

THE HISTORY OF CLICKS IN NGUNI LANGUAGES

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OVERVIEW

1. Bantu/Khoisan language contact
2. Clicks in Bantu languages
3. The Nguni languages
 1. Click inventories
 2. Subclassification
 3. Reconstruction of Proto-Nguni clicks

When did clicks enter the Nguni languages and what does this tell us about the contact history between Nguni and Khoisan speakers?

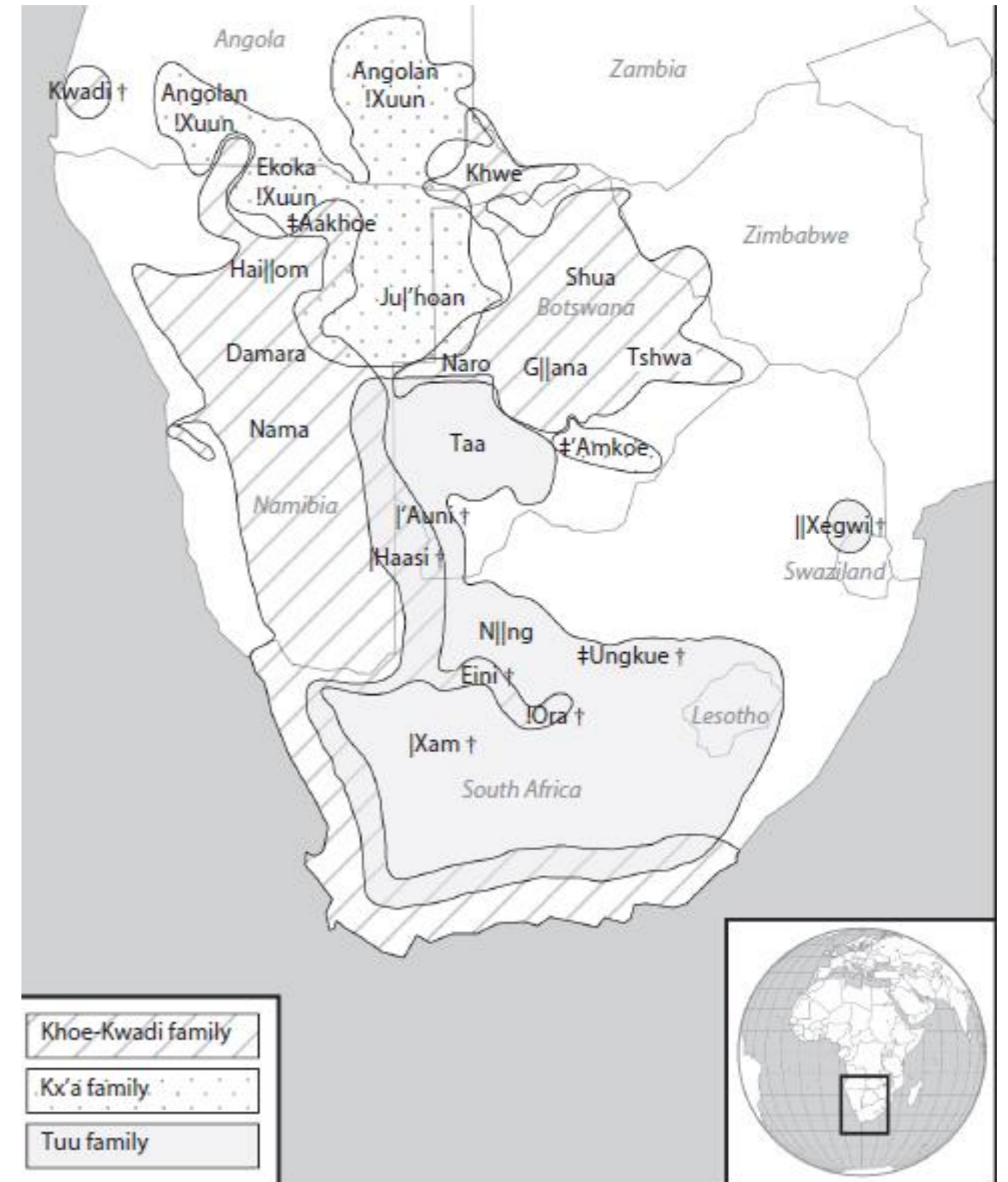
PRE-BANTU SOUTHERN AFRICA

“**Khoisan**”: languages with phonemic clicks that do not belong to another language family (e.g. Bantu or Cushitic)

Southern Africa:

- Kx'a (Northern Khoisan)
- Khoe-Kwadi (Central Khoisan)
- Tuu (Southern Khoisan)

Most Khoisan languages are endangered/extinct



Güldemann, T. 2014. 'Khoisan' linguistic classification today. In Güldemann, T & A.-M. Fehn (eds.), *Beyond 'Khoisan': historical relations in the Kalahari basin*, 1-40. Amsterdam/Philadelphia: John Benjamins Publishing Company.

BANTU/KHOISAN LANGUAGE CONTACT

- Lexicon:
 - loanwords
 - lexical semantics
- Phonology
 - **clicks**
 - other rare consonants
- Morphology
 - borrowed affixes
 - contact-induced grammaticalization

CLICKS

Clicks are unique to:

- “Khoisan” languages: Khoe-Kwadi, Kx’a, Tuu families + Sandawe, Hadza
- Bantu languages in southern Africa
- The Cushitic language Dahalo in east Africa
- Damin, ritual register of Australian language Lardil

Very unique so clear hallmark of Khoisan contact!

