

Selected topics of Kirundi Grammar

A micro-typological perspective

Daisuke Shinagawa, Seunghun J. Lee, Yuko Abe, Chérubin Mugisha



Research Institute for Languages and Cultures of Asia and Africa
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To our mentor, Shigeki Kaji (Kaji sensei),
who has been the role model of our long
and fascinating journey into describing the
diversity of African languages.

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Preface

COVID-19 has affected everyone in the world, and academia is no exception. The three authors of this book have a combined 50 years or more of fieldwork experience, and going to Africa was a significant part of our lives before the entire world was hit by the pandemic. The four authors have had opportunities to work together on the Kirundi language during this time.

This book is a collection of chapters that stem from numerous hours of sessions with the fourth author, Chérubin Mugisha. He shared his knowledge of Kirundi with us even when some of the questions were challenging. Hours of discussion sessions between us resulted in the descriptions of various areas of Kirundi grammar, as the chapters in this book demonstrate. We benefitted from his expertise in technology as well, because all of the sessions were recorded in a professional manner. This has enabled the processing and archiving of most recordings, which are shared with the greater research community (<https://bantudarc.aa-ken.jp>).

This publication and the online sessions with the fourth author were supported by the joint research project entitled *Establishment of a Research Network for Exploring the Linguistic Diversity and Linguistic Dynamism in Africa (ReNeLDA)*, funded by the Japan Society for the Promotion of Science (JSPS) within a framework of a collaborative joint research schema between research institutes based in Japan and in Africa ('Core-to-Core Program: B. Asia-Africa Science Platforms'; Coordinator: Daisuke Shinagawa). The book was also partially supported by the JSPS's Fund for the Promotion of Joint International Research (Fostering Joint International Research (B) *Microvariation in Bantu languages of South Africa: building theories from typology data (JSAntu)* (#21KK0005; PI: Seunghun J. Lee). Discussions from various grant meetings and joint research projects enriched materials in this book: Grant-in-Aid for Scientific Research (C) *A micro-typological study of inter-parametric covariation in Bantu languages* (#19K00568; PI: Daisuke

Shinagawa), as well as three joint research projects of ILCAA (i) *Typological Study of Microvariation in Bantu (2)* (Coordinator: Yuko Abe), (ii) *A new perspective on descriptive linguistics in Africa based on the translingual ecology* (Coordinator: Daisuke Shinagawa), and (iii) *Phonetic typology from cross-linguistic perspectives* (Coordinator: Seunghun J. Lee).

We also share much appreciation for Tingting Yu, who tirelessly supported the editing and formatting of all the chapters in this volume. We also thank B. Paris Fleming, Rachel Liu, Natsumi Taniguchi, and Celine Tuaño for addressing last minutes needs in the creation of this book. Last, but not least, the weekly meetings for this project kept us sane and directed us to the completion of this project.

The authors

Daisuke Shinagawa, Seunghun J. Lee, Yuko Abe, Chérubin Mugisha

French version

translated by Chérubin Mugisha

Préface

La COVID-19 a touché tout le monde et le milieu académique n'a pas fait exception. Les trois auteurs de ce livre cumulent plus de 50 ans de travail sur terrain, et aller en Afrique faisait partie intégrante de nos vies avant que le monde entier ne soit frappé par la pandémie. Les quatre auteurs ont eu l'occasion de travailler ensemble sur la langue kirundi durant cette période.

Ce livre est un recueil de chapitres issus de nombreuses heures de sessions d'enregistrements avec le quatrième auteur, Chérubin Mugisha. Il a partagé sa connaissance du kirundi avec nous même lorsque certaines des questions étaient difficiles. Des heures de séances de discussion entre nous ont abouti à la description de divers domaines de la grammaire kirundi, comme le démontrent les chapitres de ce livre. Nous avons également bénéficié de son expertise en technologie, car toutes les sessions ont été enregistrées de manière professionnelle. Cela a permis le traitement et l'archivage de la plupart des enregistrements, qui sont partagés avec l'ensemble de la communauté de chercheurs (<https://bantudarc.aa-ken.jp>).

Cette publication et les sessions en ligne avec le quatrième auteur ont été soutenues par le projet de recherche conjoint intitulé *Création d'un réseau de recherches pour l'exploration de la diversité linguistique et du dynamisme linguistique en Afrique (ReNeLDA)*, financé par l'Organisation Japonaise pour la Promotion de la Science (JSPS) au sein d'un cadre de collaboration de recherche conjointe entre les instituts de recherche basés au Japon et en Afrique (« *Core-to-Core Program : B. Asia-Africa Science Platforms* » ; Coordinateur : Daisuke Shinagawa). Le livre a également été conjointement soutenu par le Fonds JSPS pour la Promotion de la Recherche Internationale Conjointe (*Fostering Joint International Research (B) Microvariation in Bantu*

languages of South Africa: building theories from typology data (JSantu) (#21KK0005; PI: Seunghun J. Lee). Des discussions et diverses réunions de financement et de projets de recherche conjoints ont enrichi le contenu de ce livre: *Grant-in-Aid for Scientific Research (C) A micro-typological study of inter-parametric covariation in Bantu languages* (#19K00568; PI: Daisuke Shinagawa), ainsi que trois projets de recherche conjoints de l'ILCAA (i) *Typological Study of Microvariation in Bantu (2)* (Coordinateur: Yuko Abe), (ii) *A new perspective on descriptive linguistics in Africa based on the translingual ecology* (Coordinateur: Daisuke Shinagawa), and (iii) *Phonetic typology from cross-linguistic perspectives* (Coordinateur: Seunghun J. Lee).

Nous ne manquerons pas de mentionner notre appréciation pour Tingting Yu qui a soutenu sans relâche l'édition et la mise en forme de tous les chapitres de ce volume. Nous remercions également B. Paris Fleming, Rachel Liu, Natsumi Taniguchi, et Celine Tũaño pour avoir répondu aux besoins de dernière minute lors de la création de ce livre. Dernier point, mais non des moindres, les réunions hebdomadaires pour ce projet nous ont gardés sains d'esprit et nous ont dirigés vers la réalisation de ce projet.

Les auteurs

Daisuke Shinagawa, Seunghun J. Lee, Yuko Abe, Chérubin Mugisha

Kirundi version

translated by Chérubin Mugisha

Intangamarara

Ikiza Kovid-19 cateye isi yose, kidasize inyuma amashure. Abanditsi batatu b'iki gitabu begeranirije hamwe ibikorwa vy'imyaka irenga 50 vy'ubushakashatsi, ivyo bikaba biri mu mirimo yacu ya misi yose kwishikira muri Afrika imbere y'uko isi iterwa n'ico kiza. Abo banditsi bane baragiriwe ibakwe muri ako kanya ryo gukorera hamwe ku rurimi rw'Ikirundi.

Iki gitabu ni urukurikirane rw'ibigabane vyavuye mu kiganiro c'amasaha menshi n'umwanditsi agira kane ariwe Cherubin MUGISHA. Yaradusabikanirije ivyo azi kuri urwo rurimi, naho bimwe mubibazo bitari vyoroshe. Ibiganiro vyamara amasaha atari make vyadushikanye kugutanga insiguro yimice itandukanye y'indimburo y'Ikirundi nk'uko ibigabane vy'iki gitabu bivyerekana.

Twarashoboye kandi kwungukira mu bumenyi bwa Cherubin MUGISHA mu vyerekeye ubuhinga bugezweho, kuko ivyigwa vyakurikiranywe vyose vyabitswe ku buhinga buhanitse. Ivyo bikaba vyatumye inyigisho zegeranijwe hafashwe amajwi, zigosorwa, zigashingurwa zikongera zigahanahanwa hagati y'abagize umugwi w'abegize ubushakashatsi (<https://bantudarc.aa-ken.jp>).

Iki gitabu gisohotse, hamwe n'inyigisho n'uwo mwanditsi agirakane biciye ku buhinga ngurukanabumenyi vyafashijwe n'umugambi w'ubushakashatsi witwa *Establishment of a Research Network for Exploring the Linguistic Diversity and Linguistic Dynamism in Africa (ReNeLDA)*, Ku mfashanyo y'ishirahamwe ry'Ubuyapani ryishinze guteza imbere ubuhinga (JSPS) biciye mu gufashanya hagati y'ibisata vy'ubushakashatsi biri mu Buyapani no muri Afrika («*Core-to-Core Program: B. Asia-Africa Science Platforms*»; Umuhuzabikorwa: Daisuke Shinagawa). Iki gitabu carafashijwe kandi n'ikigega JSPS giteza imbere ubushakashatsi ku rwego mpuzamakungu

(Fostering Joint International Research (B) Microvariation in Bantu languages of South Africa: building theories from typology data (JSAntu) (#21KK0005; PI: Seunghun J. Lee). Ibiganiro n’amanama vyabaye mu ntumbero yo kworoshya ibikorwa no gutunganya urunani rw’ubushakashatsi vyatanze intererano ikomeye mw’itunganywa ry’iki gitabu: Grant-in-Aid for Scientific Research (C) A micro-typological study of inter-parametric covariation in Bantu languages (#19K00568; PI: Daisuke Shinagawa), hamwe n’urunani rw’imigambi itatu ya ILCAA (i). Typological Study of Microvariation in Bantu (2) (Umuhuzabikorwa: Yuko Abe), (ii) A new perspective on descriptive linguistics in Africa based on the translingual ecology (Umuhuzabikorwa: Daisuke Shinagawa), and (iii) Phonetic typology from cross-linguistic perspectives (Umuhuzabikorwa: Seunghun J. Lee).

Ntitworeka gushimira Tingting Yu yitanze atiziganya mu gutosora neza ibigabane vy’iki gitabu. Turashimiye kandi Paris B. Fleming, Rachel Liu, Natsumi na Celine Tũaño bo bitabiriye akamo kacu mu bihe vya nyuma vyo gushira ahabona iki gitabu. Ubwa nyuma, ariko vy’umwihariko, turashima cane inama zaba uko indwi itashe, zaratuma turaza umutima kuri iki gitabu, zidushikana kw’isemo ya nyuma y’iki kivi.

Abanditsi

Daisuke Shinagawa, Seunghun J. Lee, Yuko Abe, Chérubin Mugisha

Chapter 1

Introduction

1.1 About this book

This book is a collection of chapters that describe topics of Kirundi grammar based on sessions with a speaker of Kirundi from summer 2021 to early 2022. The first Kirundi sessions were held to better understand the patient inversion structure in (1).

(1) Patient inversion in Kirundi (Ndayiragije 1999: 400)

a. Abâna ba-á ra-nyôye amatá.

children 3P-PST-F-drink:PERF milk

‘Children drank milk?’

b. Amatá y-á-nyôye abâna.

milk 3S-PST-F-drink:PERF children

‘Children (not parents) drank milk.’

Baselines for the sessions were formed by eliciting lexical items. Kirundi segments focusing on the vowel length distinction and tonal patterns were recorded. The distribution of palatal segments varying in voicing and environment was also part of the investigation. These results are reported in chapter 2. Elicitation sessions concerning various morphosyntactic structures soon followed, which resulted in a database being archived.

This book has two goals in introducing the Kirundi grammar. First, the

Kirundi data is accompanied by recordings that are accessible upon request. Most data in chapter 2, and some data in chapters 3 and 4 are accessible via the archive. All data points will eventually be archived for readers who are interested in accessing the recordings. The morphosyntactic descriptions can be augmented by future prosodic studies with these recordings.

The second goal of this book is to provide an extensive paradigm pertaining to inversion constructions as well as persistive constructions that may have been presented in fragments in previous work. Comprehensive descriptions of a morphosyntactic construction require multiple sessions with a speaker who is sensitive to the constructions that linguists are interested in investigating. The fourth author played that role. Over numerous Zoom sessions, we were able to probe into fine-tuned differences between sentence structures, which are reported in this book.

Of course, this book does not aim to cover all aspects of Kirundi grammar. We hope that the chapters in this book will help us to untangle the complex aspects of Kirundi, and will offer guides for future studies on Kirundi.

1.2 Kirundi

Kirundi is a Bantu language spoken mainly in the Republic of Burundi, where it enjoys national language status with more than 10 million speakers, including 4 million monolinguals according to Ethnologue (Eberhard, Simons & Fennig 2021). The language is actively used at home, work, public environments, and in the media. It is taught in both primary and secondary schools.

In Maho (2009), which is based on Guthrie's (1967–71) classification system of Bantu languages, Kirundi is a JD62 language. Kinyarwanda (JD61) is a neighboring language spoken as the national language of Rwanda. Both languages share high mutual intelligibility and form the Ruanda-Rundi

language continuum (cf. Zorc & Nibagwire (2007: 1), Maho (2009: 58), Hammarström (2019: 40)).

1.3 Data in this book

The data used in this work were obtained in collaboration with Mr. Chérubin Mugisha. At the time of the recording, he was in his early 30's. Mr. Mugisha is from Bujumbura, and Kirundi is his mother tongue. Due to education in the country, he is also proficient in French and English. After his undergraduate education in Burundi, he moved to Japan to continue his post-graduate degree.

The main data collection and elicitation was conducted online through ZOOM in August and September 2021. The recent COVID-19 pandemic prevented us from holding direct interviews, but Mr. Mugisha's comfort in making digital recordings resulted in high quality audio recordings of all the sessions we held. The recordings were made with a sampling rate of 44.1 kHz in 16-bit using Audacity, a free audio recording software. A unidirectional microphone was connected to his computer, which allowed for the archival-quality recordings.

The recordings were then processed by the second author. All tokens were assigned with a unique ID that begins with RUN2021-. The numbers cited in this book refer to those token ID's. With permission, the recordings are accessible from the Bantu Language Digital Archive (<https://bantudarc.aaken.jp/rundi.html>).

1.4 Structure of this book

The rest of this book has 3 independent chapters. In chapter 2, phonetics and phonology of Kirundi based on our elicitation sessions are presented. Topics include palatal consonants, vowel length distinction and tonal contrast. Chapter 3 provides a fundamental description on an entire range of (mono-

clausal) strategies of focus and topic expressions from a cross-Bantu typological perspective. The description covers two inversion constructions, namely locative inversion and patient inversion, and various focus marking strategies including syntactic control, morphological marking, and the conjugational strategy generally known as conjoint-disjoint alternation.

Chapter 4 describes Kirundi persistive aspect and its related phenomena, and based on the description tries to compare those of other Bantu languages having the reflexes of persistive. The reflexes of persistive in Kirundi show two forms for affirmative and non-affirmative respectively, and the persistive extends its meaning depending on the lexical aspect of a verb. In comparison with other Bantu languages, Kirundi shares common features with the Great Lakes Bantu languages. The final part of this monograph displays plots of all the Kirundi words or sentences with following tiers: Kirundi, English translation and ID numbers.

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Chapter 2

A sketch of the Kirundi sound system

Seunghun J. Lee

2.1 Overview

This chapter is a short description of the Kirundi sound systems, with three main topics: consonants in section 2.2, vowels in section 2.3, and tone in section 2.4. The data in this chapter is produced by a male Kirundi speaker, and the data is available in the ICU Language Database series (ICULD0046). With permission, all recordings are downloadable from the Bantu Language Digital Archive (<https://bantudarc.aa-ken.jp/rundi.html>).

Table 1. Kirundi consonants¹

	labial		alveolar		palatal		velar		glottal
stop	P	β	t	d	c	ɟ	k	g	
fricative	f	v	s	z	ʃ	ʒ			h
affricate	pf		ts		tʃ	dʒ			
nasal	m		n		ɲ		ŋ		
approximant			r		j		w		

¹ This chart is an adaptation of Zorc & Nibagwire (2007: 24), which is based on various resources (Meeussen 1959; Stevick 1965; Cristini 2000; Bennett 2001). The major difference with the chart in Zorc & Nibagwire concerns the palatal stops; while they explain that palatal stops are non-contrastive, the speech of our consultant has these sounds in a contrastive manner.

2.2 Consonants

The consonants of Kirundi are listed in Table 1, in the format following the IPA chart. In each cell, the left symbol represents a voiceless sound and the right symbol a voiced sound.

2.2.1 Phonotactics

The stops series have both voiceless and voiced sounds. The only exception is the voiced labial sound, which is realized as a fricative [β] as shown in Fig. 1. Compared to the preceding [u] and the following [i], the fricative shows lower amplitude across the higher formants. The absence of a closure and burst also indicates that the sound is not a voiced stop.

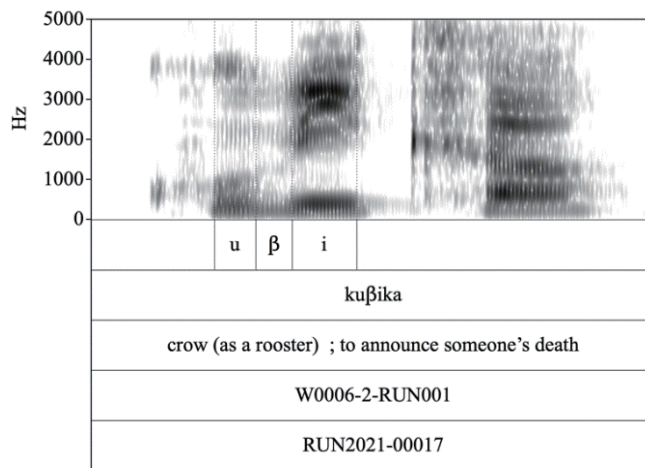
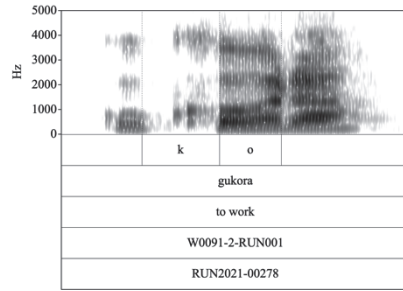
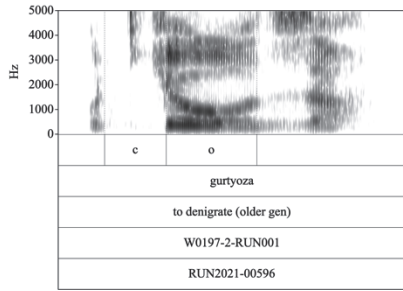


Figure 1. Voiced labial fricative [β].

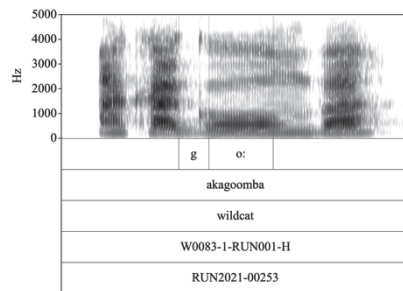
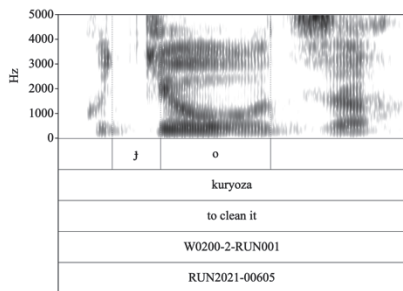
The stop series of Kirundi includes palatal stops: voiceless [c] and voiced [ɟ]. Palatal sounds acoustically display raised second formant (F2) compared to velar sounds. The spectrograms in figure 2 confirms the raising of F1. The [o] vowel after a voiceless palatal stop [c] in Fig. 2a shows raised F2, while after [k] no such raising is observed in Fig. 2b. The voiced versions in Fig. 2 demonstrate the same pattern; F2 is raised after the voiced palatal stop [ɟ] in Fig. 3a, but raising of F2 is not observed after [g] in Fig. 3b.



a. voiceless palatal stop [c]

b. voiceless velar stop [k]

Figure 2. Voiceless palatal and velar stops in Kirundi



a. voiced palatal stop [j]

b. voiced velar stop [g]

Figure 3. Voiced palatal and velar stops in Kirundi

The labial affricate /pf/ in Kirundi was perceived to have voicing during the data collection. The spectrogram in Fig. 4 shows residual voicing from the preceding vowel leading into one third of closure duration of the labial affricate. This voicing residual in the Kirundi /pf/ could have made the sound to be perceived as a voiced sound. Since neighboring languages have labial affricates that are mostly reported to be completely voiceless, labial affricates in Kirundi need further investigation from a comparative Bantu perspective.

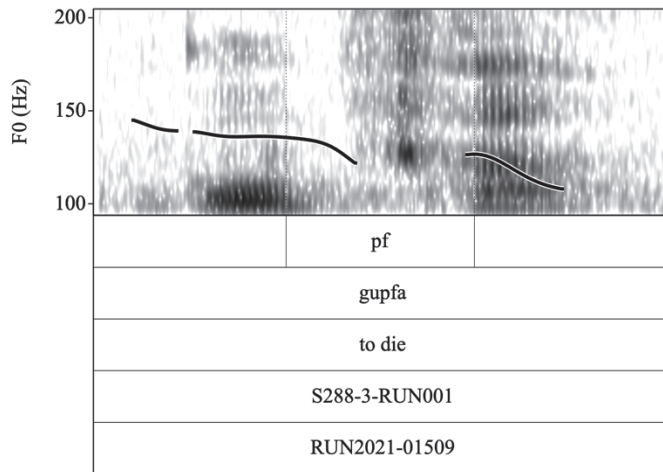


Figure 4. Examples of labial affricative /pf/

2.2.2 Voicing dissimilation in Kirundi

Voicing dissimilation² is reported in a variety of Eastern Bantu languages such as Sukuma, Kikuyu, Rwanda, and Kuria among others. Diachronically, Nyamwezi underwent the voicing dissimilation, so ‘three’ begins with a [d] before a [t] in the second syllable. Swahili does not show the voicing dissimilation, and the same word ‘three’ begins with [t], a voiceless sound.

(1) Diachronic voicing dissimilation

- a. *-datu* ‘three’ Nyamwezi
- b. *-tatu* ‘three’ Swahili

To better understand voicing dissimilation in Kirundi, we examined 38 verbal roots and categorized them based on whether the initial sound was a voiceless obstruent or not. The infinitive prefix /ku-/ undergoes voicing dissimilation, which is realized as [gu-] when the root-initial consonant is

² Voicing dissimilation is also called Dahl’s Law, which is named after the missionary Edmund Dahl by Carl Meinhof.

voiceless, but otherwise it is realized as [ku]. The stimuli of 38 items were recorded three times each resulting in 114 tokens. In (2), stimuli of our study are listed.

(2) A list of stimuli

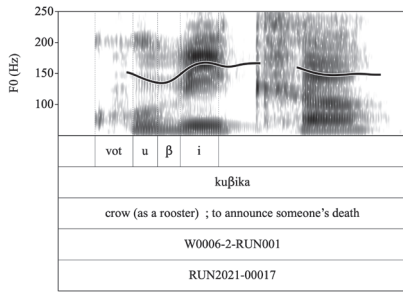
a. Root-initial is a voiceless obstruent (n = 19)

<i>gu-heza</i>	‘to terminate at’ [0007]
<i>gu-hézeza</i>	‘to be the last person’ [0010]
<i>gu-hé:reza</i>	‘to hand a thing to someone’ [0013]
<i>gu-faʃa</i>	‘to help’ [0190]
<i>gu-té:ka</i>	‘to cook’ [0193]
<i>gu-kindzika</i>	‘to cook [more polite]’ [0196]
<i>gu-hí:ga</i>	‘to hunt’ [0199]
<i>gu-ta:nga:ra</i>	‘to marvel’ [0211]
<i>gu-tweŋga</i>	‘to laugh’ [0214]
<i>ku-tembera</i>	‘to visit a place’ [0058]
<i>gu-séka</i>	‘to bump’ [0217]
<i>gu-ʃi:ma</i>	‘to thank’ [0226]
<i>gu-kora</i>	‘to work’ [0277]
<i>gu-te:méra</i>	‘to agree’ [0352]
<i>gu-kanjá</i>	‘to be cold’ [0379]
<i>gu-koropa</i>	‘to sweep’ [0406]
<i>gu-twaára</i>	‘to run a district’ [0418]
<i>gu-tinyu:ka</i>	‘to be fearless’ [0529]
<i>ku-thoora</i>	‘to find, elect’ [0205]

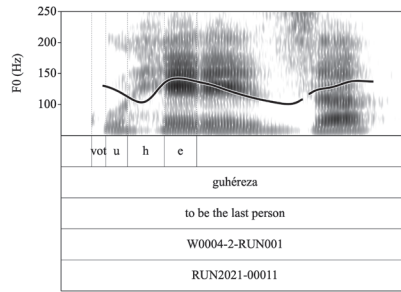
b. Root-initial is a voiced sound (n = 19)

<i>ku-βika</i>	‘to crow’ [0016]
<i>ku-βi:ka</i>	‘to put away’ [0019]
<i>ku-zira</i>	‘to be hostile to’ [0040]
<i>ku-uzira</i>	‘to visit, to come for’ [0046]
<i>ku-za</i>	‘to come’ [0049]
<i>ku-uza</i>	‘to regurgitate’ [0055]
<i>ku-ramucha</i>	‘to visit a person’ [0061]
<i>ku-ḍzi:fa</i>	‘to weave baskets’ [0121]
<i>kw-igi:fa</i>	‘to teach’ [0157]
<i>kw-iga</i>	‘to learn’ [0160]
<i>ku-iβa</i>	‘to steal’ [0181]
<i>ku-βona</i>	‘to see’ [0202]
<i>ku-vúga</i>	‘to speak’ [0208]
<i>ku-vo:ma</i>	‘to fetch water’ [0220]
<i>kw-ijumbira</i>	‘to think’ [0223]
<i>ku-gura</i>	‘to buy’ [0229]
<i>ku-gira</i>	‘to do something’ [0280]
<i>ku-garagara</i>	‘to be empty’ [0373]
<i>ku-rivimba</i>	‘to sing’ [0559]

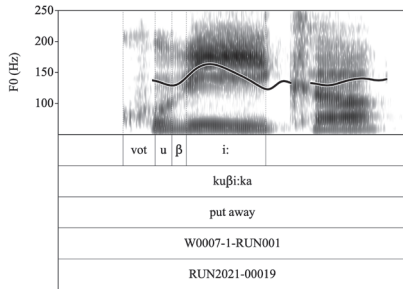
The recordings were processed using Praat, and annotations were made for the voice onset time (vot) of the initial velar stop ([k] or [g]), the vowel [u], and the first syllable of the verbal root. The initial [k] in Fig. 5a has a long vot, and as expected, the initial [g] has a short vot in Fig. 5b. This difference in vot is also observable when the root vowel is long, as in Figs. 5c and 5d, showing that root vowel length is not relevant to voicing dissimilation.



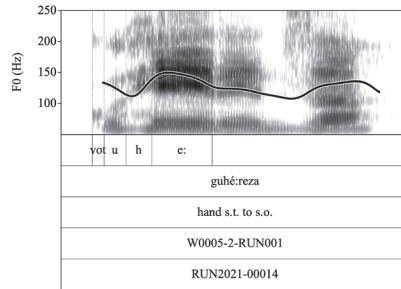
a. *kubika* ‘to crow’



b. *guhéreza* ‘to be the last person’



c. *kubi:ka* ‘to put away’



d. *guhe:reza* ‘to hand something’

Figure 5. Voicing dissimilation in Kirundi

The vot results are plotted using R (R Core Team 2020) in Figure 6. The vot of [g] has a mean of 27.5 ms (s.d. = 7.9), and the vot of [k] has a mean of 75.6ms (s.d. = 16.5). The near-categorical distribution of the vot in these two categories shows that the voicing of the root-initial consonant conditions the voicing specification of the onset of the infinitive prefix /ku/.

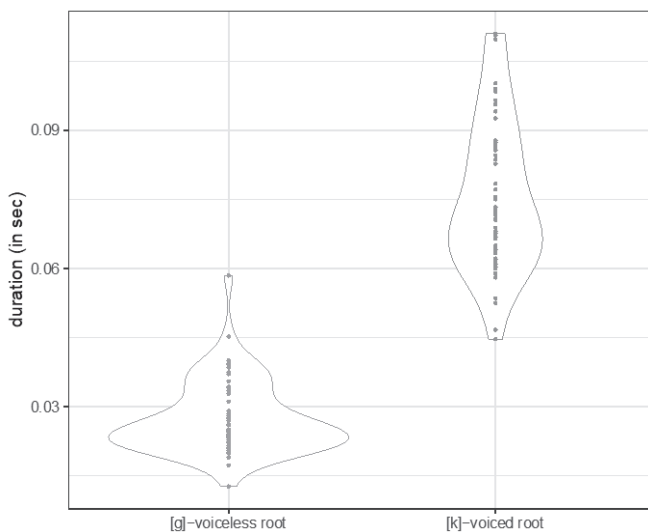


Figure 6. Comparing vot of [g] and [k] resulting from voicing dissimilation

The results in fig. 6 demonstrate that the voicing distinction of velar stops in Kirundi produced by our consultant is similar to English, in which the voiced category is produced with shorter vot (under 45 ms) and the voiceless category is produced with vot that is longer than 45 ms. In other words, short vot plosives appear before voiceless-initial roots, whereas plosives with a long vot appear before other types of roots that begin with a voiced obstruent, a sonorant [r], or a vowel.

Voicing dissimilation in Kirundi results from a ban on a sequence of voiceless onsets, which is unusual since (i) voiceless stops are phonologically unmarked, and (ii) Kirundi allows roots with more than two voiceless stops (e.g., *urutoke* ‘finger’, *gufasha* ‘to help’, *guséka* ‘to help’ etc.). As shown in this section, the voicing dissimilation occurs across morpheme boundaries. We propose that a phonetic motivation may trigger the voicing dissimilation. Could it be that the dissimilation is due to a phonetic markedness that does not allow a sequence of laryngealized segments with long vot/frication noise?³ In

³ The constraint *LONG-C in Lee & Aso (2020) was proposed as an acoustic-based constraint against long acoustic signal to explain the distribution of strong aspiration in Hateruma Yaeyaman.

Kirundi, this restriction means that two voiceless obstruents with *vot* longer than 45 ms do not appear in adjacent syllables across a morpheme boundary.

The ban on a sequence of laryngealized segments is not uncommon and it is found in various languages: voiced segments in Japanese *rendaku* (Kawahara 2012; 2018 and references there in), or ejectives in roots of Cochabamba Quechua (Gallagher & Whang 2014). For a general overview these types of co-occurrence restrictions, see MacEachern (2019). In this section, we have reported a fresh set of Kirundi data by reporting phonetic measurements concerning segments that undergo voicing dissimilation.

2.3 Vowels

Kirundi has a five-vowel system that contrasts in length. As shown in table 2, all short vowels have a corresponding long vowel.

Table 2 Kirundi vowels (Zorc & Nibagwire 2007: 26)

	Front		Back	
high	i	i:	u	u:
mid	e	e:	o	o:
low			a	a:

Examples of minimal pairs with these length contrast appears in (3). Words in (3a) has a short vowel, and words in (3b) have a long vowel in an identical position. The long vowels are 2 or 3 times longer than short vowels as shown in Fig. 7.

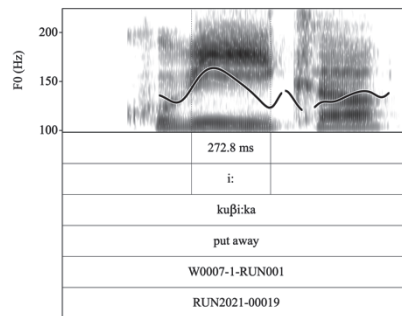
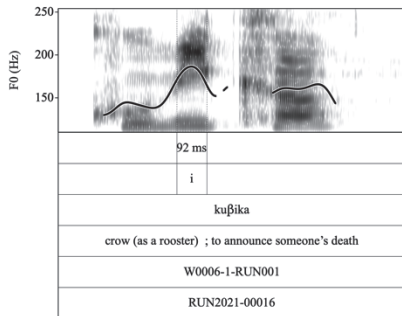
(3) Examples of vowel length contrast

a. short vowel

b. long vowel

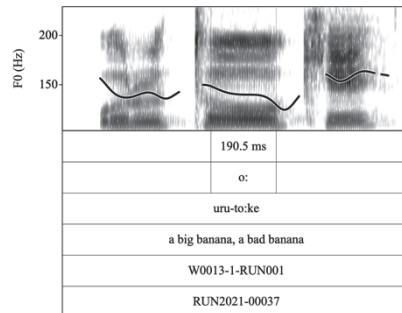
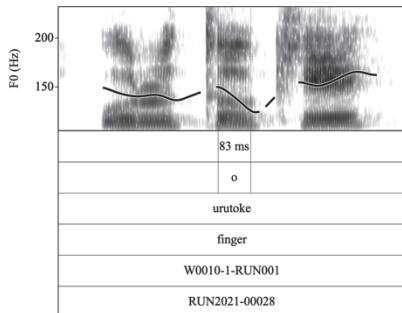
kuβika	‘to crow’	kuβi:ka	‘to put away’
	[0016]		[0019]
urutoke	‘finger’	uruto:ke	‘a big banana’
	[0028]		[0037]

kuza	‘to come’	ku:za	‘to regurgitate’
	[0049]		[0055]
ijumvire	‘Just listen!’	ijumvi:re	‘to think hard’
	[00145]		[00148]



a. *kuβika* ‘to crow’ [0016]

b. *kuβi:ka* ‘to put away’ [0019]



c. *urutoke* ‘finger’ [0028]

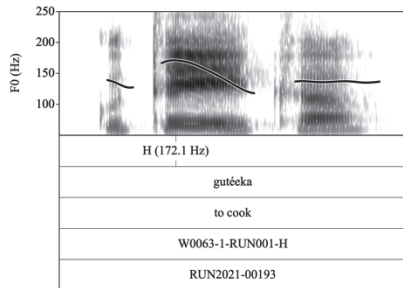
d. *uruto:ke* ‘a big banana’ [0037]

Figure 7. Short and long vowels and their duration.

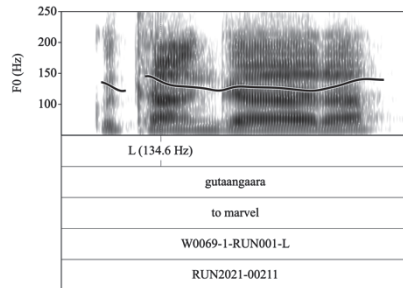
2.4 Tone

Kirundi is a two-tone language with an H tone and an L tone. The contrast of lexical tone in verbal is shown in figures 8 and 9. In figure 8, the root begins with a voiceless obstruent, resulting in voicing dissimilation of the infinitive marker. The pitch difference between H and L in the examples in figure 8 is over 30 Hz. When roots begin with a voiced obstruent, as in figure 9, the pitch is slightly lower than the voiceless roots, but a tonal contrast is still observed.

The H tone root (fig. 9a) is about 25 Hz higher in pitch than the L tone root (fig. 9b).

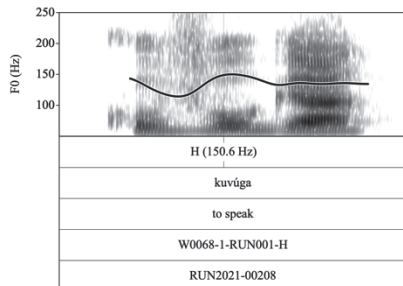


a. H tone root

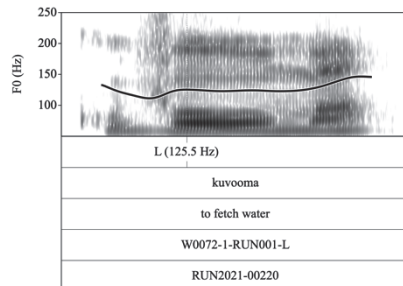


b. L tone root

Figure 8. High and low tone in voiceless-initial roots



a. H tone root



b. L tone root

Figure 9. High and low tone in voiced-initial roots

2.5 Summary

The description in this chapter is a small part of Kirundi phonetics and phonology that requires more detailed investigation. As seen in Zorc & Nibagwire (2007), Kirundi is often described together with Kinyarwanda due to their similarities. Since Kirundi data has been shown to be interesting segmentally as well as suprasegmentally, it remains to be seen whether these phonetic properties would extend to Kinyarwanda data in future studies.

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Chapter 3

A sketch of morphosyntactic variation conditioned by the information status of syntactic constituents

Daisuke Shinagawa

3.1 Introduction

It is widely accepted that various syntactic phenomena characteristic in Bantu languages are deeply associated with features relevant to the informational structure of syntactic constituents (Hyman and Watters 1984, Bearth 2003, Marten 2011, Downing and Hyman 2016, Downing and Marten 2019, among others). Especially in the current decade, the interplay between syntax and information structure has been attracting much scholarly attentions in Bantu linguistics from the typological as well as the formal/theoretical perspectives. This trend is clearly reflected in recent studies on the grammatical system of Kirundi, e.g., Lafkioui et al. (2016) investigating the cleft construction as a focus marking strategy based on a large-scale corpus, Nshemezimana and Bostoen (2017) providing a corpus-based analysis on Conjoint (CJ)/Disjoint (DJ) distinction with a special focus on its functional aspect, and Selvanathan (2020) discussing the theoretical treatment on inversion constructions.

While these studies intensively focus on specific topics, a wide range of basic description about morphosyntactic structures which reflect the informational saliency of each constituent, and the interrelationship between such construction types, have not been fully provided, particularly from a cross-Bantu typological perspective. This chapter thus aims to present a descriptive sketch of basic sentence structures⁴ relevant to the expression of

⁴ All examples in this chapter are presented in the following 6-line format; line-1: orthographic transcription (provided in **bold**), line-2: phonetic description in IPA

the informational saliency of each constituent and structural variability reflecting the factors relevant to information structure. In order to cover as wide a range of (mono-clausal) strategies as possible, this chapter is organised into two sections. Section 3.2 deals with inversion constructions, which are generally understood as associated with the expression of topic, while Section 3.3 provides an extensive range of mono-clausal morphosyntactic strategies relevant to focus marking, including syntactic word order control, morphological focus marking, and verbal inflectional operation, which is generally known as conjoint/disjoint distinction.

3.2 Inversion constructions

Inversion construction is one of the vigorously discussed topics in Bantu syntax, especially in the field of the syntax-information structure interface, from the descriptive, theoretical, and typological perspectives (Bresnan and Kanerva 1989; Marten 2006; Zeller 2013; among others). While traditional analyses tend to regard inversion constructions as part of topic expression (cf. Bearth 2003), recent studies reveal the wide functionalities of the construction from the cross-Bantu perspective (Marten and Van der Wal 2014; Van der Wal 2022).

On the other hand, it is also well recognised that the inversion construction can be further classified into subcategories. For example, Marten and Van der Wal (2014) identify five distinct types of the construction based on the thematic

(provided in square bracket), line-3: phonemic description (provided in *italic*), line-4: morphological description with boundaries, line-5: inter-linear glossing, line-6: free translation. Ungrammatical examples do not include line 2 and 3. Phonemic description provided in this chapter basically follows the phonological interpretation by Zorc and Nibagwire (2007:24). The consonant inventory adopted in this chapter is as follows: /p, t, k, b, d, g; f, s, ʃ, h, v, z, ʒ; pf, ts, tʃ; m, n, ŋ, r, j, w/. This language shows relatively rare instances of phonetic realization, such as labio-velar double articulation including [b̥g, f̥g, m̥ŋ], and labio-lingual frication [v̥d̥i ~ v̥z̥i], most of which are observed in a sequence of a plain stop followed by a glide. Plain stops also tends to be pronounced as affricates when preceded by a homorganic nasal, while nasals are regularly devoiced when followed by a voiceless stop. This language has a five vowel system with contrast of length. Tone is definitely contrastive but only surface realization is annotated in the examples.

roles of nominal arguments involved in the inversion process, namely, Locative Inversion (LI), Instrument Inversion, Patient Inversion (PI, also known as Subject-Object Reversal), Complement Inversion, and Quotative Inversion. On the other hand, Downing and Marten (2019: 282) states that LI and PI are the two major construction types that have been most thoroughly investigated in the literature. This section thus focuses on providing the basic descriptions of LI and PI in 3.2.1 and in 3.2.2, respectively.

3.2.1 Locative Inversion: typological overview

LI is the syntactic construction where a post-verbal locative noun phrase is raised to the clause initial position, whereas the verb exhibits grammatical agreement with the promoted locative in the subject marker (SM) slot (Buell 2007; Zeller 2013). The most typical case of LI is illustrated as follows; the locative noun phrase *mw'ishamba* '(in the) forest', which is a class 18 locative noun and sits in the post verbal position in the basic word order in (1), raises to the sentence initial position and gets subject-marked with the locative SM *ha-* in the LI construction in (2).

