

# What can diasporic languages teach us about the development of phonological distinctions?

Examples from Somali Chizigula Stops and  
Toronto Cantonese Vowels

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# About me

- My subfield(s): diachronic linguistics (historical linguistics, sociolinguistics, contact linguistics)
- Outsider experience: linguistic research in the Somali Bantu community in Pittsburgh, PA
  - Consultant work on Chizigula (aka Kizigua, Mushunguli, or Mushungulu) with Field Methods course at the University of Pittsburgh (Spring 2012)
  - Subsequent consultant work with other speakers in Pittsburgh: 2012-2014
- Insider (kind of) experience: dissertation research on Toronto Cantonese
  - Second-generation heritage speaker born and raised in North America
  - But specifically from San Francisco, CA with some distant relatives in Canada
- Experiences encourage me to think broadly and comparatively
- Today's talk: first opportunity to consider commonalities (sociolinguistic, historical, and linguistic) that occur in both diasporic language communities
- Specific focus today:
  - the creation of new phonological (phonemic and allophonic) distinctions in two diasporic communities

## On phonemic splits

“Most reports of phonemic change involve mergers: the reduction in phonemic inventory. This simple fact would lead to the odd conclusion that most languages are steadily reducing their vowel inventory. Since any overview of language history shows that this is not so, it stands to reason that just as many phonemic splits must take place as mergers. For reasons that are not entirely clear, it is not easy for students of the speech community to locate the ongoing creation of phonemic distinctions” (from Labov 1994:331, *Principles of Linguistic Change, Vol. 1*).

PLC Volume 3 (Labov 2011): essentially unchanged

# Why not more cases of split?

- Tse (2016)
  - Suggested it's related to the under-documentation problem in variationist sociolinguistics – most research focused on monolingual communities and on majority rather than on minority/minoritized languages (cf. Nagy & Meyerhoff 2008)
- Related Questions:
  - Could they be more common in certain types of contact situations?
    - Example: In a diasporic (or minority) language vs. a majority language community (in which most speakers are monolingual)?
  - Could they be more common in under-researched (at least in the sociolinguistics literature) languages?
  - BUT NOTE: many under-researched languages also spoken in less commonly studied types of contact settings.

# Phonemic splits discussed in PLC (Labov 1994)

## Borrowing

- /f/ ~ /v/ contrast in English through French loan words with /v/ (later other languages)

**CONTACT!!!**

## Lexical Splits

- British Broad /a/
- Mid Atlantic Short /a/ split

**Contact via dialect borrowing?  
Maybe, but debatable**

## Loss of conditioning factor

- Western PA English
  - /u/ and /ow/ front (except before coda /l/ and /r/)
  - /l/ vocalization (loss of conditioning factor)
- Result
  - Too [ty] vs. tool [tu:]
  - Go [geu] vs. Goal [go:]

**Internal Motivation, but requires specific sequence of changes**

# Thomason & Kaufman (1988) Framework (simplified)

## Linguistic Results of Contact

LANGUAGE  
MAINTENANCE

LANGUAGE SHIFT

Casual contact, little bilingualism  
among borrowing language speakers

Small shifting group or perfect  
learning

ONLY (NON-BASIC)  
VOCABULARY BORROWED

NO INTERFERENCE IN TARGET  
LANGUAGE (TL) AS A WHOLE

Ex: Monolingual English communities

Ex: The societally dominant language  
spoken by diasporic language speakers

Intensive contact including much  
bilingualism

Large shifting group and  
imperfect learning

MUCH LEXICAL BORROWING,  
MODERATE TO HEAVY  
STRUCTURAL BORROWING  
especially phonology and syntax

MODERATE TO HEAVY  
INTERFERENCE especially in  
phonology and syntax

Ex: Many diasporic languages, Turkish  
dialects of Greek, Roma language

Ex: The societally dominant language  
spoken by diasporic language speakers

I  
N  
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Labov's  
(2007,2011)  
coverage

Not as well  
studied in  
sound change  
in progress  
literature

# Example 1

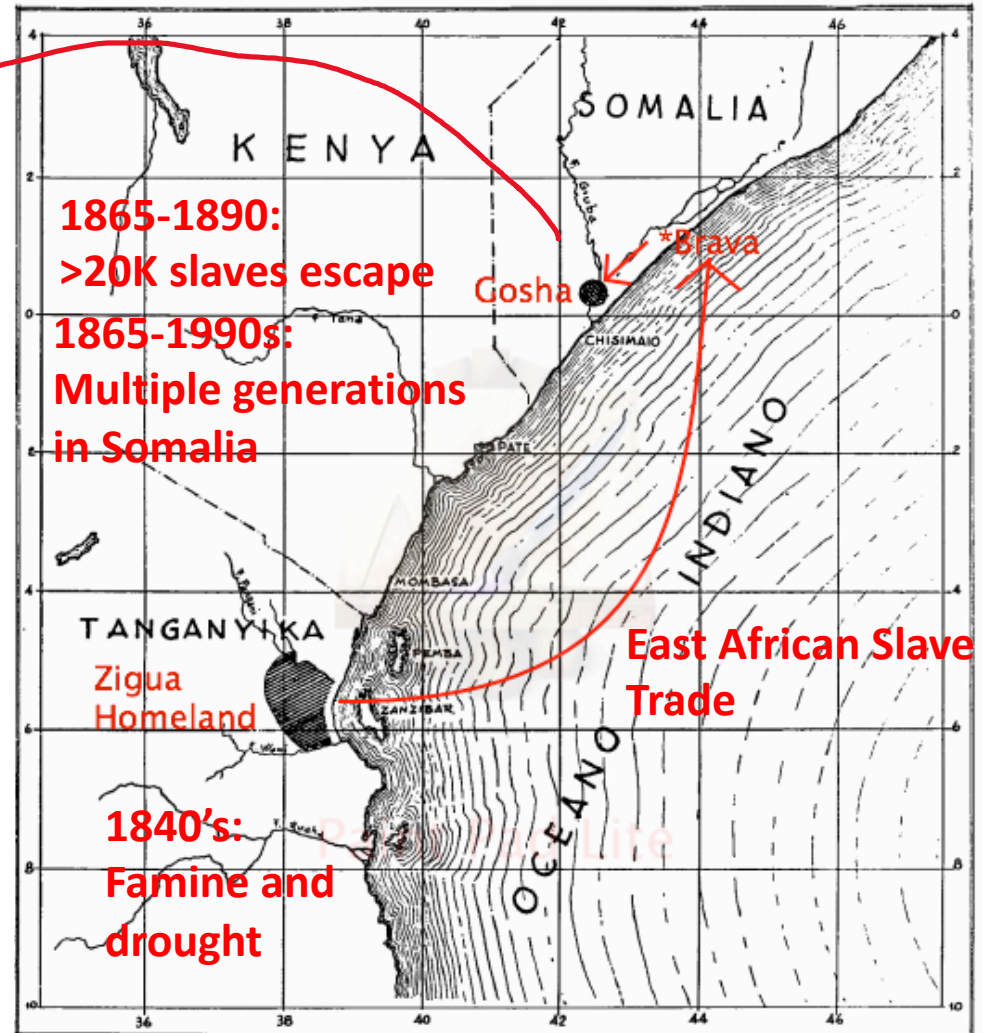
The emergence of a plosive vs. implosive contrast in Somali Chizigula (aka Kizigua, Kizigula, Mushunguli, Mushungulu, among other variants)