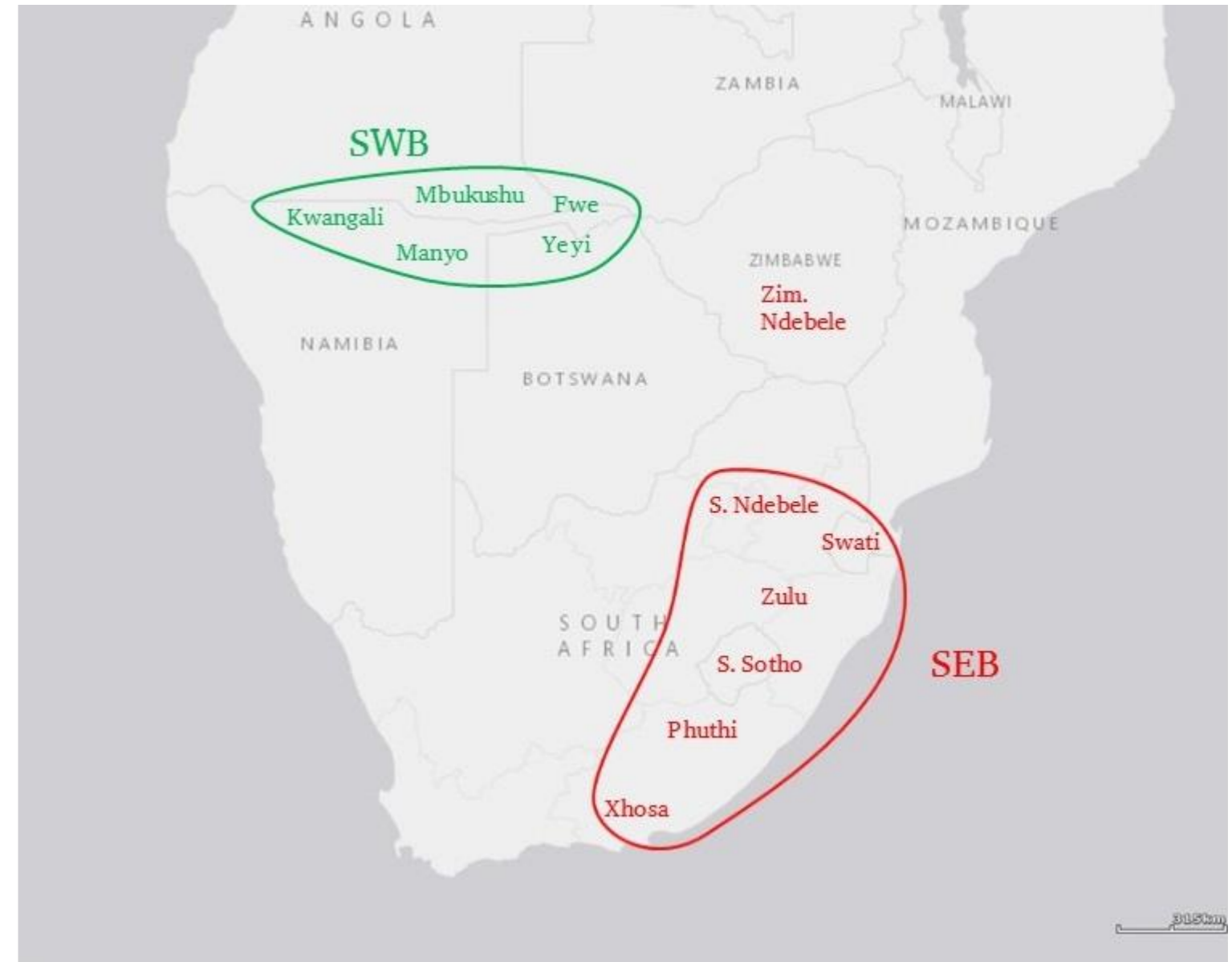
CLICKS

South East Bantu click languages

- Nguni: Xhosa, Phuthi, Zulu, Swati, Southern Ndebele, Zimbabwean Ndebele
- Sotho: Southern Sotho