- (1) Basic word order [CJ]: A+A-V+L

Intambwe iryama mw'ishamba

[iñâ:mb̃ge ijama mwifã:mba]

intambwe irjama mwifamba

i-N-tambwe i-Ø-rjam-a mu-i-famba

AUG-9-lion SM9-PRS-sleep-FV 18-5-field

'A lion sleeps in the forest'

- (2) FLI: L+L-V+A

Mw'ishamba haryama intambwe

[mwifã:mba haɣama iñâ:mb̃ge]

mwifamba harjama intambwe

mu-i-famba ha-Ø-rjam-a i-N-tambwe

18-5-field SM_{Loc}-PRS-sleep-FV AUG-9-lion

‘In the forest sleeps a lion’

LI is further classified into two types according to the noun class property of inverted nouns (cf. Marten 2006; Buell 2007; Zeller 2013). If an inverted locative noun is morphologically marked as a locative class noun, the construction is known as Formal Locative Inversion (FLI). This type is illustrated in (2) where *mw’ishamba* is in the locative class 18 as shown by the class prefix *mu-*. On the other hand, if an inverted noun denotes a locative meaning but is not morphologically locative-marked, it is referred to as Semantic Locative Inversion (SLI). This type is illustrated in the following example from Zulu.

(3) SLI in Zulu [S42] (Zeller 2013: 2)

a. Canonical word order: T+T.V+SL

U-tshani bu-mil-a e-n-gadi-ni

AUG-14.grass SM14-grow-FV LOC-9-garden- LOC

‘Grass grows in the garden.’

b. SLI: SL+_{SL}-V+T

I-n-gadi i-mil-a u-tshani.

AUG-9-garden SM9-grow-FV AUG-14.grass

‘In the garden grows grass.’

In contrast to (3a) where *e-n-gadi-ni* is morphologically marked by the locative circumfix *e-* (stem) *-ni*, (3b) shows that the inverted noun *i-n-gadi* is not in the locative class but still subject-marked in the predicate verb agreeing in its inherent noun class (in this case, class 9).

It is not necessarily to follow the inversion mechanism, i.e., to license a raised noun as a syntactic subject, in order for a post-verbal locative noun to be raised to the sentence initial position. There are two such cases where inversion mechanism is irrelevant to the raising of a post-verbal locative noun. The first is a case in which a locative noun is swapped with a subject noun

phrase due to its movement caused by Subject Inversion (SI), i.e., the movement of the syntactic subject, which is subject-marked in the SM slot of the verb, to the post-verbal position. The other is a simple Locative Dislocation (LD), where neither the syntactic licensing of a locative noun nor the process of subject inversion is involved. All of these types are illustrated in (4) from Swahili, where only SLI is grammatically unacceptable.

Table 1. Possible types of (formal/ semantic) locative raising

Types	Noun class property of raised N	Subject agreement on V
FLI	LOC marked	raised LOC
SLI	non-LOC marked	raised non-LOC
SI	LOC marked	S in the post-verbal position
LD	LOC marked	in situ S

(4) Illustration of each type in Swahili [G42]

a. FLI: L_{+L}-V+A

m-situ-ni pa-me-lal-a wa-nyama
 3-forest-LOC SM_{LOC}-ANT-sleep-FV 2-animal
 ‘In the forest sleep animals’

b. SLI: SL_{+SL}-V+A

* **m-situ u-me-lala wa-nyama**
 3-forest SM₃-ANT-sleep-FV 2-animal

c. SI: L_{+A}-V+A

m-situ-ni wa-me-lal-a wa-nyama
 3-forest-LOC SM₂-ANT-sleep-FV 2-animal
 ‘In the forest animals sleep’

d. LD: L+A_{+A}-V

m-situ-ni wa-nyama wa-me-lal-a
 3-forest-LOC 2-animal SM₂-ANT-sleep-FV
 ‘In the forest animals sleep’

Another typology on LI is on the valency types of verbs involved in the construction. As shown in Table 2, there is a general typological tendency, i.e., the more transitive the verb is, the less its involvement in LI.

Table 2. Availability of LI with different verb classes

(Based on Table 1 in [Salzmann 2011: 5], which is adopted from Demuth and Mmusi [1997: 14] and Marten [2006: 106])

a. Active voice

Verb type <relevant θ -roles>	Chewa [N31]	Shona [S10]	Setswana [S31]	Herero [R30]	Kirundi [JD62]
Unaccusative <th, loc>	OK	OK	OK	OK	OK
Unergative <ag, loc>	*	*	OK	OK	OK⁽⁶⁾
Transitive <ag, th, loc>	*	*	*	OK	OK⁽⁸⁾
Ditransitive <ag, th, pat, loc>	*	*	*	*	*⁽¹⁰⁾

b. Passive voice

Verb type <relevant θ -roles>	Chewa [N31]	Shona [S10]	Setswana [S31]	Herero [R30]	Kirundi [JD62]
Unaccusative <th, loc>	*	OK	OK	OK	OK
Unergative <ag, loc>	*	OK	OK	OK	OK⁽⁷⁾
Transitive <ag, th, loc>	OK	OK	OK	OK	OK⁽⁹⁾
Ditransitive <ag, th, pat, loc>	OK	OK	OK	OK	OK⁽¹¹⁾

Based on Table 2, this general tendency can be rigidly formalised through the following implicational hierarchy.

(5) Typological implication on valency types and LI

a. Active

Unaccusative > Unergative > Transitive > *Ditransitive

b. Passive

Di/Transitive > Intransitive

In their theoretical treatment, Bresnan and Kanerva (1989: 27) argue that LI is restricted to verbs whose highest thematic role is <theme>.⁵ However, as Marten (2006: 101–102) points out that it is not necessarily applicable to all Bantu languages, e.g., in Setwana, where an unergative active verb whose highest thematic role is <agent> can also be involved in the construction. In this typological scale, Kirundi can be classified as one of the most flexible type of languages, where the maximal range of verbs attested so far in cross-Bantu typology, i.e., all verb types except for ditransitive active verbs, can be involved in the construction. This is evidenced by the following examples.

(6) FLI: L+L-V+A [Unergative, Active] = (2)

mw'ishamba haryama intambwe

[mwiʃã:mba haɣama inã:mbɔ̃ge]

mwifamba harjama intambwe

mu-i-famba ha-Ø-rjam-a i-N-tambwe

18-5-field SM_{LOC}-PRS-sleep-FV AUG-9-lion

'In the forest sleeps a lion'

(7) FLI: L+L-V-PASS+ADP [Unergative, Passive]

mw'ishamba haryamwa n'intambwe

[mwiʃã:mba haɣamɲa niã:mbɔ̃ge]

mwifamba harjamwa na intambwe

⁵ In the theoretical framework of Lexical Functional Grammar, the following hierarchy of thematic roles are assumed (Bresnan and Kanerva 1989: 23): agent > beneficiary > recipient/experiencer > instrumental > patient/theme > locative

mu-i-famba ha-Ø-rjam-w-a na i-N-tambwe
 18-5-field SM_{LOC}-PRS-sleep-PASS-FV by AUG-9-lion
 ‘In the forest is slept (by a lion)’

Connotation: *mw’ishamba* is the place where a lion should sleep with a contrastive connotation (e.g, inside a house should be the place for humans to sleep)

- (8) FLI: L+L-V+T+A [Transitive, Active]

Mw’ishure hasoma igitabo Mariko

[mwifú:re hasoma igitáβo maríko]

mufure hasoma igitabo mariko

mu-i-fure ha-Ø-som-a i-ki-tabo mariko
 18-5-school SM_{LOC}-PRS-read-FV AUG-7-book Mariko

‘In the room Mariko reads’

Connotation: He is the only one in the class reading a book

- (9) FLI: L+L-V-_{PASS} +T+ADP [Transitive, Passive]

Mw’ishure hasomwa igitabo na Mariko

[mwifú:re hasomŋa igitáβo na maríko]

mufure hasomwa igitabo na mariko

mu-i-fure ha-Ø-som-w-a i-ki-tabo na mariko
 18-5-school SM_{LOC}-PRS-read-PASS-FV AUG-7-book by Mariko

‘In the room is read a book (by Mariko)’

- (10) FLI: L+L-V+A+B+T [Ditransitive, Active]

*** Mw’ishure hasomera umwarimu abanyeshure igitabo**

mu-i-fure ha-Ø-som-ir-a u-mu-arimu a-ba-nejure
 18-5-school SM_{LOC}-PRS-read-APPL-FV AUG-1-teacher AUG-2-student
 i-ki-tabo
 AUG-7-book

Intd. ‘In the school a teacher reads a book for students’

(11)FLI: L+L-V_{-PASS} +T+B+ADP [Ditransitive, Passive]

Mw'ishure hasomerwa igitabo abanyeshure n'umwarimu

[mwiʃũ:re hasomeŕgwa igitabo aβaŋê:ʃũ:re num̄ɲarímu]

mwifure hasomerwa igitabo abanyeshure na umwarimu

mu-i-ʃure ha-Ø-som-ir-w-a i-ki-tabo

18-5-school SM_{LOC}-PRS-read-APPL-PASS-FV AUG-7-book

a-ba-ŋeʃure na u-mu-arimu

AUG-2-student by AUG-1-teacher

'In the school is given a book to students by a teacher'

The following sections provide fundamental descriptive information of elicited examples that illustrate the four structural types shown in Table 1, namely Formal Locative Inversion (FLI, 3.2.1.1), Semantic Locative Inversion (SLI, 3.2.1.2), Subject Inversion (SI, 3.2.1.3), and Locative Dislocation (LD, 3.2.1.4).

3.2.1.1 Formal Locative Inversion

As is generally accepted, LI is observed in a context where a specific location denoted by the locative noun, which sits in the post-verbal position in the basic word order as in (12), is topicalised in the discourse as in (13).

(12)Basic word order: FOC+Q+A.V+L

Ni igiki kiriyama mugiti

[ni:gíki kiriyama mugítí]

ni igiki kiriyama mugiti

ni i-ki-ki ki-Ø-rjam-a mu-ki-ti

FOC AUG-7-what SM₇-PRS-sleep-FV 18-7-tree

'What sleeps in the tree?'

(13)FLI: L+L-V+A

Mugiti haryama ingwe

[mugítí hariyama ingwe]

mugiti hariyama ingwe

mu-ki-ti ha-Ø-rjam-a i-N-gwe
 18-7-tree SM_{LOC}-PRS-sleep-FV AUG-9-leopard
 ‘In the tree sleeps a leopard’
 < As an answer to the question: ‘What sleeps inside the tree’

As presented in detail in 3.3.3, Kirundi has a conjugational system that distinguishes CJ and DJ verb forms. Example (13) illustrates that CJ, which is an unmarked verb form in focus marking conjugation, is grammatically well-formed in FLI, while the corresponding DJ form, which is typically marked by TAM *ra-* and traditionally described as a focused verb form⁶ can also be used in FLI, as illustrated in (14).

(14) FLI [DJ]: L⁺L-D-V+A

Mugiti hararyama ingwe
 [mugíti harajâ:ma ingwe]
mugiti hararjama ingwe
 mu-ki-ti ha-Ø-ra-rjam-a i-N-gwe
 18-7-tree SM_{LOC}-PRS-DJ-sleep-FV AUG-9-leopard
 ‘In the tree **can be** slept by a leopard’

It is suggested by our native collaborator that the DJ form in (14) semantically denotes ‘possibility/capacity’ (as a place to sleep by a leopard) of the raised locative *mugiti* ‘in/inside the tree’. The semantic connotation expressed by DJ will be further discussed in 3.3.3.5.

On the other hand, there seems to be a syntactic restriction on FLI. As shown in (15), a clause can be grammatically unacceptable if any syntactic constituent intervenes between the inverted locative subject and the predicate (in this case, the AUX *hariko*) as in (15a), while it is grammatically acceptable when they are adjacent as in (15b). Thus, the ungrammaticality of the sentence can be explained through the violation of the subject-verb adjacency, i.e., a subject-

⁶ See Nshemezimana and Bostoen (2017) for further discussions of the functionality of DJ in Kirundi.

marked noun, *mwifamba* in this case, should either immediately precede or follow the verb.

(15)a. FLI [DJ]: L+A+L-AUX+L-D-V

* **Mw'ishamba imbwebwe hariko hariruka**

mu-i-famba i-N-bwebwe ha-ri-ko ha-Ø-ra-iruk-a
 18-5-field AUG-9-jackal SM_{LOC}-be-EXT SM_{LOC}-PRS-DJ-run-FV
 Intd: 'In the forest a jackal is running'

b. FLI [DJ]: L+L-AUX+L-D-V+A

Mw'ishamba hariko hariruka imbwebwe

[mwifã:mba harikó harî:ruka imbgé:bge]

mwifamba hariko hariiruka imbwebwe

mu-i-famba ha-ri-ko ha-Ø-ra-iruk-a i-N-bwebwe
 18-5-field SM_{LOC}-be-EXT SM_{LOC}-PRS-DJ-run-FV AUG-9-jackal
 'In the forest there is a jackal running'

Finally, as shown in (16), it is suggested that dropping of the agent NP is basically unacceptable, i.e., post-verbal NP cannot be omitted as generally observed in other languages (see Marten [2006] for a comparative overview). As reflected in the translation, this structure can only be possible when the preverbal argument is syntactically construed as the agent=subject of the predicate, although it is semantically unexpected in a usual context.

(16)FLI [DJ]: L+L-AUX+L-D-V → Basic word order [DJ]: A+A-AUX+A-D-V

Mw'ishamba hariko hariruka

[mwifã:mba harikó harî:ruka]

mwifamba hariko hariiruka

mu-i-famba ha-ri-ko ha-Ø-ra-iruk-a
 18-5-field SM_{LOC}-be-EXT SM_{LOC}-PRS-DJ-run-FV
 'The forest is running'
 Intd. 'In the forest there is something running'

This ungrammaticality seems to be irrelevant to the CJ/DJ alternation, as evident in the following example where the verb form is altered to a CJ form followed by a post-verbal constituent.

(17)FLI: L+L-AUX+L-V+Adv → Basic word order: A+A-AUX+A-V+Adv

Mw’ishamba hariko hiruka cane

[mwifã:mba harikó hĩ:ruka tʃá:ne]

mwifamba hariko hiiruka cane

mu-i-famba ha-ri-ko ha-Ø-iruk-a

18-5-field SM_{LOC}-be-EXT SM_{LOC}-PRS-run-FV

‘The savannah is running fast’

Intd. ‘In the forest there is something running fast’

3.2.1.2 Semantic Locative Inversion

As illustrated in (18), SLI is apparently not grammatically acceptable in Kirundi.

(18)SLI [DJ]: SL+SL-D-V+A

* **Ishamba ririko ririruka imbwebwe**

i-famba ri-ri-ko ri-Ø-ra-iruk-a i-N-bwebwe

5-field SM₅-be-EXT SM₅-PRS-DJ-run-FV AUG-9-jackal

Intd. ‘In the forest, a jackal is running (lit. The forest runs a jackal)’

However, the ungrammaticality relevant to (18) can be resolved if the locative clitic =*mwo* is attached to the verb, i.e., the clitic licenses the preverbal semantic locative noun to be syntactically parsed as a formal locative noun as illustrated in (19a). The predicate can also be passivised, in which case, the clause may instead be interpreted as a simple, non-inverted passive construction as in (19b).

(19)a. SLI [DJ]: SL+SL-AUG+SL-D-V=L+A

Ishamba ririko ririrukamwo imbwebwe

[iʃa:mba ririkó riri:rukámŋó imbǵé:bǵe]
ifamba ririko ririirukamwo imbwebwe
 i-famba ri-ri-ko ri-Ø-ra-iruk-a=mu-o i-N-bwebwe
 5-field SM5-be-EXT SM5-PRS-DJ-run-FV=PP17-DEM.M AUG-9-jackal
 ‘In the forest a jackal is running/ In the forest, there is a jackal
 running’

b. SLI [DJ]: SL+SL-AUG+SL-D-V-PASS=L+ADP

Ishamba ririko ririirukwamwo n’imbwebwe

[iʃa:mba ririkó riri:rukwámŋó nimbǵé:bǵe]
ifamba ririko ririirukwamwo nimbwebwe
 i-famba ri-ri-ko ri-Ø-ra-iruk-w-a=mu-o na
 5-field SM5-be-EXT SM5-PRS-DJ-run-PASS-FV=PP17-DEM.M by
 i-N-bwebwe
 AUG-9-jackal
 ‘In the forest a jackal is running/ In the forest, there is a jackal
 running’ (Lit. ‘The forest is being run by a jackal’)

3.2.1.3 Subject Inversion

As illustrated in (20), SI itself seems to be syntactically acceptable regardless of whether a logical subject occupies the immediately after the verb (IAV) or the clause-final position.

(20) SI (Verb raising): A-V+A+L

a. **Yinjiye umusuma mu nzu**

[ijindzije umusuma mu:ndzú]
iinziye umusuma munzu
 a-Ø-inzi-je u-mu-suma mu-nzu
 SM1-PRS-enter-PERF AUG-1-thief 18-house
 ‘In the house entered the thief’

b. SI (Verb raising): A-V+L+A

Yinjiye mu nzu umusuma

[ijindʒijé mu:ndzu umusúma]
iinzije umusuma munzu
 a-Ø-inzi-je u-mu-suma mu-nzu
 SM1-PRS-enter-PERF AUG-1-thief 18-house
 ‘The thief entered the house’

However, this is not the case when locative raising is concerned. As shown in (21), a locative noun cannot precede the verb when a syntactic subject is inverted to the post-verbal position.

(21) SI [CJ]: L+A-V+A

* **Mugiti iryama ingwe**
 mu-ki-ti i-Ø-rjam-a i-N-gwe
 18-7-tree SM9-PRS-sleep-FV AUG-9-leopard
 Indt: ‘Inside the tree sleeps a leopard’

Based on these facts, it is naturally assumed that SI is only acceptable when no noun phrase is raised to the preverbal position. However, as illustrated in (22), locative raising can be compatible with SI when i) a raised locative noun is grammatically agreed in the object marker (OM) slot of the verb and ii) the verb is in the DJ form inflected by the TAM prefix *ra-*.

(22) SI [DJ]: L+A-D-L-V+A

Mw’ishamba iraharyama intambwe
 [mwifa:mba irahája:ma ina:mbge]
mwifamba iraharjama intambwe
 mu-i-famba i-Ø-ra-ha-rjam-a i-N-tambwe
 18-5-field SM9-PRS-DJ-OM_{Loc}-sleep-FV AUG-9-lion
 ‘In the forest sleeps a lion’

Examples (23a) and (23b) suggest that violation of either of the abovementioned conditions will result in ungrammaticality.

(23)a. SI [DJ]: L⁺_{A-D}-V+A

* **Mw'ishamba iraryama intambwe**

mu-i-famba i-Ø-ra-rjam-a i-N-tambwe

18-5-field SM₉-PRS-DJ-sleep-FV AUG-9-lion

Intd. 'In the forest sleeps a lion'

b. SI [CJ]: L⁺_{A-L}-V+A

* **Mw'ishamba iharyama intambwe**

mu-i-famba i-Ø-ha-rjam-a i-N-tambwe

18-5-field SM₉-PRS-OM_{LOC}-sleep-FV AUG-9-lion

Intd. 'In the forest sleeps a lion'

However, there is also a case where the lack of OM is seemingly irrelevant to ungrammaticality. For example, (24b), which can be interpreted as a semantic equivalent of (24a), lacks an OM referring to the raised locative, but is still grammatically acceptable (Note that (24b) is NOT in an applicative form, in contrast to (24a)).

(24)a. SI [DJ]: L⁺_{A-D-L}-V+A

Munzu irahakinira imbwa

[mu:ndzu irahakinira imb̂ga] (tone omitted)

mu-n-zu i-ra-ha-kin-ir-a i-N-bwa

17-9-house SM₉-DJ-OM_{LOC}-play-APPL-FV AUG-9-dog

'In the house plays a dog'

b. SI [DJ]: L⁺_{A-D}-V+A

Munzu irakina imbwa

[mu:ndzu irakina imb̂ga] (tone omitted)

mu-n-zu i-ra-kin-a i-N-bwa

17-9-house SM₉-DJ-play-FV AUG-9-dog

'In the house plays a dog'

This may be partially explained by the fact that when an inverted locative noun can be interpreted as having been assigned a thematic role of patient, then SI is not blocked by the lack of DJ marking nor of OM that shows grammatical agreement with the raised locative noun, as illustrated in (25b) and (25c).

(25)a. SI [DJ]: P_{+A-D-P}-V+A+T

Munzu arahasiga mariko irangi ryera

[mu:ndzú arahasi:ga maríko iráŋgi rǵě:ra]

munzu arahasiga mariko irangi rjeera

mu-n-zu a-Ø-ra-ha-sig-a mariko i-raŋgi ri-era

18-5-home SM₁-PRS-DJ-OM_{LOC}-paint-FV Mariko 5-colour PP₅-white

‘Mariko is painting inside the house **white**’

b. SI [DJ]: P_{+A-D}-V+A+T

Munzu arasiga mariko irangi ryera

[mu:ndzú arasi:ga maríko iráŋgi rǵě:ra]

munzu arasiga mariko irangi rjeera

mu-n-zu a-Ø-ra-sig-a mariko i-raŋgi ri-era

18-5-home SM₁-PRS-DJ-paint-FV Mariko 5-colour PP₅-white

‘Mariko **is painting** the house white’

> Focus is on the verb *ku-siga* ‘to paint’

c. SI [CJ]: P_{+A-P}-V+A+T

Munzu ahasiga mariko irangi ryera

[mu:ndzú ahasi:ga maríko iráŋgi rǵě:ra]

munzu ahasiga mariko irangi rjeera

mu-n-zu a-Ø-ha-sig-a mariko i-raŋgi ri-era

18-5-home SM₁-PRS-OM_{LOC}-paint-FV Mariko 5-colour PP₅-white

‘Mariko is painting the house white (contrasting other rooms painted in different colours)’

3.2.1.4 Locative Dislocation

As expected, simple LD, i.e., locative raising without agreement on the verb,

is grammatically acceptable. Note however that whether a raised locative noun needs to be marked in the agreement slot on the verb remains unclear. The absence of OM which agrees with the raised locative seems to be ungrammatical in (27), whereas OM can be omitted in the DJ-marked stative verb inflected by the suffix *-je* as illustrated in (28).

(26)LD [DJ]: L+A+A-D-L-V

Mugiti ingwe iraharyama

[mugítí ingwe irahájama]

mugiti ingwe iraharjama

mu-ki-ti i-N-gwe i-Ø-ra-ha-rjam-a

18-7-tree AUG-9-leopard SM9-PRS-DJ-OM_{LOC}-sleep-FV

‘In the tree sleeps a leopard’

< As an answer to the question: ‘Does a leopard sleeps inside the tree?’

(27)LD [DJ]: L+A+A-D-V

* **Mw’ishamba intambwe iraryama**

mu-i-famba i-N-tambwe i-Ø-ra-rjam-a

18-5-field AUG-9-lion SM9-PRS-DJ-sleep-FV

Intd. ‘In the forest a lion sleeps’

(28)LD [DJ]: L+A+A-D-V-_{PERF}

Mucumba umwana araryamye

[mutʃû.mba umŋâ.na arajâ:mje]

mutʃumba umwana ararjamje

mu-ki-umba u-mu-ana a-Ø-ra-rjam-je

18-7-room AUG-1-child SM1-PRS-DJ-sleep-PERF

‘In the room a child sleeps’ [01057]

On the other hand, there seems to be no restriction on the existence of a subject noun phrase, i.e., the preverbal agent=subject can be present or omitted.

(29)LD [DJ]: L+A+A-D-L-V

Mw'ishamba intambwe iraharyama

[mwɪʃa:mba ɪnamb̃ge irahájama]

mwɪʃamba intambwe iraharjama

mu-i-ʃamba i-N-tambwe i-Ø-ra-ha-rjam-a

18-5-field AUG-9-lion SM9-PRS-DJ-OM_{LOC}-sleep-FV

'A lion sleeps in the forest' [01033]

(30)LD [DJ]: L+A-D-L-V

Mw'ishamba iraharyama

[mwɪʃa:mba irahájama]

mwɪʃamba iraharjama

mu-i-ʃamba i-Ø-ra-ha-rjam-a

18-5-field SM9-PRS-DJ-OM_{LOC}-sleep-FV

'It (a lion) sleeps in the forest'

In terms of the CJ form, example (31a) is accepted as syntactically 'incomplete' due to the lack of a post-verbal element. This syntactic incompleteness, however, is resolved by adding a post-verbal constituent such as adverbials, as illustrated in (31b). A detailed sketch of the structural restrictions pertaining to the CJ/DJ distinction is provided in 3.3.3.

(31)a. LD [CJ]: L+A+A-V

* **Mugiti ingwe iryama**

mu-ki-ti i-N-gwe i-Ø-rjam-a

18-7-tree AUG-9-leopard SM9-PRS-sleep-FV

Intd: 'In the tree a leopard sleeps'

b. LD [CJ]: L+A+A-V+Adv

Mugiti ingwe iryama neza

[mugítí ɪŋgwe ɪja:má ned̃za]

mugiti ɪŋgwe irjama neza

mu-ki-ti i-N-gwe i-Ø-rjam-a neza
 18-7-tree AUG-9-leopard SM9-PRS-sleep-FV well
 ‘In the tree a leopard sleeps well’

3.2.2 Patient Inversion

For PI, Marten and Van der Wal (2014) state a cross-Bantu typological overview with a specific mention of Kirundi as follows;

(32) “Much has been written about the use of and restrictions on patient inversion. Semantically, it has been noted for Kirundi and Kinyarwanda that the two arguments of the verb need to differ in animacy, and that the logical subject needs to be higher in animacy (Kimenyi 1980; Morimoto 2000, 2006). Pragmatically, the construction shares aspects of locative inversion: **the initial DP often provides the background of the assertion**, and there is focus on the post-verbal subject: [...] For Kinyarwanda, Kimenyi (1980: 141–146) argues that the preverbal DP is not a subject, but functions as a topic and does not have typical subject properties. In fact the only subject property of preverbal DPs in patient inversion, according to Kimenyi (1980), is verbal agreement. Morimoto (2000, 2006) correspondingly proposes that **agreement in patient inversion is ‘topic’ agreement**, rather than subject agreement.”

Marten and Van der Wal (2014: 331); emphasis added

As suggested in (32), it appears in the literature that the inverted noun phrase, be it in LI or PI, serves as a topic element that provides the contextual background of the utterance in question. On the other hand, Shinagawa and Marten (2021a) offers an argument based on the survey on a large-scale database compiling morphosyntactic features in Bantu languages (Marten et al. 2018). Specifically, a clear tendency is observed in which PI tends to be avoided in languages with major focus marking strategies, such as MFM and CJ/DJ distinction, in contrast to LI which does not show any significant correlation with major focus marking strategies. Thus, it can be regarded as a

positive strategy of assigning term focus to an inverted noun phrase. In this context, Kirundi is one of the few apparent exceptions to the generalisation and thus necessitates a detailed description of the basic structural properties of PI, which is provided in the following sections.

3.2.2.1 Fundamental structural features of PI in Kirundi

Kirundi, along with its neighbouring Kinyarwanda, is well recognised for the existence of the PI construction, which is frequently cited in the literature including Meeussen (1959) for Kirundi and Kimenyi (1976) for Kinyarwanda. Examples (33a) is one of the typical examples of PI, which is a slightly modified version of the example cited in Kimenyi (1976: 146).

(33)a. PI: P+_P.V+A

Igitabo gisoma Yohani

[igitáβo gisoma joháni]

igitabo kisoma johani

i-ki-tabo ki-Ø-som-a johani

AUG-7-book SM7-PRS-read-FV Yohani

‘Yohani reads a book’

b. Basic word order: A+A-V+P

Yohani asoma igitabo

[johă:ni asoma igitábo]

johani asome igitabo

johani a-Ø-som-a i-ki-tabo

Yohani SM1-PRS-read-FV AUG-7-book

‘Yohani reads a book’

As in (34), PI with the DJ form is also acceptable.

(34)a. PI [DJ]: P+_{P-D}.V+A

Umuryango urugara Yohani

[umuɣâ:ŋgo urugara joháni]
umurjaŋgo urugara johani
 u-mu-rjaŋgo u-Ø-ra-ugar-a johani
 AUG-3-door SM3-PRS-DJ-close-FV Yohani
 ‘Yohani will close the door’

b. Basic word order [DJ]: A+A-D-V+P

Yohani arugara umuryango
 [johã:ni arugara umuɣâ:ŋgo]
johani arugara umurjaŋgo
 johani a-Ø-ra-ugar-a u-mu-rjaŋgo
 Yohani SM1-PRS-DJ-close-FV AUG-3-door
 ‘Yohani will close the door’

It should be noted that in his comprehensive description on Kinyarwanda, Kimenyi (1976: 145) explicitly states that the semantic interpretation of PI (in his term, ‘object-subject reversal’) “is a syntactic process that gives a passive reading to a sentence by just reversing the object and the subject”. In this sense, the ‘passive reading’ of PI is well reflected in (35a), whose semantic connotation is quite similar to its corresponding passive sentence in (35b). Although previous studies tend to focus on its relevance to information structure, it should not be overlooked that the passive connotation that Kimenyi describes is also clearly observed in the PI in Kirundi. In other words, PI may be not only solely associated with IS, but also motivated by the need for valency-related control.

(35)a. PI: P+P.V+A

Inyama iriye Fara
 [iɲamá irije fára]
inyama irije fara
 i-N-ama i-Ø-ri-je fara
 AUG-9-meat SM9-PRS-eat-PERF Fara

‘Fara ate the meat’ [01243]

b. Basic word order (passive): P+P.V_{-PASS}+ADP

Inyama iriwe na Fara

[iɲamá iri:we ná fara]

inyama iriwe na fara

i-N-ama i-Ø-ri-w-je na fara

AUG-9-meat SM9-PRS-eat-PASS-PERF by Fara

‘The meat was eaten by Fara’

Interestingly, there are few cases where a causative verb stem apparently seems to be blocked in PI as in (36).

(36)a. PI: P+P.V_{-CAUS}+A

* **Abana arijije Fara?**

[aβâ:na aridzidze fára]

abaana arizije fara

a-ba-ana a-Ø-rij-ij-je fara

AUG-2-child SM1-PRS-cry-CAUS-PERF Fara

Intd. ‘Fara made children cry’

b. Basic word order (passive): P+P.V_{-CAUS-PASS}+ADP

Abana barijijwe na Fara

[aβâ:na βaridzidzɣ^we ná fara]

abaana barijijwe na fara

a-ba-ana ba-Ø-rij-ij-w-je na fara

AUG-2-child SM2-PRS-cry-CAUS-PASS-PERF by Fara

‘A child is made to cry by Fara’

As it has been repeatedly argued in the literature, one of the significant pragmatic effects of the construction is the assignment of focus to the inverted (demoted) subject (Marten and Van der Wal 2014, Van der Wal 2022, Shinagawa and Marten 2021a). The following examples clearly illustrate that

PI is part of syntactic operation to move a term-focused constituent to the syntactically dedicated position. As discussed in Gibson et al. (2017) it is striking that Kirundi utilises the clause final position for syntactic marking of focus, in contrast to typical Bantu languages where ‘immediately after the verb’ (IAV) is the syntactic position for a term focused constituent.

(37)a. Basic word order: A+A-AUX+INF+P

Yohani yamaze gusoma igitabo

[joháni ja:madze gusomá igitáβo]

johani jaamaze gusoma igitabo

johani ju-a-mar-je ku-soma i-ki-tabo

Yohani PP1-PST.N-finish-PERF 15-read AUG-7-book

‘Yohani has read **a book**/ finished to read **a book**’

b. PI: P+P-AUX+INF+A

Igitabo camaze gusoma Yohani

[igitáβo tʃa:madze gusoma joháni]

igitabo tʃa:maze gusoma johani

igitabo ki-a-mar-je ku-soma johani

AUG-7-book SM7-PST.N-finish-PERF 15-read Yohani

‘**Yohani** has read a book/ finished to read a book’

This focus effect achieved by PI is more specifically confirmed in the next example where PI is used in a clear context in which the logical subject of the patient-inverted clause is in contrastive focus.

(38) Clause compound

Intambwe iriko iratambuka ariko iriko iriruka imbwebwe

[iñambge irikíratâ:mbuka arikirikiř:rukimbge:bge]

intambwe iriko iratambuka ariko iriko iriiruka imbwebwe

Basic word order [DJ]: A+A-AUX+A-D-V

i-N-tambwe i-ri-ko i-Ø-ra-tambuk-a
AUG-9-lion SM9-be-EXT SM9-PRS-DJ-walk-FV

PI [DJ]: A-AUX+A-D-V+A

ariko i-ri-ko i-Ø-ra-iruk-a i-N-bwebwe
but SM9-be-EXT SM9-PRS-DJ-run-FV AUG-9-jackal
'A lion is walking but a jackal is running'

In terms of structural aspects, no clear restriction seemingly exists for PI to appear in an embedded complement clause as in the following examples.

(39)a. PI (embedded complement clause): c[P+p.V+A]

Nabonye umuryango wugaye Yohani

[nabô:ne umujâ:ŋgo u:gaje johá:ni]

nabonye umurjango uugaje johani

N-a-bon-je u-mu-rjango u-Ø-ugar-je johani
SM1SG-PST.N-see-PERF AUG-3-door SM3-PRS-close-PERF Yohani

'I saw **Yohani** had closed a door'

Connotation: 'I'm confirming that the door has been closed BY YOHANI'

b. Basic word order (embedded complement clause): c[A+A-V+P]

Nabonye Yohani yugaye umuryango

[nabô:ne johá:ni jû:gaje umujâ:ŋgo]

nabonye johani juugaye umurjango

N-a-bon-je johani ju-a-ugar-je
SM1SG-PST.N-see-PERF Yohani PP1-PST.N-close-PERF

u-mu-rjango

AUG-3-door

'I saw Yohani had closed **a door**'

Connotation: 'I'm confirming that the DOOR has been closed'

c. PI (embedded complement clause): c[P+P-AUX+INF+A]

Nabonye umuryango wamaze kugara Yohani

[nabô:je umujâ:ŋgo wa:madze kugara johá:ni]

nabonye umurjango waamaze kugara johani

N-a-bon-je u-mu-rjango u-a-mar-ie

SM1SG-PST.N-see-PERF AUG-3-door SM3-PST.N-finish-PERF

ku-ugara johani

15-close Yohani

‘I saw **Yohani** had closed a door’

Connotation: ‘I’m confirming that the door has been closed
BY YOHANI’

d. Basic word order (embedded complement clause):

c[A+A-AUX+INF+P]

Nabonye Yohani yamaze kugara umuryango

[nabô:jé johá:ni ja:madze kugara umujâ:ŋgo]

nabonye johani jaamaze kugara umurjango

N-a-bon-je johani ju-a-mar-ie ku-ugara

SM1SG-PST.N-see-PERF Yohani PP1-PST.N-finish-PERF 15-close

u-mu-rjango

AUG-3-door

‘I saw Yohani had closed **a door**’

Connotation: ‘I’m confirming that the DOOR has been closed’

3.2.2.2 Patient left-dislocation due to SI

Another syntactic operation by which a term-focused subject moves to the clause final position as the focus position is the patient left-dislocation. In this case, a syntactic object with a thematic role of patient is raised to the clause initial position without being licensed as a syntactic subject as in (40).

(40) Patient left-dislocation with SI: P+A-D-V+A

Inyama yariye Fara

[ijama jari:je fára]
ijama jariije fara
 i-N-ama ju-a-ri-je fara
 AUG-9-meat PP1-PST.N-eat-PERF Fara
 ‘**Fara** ate the meat’ [01228]

As illustrated in (41), patient left-dislocation construction is attested in the context of main clause negation, which is marked by the verbal proclitic *nti=*.

(41) a. Patient left-dislocation (NEG): P+_{NEG=P}-V+A

Umuryango ntiwugara Yohani
 [umuɣâ:ŋgo ñiugára johá:ni]
umurjango ntijugara johani
 u-mu-rjango nti=u-Ø-ugar-a johani
 AUG-3-door NEG-SM3-PRS-close-FV Yohani
 ‘**Yohani** will not close the door’

b. Basic word order (NEG): A+_{NEG=A}-V+P

Yohani ntiyugara umuryango
 [johá:ni ñiju:gára umuɣâ:ŋgo]
johani ntijuugara umurjango
 johani nti=ju-Ø-ugar-a u-mu-rjango
 Yohani NEG-PP1-PRS-close-FV AUG-3-door
 ‘Yohani will not close **the door**’

3.3 Focus marking and information structure

This section provides a basic description of the major mono-clausal strategies⁷ of focus marking observed in this language. Focus is generally defined as “the semantic component of a pragmatically structured proposition whereby the

⁷ The cleft construction as another major syntactic means of expressing term focus is not included in a scope of this chapter, since the direct concern of this chapter is mono-clausal expressions. For the detailed descriptions and analysis of the cleft constructions in Kirundi, see Lafkioui et al. (2016).

assertion differs from the presupposition” (Lambrecht [1994: 213]). Thus, focus is pragmatically salient in that it is assumed by the speaker to be either new, unpredicted, or contrary to the addressee’s expectations (cf. Dik 1997). Based on this definition, Güldemann (2003: 332) classifies the basic concepts on focus as follows. Focus can be classified in terms of quality and scope. Quality is further categorised into two types. The first denotes a piece of information that (a) fills a gap in the pragmatic information of the addressee (assertive focus), whereas the other (b) contrasts with expectation of the addressee (contrastive focus). In terms of scope, it is subclassified as (i) term focus, which is on the nominal argument, (ii) verb focus, which is on the lexical meaning of the verb, and (iii) predicate-centred focus, which is on the functional operators usually expressed on the predicate such as tense, aspect, modality and polarity. This chapter basically follows this conceptualisation, which is summarised in Table 3.

Table 3. Summary of the classification of the concepts on focus

(Based on Güldemann 2003: 332)

Quality (communicative point) of focus	
(a) Information gap	> ASSERTIVE FOCUS
(b) Contrastive information	> CONTRASTIVE FOCUS
Scope of focus	
(i) Term (nominal and other arguments)	> TERM FOCUS
(ii) Verb lexeme	> VERB FOCUS
(iii) Predication operator	> PREDICATE-CENTRED FOCUS

In terms of the formal means of expressing focus, it is widely recognised that focus in Bantu languages can be structurally expressed through various operations at the prosodic, morphological, and syntactic levels (see Nurse [2006] for an extensive list of focus marking strategies in Bantu languages). In Kirundi, all the three components take part in different focus marking strategies in one way or another. The remaining part of this chapter presents a basic description of each of the attested strategies for expressing focus, namely

syntactic operation (3.3.1), morphological marking (3.3.2), and conjugational patterns that are structurally marked by a combinatory means of prosody, morphology, and syntax (3.3.3).

3.3.1 Word order: especially in relation to object symmetry

3.3.1.1 General tendencies

As demonstrated in 3.2, the word order in Kirundi relatively faithfully reflects the general tendency that topic is fronted while focus moves to the post verbal position. Thus, in (42) the question word *hehe*, which is naturally focused, is placed at the post-verbal position, whereas the corresponding focus in the answer *mw'ishamba* is also at the post-verbal position. On the other hand, in a question sentence that interrogates the agent=subject as in (43), the question word *igiki* is marked by a focus marking morpheme *ni* instead of being dislocated to the post-verbal position, whereas the focused element in the answer, which is the agent *intambwe*, moves to the clause final position as expected.

(42)a. Basic word order (question): A+A-V+Q

Intambwe iryama hehe

[inâ:mbge iyama hehe]

intambwe iryama hehe

i-N-tambwe i-Ø-rjam-a hehe

AUG-9-lion SM9-PRS-sleep-FV where

‘Where does a lion sleep?’ [cf. 01021]

b. Basic word order: A+A-V+L

Intambwe iryama mw'ishamba

[inâ:mbge iyama mwifã:mba]

intambwe iryama mwifamba

i-N-tambwe i-Ø-rjam-a mu-i-famba

AUG-9-lion SM9-PRS-sleep-FV 18-5-field

‘A lion sleeps in the forest’

(43)a. Basic word order (question): FOC+Q^{+A}-V+L

Ni igiki kiriyama mw'ishamba

[ni:giki kiriyama mwifâ:mba]

ni igiki kiriyama mwifamba

ni i-ki-ki ki-Ø-rjam-a mu-i-famba

FOC AUG-7-what SM7-PRS-sleep-FV 18-5-field

'What sleeps in the forest?' [01027]

b. FLI: L^{+L}-V+A

Mw'ishamba haryama intambwe

[mwifâ:mba hajama inâ:mbge]

mwifamba harjama intambwe

mu-i-famba ha-Ø-rjam-a i-N-tambwe

18-5-field SM_{LOC}-PRS-sleep-FV AUG-9-lion

'A lion sleeps in the forest' [01030]

As presented in 3.2.1, a subject can be dislocated in different ways. Example (44a) presents a case where the subject is dislocated through SI (3.2.1.3), i.e., with the subject kept agreed in the SM slot of the verb. On the other hand, dislocation in (44b) co-occurs with PI (3.2.2), i.e., the raised patient is subject-marked on the verb.