# History of the Zigua (Bantu) People



**1990s-present: Somali Civil War**  
**2004-present: Migration to many mid-size US cities (often via UN refugee camps in Kenya) including**

- Columbus, OH
- San Diego, CA
- Boise, ID
- Pittsburgh, PA



**1865-1890:**  
**>20K slaves escape**

**1865-1990s:**  
**Multiple generations in Somalia**

**East African Slave Trade**

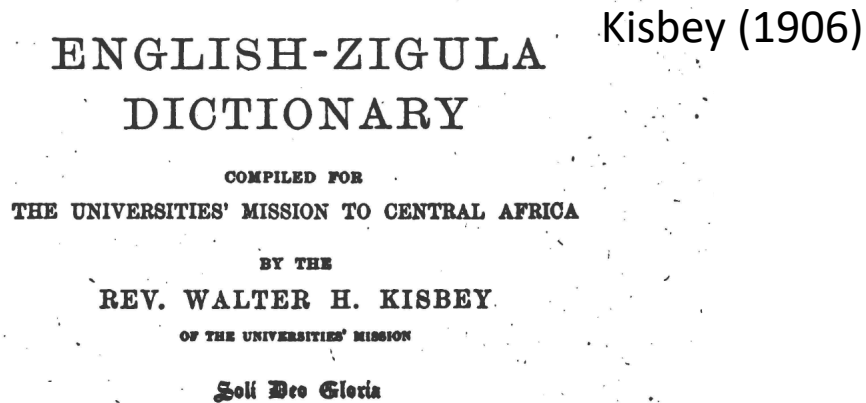
**1840's:**  
**Famine and drought**

Adapted from Grotanelli (1955)

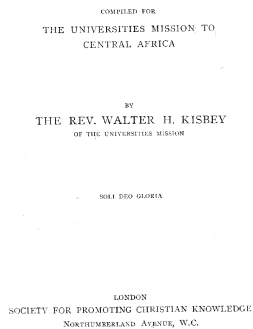


# Data Sources

## Late 19<sup>th</sup>/early 20<sup>th</sup> Century Tanzanian Chizigula

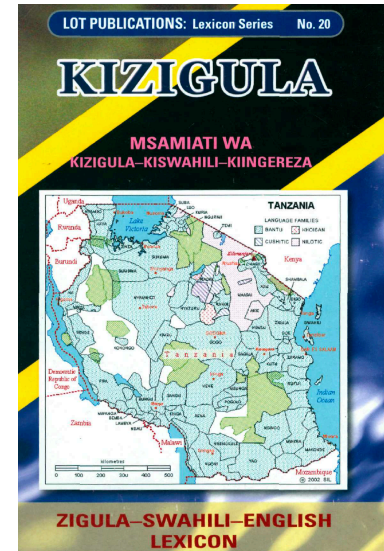


## ZIGUA EXERCISES



Kisbey (1897)

## Modern Tanzanian Chizigula



Mochiwa (2008)













University of Pittsburgh

Somali Chizigula





Consultant work: 2012-2014

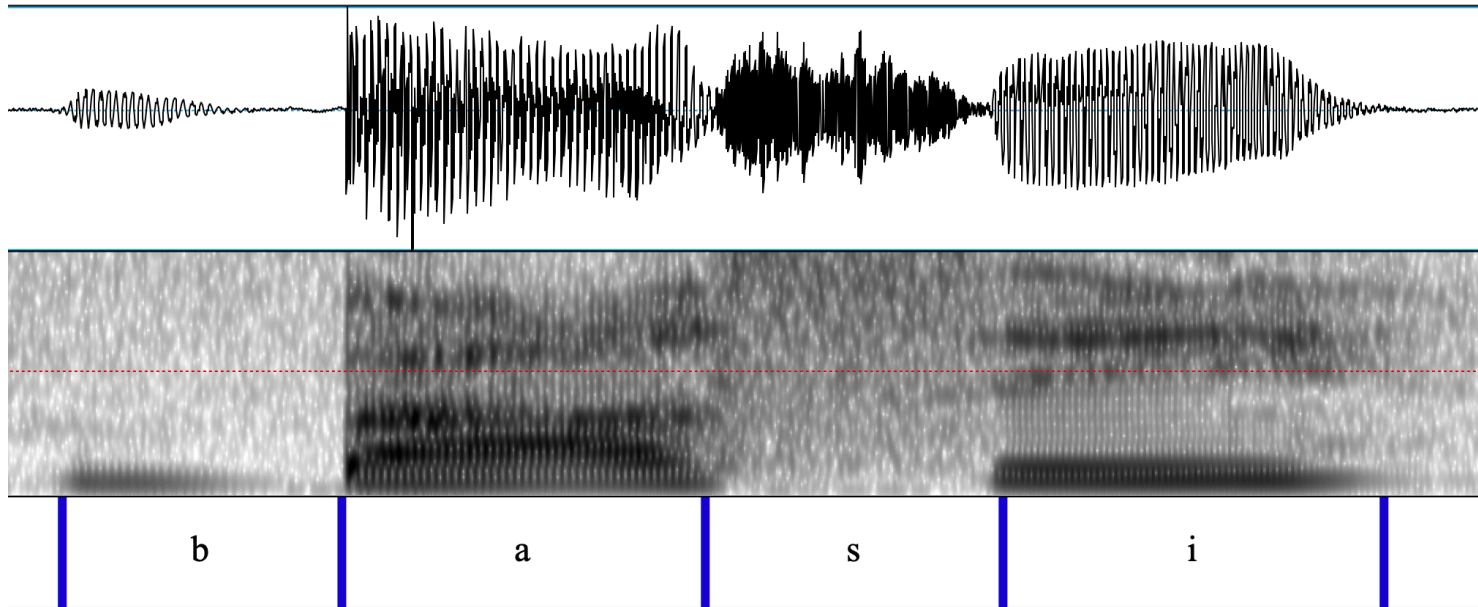
Other projects: Boise (Temkin  
Martinez talk today), Columbus  
(Odden, Barlew, Hout)

