *óm*khúulu ‘a big person’
 (31b) H: umu-thi om-khulu → *ú*múthi *óm*khúulu ‘a big tree’
 (31c) Ø: i-ngwe e-khulu → *ing*we *ékú*ulu ‘a big leopard’
 (31d) H: i-mvu e-khulu → *im*vu *ékú*ulu ‘a big sheep’

As shown for bisyllabic stems above, prefix H tones target the PU, even when contributed by the APU, and create a falling tone on a long PU (see example 12 above). However, this is not the case with toneless monosyllabic stems; rather, the target is the final with a short PU, and a level H tone is formed on the PU when the PU is long – the surface pattern employed by H-toned bisyllabic stems. Therefore, a condition to the analysis presented in (22) above needs to be added: the prefix H tone, unless blocked by another H tone, needs to minimally reach the first stem syllable, as in (31a). In utterance-final forms (27a above) the stem syllable is the final syllable of the utterance and therefore the H tone is delinked from the final syllable. The analysis is updated in (32).

(32) H tones contributed by prefixes

- a) The target of the H tone is the PU, but the H tone must reach the stem.
- b) In utterance-final forms the H does not spread to the second mora of the lengthened PU.
- c) Delinking does not apply.
- d) Spreading can be stopped by a stem H tone, which leads to two adjacent H tones and subsequent fusing of the two H tones.

With H-toned monosyllabic stems, the spread of the augment H stops earlier than expected, as normally adjacent H tones are fused (see example 3 above). As seen above, the phrase-medial form is the basic form for H Tone Spread/Shift, and utterance-final forms simply exclude the final from the surface realization. Taking the phrase-medial form as the starting point helps to explain the peculiar surface pattern of monosyllabic H-toned stems: in phrase-medial forms, the prefix H cannot spread to the stem, as it already has a H tone (31b); this failure to spread has led to a reanalysis of the PU as the target in this form. Next, the final stem H is lost – the same has been reported for younger speakers of Zimbabwean Ndebele (Rycroft 1983) – but PU has remained as the target of the tone spread in these forms, and therefore the surface patterns are identical to those of longer toneless stems that also target the PU. The analysis is updated in (33).

(33) H tones contributed by stems

- a) If contributed by the APU or the PU, the target of the H tone is the final syllable unless that syllable is underlyingly H-toned.
- b) If contributed by a pre-APU syllable, the target of the H tone is the PU.
- c) In utterance-final position, the H tone is delinked from the final syllable.
- d) Delinking from the H-contributing syllable is optional when no other H tone precedes but does not apply in the presence of a prefix H.

In this analysis, the underlying tones correspond to Proto-Bantu stems: H stems in Proto-Bantu are analysed as H in isiNdebele and Proto-Bantu L stems are analysed as toneless. Another possibility is that the stem tones might have changed over time to become the opposite of the Proto-Bantu stem tones, matching the surface forms of bisyllabic stems. However, extending the nominal stems with suffixes reveals that our analysis is also synchronically plausible: toneless monosyllabic stems exhibit the surface pattern of toneless bisyllabic stems when extended by a suffix that is itself toneless (34a) – that is, a falling tone on the long PU (contributed by the augment) – while extended H-toned monosyllabic stems match the H-toned bisyllabic pattern and have a level H tone on the long PU (34b), contributed by the nominal stem. Table 4 summarizes the surface tone patterns on monosyllabic noun stems.⁹

- | | | | | |
|----------|--------------------------|-----------------------|-----------------------|-----|
| (34a) Ø: | <u>u</u> mu-no | → <u>ú</u> múúno | ‘finger’ | vs. |
| | ise- <u>u</u> mu-no-eni | → <u>í</u> sémúnwéeni | ‘it is in the finger’ | |
| Ø: | <u>u</u> mu-ntu | → <u>ú</u> múúntu | ‘person’ | vs. |
| | <u>u</u> mu-ntu-ana | → <u>ú</u> mntwáana | ‘a child’ | |
| (34b) H: | <u>u</u> mu-thi | → <u>ú</u> múuthi | ‘tree’ | vs. |
| | ise- <u>u</u> mu-thi-eni | → <u>í</u> sémtbítini | ‘it is in the tree’ | |

⁹ Phrase-medial forms without the augment are missing from the current set of data.