(44)a. SI: P^{+A}-V+A

Inyama yariye Fara

[inyama jarije fára]

inyama jariije fara

i-N-ama ju-a-ri-je fara

AUG-9-meat PP₁-PST.N-eat-PERF Fara

'Fara ate the meat' [01228]

b. PI: P^{+P}-V+A

Inyama iriye Fara

[inyama iriije fára]

ijama irije fara
 i-N-ama i-Ø-ri-je fara
 AUG-9-meat SM9-PRS-eat-PERF Fara
 ‘Fara ate the meat’ [01243]

According to our native collaborator, the semantic difference between the two can be clarified as follows. While the post-verbal agent is focused in both sentences, (44b) can be typically used in such a context where the meat was served for the speaker but someone else instead ate it. This may be relevant to the ‘passive connotation’ described by Kimenyi (1976: 145).

3.3.1.2 Clause-final as a syntactic position for term focus

As is widely recognised, the most typical position dedicated to term focus in many Bantu languages is the IAV position. However, as Gibson et al. (2017) points out, Kirundi tends to utilise the clause-final position for marking term focus (cf. 3.3.1.3; see also Van der Wal 2017; Van der Wal 2022). The following examples illustrate this tendency.

(45)a. Double Object Construction: A+A-V+T+B

Mariko yaguriye inyama abana
 [maríko jaǵurije ijama aβâ:na]
mariko jaguriye ijama abaana
 mariko ju-a-gur-i-je i-N-ama a-ba-ana
 Mariko PP1-PST.N-buy-APPL-PERF AUG-9-meat AUG-2-child
 ‘Mariko bought meat **for children**’

b. Double Object Construction: A+A-V+B+T

Mariko yaguriye abana inyama
 [maríko jaǵurije aβâ:na ijama]
mariko jaguriye abaana ijama
 mariko ju-a-gur-i-je a-ba-ana i-N-ama
 Mariko PP1-PST.N-buy-APPL-PERF AUG-2-child AUG-9-meat

‘For children Mariko bought **meat**’

What may be more striking is that, unlike in many Bantu languages where DJ forms do not take a post-verbal nominal as its direct object, DJ forms in Kirundi can take not only one object nominal but even two full object NPs, wherein the one in the clause-final position is interpreted as a focused element. In terms of the semantic difference between the CJ form and the DJ form, our collaborator suggests that the DJ forms tend to be used as a reporting statement where a specific event has just occurred (the present perfect reflects this connotation).

(46)a. Double Object Construction [DJ]: A+A-D-V+T+B

Mariko yaraguriye inyama abana

[maríko jaráǵuriye ijnama aβâ:na]

mariko jaraguriye inyama abaana

mariko ju-a-ra-gur-ir-je i-N-ama a-ba-ana

Mariko PP1-PST.N-DJ-buy-APPL-PERF AUG-9-meat AUG-2-child

‘Mariko has bought meat **for children**’

b. Double Object Construction [DJ]: A+A-D-V+B+T

Mariko yaraguriye abana inyama

[maríko jaráǵuriye aβâ:na ijnama]

mariko jaraguriye abaana inyama

mariko ju-a-ra-gur-i-je a-ba-ana i-N-ama

Mariko PP1-PST.N-DJ-buy-APPL-PERF AUG-2-child AUG-9-meat

‘For children Mariko has bought **meat**’

This syntactic flexibility of double object NPs is nothing but a direct reflection of the object symmetry of this language, which, in turn, enables either of the two objects to be in the scope of focus at the clause final position. A cross-Bantu typological survey by Shinagawa and Marten (2021a) suggests that languages with the CJ/DJ distinction generally tend to restrict object order symmetry. Thus, it can be said that Kirundi shows double exceptionalities as

a CJ/DJ language, i.e., the clause-final position for term focus and high object order symmetry. If the two are interrelated, the a possible interpretation of the relationship may be as follows; the object symmetry, which influences a wider range of morphosyntax components than syntactic focus marking, may ‘unlock’ the syntactic regulations including the positional restriction for the IAV focus as well as other ‘atypical’ features, including the availability of post-verbal nominals after DJ forms. This is, however, a mere working hypothesis and further comprehensive description is required to enhance the understanding of such an ‘exceptionality’ observed in this language.

3.3.1.3 Clause-finality and object symmetry

The object symmetry attested in this language is not limited to the order of full object nominals, but observed in the availability of object concordance markers (OMs) in the verbal template, i.e., both objects can equally be licensed as a syntactic (primary) object.

(47)a. Basic word order with an OM: A+A-B.V+T

Mariko yabaguriye inyama

[maríko jaβáǵurije inâ:ma]

mariko jabagurije inyama

mariko ju-a-ba-gur-i-je i-N-ama

Mariko PP1-PST.F-OM2-buy-APPL-PERF AUG-9-meat

‘Mariko bought them meat’

b. Basic word order with an OM: A+A-T.V+B

Mariko yaziguriye abana

[maríko jadzígurije aβâ:na]

mariko jaziguriye abaana

mariko ju-a-zi-gur-i-je a-ba-ana

Mariko PP1-PST.F-OM10-PST-buy-APPL-PERF AUG-2-child

‘Mariko bought them for children’

c. Basic word order with an OM [DJ]: A+A-D-B-V+T

Mariko yarabaguriye inyama

[maríko jaráβaǵúrije iɲama]

mariko jarabaguriye inyama

mariko ju-a-ra-ba-gur-i-je i-N-ama

Mariko PP1-PST.F-DJ-OM2-buy-APPL-PERF AUG-9-meat

‘Mariko has bought them meat’

d. Basic word order with an OM [DJ]: A+A-D-T-V+B

Mariko yaraziguriye abana

[maríko jarádʒiǵúrije aβâ:na]

mariko jaziguriye abaana

mariko ju-a-zi-gur-i-je a-ba-ana

Mariko PP1-PST.F.-OM10-PST-buy-APPL-PERF AUG-2-child

‘Mariko has bought them for children’

In (47a), the applied cl.2 object is agreed and marked in the verb template, whereas the base object in (47b), which is cl. 10, is morphologically marked in the verbal template. The same operation can be applied to DJ forms as illustrated in (47c–d). Moreover, both OMs can structurally be slotted in a single verb form as in (48a), whereas there seems to be a fixed order of OM, i.e., the opposite order in (48b) is accepted as a semantically irregular sentence as the class 10 OM *zi-*, which refers to *inyama* ‘meat’, is interpreted as a recipient/beneficiary of the event. This case clearly suggests that a rigid rule exist for ordering multiple OMs, which may be similar to that attested in a neighbouring language Haya [JE22], where OMs should be arranged in the following sequential order; instrumental/patient (theme) < goal/benefactive < verb stem, suggesting that the order reflects the topicality hierarchy (Duranti 1979: 39–44).

(48)a. Basic word order with multiple OMs [DJ]: A+A-D-T-B-V

Mariko yarazibaguriye

[maríko jarád̥ziβáǵurije]
mariko jarazibagurije
 mariko ju-a-ra-zi-ba-gur-i-je
 Mariko PP1-PST.N-DJ-OM10-OM2-buy-APPL-PERF
 ‘Mariko has bought them for them’

b. Basic word order with multiple OMs: A⁺A-D-T-B-V

Mariko yarabaziguriye
 mariko ju-a-ra-ba-zi-gur-i-je
 Mariko PP1-PST-DJ-OM2-OM10-buy-APPL-PERF
 ‘Mariko bought children for the meat’

Finally, the object marking symmetry can be applied to more than two OMs as long as they follow the fixed order.

(49) Basic word order with multiple OMs [DJ]: A⁺A-D-T-L-B-V

Mariko yarazihabaguriye
 [maríko jarád̥ziháβáǵurije]
mariko jarazihabagurije
 mariko ju-a-ra-zi-ha-ba-gur-i-je
 Mariko PP1-PST.N-DJ-OM10-OM_{Loc}-OM2-buy-APPL-PERF
 ‘Mariko has bought them for them’

3.3.1.4 Verb focus

The verb focus, on the other hand, is seemingly exclusively expressed through DJ forms as shown in (50b).

(50)a. Basic word order (question): A⁺A-AUX⁺A-V+Q

Imbwebwe iriko igira iki?
 [imbǵé:ǵge irikó igira íki]
imbwebwe iriko igira iki

i-N-bwebwe i-ri-ko i-Ø-gir-a iki
 AUG-9-jackal SM9-be-EXT SM9-PRS-do-FV what
 ‘What is a jackal doing?’

b. PI [DJ]: A-AUX+A-D.V+A

Iriko iriruka imbwebwe

[irikó irĩ:ruka imbǵé:bǵe]

iriko iriiruka imbwebwe

i-ri-ko i-Ø-ra-iruk-a i-N-bwebwe
 SM9-be-EXT SM9-PRS-DJ-run-FV AUG-9-jackal
 ‘A jackal is running’

This tendency supports the argument by Nshemezimana and Bostoen (2017), in that the DJ in Kirundi is exclusively used for verb focus. Section 3.3.3 further describes the DJ forms in this language in relation to relevant morphosyntactic contexts including question, subordination, and negation.

3.3.2 Morphological Focus Marking

As in many north eastern Bantu languages, Kirundi also utilises the identificational copula *ni*, as illustrated in (51), as a focus marking device. As (52a) shows, the focus marking *ni* is typically used as procliticised to a question word (or a pronominal word used as a *wh*- word). The MFM *ni* can be omitted only when the sentence is uttered as an echo question, i.e., where both speech participants share a common knowledge about a discourse context.

(51) the origin of *ni* as a copula: (Pseud-)cleft: A+COP+C[A-AUX+A-D-V]

Imbwebwe niyo iriko iriruka

[imbǵé:bǵe ni:jo iríko irĩ:ruka]

imbwebwe niyo iriko iriiruka

i-N-bwebwe ni-jo i-ri-ko i-Ø-ra-iruk-a
 AUG-9-jackal COP-RES9 SM9-be-EXT SM9-PRS-DJ-run-FV
 ‘It is a jackal that is running’

(52)a. Basic word order (question): FOC+Q+A-V+P

Ni inde yariye inyama

[ni:ndé jarî:je ináma]

ni inde jariije inyama

ni inde ju-a-ri-je i-N-ama

FOC who PP₁-PST.F-eat-PERF AUG-9-meat

‘Who ate the meat?’ [01210]

b. Basic word order: FOC+Q+A-V+P

Inde yariye inyama

[indé jarî:je ináma]

inde jariije inyama

inde ju-a-ri-je i-N-ama

who PP₁-PST.F-eat-PERF AUG-9-meat

‘Who ate the meat?’

As shown in 3.3.1.1, a question word should not be procliticised by *ni*, when used in the clause-final position, where term focus is structurally assigned. Simply put, the presence of *ni* indicates a redundant marking of focus.

(53) Basic word order (question): A+A-AUX+A-V+Q

Imbwebwe iriko igira iki?

[imbǵé:bǵe irikó igira íki]

imbwebwe iriko igira iki

i-N-bwebwe i-ri-ko i-Ø-gir-a iki

AUG-9-jackal SM₉-be-EXT SM₉-PRS-do-FV what

‘What is a jackal doing?’

Apart from the use of a proclitic to question words, the usage of *ni* is seemingly relatively restricted. As shown in (54), *ni* appears not to be used as a proclitic to a verb, in contrast to the fact that this usage is widely observed in other North Eastern languages (especially in E50 and E60 languages).

(54) Preverbal use of *ni* (ungrammatical)

* **Ni bamukubise**

ni ba-a-mu-kubit-je

FOC SM₂-PST.N/F-OM₁-hit-PERF

Intd: 'They beat him (this is what happened)'

3.3.3 Conjoint/Disjunct alternation

In a seminal paper that provides a cross-Bantu typological overview of the CJ/DJ distinction, Van der Wal (2017: 15) states the following as a working definition for the distinction:

(55) The conjoint/disjunct alternation is an alternation between verb forms that are formally distinguishable, that are associated with an information-structural difference in the interpretation of verb and/or following element and of which one form is not allowed in sentence-final position.

Van der Wal (2017: 15)

Based on this definition, only CJ can be structurally identified as a form that cannot be used at the clause final position. Example (56a) illustrates such a form in Kirundi. However, its ungrammaticality is resolved once it is followed by a post-verbal constituent as in (56b).

(56)a. Basic word order [CJ]: A₊A-AUX₊A-V

* **Imbwebwe iriko yiruka**

[imbǵé:bǵe irikó ijiruka]

imbwebwe iriko iiruka

i-N-bwebwe i-ri-ko i-Ø-iruk-a

AUG-9-jackal SM₉-be-EXT SM₉-PRS-run-FV

Intd. 'A jackal is running'

b. Basic word order [DJ]: A₊A-AUX₊A-V+Adv

Imbwebwe iriko yiruka cane

[imbǵé:bǵe irikó ijiruka tʃa:ne]
imbwebwe iriko iiruka cane
 i-N-bwebwe i-ri-ko i-Ø-iruk-a cane
 AUG-9-jackal SM9-be-EXT SM9-PRS-run-FV fast
 ‘A jackal is running fast’

DJ, on the other hand, can be contrastively identified, i.e., it can be used at the clause final position as in (57). Additionally, while CJ tends to be structurally unmarked, DJ typically features an additional segmental and suprasegmental marking. In Kirundi, DJ is typically marked with the segmental marker *ra-* which is slotted in the TAM slot (or between the TAM and OM slots) along with an accompanied high tone on the marker.

(57) Basic word order [DJ]: A⁺A-AUX⁺A-D-V

Imbwebwe iriko iriruka
 [imbǵé:bǵe irikó irí:ruka]
imbwebwe iriko iriiruka
 i-N-bwebwe i-ri-ko i-Ø-ra-iruk-a
 AUG-9-jackal SM9-be-EXT SM9-PRS-DJ-run-FV
 ‘A jackal is running’

As shown in (58), Kirundi enables the use of DJ with a post verbal element. As mentioned in 3.3.1.2, such forms tend to be used as sentences that report something is happening or has just happened. According to Van der Wal (2017: 19), Kirundi is one of the four sample languages (along with Makuwa [P31], Bemba [M42], and Sambia [G23]), where DJ can be followed by a post-verbal constituent. In contrast, the limited use of DJ in the clause final position is attested in 5 sample languages (i.e., Kinyarwanda [JD61], Zulu [S42], Tswana [S31], Sotho [S33], and Makonde [P23]).

(58) Basic word order [DJ]: A⁺A-AUG⁺A-D-V+L

Imbwebwe iriko iriruka mw'ishamba

[imbǵé:bǵe irikó irî:ruka mwifa:mba]
imbwembwe iriko iriiruka mwifamba
 i-N-bwembwe i-ri-ko i-Ø-ra-iruk-a mu-i-famba
 AUG-9-jackal SM9-be-EXT SM9-PRS-DJ-run-FV 18-5-field
 ‘A jackal runs/ is running through the savannah’

According to the pedagogical textbook by Cox (2005), verb forms marked by the TAM marker *ra-* demonstrate the following morphosyntactic characteristics.

(59) Selected morphosyntactic features of the *ra*-marked (DJ) forms (Cox 2005: 19–20)

- i. Restriction on the syntactic position:** “It is used in stating a simple fact regarding that which is happening now if no phrase or object follows. Occasionally it is used even with an object or phrase.” (3.3.3.1)
- ii. Usage in polar questions:** “It is used in questions and answers to questions when no object or phrase follows.” (3.3.3.2)
- iii. Restrictions on the use in dependent clauses:** “It is never used in a dependent clause, when it expresses present time.” (3.3.3.3)
- iv. Semantics of TAM *ra-*:** “The *ra*-present may express progressive or continuous present.” (3.3.3.5)

The following sections provide detailed descriptions of DJ forms in relation to the five different contexts, including those listed in (59), namely restrictions on syntactic adjacency (3.3.3.1), features in question clauses (3.3.3.2), restrictions on subordinate clauses (3.3.3.3), and in the context of negation (3.3.3.4), and semantic connotation (3.3.3.5).

3.3.3.1 DJ and its syntactic restriction

As mentioned in 3.3.1.4, although the verb focus in Kirundi tends to be expressed exclusively by DJ, the clause final position remains a typical position for the focused verb as well. According to our native collaborator, (60a)

highlights the action of running, which is happening in the forest. On the other hand, (60b), which takes an OM that refers to a raised locative, suggests an ‘additional’ focus on the location *mw’ishamba*.

(60)a. LD [DJ]: L+A+A-AUX+A-D-V

Mwishamba imbwebwe iriko iriruka

[mwɪfa:mba imbɛgebɛ irikó iri:ruka]

mwɪfamba imbwebwe iriko iriiruka

mu-i-famba i-N-bwebwe i-ri-ko i-Ø-ra-iruk-a

18-5-field AUG-9-jackal SM9-be-EXT SM9-PRS-DJ-run-FV

‘Through the forest jackal is running’

b. LD [DJ]: L+A+A-AUX +A-D-L-V

Mwishamba imbwebwe iriko irahiruka

[mwɪfa:mba imbɛgebɛ irikó irahî:ruka]

mwɪfamba imbwebwe iriko irahiiruka

mu-i-famba i-N-bwebwe i-ri-ko i-Ø-ra-ha-iruk-a

18-5-field AUG-9-jackal SM9-be-EXT SM9-PRS-DJ-OM_{Loc}-run-FV

‘Through the forest jackal is running’

While DJ in Kirundi shows a syntactic flexibility in that it may or may not be followed by a post-verbal constituent, CJ is subject to a structural restriction in which it has to be used with a post-verbal element. Moreover, the element should not be an inverted subject, i.e., the post-verbal slot should be filled by any constituent that is not subject-marked on the verb.

(61)SI: A-AUX+A-V+A

***Iriko yiruka imbwebwe**

i-ri-ko i-Ø-iruk-a i-N-bwebwe

SM9-be-EXT SM9-PRS-run-FV AUG-9-jackal

In this sense, it may be worth noting that the CJ form with an OM that refers to

a raised object can be accepted as a grammatical sentence. According to our native collaborator, this verb form sounds a shortened DJ form *i-ra-ha-iruk-a*.

(62)LD [CJ]: L+A+A-AUX+A-L-V

Mwishamba imbwebwe iriko ihiruka

[mwiʃa:mba imb̃gẽb̃gẽ irikó ihî:ruka]

mwifamba imbwebwe iriko ihiiruka

mu-i-famba i-N-bwebwe i-ri-ko i-Ø-ha-iruk-a

18-5-field AUG-9-jackal SM9-be-EXT SM9-PRS-OM_{LOC}-run-FV

‘Through the forest jackal is running’

Lastly, it should be noted that while the post-verbal position can be filled even after a DJ verb form, the syntactic property of the post-CJ position and that of the post-DJ position should be described differently. In abovementioned DJ form, the locative phrase following the verb is interpreted as the place where the action is taking place, whereas in a CJ form below, its semantic role is interpreted as a goal. Additional observations on DJ-related semantics will be provided in 3.3.3.5

(63)a. Basic word order [DJ]: A+A-AUX+A-D-V+Adv

Imbwebwe iriko iriruka hariya

[imb̃gẽ:b̃gẽ irikó irî:ruka hář:ja]

imbwebwe iriko iriiruka hariija

i-N-bwebwe i-ri-ko i-Ø-ra-iruk-a hariija

AUG-9-jackal SM9-be-EXT SM9-PRS-DJ-run-FV DEM.R16

‘A jackal is running around over there’

N.B. NOT ‘A jackal is running to(ward) the place’

b. Basic word order [CJ]: A+A-AUX+A-V+Adv

Imbwebwe iriko yiruka hariya

[imb̃gẽ:b̃gẽ irikó ijiruka hář:ja]

imbwebwe iriko iiruka harija

i-N-bwebwe i-ri-ko i-Ø-iruk-a hariija

AUG-9-jackal SM9-be-EXT SM9-PRS-run-FV DEM.R16

‘A jackal is running toward that place’

3.3.3.2 DJ in question

As stated in (59ii), DJ can be used in a polar question. (64) demonstrates that it can also be used in a polar question even when followed by a post-verbal constituent.

(64) Basic word order (question) [DJ]: A+A-D-V+L

Ingwe iraryama mugiti?

[ingwe irarjama mugíti]

ingwe irarjama mugiti

i-N-gwe i-Ø-ra-rjam-a mu-ki-ti

AUG-9-leopard SM9-PRS-DJ-sleep-FV 18-7-tree

‘Does a leopard sleeps inside the tree?’ [01063]

However, DJ seems not to be used in a wh-question especially when a question word is placed at the clause initial position and thus the focus marking *ni* is attached to the question word. This ungrammaticality may be explained by the general restriction that avoids double focus marking (cf. Güldemann 2003: 573–574; Shinagawa and Marten 2021b: 239).

(65)a. Basic word order [CJ]: FOC+Q+A-V-L

Ni igiki kiriyama mugiti

[ni:gíki kiriyama mugíti]

ni igiki kiriyama mugiti

ni i-ki-ki ki-Ø-rjam-a mu-ki-ti

FOC AUG-7-what SM7-PRS-sleep-FV 18-7-tree

‘What sleeps in the tree?’

b. Basic word order [DJ]: FOC+Q+S-D-V-L

* **ni igiki kirajama mugiti**

ni i-ki-ki ki-Ø-ra-rjam-a mu-ki-ti
FOC AUG-7-what SM7-PRS-DJ-sleep-FV 18-7-tree
Intd. ‘What sleeps in the tree?’

3.3.3.3 DJ in dependent clauses

As stated in (59iii), a syntactic constraint exists on the use of DJ in dependent clauses. An apparent reflection of such restrictions can be observed in the following examples. As illustrated in (66a), the CJ form is used in a complement clause in a cleft construction headed by a pronominal demonstrative, whereas the use of DJ in the parallel syntactic context in (66b) makes the construction divided into two independent clauses.

(66)a. Cleft: COP+A+c[s-p-V]

Ni bo bamukubise

[ní βo βã:mukubisé]

ni bo baamukubise

ni bo ba-a-mu-kubit-je

COP PRON₂ SM₂-PST.F-OM₁-hit-PERF

‘It is they who beat him’

b. Clausal sequence (copula clause + finite verb): COP+A##A-D-O-V

Ni bo, baramukubise

[ní βo βáramukubise]

ni bo baramukubise

ni bo ba-a-ra-mu-kubit-je

FOC PRON₂ PP₂-PST.F-DJ-OM₁-hit-PERF

‘It is them, (and) they beat him’ [01315]

N.B. NOT ‘It is they who beat him’

In addition, the ungrammaticality of DJ in a cleft sentence suggests a syntactic

constraint on the relative clause in this language (cf. Van der Wal [2017: 19–20]).

Alternatively, the DJ form is seemingly freely used in a complement clause embedded in a finite main verb. A complex tense form in (67a) denotes the event happens spontaneously within the temporal scope of the main clause, whereas a simple DJ form in (67b) depicts that the event is expected to occur shortly.

(67)a. Complement clause [DJ]: c[A+A-AUX+A-D-V+P]

Nabonye Yohani ariko arugurura umuryango

[naβô:ɲé joháni ariko arugurura umujâ:ŋgo]

nabonye johani ariko arugurura umurjango

N-a-bon-je johani a-ri-ko

SM1SG-PST.N-see-PERF Yohani SM1-be-EXT

a-Ø-ra-ugur-ur-a u-mu-rjango

SM1-PRS-DJ-close-REV-FV AUG-3-door

‘I’ve seen Yohani opening the door’

b. Complement clause [DJ]: c[A+A-D-V+P]

Nabonye Yohani arugara umuryango

[naβô:ɲé joháni aru:gara umujâ:ŋgo]

nabonye johani aruugara umurjango

N-a-bon-je johani a-Ø-ra-ugar-a

SM1SG-PST.P-see-PERF Yohani SM1-PRS-DJ-close-FV

u-mu-rjango

AUG-3-door

‘I saw that Yohani would be closing the door (later on)’

3.3.3.4 DJ in negation

Negation is another grammatical process associated with different behaviours pertaining to the CJ/DJ distinction. Van der Wal (2017) points out that there is a cross-linguistic tendency that the formal distinction between CJ

and DJ tends to be blurred in the context of negation (ibid.: 19–20). In many cases, DJ forms are used for (main clause) negation (ibid.: 34–35).

Interestingly, although a clear structural constraint exists on the CJ/DJ distinction in the context of negation, the restriction is imposed on the DJ, i.e., it is DJ that is restricted to occur in the main clause negation instead of the CJ, contrary to the cross-Bantu tendency.

(68)a. LI (NEG) [CJ]: L+_{NEG=L}-V+A

Mugiti ntiharyama ingwe

[mugíti ñihajama iŋgwe]

mugiti ntihararjama iŋgwe

mu-ki-ti nti=ha-Ø-rjam-a i-N-gwe

18-7-tree NEG=SM_{LOC}-PRS-sleep-FV AUG-9-leopard

‘Inside the tree cannot be slept by a leopard’

b. LI (NEG) [DJ]: L+_{NEG=L-D}-V+A

* **Mugiti ntihararyama ingwe**

mu-ki-ti nti=ha-Ø-ra-rjam-a i-N-gwe

18-7-tree NEG=SM_{LOC}-PRS-DJ-sleep-FV AUG-9-leopard

It should be further noted that the use of DJ in the context of main clause negation sounds like ‘too much’ in light of the intuition of the native speaker. This may also be interpreted as a result of the violation of the double focus restriction as mentioned in 3.3.3.2. In that sense, the following clause compound shows a typical environment of each form, i.e., CJ is used in the negative clause which also serves as part of hearer’s expectation to be rejected, while DJ is used in the latter clause which includes the contrastively focused element *iŋgwe*.

(69)a. Basic word order (NEG) [CJ]: A+_{NEG=A}-V+L

Intambwe ntiryama mugiti,

[iñá:mb̂ge ñijama mugíti]

intambwe ntirjama mugiti
 i-N-tambwe nti=i-Ø-rjam-a mu-ki-ti
 AUG-9-lion NEG=SM9-PRS-sleep-FV 18-7-tree
 ‘A lion does not sleep in the tree,’

b.LD [DJ]: A+L+_{A-D-L}-V

ariko ingwe mugiti iraharyama
 [ariko ingwe mugiti irahája:ma]
ariko ingwe mugiti iraharjama
 ariko i-N-gwe mu-ki-ti i-Ø-ra-ha-rjam-a
 but AUG-9-leopard 18-7-tree SM9-PRS-DJ-OM_{Loc}-sleep-FV
 ‘but a leopard sleeps in the tree’

However, if it is not in such a contrastive context, the structurally corresponding DJ form of (69a) can be used as a main clause negation as in (70).

(70) Basic word order (NEG) [DJ]: A+_{NEG=A-D}-V+L

Intambwe ntiraryama mugiti
 [iñá:mbge ñirajâ:ma mugiti]
intambwe ntirjama mugiti
 i-N-tambwe nti=i-Ø-ra-rjam-a mu-ki-ti
 AUG-9-lion NEG=SM9-PRS-DJ-sleep-FV 18-7-tree
 ‘The lion has not yet slept in the tree’

Compared with (69a), (70) appears to denote a modal connotation of unexpectedness (e.g., the lion is supposed to have slept already but it has not yet contrary to the expectation).

3.3.3.5 DJ and its semantic connotation

This short sketch of focus-relevant sentences in Kirundi has clarified the general tendency that the nominal term focus tends to be expressed through the

control of syntactic positions, i.e., dislocation or inversion to the clause-final position⁸. In contrast, the verb focus is seemingly exclusively marked by the DJ form as argued in Nshemezimana and Bostoen (2017). If the tendency is correct, then how does the DJ form give informational salience to which aspect of the lexical meaning of verbs? This section provides a summary of several types of semantic prominence, which can be interpreted as given by the DJ template, which include i) potentiality, ii) evidentiality, and iii) intensity or iterativity.

i) Potentiality

When the DJ is used in the LI construction, the potentiality of the location seems to be focused. As presented in 3.2.1.1, 0 seemingly focuses on the potentiality of *mugiti* as a place to sleep by a leopard.

(71) FLI [DJ]: L_{+L-D}-V+A = 0

Mugiti hararyama ingwe

[mugíti harajâ:ma ingwe]

mugiti hararjama ingwe

mu-ki-ti ha-Ø-ra-rjam-a i-N-gwe

18-7-tree SM_{LOC}-PRS-DJ-sleep-FV AUG-9-leopard

‘Inside the tree can be slept by a leopard’ [01060]

ii) Evidentiality

Another salient semantic feature connotated by DJ is the evidentiality of the event expressed by the verb. As mentioned in 3.3.1.2, the DJ form tends to be used in situations where a speaker reports what has just happened or is happening at the time of utterance. This usage of DJ can be regarded as a clear reflection of this semantic connotation. (72a) also demonstrates that the use of

⁸ Note that Lafkioui et al (2016) point out that the cleft construction is far more frequently used than other strategies including dislocation to the clause-final position for a term focus marking in Kirundi, though the construction is not in the scope of this brief sketch.

the DJ form implies that the speaker actually witnessed the situation and thus provides a similar pragmatic connotation expressed by the cleft sentence in (72b).

(72)a. Single (finite) verb form [DJ]: A-D-O-V

Baramukubise

[βǎ:ramukúβise]

baaramukubise

ba-a-ra-mu-kubit-je

SM₂-PST.F-DJ-OM₁-hit-PERF

‘They beat him (emphasis is on the fact that the speaker acquainted the situation)’

b. Cleft: COP+S+c[A-O-V] = (66)

Ni bo bamukubise

[ní βo βǎ:mukubisé]

ni bo baamukubise

ni bo ba-a-mu-kubit-je

COP PRON₂ SM₂-PST.F-OM₁-hit-PERF

‘It is they who beat him’ [01315]

iii) Focus on a specific semantic process

Another piece of semantic connotation that DJ marking may be relevant is attested when it is used in movement verbs. Compared to corresponding CJ forms, DJ-marked movement verbs imply that a specific process of movement is focused. Although the directionality of the movement can be expressed through applicative morphology as in (73), the DJ form in (74) implies that the agent walks around the market, e.g., stopping by at several shops.

(73) Basic word order [CJ]: A+A-V-APPL+L

imfyisi yirukira mw’ishamba

[impfjisi ijirukira mwiʃa:mba]

imfyisi iirukira mwifamba

i-N-fyisi i-Ø-iruk-ir-a mu-i-famba

AUG-9-hyena SM9-PRS-run-APPL-FV 18-6-field

‘A hyena runs towards the forest’

cf. Basic word order [CJ]: A+A.V+L

imfyisi yiruka mw’ishamba

[imɸfjisi ijiruka mwɪʃa.mba]

imfyisi iiruka mwifamba

i-N-fyisi i-Ø-iruk-a mu-i-famba

AUG-9-hyena SM9-PRS-run-FV 18-6-field

‘A hyena runs in the forest’

(74) Basic word order [DJ]: A-AUX+A-D-V+L

Ariko aragenda mw’isoko

[arikó aragê.nda mwisóko]

ariko aragenda muisoko

a-ri-ko a-Ø-ra-gend-a mu-i-soko

SM1-be-EXT SM1-PRS-DJ-go-FV 18-5-market

‘S/he is walking around inside the market’

cf. Basic word order [CJ]: A-AUX+A-V+L

Ariko agenda mw’isoko

[arikó age.nda mwisóko]

a-ri-ko a-Ø-gend-a mu-i-soko

SM1-be-EXT SM1-PRS-go-FV 18-5-market

‘S/he is going to/inside the market’

3.4. Summary

This chapter provided a descriptive sketch of the morphosyntactic variation of mono-clausal expressions that reflect the informational saliency of each constituent, focusing on inversion constructions and various focus-related forms with a special reference to the CJ/DJ distinction. Table 4 summarises the

basic features of each construction/strategy.

Table 4. Summary of the features of each construction/strategy

Constructions/Strategies		Summary of features
Inversion	LI typology	Maximal range of verb types, i.e., unaccusative, unergative and transitive verbs can take part in LI.
	FLI	Both CJ and DJ can be used in FLI.
	SLI	Structurally possible only when the locative enclitic = <i>mwo</i> is attached to the verb.
	SI	Locative raising in SI seems to be structurally restricted in a way that the verb should be in DJ and the raised locative NP should be object marked in the verb. More investigation needed.
	LD	The raised locative noun has to be object-marked, but there seems no restriction in terms of CJ-DJ distinction.
Syntactic position for FOC		Dedicated position for focus is clause-final rather than IAV.
MFM		Attested as a particle/clitic immediately preceding a question word. Procliticisation to the verb is not accepted.
CJ/DJ	Syntactic restriction	Flexibility of DJ in terms of taking a post-verbal constituent.
	Question	DJ can be used in polar questions but there seems a restriction in wh-questions.
	Dependent clause	DJ is restricted in the clefted clause, while there seems no restriction in a complementary clause of finite (cognitive) verbs
	Negation	Both can be used in main clause negation, but more restriction tends to be imposed on DJ. When

		DJ is acceptable in NEG, it tends to express operator focus.
	Semantic connotation	DJ forms may express semantic connotations such as potentiality (with unaccusative verbs), evidentiality, and focus on a specific semantic ‘process’.

In summary, the following aspects should be noted as typologically significant features. As a typology of verb types available in LI, Kirundi indicates that the maximal range of verbs can be involved in the construction, i.e., not only both types of intransitive verbs but also transitive verbs can take part in LI. With reference to the CJ/DJ alternation, while both are attested in LI, there seems to be a structural restriction on the use of CJ in SI with locative raising.

In terms of the syntactic position dedicated to term focus, it is confirmed as a general tendency that a focused constituent, be it a nominal argument or a DJ verb form, tends to sit in the clause-final instead of the IAV position as mentioned by Gibson et al. (2017). What should be further noted in relation to the tendency, which is relatively exceptional in the context of cross-Bantu typology, is that the word order flexibility of the post-verbal constituents, which is a prerequisite of this syntactic strategy, is ensured by the high degree of object symmetry as discussed in 3.3.1.3. Interestingly, object order symmetry tends to be relatively restricted in languages with the CJ/DJ distinction as discussed in Shinagawa and Marten’s (2021a) cross-Bantu survey on inter-parametric correlation pertaining to focus marking strategies. The high degree of object symmetry in Kirundi may thus be a key factor for explaining the structural ‘exceptionalities’ observed in different aspects of the grammatical system in Kirundi as a CJ/DJ language.

Another atypical morphosyntactic feature is observed in main clause negation. In Kirundi, DJ is more structurally restricted than CJ, which is in contrast to the general observation that DJ tends to be the regular form of main clause negation as reported from Makhwa [P31] or Makwe [G402] presented in Van der Wal (2017: 35–37). The preference for CJ in negation, on the other

hand, can be seen as a reflection of the limit of the functional load, i.e., for a single tense form to bear verb focus as well as negation would be functionally ‘too much’ (ibid.: 35). Including this apparent exceptionality, further description and analyses on various aspects of the interaction between the CJ/DJ distinction and other grammatical categories will provide empirical insights for a possible typological generalization pertaining to focus marking strategies in Bantu.

Finally, it is worth mentioning that semantic connotations brought about by DJ forms (in comparison with a corresponding CJ form) would also be an interesting topic for further investigation. While three semantic features, i.e., potentiality, evidentiality, and focus in a specific semantic process, are discussed in 3.3.3.5 as a typical connotation of the DJ forms, it is still unclear whether there are other semantic features or pragmatic effects that can be conveyed through the DJ marking, how these or relevant semantic features may (or may not) be expressed in different ways, and how these features can be interrelated in a general semantic scheme. All these questions are open to further empirical investigations.

List of Abbreviations

[Gloss line (morphemic information)]

1SG, 2PL etc.: Person and Number

1, 2, 3 etc. (when not followed by SG or PL): Noun class number

ANT: Anterior

APPL: Applicative

AUG: Augment

CAUS: Causative

CJ: Conjint

COP: Copula

DEM.M: Demonstrative middle

DEM.R: Demonstrative remote

DJ: Disjoint

EXT: Existential

FOC: Focus

FV: Final Vowel

LOC: Locative

NEG: Negative

OM: Object marker

PASS: Passive

PERF: Perfective

PP: Pronominal Prefix

PRON: Personal Pronoun

PRS: Present

PST.F: Far Past

PST.N: Near Past

RES: Resumptive

REV: Reversive

SM: Subject Martker

=: Clitic boundary

[Word classes and thematic roles]

ADP: Adpositional phrase

AUX: Auxiliary

C: Complement (clause)

V: Verb

A: Agent

B: Beneficiary

L: Location

P: Patient

T: Theme

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Chapter 4

Persistentive in Kirundi verbs⁹

Yuko Abe

4.1 Introduction

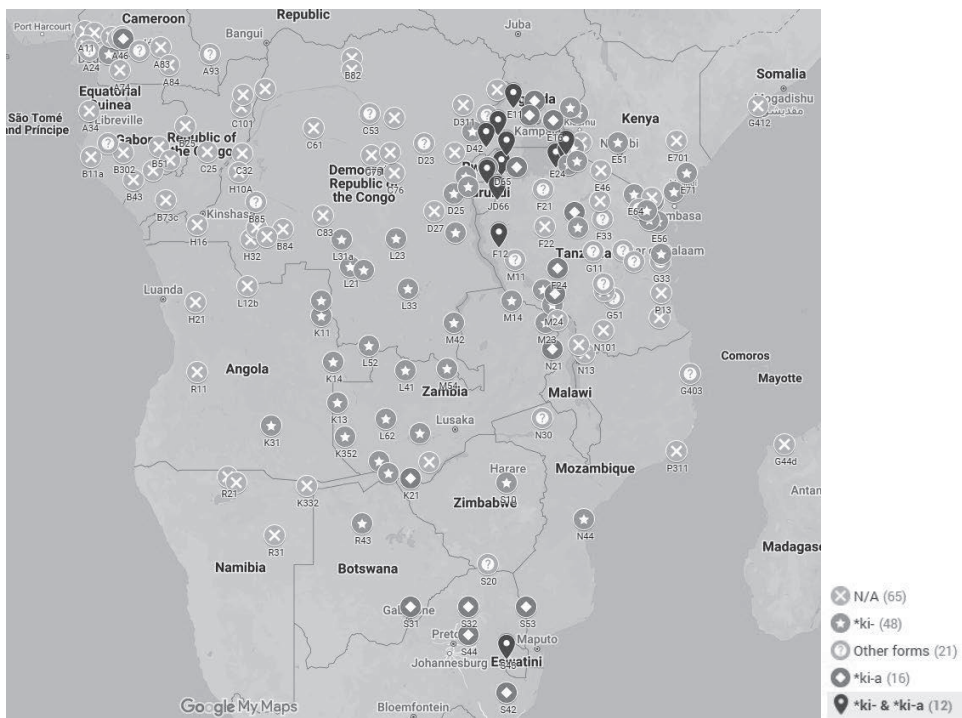
This chapter aims to describe the Kirundi (JD62) grammatical aspect known as ‘persistentive’ and its related phenomena. Persistentive is reconstructed as **kí-* in Proto-Bantu, as in the TA slot in (1). The persistentive **kí-* widely spreads throughout the entire Eastern and Southern Bantu languages of zones (J)D, E, F, K, L, M N, R and S (Nurse 2008: 146), and some cases in Eastern Bantu languages have also been reported thus far (Abe 2015). It typically refers to a ‘situation that has held continuously since an implicit or explicit point in the past up to the time of speaking’ and ‘sometimes occurs as the still-tense’ (Nurse 2008: 145) in several traditional reference grammars of Bantu languages, including Kirundi (Cox 2020a).

(1) Typical Bantu verbal structure (Nurse 2003: 90)

Initial–Subject–Negative–TA–Object≠Root–Extension(s)–Final–Suffix

⁹ The orthography and morphological analyses used in this chapter is based on the (Cox 2020a; Cox 2020b). The examples are given in four lines: the first line shows original text (based on the orthography), the second shows morphemes, the third is the glossing for the second line, and the fourth is a free translation. Since the focus in this chapter is the morpho-syntax and semantics of Kirundi, detailed phonetic description is omitted. The sound data of examples used in this chapter are partly available in our website the Bantu Language Digital Archive (<https://bantudarc.aaken.jp/kirundi.html>).

Map 1 shows the distribution of the reflexes of **kí-* out of the 161 Bantu languages collected from Nurse (2008: Appendix) and other reference grammars. According to Map 1, 47% (76 out of 161 languages.) of the languages confirm to have the reflexes of **kí-*, however, some languages have lost the persistive aspect. Alternatively, a few languages (13%; 21 out of 161 languages) have retained the persistive aspect, whereas the reflexed form of **kí-* has been lost. Some of the reflexes of **kí-* may appear in combination with **-a* (*kí+a-*), especially among the languages of zones J, F, and S.



Map 1 Distribution of the reflexes of **kí-*

A typical example of persistive is introduced by Bende (F12), which is spoken in neighboring areas in Tanzania in (2). In this example, the action ‘work’ is continuously held.

(2) Typical persistentive in Bende (Abe 2015)

*Tusyákola múlímó*¹⁰

tu-syá-kol-a mu-límó

SM_{1PL}-PERS-do-FV CL3-work

‘We are still working.’ (also ‘Let us work first.’)

