

History of numerals as history of East African languages

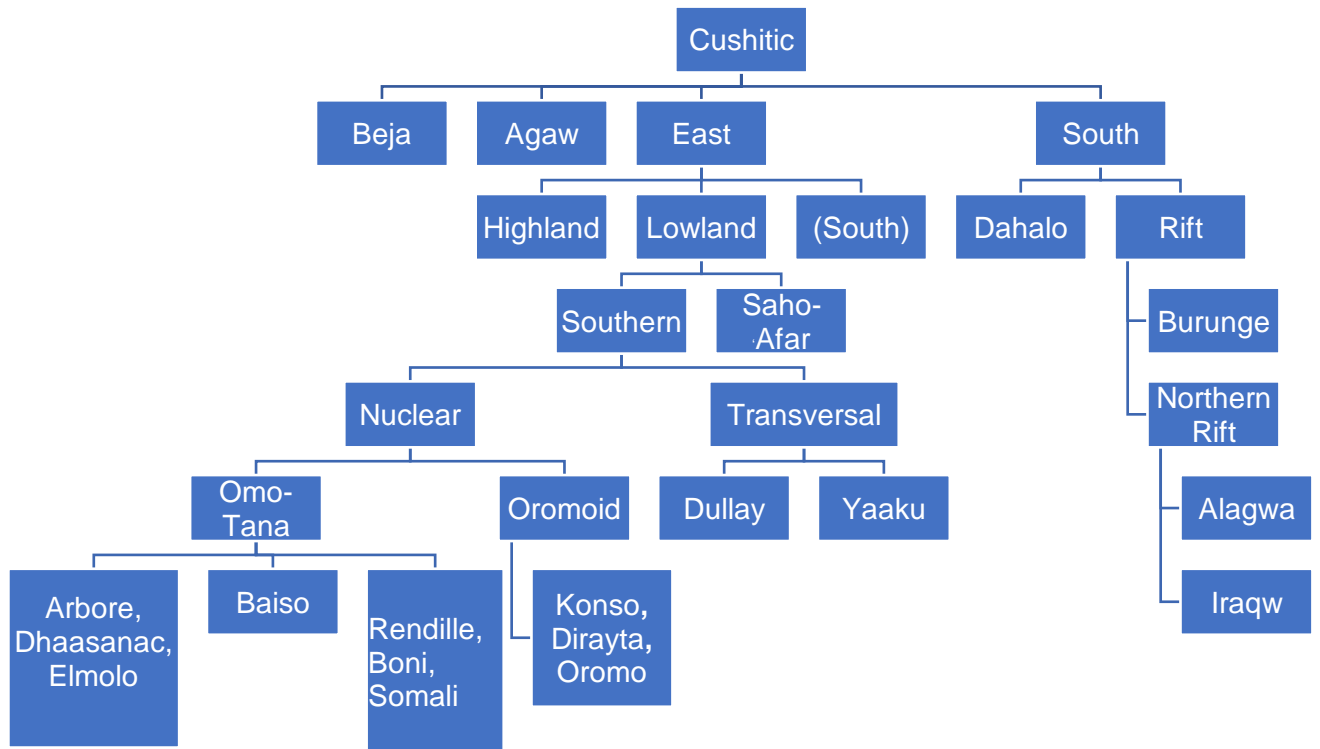
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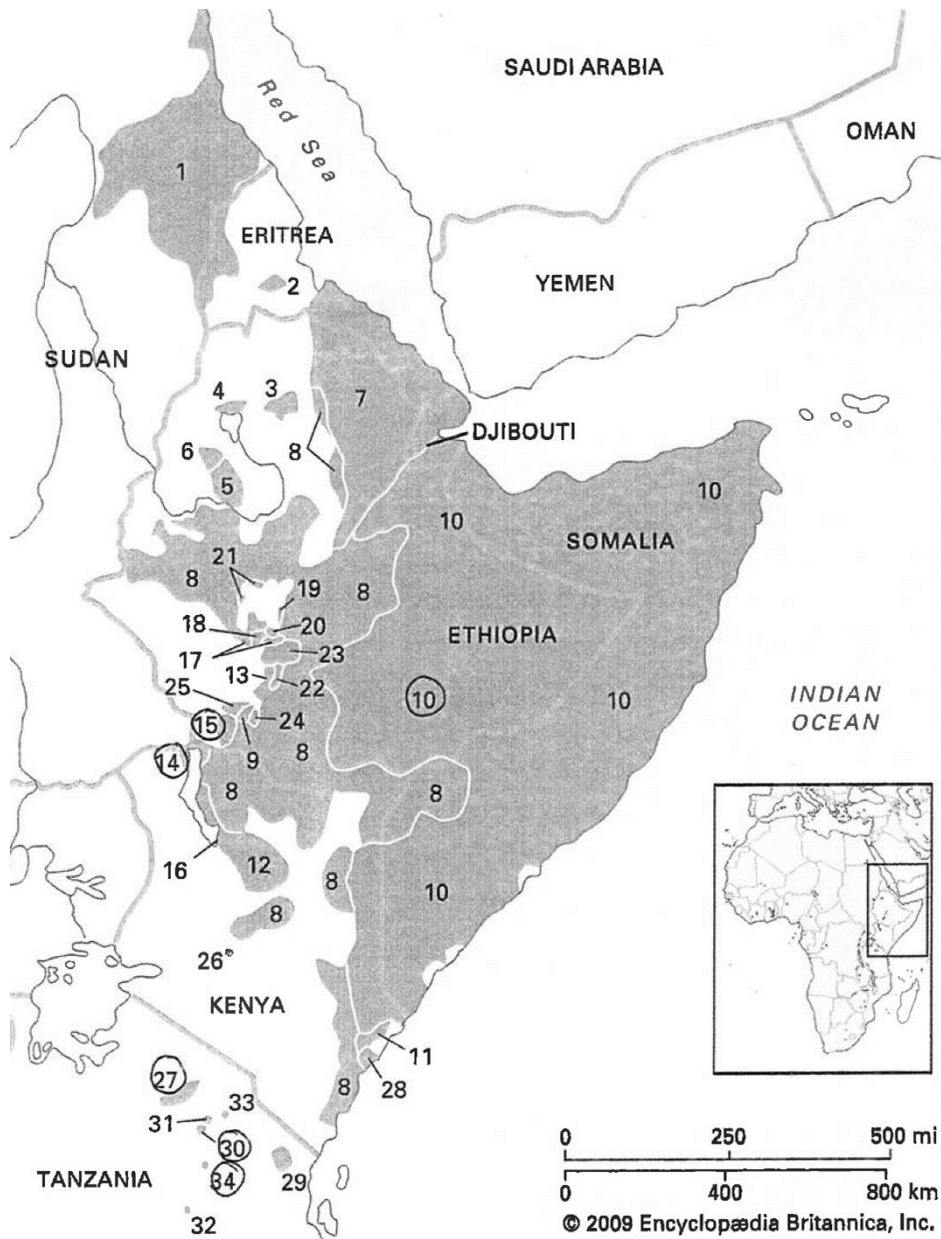
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Abstract

