

Lateral obstruents in East Africa from an areal and historical perspective: A case for contact-induced non-change

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Abstract

The Southern Cushitic languages in Tanzania have in their sound inventories two lateral obstruents: a voiceless lateral fricative and an ejective lateral affricate. Both sounds can be shown to be inherited from Cushitic and Afroasiatic and are reconstructed with lateral fricative pronunciation. Yet the Southern Cushitic languages are the only Cushitic languages that maintain the lateral fricative pronunciation. In the area where these languages are and were spoken, there are a number of other unrelated languages with these lateral sounds: Hadza (isolate) has a voiceless and voiced lateral affricate and a lateral fricative, Sandawe (unclassified) likewise has a lateral fricative and a lateral affricate, and Southern Nilotic has been reconstructed with a lateral fricative that is only documented in a now extinct primary branch. The feature has been proposed as one diagnostic of the Tanzanian Rift Valley as a linguistic area. In such a scenario, the presence of laterals in the area could be interpreted as contact-supported retention of otherwise versatile sounds. Additional language groups in East Africa in which laterals are attested are Kuliak (Nilo-Saharan or unclassified) in Uganda, consisting of three languages, and Taita Bantu languages in Kenya. In their case, the challenge is to determine the origin of the sounds (inheritance, contact, or innovation). This paper investigates the historical processes within language contact that resulted in the areal distribution of lateral obstruents in East Africa.

Keywords: lateral obstruents, contact-supported retention, areal linguistics, Tanzanian Rift Valley language area

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1 Introduction

Northern Tanzania is one of the linguistically most diverse areas in Africa, with representatives of all four major language phyla. Kießling et al. (2008) propose that the Tanzanian Rift Valley is a linguistic area, an area of linguistic convergence. The first feature that they discuss is the presence of a lateral fricative and affricate in several present-day Southern Cushitic languages (Iraqw, Gorwaa, Alagwa and Burunge, as well as in their reconstructed ancestor, Proto-West Rift Southern Cushitic), in the linguistic isolate Hadza, in Sandawe, which is another click language, and in reconstructed Proto-Southern Nilotic, with lateral fricatives attested in the once spoken Southern Nilotic language Omotik. These lateral sounds do not occur in the region's Bantu languages, nor in the present-day Nilotic languages Datooga and Maasai. This renders the Tanzanian Rift Valley one of the few hotspots of lateral obstruents in Africa. In what follows, we investigate which processes of language contact resulted in this feature becoming areal. There are two other areas in East Africa where such laterals have been reported: the Karamoja Region of Uganda and the Taita Hills of Kenya. The laterals in these two areas are discussed as well in order to establish whether they show evidence of a historical connection to the laterals in the Tanzanian Rift Valley. In discussing the history of these sounds in the various languages and language groups, we show that language contact played a role in a variety of ways: 1) laterals were introduced into Sandawe by lexical transfer from Southern Cushitic languages; 2) lexical items containing laterals underwent interesting phonetic adaptations as clicks when borrowed into Hadza (and possibly the reverse when items were borrowed from Hadza); 3) different Taita Bantu languages innovated lateral obstruents in two different ways, one involving sound change of inherited vocabulary while likely in contact with a Cushitic language that had lateral obstruents, and the other involving borrowed vocabulary from a Cushitic language; 4) the Southern Cushitic laterals remain as inherited sounds that only survive with lateral realisation on this areal edge of Cushitic, where the contact with other lateral-containing languages, such as Hadza, arguably provide an instance of contact-enhanced retention; and lastly, 5) lateral obstruents in the three Kuliak languages of northeast Uganda can be shown, in some cases, to be historically related to the Southern Cushitic laterals. Given the considerable genetic and geographic distance between the two groups, hypotheses are needed as to the nature and time of possible historical contact scenarios.

This article provides a case study of contact-enhanced retention. Language contact is almost always associated with change; scenarios in which language contact reinforces the preservation of features are less studied. There are occasional claims to this effect. For example, Dickey (2011: 224) points out that "in some cases language contact causes linguistic features to be preserved," and Enrique-Arias (2019: 170) identifies "the retention of older variables" as a possible outcome of language contact. A workshop initiated by Andrés Enrique-Arias and Sarah Thomason at the 2022 International Conference on Historical Linguistics in Oxford was devoted to contact-induced non-change. We consider the retention of the voiceless lateral fricative and the lateral ejective affricate in West Rift Southern Cushitic to be an instance of such contact-induced non-change. In order to make this case we have to show that the languages inherited these features and that the languages with which they were in contact contained these features. We show both, but we face a challenge in showing that these features were inherited in the contact languages, due to their isolated status in terms of classification.

In the case of many languages in this study, the uneven areal distribution of lateral sounds across language phyla suggests scenarios of historical language contact. However, because Hadza is an isolate, and Sandawe as well (or at least extremely isolated within its phylum if Khoe-Kwadi-Sandawe is accepted as a phylum), there is some uncertainty as to the historical developmental depth of lateral obstruents in these languages. Likewise, the relative isolation of Kuliak vis-à-vis Nilo-Saharan

and the layers of language contact these languages have undergone leaves us in a state of having to propose most likely scenarios. The historical reconstruction and positioning of Southern Cushitic within Cushitic, of East African Bantu within Bantu, and of Southern Nilotic within Nilotic are central to our Linguistic History of East Africa project, www.lheaf.org. One of the results of this renewed interest in lexical and phonological reconstruction on these language families has been a re-appraisal of the claim that Southern Nilotic had a lateral fricative. In the latter case, Rapold (in prep.) argues that proto-Southern Nilotic did not have a lateral fricative, meaning that the now-extinct Omotik, the sole Southern Nilotic language with a lateral fricative, must have acquired it through contact.