Including the typical example in (2), the Bende persistentive reflexes of **kí-*, *syá-* / *sí-* may appear in various combinations and meanings. In total, Bende has five constructions with *syá-* / *sí-*, as in (3). These constructions are interpreted not only as typical persistentive but also as inceptive, recent past and persistentive proximative ‘not yet’. Such variation of persistentive can be observed in Kirundi as well—though it is not an exact match.

(3) Five morphological constructions and their interpretations in Bende¹¹

	Construction	Interpretation
C1	SM- <i>syá</i> / <i>sí</i> -VB- <i>a</i>	S is still VBing. (persistentive) Let S VB first. (inceptive)
C2	SM- <i>syá</i> / <i>sí</i> -VB- <i>ilé</i>	S is still VBing. (persistentive) S has just finished VBing. (recent past)
C3	SM- <i>syá-lí</i> + <i>ku</i> -VB- <i>a</i>	S has not VBed yet. (persistentive proximative)
C4	SM- <i>syá-lí</i> + SM- <i>li</i> + <i>ku</i> -VB- <i>a</i>	S is still VBing. (persistentive)
C5	SM- <i>syá-lí</i> + SM-VB- <i>ilé</i>	S is still VBing. (persistentive) S has just finished VBing. (recent past)

In a Kirundi reference grammar (Cox 2020a: 144–145, 158), the reflexes of

¹⁰ Bende has both reflexives of **kí-* and **kí+a*. Instead of *syá-*, an alternative form *sí-* is acceptable as in *tusíkola múlímó*. Both sentences (*tusyákola múlímó* and *tusíkola múlímó*) may be interpreted as ‘Let us work first’, depending on context. The difference between the two interpretations is related to the verbal aspects as active, achievement, and stative.

¹¹ The construction types 1, 2, and 5 may be interpreted in two ways, most probably depending on the verbal aspect types, however, clear criteria for the distinction has not been defined yet.

persistive *raca*-¹² or *ki-/gi*-¹³ appear as ‘still present’ as in (4).

(4) Still present (Cox 2020a: 145)¹⁴

turacakora

tu-raca-kor-a

SM_{1PL}-PERS-work-FV

‘We are still working.’ [00978]

Cox (2020: 145) further explains that ‘in the negative and in the dependent clauses the *raca*- changes to *ki*-’ as in (5a) and (5b).

(5) Alternative form of persistive *ki*- (Cox 2020a: 145)

a. Negative

Paulo ntakīza kwigishwa

Paulo nti-a-kī-z-a

ku-igish-w-a

NAME NEG-SM₁-PERS-come-FV CL₁₅-teach-PASS-FV

‘Paul no longer comes to learn.’

b. Dependent clause

Akirima avugana n’abandi

a-ki-rim-a

a-vugan-a

na

a-ba-ndi

SM₁-PERS-hoe-FV SM₁-talk_with-FV and IV-CL₂-person

‘While he’s hoeing, he’s talking with others.’ (The dependent often carries the meaning of ‘while’ with no introductory of conjunction necessary)

In Sections from 4.2 to 4.5, *raca*- and *ki*-, which are the Kirundi reflexes of persistive **kí*-, are observed in detail. Finally, in Section 4.6 Kirundi persistive

¹² The reflex *raca*- might be further analyzed as *ra-ca*-, although no independent morpheme *ca*- exists in Kirundi.

¹³ Either *ki*- or *gi*- is determined by the dissimilation of the subsequent sound. In this paper, we use *ki*- as a representative form of the two.

¹⁴ Sentences from (Cox 2020a) in this chapter are glossed by the author.

will be compared with those of other Bantu languages.

4.2 Persistent affirmative

The typical persistent of ‘still tense’ appears with *raca-*, which may be further analyzed as *ra-ca-*. Specifically, *ra-* is a present tense marker¹⁵, whereas *ca-* could also be further analyzed as **kí+a-* (persistent + past). This form is widely observed in the languages of zones J, F, and S, as discussed in 4.1. However, *ca-* is not used as an independent morpheme in verb conjugations. Thus, *raca-* is treated as one morpheme of persistent that is only used in Kirundi. Moreover, *raca-* is the persistent marker that is used only in the present affirmative as in (6).

(6) Persistent affirmative present with *raca-* = (4)

turacakora

tu-raca-kor-a

SM_{1PL}-PERS-work-FV

‘We are still working.’ [00978]

Another type of the persistent affirmative present is similar to (6), except for the ending, as in (7a). Instead of a final vowel *-a*, example (7a) ends with a perfect *-ye*, which is primarily selected for such as stative verbs, such as *rwāra* ‘be sick’. *Rwāra* ending with a final vowel *-a* is also used, though only if the context is additionally given, as in (7b), which is used in the meaning that we still have chances to get sick (such as malaria) repeatedly. This statement indicates that when *rwāra* is used as a stative verb ‘be sick’, it primarily selects a perfect ending *-ye*. However, when *rwāra* is used as an accomplishment verb ‘get sick’, it ends in a final vowel *-a*. Therefore, either *-a* or *-ye* selects the lexical aspect of a verb. Apart from *rwāra* ‘be sick’, the perfect *-ye* is confirmed in the following verbs based on the list of the verbs classified by

¹⁵ Simple present with *ra-* appears in *tu-ra-kor-a* (SM_{1PL}-PRS-work-FV) ‘We work, are working.’ (Cox 2020a: 21).

lexical aspects is from Kanijo (2019: 227)¹⁶: *kw-ōroha* ‘to be soft’, *kw-āmbara* ‘to wear’, *ku-doha* (old) / *ku-vyibuha* (new) ‘to be fat’, *gu-hetama* ‘to be bent’, *ku-jōba* ‘to be wet’, *ku-gāsha* ‘to be fermented’, *kw-īcara* ‘to be sitting’, *gu-sinzīra* ‘to be sleeping’, *gu-sutama* ‘to be squatting’, *gu-shavura* ‘to be angry’, *ku-baka* ‘to be married’, *ku-mena* ‘to be broken’.

(7) Persistentive affirmative present with either a perfect *-ye* or a final vowel *-a*

a. *turacarwāye*

tu-raca-rwar-ye

SM_{1PL}-PERS-be_sick-PERF

‘We are still sick.’ [01084]

b. *turacarwāra*

tu-raca-rwar-a

SM_{1PL}-PERS-get_sick-FV

‘We can still get sick (since we may get sick anytime).’

The persistentive affirmative can be expressed in past and future tenses in the compound as in (8a–b) and (9a–b). These tenses require that the copula *ri* or *ba* part carry a tense marker. The second part of the compound does not require *raca-*, but uses another persistentive form *ki-*. The ending of the second part of the compound takes a final vowel *-a* or a perfect *-ye*, according to the lexical aspect of a verb.

(8) Persistentive affirmative past

a. *twari tugikora*

tu-a-ri

tu-ki-kor-a

SM_{1PL}-PST-COP

SM_{1PL}-PERS-work-FV

‘We were still working’ [01078]

¹⁶ See Appendix.

b. *twari tukiwrāye*

tu-a-ri tu-ki-rwār-ye
SM_{1PL}-PST-COP SM_{1PL}-PERS-be_sick-PERF
'We were still sick.' [01087]

(9) Persistent affirmative future

a. *tuzoba tugikora*

tu-zo-ba tu-ki-kor-a
SM_{1PL}-FUT-COP SM_{1PL}-PERS-work-FV
'We will be still working.' [01081]

b. *tuzoba tukiwrāye*

tu-zo-ba tu-ki-rwār-ye
SM_{1PL}-FUT-COP SM_{1PL}-PERS-be_sick-PERF
'We will be still sick.' [01090]

In summary, the typical persistent affirmatives are listed in (10). However, the ending *-a* or *-ye* is selected according to the lexical aspect of a verb.

(10) Typical persistent affirmative in three tenses

Construction	Interpretation
SM- <i>raca</i> -VB- <i>a</i> /- <i>ye</i>	S is still VBing. (present)
SM- <i>a-ri</i> + SM- <i>ki</i> -VB- <i>a</i> /- <i>ye</i>	S was still VBing. (past)
SM- <i>zo-ba</i> + SM- <i>ki</i> -VB- <i>a</i> /- <i>ye</i>	S will be still VBing. (future)

4.3 Persistent negative

As we introduced in (5a), the persistent morpheme *ki-* is used in negatives. In the negative, it is typically interpreted as 'no longer', used to intensify the negation.

(11) Persistent negative present (Cox 2020a: 145) = (5a)

Paulo ntakīza kwigishwa

Paulo nti-a-kī-z-a kw-igish-w-a

Paul NEG-SM1-PERS-come-FV CL15-teach-PASS-FV

‘Paul no longer comes to learn.’

The affirmative sentences of three tenses that appeared in Section 4.2 can be negated as in examples (12)-(14). In the past and future tenses, the copula *ri* or *ba* of a compound is attached to a negative marker *nti-*, whereas the persistent marker *ki-* appears in the second.

(12) Persistent negative present

ntitugikora

nti-tu-ki-kor-a

NEG-SM1PL-PERS-work-FV

‘We no longer work.’ [00982]

(13) Persistent negative past

ntitwari tugikora

nti-tu-a-ri tu-ki-kor-a

NEG-SM1PL-PST-COP SM1PL-PERS-work-FV

‘We no longer worked.’

(14) Persistent negative future

ntituzoba tugikora

nti-tu-zo-ba tu-ki-kor-a

NEG-SM1PL-FUT-COP SM1PL-PERS-work-FV

‘We will no longer work.’ [00994]

As observed in (7)-(9), stative verbs, such as *rwāra* ‘be sick’ also require a perfect ending *-ye* in the negative. See the examples of the three tenses (15a-c).

(15) Persistent negative in the three tenses for a stative verb *rwāra* ‘be sick’

a. *ntitukirwāye*

nti-tu-ki-rwār-ye

NEG-SM_{1PL}-PERS-work-PERF

‘We are no longer sick.’

b. *ntitwari tukirwāye*

nti-tu-a-ri tu-ki-rwār-ye

NEG-SM_{1PL}-PST-COP SM_{1PL}-PERS-work-PERF

‘We were no longer sick.’

c. *ntituzoba tukirwāye*

nti-tu-zo-ba tu-ki-rwār-ye

NEG-SM_{1PL}-FUT-COP SM_{1PL}-PERS-work-PERF

‘We will be no longer sick.’

In summary, the persistent negatives that correspond to the persistent affirmative in (10) are listed in (16).

(16) Persistent negative in the three tenses

Construction	Interpretation
<i>nti-SM-ki-VB-a /-ye</i>	S no longer VB. (present)
<i>nti-SM-a-ri+SM-ki-VB-a /-ye</i>	S no longer VBed. (past)
<i>nti-SM-zo-ba+SM-ki-VB-a /-ye</i>	S will no longer VB. (future)

4.4 *Ki-* in dependent clauses

The persistent sentences observed thus far are used in independent clauses. Specifically, the persistent marker *raca-* is solely used for the affirmative present, whereas the persistent marker *ki-* is used in a compound for the past and future tenses.

Instead of *raca-*, the marker *ki-* is used in affirmatives, where the verb becomes a dependent clause with the meaning of ‘while’ without a conjunction,

as in (5b). The marker *ki-* indicates the continuity of time, which is similar to the ‘still tense’ in independent clauses.

(17) *ki-* in a dependent clause = (5b)

Akirima avugana n'abandi

a-ki-rim-a a-vugan-a na a-ba-ndi

SM1-PERS-hoe-FV SM1-talk_with-FV and IV-CL2-person

‘While he’s hoeing, he’s talking with others.’ (The dependent often carries the meaning of ‘while’ with no introductory of conjunction necessary)

This study uses a list with 65 verbs of different aspectual classes of verbs from Kanijo (2019: 227) and tests the *ki-* interpretations. The result indicates that not all verbs are interpreted as a dependent clause that carries the meaning of ‘while’. Dependent on the aspectual classes of a verb, three interpretations are observed that carry temporal clauses of ‘while’, ‘when’, and ‘right after’.

(18) *ki-* of ‘while’ interpretation

tugikina Fara yaciye aza

tu-ki-kin-a Fara a-a-ca-ye a-z-a

SM1PL-PERS-dance-FV NAME SM1-PST-cut-PERF SM1-come-FV

‘While we were dancing, Fara just came.’¹⁷

(19) *ki-* of ‘when’ interpretation

bakigwa Fara yaciye aza

ba-ki-gu-a Fara a-a-ca-ye a-z-a

SM2-PERS-fall_down-FV NAME SM1-PST-cut-PERF SM1-come-FV

‘When they fell down, Fara just came.’

The difference between (18) and (19) is the lexical aspect of a verb in dependent clauses. *Kina* ‘dance’ in (18) is an action verb whose action can be

¹⁷ The verb stem of *yaciye* is *guca* ‘to cut’ that is often used as an auxiliary verb, meaning ‘immediately’ (Cox 2020b: 13).

continuously held, whereas *gwa* ‘fall down’ in (19) is an achievement verb whose action is held only once.

Several stative verbs, such as *rwāra* ‘be sick’, can be interpreted in two ways; namely ‘while’ and ‘when’ as in (20a–b). These examples, which are similar to those in (7), are used with both endings, namely, a final vowel *-a* and a perfect *-ye*, which is dependent on the interpretation of the verb. *Rwāra* is interpreted as ‘while’ if it ends with a perfect *-ye*, as in (20a). However, it ends with a final vowel *-a*, as in (20b), by interpreting the clause as ‘when’. *Rwāra* in (20b) is no longer a stative verb. Instead, it becomes an achievement ‘get sick’.

(20) *ki-* of both ‘while’ and ‘when’ interpretations

a. *tukirwāye Fara yaciye aza*

tu-ki-rwār-ye	Fara	a-a-ca-ye	a-z-a
SM1PL-PERS-be_sick-PERF	NAME	SM1-PST-cut-PERF	SM1-come-FV

‘While we were sick Fara just came.’

b. *tukirwāra baraduha imiti*

tu-ki-rwār-a	ba-ra-tu-h-a	i-mi-ti
SM1PL-PERS-get_sick-FV	SM2-PRS-OM1PL-give-FV	IV-CL4-tree

‘When we get sick, they (usually) give us medicines.’

Other examples that are interpreted in both ‘while’ and ‘when’ are those with the following verbs: *ku-nūka* ‘to smell bad; stink’, *ku-mōta* ‘to smell good’, *kw-āmbara* ‘to get dressed’, *ku-doha* (old) / *ku-vyibuha* (new) ‘to be(come) fat’, *ku-bira* ‘to boil’, *gu-hetama* ‘to be(come) bent’, *ku-jōba* ‘to be(come) soaked’, *kw-īcara* ‘to sit’, *gu-sinzīra* ‘to fall asleep/sleep’, *gu-sutama* ‘to squat’, *gu-shavura* ‘to be(come) angry’, *ku-baka* ‘to (get) married’.

Another interpretation is ‘right after’, as in (21), whose verb is a motion verb. Other examples of ‘right after’ interpretation are those with the following motion verbs: *kw-īruka* ‘to run’, *ku-garuka* ‘to return’, *ku-za* ‘to come’.

(21) *ki-* of the ‘right after’ interpretation

tukigenda Fara yaciye aza

tu-ki-gend-a Fara a-a-ca-ye a-z-a

SM_{1PL}-PERS-go-FV NAME SM₁-PST-cut-PERF SM₁-come-FV

‘Fara came right after we left.’

The tense of the entire sentence matches the tense of the independent clause. Thus, the future tense is also available, as in (22), apart from the present and past tenses in examples (17)–(21).

(22) *Ki-* in the future with ‘while’ interpretation

Nzotūnga mugisinzirīye

n-zo-tūng-a mu-ki-sinzīr-ye

SM_{1SG}-FUT-be_rich-FV SM_{2PL}-PERS-sleep-PERF

‘I will be rich, while you (pl) are still sleeping.’ [01432]

In summary, the *ki-* used in dependent clauses features two types of construction with different endings; *-a* or *-ye*. Furthermore, it has three interpretations, namely, ‘while’, ‘when’, and ‘right after’, as in (23). The difference in construction and interpretation is dependent on the lexical aspects of a verb, which was tested by using a list in Appendix (Kanijo 2019: 227). The ‘while’ interpretation is typically observed for active (except for motion verbs), series, perception stative, and accomplishment verbs. Alternatively, non-perception stative verbs are also interpreted as ‘while’, when the verb ends with the perfect *-ye*. This usage as ‘while’ inherits its original persistive meaning, that is the ‘situation that has held continuously since an implicit or explicit point in the past up to the time of speaking’ (Nurse 2008: 145). The ‘when’ interpretation is observed with achievement verbs that lack the continuity of an action or an event, whereas the ‘right after’ interpretation is observed with a few motion verbs that may have a source or goal point.

(23) *Ki-* in dependent clauses

Construction	Interpretation
SM- <i>ki</i> -VB- <i>a</i> ...	While VBed/VBs/will VB... (active, series, perception stative, accomplishment verbs)
SM- <i>ki</i> -VB- <i>a</i> ...	When S VBed/VBs/will VB... (achievement verbs)
SM- <i>ki</i> -VB- <i>a</i> ...	Right after VBed/VBs/will VB... (motion verbs)
SM- <i>ki</i> -VB- <i>ye</i> ...	While S VBed/VBs/will VB... (no-perception stative verbs)

A single verb can be used in multiple aspects, as in (20). However, the lexical aspects in (23) are not a perfect match. For example, the motion verbs can be interpreted in multiple ways. Thus, the difference in the lexical aspects of a verb requires further investigation.

4.5 *Ki-* of past habitual in an independent clause

Out of the 65 verbs listed by Kanijo (2019: 227), the two perceptual verbs *ku-bona* ‘to see’ and *kw-ūmva* ‘to hear’ behave differently. They may appear with persistive affirmative *raca-* in independent clauses (24a), and with *ki-* in dependent clauses (24b). In addition, they may appear with *ki-* in independent clauses, which does not occur for other verbs. The *ki-* in independent clauses (24c) is interpreted as the past habitual ‘used to’.

(24) *ku-bona* ‘to see’ in three interpretations

- a. Persistive affirmative *raca-*

turacabona

tu-raca-bon-a

SM_{1PL}-PERS-see-FV

‘We can still see.’¹⁸

¹⁸ For *ku-bona* ‘to see’, *kw-ūmva* ‘to hear’ the persistive affirmative *turacabona* and

b. *ki-* of ‘when’ interpretation in a dependent clause

tukibona ivyabaye Fara yaciye aza

tu-ki-bon-a i-bi-a-ba-ye Fara

SM₁PL-PERS-see-FV IV-SM₈-PST-be-PERF NAME

a-a-ca-ye a-z-a

SM₁-PST-cut-PERF SM₁-come-FV

‘When we saw what happened, Fara came.’

c. *ki-* of ‘past habitual’ interpretation in an independent clause

tukibona

tu-ki-bon-a

SM₁PL-PERS-see-FV

‘We used to be able to see.’

At the moment, no case exists to be interpreted as past habitual in independent clauses apart from these two perceptual verbs *ku-bona* ‘to see’ and *kw-ūmva* ‘to hear’. In the future study, other perceptual verbs will need to be tested.

4.6 Kirundi persistives compared with other Bantu languages

This section intends to compare Kirundi persistives and their related phenomena with those of other Bantu languages focusing the three features in (25) and provides the following remarks.

(25) Three features to compare persistives

- (i) forms of reflexes of **kí-*
- (ii) persistive negative, and
- (iii) extended meaning of the reflexes of **kí-* in dependent clauses

The first feature (i) is the reflexed forms of Proto-Bantu **kí-*, as in Map 1,

turacyumva are explained as ‘we can still see’ and ‘we can still hear’ with an auxiliary ‘can’. What is implied by the auxiliary ‘can’ needs to be revealed in the further research.

which illustrates the distribution of 161 Bantu languages. It classifies the languages into four types based on common features: N/A (not applicable), **kí-*, **kí+a*, **kí-* and **kí+a-*, and other forms of persistive use.

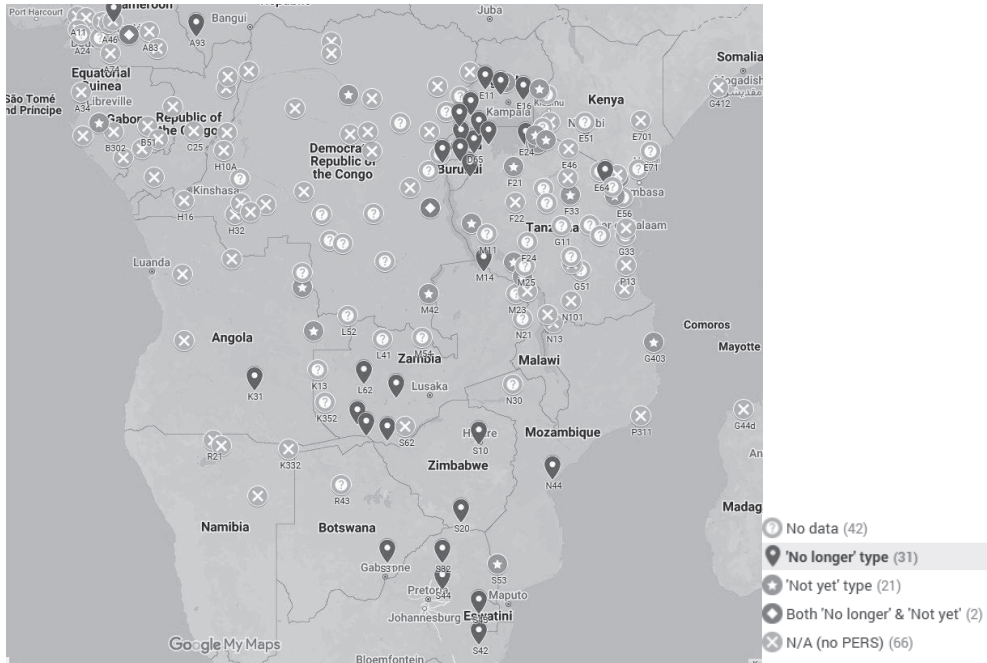
Kirundi has two forms for persistive, namely, *raca-* and *ki-*, which have a nearly complementary distribution in terms of use¹⁹. In Map 1 Kirundi is classified as a ‘**kí-* and **kí+a-*’ type, because the *raca-* form can be analyzed as the reflex of **kí+a-*. In the modern Kirundi language, *raca-* is an independent morpheme that cannot be further divided. However, with the help of the Proto-Bantu reconstruction, *raca-* could be reconstructed as **ra-ki-a-*, where *ra-* is a present marker; **ki-* is a hypothetical persistive, and **a-* as a past marker; as such, **ki-a-* would then be assumed to become *ca-*.

The distribution of ‘**kí-* and **kí+a-*’ type is observed especially in the languages of zones J, F, and S (Map 1). Moreover, Nurse (2008: 147) claims that ‘the shape (**kí+a-*) appears predominantly, although not universally, in the affirmative persistive, with simple **ki-* in the negative.’ This statement is consistent with Kirundi’s use of the two forms: *raca-* and *ki-*.

The second feature (ii) compares the persistive negative. As we see in Section 4.3, Kirundi persistive negative appears with the negative marker *nti-* before subject marker (SM) position (*nti-SM-ki-VB-a/-ye*), and is interpreted as ‘no longer’ to intensify the negation.

From the database of 161 Bantu languages by Nurse (2008: Appendix) and other reference grammars, two types of persistive negative are observed, namely, ‘no longer’ and ‘not yet’ types. Out of the 161 languages, 52 languages are relevant for this comparison, which excludes 66 languages not having persistive and 42 languages without data. Out of the 52 relevant languages, 31 (60%) belong to the ‘no longer’ type, whereas 21 (40%) belong to the ‘not yet’ type (Map 2).

¹⁹ Except for the perceptual verbs *ku-bona* ‘to see’ and *kw-ūmva* ‘to hear’ that have both *raca-* and *ki-* in affirmative independent clause. See 0.



Map 2 Distribution of persistive negative

The ‘no longer’ type predominantly appears among the so-called Great Lakes Bantu languages, which includes Kirundi. Similar to the Kirundi examples in Section 3.3, the reflex of **ki-* is used for negatives with an obvious negative marker, as in the Haya example (26).

(26) The ‘no longer’ type in Haya (E22) (Nurse 2008: 147) glossed by the author

<i>titúkigura</i>	cf	<i>tukiáágura</i>
ti-tú-ki-gur-a		tu-kiáá-gur-a
NEG-SM _{1PL} -PERS-buy-FV		SM _{1PL} -PERS-buy-FV
‘We are no longer buying.’		‘We are still buying.’ (affirmative)

Alternatively, the ‘not yet’ type spreads among the Eastern-Southern Bantu languages. However, this type may be further divided into two. The first has a negative marker, as in Mbugu/Ma’a (G20A) in example (27a), and the second lacks an obvious negative marker, as in Bende (F12) example in (27b), which

is the third construction type from (3).

(27) The ‘not yet’ type with and without a negative marker

a. Mbugu / Ma’a (G20A) (Mous 2003: 142; Nurse 2008: appendix)

téchèrikúru

té-chéri-kúru

NEG.SM₁-PERS-dig

‘He hasn’t dug yet.’

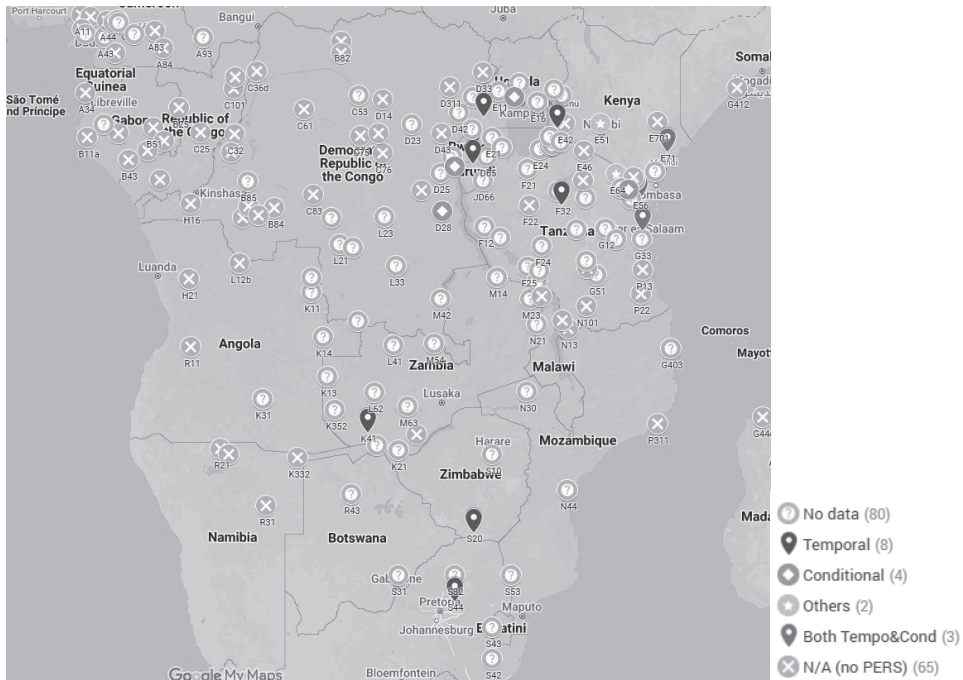
b. Bende (F12) (Abe 2015: 26)

tusyáli kúyúla

tu-syá-lí kú-γúl-a

SM₁PL-PERS-be CL₁₅-buy-FV

‘We have not bought yet.’



Map 3 Distribution of *kí- of dependent clauses

The third feature (iii) compares the extended meaning of the reflexes of **ki-* in dependent clauses. At the moment, only 17 languages are relevant to this feature (Map 3) due to the lack of a sufficient description of languages.

The Kirundi *ki-* is used in dependent clauses in three temporal uses, namely, ‘while’, ‘when’, and ‘right after’ as discussed in Section 4.4. Out of 17 relevant languages, eight are confirmed as having temporal use; four have conditional use ‘if’, and three have both temporal and conditional uses.

Swahili (G42) is an example of temporal and conditional (see 28). The Swahili *ki-* has, however, no longer the persistive use in independent clauses. However, it is used as ‘while’ (temporal) in (28a) and ‘if’ (conditional) in (28b) only for dependent clauses.

(28) Swahili (G42) dependent clauses of temporal and conditional (Ashton 1944: 138)

a. Temporal use ‘while’ (simultaneous)

Tuliwaona watoto wakicheza

tu-li-wa-on-a wa-toto wa-ki-chez-a

SM_{1PL}-PST-OM₂-see-FV CL₂-child SM₂-SIM-play-FV

‘We saw the children while they were playing.’

b. Conditional use ‘if’

Ukimwona Hamisi, mwambie namtaka

u-ki-m-on-a Hamisi m-ambi-e

SM_{2SG}-CND-OM₁see-FV NAME OM₁-tell-SUBJ

n-a-m-tak-a

SM_{1SG}-PRS-OM₁want-FV

‘If you see Hamisi, tell him I want him.’

Among the three features presented in (25), (i) and (ii) demonstrate the significant distribution of the Great Lakes Bantu languages including Kirundi, whereas feature (iii) does not exhibit the obvious distributional characteristics.

4.7 Summary

The Kirundi reflexes of **kí-* have two forms, *raca-* and *ki-*, which illustrate a nearly complementary distribution. According to the lexical aspect, the endings may be either the final vowel *-a*, or a perfect *-ye*. Kirundi persistive can be added using the negative marker *nti-*, resulting in the meaning ‘no longer’. When *ki-* is used in dependent clauses, it becomes a temporal clause, such as ‘while’, ‘when’, and ‘right after’. The difference between the three forms is dependent on the lexical aspects of a verb. However, only two perceptual verbs, namely, *ku-bona* ‘to see’ and *kw-ūmva* ‘to hear’, depict the exceptional interpretation as past habitual in independent clauses. This type of verbs requires further investigation with a focus on the extended meanings of persistive reflexes.

From the comparison with other Bantu languages, the Great Lakes Bantu languages, including Kirundi, share significant common features, such as (i) having two forms, and (ii) persistive negative meaning ‘no longer’. However, the study observes no characteristic distribution for dependent clauses.

Nevertheless, additional research on Kirundi is required, especially regarding the extended meanings of persistive reflexes together with the appropriate classification of verbs, particularly when a single verb may have multiple lexical aspects.

Appendix

The list of 65 Kirundi verbs that are translated from Kanijo (2019: 227).

Aspectual class	Kirundi examples
Activities	<i>ku-ririmba</i> ‘to sing’, <i>ku-rira</i> ‘to cry’, <i>gu-twēnga</i> ‘to laugh’, <i>gu-kina</i> ‘to play, dance’, <i>ku-yāga</i> ‘to talk, chat’, <i>ku-fūmba</i> ‘to smoke’, <i>kw-iyoga</i> ‘to shower, bathe’, <i>ku-gura</i> ‘to buy’, <i>ku-baza</i> ‘to ask’, <i>gu-turagura</i> ‘to thunder’, <i>ku-genda</i> ‘to go’, <i>kw-iruka</i> ‘to run’, <i>ku-garuka</i> ‘to return’, <i>ku-za</i> ‘to come’
Series	<i>gu-korora</i> ‘to cough’, <i>ku-jugumira</i> ‘to tremble’, <i>ku-ryāna</i> ‘to bite’, <i>ku-gōna</i> ‘to snore’, <i>gu-hekenya</i> ‘to chew’
Perception statives	<i>ku-bona</i> ‘to see’, <i>kw-ūmva</i> ‘to hear’, <i>ku-rora</i> ‘to look (at)’, <i>ku-nūka</i> ‘to smell bad; stink’, <i>ku-mōta</i> ‘to smell good’, <i>gu-honja</i> ‘to taste (by swallowing a bit)’, <i>kw-ūmviriza</i> ‘to listen’
Non-perception statives	<i>kw-ībuka</i> ‘to remember’, <i>gu-kūnda</i> ‘to love, like’, <i>gu-hūza</i> ‘to agree’, <i>kw-ōroha</i> ‘to be soft’, <i>ku-rwāra</i> ‘to be sick’, <i>gu-sa</i> ‘to resemble’
Accomplishment	<i>kw-āmbara</i> ‘to get dressed’, <i>gu-sya</i> ‘to grind’, <i>gu-pfundikira</i> ‘to block sthg, plug’, <i>ku-dūga</i> ‘to climb’, <i>kw-ūbaka</i> ‘to build’, <i>gu-suka</i> ‘to pour into’, <i>ku-sekura</i> ‘to pound’, <i>ku-rima</i> ‘to cultivate’, <i>ku-rya</i> ‘to eat’, <i>ku-nywa</i> ‘to drink’
Transitional achievements	<i>ku-doha</i> (old) / <i>ku-vyibuha</i> (new) ‘to be(come) fat’, <i>ku-bira</i> ‘to boil’, <i>gu-hetama</i> ‘to be(come) bent’, <i>ku-jōba</i> ‘to be(come) soaked’, <i>ku-menya</i> ‘to (come to) know’, <i>kw-ūgurura</i> ‘to open’, <i>gu-kura</i> ‘to grow’

Irreversible resultative achievements	<i>gu-pfa</i> ‘to die’, <i>ku-bora</i> ‘to be(come) rotten’, <i>gu-shika</i> ‘to arrive’, <i>ku-pfūsha</i> ‘to be(come) blunt’, <i>kw-ūma</i> ‘to dry up’, <i>gu-kira</i> ‘to recover’, <i>ku-gāsha</i> ‘to spoil, ferment’, <i>gu-sara</i> ‘to be(come) crazy’, <i>gu-shōnga</i> ‘to melt (plastic)’
Reversible resultative achievements	<i>ku-gwa</i> ‘to fall down’, <i>kw-īcara</i> ‘to sit’, <i>gu-sinzīra</i> ‘to fall asleep/sleep’, <i>gu-sutama</i> ‘to squat’, <i>gu-shavura</i> ‘to be(come) angry’, <i>ku-baka</i> ‘to (get) married’, <i>ku-mena</i> ‘to break’

Abbreviations

1, 2, 3: Noun class or Person

CL: Noun class

CND: Conditional

COP: Copula

FUT: Future

FV: Final vowel

IV: Initial vowel

NEG: Negative

OM: Object Marker

PASS: Passive

PERF: Perfect

PL: Plural

PRS: Present

PST: Past

S: Subject

SG: Singular

SIM: Simultaneous

SM: SubjectMarker

SUBJ: Subjunctive

VB: Verb base

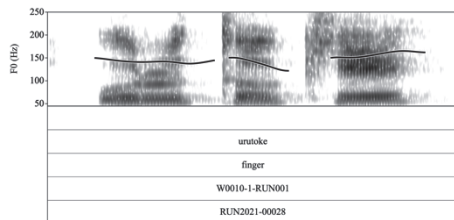
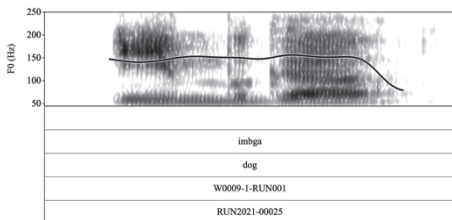
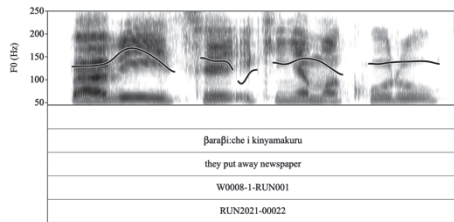
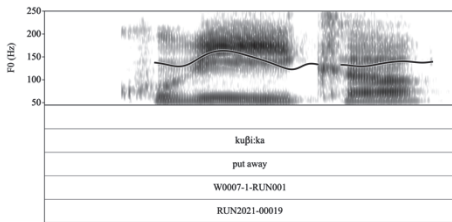
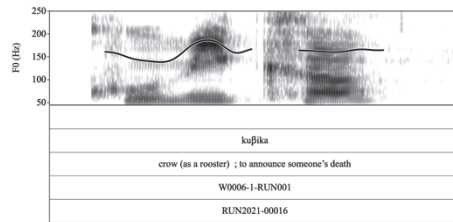
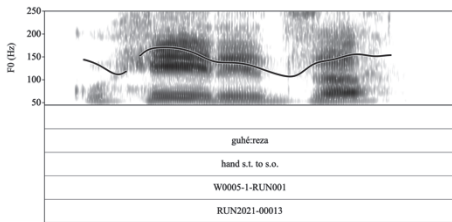
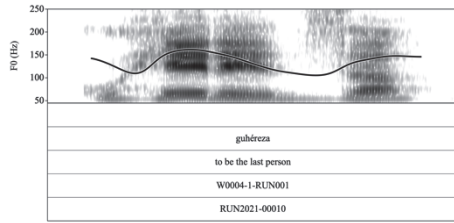
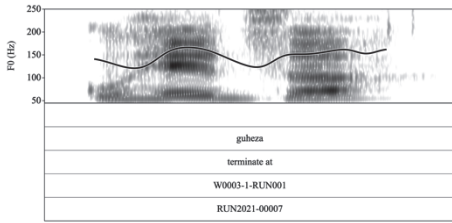
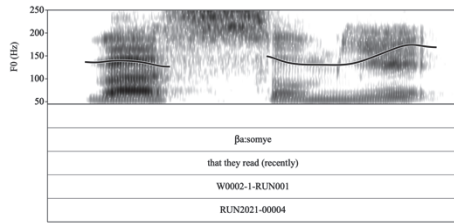
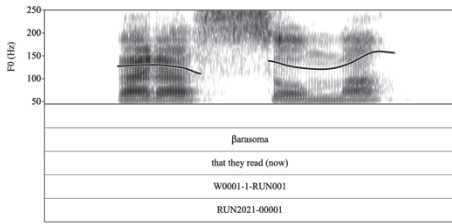
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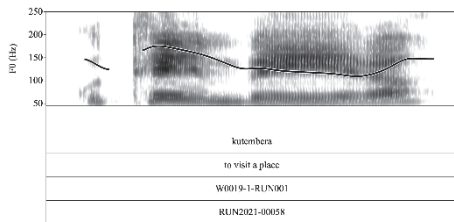
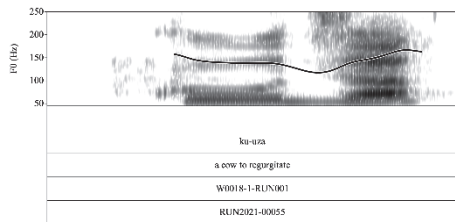
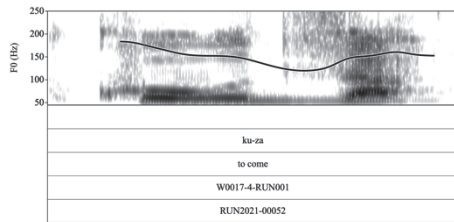
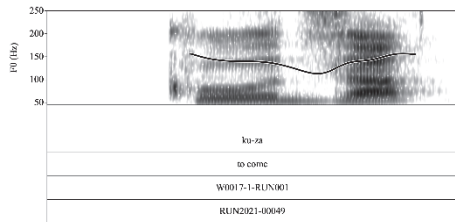
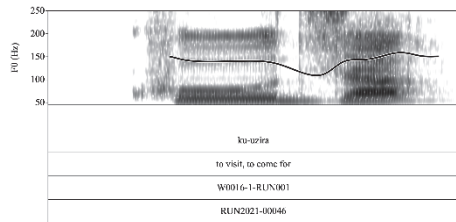
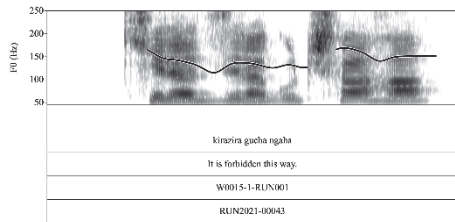
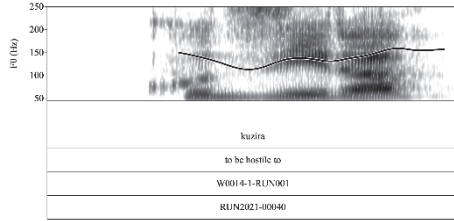
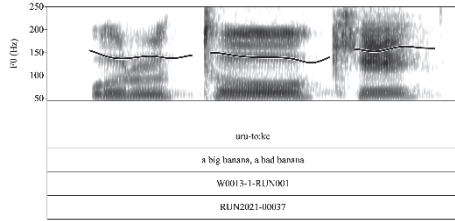
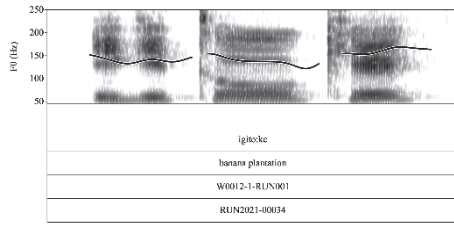
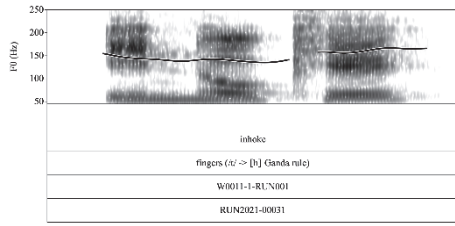
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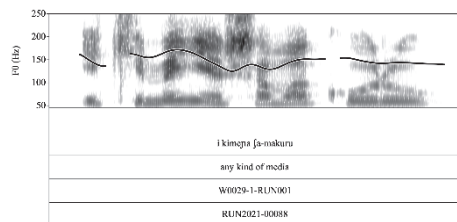
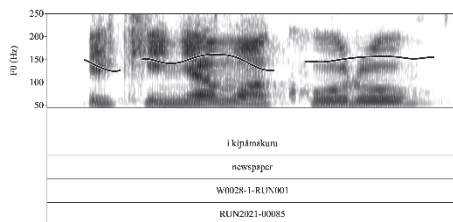
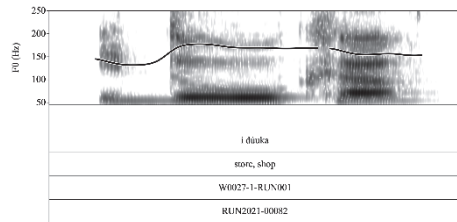
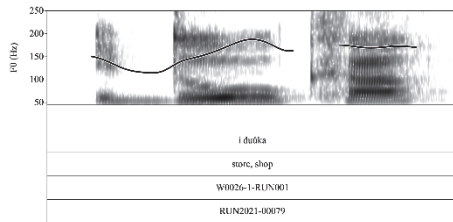
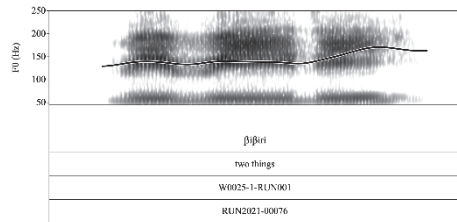
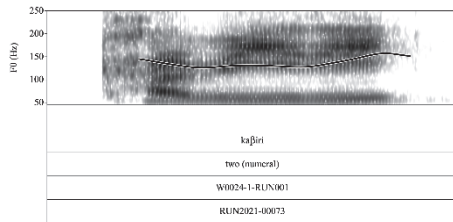
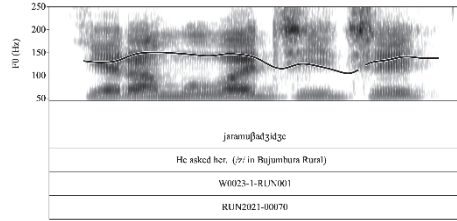
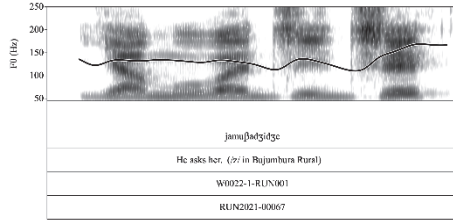
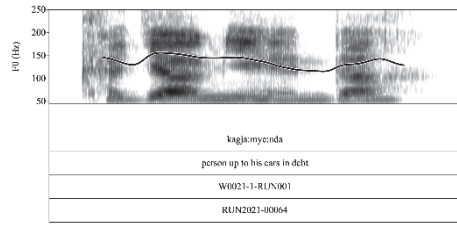
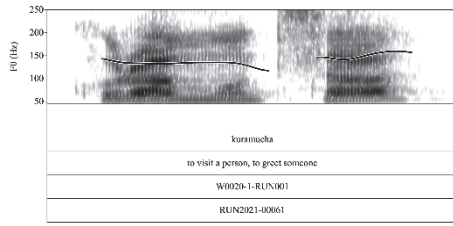
Chapter 5