# Evidence of Voiced Plosives > Implosives

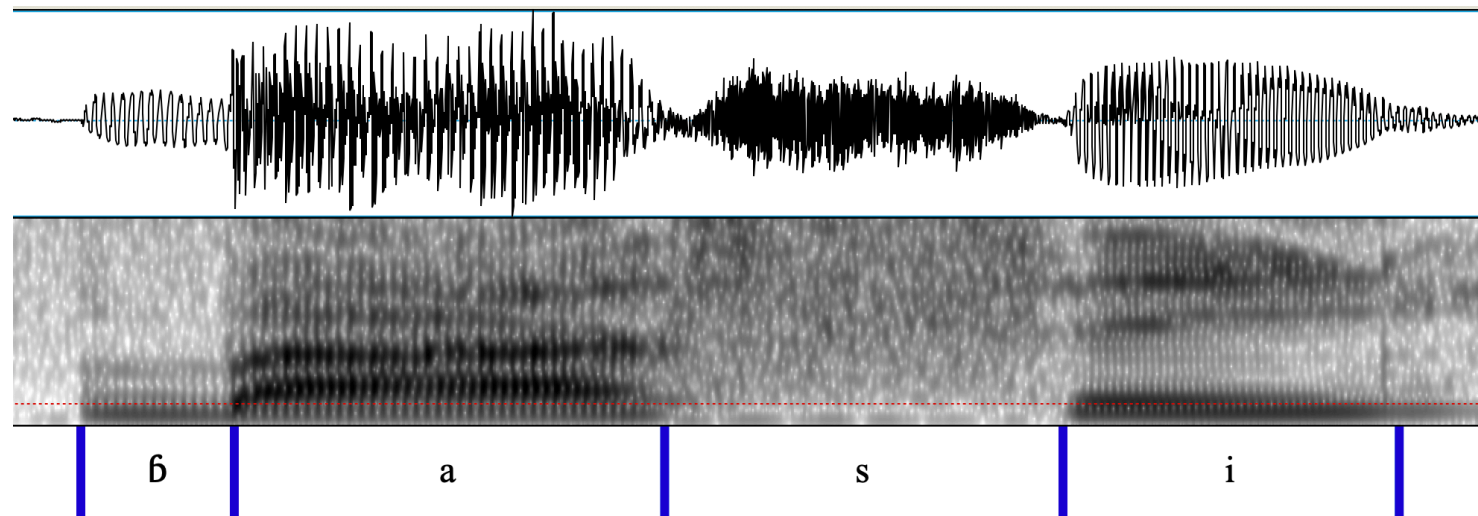
Tanzanian Zigua in orthography (Kisbey 1906)	Somali Chizigula (consultant work, in IPA)	Gloss	Sound samples
basi	ɓasi	'enough'	
banti	ɓaŋti	'door'	
dudu	ɗuɗu	'bug'	
kadodo	kaɗoɗo	'little'	
kudumula	kuɗumula	'to cut'	
kudyenda	kuɟenda	'to walk'	
kudya	kuɟa	'to eat'	
gali	ɠali	'expensive'	
gutwi	ɠutwi	'ear'	
kogera	koɠera	'to swim'	

# Voiced Plosives in Loan Words

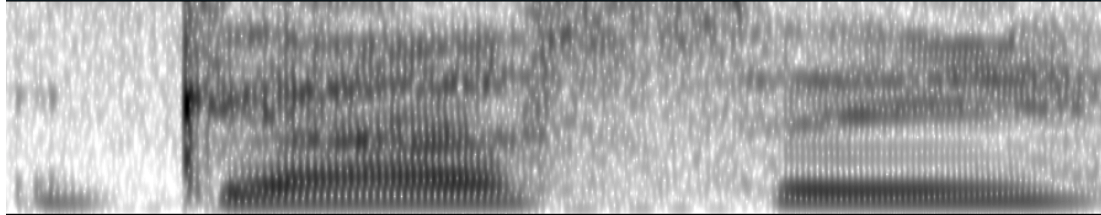
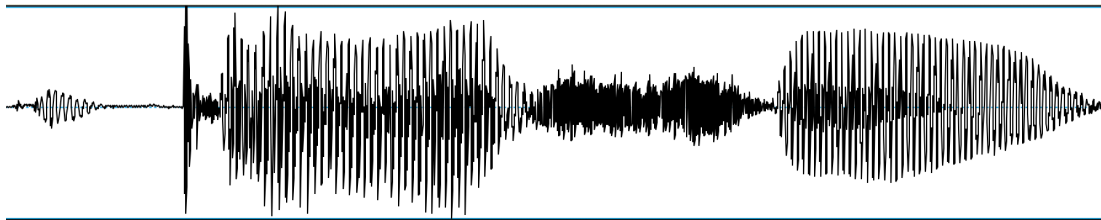
Tanzanian Zigua (Kisbey 1906)	Somali Chizigula (consultant work)	Possible Loan source	
NO COGNATE IDENTIFIED	bujno / pujo	pugno [pujo] (Italian, 'fist')	
NO COGNATE IDENTIFIED	basi	'bus' (directly from English or via Standard Swahili in Kenya)	
NO COGNATE IDENTIFIED	gasi	'gas' English	
NO COGNATE IDENTIFIED	gurupu	'teamwork' English	