The West-Rift Southern Cushitic languages (Tanzania) have a word for ‘three’ **tam* ‘3’ that is cognate with the word for ‘two’ **lam(m)* ‘2’ in the East Cushitic branches (Sasse 1979); and a word for ‘four’ that is cognate to the word for ‘three’ in East Cushitic, while the terms for ‘five’ and ‘six’ correspond regularly in form and meaning with the rest of Cushitic. This remarkable semantic shift in itself shows that the East-Rift SC language Aasa which has the regular reflex for ‘two’ did not share this intriguing innovation, and is therefore not part of West-Rift; the other East-Rift SC language, Qwadza, does share this 2 > 3 semantic innovation, and is better classified as West-Rift. But how did this shift in meaning come about? I suggest that West-Rift Southern Cushitic had two competing reflexes of the Cushitic words for ‘2’. Blažek (2018:48) suggests that PWR **ts’ad* ‘2’ may be related to *sada* ‘2’ in old-Arbore (East Cushitic, Ethiopia), while present-day Arbore has the East-Cushitic reflex *laamá* for ‘2’ (Hayward 1984:446). This suggests two competing roots. While one was lost in Arbore, I propose a scenario in West-Rift South Cushitic of admixture with a later Cushitic group that brought a competing Proto East Cushitic word **lam(m)* developing into PWR **tam*, originally meaning ‘2’ in East-Cushitic but reinterpreted as ‘3’. In a similar vein, the similarity in form between an old Cushitic layer in Proto WestRift related to **sägya* ‘4’ for old Bilin (Blažek 2018:49), and a newer Cushitic from Proto East Cushitic **sizaḥ* ‘3’ led to the interpretation of the PWR reflex **ts’igaḥa* as ‘4’. West-Rift Southern Cushitic does not have the East Cushitic word **’afur* for ‘4’.