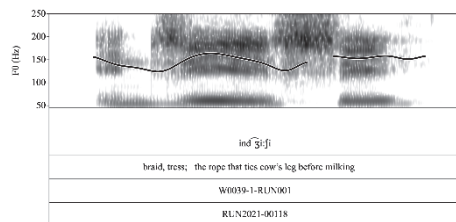
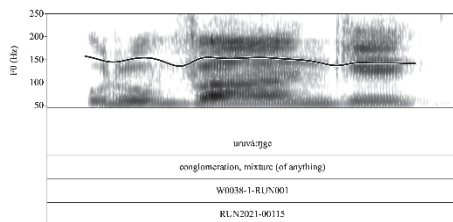
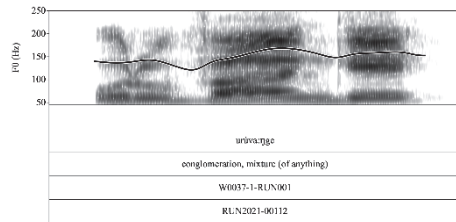
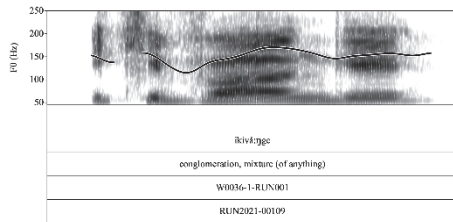
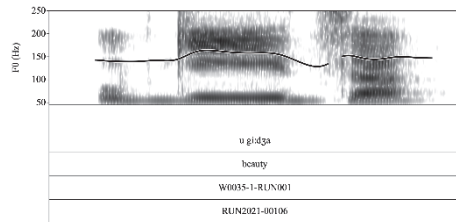
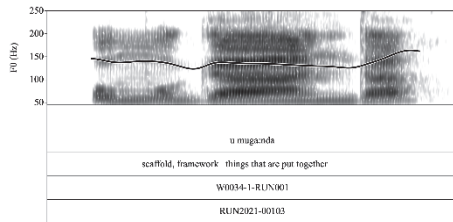
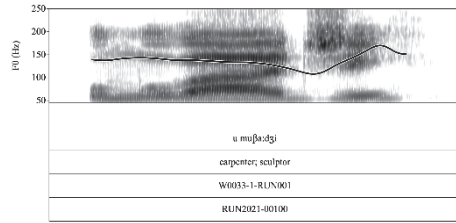
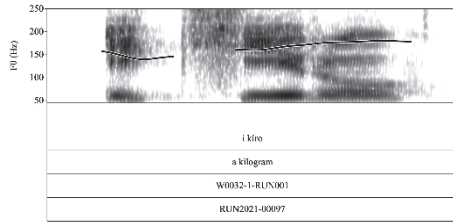
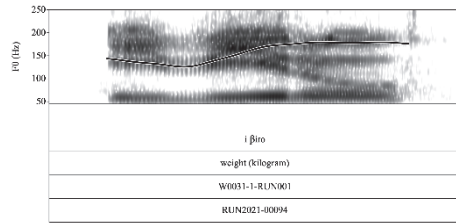
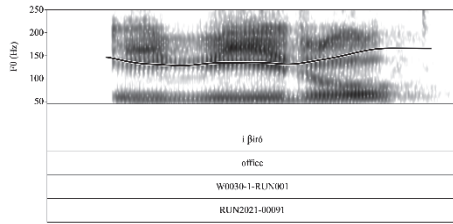
Plots of Kirundi items

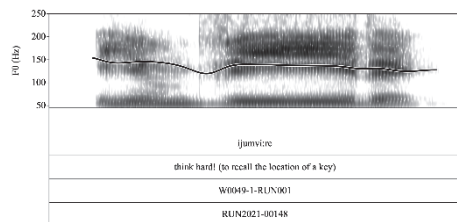
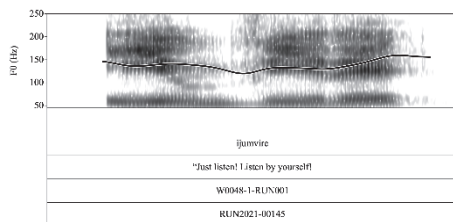
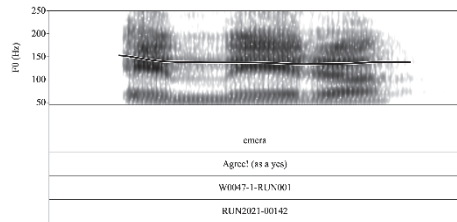
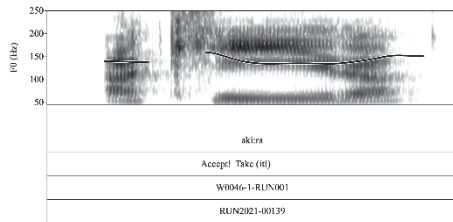
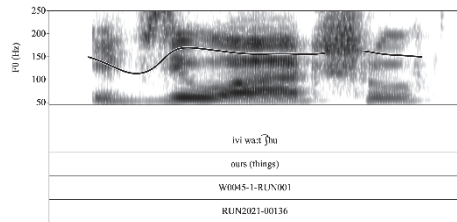
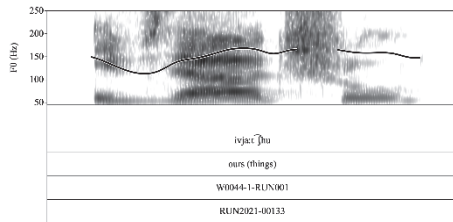
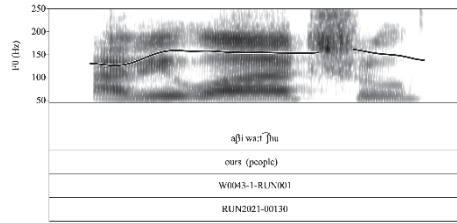
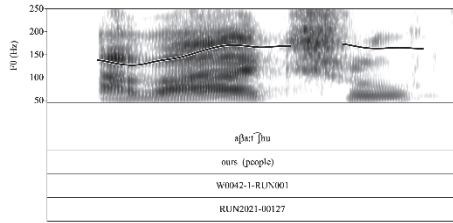
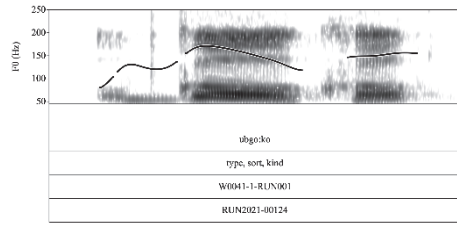
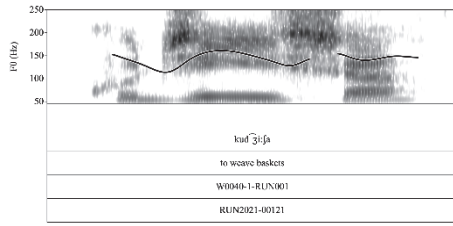
This chapter presents one representative plots of all the Kirundi words or sentences with the following tiers: Kirundi, English translation and ID numbers. In the ID W007-2-RUN001, W007 is an item ID, 2 means the second repetition, RUN001 is the speaker ID. The bottom tier takes the ID format RUN2021-00326, which means token 326 of the Kirundi data collected in 2021. All recordings are available upon request at <https://bantudarc.aa-ken.jp/rundi.html>

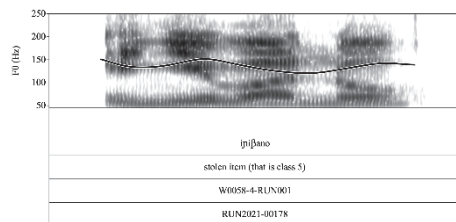
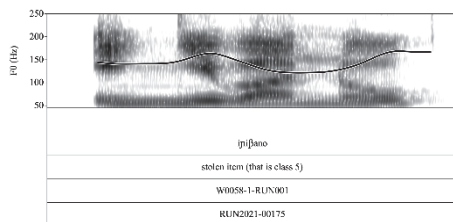
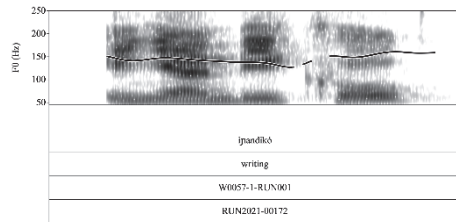
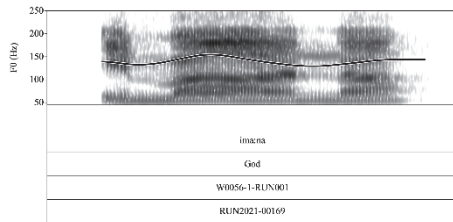
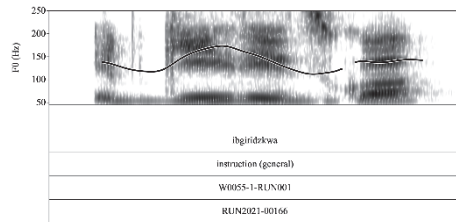
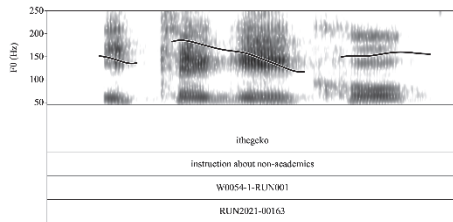
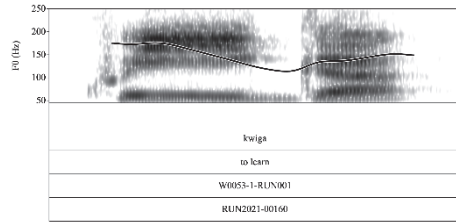
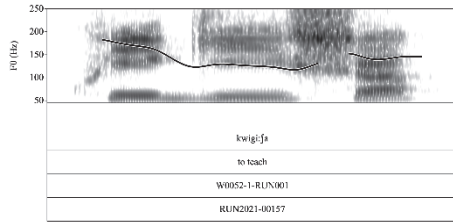
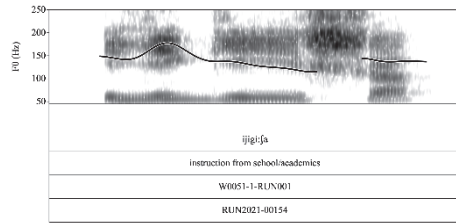
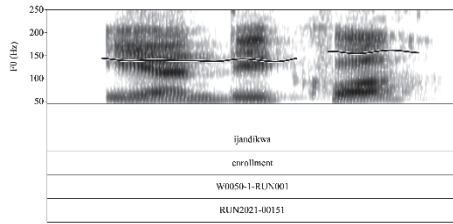


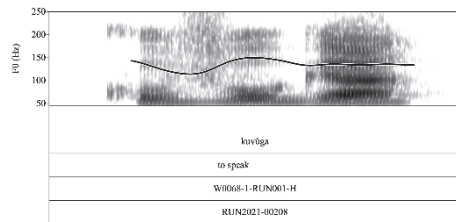
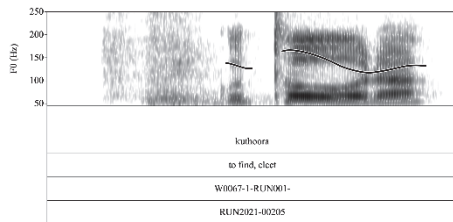
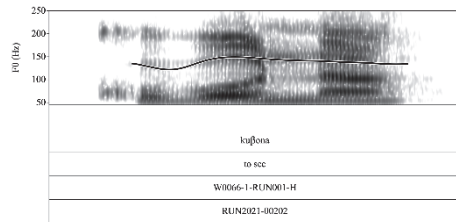
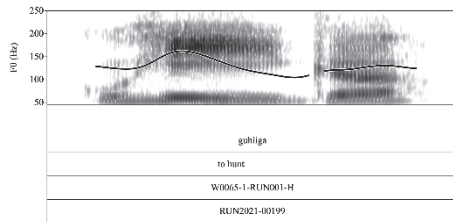
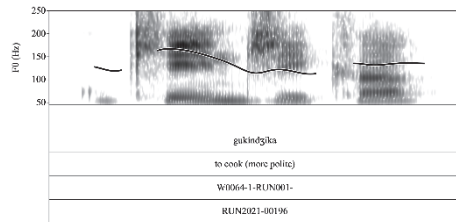
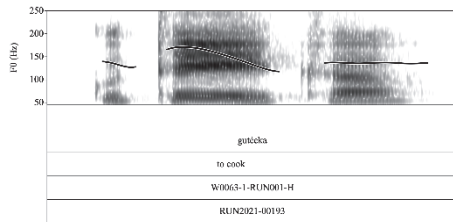
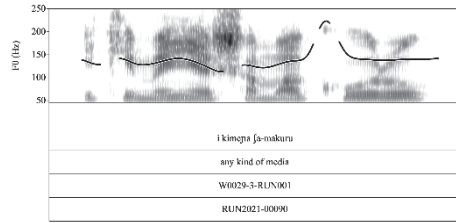
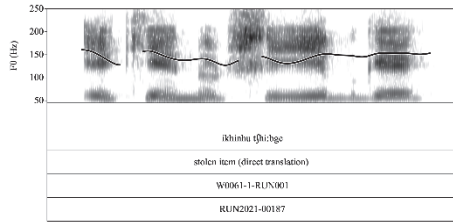
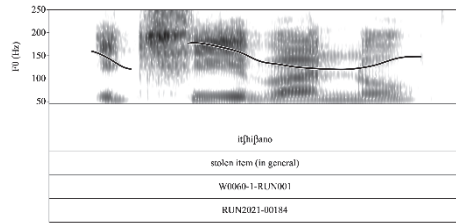
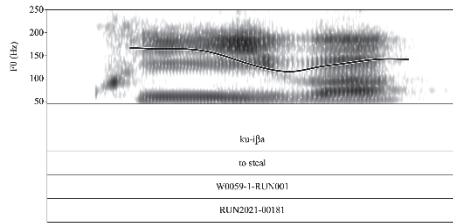


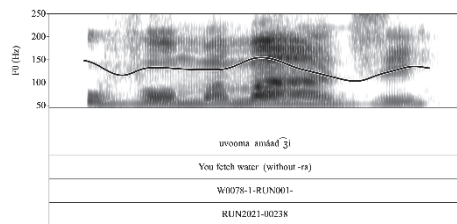
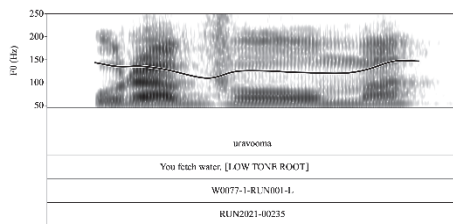
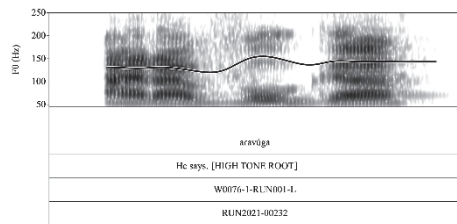
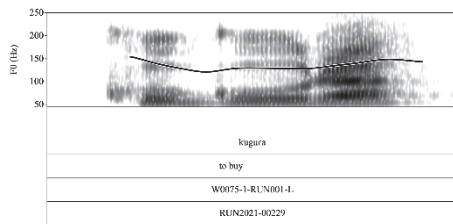
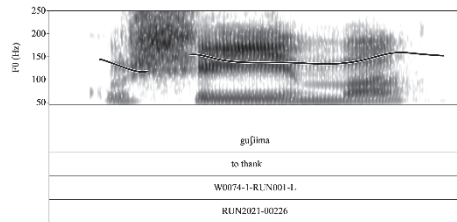
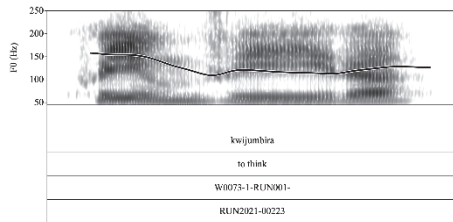
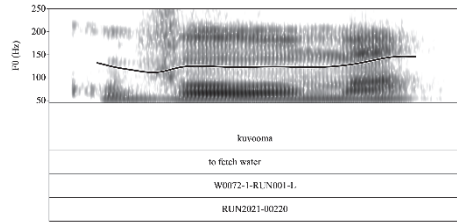
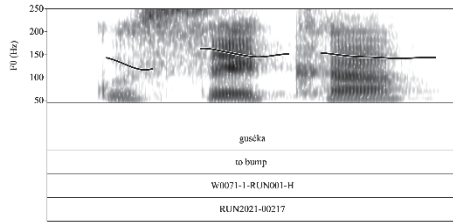
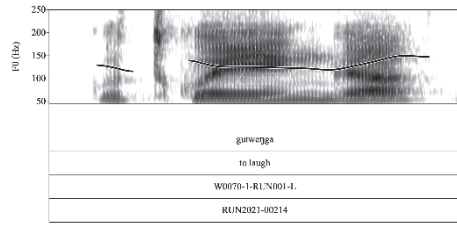
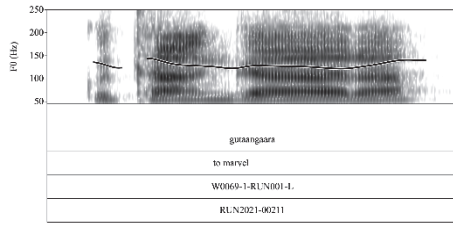


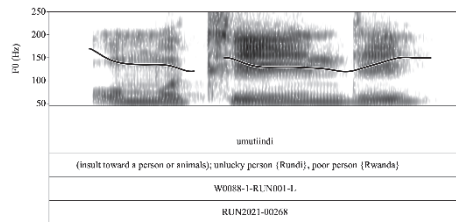
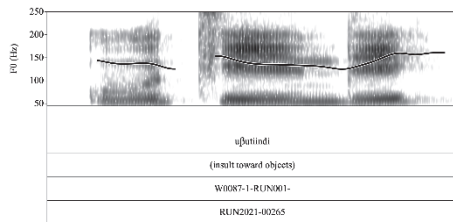
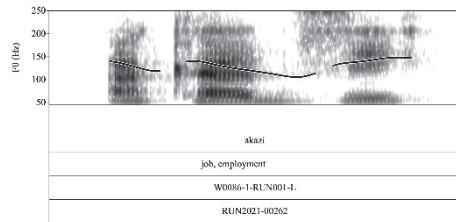
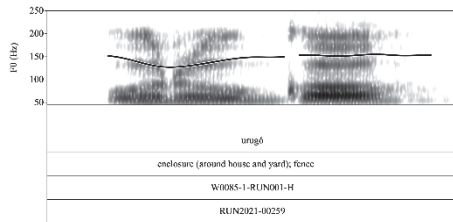
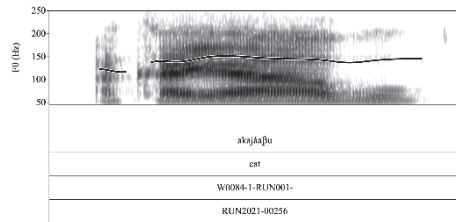
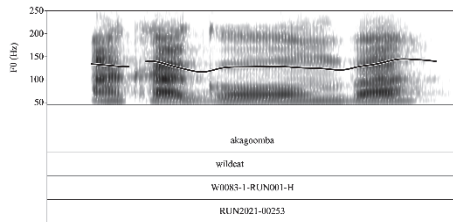
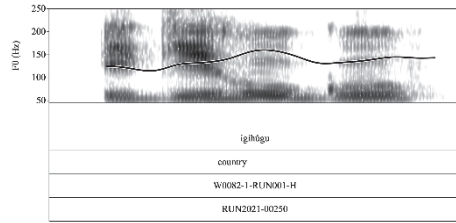
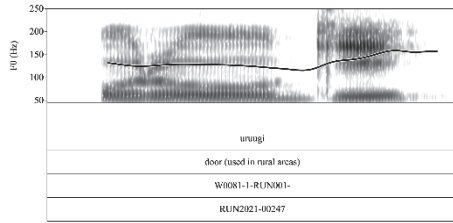
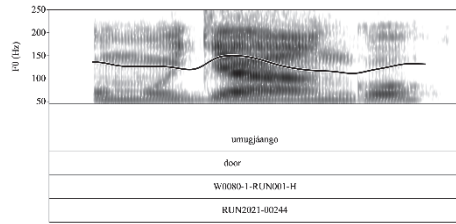
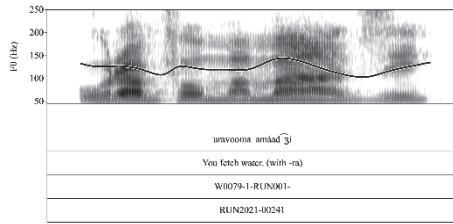


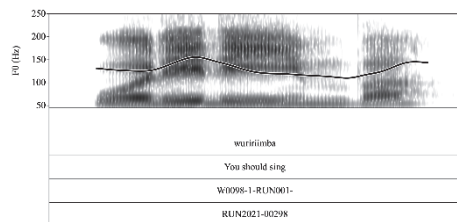
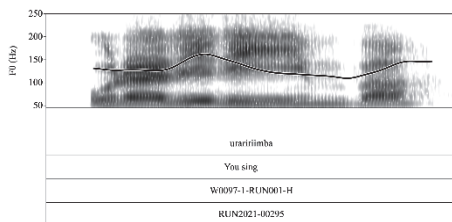
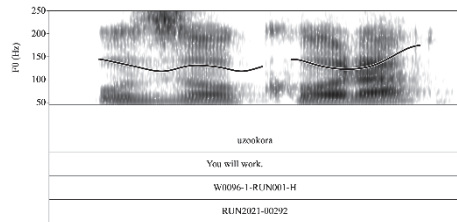
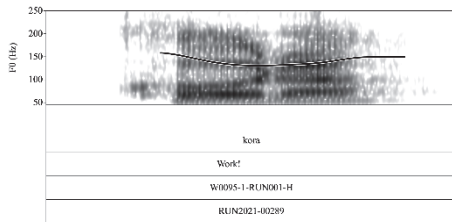
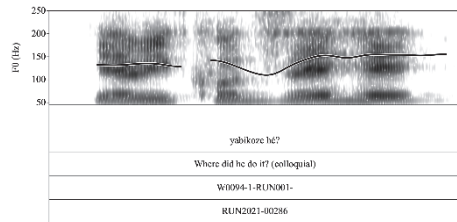
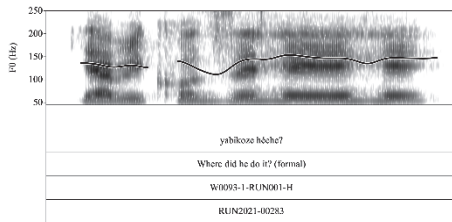
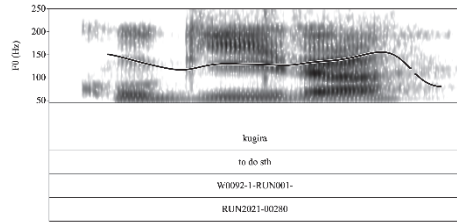
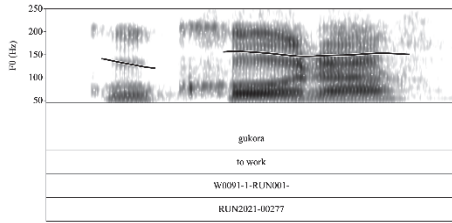
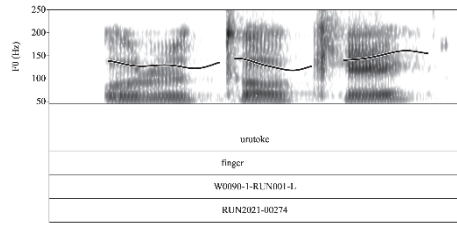
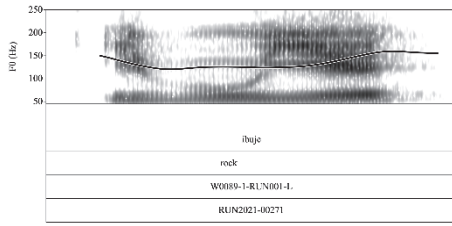


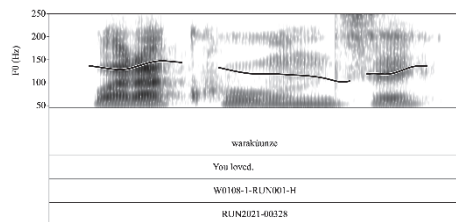
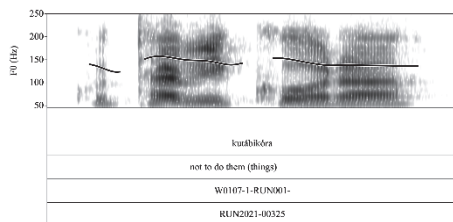
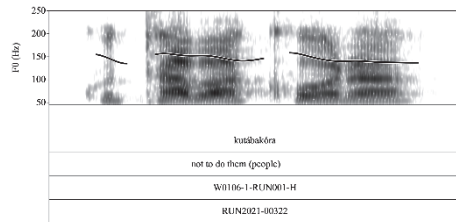
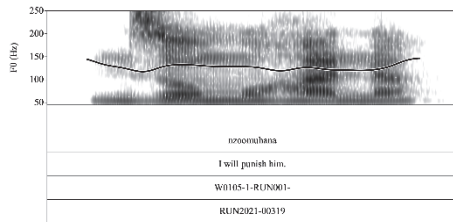
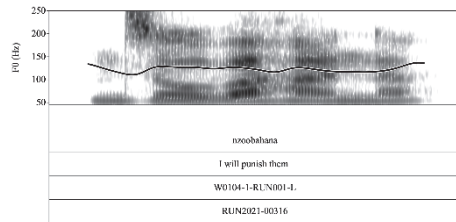
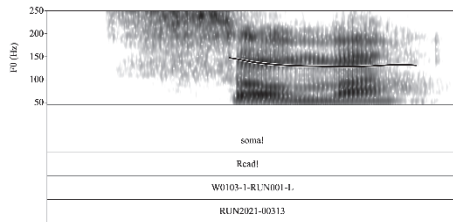
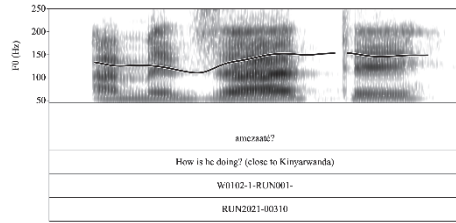
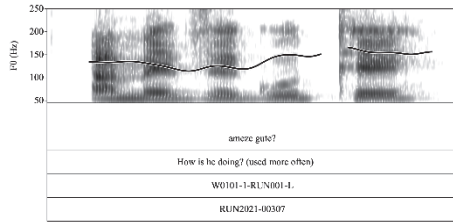
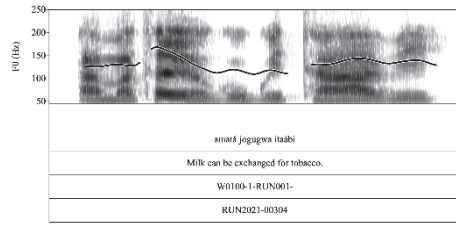
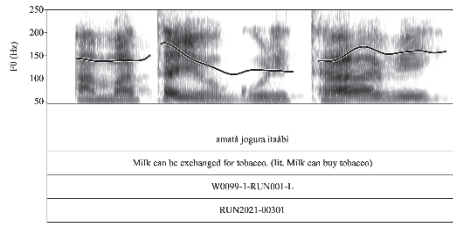


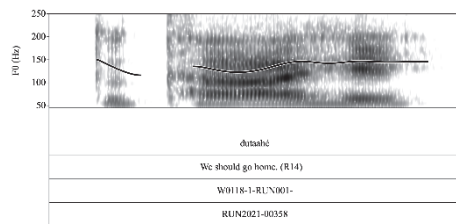
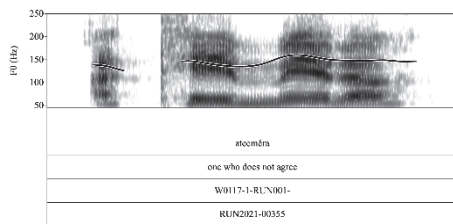
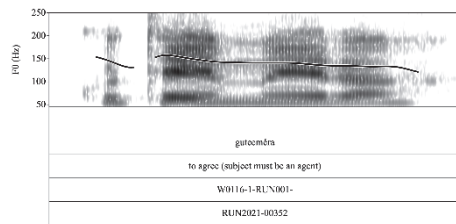
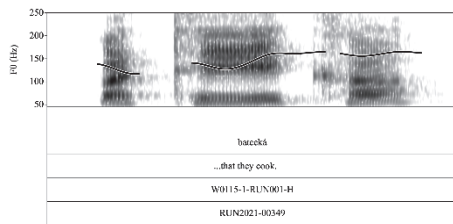
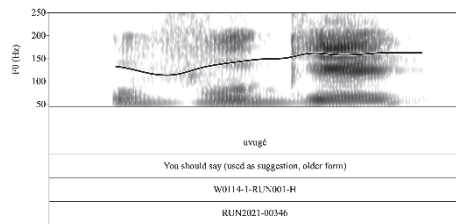
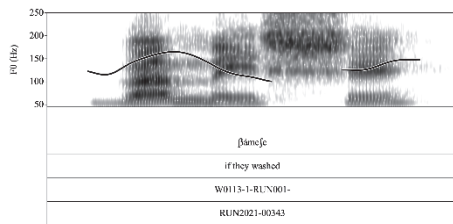
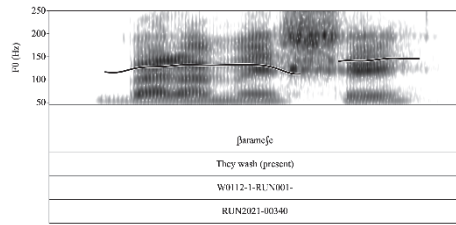
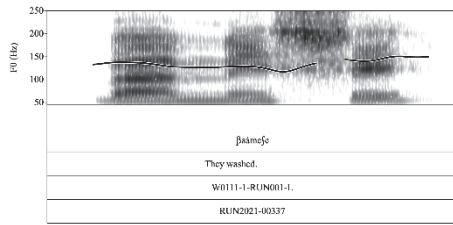
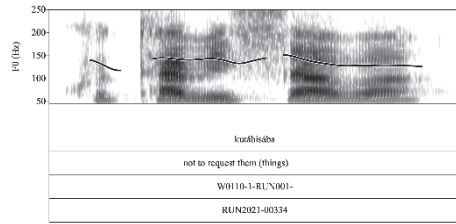
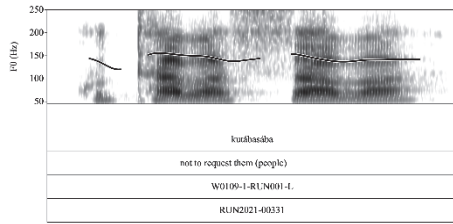


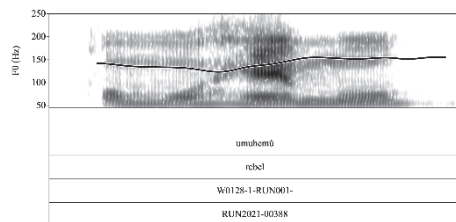
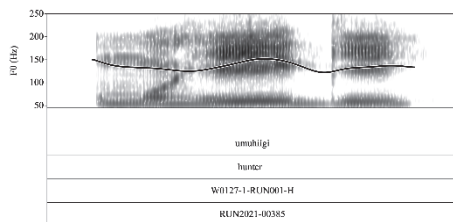
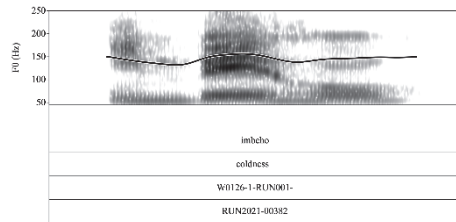
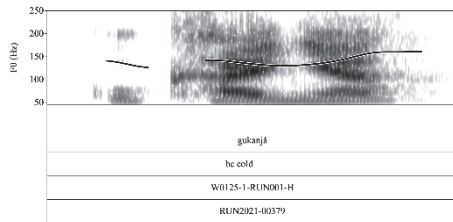
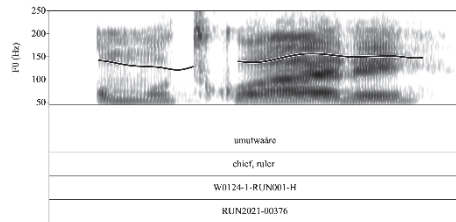
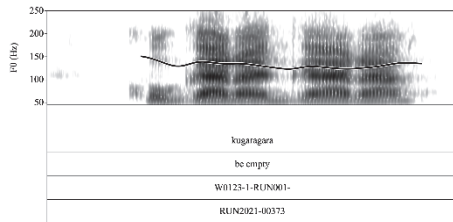
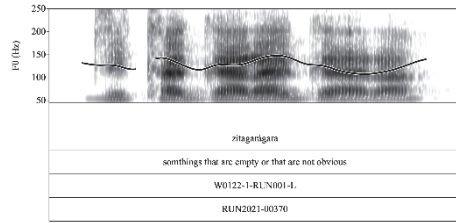
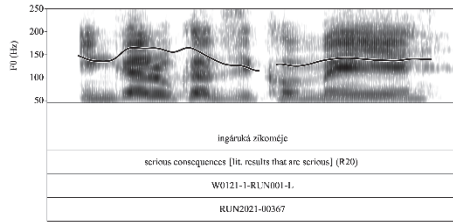
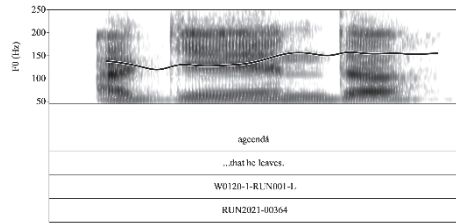
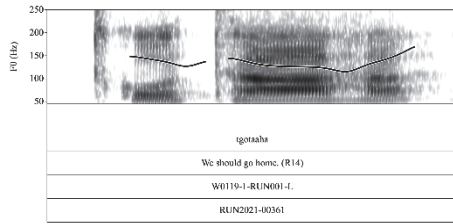


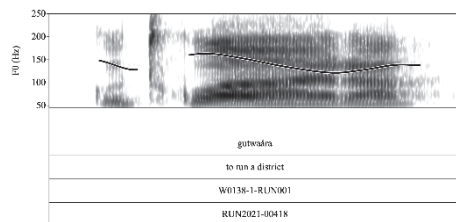
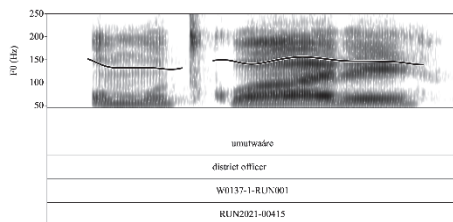
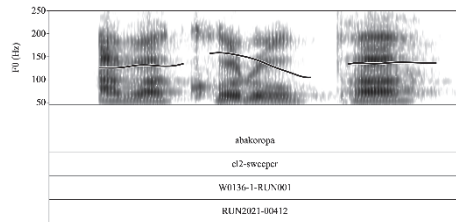
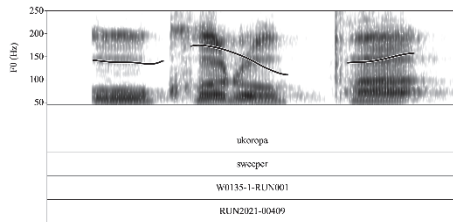
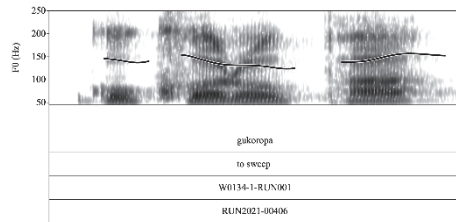
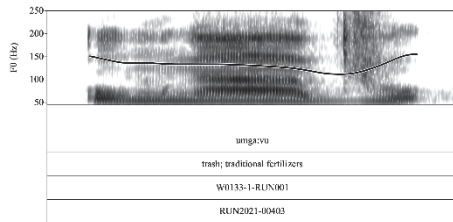
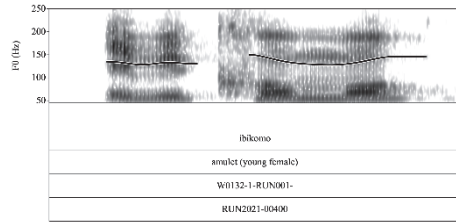
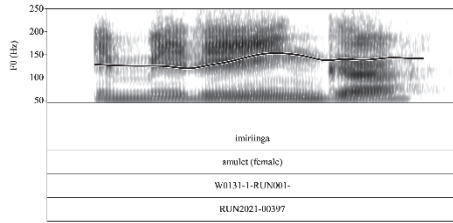
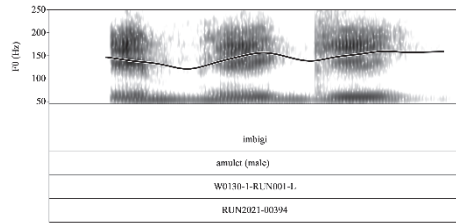
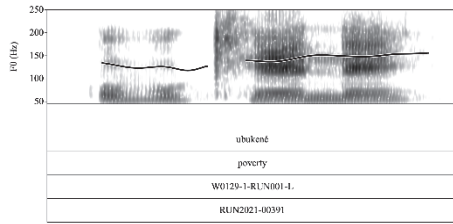