Table 4 Surface stem tone patterns without and with depressor consonants in monosyllabic noun stems, shown with and without an augment for utterance-final forms, and with an augment for phrase-medial forms

	Utterance- final	Utterance- final	Phrase- medial	Underlying
	w/o Aug	with Aug	with Aug	
No depressors	L	(HL-)L ¹⁰	L	H
	L	(HH-)L	H	∅
Depressor	L	(HL-)L	L	H
	L	(HH-)L	L	∅

5. LONG NOUN STEMS

More stem syllables provide more logical options for tone patterns. While monosyllabic stems are restricted to a H vs. L (or toneless) opposition, bisyllabic stems can have four patterns (H.H, H.L, L.H, L.L; see Section 3 above). In trisyllabic stems eight patterns (H.L.L, H.H.L, H.H.H, L.H.L, L.L.H, L.H.H, L.L.L, H.L.H) are possible, and the number of logical possibilities for 4-syllabic stems is already 16. While it is possible for a language to make use of all the logical possibilities, it is often the case that the number of tone patterns in use is restricted: in longer words there is more segmental material to identify the lexical item and therefore a full tonal distinction is not needed (Aunio *forthcoming*).

As we have seen above, the stem tone distinctions of bisyllabic noun stems in isiNdebele have been reduced to two: toneless and H-toned. It was established that the stem-initial syllable is the source of the tone difference. Looking only at bisyllabic stems, the conclusion could be that the final syllable is excluded as a source for tone specification, but we saw that the distinction is retained with monosyllabic stems as well. Therefore, we can state that the tone specification of nominal stems is restricted to H versus toneless stems, regardless of the length of the stem and we do not expect to have more patterns in longer words than we have in shorter words.

In addition, the analysis presented above predicts that any H tone contributed by the APU is realized as a level H tone on the lengthened penult, while any pre-APU H tones form a falling tone on the lengthened penult (see example 2 above). This limits the number of expected tone patterns to two, even with longer stems, with the tonal difference manifested on the long penultimate

¹⁰ Tonal difference displayed on the nominal prefix.

syllable. And indeed, this pattern is found with trisyllabic stems where toneless stems have a falling tone on the lengthened PU, contributed by the augment (35a), while trisyllabic H stems have a level H on the lengthened PU, contributed by the APU (35b).

- (35a) Ø: *isi-biliso* → *ísibiliiso* ‘yeast’
 Ø: *isi-abelo* → *ísábéelo* ‘a share’
 Ø: *um-belethi* → *úmbéléethi* ‘a parent’
- (35b) H: *isi-bulawo* → *isibúlááwo* ‘a weapon’
 H: *isi-ahluko* → *isáhlúúko* ‘a chapter’
 H: *i-bubulo* → *ibúbúúlo* ‘a company’

The same surface patterns as those seen in shorter stems emerge when the augment is deleted: the toneless stems are realized as L now that there is no augment that would contribute a H tone that spreads to the stem (36a), and the H stems have a level H tone on the PU, again contributed by the first stem syllable (APU) (36b).

- (36a) Ø: *a-ngi-na isi-biliso* → *angíná sibiliiso* ‘I don’t have yeast’
 Ø: *a-ngi-na isi-abelo* → *angíná sabeelo* ‘I don’t have a share’¹¹
- (36b) H: *a-ngi-na isi-bulawo* → *angíná sibúlááwo* ‘I don’t have a weapon’
 H: *a-ngi-na isi-ahluko* → *angíná sáhlúúko* ‘I don’t have a chapter’

Phrase-medial forms with a short PU show the same pattern as the shorter stems: the pre-APU H targets the PU (37a) while the stem H of the APU targets the final (37b).

- (37a) Ø: *isi-biliso si-ami* → *isibiliiso sáámi* ‘my yeast’
 Ø: *isi-abelo si-ami* → *isábéelo sáámi* ‘my share’
- (37b) H: *isi-bulawo si-ami* → *isibúlááwo sáámi* ‘my weapon’
 H: *isi-ahluko si-ami* → *isáhlúúko sáámi* ‘my chapter’

11 As with the shorter stems in example (12b) above, some speakers seem to have lexicalized the tone pattern stemming from the augment and pronounce the falling pattern on the PU of toneless nouns even when the augment is not present, e.g. *angína sábéelo*.

In the negative copula forms in (38), the prefix H is not contributed by the augment, but rather by the negative copula prefix, which is itself realized as L but which induces a H tone on the following syllable. The noun class prefix is not present with consonant-initial stems, but it is found with vowel-initial stems in this copula form.