A secondary interesting historical number story is that of *haka* ‘4’: some unrelated languages in the region have this root for ‘4’: Aasa and Qwadza (both South Cushitic, Tanzania) have *hak*. The mixed register of the Bantu language Inner Mbugu (or Mixed Ma’á) has *hai*. Sandawe has *haká* ‘4’ which is a reflex of Khoekhoe **haka* ‘4’ (Voßen 1997:503). This points to a Sandawe transfer into Qwadza, Aasa, and eventually Mixed Ma’á. These are all languages that are not directly related nor in direct contact presently. However, the word is also used in Gorwaa (South Cushitic) in the register of diviners counting stones (Andrew Harvey p.c.); showing that it is more widely known in the area. This requires scenarios of earlier contact. The historical semantic shift in the numbers of West-Rift South Cushitic suggest a history that involves more than one Cushitic branch, and more than one language migration. The wide distribution of *haka* shows the earlier importance of Sandawe as a donor language with prestige.



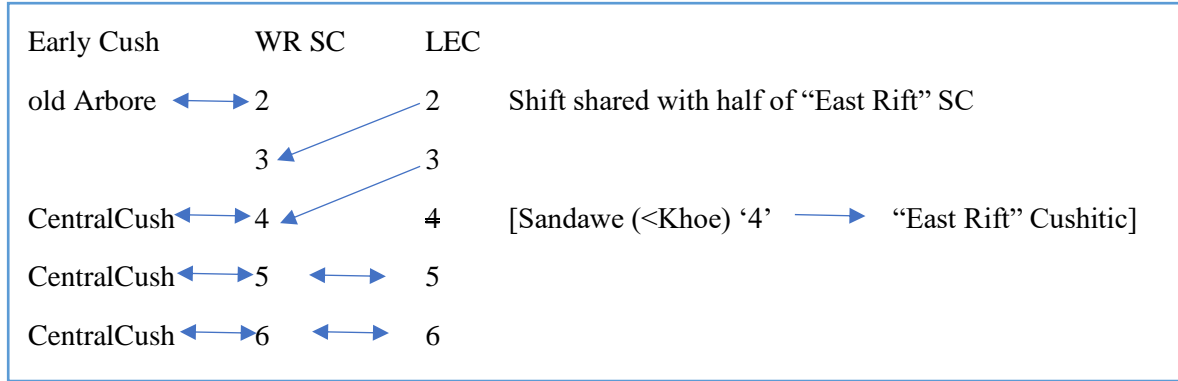


1. Beja
2. Bilin Agaw
3. Khamtanga
4. Kemant
5. Awngi
6. Kunfal
7. Saho-Afar
8. Oromo group*
9. Konso
10. Omo-Tana dialect
11. Boni
12. Rendille
13. Bayso
14. Dasenech
15. Arbore
16. Elmolo †
17. Hadiyya HBC
18. Kambata
19. Libido
20. Alaba
21. Timbaro
22. Gedeo
23. Sidamo
24. Burji
25. Dullay
26. ~~Angait~~ Yaakni †
27. Iragwa West-
28. Dahalo Rift SC
- (29. Ma'a/Mbugu)
30. Alagwa
31. Gorowa
32. Kwana †
33. Asa †
34. Burunge

1 Shift in West-Rift Southern Cushitic numerals

Several studies on the history of Cushitic numerals exist (Banti 1993, Zaborski 1987, Zelealem 2003). The most elaborate being Blazek (2018). I build on his work and propose a scenario for an intriguing apparent shift in the numbers in Tanzanian Cushitic, $3 > 4$ and $2 > 3$. The scenario involves late Cushitic influence in existing Cushitic languages in Tanzania and has wider repercussions for the linguistic history of East Africa.

Schema of number shift



1. East Cushitic *lāma ‘2’ = West-Rift Southern Cushitic *tam ‘3’

Sources: EC: Black (1974:158) for Proto Southern Lowland East Cushitic (=PLEC minus Saho-Afar); Blazek (2018:48); Kambaata *lam-o* (Treis 2007:56); PWR: Kiessling and Mous (2003).

There is some supporting evidence for the correspondence $l = t$ if we consider the Somali impersonal marker *la* (Cabredo Hofherr 2008) to be cognate to the Iraqw impersonal *ta* connected to Yaaku *ti* by Kiessling (2002:364) and reconstructed as PWR **ta*; and the Konso *law-a* ‘arrow’ with Alagwa-Burunge **taf-iroo* (f) ‘arrow notch’ (Kiessling & Mous 2003).

However, in fact there are conflicting correspondences of stem-initial *l* in PEC with PWR: PEC **laal* ‘sing’ PWR **raa* ‘sing’; Oromoid *le* ‘moon’ and PWR **lah-aj*^w; PEC *lih* and PWR *lahoo?u* ‘6’.