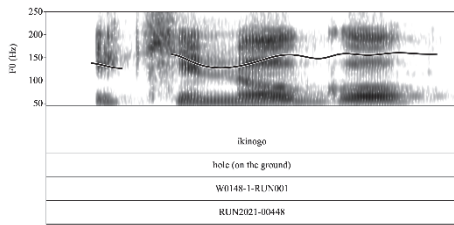
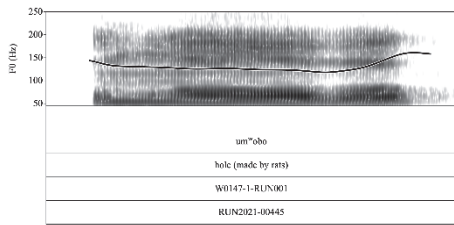
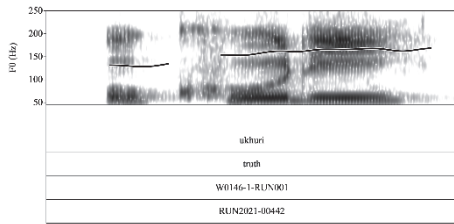
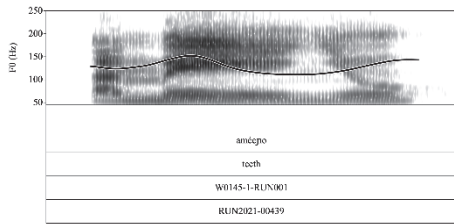
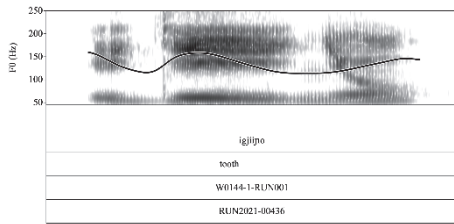
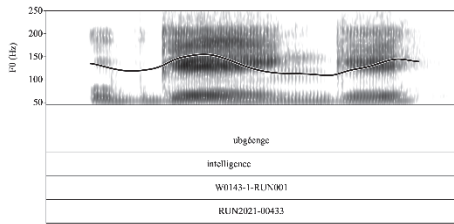
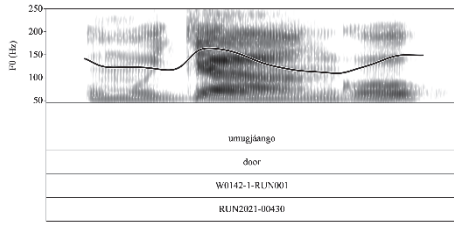
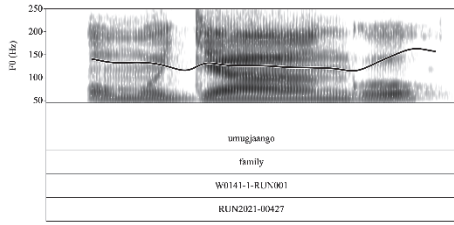
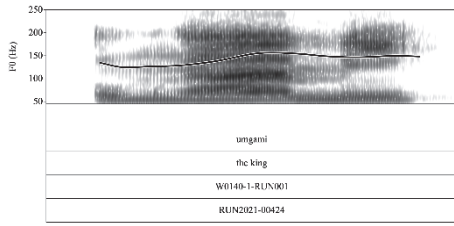
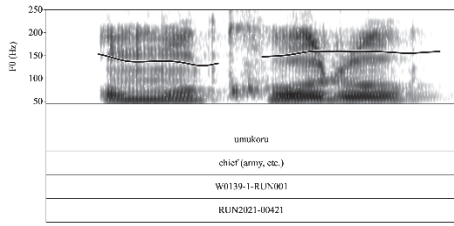


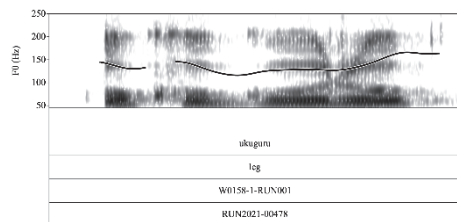
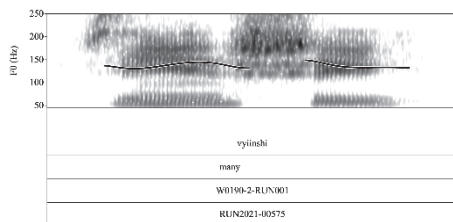
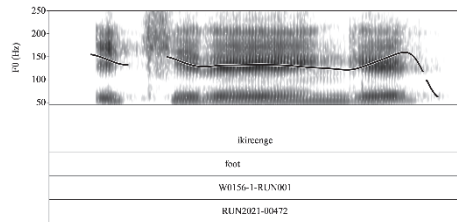
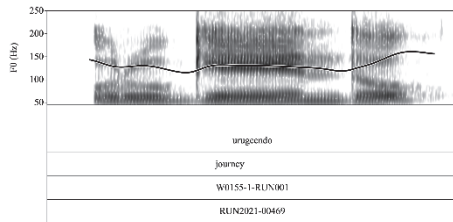
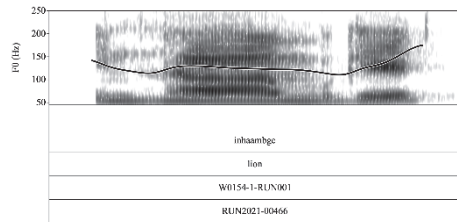
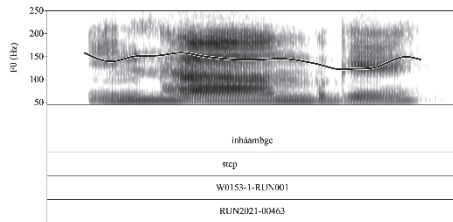
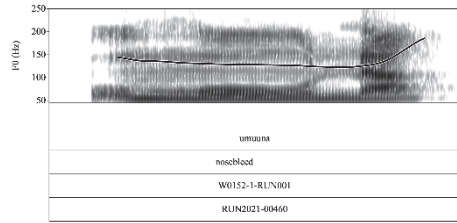
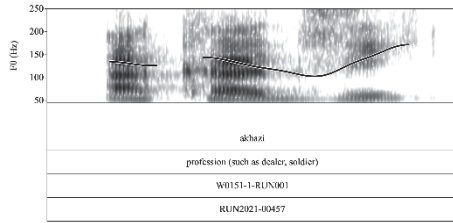
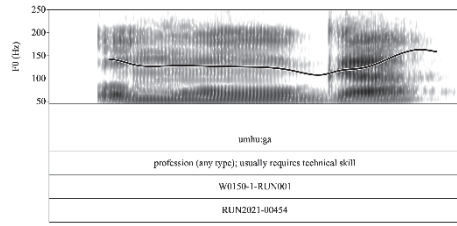
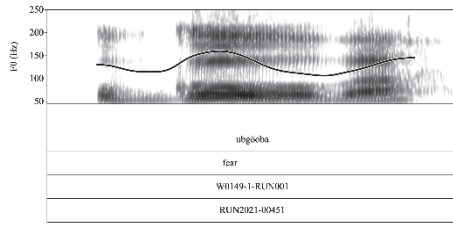


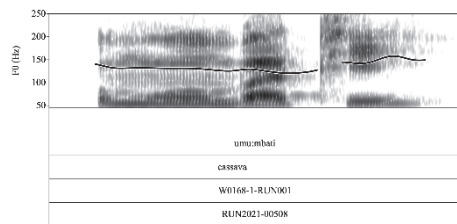
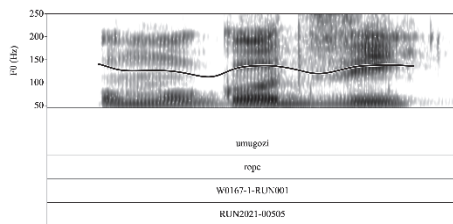
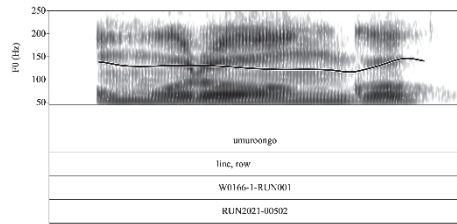
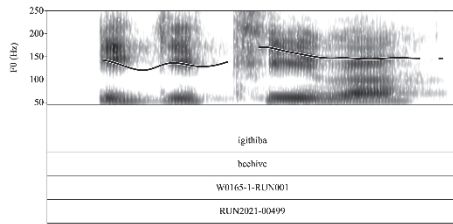
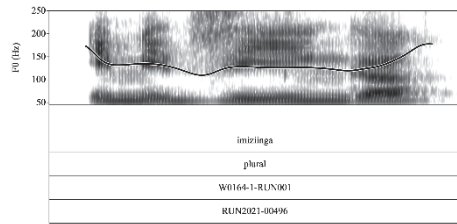
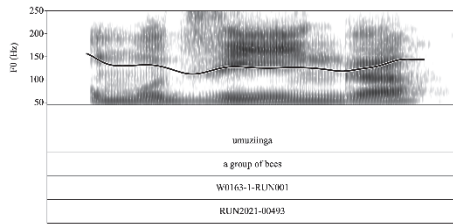
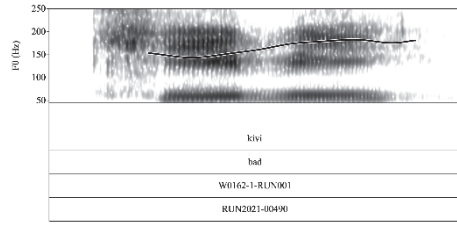
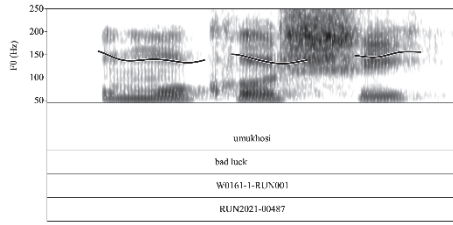
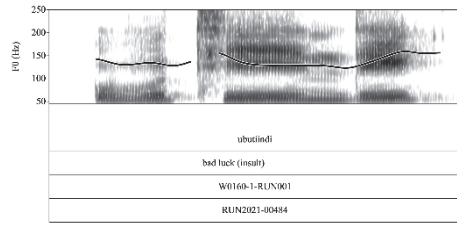
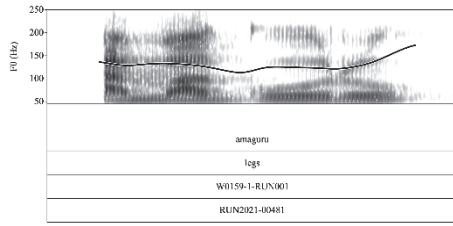


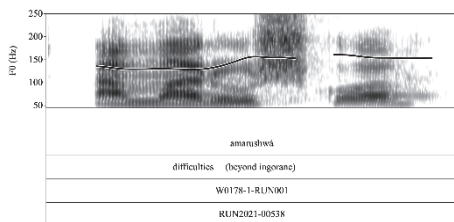
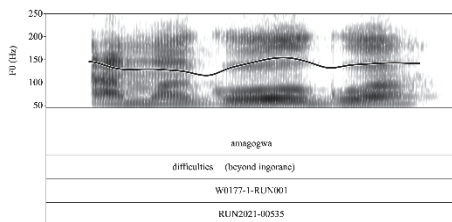
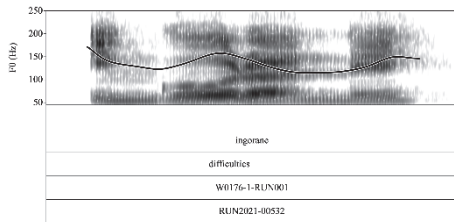
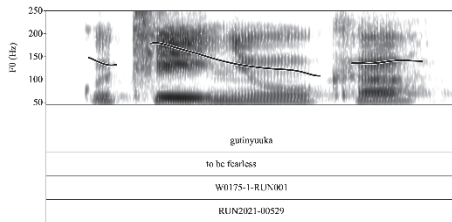
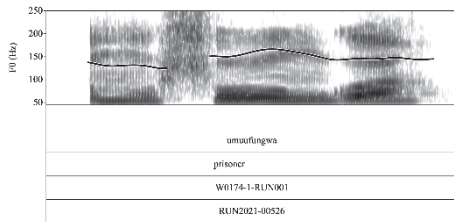
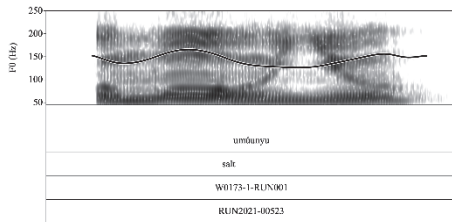
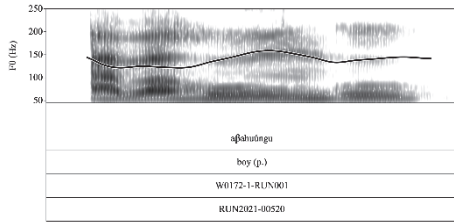
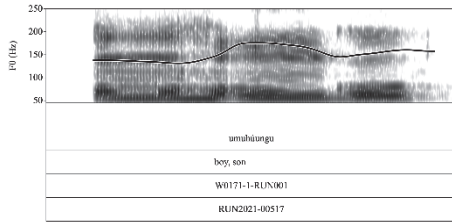
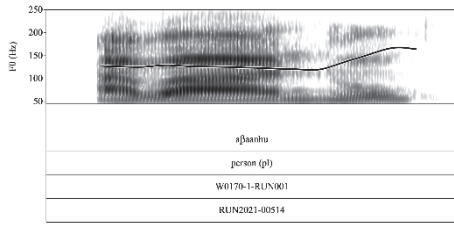
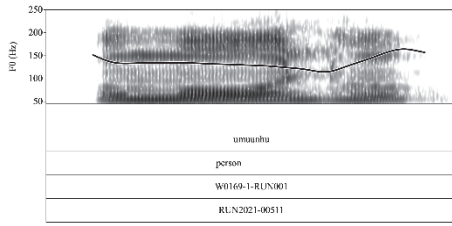


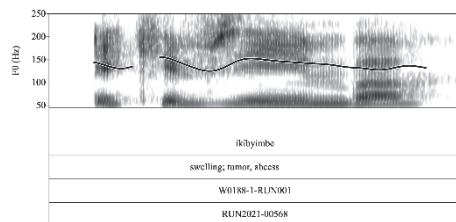
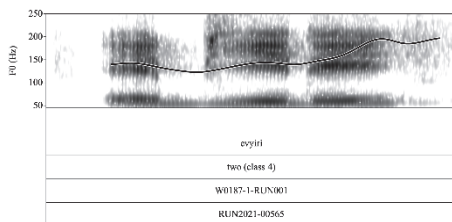
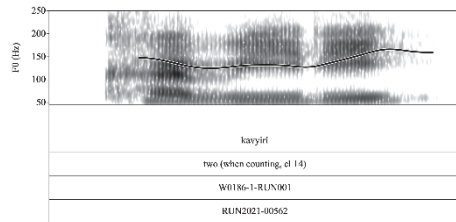
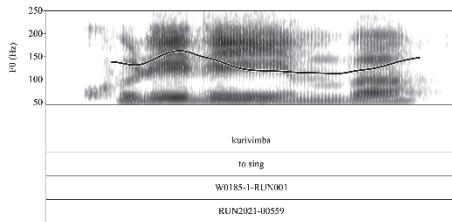
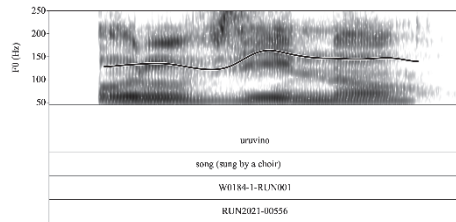
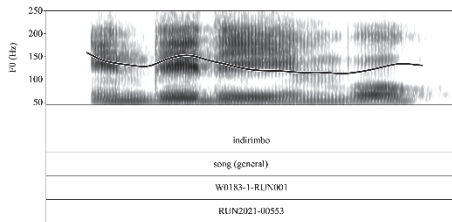
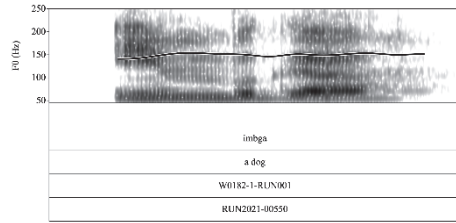
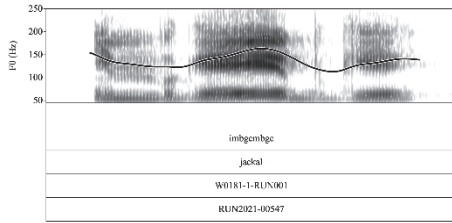
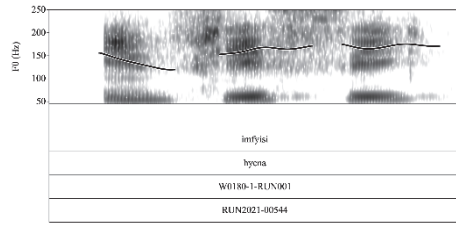
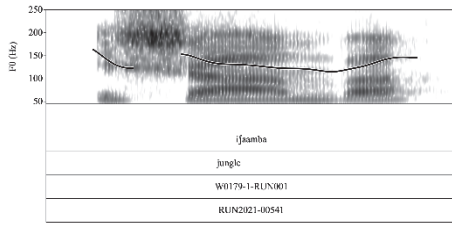


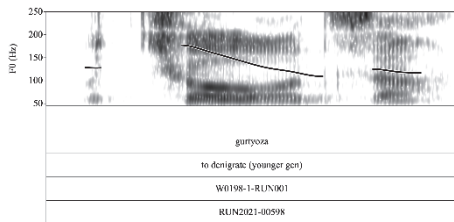
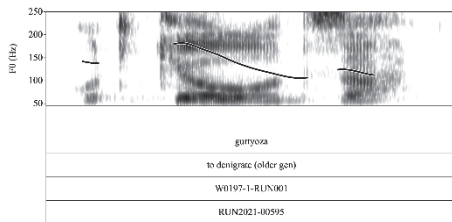
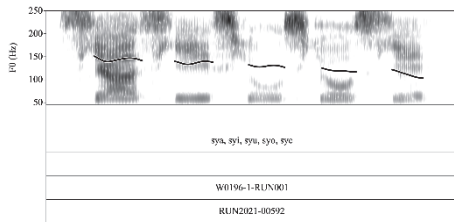
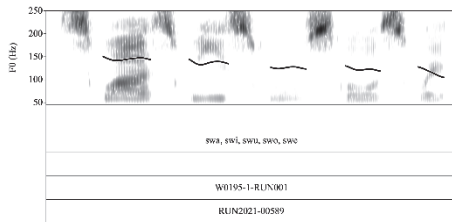
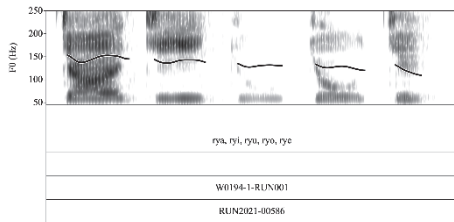
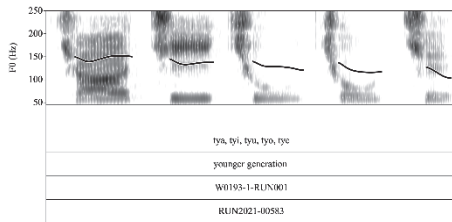
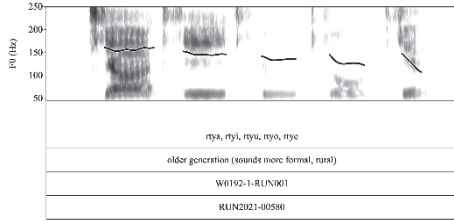
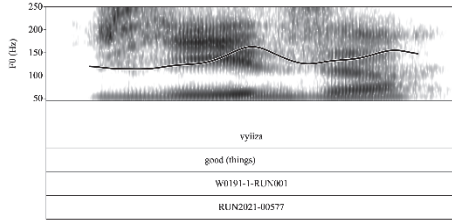
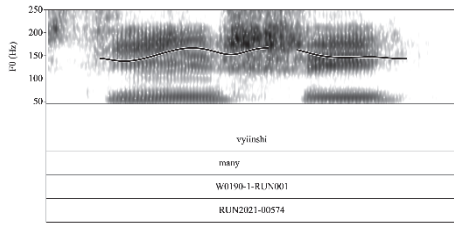
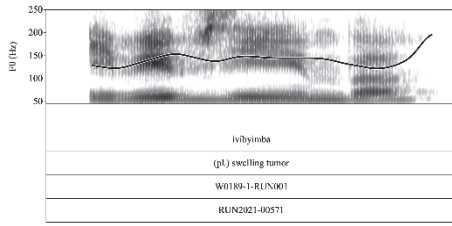


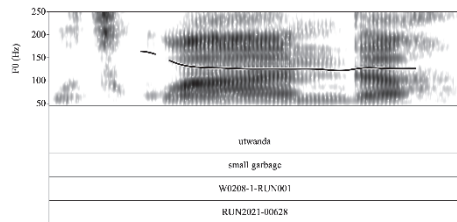
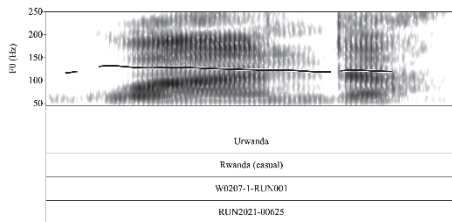
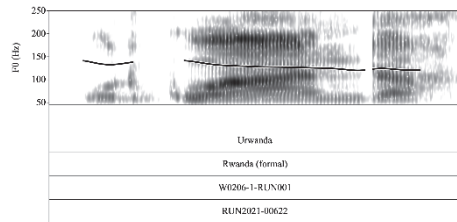
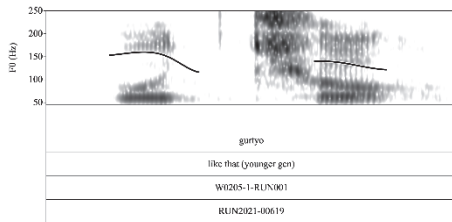
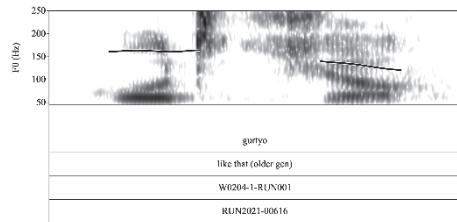
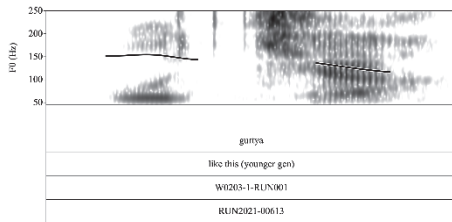
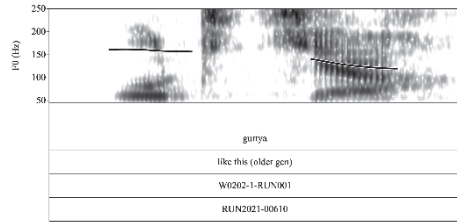
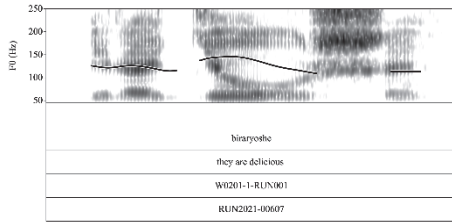
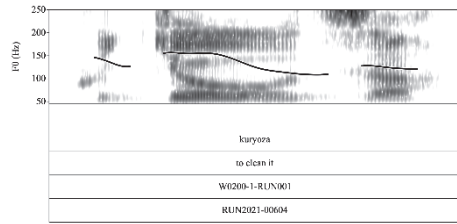
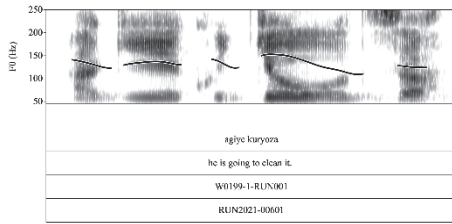


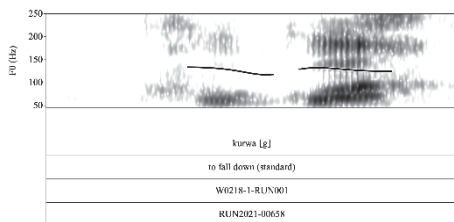
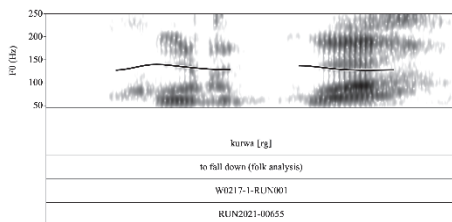
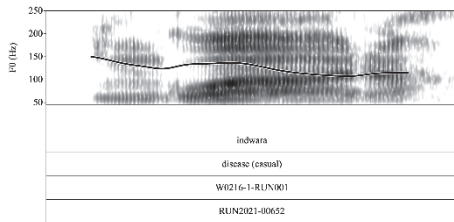
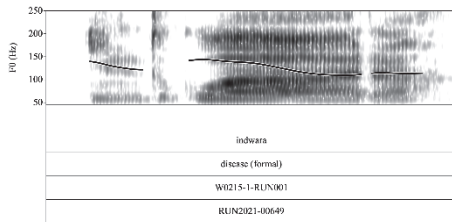
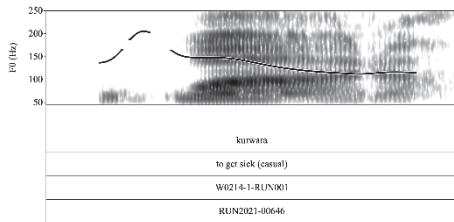
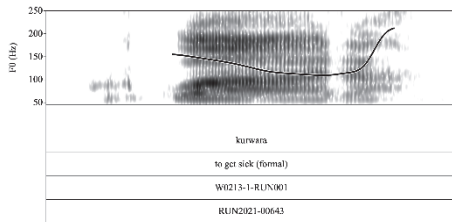
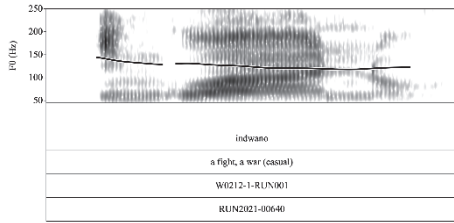
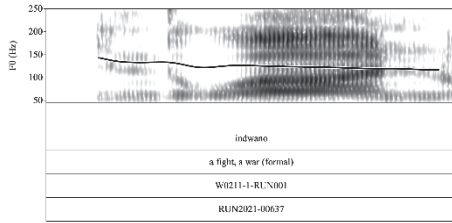
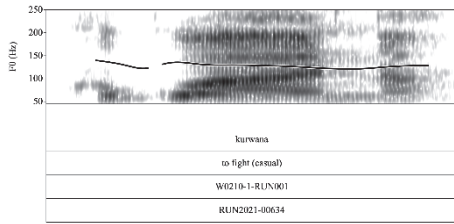
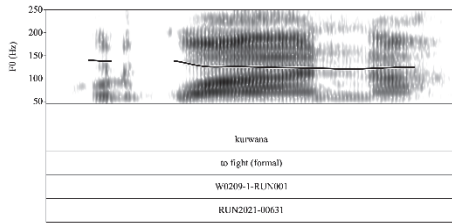


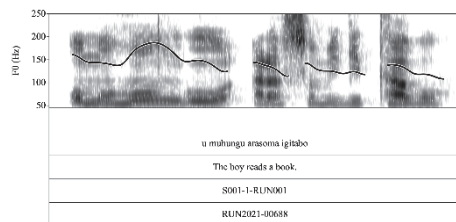
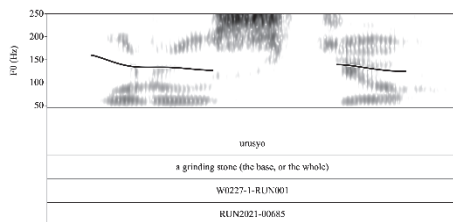
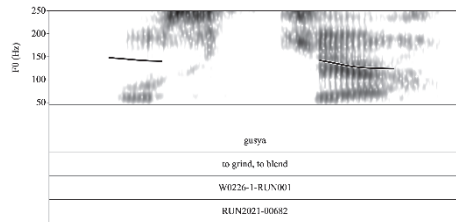
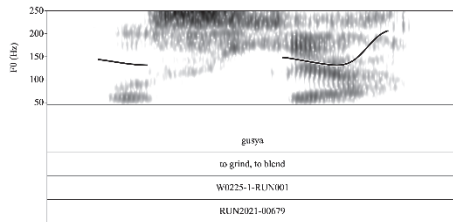
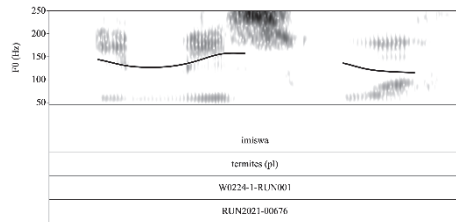
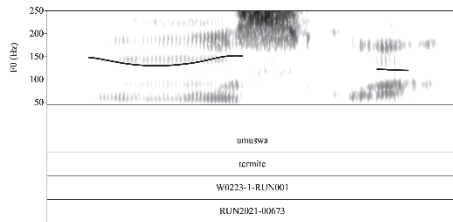
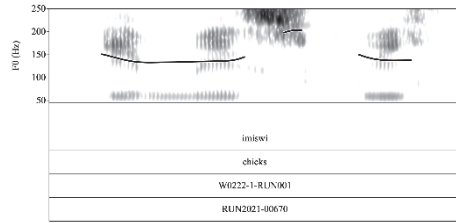
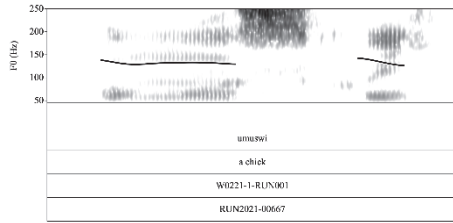
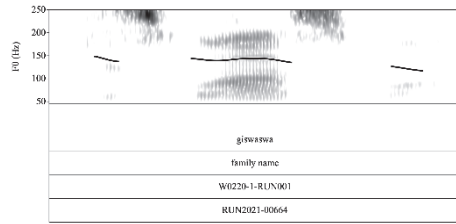
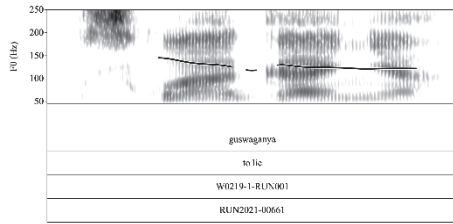


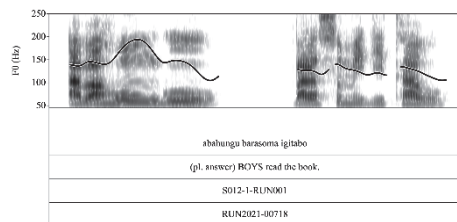
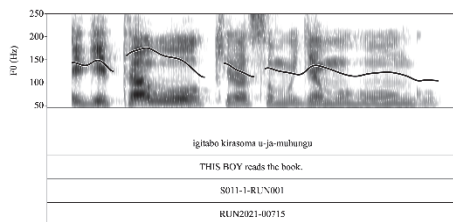
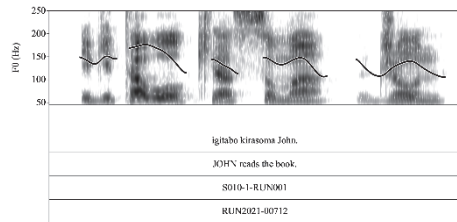
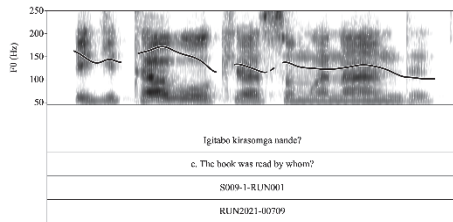
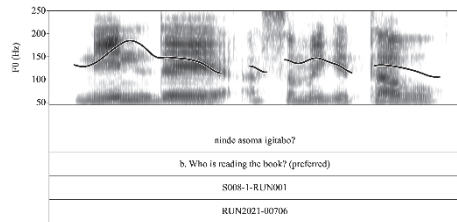
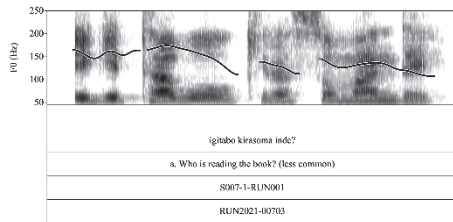
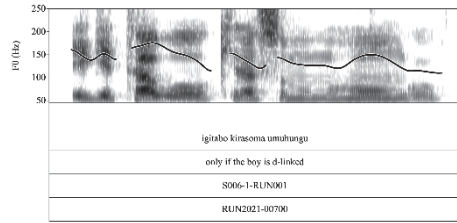
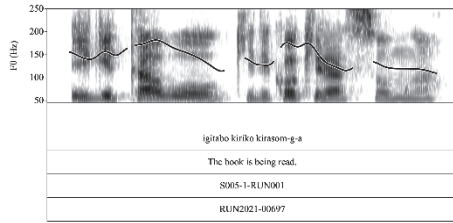
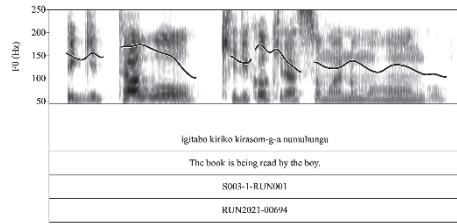
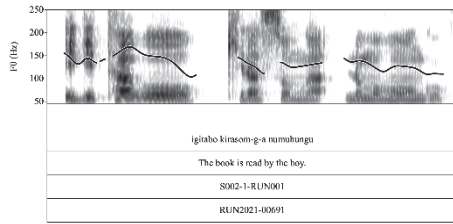


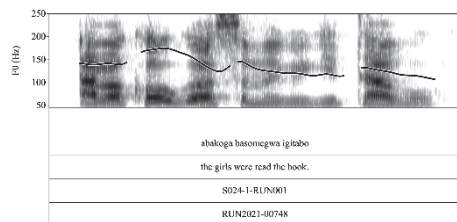
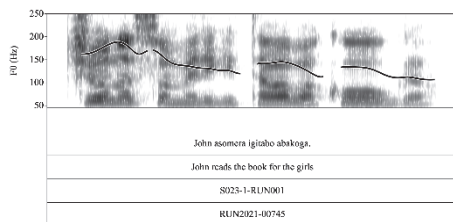
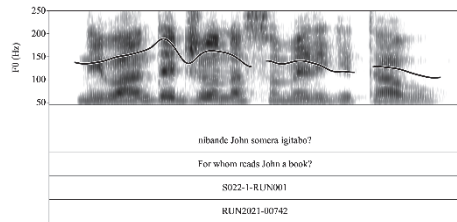
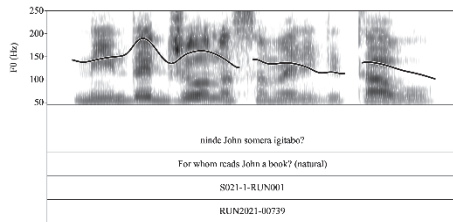
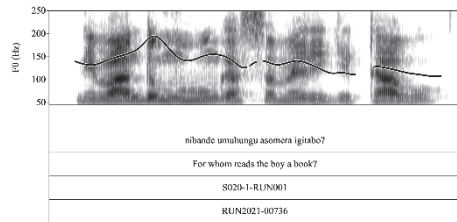
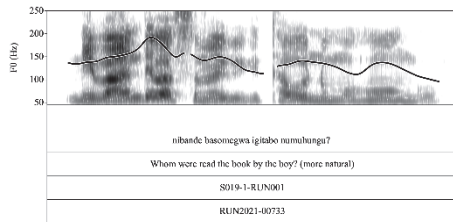
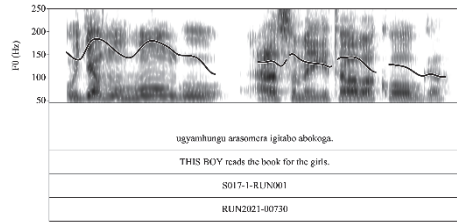
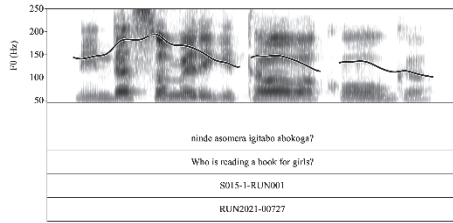
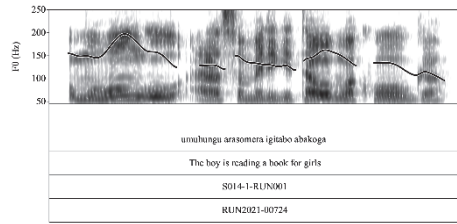
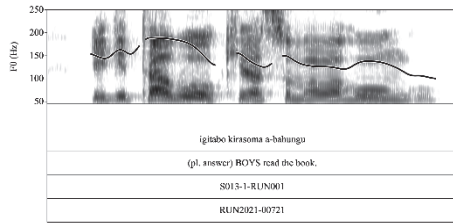


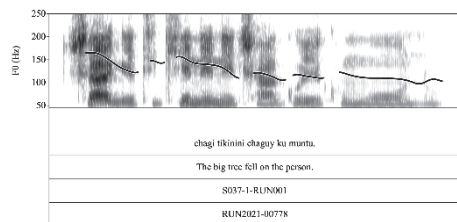
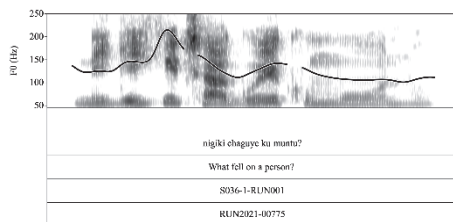
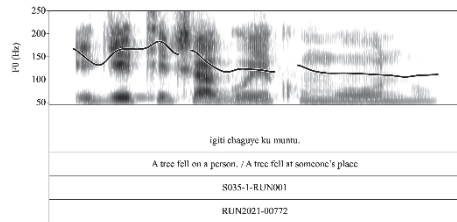
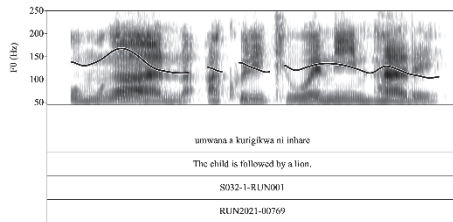
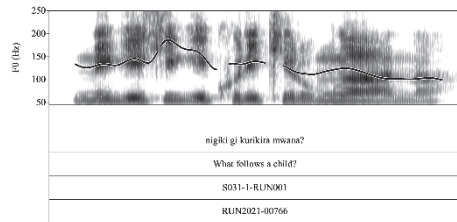
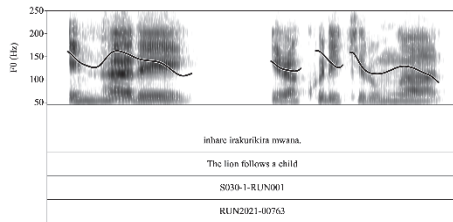
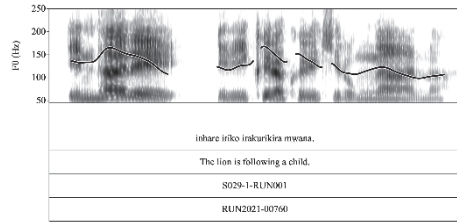
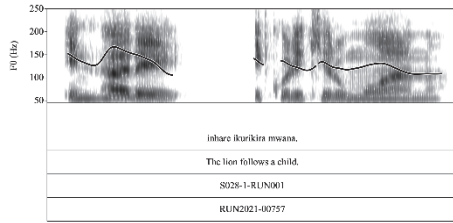
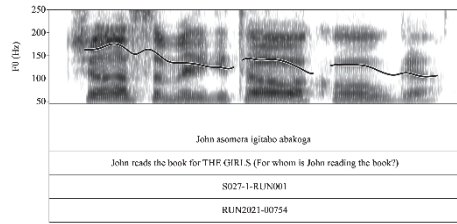
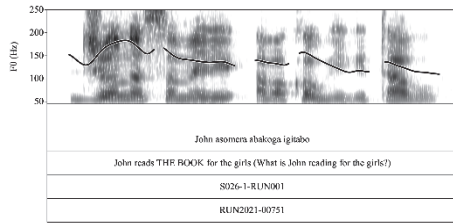