Contact-induced non-change may play a major role in the emergence or recognition of linguistic areas. The validity of linguistic areas is often debated. Campbell (2017:19) suggests that "... it is *individual historical events* of diffusion that count, not the post hoc attempts to impose geographical order on varied conglomerations of these borrowings" [emphasis mine]. To consider contact-induced non-change a factor in the emergence and recognition of a linguistic area entails considering non-change a historical event. In the light of this philosophical challenge, it is important to show that the retained feature is prone to change. In our case, we could indeed argue that the lateral obstruents were lost elsewhere in Cushitic, and probably several times. That the presence of lateral fricatives is one of the diagnostics of the Tanzanian Rift Valley linguistic area (Kießling et al. 2008) is at least partly also due to contact-induced change as well. We show that the languages involved in the area have borrowed vocabulary containing the lateral obstruents, reinforcing the presence of lateral obstruents as a feature of the area.

In Section 2, we argue that the Southern Cushitic laterals are indeed retentions. Then, in Section 3 we argue that Hadza originally had several lateral obstruents and reinforced the feature by borrowing words with laterals. We show in Section 4 that Sandawe borrowed a substantial number of lexical items with lateral obstruents from Cushitic and kept them as such. Not all lateral obstruents in Sandawe can be shown to be the result of language contact; however, given the isolated position of Sandawe, it is not possible to know whether Sandawe originally had lateral obstruents. Section 5 addresses Eastern and Southern Nilotic languages. While one of these languages, the now-extinct Southern Nilotic language Omotik, had a lateral fricative, we show that this was an innovation rather than a retention. We further show also that reconstructions positing a lateral fricative in Proto-Eastern Nilotic are supported by little evidence. Therefore, we rule out Eastern and Southern Nilotic as sources of pressure for neighboring languages to retain lateral obstruents. Finally, we discuss two additional language groups that fall outside the linguistic area of the Tanzania Rift Valley as defined by Kießling et al. (2008), but that do have lateral obstruents. In Section 6, we show that Proto-Kuliak had several lateral obstruents and that it was in contact with the languages of the Tanzanian Rift Valley in the deep past. In Section 7, we discuss the nearest other occurrence of lateral obstruents, namely, in the Taita Hills in Kenya. There, the lateral obstruent in the Bantu language Davida is the result of a process of spirantization, a common sound change in Bantu that resulted in a lateral obstruent only in Davida. This outcome was influenced by an earlier presence in the area of languages with lateral obstruents: a now extinct Cushitic language and the other Bantu language in the area, Saghala, which once had lateral obstruents, but only in Cushitic borrowings.

2 Are Southern Cushitic laterals retentions from Cushitic?

Numerous lexical items containing the voiceless lateral fricative [ɬ] or the lateral ejective affricate [tʃ'] are found in Southern Cushitic languages (West Rift branch, Northern Tanzania). Both can be shown to be retentions from Proto-Cushitic. Evidence that the affricate is a retention is strong, with many

cognate retentions. For the fricative, only a limited number of words have cognates in Cushitic, but more can be added as we cast the net wider to Afroasiatic.

Table 1 illustrates the correspondence between the West Rift Southern Cushitic lateral fricative and an *s or *ʃ in Proto-East-Cushitic.

Table 1: Lateral obstruents as retentions in West Rift Southern Cushitic²

West Rift Cushitic reconstruction	Cushitic reconstruction	Remarks
*ʃaqw (v) 'shoot'	*ʃaqw (v) 'fight, shoot' (Ehret 1987) PEC *ʃok'- 'beat, hit'. (Sasse 1979)	
*ʃa:qat (v:middle) 'be tired, exhausted'	PHEC: *ʃakk'-	There are Semitic parallels in Modern South Arabian with lateral pronunciation
*ʃee (f) 'cow'	PEC *ʃaɿ- 'cow', PHEC has *saʔa (Hudson 1989: 44)	Note that there is also PEC *lo' 'cattle' There are Semitic and Chadic parallels with ʃ.

The comparative evidence that the lateral fricative is a retention of a specifically lateral fricative proto-form is strengthened by cognates outside of Cushitic in the wider Afroasiatic phylum, particularly within Semitic and Chadic, as presented in Table 2.

Table 2: Lateral fricative cognates in wider Afroasiatic

West Rift Cushitic reconstruction	Afroasiatic links	Remarks
*ʃaʔ 'want'	Chadic: Gwandara só ~ jó 'want', Goemay sa 'like', P-Semitic *ʃiiʔ- 'wish'	
*ʃaw 'get, find'	PChadic: *ʃəwə 'accept, answer' (Newman 1977: 22 #1)	
*ʃuf 'swell'	Old-Egyptian ʃ-f 'swell'	Orel and Stolbova (1995) link this root to West Chadic ʃafaf 'heat up, make hot' with partial reduplication
Alagwa-Burunge *niinga-ʃaaba 'big water-lizard'	PWestSemitic *ʃʕbb- 'monitor lizard' (Kogan 2011: 211)	The link with Semitic has an irregular sound correspondence: ʃ = P-Semitic (t)ʃ'

The evidence that the lateral ejective affricate in WR Southern Cushitic is a Cushitic retention is stronger, as shown in Table 3. Most of these examples have already been reported in Kießling and Mous (2003: 36), though more have been added here. The corresponding sound in Proto-East Cushitic (Sasse 1979) is *d₁'; the regular reflex of *d₁' in Somali is [d].

Table 3: Lateral affricates as retentions in West Rift Southern Cushitic

Proto-West Rift	Cushitic	Remarks
*tʃ'aw (v) 'get up, rise, fly'	Oromo daab- 'upright, erect' (Kießling and Mous 2003: 280)	PAA tʃ'a' / tʃ'aw / tʃ'ay 'move upwards' (Orel and Stolbova 1995: #516)
*tʃ'eed (adj.sg) 'long'	PEC *d ₁ iir- 'male', Oromo deera	tʃ'ixar- 'grow, be long' (Orel and

² We use the following abbreviations: PEC Proto-East Cushitic, PHEC Proto-Highland East Cushitic, PWR Proto-West Rift, PIRQ Proto-Iraqwoid, ALBU Alagwa-Burunge, PNWR Proto-Northern West Rift, PAA Proto-Afroasiatic, P Proto.