South West Bantu click languages

- Kavango: Kwangali, Manyo, Mbukushu
- Bantu Botatwe: Fwe
- Yeyi

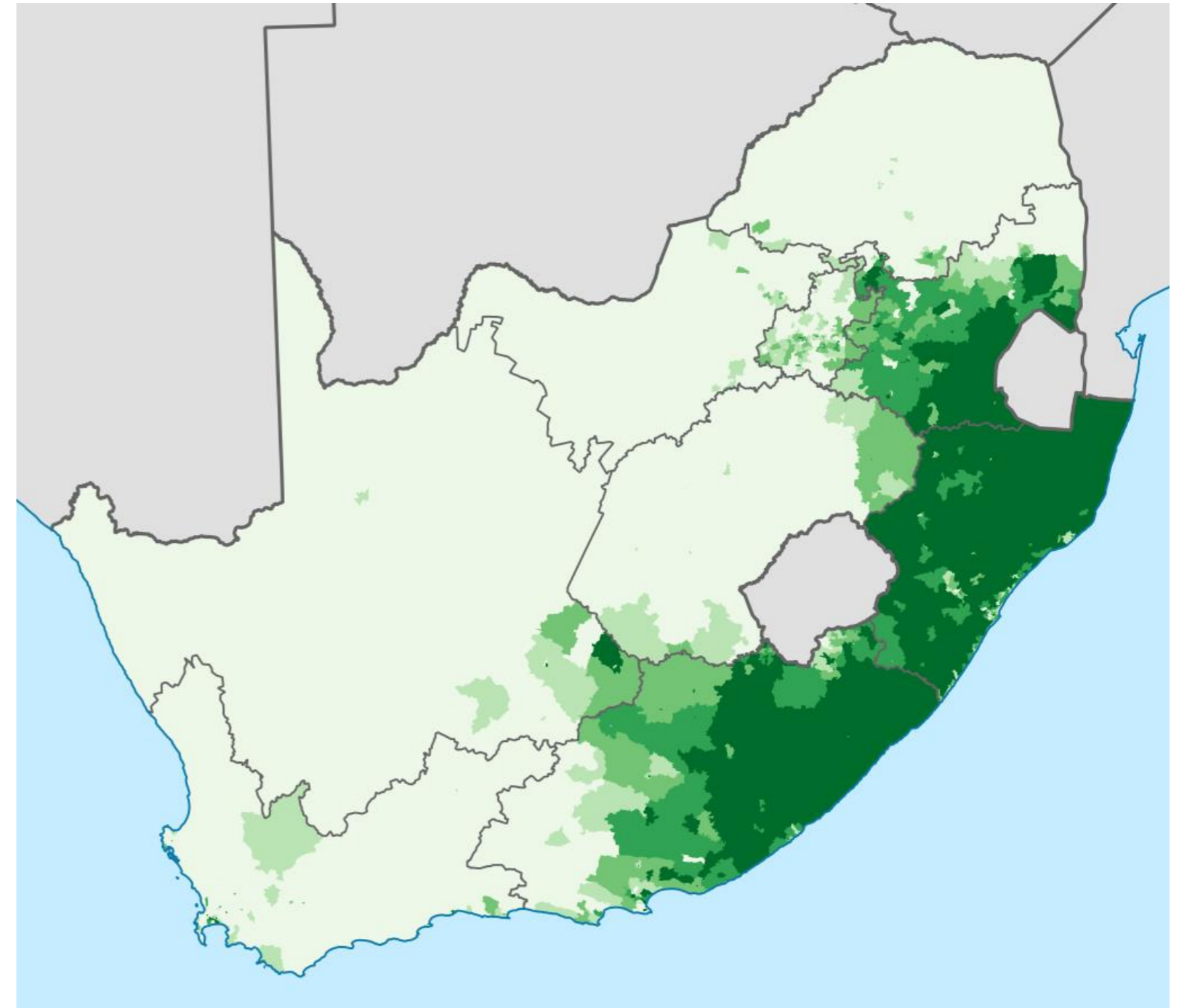


Adapted from: Pakendorf, B., et al. (2017). "Prehistoric Bantu-Khoisan language contact: A cross-disciplinary approach." *Language Dynamics and Change* 7(1): 1-46.

NGUNI

Nguni (S40)

- Xhosa (S41)
- Zulu (S42)
- Swati (S43)
- (Zimbabwe) Ndebele (S44)
- Bhaca (S402), Phuthi (S404), Lala (S406), South Ndebele (S407), North Ndebele (S408), ...



CLICKS IN NGUNI

- All Nguni languages have clicks
 - except Northern Ndebele > still had a few click words when described by Ziervogel (1959)
- Many click words are shared
- Functional load of clicks differs across Nguni languages
 - number of click phonemes
 - percentage of click words in the lexicon

CLICKS IN NGUNI

When did clicks enter Nguni languages?

