

**Language Family Reconstruction Example using Turkic vs Nilo-Saharan**  
**by**  
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Bender, Lionel, Nilo-Saharan Languages: A comparative essay, Lincom Europa, 1996.

These reconstructions are from the various words in the languages which are presumed to constitute the Nilo-Saharan family. As can be seen some of the words exist in Turkic, and Indo-European. For some of them the original words in the constituent languages are shown. Substituted â for A; ô for O; ê for E; û for U; í for R; þ for K; i for I; d' for D; h for H; s for S; n for N; t for T; ü for V; p<sup>h</sup> for P; l for L

In version 1 (this version) only very short Turkic cognates of Nilo-Saharan words are given without references. Anyone with a knowledge of Turkic can immediately see the cognate in most cases. Secondly, it is an example of how widely divergent semantic equivalences can be used in reconstruction which is denied Turkic reconstruction. There is no hiding the fact that these sound changes all fit directly into the scheme

$$\begin{aligned} t &> \{w, l, s/\$ \} \mathbf{U} \{d\} \mathbf{U} \{t\} \\ d &> \{y, r, z\} \mathbf{U} \{\eta\} \mathbf{U} \{d\} \end{aligned}$$

where **U** indicates set union. It is also possible that the t/d in some cases was -nt/-nd- and somehow there was a shift to -ng- (ŋ). Other sound changes are known to be very common for IE studies. I cannot give links to etymologies because it gets too complex too fast especially since everyone is too habituated to other assumed sound changes. Later versions will have more; this version gives a simple list.

1. \*\*ar+, ar+ô rain, water, river, lake, rainy season [Ben96:77]  
**ark= water canal**
2. \*\*er+, +êr+, \*ar+ı brother, man or male, friend, bear child, mother [Ben96:78]  
**er=man, soldier**
3. \*\*+kor+, gur+, kol+ follow, enter, hunt, or chase, dance, return, rise, turn [Ben96:79]  
**kuw=chase, kov=chase**
4. \*\*kor<sub>2</sub>, \*\*kol+, \*kol+o elbow, claw, foot, hand or arm, finger[Ben96:79]  
**kol=arm, hand**
5. \*\*kur, \*kûr+, kwr+ lake, river, well, water [Ben96:79]  
**köl=lake, kıldı=wet**
6. \*\*p<sup>h</sup>at, \*pat, ~ tap many, all or completely, long, very [Ben96:80]  
**köp=much, many**
7. \*a+gêl, a+gil, a+gêl+ know, see, forget or lose, stare, watch [Ben96:80]  
**kör=see, kara=to look**
8. \*bar+, ~ber+, bař+, bala+ brother, boy, man [Ben96:80]  
**bala = child**

9.*den *din *den	story or tell, say, word, count, voice [Ben96:81] <b>de=to say, to tell</b>
10.*di~tet	burn, bite [Ben96:81] <b>tüt=to smoke, tuman=smoke</b>
11.*dur+, dur, +dir-+dôr	short, thin, small [Ben96:81] <b>dur/tur=to stop, durmuş=stopped (e.g. short)</b>
12.+der+, (n)der	fall, go, jump, hop, walk, follow, throw <b>teř~tel</b> , [Ben96:82]
13.*do, to/tu, +tu	<b>yürü/cürü=to walk (c-/y- said to come from *d, thus *du-)</b> put, pout, pull or push[Ben96:82] <b>türt= push, tart= pull (weigh)</b>
14.*d'ud+, duud+ dûd+?	smoke, black, dirty or rotten[Ben96:82] <b>Tüt=to smoke, tuman=smoke</b>
15.*iri ~lau-, *wri-	stand, remain, rest or wait, sit, sleep, ~lau, wri wake [Ben96:84] <b>öre=standing, high, örle=to climb up</b> <b>uyu=to sleep</b>
16.*kaf+t+	gourd or spoon, bowl [Ben96:84] <b>kap=pumpkin, gourd, bowl, cup</b>
17.*k+ar+, ar+	white, red, yellow, clean [Ben96:84] <b>arit=to clean, sari=yellow, al=red</b>
18.*kat+, ~ket+	bring, hold, pick up [Ben96:85] <b>ket=to go, kaldır=to lift (related to kali=high)</b>
19.*kau,	ashes, field, mountain or hill, stone [Ben96:85] <b>küy/küw=to burn, kül=ashes, kayna=to boil, kabın=catch fire</b>
20.*ke/ir, *kir, kir	rope, root (or vein, etc), beard, hair=feather [Ben96:85] <b>klı=body hair, sakal=beard</b>
21.*kol+, **kôl, *kol	tree, (throwing) stick, spear, shield, arrow, forest [Ben96:85] <b>kalkan=shield, ok=arrow</b>
22.*kor+, kôr,	after, afternoon, before, time, yesterday [Ben96:86] <b>sonra=after, öd=time, keç=to pass, late</b>
23.*kor, kâl	remain or stop, sit, prevent, rest [Ben96:86] <b>kal=to remain</b>
24.*kor, ~ kʷay,	chief or owner, drum, servant or slave *kôr ~kʷay, -k(w)ôr [Ben96:86] <b>kul=slave</b>
25.*koy~kûi, koy+a~kui, kʷ(o)l	fall (maybe of rain), go or leave, walk [Ben96:87] <b>ket=go, leave; koy=to put, to leave alone, kuy=to pour</b>
26.*kôr+, kor+o	good, right, pretty, sweet, light [Ben96:87]
27.*kur+, *ķur, kur+i	food, bite, burn, dura, eat [Ben96:87] <b>küy/küw=to burn, kap=bite</b>
28.*kut+,	carry, bring, gather, get or pick up [Ben96:87] <b>ket=to go, tut=to catch, hold; kötürlift</b>