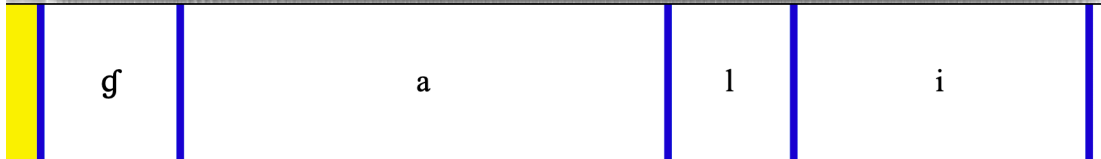
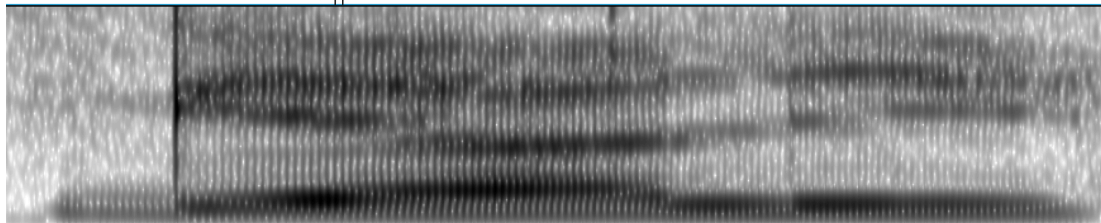
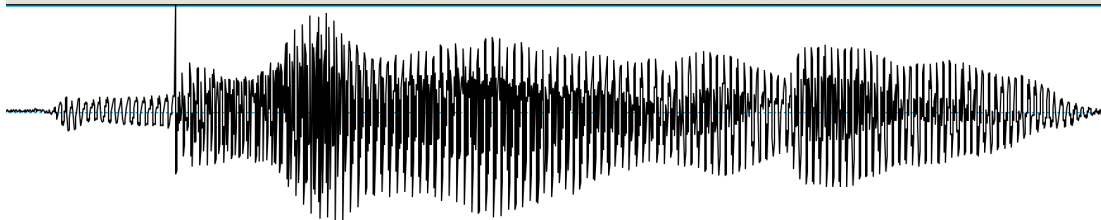
'bus'



'enough'



'gas'



'expensive'

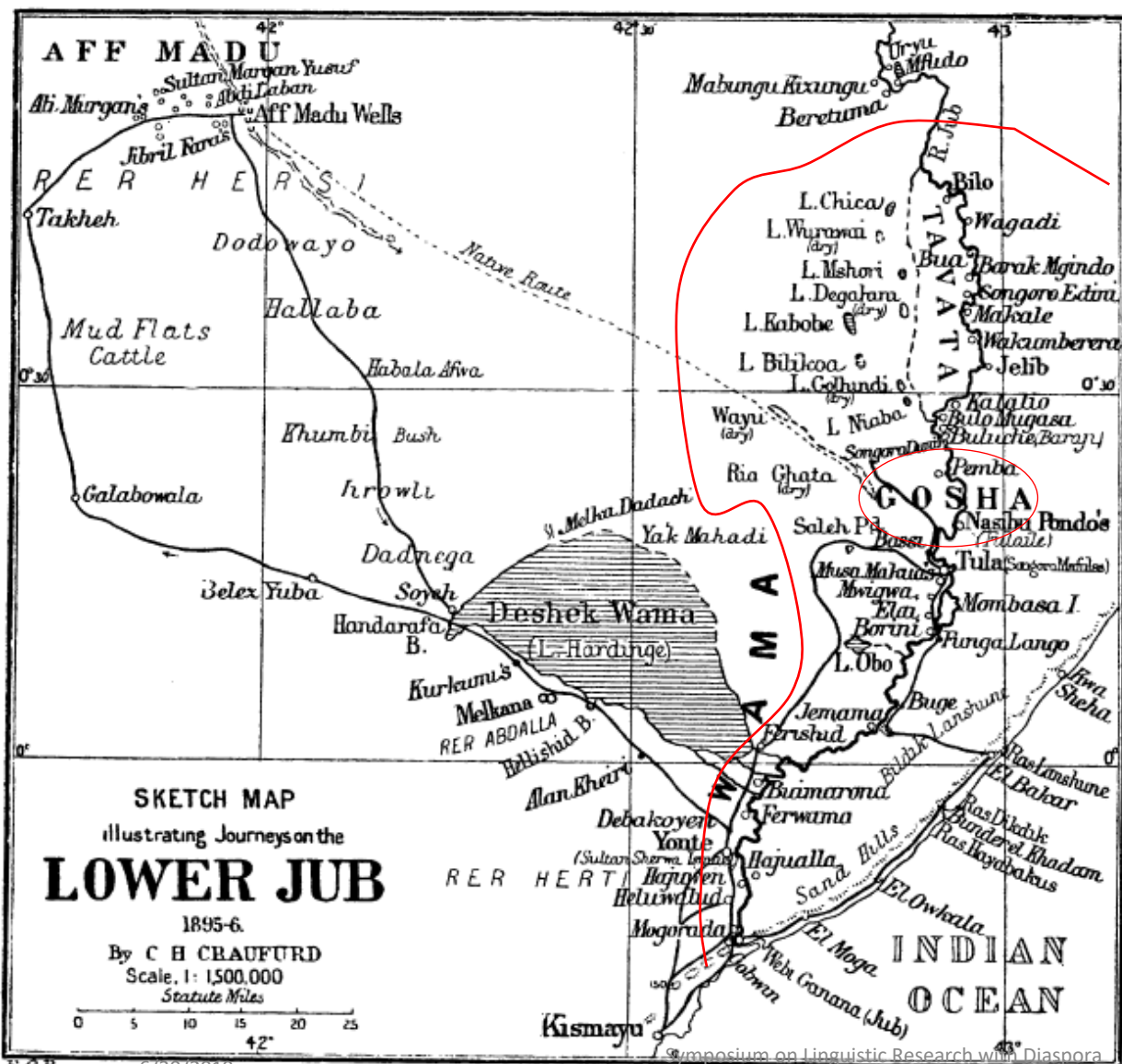
# Plosive/Implosive contrast among Chizigula speakers in Boise, Idaho (Temkin Martinez & Rosenbaum 2017)

Plosives	Implosives
bafu 'basin' (> English 'bath'?)	ɓafu 'selfish'
gana 'Ghana' (NOTE: in West Africa, not East Africa!)	ɠane 'dormitory'
bosi 'handicapped person' (> Somali/Maay <boos>)	ɓosi 'boss' (> English, implosive to contrast with 'handicapped person?')