- (38a) Ø: a-ku-si si-biliso si-ami → akusi sibiliso sáámi
 'it is not my yeast'
- Ø: a-ku-si si-si-abelo si-ami → akusi sisábélo sáámi
 'it is not my share'
- (38b) H: a-ku-si si-bulawo si-ami → akusi sibúlawó sáámi
 'it is not my weapon'
- H: a-ku-si si-si-ahluko si-ami → akusi sisáhlúkó sáámi
 'it is not my chapter'

A depressor on the first stem syllable (APU) lowers the H of that syllable while the tone pattern is otherwise just like without depressors (39a&b). A depressor on the second stem syllable (PU) delinks the prefix H from the PU (39c), but the stem H is realized as a rising H on the PU with a depressor (39d). A depressor on the final syllable does not affect the realization of the tones in these utterance-final forms (39e&f).

- (39a) Ø: i-bhontjisi → ibhontjisi 'bean'
- (39b) H: i-bhaloni → ibhalóni 'balloon'
- (39c) Ø: is-ambatho → isám~~a~~atho 'cloth'
- (39d) H: is-aziso → isáziiso 'notice'
- (39e) Ø: um-cabango → umcábáango 'thought'
- (39f) H: um-beregó → umbéréégo 'task'

Trisyllabic infinitive stems demonstrate the same two types of tone patterns.

- (40a) Ø: uku-hleki-s-a → úkúhlékúisa 'to make sb. laugh'
- Ø: uku-dabul-a → úkúdabúula 'to rip'
- Ø: uku-bambel-a → úkúbámbeela 'to hold on'
- Ø: uku-thokoz-a → úkúthókóoza 'to thank'
- (40b) H: uku-bonis-a → úkúbónúisa 'to show'
- H: uku-zwisis-a → úkúzwisúisa 'to understand'

H: uku-sungul-a → úkúsúnguúla ‘to begin’

H: uku-seubenz-a → úkúsébéénza ‘to work’

Most 4-syllabic and longer stems encountered so far are reduplications, compound stems, stems derived from verbs, or loan words, and possibly have special tone rules – these need more systematic work before a full analysis can be presented. However, with the limited set of data available, some observations can be presented.

The analysis presented above (see examples 32 and 33 above) – namely, that the PU and APU Hs target the final and that pre-APU Hs target the PU – suggests that the surface lexical tone contrast is neutralised in 4-syllabic and longer stems when the augment is present. This neutralisation can be seen with infinitives (see Section 1). In addition, nouns occur without the augment in a very limited set of contexts; that is, the most common contexts are the ones in which the neutralization takes place. Taking into account that tonal differences are less crucial in distinguishing meaning in longer words, it is not surprising to find tone neutralization with long nouns. For example, the surface tone for *ábá-béléthiisi* ‘midwives’ is the same whether or not the stem has a H tone; that is, both underlying forms, toneless (*aba-belethiisi*) and H-toned (*aba-belethiisi*), would give the same surface form. Therefore, while some speakers treat it as a H-toned stem (*angina ba-béléthiisi* ‘I don’t have midwives’), others treat it as a toneless stem (*angina ba-belethiisi* ‘I don’t have midwives’).

Stems with depressor consonants neutralize the tone contrast even further: those speakers who analyse the stems without depressors as toneless also do so when there are depressor consonants on the stem. But long stems with depressors are also frequently analysed as toneless by those for whom the stems without depressors are clearly H-toned stems. In general, the tones of these stems are far from stable, and there is variation even in the speech of the same individual, again indicating the lowered functional load of the lexical tones.

Loan words also have some variation at the segmental level, adding to the confusion about the lexical tones. For example, *í-bbedirúúde* ‘beetroot’ has an unexpected level H on the long penult. This tone pattern is, however, a fully regular realization of a trisyllabic H-toned stem, pronounced as such by another speaker as *í-bbedruúde*. The rising tone on the penult is because of the depressor *d*, which is in the penultimate syllable now that the epenthetic vowel is not pronounced.

6. COMPARISON AND CONCLUSIONS

As the analysis of isiNdebele presented here deviates from the “general” Nguni pattern in which the H tones target the APU (e.g. Downing 2004: 130), in this section we will present some observations about the tone realizations in isiNdebele in comparison to what is described for other Nguni languages. We will also summarize the phonological arguments for the distinct analysis and compare the isiNdebele tone system to that of its closest Nguni relatives, isiZulu and Zimbabwean Ndebele, as well as to the geographically close Sotho varieties.