29.*khôr, kor, kôr	say, count or write, story or tell, lie, call or shout, laugh [Ben96:87] <b>kül=laugh; *kışır&gt;kıçır=to call, shout</b>
30.*sêr <sub>2</sub> , *sêl+,	clean, rub or sweep or broom, wash, white [Ben96:89] <b>sibir/süpür=to sweep, sarı=yellow</b>
31.*si, **si, **si	burn, eat, bite [Ben96:89] <b>ye/cey=to eat (y/c &lt; *d but Chuvash has ś)</b>
32.*sûr+, *sûr, *śar	straight, right, crooked, left, round [Ben96:89] <b>tüz=straight, sol=left</b>
33.*śir+, sir+, *sêr+?	cut, rip or split, break, knife [Ben96:90] <b>sih=to slice, sin=to break (&lt;*si)</b>
34.*tâl, *tir~ tóri+, tôr+	dust, ashes, earth or country, mud, field, stone, mountain, marsh [Ben96:90] <b>toplak &lt; *torpak (earthen, dirt), taş=stone &lt; *tatul</b>
35.*târ+, *târ+, *têl+a	sky or up or god, lightning, outside [Ben96:91] <b>tan=sky, tış=outside, taş=to overflow (e.g. go outside)</b>
36.*tum	rise, dance, turn, fall, throw [Ben96:91] <b>tepse=to dance, dön=to turn, tüş=to fall</b>
37.*tu?, **ti~tu, ti~tu	cut or break, hit or beat, swim [Ben96:91] <b>tüy=to beat</b>
38.*tir+, dir, dir	gather or meet, send, catch, hold, carry [Ben96:91] <b>tut=to catch, hold, tübe=to meet, taşı=to carry</b>
39.*ton-?, doň+, dûň+	sit or set, stand up or wake, remain, sleep, wait, forbid [Ben96:92] <b>tur=stand up, stand, remain, tüş=dream</b>
40.*tul+, *dur+ ~ tul, țur+	smoke, hearth, hot [Ben96:92] <b>tütün=smoke, tuman=smoke, tibir=hearth</b>
41.*war, war, war	moon, month, day, sun, star, tomorrow, yesterday [Ben96:92] <b>ay=moon &lt; *ad &gt; ar/armâ (moon, Hittite)</b>
42.ar+, âj, ar	mountain or hill or stone, ashes, down, dust, sand [Ben96:93] <b>aşk=stone (&lt;*taş &lt; *tat- )</b>
43.bang+a, baň+a, `bam	sister, girl, servant, mother [Ben96:91]
44.bar+ ~+bir+ bař+ ~ baar+	root, hair, snake, worm [Ben96:94] <b>baş=head</b>
45.da, -da, +da	fat, meat [Ben96:95] <b>yağ/caw &lt; *da- = oil, fat, butter (shining, glistening?)</b>
46.dao+ ~ did+, did+, *d'	bird [Ben96:95] <b>tawuk, tox= hen, tük=feather, tüy=feather</b>
47.dor, dôr	sheep or ram or goat, buffalo, bull [Ben96:95]
48.dog, tog+	mud, earth, field, mountain [Ben96:96] <b>taw/dağ=mountain</b>
49.jut ~św-, *ju~św, -śi	milk, suckle [Ben96:98] <b>suw=water, süt=milk</b>