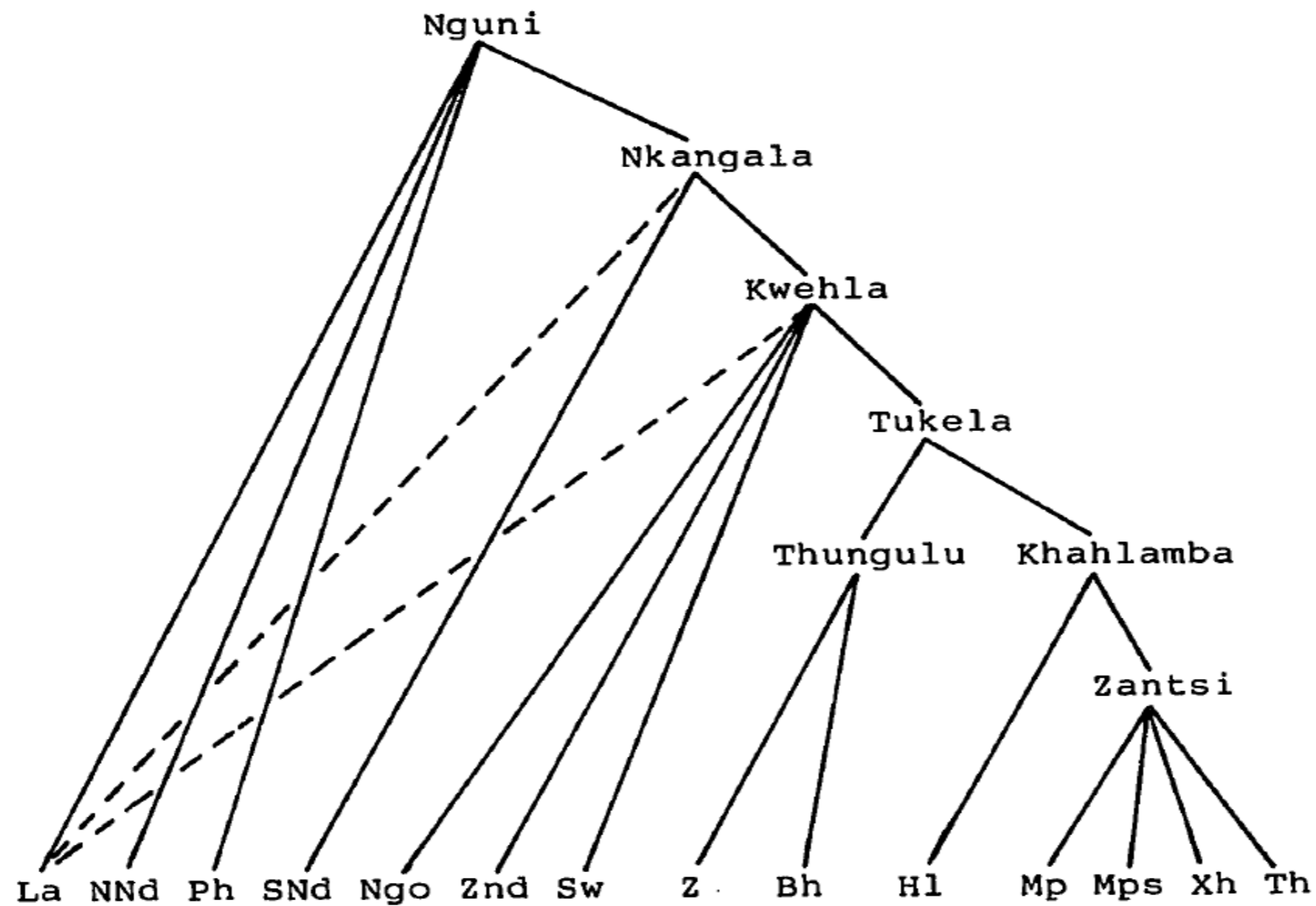
- **were clicks borrowed into the Nguni languages once into Proto-Nguni?**
 - **sharing of click words with regular sound correspondences**
- did clicks diffuse from one Nguni language to others?
 - sharing of click words but no regular sound correspondences
- were clicks borrowed into individual Nguni languages?
 - little sharing of click words

NGUNI SUBCLASSIFICATION

- Tekela vs. Zunda:
 - Zunda:
 - use /z/ instead of /t/
 - use aspiration /t^h/ instead of affricates /ts, tf/
 - Xhosa, Zulu, Zim. Ndebele, S. Ndebele
 - Tekela:
 - use /t/ instead of /z/
 - use affricates /ts, tf/ instead of aspiration /t^h/
 - Swati, Phuthi, Bhaca, Lala, N. Ndebele