The $l < t$ correspondence can also be found internally in East Cushitic as Muusiye has *taamo* ‘2’ (Yibeltal 2018: 199); or *tammo* (Wondwosen 2015:84).¹

2. East Cushitic *s[a/e]ddeh ‘3’ = West-Rift Southern Cushitic *ts’igaha ‘4’

This equivalence suggests an intriguing innovation in West Rift Southern Cushitic of a shift in the numbers $2 > 3$ and $3 > 4$ while 5 and 6 are inherited as such. I discuss the irregularities of the correspondences of this comparison, in a next section.

3. Proto Agaw *ʔank^wa = West-Rift South Cushitic *kooʔan ‘5’ = East Cushitic *kan ‘5’ and

4. West-Rift South Cushitic *lahooʔu = East Cushitic *lih

This root for ‘five’ is common to nearly all branches of Cushitic. Appleyard reconstructs the Proto Agaw root for ‘five’ as *ʔank^wa and remarks that “Perhaps the Agaw root may be related (by metathesis: PC *CVN > *NVC > PA *VNC) to PLEC **ken/-kon-* ‘five’ (Afar *konoy*, Saho *koon*, Or.

¹ Muusiye is at the northern tip of the Sagan language area where Oromoid and Dullay show parallel sound correspondences and come together in Muusiye (a.k.a. Busa). The Dullay languages have *lakki* for ‘two’ (Amborn et al. 1980:211 for Dullay; Sava 2015:95 for Tsamakko; and this shared with Konso (Black and Shako nd: 84) which also has the root *lam-* in *lam-m-aaw* ‘become two’; and Diraytata *lakk^e* in (Black 1973:73) or *lakki* (Wondwosen nnn: 65) but Oromo has *lamá* (Owens 1985:267 for Harar Oromo).

san, Konso *ken[i]*, Som. *san*, Rendille *can*, Bayso *ken*, Dhaasanac *cen*, etc.); also PSC **koʔan-* [Ehret 1980:245].” The Sandawe form *kwà’áná* ‘5’ must be a transfer from West-Rift South Cushitic into Sandawe.

The root for ‘six’ shows correspondence in the first and second radical between East and South Cushitic. The numeral ‘six’ in proto Agaw is complex consisting of ‘five’ plus ‘one’ (Appleyard 2006:107). The numbers 7, 8, 9, 10 in Proto West Rift seem to be monomorphemic but cannot be related to roots in the rest of Cushitic.

2 Motivation for the shift in numbers

The suggested equivalence between Proto East Cushitic **saddeh* ‘3’ = Proto West-Rift South Cushitic **ts’igaha* ‘4’ is less than perfect in the first and second radical. The quoted reconstruction **saddeh* is by Black (1974) for Proto Lowland East Cushitic. Appleyard quotes **sizh-* / **sazih-* as reconstructed form for Proto East Cushitic ‘three’. Hudson (1989) has **sase* ‘3’ for proto Highland East Cushitic (Hudson 1989:154). The reconstructed proto-Agaw form **säy^wa/səy^wa* ‘3’ fits better with a velar second radical. Appleyard (2006) remarks: “PA **säy^wa/səy^wa* has been compared to PEC **saz[i]h-/sazzih-/sizaḥ-* (Afar *sidoh*, Som. *saddeh*, Arbore *seezze*, Bayso *seed*, Or. *sadi?*, Konso *sessä*, Buiji *fadfyä*, Sidamo *sase*, Dullay (Gawada) *iseh*, etc. [See Lamberti & Haberland 1988:135-6 for more possible cognates. See also Dolgopolskiy 1973:282]. It is difficult, however, to see how the PEC medial cluster **-zḥ-* could relate to PA **-y^w-.*” I agree and what I suggest in this instance in West-Rift Southern Cushitic is an amalgamation of both forms when an East Cushitic shape for ‘3’ with a final pharyngeal entered pre-proto-West-Rift Southern Cushitic.

