# Introduction to Linguistics LIN101

Lecture 8: Practice with phonemic analysis

Fall 2024, University of Toronto, St. George Angelika Kiss

### Announcements

- •Automatic extension on HW3 for everyone:
- Submit HW3 by September 25
- •Quiz 2 is coming after the reading week, on November 11th
- •In this lecture, we'll practice phonemic analysis in various languages

- Kalaallisut, a.k.a. West Greenlandic
- a language of the Inuit dialect continuum that stretches from Greenland to Alaska
- Endangered language ("vulnerable")



### Step 1: Identify and organize the phones of interest

Phones of interest: [i], [e], [a], [o], [u]

[ivnaq]	'bluff'	[ine]	'room'	[sakiak]	'rib'
[ikusik]	'elbow'	[orpik]	'bear'	[nanoq]	'bear'
[iperaq]	'harpoon strap'	[sermeq]	'glacier'	[isse]	'eye'
[sava]	'sheep'	[aveq]	'walrus'	[nerdloq]	'goose'
[qilaluvaq]	'white whale'	[sako]	'tool'	[ugsik]	'cow'
[nuna]	'land'	[qasaloq]	'bark'	[itumaq]	'palm (hand)'
[iseraq]	'ankle'	[iga]	'pot'	[igdlo]	'house'
[qatigak]	'back'	[tuluvaq]	'raven'	[marraq]	'clay'
[imaq]	'sea'	[ennit]	'waters'		

### Step 2: Identify the individual environments of the phones of interest

Phones of interest: [i], [e], [a], [o], [u]

[ivnaq] [ine] [sakiak]

[ikusik] [orpik] [nanoq]

[iperaq] [isse]

[sava] [neʀdloq]

[qilaluvaq] [sako] [ugsik]

[nuna] [qasaloq] [itumaq]

[iseraq] [iga] [igdlo]

[qatigak] [tuluvaq] [marraq]

[imaq] [ennit]

Step 6: Identify the default allophone and finalize the analysis

Phones of interest: [o] vs. [u]

[i] [e] [a] [o]



### Step 1: Identify and organize the phones of interest

- O'odham (a.k.a as Pima and Papago)
- a Tepiman language of the Uto-Aztecan language family
- Spoken in Arizona (US) and Northern Sonora (Mexico)
- Endangered language with a couple of thousands of speakers



### Step 1: Identify and organize the phones of interest

Phones of interest: [t], [d], [ts], [dʒ]

[tatai]	'tendon'	[t͡ʃɨposid]	'to brand'
[tamʃ]	'gums'	[todsid]	'to frighten'
[tatal]	'mother's younger brother'	[daswua]	'to pile'
[tohnto]	'degenerate'	[dakpon]	'to slip'
[tokih]	'cotton'	[do?ag]	'mountain'
[t͡ʃinig]	'to move the lips'	[doad͡ʒida]	'healing'
[t͡ʃikpan]	'work'	[d͡ʒiwhiadag]	'arrival'
[tʃutʃul]	'chicken'	[d͡ʒuni]	'dried cactus fruit'
[t͡ʃuagia]	'net bag'	[d͡ʒusukal]	'tree lizard'
[t͡ʃukma]	'dark'	[d͡ʒuhki]	'rain'
[t͡ʃɨlwin]	'to rub'	[d͡ʒɨgos]	'storm'
[t͡ʃɨgitog]	'to think'	[d͡ʒɨwikon]	'to scrape'

### Step 2: Identify the individual environments of the phones of interest

Phones of interest: [t], [d], [ts], [dʒ]

[tatai]	[t͡ʃɨposid]
[tamʃ]	[todsid]
[tatal]	[daswua]
[tohnto]	[dakpon]
[tokih]	[doʔag]
[t͡ʃinig]	[doad͡ʒida]
[t͡ʃikpan]	[d͡ʒiwhiadag]
[tʃutʃul]	[d͡ʒuni]
[t͡ʃuagia]	[d͡ʒusukal]
[t͡ʃukma]	[d͡ʒuhki]
[t͡ʃɨlwin]	[d͡ʒɨgos]
[t͡ʃɨgitog]	[d͡ʒɨwikon]

### Step 3-4: Determine overlap and simplify environments

Phones of interest: [t], [d], [ts], [dʒ]