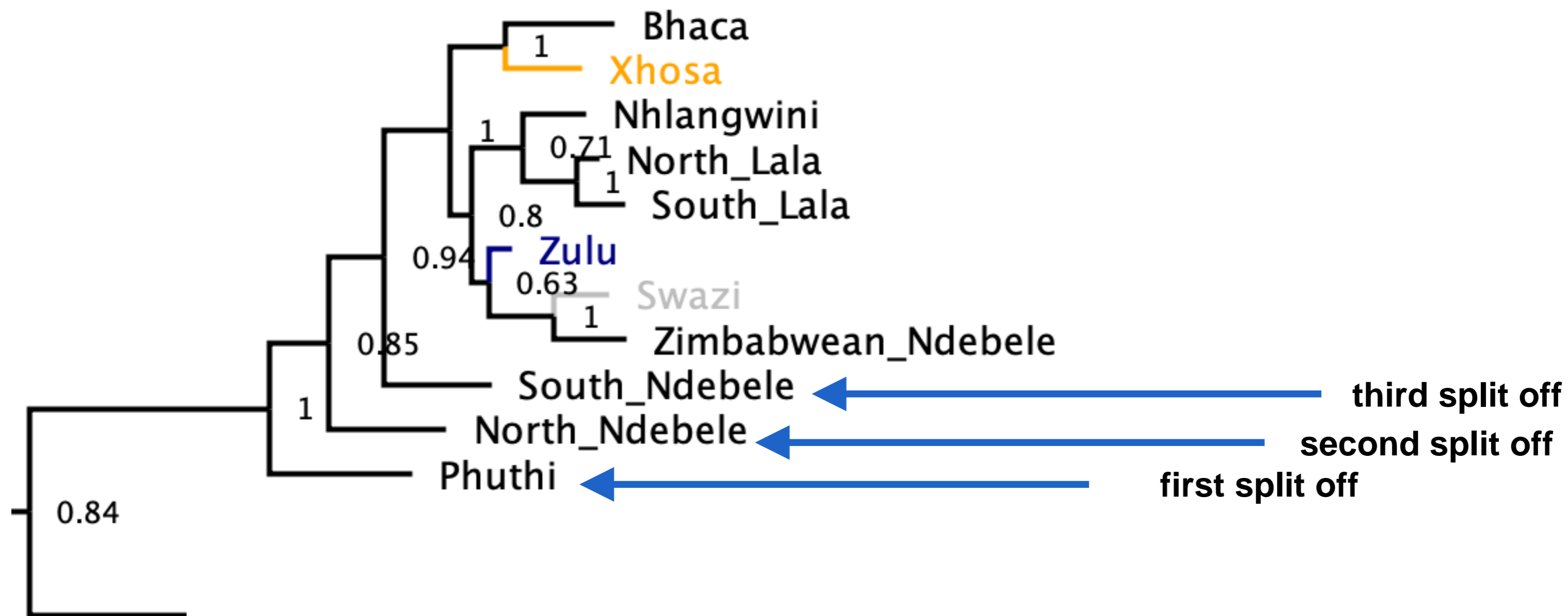
NGUNI SUBCLASSIFICATION

Subclassification based on lexicostatistics by Ownby (1981, 1985)



NGUNI SUBCLASSIFICATION

Phylogenetic classification by Chousou-Polydouri, Bostoen & Gunnink (forthcoming)



NGUNI SUBCLASSIFICATION

Which subclassification is best?

- Zunda/Tekela: presence of a word in Zunda (Zulu, Xhosa, S. Ndebele) and Tekela (Swati, Bhaca, Phuthi) points to Proto-Nguni origin
- Ownby & Chousou-Polydouri et al: presence of a word in Lala?, Phuthi, S. Ndebele and one other language points to Proto-Nguni origin

It doesn't matter – we can satisfy both criteria

NGUNI DOCUMENTATION

Documentation of the Nguni languages is very uneven:

- Zulu, Xhosa: very well-described
- Zim. Ndebele, Swati: well-described
- S. Ndebele: moderately well-described
- Bhaca, Phuthi, Lala: very sparsely described
- Mpondomise, Xesibe, Hlubi, ...: virtually no data (are they even languages?)

Lack of documentation hampers reconstruction: absence or presence of a cognate can often not be definitively proven

CLICKS IN NGUNI LANGUAGES

Clicks are doubly articulated consonants:

- anterior closure = click type: bilabial [ɔ̥], dental [l̪], (post)alveolar [l̪ʲ], lateral [l̪ʲ], palatal [t̪ʲ]
- posterior closure, usually velar or uvular
- click accompaniment: voicing, aspiration, breathiness, nasalization, etc...
- click type + click accompaniment = click phoneme

CLICKS IN NGUNI LANGUAGES

Xhosa: 3 click types, 6 accompaniments

	Dental	Alveolar	Lateral
Voiceless		!	
Voiced	g	g!	g
Aspirated	h	!h	h
Nasal	n	n!	n
Voiceless prenasalized	ᵑ ◦	ᵑ! ◦	ᵑ ◦
Voiced prenasalized	ᵑ g	ᵑ!g	ᵑ g

CLICKS IN NGUNI LANGUAGES

Swati: 1 click type, 6 accompaniments

	Dental	Alveolar	Lateral
Voiceless		!	
Voiced	g	g!	g
Aspirated	h	!h	h
Nasal	n	n!	n
Aspirated nasal	n h	n!h	n h
Breathy voiced nasal	n ̤	n!̤	n ̤

CLICKS IN NGUNI LANGUAGES

Zulu / Zimbabwe Ndebele / Lala / Bhaca: 3 click types, 5 accompaniments

	Dental	Alveolar	Lateral
Voiceless		!	
Voiced	g	g!	g
Aspirated	h	!h	h
Nasal	n	n!	n
Voiceless prenasalized	ᵑ ◌	ᵑ! ◌	ᵑ ◌
Voiced prenasalized	ᵑ g	ᵑ!g	ᵑ g

CLICKS IN NGUNI LANGUAGES

Southern Ndebele: 2 click types, 4 accompaniments

	Dental	Alveolar	Lateral
Voiceless		!	
Voiced	g	g!	g
Aspirated	h	!h	h
Nasal	n	n!	n
Voiceless prenasalized	ᵑ ◦	ᵑ! ◦	ᵑ ◦
Voiced prenasalized	ᵑ g	ᵑ!g	ᵑ g

CLICKS IN NGUNI LANGUAGES

Phuthi: 3 click types, 4 accompaniments

	Dental	Alveolar	Lateral
Voiceless		!	
Voiced	g	g!	g
Aspirated	h	!h	h
Nasal	n	n!	n
Voiceless prenasalized	ᵑ ◦	ᵑ! ◦	ᵑ ◦
Voiced prenasalized	ᵑ g	ᵑ!g	ᵑ g

CLICKS IN NGUNI LANGUAGES

	Dental	Alveolar	Lateral	Number of click phonemes
Xhosa	, g , ^h , ɲ , ɳ g, ɳ _o	!, g!, ! ^h , ɲ!, ɳ!g, ɳ! _o	, g , ^h , ɲ , ɳ g, ɳ _o	18
Zulu	, g , ^h , ɲ , ɳ g	!, g!, ! ^h , ɲ!, ɳ!g	, g , ^h , ɲ , ɳ g	15
Zim. Ndebele	, g , ^h , ɲ , ɳ _l	!, g!, ! ^h , ɲ!, ɳ! _l	, g , ^h , ɲ , ɳ _l	15
S. Ndebele	, g , ^h , ɲ	!, g!, ! ^h , ɲ!	-	8
N. Ndebele	-	-	-	0
Swati	, g _l , ^h , ɲ , n _l , ɲ h	-	-	6
Phuthi	, g , ^h , ɲ	!, g!, ! ^h , ɲ!	, g , ^h , ɲ	12
Bhaca	, g , ^h , ɲ , ɳ _l	!, g!, ! ^h , ɲ!, ɳ! _l	, g , ^h , ɲ , ɳ _l	15
Lala	, g , ^h , ɲ , ɳ g	!, g!, ! ^h , ɲ!, ɳ!g	, g , ^h , ɲ , ɳ g	15