	'long'	Stolbova 1995: #555)
*ʕeetʔ (v) 'be unripe'	Arbore heeddí 'raw', Afar ʕeed 'be raw', Somali ʕaydiin 'unripe'.	
*tʔapaa (f) 'level ground, depression'	PEC *d ₁ aff- 'meadow'	
*tʔaf-iya (f) 'cloud'	Somali qaaf- 'pass by, overtake'.	
*tʔaʕ-aangw (m) 'middle'	Somali qeħ 'waist, middle'	
*tʔaaʕa (n.sg.f) 'rock'	Somali qaʕa 'sound of a falling stone'	
*tʔeeqw (v) 'dam up'	PEC *d ₁ ak' / *d ₁ ik' 'wash'. (Sasse 1979)	
*tʔibiʕ (v) 'push'	PEC *d ₁ iib- 'squeeze' (Borana Oromo diiba 'push')	
*tʔub (v) 'rain'	PEC *d ₁ ub- 'dip in'	
*tʔubaʕa (m) 'upper arm'	Afar dabʕe 'armpit'	
^{ALBU} *tʔuħ-iya (f) 'elbow'	PEC *d ₁ ikl- 'elbow'	
*tʔuumfuqaa (f) 'mixture of mud and wet dung'	PEC *d ₁ ookk'- 'mud'	
*tʔup (v) 'smash'	PEC *d ₁ uf- 'close, shut'	
*qatʔ (v) 'die, be finished'	Somali qadid 'die out'	
*quutʔ (v) 'go away, run away'	Beja kuud	

It is clear from the above that [tʔ] in WR Southern Cushitic languages is a retention, but less clear that the pronunciation was lateral in the Proto-Cushitic etyma. Sasse (1979) shows that a phoneme *d₁' needs to be set up for Proto-East Cushitic but does not commit himself to its pronunciation. This is the phone regularly cognate with West Rift Southern Cushitic *tʔ. Ehret (1987: 135) reconstructs it as *dl, a voiced lateral fricative ([ɮ]), for Southern Cushitic, and proposes that West Rift Southern Cushitic developed the ejective pronunciation. However, Orel and Stolbova (1995) reconstruct a lateral affricate *tʔ next to a lateral fricative *ɮ for Proto-Afroasiatic. In summary, the WR Southern Cushitic lateral fricative is posited as a retention from Cushitic and Afroasiatic, despite the paucity of retained lexical items. The WR Southern Cushitic ejective lateral affricate is also posited as retained from Cushitic and Afroasiatic, but it is unclear whether it retained this pronunciation from Proto-Cushitic and Afroasiatic or whether the lateral and ejective pronunciation is a WR Southern Cushitic innovation.

3 Lateral obstruents in Hadza

Hadza is a language spoken in northern Tanzania in the immediate surroundings of Lake Eyasi by between 1,000 (Blurton Jones 2016: 3) and 6,289 (Languages of Tanzania Project [LOT] 2009: 3) people, and is another regional language with lateral obstruents. It was formerly considered a member of the "Khoisan" language phylum, primarily because of its use of phonemic click consonants (Greenberg 1963) and the hunter-gatherer mode of subsistence practiced by at least a subset of the community. More recently, however, it has convincingly been argued to be a language isolate (Sands 1995). Hadza is in contemporary contact with a variety of languages, including the Nilotic languages Maasai and Datooga, the Cushitic language Iraqw, and the Bantu languages Ihanzu, Sukuma (specifically the Jinykɛya variety), and the national lingua franca, Swahili.

Hadza has a robust set of lateral sounds, featuring nine phonemes with lateral features: the alveolar lateral approximant [l] (or [r], or [ɺ]), the alveolar lateral fricative [ɮ], both an aspirated [c_l^h] and unaspirated [c_l^ʔ] palatal affricate, the ejective palatal affricate [c_l^ʔʔ], and four postalveolar lateral

click consonants: one aspirated [kʰ] and another tenuis [k], as well as nasalised [k̃] and glottalised nasalised [k̃ʔ].

The central question for Hadza in this discussion is whether Hadza laterals can be shown to have existed in its phoneme inventory before (or at least independent of) contact. It is difficult to provide a straightforward answer to this for two primary reasons. The first is that, because Hadza is a language isolate, comparing phoneme inventories of genetically related languages is impossible. The second is that the study of Hadza lexical and historical linguistics is in its infancy: that is, we know very little about how the words and sounds of Hadza came to be the way they are today. The best resource for this kind of work is an unpublished lexicon (Miller 2017). Miller (p.c. 2022.04.07) notes that, when comparisons for Hadza words are provided in this lexicon, no etymological claim is implied, and that forms are given for comparison only. Additionally, Miller asserts the inverse: where no form is provided, it does not necessarily mean that no etymological link exists between a Hadza word and a word in another language, but rather, that no such link has been found. With those caveats, Hadza examples and comparanda from other languages are presented in Table 4, adapted from Miller (2017).

Table 4: Links between Hadza and Southern Cushitic laterals.