It has been described above that in isiNdebele, any pre-APU H tones target the PU and form a falling tone on the lengthened penult. For Nguni languages in general, Cassimjee & Kisseberth (2001: 331) describe this surface pattern as a “purely phonetic fall” which follows a H on the preceding syllable and is distinct from “the true falling-toned penult syllables (which have a somewhat greater duration of the H portion of the fall).” Rycroft (1980a: 126) describes this phonetic falling as a “falling pitch onset glide” in Zimbabwean Ndebele. In isiNdebele, the fall on the lengthened PU often begins with a *higher* pitch than the preceding H-toned syllable (Figures 1 and 2), possibly indicating a later pitch target than in Nguni languages in general, and falls evenly throughout the

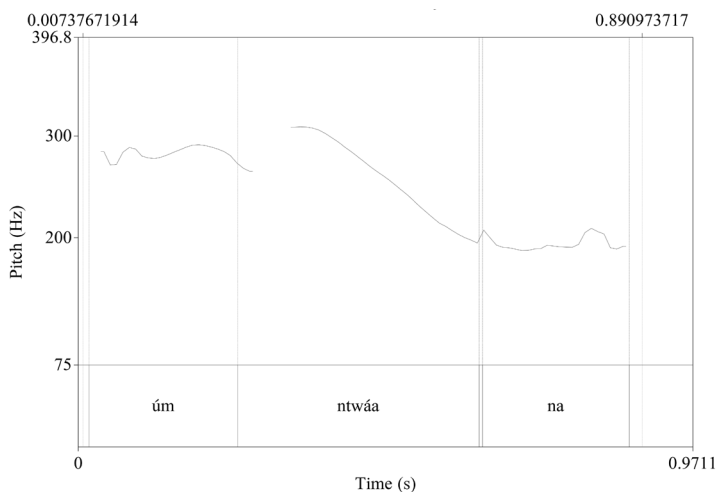


Figure 1 *úmntwáana* ‘a child’: a H tone spread from the augment peaks at the beginning of the PU and falls steadily throughout the whole syllable.

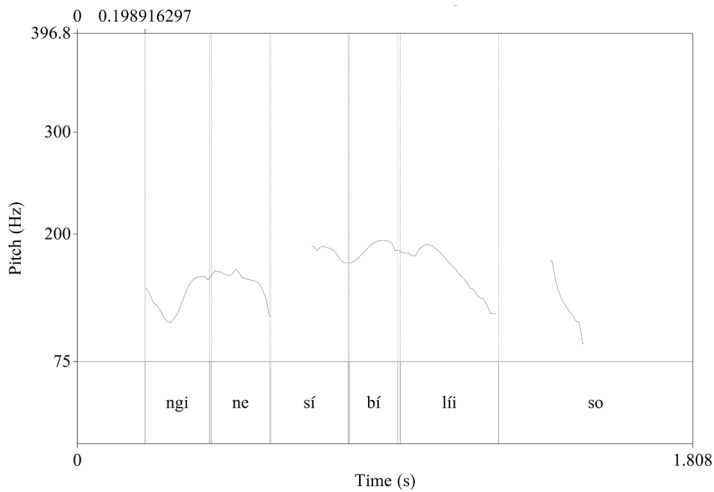


Figure 2 *ngine sibiliiso* 'I have yeast': a H tone spread from the augment (*ngina* \dot{i} → *ngine*) spreads to the PU and falls steadily throughout the whole syllable.

whole syllable.¹² Also, Cassimjee & Kisseberth's "true falling-tone" – that is, a H shifted from the APU to PU when the APU has a depressor consonant – is realized in isiNdebele with the same type of pitch as the "purely phonetic fall": as descending through the whole syllable (Figure 3).

The H tones contributed by the APU or the PU that are realized as a level H tone on the lengthened PU also differ phonetically from what has been reported for Nguni languages in general. Cassimjee & Kisseberth (2001: 331) write that "in all the varieties of Nguni that we have studied, we have observed that a H tone on the penult has a clearly descending shape, the consequence is that a penult H tone ends up significantly lower than a preceding antepenult H." This is true for

12 There is a cross-linguistically attested phenomenon of peak delay which sounds similar to the PU pitch peak in isiNdebele: a H tone does not reach its pitch peak until the beginning of the following syllable. Peak delay is reported for some Bantu languages, for example, Chichewa (Myers 1999). However, peak delay is presented as a possible phonetic explanation for what can be accounted for phonologically as bounded spreading, that is, when a H tone only spreads to the following syllable. In isiNdebele, the spreading is unbounded as the context for the falling PU requires the H tone to be contributed by a pre-APU syllable which is not adjacent to the PU. Zerbian and Barnard (2009) report on a production study of Northern Sotho H tone realization and conclude that both phonetic (peak delay) and phonological (H tone spread) factors contribute to the fact that a H tone is, in certain contexts, realized both on the contributing and on the following syllable.