CLICKS IN NGUNI LANGUAGES

Proposed Proto-Nguni click inventory: 4 click types, 5 accompaniments

	Dental	Alveolar	Palatal	Lateral
Voiceless	*	*!	*ǀ	*
Voiced	*g	*g!	*gǀ	*g
Aspirated	* ^h	*! ^h	*ǀ ^h	* ^h
Nasal	*ŋ	*ŋ!	*ŋǀ	*ŋ
Prenasalized	*ŋ g			

PROTO-NGUNI CLICKS

Voiceless dental clicks: maintained as such in all Nguni languages

Proto-Nguni	* lil i ‘earring’
Zulu	i-lil i ‘earring’
Xhosa	i-lil i ‘earring’
Zim. Ndebele	i-lil i ‘earring’
S. Ndebele	i-lil i ‘earring’
Swati	li-lil i ‘earring’
Phuthi	lil i ‘earring’

PROTO-NGUNI CLICKS

Voiceless alveolar clicks: maintained in all Nguni languages EXCEPT Swati, ! > l

Proto-Nguni	*!in ‘become strong’
Zulu	!in-a ‘become strong/firm’
Xhosa	!in-a ‘become hard/firm’
Zim. Ndebele	!in-a ‘become strong/firm’
S. Ndebele	!in-a ‘be/become strong/firm’
Swati	lin-a ‘be strong’
Phuthi	!in-a ‘be strong/tight’
Bhaca	!in-a ‘be strong’

PROTO-NGUNI CLICKS

Voiceless lateral clicks: maintained in all Nguni languages

EXCEPT Swati, S. Ndebele: ll > l

Proto-Nguni *lloll-a ‘to chat’

Zulu lloll-a ‘to chat’

Xhosa lloll-a ‘to chat’

Zim. Ndebele lloll-a ‘to chat’

S. Ndebele lol-a ‘to chat’

Swati lol-a ‘to converse’

Lala lloll-a ‘to chat’

PROTO-NGUNI CLICKS

Could shared click words be the result of language contact?

regular sound correspondences: inheritance

irregular sound correspondences: borrowing

PROTO-NGUNI CLICKS

Some regular sound correspondences in Nguni:

Tekela /tf, ts/ = Zunda /th/

Swati (Tekela) **tsandza** 'love', Zulu (Zunda) **thanda** 'love'

Swati (Tekela) **tfola** 'get', Zulu (Zunda) **thola** 'get'

Tekela /dv, dz/ = Zunda /d/

Swati **li-dvolo** 'knee', Zulu **i-dolo** 'knee'

PROTO-NGUNI CLICKS

Borrowed words in Nguni languages defy regular sound correspondences:

Swati **thula** 'be quiet', borrowed from Zulu **thula** 'be quiet'

Swati **deda** 'get out of the way', borrowed from Zulu **deda** 'get out of the way'

Phuthi **i-!o!otho** 'larynx', borrowed from Sotho **!o!otho**

Phuthi **thowuuka** 'travel down', borrowed from Sotho **thouha**

PROTO-NGUNI CLICKS

Click words in Nguni also follow these regular sound correspondences:

Swati /tf/ - Zulu /th/

Swati **letfuka** 'fall over', Zulu **!ethuka** 'fall over'

Swati **si-latfulo** 'shoe', Zulu **isi-lathulo** 'shoe'

Swati /dz/ - Zulu /d/

Swati **ledza** 'finish', Zulu **!eda** 'finish'

Swati **li-landza** 'egg', Zulu **i-!anda** 'egg'

PROTO-NGUNI CLICKS

Voiced clicks:

Proto-Nguni	*glin-a ‘keep’
Zulu	glin-a ‘keep, preserve; terminate’
Xhosa	glin-à ‘keep’
Zim. Ndebele	glin-a ‘keep, preserve’
S. Ndebele	glin-a ‘keep’
Swati	glin-à ‘keep; terminate’
Phuthi	glin-á ‘keep’

PROTO-NGUNI CLICKS

Voiced clicks:

Proto-Nguni	*g!ok-a ‘wear’
Zulu	g!ok-a ‘wear, dress’
Zim. Ndebele	g!ok-a ‘wear, dress’
Lala	g!ok-a ‘wear’
Swati	glòk-à ‘dress, wear’

PROTO-NGUNI CLICKS

Aspirated clicks

Proto-Nguni ***lhith-a** ‘spill’

Zulu **lhith-a** ‘scatter, waste, spill’

Xhosa **lhìth-à** ‘demolish, scatter, spill, spend’

Zim. Ndebele **lhith-a** ‘spill’

S. Ndebele **lhith-a** ‘waste’

Swati **lhìts-à** ‘spill, waste, scatter’