No such contrast identified in Tanzanian Kizigua (Kisbey 1897;1906, Mochiwa 2008)

# In Goshia and the Juba River Valley (c. 1860s – c. 1920s)

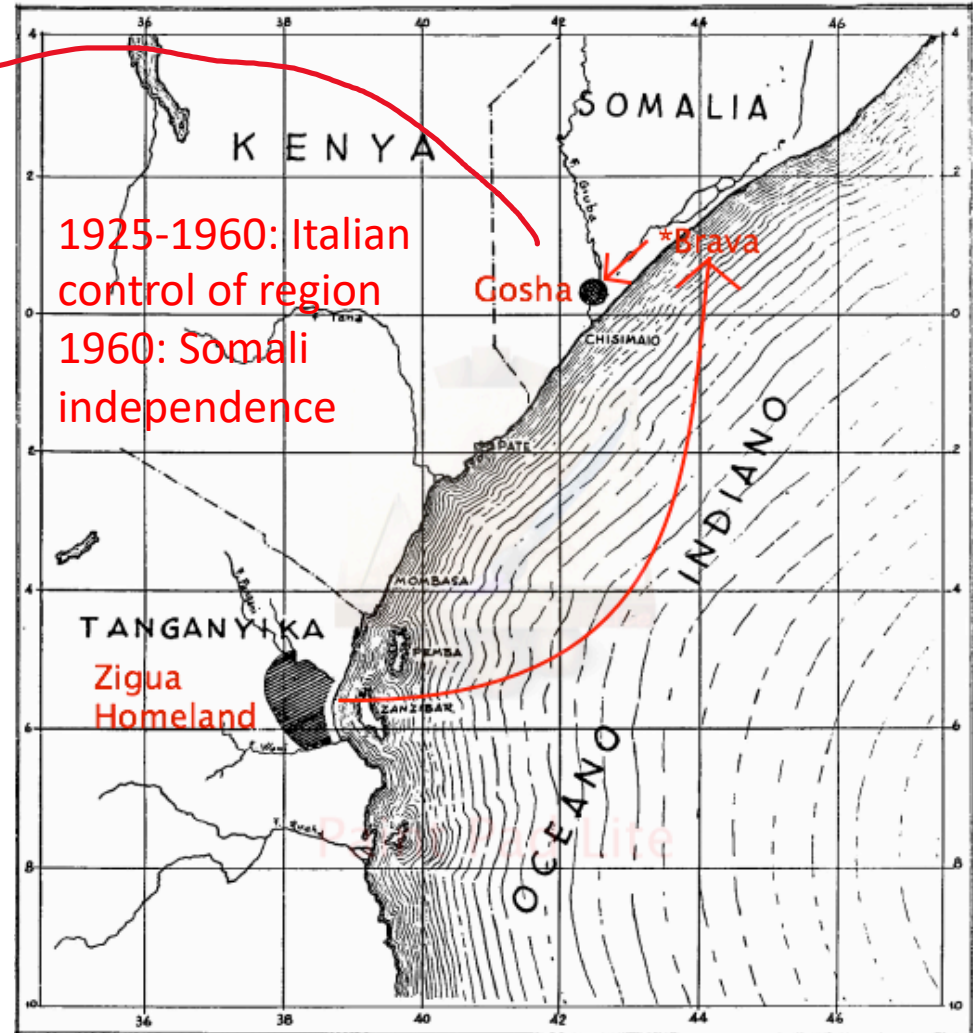
- Described as a “republic of free ex-slaves” (Declich 1995:96)
- Zigua came in contact with speakers of other Bantu languages (see Tse 2015 for more details)
- Some of these languages have implosives corresponding to Zigua voiced plosives (Nurse & Hinnebusch 1993)
- Thus, via contact: voiced plosives > implosives



# Italian colonization and migration to the US



- 1925-1960: Introduction of Italian loanwords like 'pugno' [puɲo] > Chizigula [buɲo]
- 1960s-2000s: Zigua learned Cushitic languages (Somali, Maay) and borrowed words with plosives
- After 2000s: Introduction of English loan words with plosives including [basi] 'bus', [gasi] 'gas', [gurupu] 'group, or teamwork'



Adapted from Grotanelli (1955)



# Example 2

Vowel Split in Toronto Heritage Cantonese

# Toronto Heritage Cantonese

## Homeland Cantonese



1960s - 1997

## Toronto Heritage Cantonese



- **1960s:** First large wave of immigration from Hong Kong (UK Colony ~90% Cantonese speakers) to Canada
- **1980s-1997:** More immigration, motivated by fears of handover to China
- **2011 Census:** 178,000+ (3.1%+ of population) Cantonese speakers in Toronto
  - Now the 2nd most spoken mother tongue (after English)

# Data and Analysis



Nagy (2011)

HERITAGE LANGUAGE VARIATION AND CHANGE IN TORONTO  
[HTTP://PROJECTS.CHASS.UTORONTO.CA/NGN/HLVC](http://projects.chass.utoronto.ca/ngn/hlvc)

- Are there inter-generational differences in vowel production patterns?
- Sociolinguistic interview data (following Labov 1984) and hence spontaneous speech
- 32 speakers (24 from Toronto, 8 from Hong Kong)
  - Toronto speakers further divided into GEN 1 (n=12) and GEN 2 (n=12)
- 11 vowel categories, 33,179 vowel tokens
- Vowel space created based on Lobanov normalized (Thomas & Kendall 2007) midpoint F1 and F2

# Contact Setting

## GEN 1 Speakers

- Born and raised in HK, came to Toronto as adults, AND have lived in TO for > 20 years
- Variable levels of English knowledge