Phoneme	Hadza Word	Compare
[l] (or [r] or [ʝ])	[ʔerati] 'young man'	possibly linked to a wide-spread EA root for 'girl' Aasax <i>eletō</i> 'girl', Inner Mbugu <i>mʔaléta</i> (1/2) 'girl' and Kikuyu <i>mwiretu</i> . Possible also Oromo <i>intala</i> , with a Nilotic or Cushitic <i>-etV</i> suffix.
	[haro] 'to move out of the way'	∅
[t]	[ʔarakama] 'insane person'	Iraqw <i>ʔarhamá</i> 'mad person'
	[ʔok'o-ko] 'dry dicotyledon leaves'	PIRQ* <i>ʔooʕáy</i> (m) 'leaves of maize cob'; Iraqw <i>ʔooʕi</i>
	[!uʔa] 'big, old, or important person'	∅
[cʰ]	[cʰuʔa] 'to hit'	Proto-East Cushitic <i>*d'uf</i> 'to close, shut'
	[cʰehe] 'bottom'	∅
[cʰ]	[cʰ-akioko] 'wrist guard'	Iraqw and PWR <i>tʔ'akw-ay</i> 'bag, pocket'
	[pucʰ-upucʰ-u:] 'to rise (of the sun or moon)'	Alagwa-Burunge and Sandawe <i>butʔ'i</i> 'blood-red'
	[ecʰ:e:] 'to pass (intrans.)'	∅
[cʰ']	[cʰ'-angase] 'quiver (for arrows)'	Iraqw and Proto-NWR <i>tʔ'aangasi</i> 'quiver (for arrows)'
	[cʰ'-omako] 'head'	PWR and Iraqw <i>*tʔ'ooma</i> 'mountain, temple [of head]'
	[cʰ'-asi] 'to drop by and say hello'	∅
[kʰ]	[kʰui-ko] 'mosquito'	Iraqw and PWR <i>ts'uuʔi</i> 'mosquito'
	[kʰu:] 'to stand still'	Sandawe <i>nxume</i> 'to stand up'
	[kʰebe:] 'to hide oneself'	∅
[k̃]	[k̃akxʷ'ats'i] 'to give something to a lover as a sign of commitment'	PWR <i>*tʔ'agway</i> 'wives'; Iraqw <i>tʔ'aaway</i>
	[k̃apʰa] 'a piece of wood'	∅
[ʔ]	[ʔape] 'to throw'	∅
[ʔʔ]	[ʔʔuk'u] 'to bite, chew, gnaw'	PWR and Iraqw <i>*tʔ'uʔ</i> 'to bite, chew, gnaw'
	[taʔʔi] 'to die'	∅

Not all pairs in Table 4 are equal. The Hadza form ^k//akx^wats'i 'to give something to a lover as a sign of commitment' and the Proto-West Rift *tʰagway 'wives' is weaker as a cognate pair than, say, the Hadza form ʈok'o-ko 'dry dicotyledon leaves' and the Iraqw form ʈoosi 'leaf of maize cob'.

The time depth proposed for any sort of significant Hadza-Sandawe contact (15-20 thousand years ago (Tishkoff et al. 2007: 2191) means that it is very unlikely that any pair of Hadza-Sandawe words in Table 4 represents cognates. Direction of transfer is also unknown: is the Hadza form ^o//ʔuk'u 'to bite, chew, gnaw' a borrowing from Proto-West Rift *tʰuʔ 'to bite, chew, gnaw', or is the direction of transfer the other way round – Hadza to Proto-West Rift? It is difficult to decide in the absence of further Cushitic links.

Perhaps, then, the best conclusions at this stage are 1) that Hadza features a wide array of lateral (or lateral-like) sounds, 2) that some words containing lateral sounds are borrowings from Cushitic, but 3) that all of the relevant sounds also feature in words for which no comparable word in a nearby language has been identified, and some contain clicks, which are presumably an original Hadza feature. As such, and until convincing cognates are found and/or sound-change laws proposed, it does not appear as if Hadza acquired its lateral sounds through borrowing. Moreover, 4) Miller has suggested that a possible Hadza adaptation of a pre-nasalised Cushitic lateral ejective affricate is a click, e.g. //ʔ as in kiliki//ʔi 'arrow barb' from Iraqw qiriqintli 'arrow barb'. And finally 5) there must have been Hadza-Proto-West Rift and Hadza-Iraqw language contact.

4 Lateral obstruents in Sandawe

Sandawe is spoken in North Central Tanzania, close to the homeland of the West Rift Southern Cushitic languages. Genetically unrelated to Cushitic, Sandawe also has a robust inventory of non-click lateral obstruent phonemes, including: /t/, /tʰ/, /tʰ/, /dʒ/ (Steeman 2011: 22, 26-27). The lateral affricates, [tʰ] and [dʒ], are rare and are not attested word-internally (Steeman 2011: 26). The phoneme /tʰ/ is realised as [kʰ] preceding [u] or [w] (Eaton 2010: 10). Many, but far from all, items with these sounds have been identified as (possible) loans from Southern Cushitic (Ehret and Ehret 2012). Sandawe has no obvious genetic relative (Güldemann 2018: 103, 105-106, 353). Güldemann and Elderkin (2010) discuss potential grammatical and lexical cognates between Sandawe and Khoe–Kwadi and conclude that a genetic link can still only be characterised as promising. Note also that Proto-Khoe does not contain any non-click lateral fricatives/affricates (Voßen 1997: 326). Table 5, adapted from Kießling et al. (2008), shows the transfer of lateral obstruents from Southern Cushitic into Sandawe. We include only those that can be shown to be Cushitic by wider cognates in Cushitic. There are two cases where the transfer is more likely to be in the other direction: Sandawe búttʰi 'red' transferred into Alagwa-Burunge *butʰi (ideo) 'blood-red' and Sandawe dʒàní 'arrow' to Kw'adza tʰ'ani-ko 'arrow'. In the former case, which is an ideophone, the proposal that the direction of transfer is into Alagwa and Burunge is motivated by the fact that these Cushitic languages have another non-sound symbolic word for 'red' (moreover, a Hadza lexical origin is proposed above in Table 4). The direction into Kw'adza in the second case is motivated by the fact that it is easier to suggest loss of voice in Kw'adza than exceptional voicing in Sandawe.