Phuthi **lhìtsh-à** ‘pour away, waste’

PROTO-NGUNI CLICKS

Aspirated clicks

Proto-Nguni	*!hʉb-a ‘drive’
Zulu	!hʉb-a ‘drive along, urge on’
Xhosa	!hùb-à ‘drive’
Zim. Ndebele	!hʉb-a ‘advance, drive along’
S. Ndebele	!hʉb-a ‘prolong’
Lala	!hʉb-a ‘drive’
Bhaca	!hʉb-a ‘proceed’
Swati	!hùb-à ‘drive, continue with’

PROTO-NGUNI CLICKS

Nasal clicks

Proto-Nguni	*ɲled-a ‘help’
Zulu	ɲled-a ‘help’
Xhosa	ɲlèd-à ‘be useful, helpful’
Zim. Ndebele	ɲled-a ‘help’
S. Ndebele	ɲled-a ‘help’
Swati	ɲlèdz-à ‘help’
Lala	ɲledz-a ‘help’
Bhaca	ɲlèdz-á ‘help’

PROTO-NGUNI CLICKS

Nasal clicks

Proto-Nguni	*ŋllele ‘left’
Zulu	bu-ŋllele ‘left’
Xhosa	ĩ-ŋllêlè ‘left hand’
Zim. Ndebele	i-ŋllele ‘left-handed person’
Phuthi	lì-ŋllélé, lí-ŋllèlè ‘left-handed person, left hand’
S. Ndebele	i-ŋlele ‘left-handed person’
Swati	lí-ŋlelè ‘left-handed person’

PROTO-NGUNI CLICKS

Proposed Proto-Nguni click inventory: 4 click types, 5 accompaniments

	Dental	Alveolar	Palatal	Lateral
Voiceless	*	*!	*ǀ	*
Voiced	*g	*g!	*gǀ	*g
Aspirated	* ^h	*! ^h	*ǀ ^h	* ^h
Nasal	*ŋ	*ŋ!	*ŋǀ	*ŋ
Prenasalized	*ŋ g			

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

Xhosa	ceb-a 'to become fat, rich'
Zulu	leb-a 'to be rich, fat'
S. Ndebele	um-lebo 'riches, wealth'
Swati	leb-a 'to get rich'
Bhaca	leb-a 'be fat'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

Xhosa	i-cala 'fault'
Zulu	i-lala 'fault'
Zim. Ndebele	i-lala 'fault'
S. Ndebele	i-lala 'fault'
Swati	li-lala 'fault'
Bhaca	i:-lala 'fault, case'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

Xhosa	cob-a 'to crush, grind'
Zulu	lob-a 'to mince, crush'
S. Ndebele	lob-elel-a 'to cut into small pieces'
Swati	lob-a 'to cut into small pieces'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

dental click // in Xhosa = dental click // in other Nguni languages

Zulu	i-lili 'earring'
Xhosa	i-lili 'earring'
Zim. Ndebele	i-lili 'earring'
S. Ndebele	i-lili 'earring'
Swati	li-lili 'earring'
Phuthi	lili 'earring'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

dental click // in Xhosa = dental click // in other Nguni languages

Zulu **lela** 'request'

Xhosa **lela** 'request'

Zim. Ndebele **lela** 'request'

S. Ndebele **lela** 'request'

Swati **lela** 'request'

Phuthi **lela** 'request'

Bhaca **lela** 'request'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

dental click // in Xhosa = dental click // in other Nguni languages

Option 1: one proto-Nguni phoneme *l which split in Xhosa and was maintained in all other Nguni languages

Option 2: two proto-Nguni phonemes which were maintained in Xhosa and merged in all other Nguni languages

PROTO-NGUNI PALATAL CLICKS

No conditioning environment:

Xhosa // = // elsewhere:

Xhosa	leb-a 'to plan'
Zulu	leb-a 'to inform against'
S. Ndebele	leb-a 'to report s.o.'
Swati	leb-a 'to inform on'
Zim. Ndebele	leb-a 'to plot'
Bhaca	leb-a 'to report'

Xhosa /c/ = // elsewhere:

Xhosa	ceb-a 'to become fat, rich'
Zulu	leb-a 'to be rich, fat'
S. Ndebele	um-lebo 'riches, wealth'
Swati	leb-a 'to get rich'
Bhaca	leb-a 'be fat'

PROTO-NGUNI PALATAL CLICKS

palatal stop /c/ in Xhosa = dental click // in other Nguni languages

dental click // in Xhosa = dental click // in other Nguni languages

~~Option 1: one proto-Nguni phoneme *l which split in Xhosa and was maintained in all other Nguni languages~~

no conditioning environment

Option 2: two proto-Nguni phonemes which were maintained in Xhosa and merged in all other Nguni languages

PROTO-NGUNI PALATAL CLICKS

Xhosa // = // elsewhere > Proto-Nguni *l

Xhosa /c/ = // elsewhere > Proto-Nguni *ǀ

Support for the reconstruction of palatal clicks:

- *ǀ > /c/ is phonetically plausible: loss of ingressive airstream
- in certain Khoe languages, palatal clicks are also replaced by palatal stops
- some Proto-Nguni words with *ǀ have a Khoisan source with /ǀ/