*Photo by Holman Tse, 2014*

ENGLISH (L2  
learned as child)



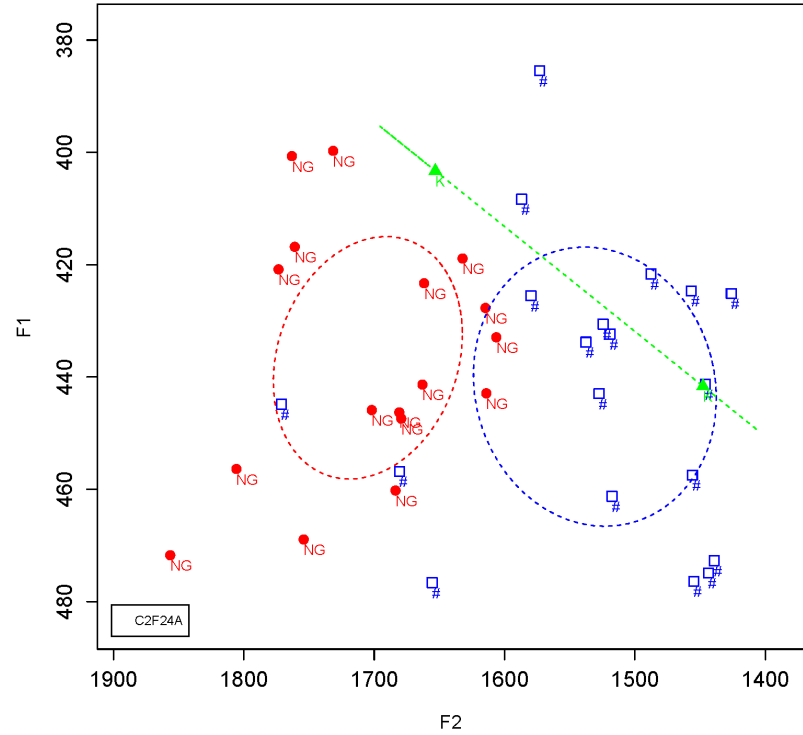
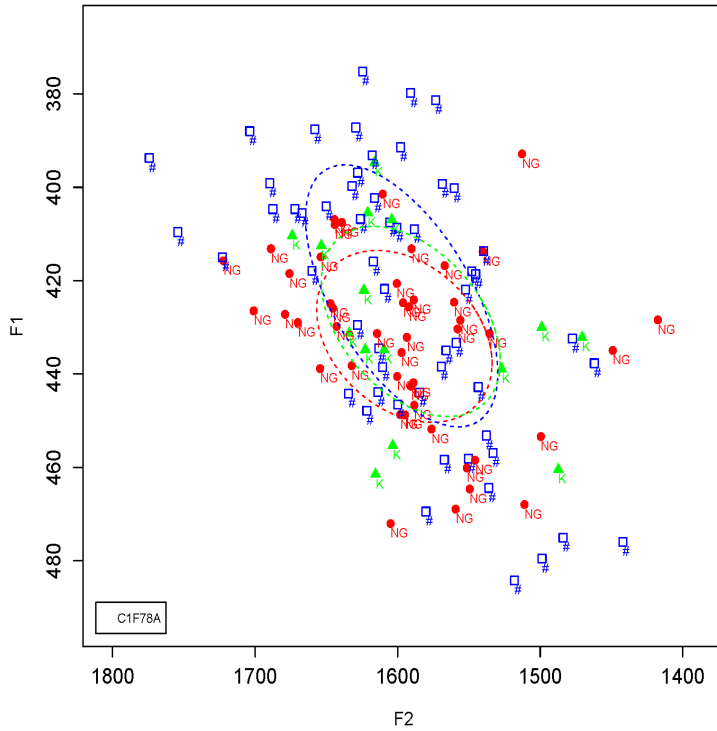
Possible L2 to  
L1 influence?

廣東話 (L1, not a societally  
dominant language in Toronto)

## GEN 2 Speakers

- Grew up in TO
- Learned Cantonese primarily at home (L1)
- All linguistically dominant in English (L2) as evidenced from Ethnic Orientation survey questions