Table 5: Transfer of laterals from West Rift to Sandawe

Sandawe	West Rift source	Broader Cushitic link
tʰ'úpé 'smash, hit something wet'	PWR*tʰ'up (v) 'smash'	PEC *d'1uf- 'close, shut'
tʰ'ùùng 'arm'	PWR*tʰ'ubaʃa (m) 'upper arm'	Afar dʌb/e 'armpit'

<i>tʰíibàʔé</i> 'squeeze'	PWR * <i>tʰíibíʃ</i> (v) 'push'	PEC * <i>d₁iib-</i> 'squeeze' (Borana Oromo <i>díiba</i> 'push')
<i>tʰwâang</i> 'rain'	PWR * <i>tʰubay</i> (m) 'rain'	Proto-Sam * <i>d'oobo</i> 'dip in; mud'
<i>k'áatʰ'à</i> 'something cut off and thrown away, garbage'	PWR * <i>quutʰ</i> (v) 'cut up, cut into pieces'	PEC * <i>k'ad₁-</i> 'cut', Shinassha <i>k'út</i> 'cut'
<i>tʰ'ók'òndò</i> 'mud'	ALBU * <i>tʰ'oqoondú</i> (m) 'wet cow dung'	
<i>tʰ'ák'átó</i> 'Grant's gazelle'	PWR * <i>tʰ'aaqataa</i> (f) 'impalas'	
<i>tʰ'ùngù</i> 'clouds'	PWR * <i>tʰ'aangwa</i> (f) 'fog, mist'	
<i>tʰ'áná</i> 'horn'	Burunge <i>tʰ'aana</i> 'upper leg, thigh'	
<i>k'ítʰ'é</i> 'get angry'	Iraqw <i>qitʰ</i> 'endure'	
<i>ʔàá</i> 'goat'	PWR * <i>ʔee</i> (f) 'cow'	PEC * <i>ʔaʃ-</i> 'cow', * <i>loʔ</i> 'cattle'
<i>ʔúbàrà ~ ʔùbà</i> 'foam'	PWR * <i>ʔubari</i> (n) 'foam'	
<i>ʔúfé</i> 'be swollen (from eating too much)'	PWR * <i>ʔuf</i> (v) 'swell, be swollen'	
<i>ʔáarà</i> 'rubbish like fallen leaves'	PWR * <i>ʔaaraḥí</i> (f) 'grain stalks'	
<i>ʔàʔangè</i> 'chameleon'	PWR * <i>ʔangaʔaangáy</i> (m) 'chameleon'	
<i>ʔàʔé</i> 'sting, stab, hurt'	PWR * <i>ʔaḥ</i> (v) 'hit, hurt'	
<i>ʔáʔtò</i> 'fallow field'	ALBU * <i>ʔaʔay</i> 'naked, nudity'	
<i>ʔáʔ'ato</i> 'glade'	PWR * <i>ʔaʃa</i> (f) 'wilderness, uncultivated land'	
<i>xòóʔà</i> 'scratch'	PIRQ * <i>xooʔ</i> (v) 'grind'	
<i>ʔébérà</i> 'mixing stick'	Burunge <i>ʔubisay</i> 'twirl'	
<i>ʔebee</i> 'fin'	Burunge <i>ʔabi</i> 'rib'	
<i>aʔee</i> 'tree (sp.)'	Burunge <i>ʔaʔaw</i> ' <i>Euphorbia candelabrum</i> '	
<i>ʔak'e-e</i> 'be similar'	PWR * <i>ʔaqa-s</i> 'resemble'	

The more common non-click lateral obstruents in Sandawe, the lateral fricative /ʃ/ and the ejective lateral affricate /tʰʃ/, occur often in borrowings from West Rift Cushitic languages.

5 Lateral obstruents in Southern and Eastern Nilotic

Southern Nilotic is represented in the Tanzanian Rift Valley today primarily by various Datooga groups and languages, which do not have lateral obstruents. Kießling and Mous (2003) suggest that at the Proto-West Rift Southern Cushitic stage, influence from Southern Nilotic predating the current Datooga presence can already be seen. One of the Southern Nilotic languages in the area was Omotik, a now probably extinct sub-branch of the family, in which a lateral fricative phoneme /ʃ/ is attested. This sound has been reconstructed to Proto-Southern Nilotic (Rottland 1997, previously more vaguely as *L in Rottland 1982). Based on its reflexes, two positions may be distinguished: preceding *Vʃ and elsewhere.

For the former position it has been argued that *R rather than *ʃ be reconstructed (Larsen 1991: 267-268, Rapold in prep.). Support for this argument comes from the following areas: conflicting cognates between Proto-Kalenjin and Common Datooga, the phonetics of the reflexes in all the three major sub-branches of Southern Nilotic, cognates in other Nilotic branches, rule economy, and rule regularity.

For the latter position (*ʃ elsewhere) there is evidence that at least in certain cases *ly rather than *ʃ is the preferable reconstruction. Evidence for this comes from morphophonological alternations in Common Datooga verb derivations, from the phonetics of the reflexes in Datooga, from reflexes that are irregular in Rottland's (1982) reconstruction, and from cognates in other Nilotic branches (Rapold

in prep.). While the evidence does not exclude *ɬ in these cases, *ly is superior for the cited reasons. By extension and for reasons of economy, *ly rather than *ɬ could also be posited in those cases where so far there is no evidence against *ɬ and for *ly.

The proposal of a revision of the reconstructed *ɬ for Southern Nilotic requires an article-length treatment (Rapold in prep.); in short, however, out of the Proto-Southern Nilotic instances reconstructed as *ɬ (Rottland 1982, 1997), some were not, and the others were less likely, *ɬ.

As for Proto-Eastern Nilotic, Voßen (1982:298) reconstructs an alveo-palatal lateral phoneme *ly, which is “alternatively written *ɬ” and occurs only once in PEN: *-lyapaty-, *-ɬapaty- ‘moon/month.’ A second item reconstructs to the lower node Proto-Teso-Lotuko-Maa, *lyac-, *ɬac- ‘louse’ (Voßen 1982: 298, 392, 395-396). The phoneme /ly/ or /ɬ/ does not occur synchronically in any of the reflexes. Voßen and Heine (1989: 187, 192) posit only *ɬ for PEN and reconstruct a dental–alveolar fricative *ɬ for the low-level branch Proto–Ongamo–Maa. Based on the distribution of consonant sequences and reflexes in the Teso-Turkana cluster, Dimmendaal (1984: 71) argues for *ly rather than *ly and implicitly seems to reject PEN *ɬ.