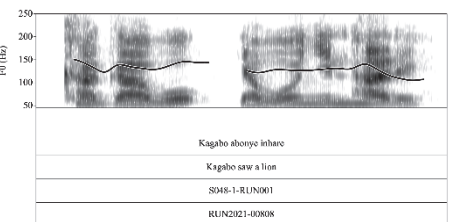
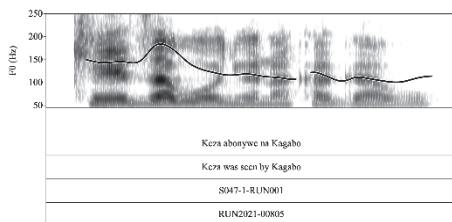
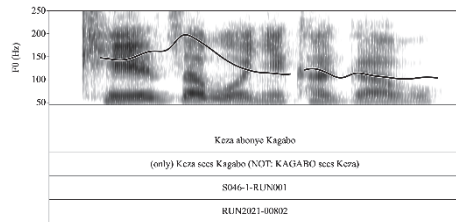
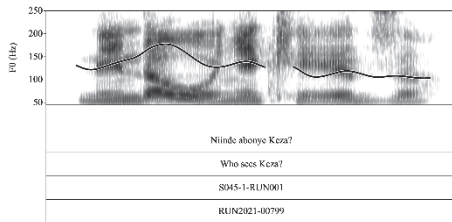
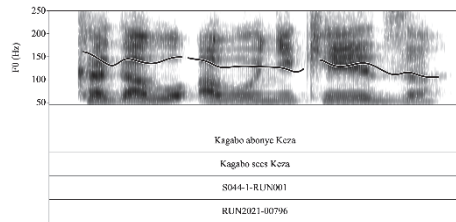
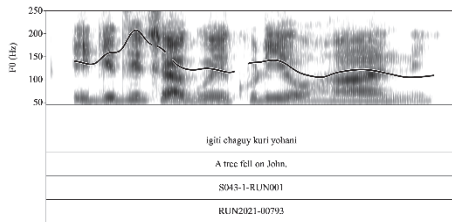
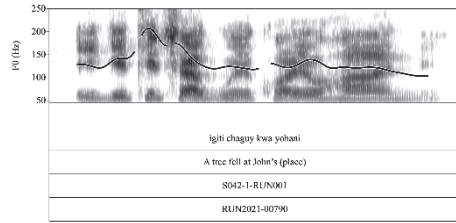
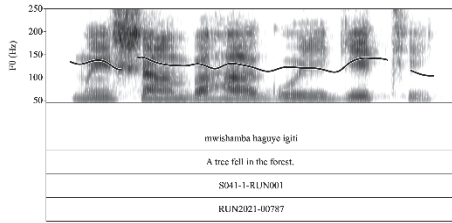
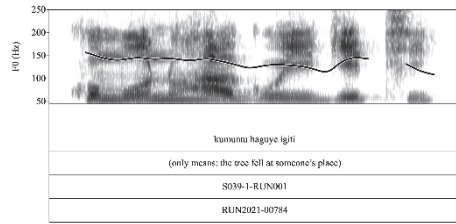
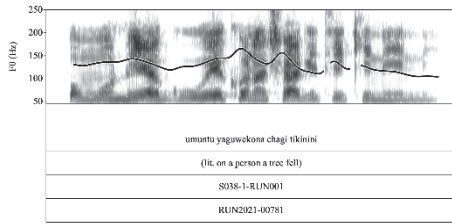


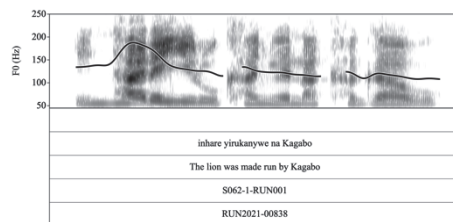
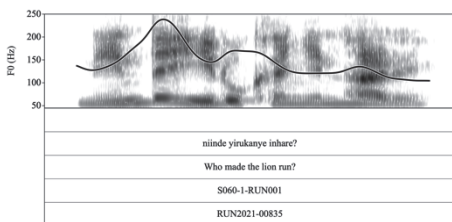
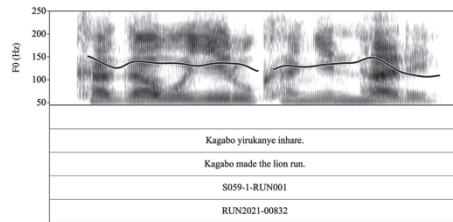
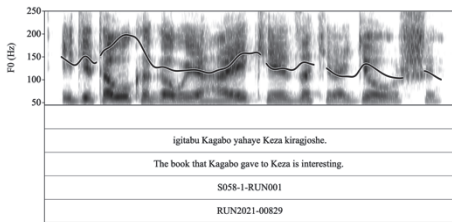
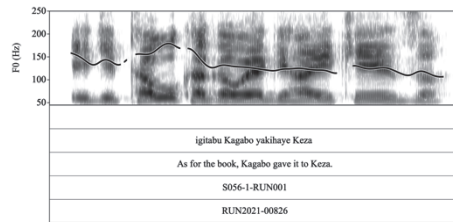
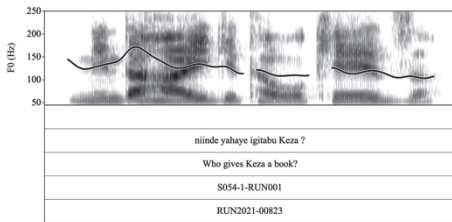
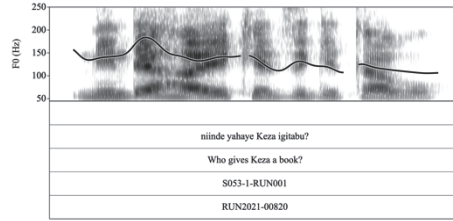
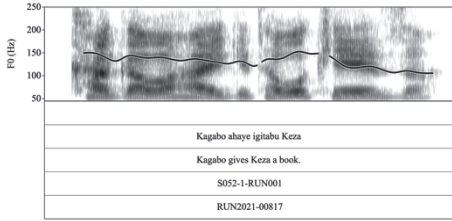
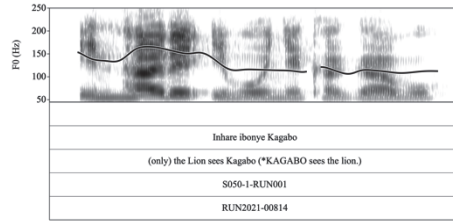
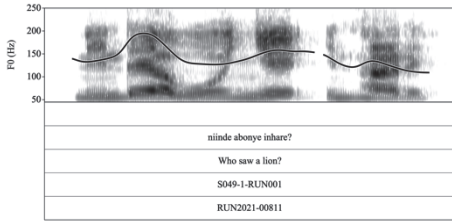


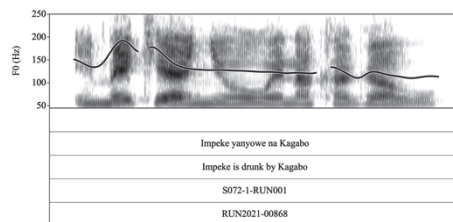
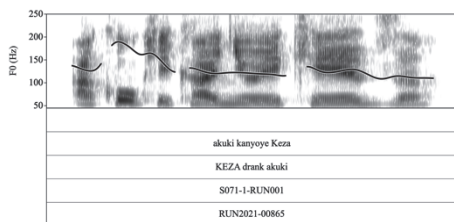
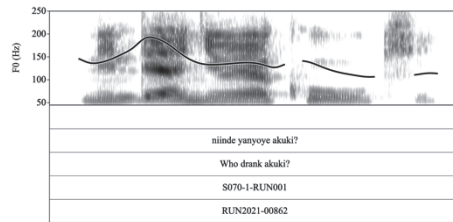
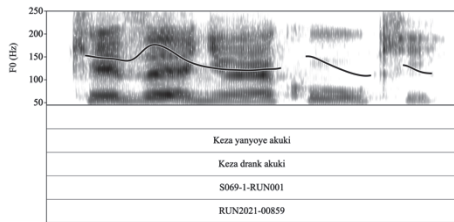
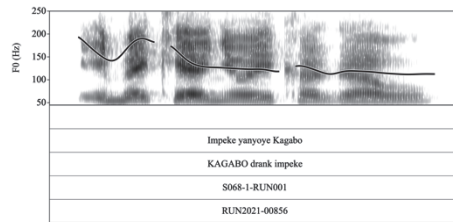
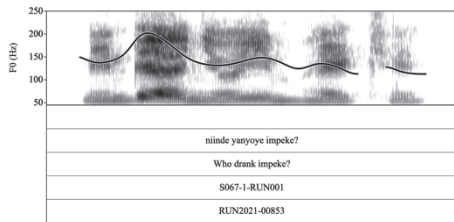
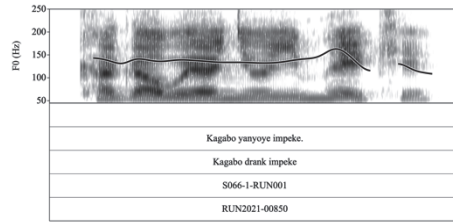
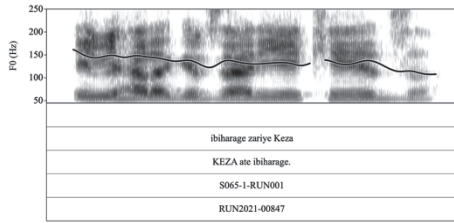
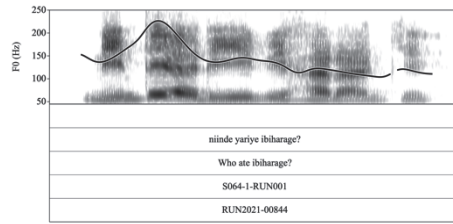
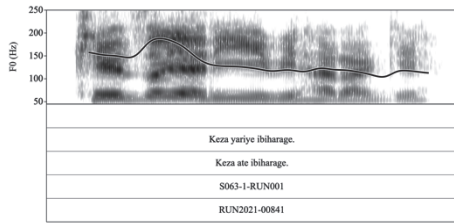


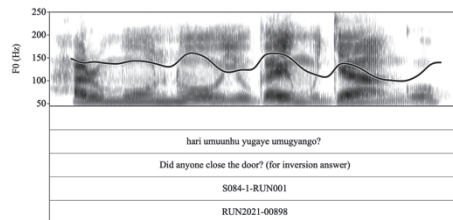
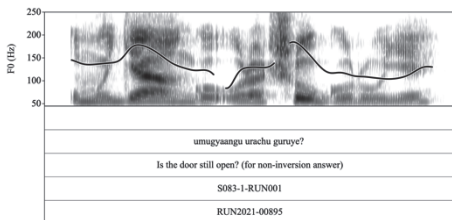
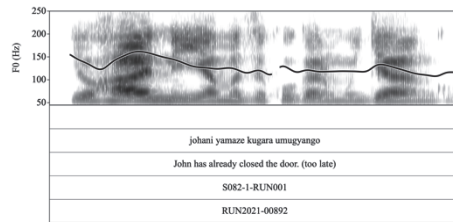
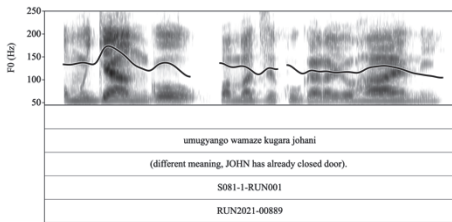
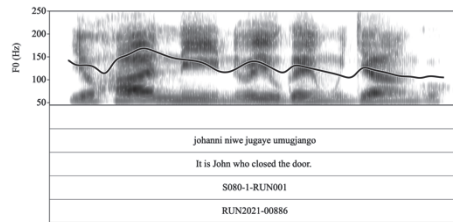
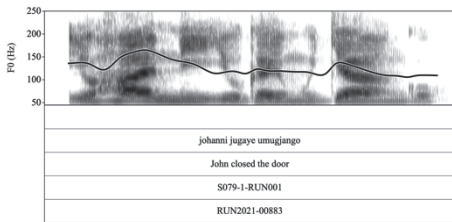
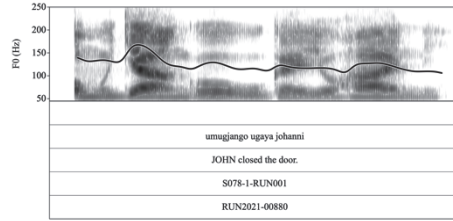
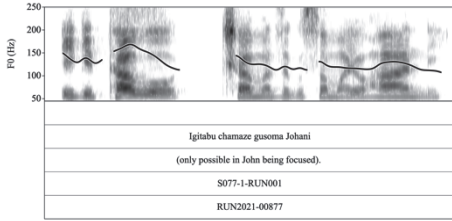
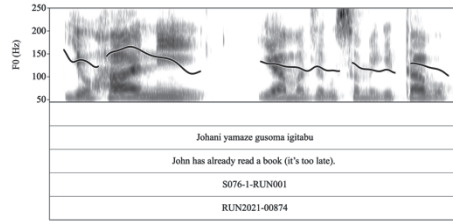
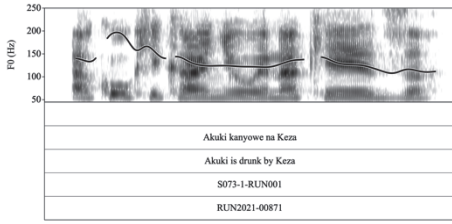


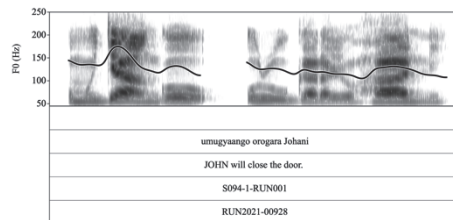
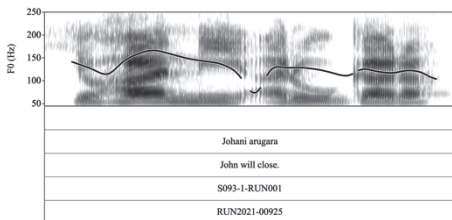
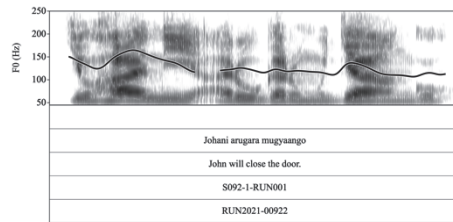
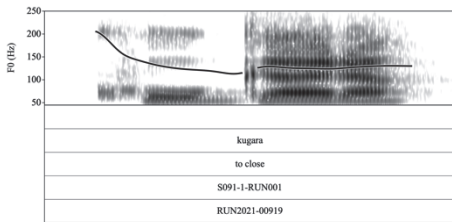
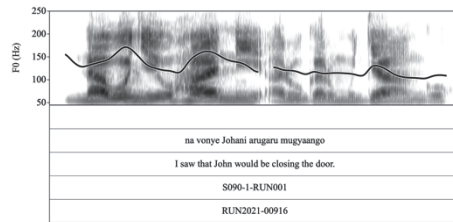
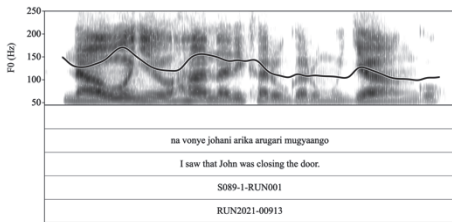
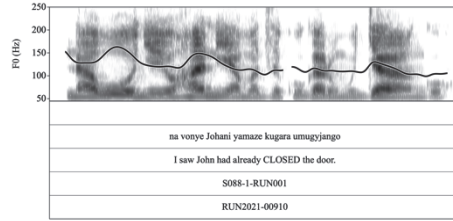
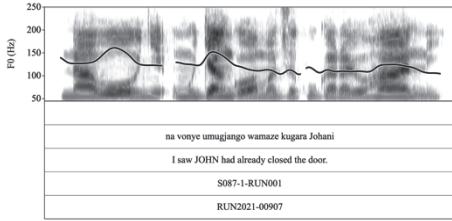
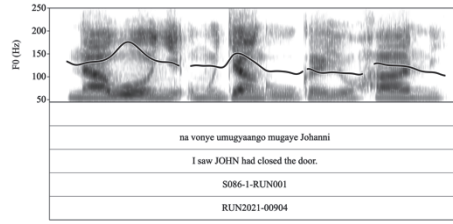
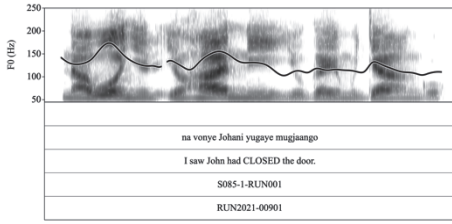


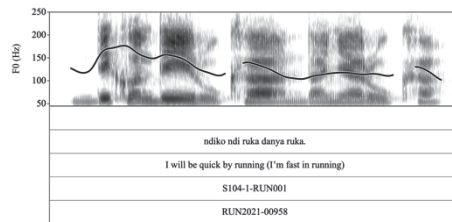
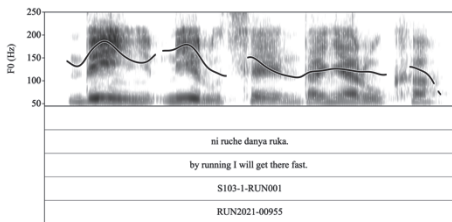
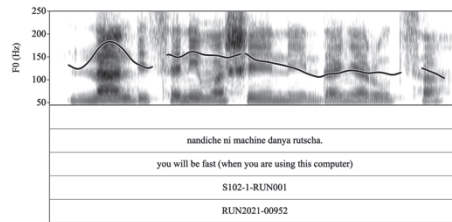
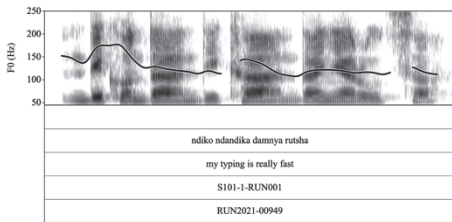
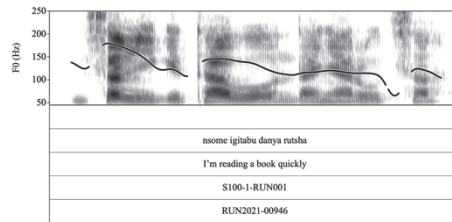
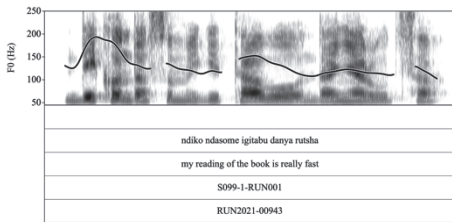
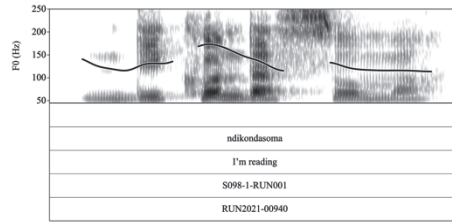
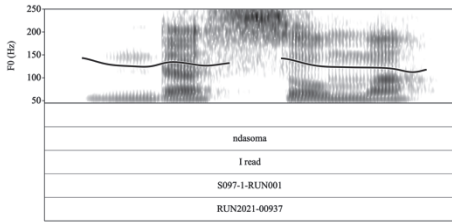
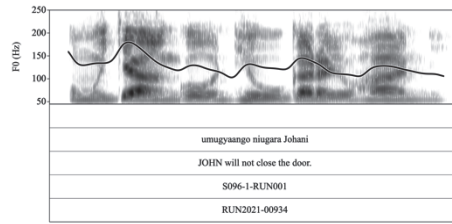
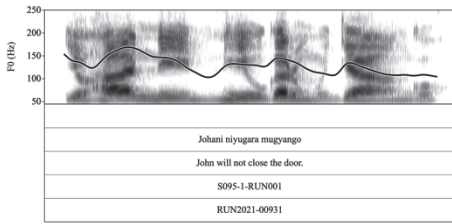


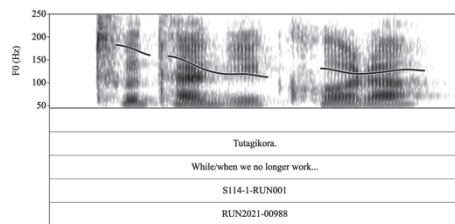
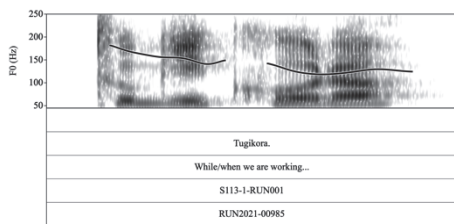
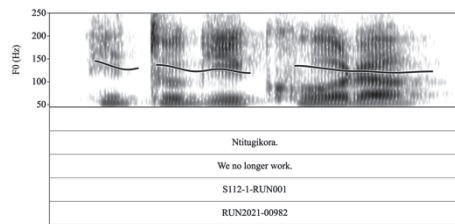
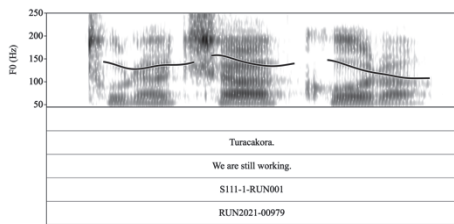
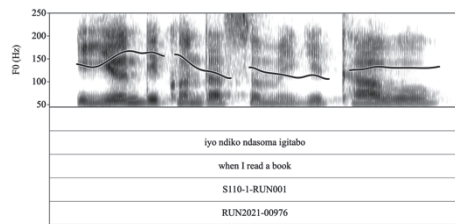
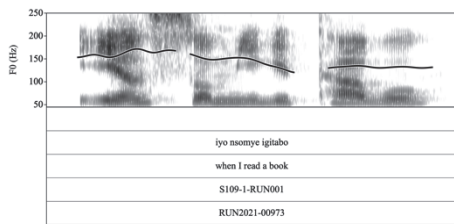
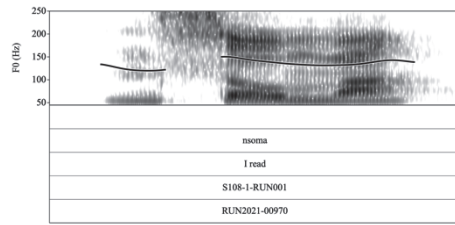
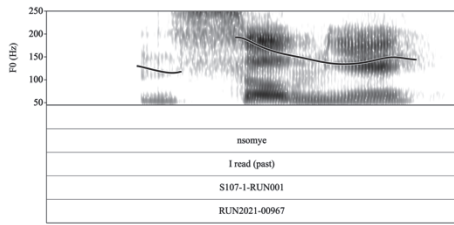
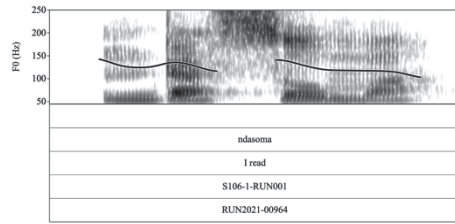
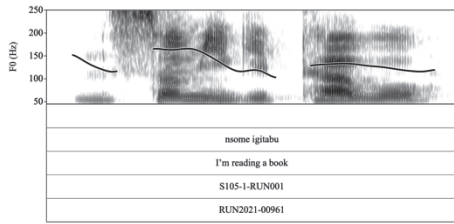


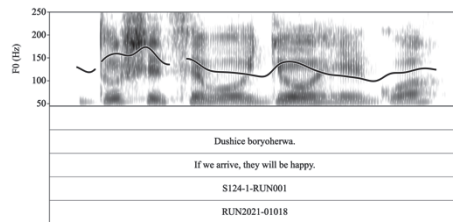
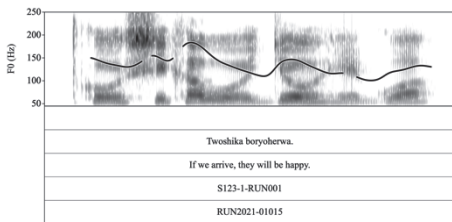
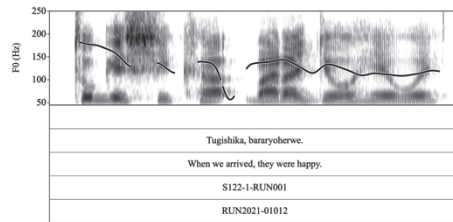
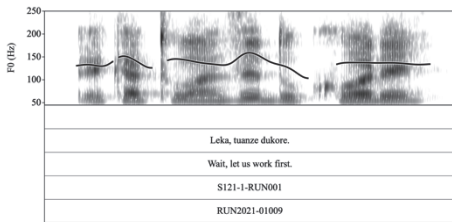
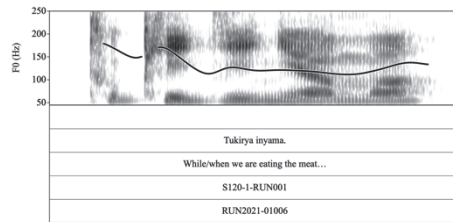
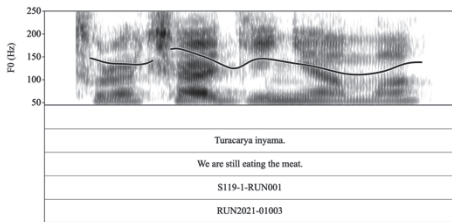
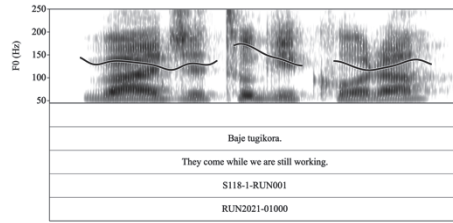
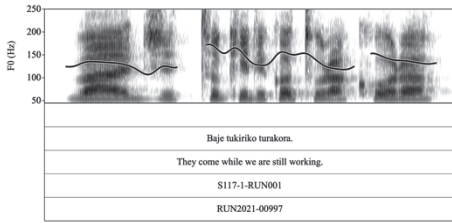
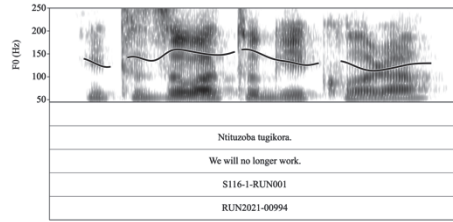
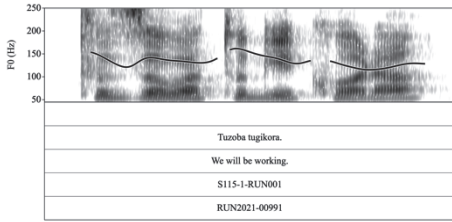


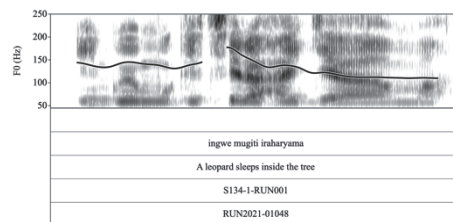
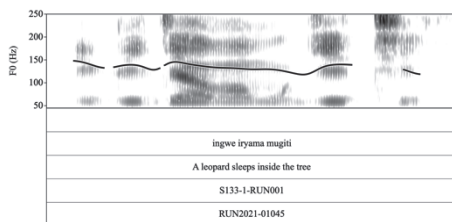
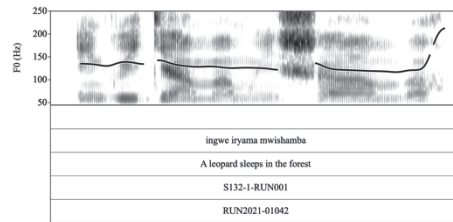
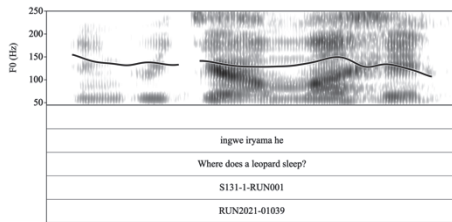
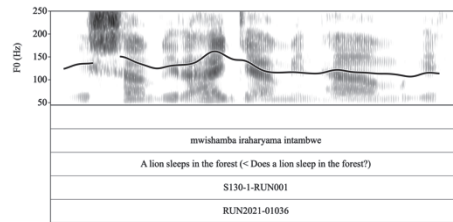
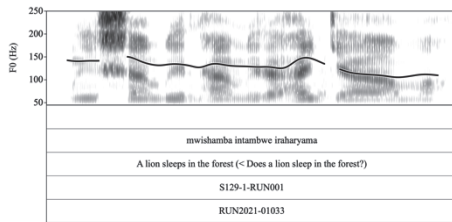
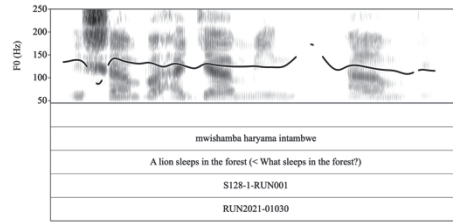
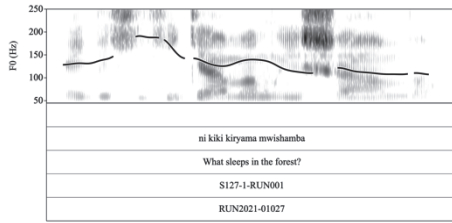
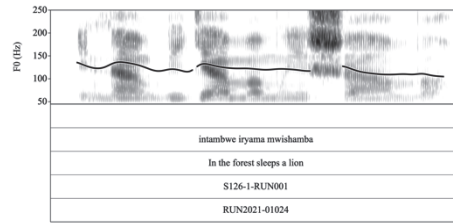
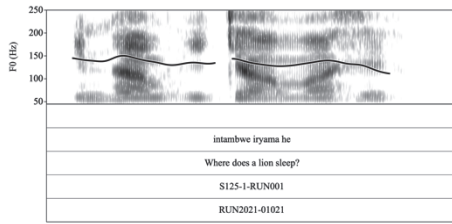


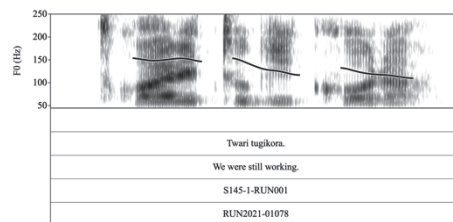
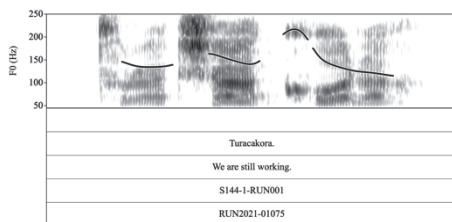
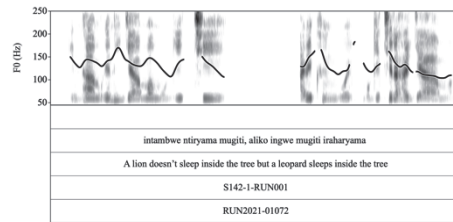
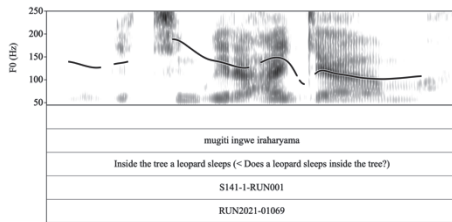
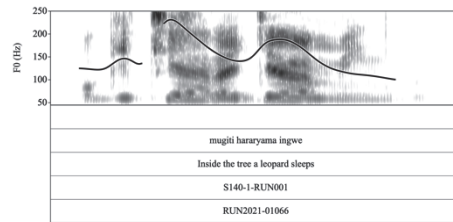
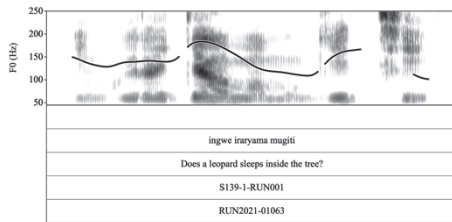
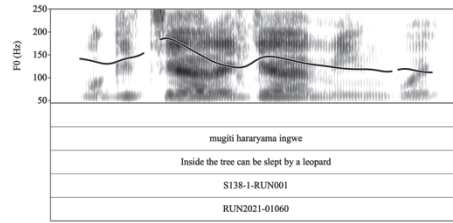
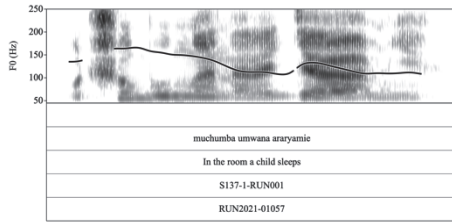
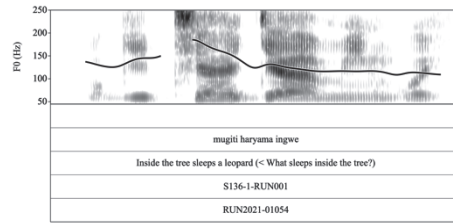
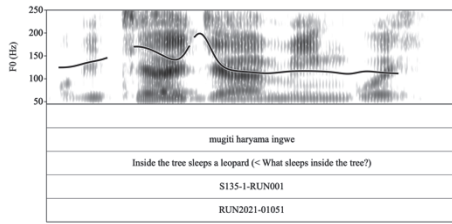


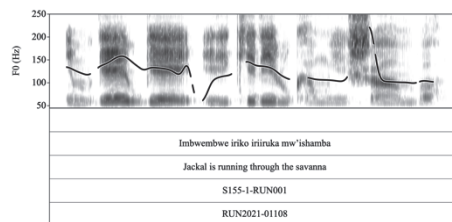
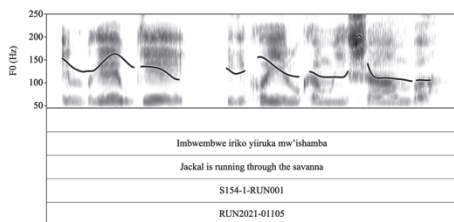
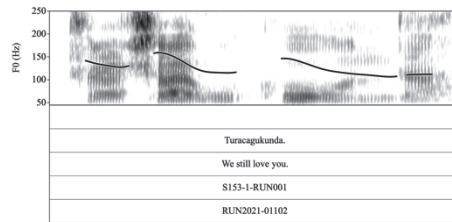
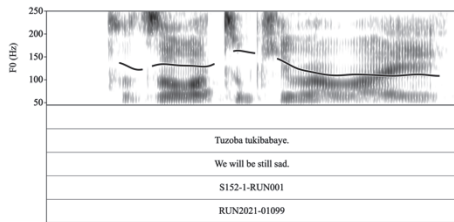
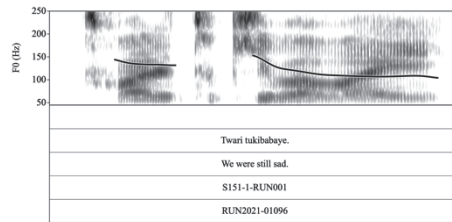
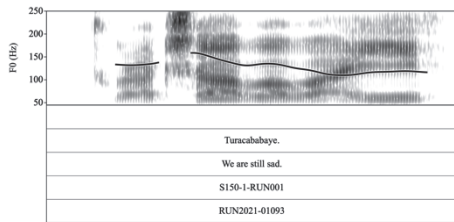
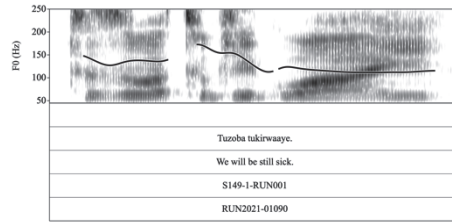
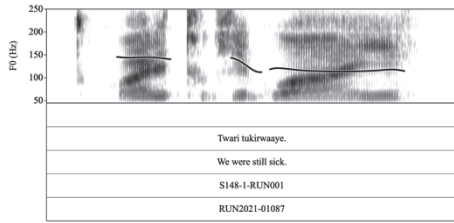
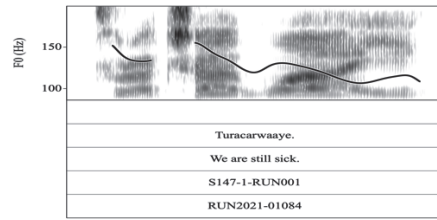
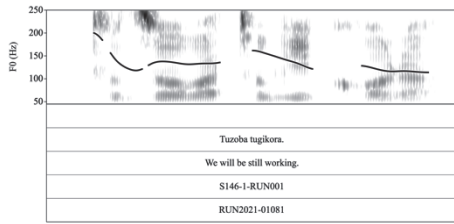


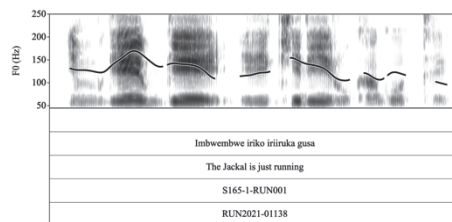
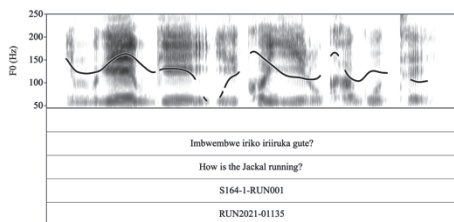
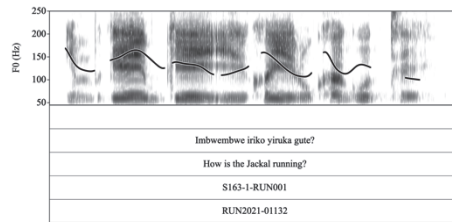
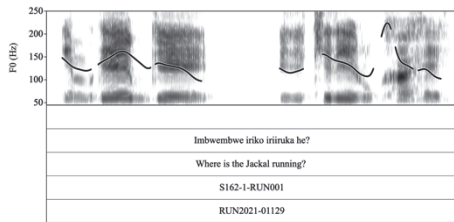
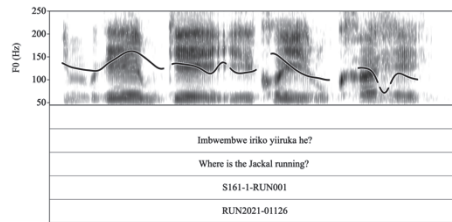
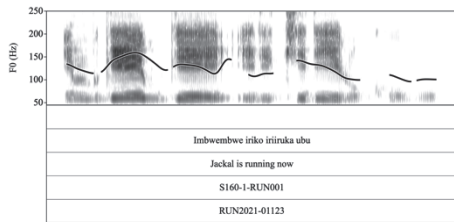
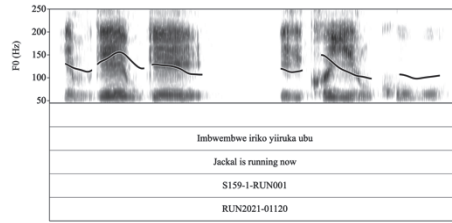
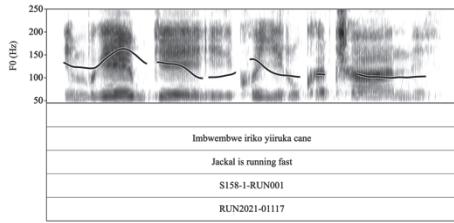
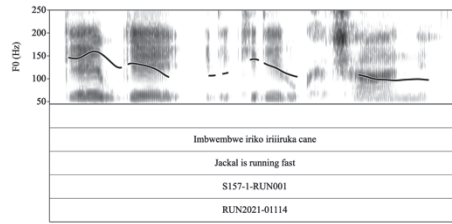
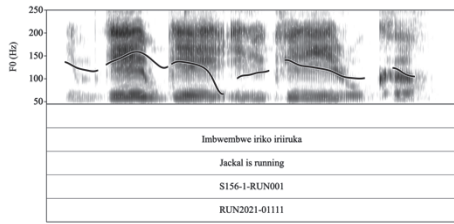