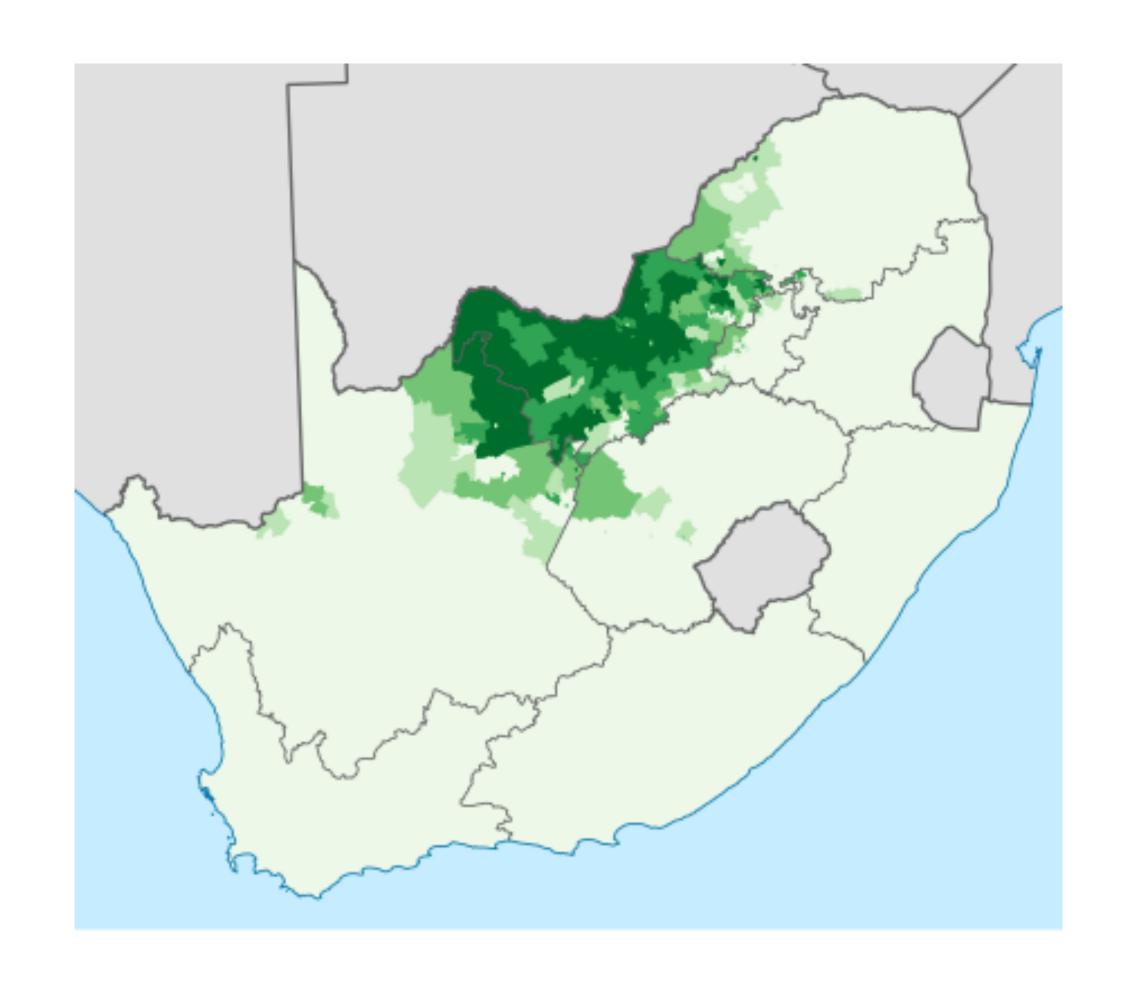
[t]

 $\widehat{[t]}$ 

[d]

[d3]

- •Setswana (a. k. a. as Tswana language)
- •a Bantu language spoken in Botswana, South Africa, and Zimbabwe
- has official status in these countries and has millions of speakers



#### Step 1: Identify and organize the phones of interest

•Phones of interest: [l] and [d]

[lefifi]	'darkness'	[loleme]	'tongue'	[mmadi]	'reader'
[selεpε]	'axe'	[molɔmo]	'mouth'	[hudi]	'wild duck'
[xobala]	'to read'	[feːdi]	'sweeper'	[kʰudu]	'tortoise'
[lerumɔ]	'spear'	[badisa]	'the herd'	[mosadi]	'woman'
[xonala]	'to marry'	[podi]	'goat'	[loxadima]	'lightning flash'
[lokwalɔ]	'letter'	[did͡ʒɔ]	'food'	[dumɛla]	'greetings'

### Step 2: Identify the individual environments of the phones of interest

•Phones of interest: [l] and [d]

[lefifi] [loleme] [mmadi]

[selεpε] [molɔmo] [hudi]

[xobala] [feːdi] [kʰudu]

[lerumɔ] [badisa] [mosadi]

[xonala] [podi] [loxadima]

[lokwalɔ] [did͡ʒɔ] [dumɛla]

Step 3-4: Determine overlap and simplify environments

•Phones of interest: [l] αnd [d]

[l] [d]

### Step 1: Identify and organize the phones of interest

•Phones of interest: [p], [ph], [t], [th], [k], and [kh],

[peth.kuj]	'broom'	[makh.tiʔ]	'ghost'	[kuj]	'wood'
[kekh.pa?]	'it flies'	[tots]	'tongue'	[tiː.ttit <sup>h</sup> ]	'mestizo'
[mok <sup>h</sup> ]	'corn'	[peth.pa?]	'he sweeps'	[i.kka?]	'he killed it'
[i.ka.pun]	'his barrow'	[pe.ttaːpʰ]	'it is being swept'	[hoː.ppaʔ]	'it rolls'
[nɨpʰ]	'mouth'	[nɨkʰ.paʔ]	'he goes'	[pikh.ʃiʔ]	'bow'

#### Step 2: Identify the individual environments of the phones of interest

•Phones of interest: [p], [ph], [t], [th], [k], and [kh],

[pet<sup>h</sup>.kuj] [mak<sup>h</sup>.ti?]

[kekʰ.paʔ] [tiː.ttitʰ]

[mok<sup>h</sup>] [j.kka?]

[i.ka.pun] [pe.ttaːpʰ] [hoː.ppaʔ]

 $[nip^h]$   $[nik^h.pa?]$   $[pik^h.Ji?]$ 

Step 3-4: Determine overlap and simplify environments

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•Phones of interest: [p], [ph], [t], [th], [k], and [kh],
[p] [ph] [t] [th] [k]
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# End of lecture 8