PAgaw **säʒa*. ‘4’. Appleyard (2006:72): “Ehret (1987:57) tries to relate PA **säʒ[ʒ]-* to PEC ‘three’: **sizḥ-* / **saziḥ-*, though it is not explained why ‘three’ should become ‘four’ or *vice versa*. The other Cushitic roots for ‘four’ are quite heterogeneous: PLEC **ʔafar-/ʔafur-*; PHEC **soole* and PDullay **salah*; PSC **haxa/haaka*; Beja *fad’ig*.” Blazek (2018), however, remarks that the more archaic Agaw protoform **sägya* ‘4’ is compatible with Iraqwoid **tsigaha* ‘4’ - cf. Reinisch 1887, 298: von alten Leuten und Weibern noch öfters *sägyä*, *sägyä* gesprochen; Munzinger had recorded *segia* ‘4’”

Following Blazek, I agree that the West Rift form for ‘4’ is inherited from early Cushitic ‘4’ with the pre-proto Agaw as best fit. But the form got fused with the introduction of the East Cushitic root for ‘three’ that has a final pharyngeal, and this left a gap for ‘three’ to those EC speakers which was filled by the shift of their *lam* to *tam* ‘3’.

The form **tsada* for ‘two’ in West-Rift Cushitic has been linked by Blazek (2018) to an old form *sada* ‘2’ in Arbore, as reported by Conti Rossini (1927).² Present-day Arbore has the more common East-Cushitic root *laamá* (Hayward 1984:446). The fact that there was an inherited form for ‘2’ in West-Rift South Cushitic helped to let *lam/tam* from Late Cushitic to fill the gap for ‘three’. Moreover, if Blazek (2018) is correct in linking PWR **tsigahha* ‘4’ to a pre-Agaw form **sägya*, then likewise a competition of two similar forms Late Cushitic **sizahh* ‘3’ and Early Cushitic *sägya* could have resulted in the apparent shift in meaning 3 > 4 pushing the alternate form for ‘2’ to come to mean ‘3’ and formwise fusing **sägya* and (t)*sizahh*.

Consequences for subclassification within Southern Cushitic

Asa has *lam* or *laam* for ‘2’. If this is cognate with Lowland East Cushitic **lama* then the innovation of *lam/tam* to come to mean ‘3’ is one separating West Rift Southern Cushitic from Asa. While

² The Arbore data were collected in 1894 by A. Donaldson Smith (1897). The other reported numerals correspond more or less to the ones reported by Hayward (1984). Some contain a suffix *-da*. Possibly, the root for *sada* is just *sa-*. PWR *ts* corresponds to East Cushitic *d*; correspondence with proto Agaw is to be worked out.

Kw'adza has **tami** '3' like West Rift and thus shared the putative WR innovation '2' > '3'. Since this is unlikely to happen independently, the innovation would put Kw'adza and West-Rift SC together and separate from Aasa.

Additional evidence for late Eastern Cushitic, Oromoid, influence on Proto West-Rift.

Kiessling and Mous (2002:38) list a group of 12 West-Rift SC roots that show a close connection to Oromo. In addition there is the East-Cushitic root for 'meat', **so**, that is cognate with Proto-West-Rift **fu'u-nay** showing the typical Oromoid innovation of s>f. They also point out to two nominal suffixes in proto West-Rift SC that originate in Oromoid, as well as some other grammatical features.

Links with Sandawe for 'four'

Ehret (1980:306) reconstructs a second item for Proto Southern Cushitic 'four', ***haxa** or ***haaka** on the basis of Kw'adza **haka** (several independent sources: **háka** Claus 1910 and **hagá** Kohl-Larsen 1943); and Asa **ha(g)** (Fleming 1969:8 on the basis of older sources) and Inner Mbugu (Mixed Ma'á) **háí**. Fleming (1969) came independently to the same conclusion. This root can be linked to Sandawe **haká** (Ehret & Ehret 2012:36), and the same root ***haka** '4' is reconstructed for proto Khoekhoe by Voßen (1997:503). Given the distance, both physical and it time, between Sandawe and Khoekhoe and the perfect match for the item, I assume that this must be a Sandawe transfer into Kw'adza, Aasa, and possibly even IMb. The root is not unknown to the West-Rift Cushitic speakers though; Gorwaa ritual experts use it when counting stones for divination (Andrew Harvey p.c.) and the same is true for Iraqw, where it exists in this register next to the common form **tsiyah** for 'four' (recording Gajeet Naman on 13.10.1987 in Muray, Tanzania).

Summary and conclusion

The West-Rift South Cushitic languages including Kw'adza changed the shape of their inherited word for '4' under the influence of Late (Oromoid) Cushitic term for '3' and innovated the Late (Oromoid) term for 'two' to be used for 'three'.

This scenario suggests to classify Kw'adza with West-Rift and not to classify it in a unit with Asa. It also suggests a double Cushitic inheritance with an early Cushitic group being influenced by a late Cushitic group, probably of Oromoid origin.

It shows how similarity in form can lead to amalgamation in a situation of language contact with an intriguing shift in meaning of number forms as a consequence.

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