Omotik contact with Iraqw, and the absorption of some Omotik speakers into Iraqw society, are attested in oral traditions (Berger and Kießling 1998: 183), but these were Omotik outliers. The heart of the Omotik-speaking area was far from the Tanzanian Rift Valley contact area. If Omotik developed the lateral pronunciation under influence from Cushitic, it must have been from early Cushitic presence in Kenya. The lateral fricatives that have been found in Omotik correspond to /j/ in Datooga and to /l/ in Kalenjin (both Southern Nilotic) in clear cognate sets. Only in the word for ‘moon’ can we argue for transfer from Cushitic into Omotik and Datooga: *ɬaḥ-aanʷ in Proto-West Rift SC and /ɬɛ/ in Omotik, /jɛ/ in Datooga. Thus, how Omotik acquired its lateral fricatives remains a puzzle. One scenario would be through contact with a precursor of West Rift SC in Kenya, for which there is some evidence (Mous and Rapold in prep.).

6 Lateral obstruents in Kuliak

The Kuliak languages (Ik, Nyangi, Soo) are spoken in the mountainous regions of northeast Uganda, currently relatively far from the other languages in this study. Most classificatory proposals position Kuliak as peripherally Nilo-Saharan (Bender 1991, Ehret 2001) or as unclassifiable (Güldemann 2018). The Kuliak languages have most recently had considerable contact with Nilotic languages (mainly Eastern Nilotic Teso-Turkana and Southern Nilotic Kalenjin varieties), and there is evidence for considerable Cushitic contact at greater time depth (Lamberti 1988). Ik language use is still robust, while Soo is seriously endangered. Nyangi appears only to be remembered by a single speaker, a situation that severely limits the availability of lexical data.

Lateral obstruents are recently attested in two of the three Kuliak languages. The fullest set in a Kuliak language is found in a recently obsolescent variety of Ik (Schrock 2014: 37-38). In this variety, three lateral obstruents contrasted with each other and with the alveolar lateral approximant /l/: a voiceless lateral fricative *ɬ, a voiced lateral fricative *ɬ̣, and a voiceless ejective lateral affricate *tɬ'. Two phonemes that are realized at least sometimes as lateral obstruents are also attested in the last known idiolect of Nyangi. One, /ɬ/, is variously realized as [ɬ], [ʃ], [ð], [l], and [ɬ̣], and the other, /ɬ̣/, which is attested only in very few words, varies between [ɬ̣] and [zʰ] (Beer 2017: 25). No lateral obstruents are attested in Soo.

We reconstruct three lateral obstruents for Proto-Kuliak: *ɬ, *ɬ̣, and *tɬ'. As seen in Table 6 below, the evidence that *ɬ was in use in Proto-Kuliak is robust, as there is a regular sound correspondence (Ik *ɬ = Nyangi ɬ = Soo l) with attestations across many lexemes, and reflexes of this phone are lateral

fricatives in two of the three Kuliak languages today (representing both primary branches of the family). In Table 6, Ik words are from Schrock (2014), Nyangi words are from Heine (1974), and Soo words are from Heine and Carlin (2010). Ik words are adapted for presentation as starred forms from the recently obsolescent Ik variety in which lateral obstruents were still used.

Table 6: Reflexes of Proto-Kuliak *ɬ

Gloss	Ik	Nyangi	Soo
lame	*ɲwàɬ-	ɲáɬ	kɪɲwal
tooth		eɬ'egw	ilog
thin stick, switch, rod	*kíɬó-		kil
thirst		eɬ	ɛl
round		muk'uɬ	mɔgɔl, mɔkɔl
hard	*ɲìɬ-	ɲìɬ	

For *ɬ and *tɬ', the evidence is more sparse.

Within the Kuliak family, a typologically uncommon three-term system of lateral obstruents can be found, and today, the nearest other languages to Kuliak with lateral obstruents are spoken in the north Tanzanian Rift Valley, at a considerable distance from Kuliak. One problem of historical interpretation raised by this situation is how such similar systems have come to be found in apparently unrelated languages spoken so remotely from each other. The question we are faced with is this: is the Kuliak lateral obstruent system 1) an innovation historically independent from the Rift Valley lateral obstruents, 2) an innovation motivated by contact with the Rift Valley lateral obstruents, or 3) a retention from a shared ancestral language?

Unfortunately, a survey of prospective etymologies of Kuliak words with lateral obstruents cannot offer a comprehensive answer to this question. Lexical similarities stretch far and wide, with likely candidates for words variously found in Eastern Nilotic, Southern Nilotic, Surmic, Semitic, Lowland East Cushitic, and Southern Cushitic. For some words, a shared history with a single other genetic unit is apparent; for example, Proto-Kuliak *ɲwàɬ 'lame' has close lexical resemblances in languages of each branch of Nilotic, e.g. Karimojong (Eastern Nilotic) *akɪ-ɲwal* 'to become lame', Acholi (Western Nilotic) *ɲol* 'to become deformed, crippled, maimed', and Nandi (Southern Nilotic) *ki-ɲwal* 'to limp'. In other instances, prolific Afro-Asiatic correspondences can be found, with few if any Nilo-Saharan correspondences, e.g. Proto-Kuliak *ɬɔ 'cattle' is a well-attested resemblance of a root distributed widely throughout Afro-Asiatic. A particularly striking example of this is Ik *tɬ'ábú-gwàà- 'guinea fowl' (a compound, *gwàá-* being the Ik root for 'bird'), with its likely Nyangi cognate *lebus* 'guinea fowl'. These words have close phonological correspondences among Rift Valley forms such as Alagwa (West Rift Southern Cushitic) *tɬ'abi* 'laughing dove' or Hadza (isolate) *cɬ'ap^ho* 'dove, pigeon', which share an ejective lateral affricate. For some other words, candidate lexical correspondences are too widely distributed to reconstruct any particular historical picture for Kuliak. For most words (most of which are found in Ik), no convincing correspondences at all have been found - including within Kuliak.