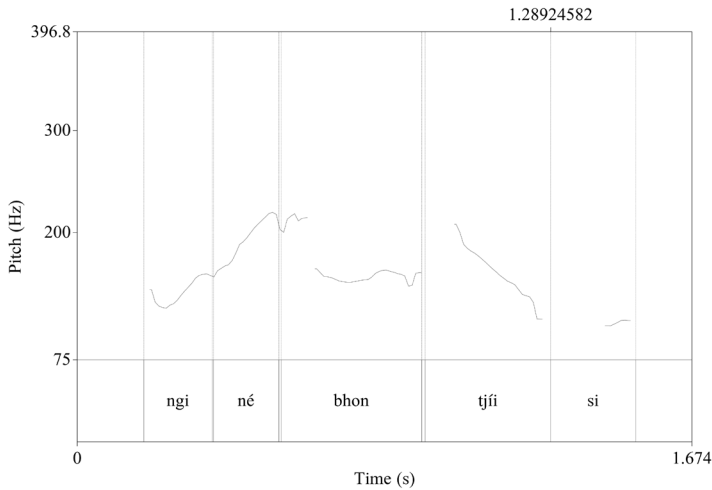


Figure 3 *ngine bhontjiisi* 'I have a bean': a H tone spread from the augment (*ngina i-* → *ngine*) spreads to the PU with a lowering at the depressed syllable and falls steadily throughout the whole syllable.

some speakers of isiNdebele, but for other speakers, the level H on the PU is realized with a rather stable pitch (Figure 4).

Although there are potential *phonetic* differences between isiNdebele and the Nguni languages that have been described as targeting the APU, the arguments for a differing analysis presented here for isiNdebele come from the *phonological* system. Cassimjee and Kisseberth (2001: 355) write that “[a] characteristic feature of Nguni seems to be the behavior of word-final H tones. In a number of varieties, word-final H tones are retained when the word is in final position in the phrase but deleted in phrase-medial position. This distribution is somewhat surprising. One would expect that phrase-final position would be more antagonistic to H tone than phrase-medial position. After all, there is a general preference for pitch to go down at the end of a (declarative) intonational phrase whereas medial position is not at all a position where there is a preference for lowering of pitch.” As seen above, isiNdebele shows the expected pattern; that is, H tones are *not* allowed in utterance-final position but they *are allowed* utterance-medially, regardless of the phrase boundaries. This difference suggests a different analysis of the HTS target: the stem-initiated (APU and PU) H tones target the final in phrase-medial position – not the PU as in many other Nguni languages – but the final H is deleted in utterance-final position.

It was mentioned only in passing above (see example 12b and fn. 11 above) that some toneless stems have a falling tone on the long PU even in contexts where

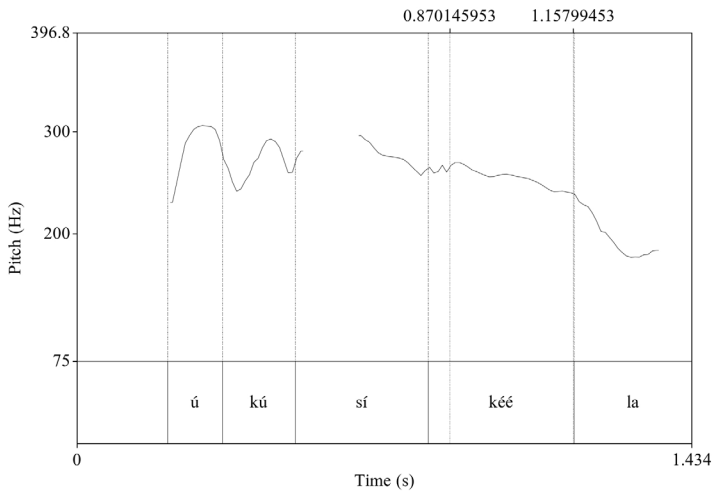


Figure 4 *úkúsíkée'la* 'to cut for someone': a H tone contributed by the APU realized as a fairly level H tone on the PU.

there is no contributor of the H tone, that is, where the augment is not present. This phenomenon shows that some speakers have reanalysed the falling tone as the distinctive pattern and associated it with the nominal stem; the PU as the target of H tone spread has been phonologized. This is in contrast with what is described, for example, for Zimbabwean Ndebele, where “[w]ith most speakers, no tonal contrast is realized on the noun stem itself” (Rycroft 1983: 88). In isiNdebele the stem has become the domain in which the lexical contrast is realized.