# Emergence of an allophonic split

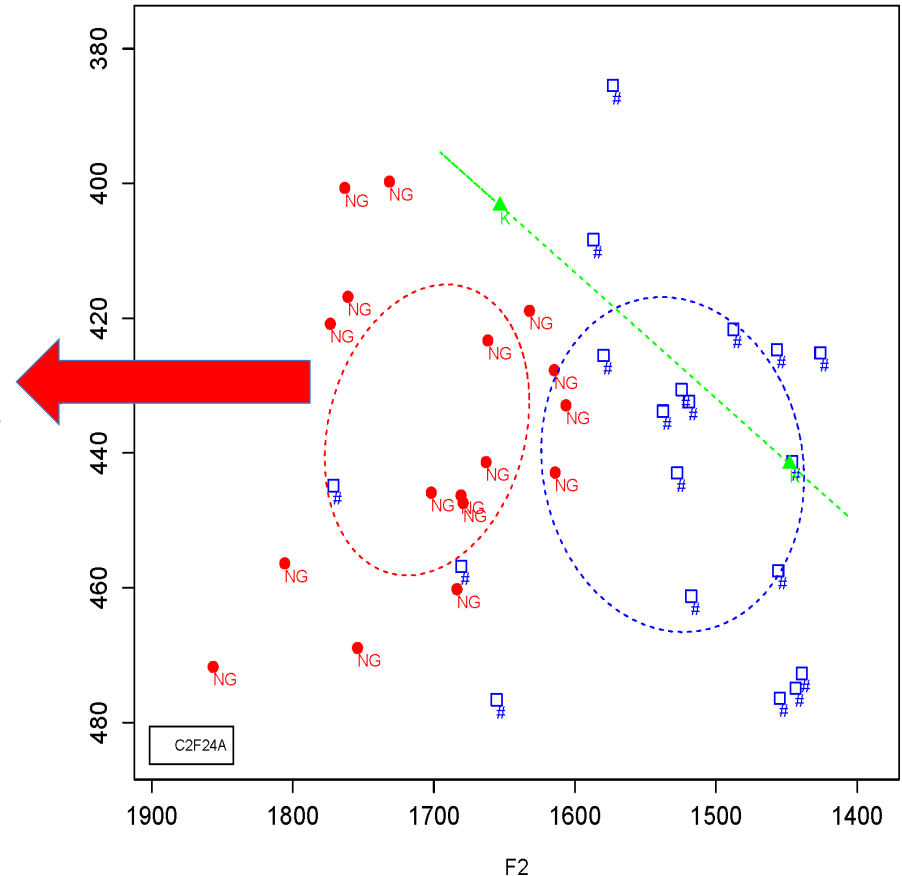


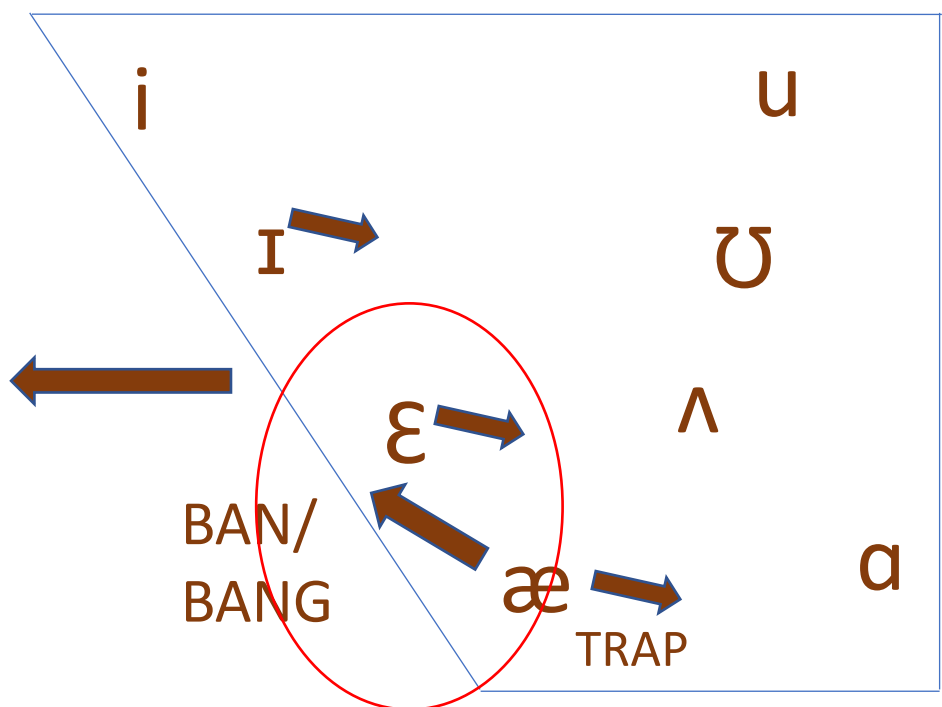
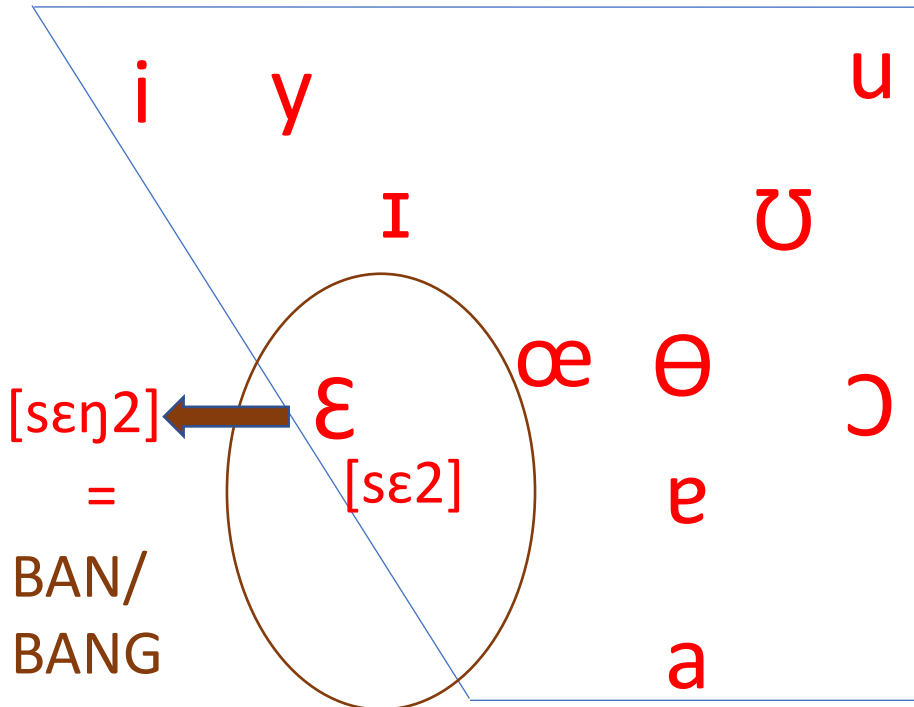
# Sound samples of /ɛ/ from C2F41A

	/ŋ/ (fronted variant)	Open Syllable
isolated	<b>meng2</b> ‘name’	<b>ce1</b> ‘car’
sentence	M4 hai6 ci5 hai6 zung1 man4 <b>meng2</b> gaa3.	Jyu4 gwo2 jau5 di1 pang4 jau5 jau5 <b>ce1</b> soeng2 heoi3
Gloss	“it doesn’t look like a Chinese name”	“if there are friends with a car who want to go ... ”
Word Sample		
Sentence sample		

# CAN % Score (proficiency proxy)

- CAN % Score = (total words uttered in Cantonese + total words uttered in English) / total words uttered in transcription
  - Note: code-switching/mixing allowed in interviews, although interviews primarily in Cantonese
- Lower CAN % Scores → More fronting of pre-nasal /ε/
  - Suggests contact-induced change
- Contact-induced change further supported by lack of the same change in Hong Kong and among GEN 1 speakers







# Summary

- Somali Chizigula and Toronto Cantonese cases both involve intense contact (multilingual speakers with access to more than one phonological system)
- Changes initiated by multilingual speakers
  - A phonemic split via loanword vocabulary (Somali Chizigula)
  - An allophonic split in one language (Toronto English) creating one in another (Toronto Cantonese)
- Not much difficulty locating splits in diasporic language communities (as opposed to Labov 1994's discussion)

# Discussion

- What can diasporic languages teach us about the development of phonological distinctions?
  - They show how intense contact can facilitate certain structural changes through the interaction of different phonological systems
  - These changes can be lexically mediated or arise through direct structural influence
  - They can help us better understand the full range of linguistic processes (both synchronic and diachronic) that can affect language over time
  - These changes also present a paradox:
    - language loss associated with diasporic languages but phonemic and allophonic splits lead to increased phonological complexity
    - How can we resolve this paradox?