Proto-Nguni *ǀaba ‘flat’ < Khoekhoe ǀgapa ‘open, level (of terrain)’, !Ora ǀhaba ‘flat, broad’

Proto-Nguni *ǀand ‘cleave, chop’ < Khoekhoe ǀā ‘crack (e.g. dry mud/wood), split (wood)’

CLICKS IN NGUNI LANGUAGES

Proposed Proto-Nguni click inventory: 4 click types, 5 accompaniments

	Dental	Alveolar	Palatal	Lateral
Voiceless	*	*!	*ǀ	*
Voiced	*g	*g!	*gǀ	*g
Aspirated	* ^h	*! ^h	*ǀ ^h	* ^h
Nasal	*ŋ	*ŋ!	*ŋǀ	*ŋ
Prenasalized	*ŋ g			

NGUNI NASAL CLICKS

Prenasalized clicks in modern Nguni languages:

- none in S. Ndebele, Phuthi
- 1 in Zulu, Zim. Ndebele, Bhaca, Lala
- 2 in Xhosa, Swati

Why only a dental prenasalized click in Proto-Nguni?

Where do the additional alveolar and lateral prenasalized clicks come from?

PROTO-NGUNI PRENASALIZED CLICKS

Proto-Nguni ***ŋlgwab-a** ‘bury’

Xhosa **ŋlgwàb-à** ‘bury’

Zulu **ŋlgwab-a** ‘bury’

Zim. Ndebele **nɿwab-a** ‘bury’

Swati **nɿwáb-à** ‘bury’

Proto-Nguni ***ŋlgonο** ‘better’

Zulu **ŋlgonο** ‘better’

Zim. Ndebele **nɿlonο** ‘better’

Swati **nɿlónò** ‘better’

Bhaca **nɿlonο** ‘recovered’

Lala **ŋlgonο** ‘better’

OTHER NGUNI PRENASALIZED CLICKS

Source of other 'prenasalized/breathy voiced' nasal clicks: prenasalisation

Prenasalisation as a morphophonological process: nominal prefix of class 9/10

e.g. Xhosa

class 9: **impumelelo** 'success'

cf. verb **phumelela** 'to succeed'

Prenasalisation also affects nouns with initial clicks:

e.g. Xhosa

class 9: **in^hlelo** 'request'

cf. verb **lela** 'to request'

NGUNI NASAL CLICKS

Why only one prenasalized click in Proto-Nguni?

- > regular sound correspondences for only one the dental prenasalized click
- > other prenasalized clicks can be explained as language-internal developments

Where do the additional prenasalized clicks come from?

- > outcome of prenasalisation: regular, language-internal morphophonological process

FREQUENCY OF PROTO-NGUNI CLICKS

	Dental		Alveolar		Palatal		Lateral	
Voiceless	*	15	*!	20	*ǀ	4	*	4
Voiced	*g	2	*g!	4	*gǀ	2	*g	1
Aspirated	* ^h	8	*! ^h	12	*ǀ ^h	2	* ^h	3
Nasal	*ŋ	4	*ŋ!	2	*ŋǀ	2	*ŋ	3
Prenasalized	*ŋ g	3						

THE ORIGIN OF PROTO-NGUNI CLICK WORDS

91 Proto-Nguni click words

- 24 click words have a Khoisan etymology
 - Khoe:
 - Khoekhoe (17)
 - !Ora (14)
 - Tuu:
 - N|uu (3)
 - ||Xegwi (1)
 - ≠Ungkue (1)

THE ORIGIN OF PROTO-NGUNI CLICK WORDS

91 Proto-Nguni click words

- 24 click words have a Khoisan etymology
- 8 click words have a Bantu etymology
 - hlonipha? identity-marking?
- 58 click words cannot be traced
 - borrowings from undocumented Khoisan languages?

CLICKS IN NGUNI LANGUAGES

When did clicks enter the Nguni languages? In Proto-Nguni (+- 1000 AD)

- Subsequent attrition:
 - all languages lost palatal clicks
 - S. Ndebele and Swati lost lateral clicks
 - Swati also lost alveolar clicks
- Subsequent enrichment:
 - some languages developed additional nasal clicks through the application of already existing processes of prenasalisation
 - no enrichment through language contact:
no Nguni language adopted new click phonemes from Khoisan after Proto-Nguni

CONCLUSIONS

- Clicks entered the Nguni languages only at the Proto-Nguni stage
 - subsequent contact with Khoisan languages did take place (cf. Khoisan borrowings in click words not reconstructable to Proto-Nguni) but did not lead to adoption of new click phonemes
 - different levels of attrition may be result of different contact situations
 - Northern & Southern Ndebele: language contact with clickless languages
Northern Sotho & Tswana led to click loss
 - Xhosa: language contact with Khoekhoe led to click maintenance

FURTHER RESEARCH

Post-Proto-Nguni developments

- which Nguni languages continued to be in contact with which Khoisan languages?
- what contact-induced changes happened after the break-up of Proto-Nguni?
 - loanwords
 - morphology

FURTHER RESEARCH

- Where do clicks come from in Southern Sotho?
 - many click words are shared with Nguni languages
 - Southern Sotho is part of the Sotho cluster, and other Sotho languages don't have clicks
- Other possibly foreign sounds: delayed breathy voiced stops, velar affricates, velar lateral affricates...
 - were they copied from Khoisan languages?
 - if so, at Proto-Nguni level or later?