Although most Nguni languages seem to follow the Avoid Prominence Principle (Cassimjee & Kisseberth 2001: 336), targeting the prominent PU is found in some other Nguni languages as well. For example, stem-initiated H tones target the PU in Cele and Durban Zulu varieties as well as in Malawian Ngoni. Cassimjee and Kisseberth give analogy as a possible explanation: as the majority of verb stems are two or three syllables long – in which case the tone is contributed by APU or PU and the H target is therefore the PU – the surface pattern has been generalized to longer stems as well. This, in turn, is similar to the isiNdebele reanalysis of the augment tone pattern as the stem tone pattern.

Some varieties of Sotho, for example Southern Sotho (Sesotho), display bounded H tone spread and spread a H tone only to the adjacent syllable on the right, while unbounded spread is found in Northern Sotho dialect clusters (Zerbian 2006). Interesting to our discussion is the variation found in the target of the unbounded HTS: in the Setswapo dialect described by Monareng (1993),

the target of HTS is the APU, as it is in the majority of Nguni languages, but in a northwestern dialect of Northern Sotho studied by Zerbian (2006), the target of HTS is the PU. Northern Sotho dialects are spoken in the same area as isiNdebele in northern South Africa and many speakers of isiNdebele also speak Northern Sotho, but the possible Sotho influences in isiNdebele remain to be studied.

As for the closest Nguni relatives of isiNdebele, today the isiNdebele speakers are geographically much closer to speakers of isiZulu than to speakers of Zimbabwean Ndebele, but the reverse was probably true at some point in history (see Introduction to this volume). Tonally, isiNdebele is closer to Zimbabwean Ndebele than to isiZulu, which suggests a period of intensive contact between these two groups of Ndebeles after their departure from the coastal plains to the Highveld. Some shared features of the two Ndebele languages as opposed to isiZulu are, for example, 1) the augment H tones spread rather than shift to the prefix syllable and/or to the nominal stem (although there are isiZulu varieties that spread prefix tones); 2) the 4-way lexical tone contrast of bisyllabic and longer stems is mostly reduced to a 2-way contrast; and 3) lexical H tones contributed by the final syllable are deleted (Rycroft 1980a; 1980b; 1983).

In isiZulu, the underlying stem tone patterns for bisyllabic stems are LL, HL, FL, and LH (Rycroft 1963; Clark 1988). In Zimbabwean Ndebele, as presented by Rycroft (1980a), three patterns seen in isiZulu – LL, FL, and LH – have collapsed to a single LL pattern. These tone patterns have collapsed in isiNdebele, as well (41). The loss of lexical final H tones accounts for the collapse of LL and LH patterns (to LL) and points to a shared history between the two Ndebele languages, independent of isiZulu.

(41)	isiZulu (Rycroft 1983)	Zim.Ndebele (Rycroft 1983)	isiNdebele	
LL:	<i>abá-ntwana</i>	<i>ábá-ntwana</i>	<i>ábá-ntwána</i>	'children'
FL:	<i>ísi-khw'âma</i>	<i>ísi-khwama</i>	<i>ísi-khwáma</i>	'bag'
LH:	<i>ín-komó</i>	<i>ín-komo</i>	<i>í-kómo</i>	'head of cattle/cow'

As shown in Section 5 above, the lexical tone difference is maintained for trisyllabic stems in isiNdebele, both with and without the augment. In Zimbabwean Ndebele this contrast is partly neutralized: both toneless and H-toned stems have the surface stem tone pattern HLL without the augment (*ábá-ntwányana* 'small children' vs. *í-ntwányana* 'tiny thing') but are distinguished when the augment is not present (LLL as in *ba-ntwanyana* 'small children' vs. HLL as in *ntwányana* 'tiny thing') (Rycroft 1983: 86). As the stem H tone in H-toned trisyllabic stems

is contributed by the APU, the expected stem pattern should be HHL, which is seen in Zimbabwean Ndebele verbs, for example, *úkú**ó**nísa* ‘to show’ (Rycroft 1983: 93). Rycroft does not discuss the reasons for this anomaly, but it might be significant that all stems in his examples are derived.