# Concluding Thoughts: Is this really new?

- “A common end-state of language attrition is disappearance of the old language as people shift to speaking another language. **But the shift could be halted.** This may happen because of a sudden reduction in the intensity of contact and the influence of the other language, as when colonizers are expelled or their contact with their original homeland wanes, and the language of government and trade in their new country changes back to the language of the colonized albeit with much loss accompanied by convergence, borrowing, shift, restructuring, from the colonizer’s language. **Something like this may have happened to English** in the period between the dominance of French and Latin as languages of power immediately after the Norman conquest, and the mid-fourteenth century when Edward III’s government gave official recognition to English in the 1362 Statute of Pleading requiring English to be spoken in law courts” (Simpson 2014, from *The Handbook of Historical Linguistics*)
- NOTE: This is the period when /f/, /v/, and /ʒ/ became phonemes in English

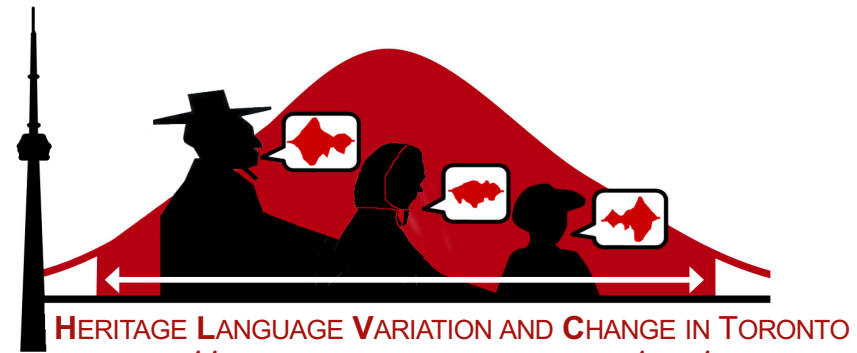
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Asante! / 多謝! / Thank you!



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UNIVERSITY OF  
TORONTO

Naomi Nagy, Alexei Kochetov, Yoonjung Kang, and James Walker. All HLVC RA's  
[http://projects.chass.utoronto.ca/ngn/HLVC/0\\_0\\_home.php](http://projects.chass.utoronto.ca/ngn/HLVC/0_0_home.php)

# References

- Declich, F. (1995) "Gendered Narratives," History, and Identity: Two Centuries along the Juba River among the Zigula and Shanbara, *History in Africa*, 22, p. 93–122. <http://doi.org/10.2307/3171910>
- Kisbey, W. H. (1897) *Zigula exercises : compiled for the Universities' mission to Central Africa*, London: Society for Promoting Christian Knowledge.
- Kisbey, W. H. (1906) *Zigula-English dictionary*. Compiled for the Universities' Mission to Central Africa by Rev. Walter H. Kisbey, England. Retrieved from <http://babel.hathitrust.org/cgi/pt?id=nyp.33433081991006;view=1up;seq=9>
- Labov, William. 1994. *Principles of linguistic change, Volume 1*. Oxford, UK; Cambridge, MA: Blackwell.
- Labov, William. 2007. *Transmission and Diffusion*. *Language* 83.344–387.
- Labov, William. 2008. *Mysteries of the substrate. Social Lives in Language—Sociolinguistics and multilingual speech communities: Celebrating the work of Gillian Sankoff.*, 315–326. Amsterdam, The Netherlands/Philadelphia, Pennsylvania: John Benjamins Publishing Company.
- Labov, William. 2011. *Principles of linguistic change, cognitive and cultural factors. Vol. 3*. John Wiley & Sons.
- Mochiwa, Z. S. M. (2008) *Kizigula : msamiati wa Kizigula-Kiswahili-Kiingereza = Zigula-Swahili-English lexicon*, Dar-es-Salaam: Languages of Tanzania Project University of Dar-es-Salaam.
- Nagy, Naomi. 2011. *A Multilingual Corpus to Explore Variation in Language Contact Situations*. *Rassegna Italiana di Linguistica Applicata* 43.65–84.
- Nagy, Naomi.; and Miriam Meyerhoff. 2008. *Introduction: Social Lives in Language. Social lives in language--sociolinguistics and multilingual speech communities: celebrating the work of Gillian Sankoff*, 1–17. Amsterdam; Philadelphia: John Benjamins.
- Nurse, D., & Hinnebusch, T. J. (1993) *Swahili and Sabaki: a linguistic history*, Berkeley: University of California Press.
- Simpson, Jane. 2014. *Language attrition and language change*. *The Routledge Handbook of Historical Linguistics*, ed. by Claire Bower and Bethwyn Evans, 537–554. London, UNITED KINGDOM: Routledge.
- Temkin Martinez, Michal & Vanessa Rosenbaum. 2017. *Acoustic and Aerodynamic Data on Chizigula Voiced Stops*. In. Kandybowicz, Jason & Harold Torrence. *Africa's Endangered Languages: Documentary and Theoretical Approaches*
- Thomason, Sarah Grey.; and Terrence Kaufman. 1988. *Language contact, creolization, and genetic linguistics*. University of California Press.
- Tse, Holman 2015. *The Role of Shift-Induced Interference in the Development of a Typologically Rare Phonological Contrast in Somali Bantu Kizigula*. *Travaux Interdisciplinaire sur la Parole et le Langage*. V. 31
- Tse, Holman. 2016. *Contact-induced splits in Toronto Heritage Cantonese mid-vowels*. *Linguistica Atlantica* 35.133–155.