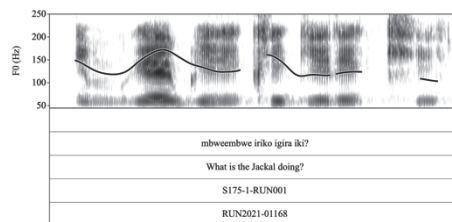
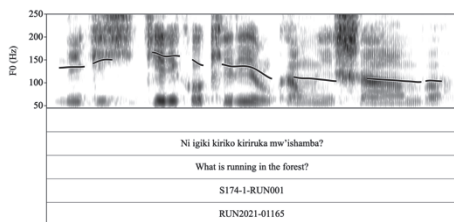
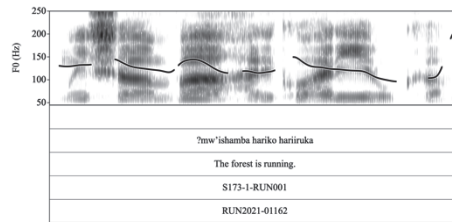
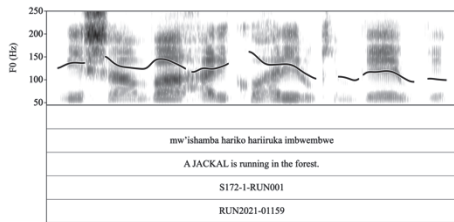
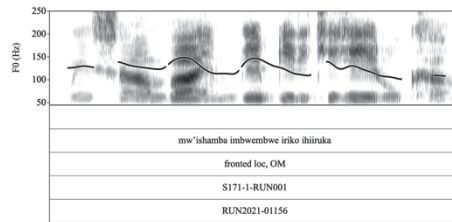
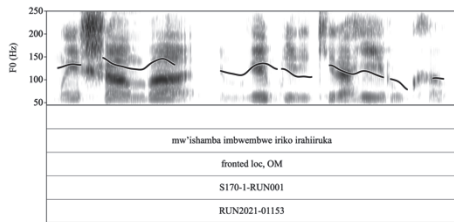
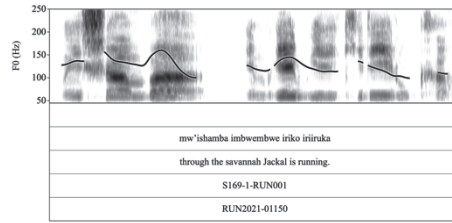
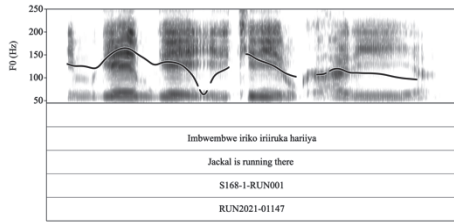
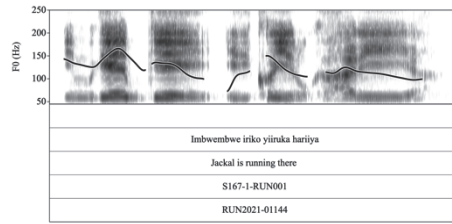
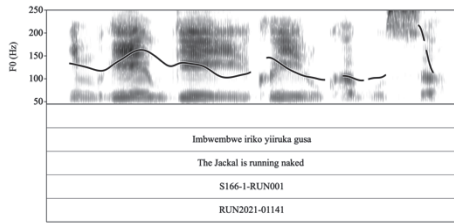


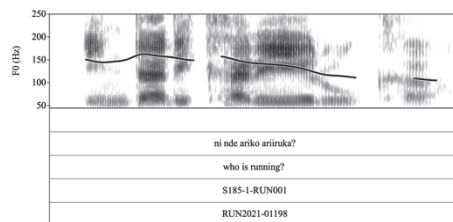
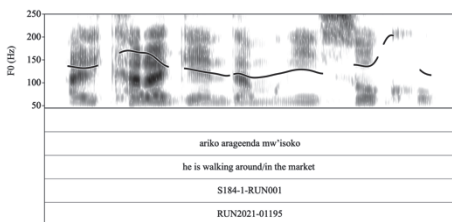
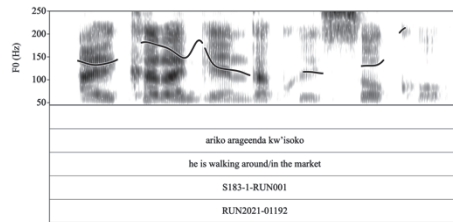
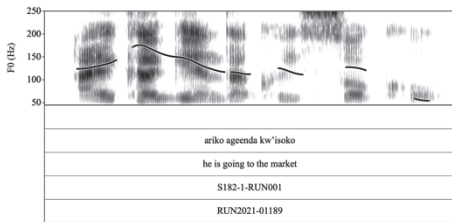
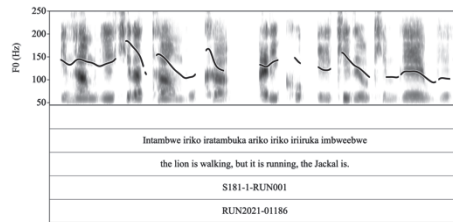
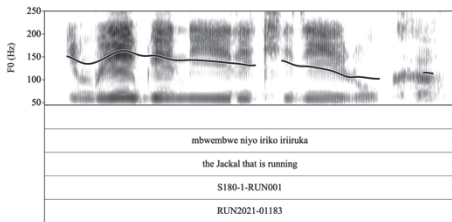
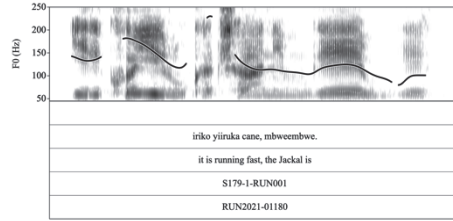
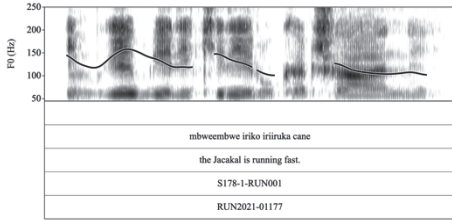
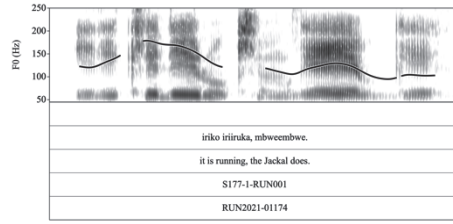
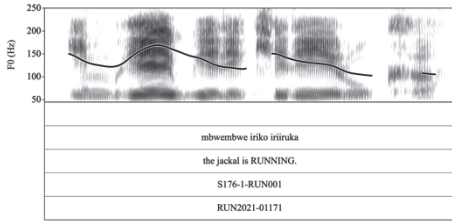


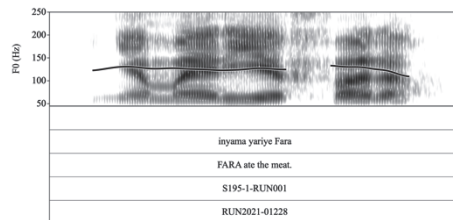
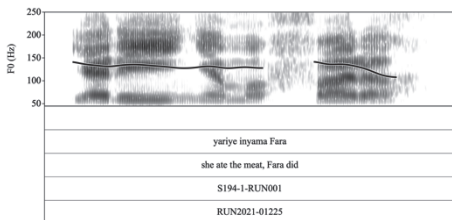
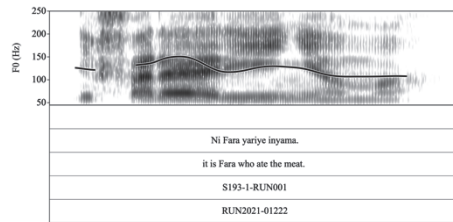
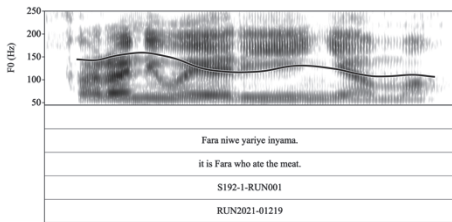
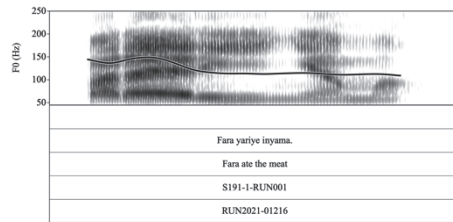
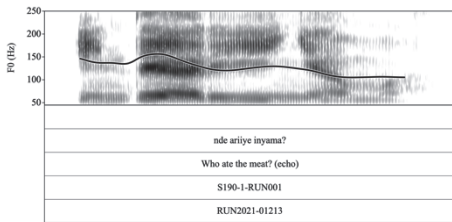
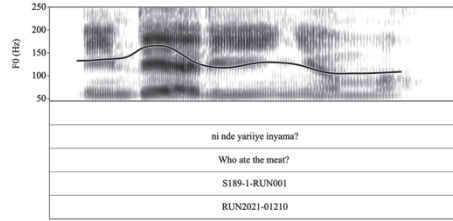
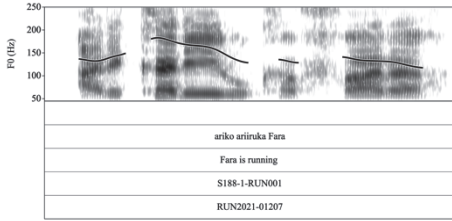
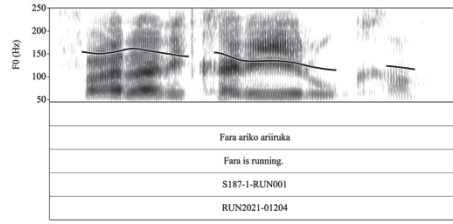
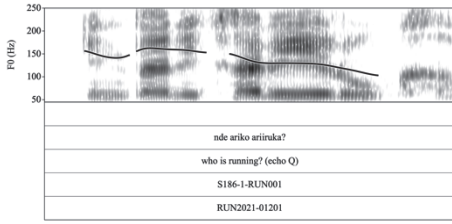


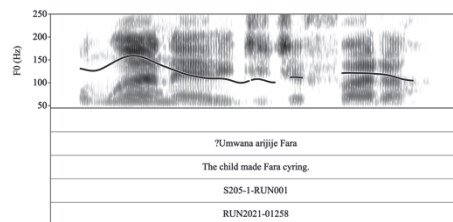
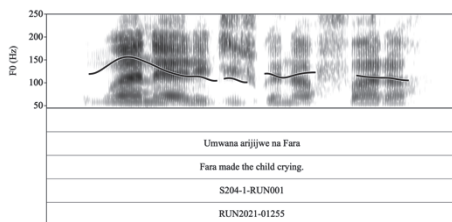
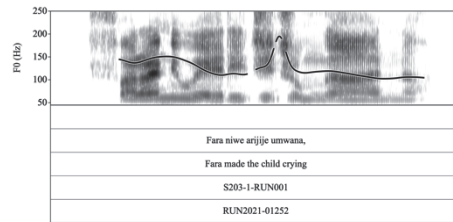
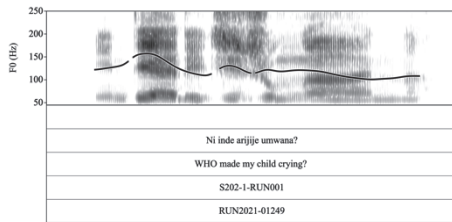
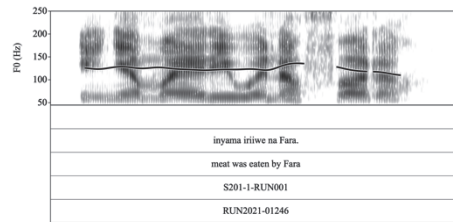
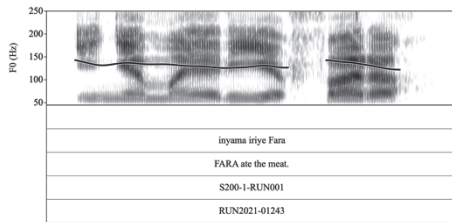
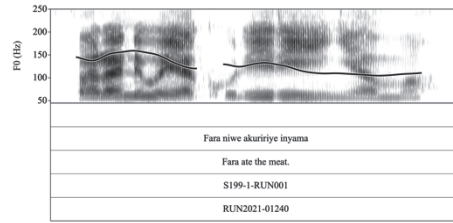
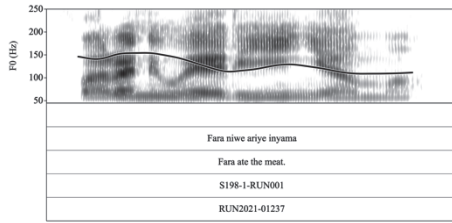
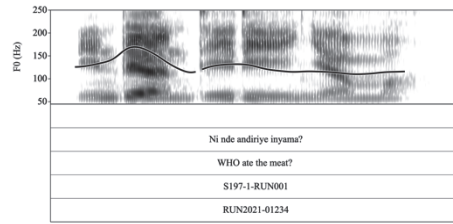
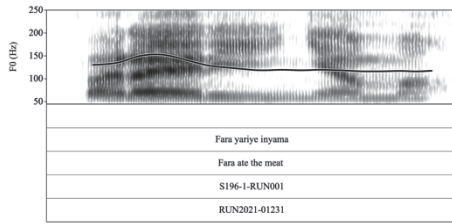


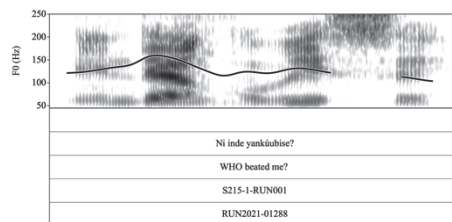
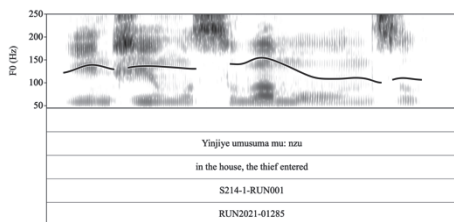
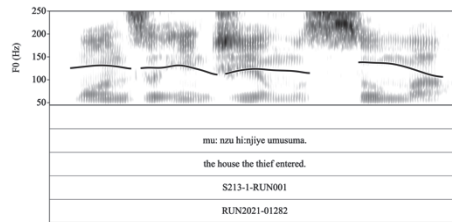
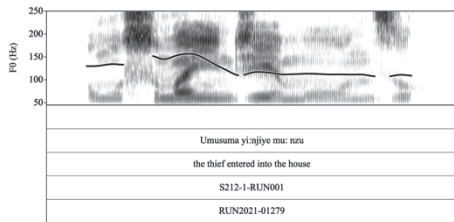
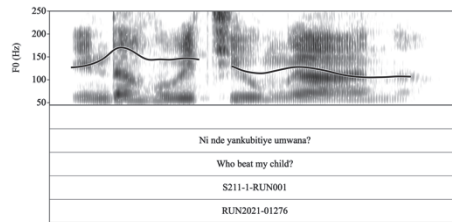
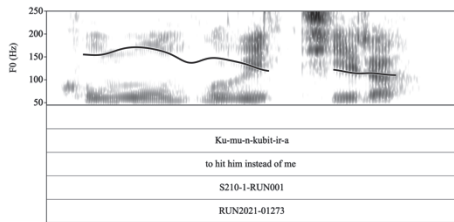
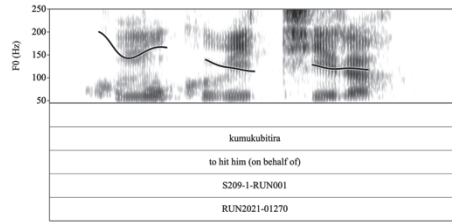
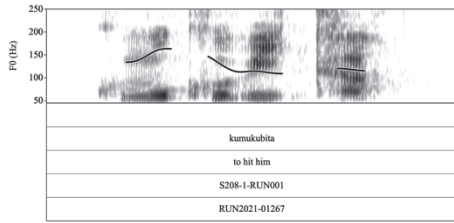
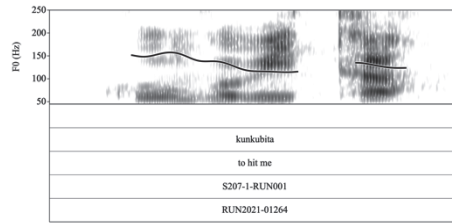
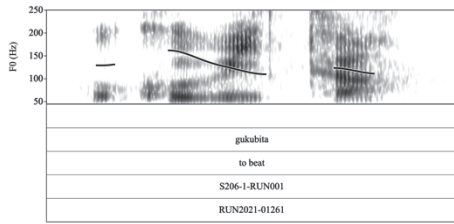


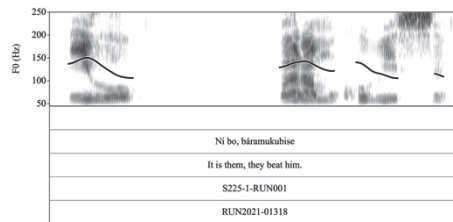
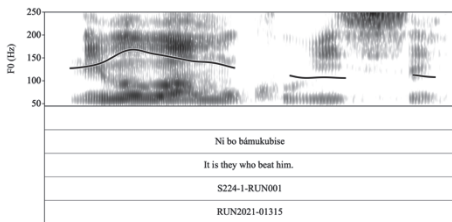
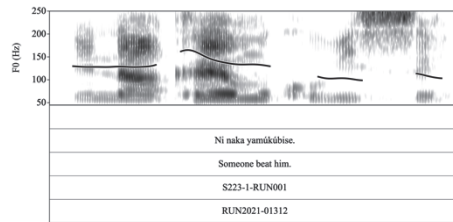
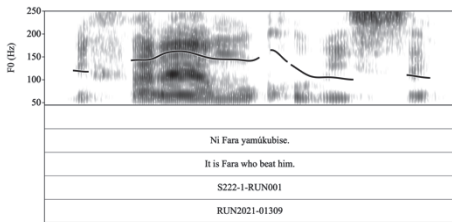
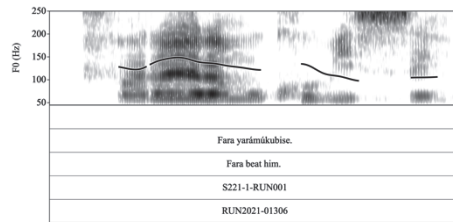
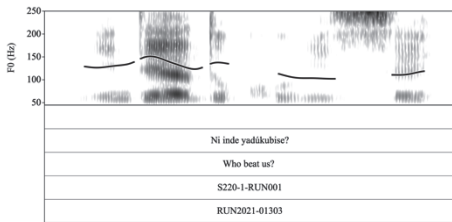
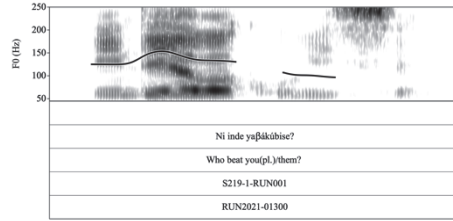
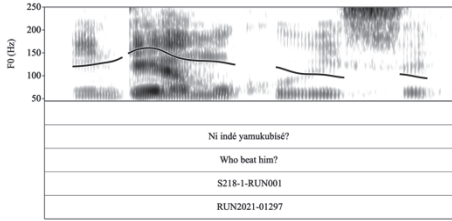
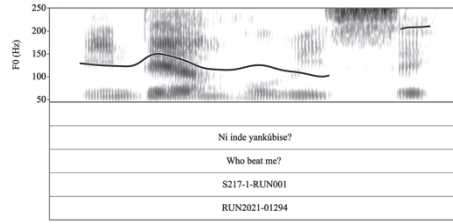
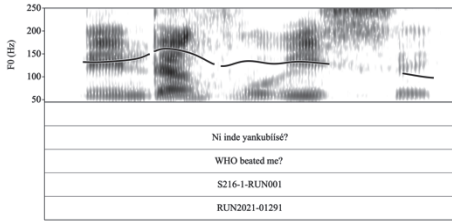


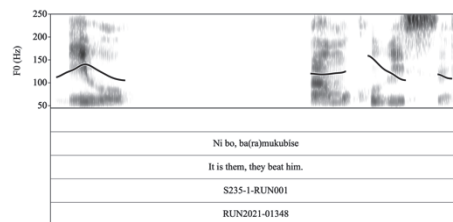
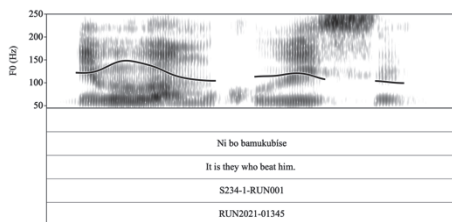
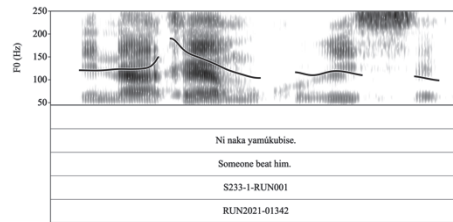
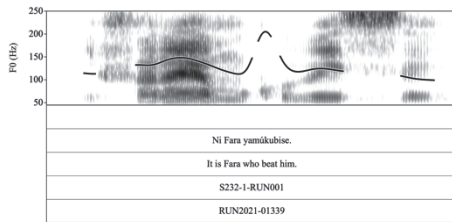
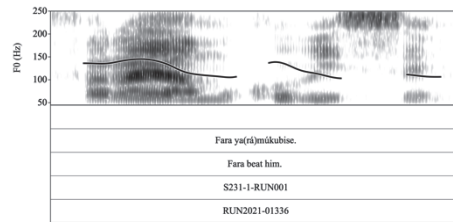
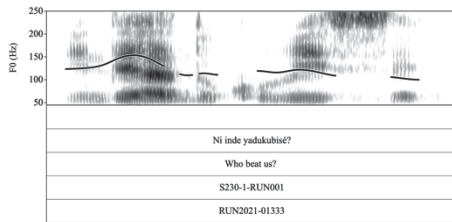
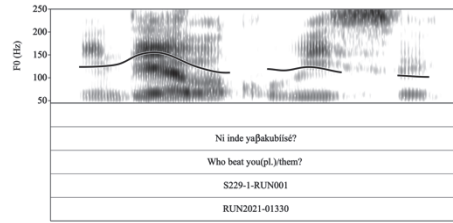
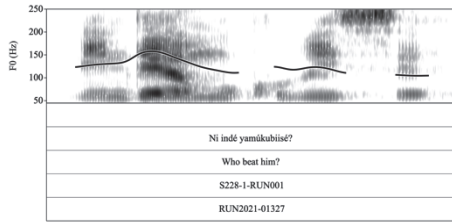
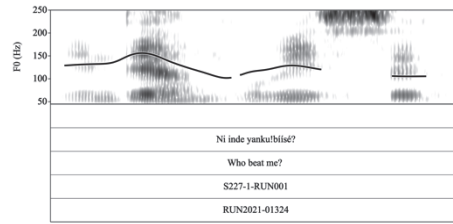
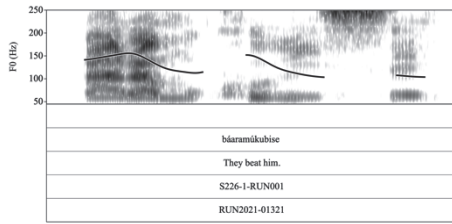


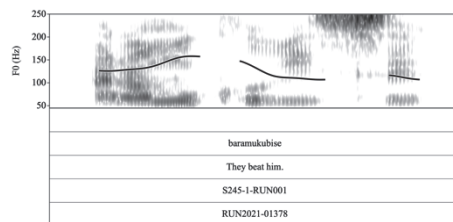
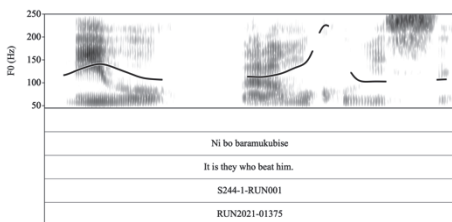
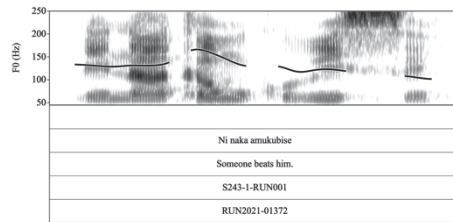
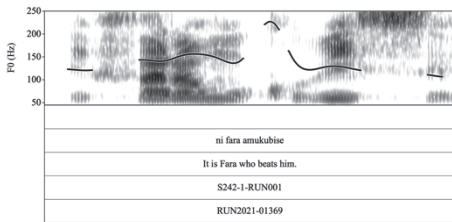
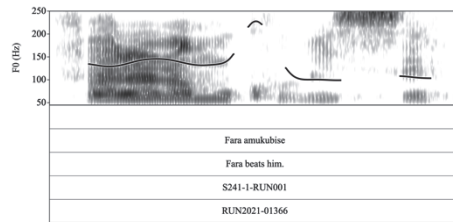
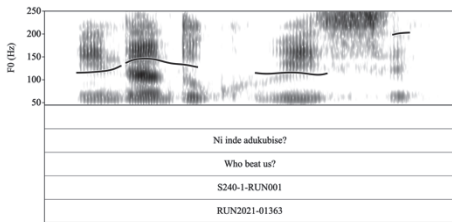
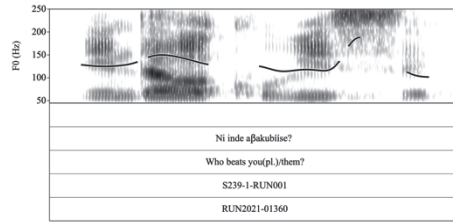
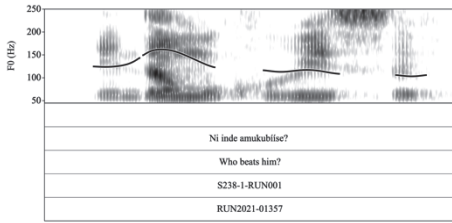
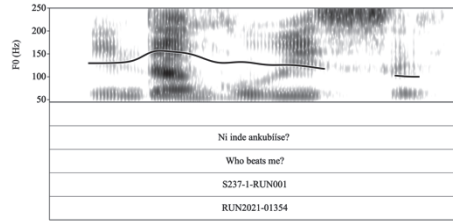
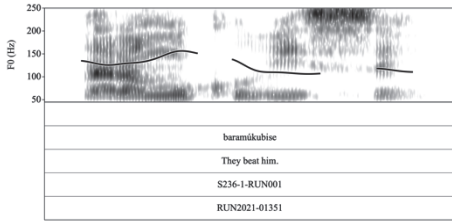


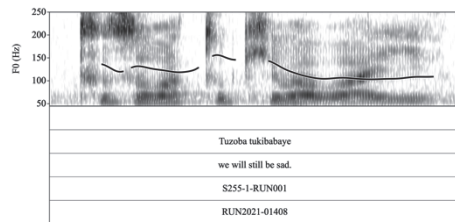
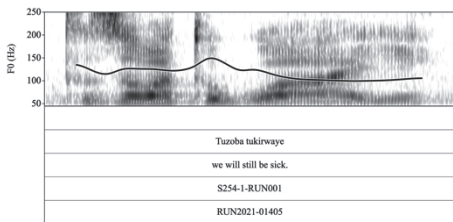
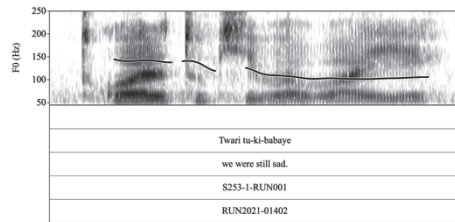
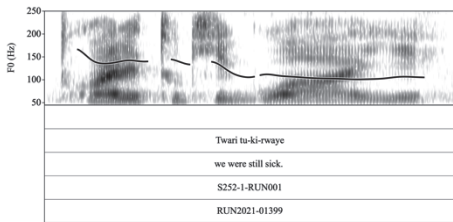
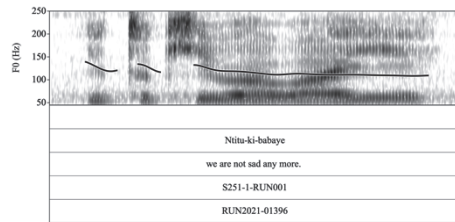
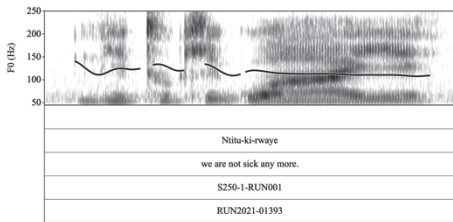
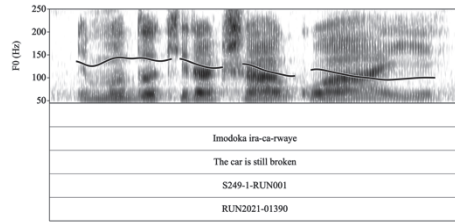
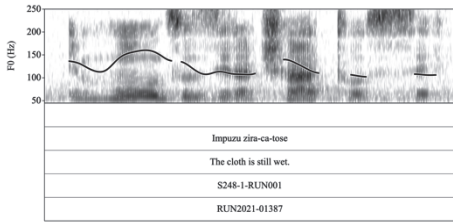
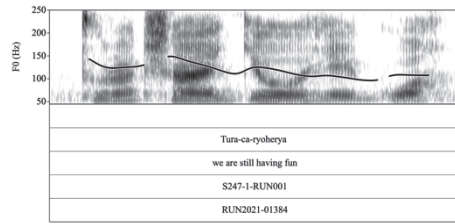
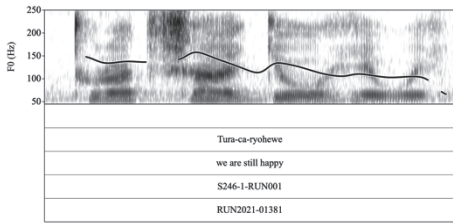


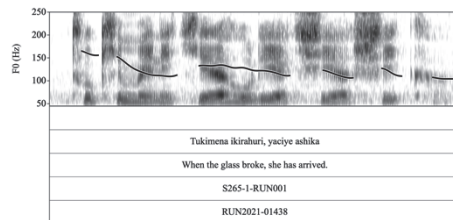
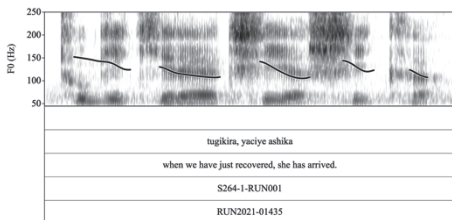
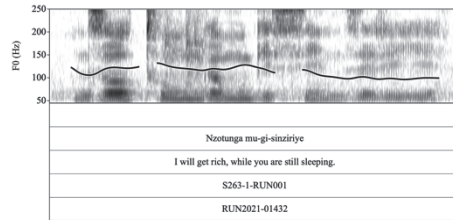
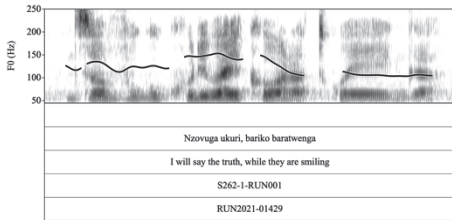
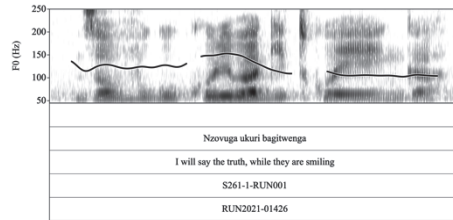
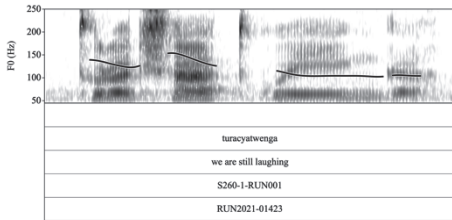
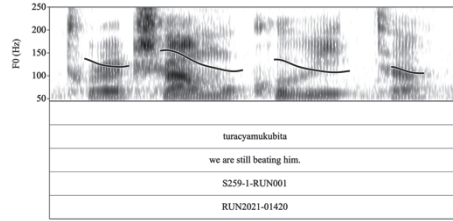
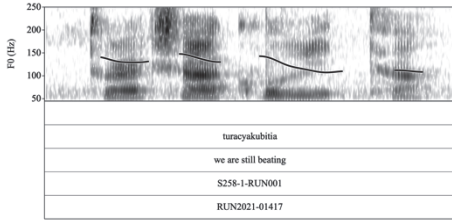
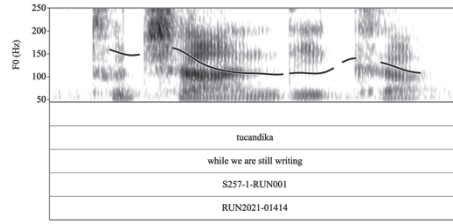
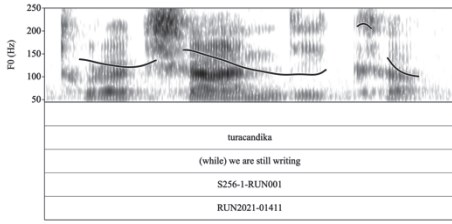


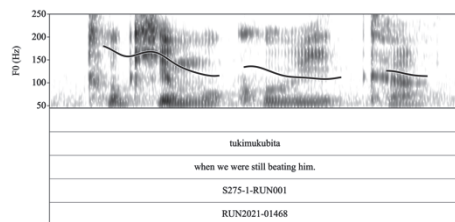
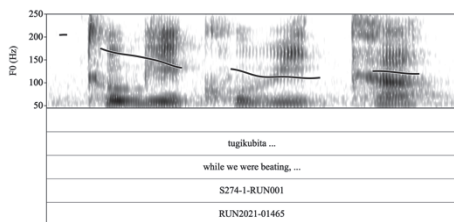
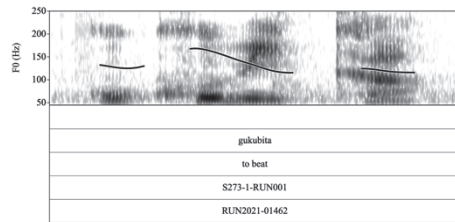
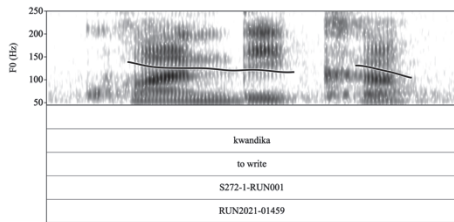
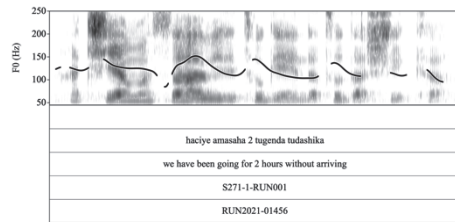
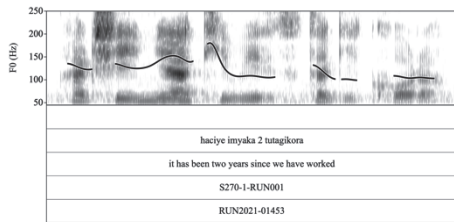
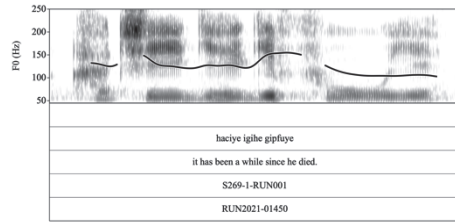
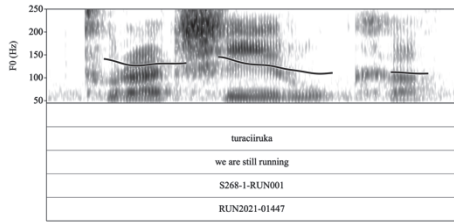
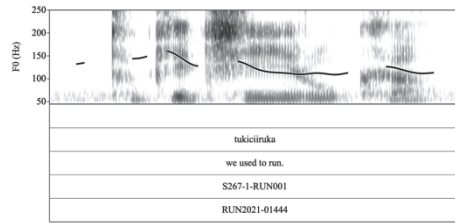
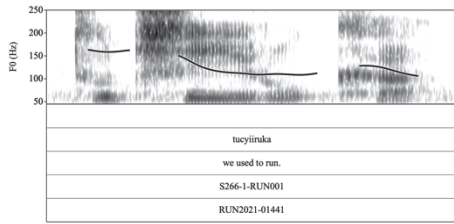


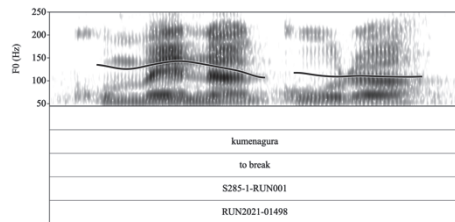
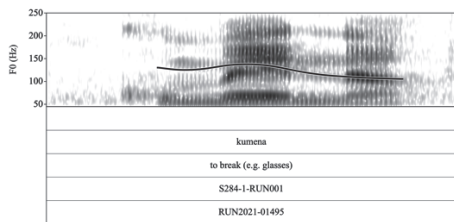
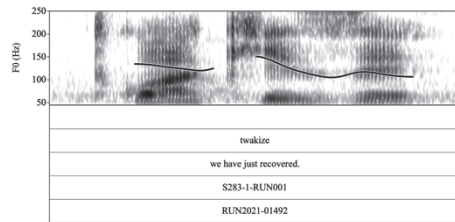
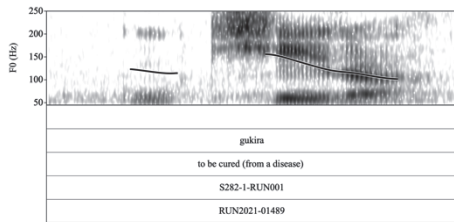
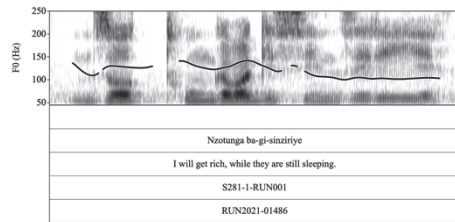
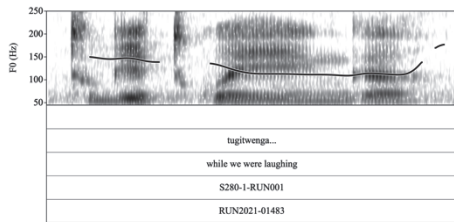
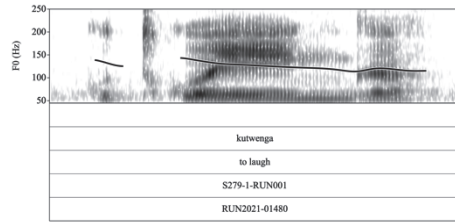
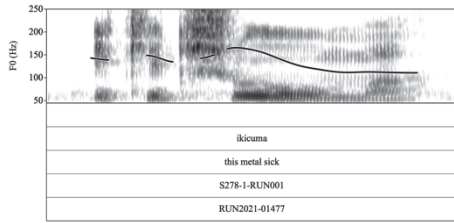
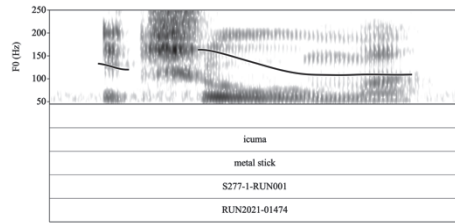
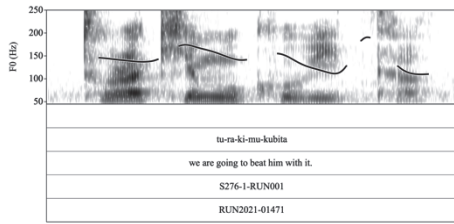


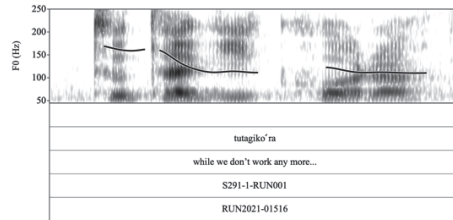
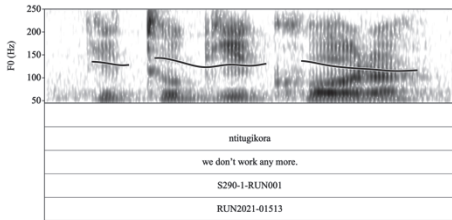
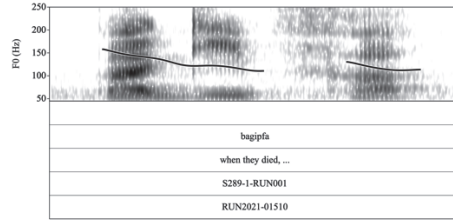
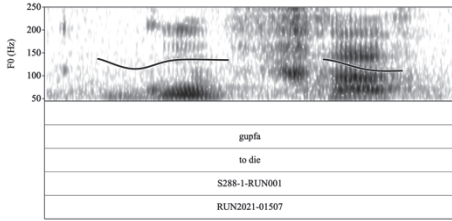
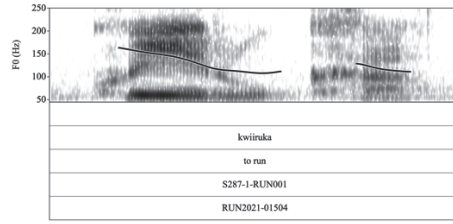
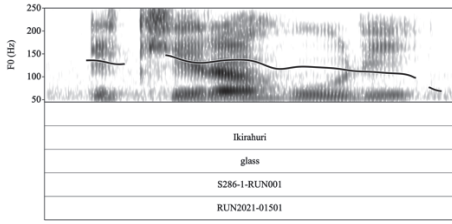












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