Some extended trisyllabic nominal stems in Zimbabwean Ndebele have the expected HHL pattern, but these stems are toneless in their underived form. Rycroft (1983) shows that these stems that have either the LH or the FL pattern in isiZulu; that is, they historically had a H tone on the stem final syllable that is now visible only in derived forms. This is the case in isiNdebele as well. For example, *ísi-khwáama* ‘bag’ is a toneless stem, but it shows the H pattern when derived: *língé síkhwámééni* ‘it is in the bag’; this noun has the FL pattern in isiZulu (see example 41 above).

The third pattern of Zimbabwean Ndebele trisyllabic stems, LLL, is a marginal pattern of “a few non-derived stems” that corresponds to the combination of the LL and FL patterns in isiZulu (Rycroft 1983: 85). No corresponding pattern has been identified in isiNdebele.

In 4-syllabic and longer stems, the surface tone pattern with the augment present is the same for all nouns. This is also the case in Zimbabwean Ndebele, although there are “a small number of nouns with irregular patterns” (Rycroft 1983: 88). In Zimbabwean Ndebele the forms without the augment are the two lexical tone patterns of H-toned and toneless stems.

As stated above, isiNdebele does not show downstep between two adjacent H tones, unlike isiZulu. Rycroft (1980a; 1983) does not describe downstep for Zimbabwean Ndebele, either, but in Sibanda’s (2004) analysis both H and toneless stems-initial syllables are downstepped when adjacent to the augment H. Since there is a downstep between the prefix and the stem in Sibanda’s analysis, even when there is underlyingly only one H tone, the drop in pitch is not phonological.

Rycroft (1983) notes that some older speakers of Zimbabwean Ndebele have maintained some tone distinctions found in isiZulu that are lost in the speech of younger speakers of Zimbabwean Ndebele. This retention of tonal distinctions is not attested with isiNdebele speakers, but tonal irregularities that could be due to heavy contact with isiZulu are found in the speech of younger generations of isiNdebele speakers as well. This variation, as well as the influence of the other contact languages, warrants further research.

This paper has described isiNdebele nominal tone patterns as they can be understood based on the current set of data. The system is reduced from the nominal tone system found in isiZulu, but it resembles the Zimbabwean Ndebele nominal tone system in that only two basic lexical tone types, toneless and

H-toned stems, can be identified. It was also established that the basic H tone spreading/shifting rules employed to derive the surface tone patterns from the underlying tones differ from those found in other Nguni languages: 1) pre-APU H tones target the PU, and 2) APU and PU tones target the final.

REFERENCES

- AUNIO, Lotta *forthcoming*. Nominal Tone Contrasts. In: L. MARTEN, N. KULA, J. ZELLER & E. HURST (eds), *The Oxford Guide to the Bantu Languages*. Oxford: OUP.
- AUNIO, Lotta & Stephan SCHULZ 2018. Depressor Effects of Noun Class Prefix 10 in isiNdebele. A paper presented at SLE 51, Tallinn, 29 Sept. 2018.
- CASSIMJEE, Farida 1998. *Isixhosa Tonology: An Optimal Domains Theory Analysis*. München: LINCOM Europa.
- CASSIMJEE, Farida & Charles W. KISSEBERTH 1998. Optimality Domains Theory and Bantu Tonology: A Case Study from Isixhosa and Shingazidja. In: L.M. HYMAN & Ch.W. KISSEBERTH (eds), *Theoretical Aspects of Bantu Tone*: 33–132. Stanford: CSLI Publications.
- CASSIMJEE, Farida & Charles W. KISSEBERTH 2001. Zulu Tonology and Its Relationship to Other Nguni Languages. In: Sh. KAJI (ed.) *Proceedings of the Symposium Cross-Linguistic Studies of Tonal Phenomena: Tonogenesis, Japanese Accentology, and Other Topics*: 327–359. Tokyo: ILCAA.
- CLARK, Mary 1988. An Accentual Analysis of the Zulu Noun. In: H. VAN DER HULST & N. SMITH (eds), *Autosegmental Studies on Pitch Accent*: 51–79. Dordrecht: Foris.
- CLAUGHTON, John Sellick 1992. *The Tonology of Xhosa*. PhD dissertation, Rhodes University.
- COPE, Anthony Trevor 1970. Zulu Tonal Morphology. *Journal of African Languages* 9(3): 111–152.
- CRANE, Thera, Stephan SCHULZ, Lotta AUNIO & Axel FLEISCH 2019. IsiNdebele Grammar Sketch. Manuscript, University of Helsinki.
- DONNELLY, Simon Scurr 2009. *Aspect of Tone and Voice in Phuthi*. PhD dissertation, University of Illinois.
- DOWNING, Laura J. 1990. Local and Metrical Tone Shift in Nguni. *Studies in African Linguistics* 21(3): 261–317.
- DOWNING, Laura J. 2001a. How Ambiguity of Analysis Motivates Stem Tone Change in Durban Zulu. *UBC Working Papers in Linguistics* 4: 39–55.
- DOWNING, Laura J. 2001b. Ungeneralizable Minimality in Ndebele. *Studies in African Linguistics* 30(1): 33–58.
- DOWNING, Laura J. 2004. What African Languages Tell Us about Accent Typology. *ZAS Papers in Linguistics* 37: 101–136.
- DOWNING, Laura J. 2009. On Pitch Lowering Not Linked to Voicing: Nguni and Shona Group Depressors. *Language Sciences* 31: 179–198.