To summarize the situation, first, there is no compelling evidence from lateral obstruents that demands any radical reconceptualization of the genetic affiliation of the Kuliak languages, such as would be necessary for lateral obstruents in Kuliak to be inherited from an Afroasiatic ancestor. Second, several of the words with each of the three lateral obstruents in Kuliak correspond in some way with words in Rift Valley languages, although recent direct transfer is unlikely. A more likely scenario is that these transfers between Afroasiatic languages and Kuliak languages took place when

lateral obstruents were more widespread in at least Cushitic and were retained in Kuliak after being lost in non-Rift Valley Cushitic. Third, there are enough examples of lateral obstruents in words unique to Kuliak to support a hypothesis of independent invention in Kuliak. If nothing else, a past era in which Kuliak shared lateral obstruents with Cushitic neighbors could have favored the contact-induced retention of the otherwise typologically rare lateral obstruent series.

Whether or not the Kuliak lateral obstruents emerged separately from or out of the forebears of the Rift Valley lateral obstruents, shared lexical material indicates that they do not represent altogether independent case studies. In the relatively deep past, at least some words including lateral obstruents were passed between a likely Cushitic language and a Kuliak language.

7 Lateral obstruents in Kenyan Cushitic and Kenyan Bantu

At some distance from the Tanzanian Rift Valley, in the Taita Hills in Kenya near the Tanzanian border, lateral obstruents are found in Taita Bantu: Davida (E74) and Saghala (E741). Both of these Bantu languages contain a number of Cushitic loans, which has led Ehret and Nurse (1981) to posit a former now-extinct Cushitic language in the area, Taita Cushitic. Below is an inventory of those lateral obstruents with their corresponding sounds in the Taita Bantu languages of the area.

Taita Bantu	{	Davida Weruga	ɬ^j : r, l, t ʰ
		Davida Mbale	ɬ : r, z, l
		Saghala	ɬ : ɬ (> ɬ) ← ɬ Taita Cushitic

The main characteristics of the lateral obstruents in the Taita area include:

- voiced palatalized [ɬ^j] and non-palatalized [ɬ] are found in the Northern Davida dialects (Slavikova 1975; Harris 1978),
- there is one voiceless ɬ from Taita Cushitic present in loanwords in Saghala, and it subsequently changed to [ʃ] in some words (Ehret 2011: 193),
- the majority of lateral obstruents found in Davida are in inherited Bantu items,
- Saghala has no [ɬ] in inherited Bantu words, but only in Cushitic loans, and
- none of the attested words has a cognate with a corresponding lateral obstruent in the dialects of Davida.

Figure 1 illustrates the development of [ɬ^j] and [ɬ] (and tentatively Common Bantu *d) in Davida (Dav.). It includes rules (1) and (3) from Slavikova (1975) for Davida Weruga and (2) from Nurse and Hinnebusch (1993) for Taita Bantu. Rules (1) and (3) are extended to other dialects with the addition of (4) and the intermediate *l . That transitional *l devises a plausible phonetic shift from the lateral sonorant to the lateral obstruent utilizing the Bantu spirantization rule (cf. Nurse and Hinnebusch 1993).

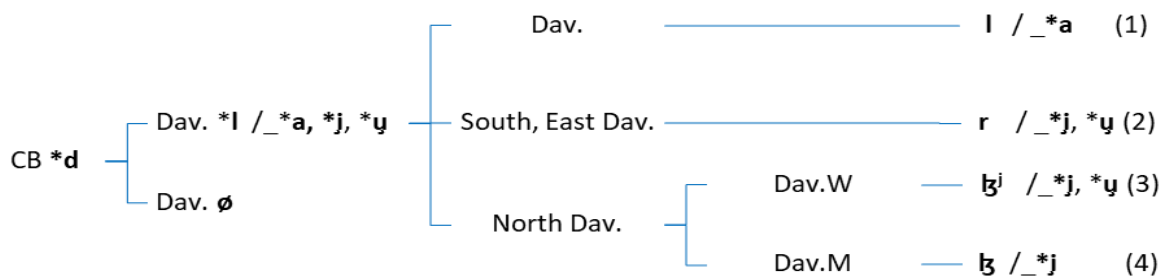


Figure 1: The development of Davida ɬ^j and ɬ

The environments specified in the diagram are archaic conditioning positions that are no longer consistent, particularly those postulated for *l* and *r*. The cedilla vowels **j* and **ɥ* are referred to as close-vowels in Slavikova (1975) and super-close vowels in Nurse and Hinnebusch (1993). In West Rift Cushitic languages, the most frequent vowels following the lateral fricative [ɬ] are also mainly [i] and [u] (short and long) (Kießling and Mous 2003).

Finally, Bantu Spirantization is determined as the source of Davida [ɬʲ] and [ɬ]. However, Nurse and Hinnebusch (1993:127) argue “[w]e also concluded that Bantu Spirantization, as far as Sabaki is concerned, is a mix of genetic and areal factors”. Similarly, although the internal motivation is strong for Davida, external pressure is feasible given the areal existence of lateral obstruents in language groups discussed in this study. Saghala’s contact with (Taita) Cushitic is evident at least in those loanwords with [ɬ].

In sum, the voiced lateral obstruents in Taita Bantu Davida are the outcome of the general Bantu sound change of spirantization. Neighbouring Taita Bantu Saghala had a voiceless lateral obstruent at the beginning of the 19th century, and this sound came specifically from loans from a now-extinct Cushitic language in the region. Bantu spirantization is a very common process in East African Bantu, but only in this instance did it result in lateral fricatives. It is likely that this specific pronunciation developed under the influence of lateral fricatives in the area, in the now-extinct Taita Cushitic language, and in the Taita Bantu language Saghala.