- DOWNING, Laura J. & Lotta AUNIO 2018. High-Tone Rejecting Syllables in isiNdebele. Paper presented at the ACAL 49, Michigan State University, 22 Mar. 2018.
- GOLDSMITH, John, Karen PETERSON & Joseph DROGO 1989. Tone and Accent in the Xhosa Verbal System. In: P. NEWMAN & R. BOTNE (eds), *Current Approaches to African Linguistics*: 157–177. Dordrecht: Foris.
- HYMAN, Larry M. 2001. Privative Tone in Bantu. In: Sh. KAJI (ed.) *Proceedings of the Symposium Cross-Linguistic Studies of Tonal Phenomena: Tonogenesis, Japanese Accentology, and Other Topics*: 237–257. Tokyo: ILCAA.
- JOKWENI, Mbulelo Wilson. 1995. *Aspects of Isixhosa Phrasal Phonology*. PhD dissertation, University of Illinois.
- KHUMALO, James Steven Mzilikazi 1987. *An Autosegmental Account of Zulu Phonology*. PhD dissertation, University of the Witwatersrand.
- MONARENG, William Malakia 1993. *A Domain-Based Approach to Northern Sotho Tonology: A Setswapo Dialect*. PhD dissertation, University of Illinois.
- MYERS, Scott 1999. Tone Association and Fo Timing in Chichewa. *Studies in African Linguistics* 28(2): 215–239.
- RYCROFT, David K. 1963. Tone in Zulu Nouns. *African Language Studies* 4: 43–68.
- RYCROFT, David K. 1980a. Ndebele and Zulu: Some Phonetic and Tonal Comparisons. *Zambezia* VIII(ii): 109–128.
- RYCROFT, David K. 1980b. Nguni Tonal Typology and Common Bantu. *African Language Studies* 17: 33–76.
- RYCROFT, David K. 1983. Tone-Patterns in Zimbabwean Ndebele. *Bulletin of the School of Oriental Studies, University of London* 46(1): 77–135.
- SCHULZ, Stephan *forthcoming*. The Phonology of isiNdebele. PhD dissertation, University of Helsinki.
- SIBANDA, Galen 2004. *Verbal Phonology and Morphology of Ndebele*. PhD dissertation, University of California.
- SKHOSANA, Philemon Buti 2009. *The Linguistic Relationship between Southern and Northern Ndebele*. PhD dissertation, University of Pretoria.
- ZELLER, Jochen, Sabine ZERBIAN & Toni COOK 2017. Prosodic Evidence for Syntactic Phrasing in Zulu. In: J. VAN DER WAL & L.M. HYMAN (eds), *The Conjoint/Disjoint Alternation in Bantu* (Trends in Linguistics, Studies and Monographs 301): 295–328. Berlin: De Gruyter.
- ZERBIAN, Sabine 2006. High Tone Spread in the Sotho Verb. In: J.M. MUGANE, J.P. HUTCHISON & D.A. WORMAN (eds), *Selected Proceedings of the 35th Annual Conference on African Linguistics*: 147–157. Somerville, MA: Cascadilla Proceedings Project.
- ZERBIAN, Sabine & Etienne BARNARD 2008. Phonetics of Intonation in South African Bantu Languages. *Southern African Linguistics and Applied Language Studies* 26(2): 235–254.
- ZERBIAN, Sabine & Etienne BARNARD 2009. Realisations of a Single High Tone in Northern Sotho. *Southern African Linguistics and Applied Language Studies* 27(4): 357–379.

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