8 The history of lateral obstruents in East Africa

The lateral obstruents (fricative and affricate) in the Cushitic languages of the Tanzanian Rift Valley were inherited, and the languages that they must have been in contact with from the earliest times, Hadza and the Sandawe, also have similar sounds. Both languages actually have bigger inventories of lateral obstruents than their Cushitic neighbours, and both can be shown to have been in contact with the early Cushitic speakers. For both Hadza and Sandawe, some of the lexical items containing lateral obstruents were transferred from Cushitic, but it is very likely that Hadza had inherited lateral obstruents from its own predecessors. The situation for Sandawe is more difficult to ascertain. If Sandawe is ultimately related to Khoe, we must assume that Sandawe developed its own laterals since Proto-Khoe did not have lateral obstruents. However, if we consider Sandawe an isolate, then it is easier to assume that Sandawe did not develop its four different lateral obstruents solely from transfer from Cushitic, which distinguished only two different obstruents. The presence of lateral obstruents in Sandawe and Hadza may have supported the continuation of lateral realisations in the Tanzanian Cushitic languages, realisations which were lost in the Cushitic languages of Ethiopia. Thus, this is a possible instance of contact induced retention. In the Hadza-Cushitic contact, there are instances of lateral ejective affricates from Cushitic rendered as clicks in Hadza, and the high frequency of ejective lateral affricates in Tanzanian Cushitic may have been a result of Cushitic adaptations of clicks (Kießling and Mous 2003: 93). The Tanzanian Rift valley shows transfers of lateral obstruents between Cushitic, Hadza, and Sandawe in both directions and shows a mutual influence in maintaining lateral obstruents in the area; these interconnected pressures are represented in Figure 2.

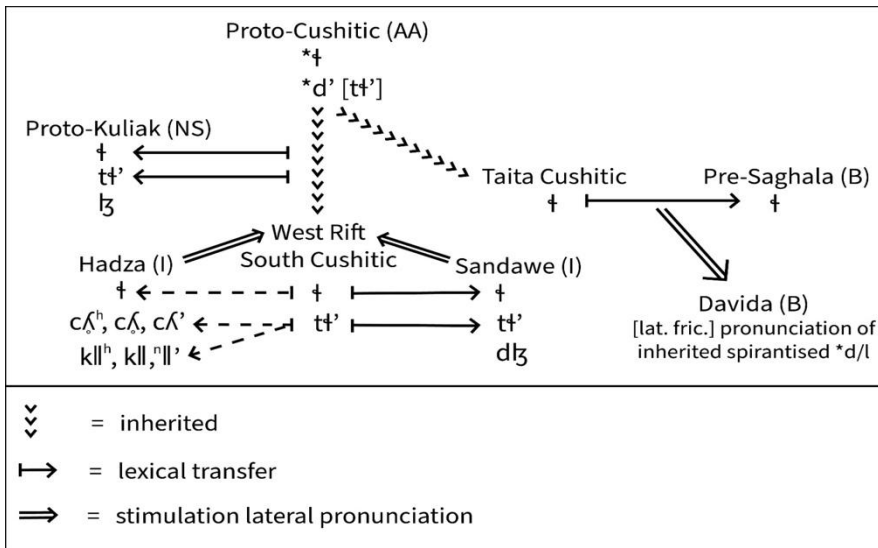


Figure 2: Lateral obstruent inheritance, transfer, and innovation in East African languages

Further afield, in Uganda and Kenya, lateral obstruents also occur. There is evidence for a historical relation between the Kuliak languages of Uganda and the languages of the Tanzanian Rift Valley, and the presence of lateral obstruents are part of that evidence. This scenario strongly suggests prior contact and begs a historical explanation. One such explanation could be that before the speakers of West Rift Southern Cushitic settled in the Tanzania Rift Valley, they passed by the current and then Kuliak area in eastern Uganda. A similar scenario may be responsible for the presence of the lateral obstruent in Southern Nilotic Omotik.

Elsewhere in Kenya, the lateral obstruents in the Bantu languages of the Taita Hills near the Tanzanian border are found in inherited Bantu lexicon as an outcome of spirantisation, a common historical phonological rule in East African Bantu, which leads to the development of a lateral obstruent, but only in Davida. The other Bantu language in the Taita Hills, Saghalala, once had a lateral obstruent under influence of a now extinct Cushitic language in the area. In this area, we see both the introduction (and subsequent loss) of lateral obstruents by borrowing from a Cushitic language and the development of lateral pronunciation in inherited sounds under influence of a Cushitic language with a lateral obstruent. How the presence of the lateral obstruent in the Taita Hills is historically related to those in the Tanzanian Rift Valley is to be determined.

In the next mountain range from the Taita Hills, the “mixed” language Mbugu reintroduced lateral fricatives in its parallel and mixed lexicon by deliberate change as an icon of otherness. Neighbouring Shambaa speakers recognise this sound as typical for the Mbugu (Mous 2003: 52-56). The lateral fricative is apt as an iconic sound due to the fact that it is rare in the majority of (Bantu) languages of East Africa, recognisable and yet quite easy to produce.

In conclusion, the areal distribution of lateral obstruents in four-to-five genetically unrelated stocks of languages in East Africa provides a fertile field of investigation into the historical contacts between the aforementioned groups and the types of phonological contact phenomena that can occur in such circumstances. The presence of a lateral obstruent in the linguistic area of the Tanzanian Rift Valley is due to several contact phenomena: the transfer of lexemes with a lateral obstruent into other languages which did not adapt this sound since it was part of their phonemic inventory and hence added to the frequency of the sound, the retention of the lateral obstruent in this area in the Cushitic languages while the lateral pronunciation was lost in all other branches of Cushitic, showing an instance of contact-induced non-change, and, finally, the occasional recourse to a lateral ejective

affricate as an adaptation of a click into a language that lacks click consonants but does have a lateral ejective affricate.

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