50.kal+	gourd, or spoon, or paddle, pot [Ben96:98] <b>kaşık=spoon</b>
51.kol	armpit, breast or chest [Ben96:99] <b>kol=arm, hand</b>
52.kom, *kûm	all, deep, many, fat or thick [Ben96:99] <b>he(m/p)isi, hemi=all, köp=many, kalm=thick, semiz=fat</b>
53.kor+	bad or evil, dirty, rotten [Ben96:99] <b>kötü=bad</b>
54.kor+o, kor+o	dry season, sun or moon [Ben96:99] <b>kuru=dry, kûy=to burn (dry up), kün=sun, kuyaş=sun</b>
55.kur+, **kor	big, full, long=deep, fat=thick, many, very [Ben96:100] <b>köp=many, much, to swell; semiz=fat,</b>
56.k <sup>w</sup> al ~köL+ kol+, gûl+	right, left [Ben96:100] <b>sol=left, kol=arm, hand</b>
57.ķas+	old [Ben96:100] <b>kart=old</b>
57.môr, môl/r-, mar	all or complete, enough, far, fat, many, very [Ben96:101] <b>may=fat, oil, bari=all</b>
59.ru, *uru	say, call or shout, count or write [Ben96:102] <b>yaz/caz=to write, Chuvash şir=to write &gt; Magyar ir</b>
60.śi, *śi+a	rope, hair or feather, snake, tail, worm [Ben96:103] <b>cip/yip=rope, saç=hair, cilan/yılan=snake</b>
61.śur <sub>2</sub> +?, **sul, sul	river=valley, marsh, well, earth, field [Ben96:103] <b>suw=water, sadır=bog, sel=flood (Ar.?)</b>
62.tind	remain, live or be alive, sit or set, sleep [Ben96:104] <b>tin=life, tiri=alive</b>
63.tor?, tor, to(o)r	come, climb or ascend, dance, hunt, turn, walk [Ben96:104] <b>ör=high, töjere=to roll (&lt;*tVd), cürü/yürü=to walk &lt; *du-</b>
64.tuk, **tok =	turn=return, come=arrive=enter, dance, go=run, throw,climb=ascend [Ben96:104] <b>dön=turn, change mind</b>
65.wôl, -wol, wol	before or in front of, tomorrow [Ben96:105] <b>al=front, alın=forehead, ileri=forward, ilet/elt=to forward, ulaş=to reach; ulag=pack horse, ulak=goat kid</b>
66.a(n)+da	know, see, think [Ben96:106] <b>añı=consciousness, mind, añaña/anla=to understand</b>
67.ar, *(y)ar+a	two, half, foreigner=other [Ben96:106] <b>carım/yarım=half, yağı=foreigner, enemy</b>
68.(a)ta, *ata	person, boy, child, father, man, son, sister [Ben96:106] <b>ata=father, atta=father</b>
69.ayo, ay~yô	come, climb, enter, go, walk [Ben96:106] <b>aylan=wander, walk, [örle, ay, ar/arma etc]</b>

70.âl	tree or wood, stem, stick, poison [Ben96:107] <b>ağı, aw/uw= poison</b>
71.*+ja, *sa	go or travel, fall, run or flee, turn [Ben96:107] <b>çap=run</b>
72.kel+, *kʷ́r	small, sharp, thin, thorn [Ben96:108] <b>küçük= small, kiçi=younger, gitçe=small</b> <b>keskin=sharp (from kes=cut), kısa=short (from cut)</b> <b>kır=to break, kıptı &lt; *kılıptı (scissors), kılıç=sword</b>
73.sil, *(s)iř+?	hand, elbow, one [Ben96:109] <b>el=hand, elig=hand (Sumerian silig)</b>
74.tük	one, ten [Ben96:110] <b>tek=single</b>
75/ay	remain, sleep, or lie down, finish [Ben96:110] <b>uyu=sleep, yat=lie down</b>
76.+sas+, ~+sis+?	Fat or thick, wide [Ben96:114] <b>şışman=fat, şış=to swell</b>
77.**ša	milk [Ben96:114] <b>süt=milk</b>
78.tush?	tie [Ben96:114] <b>tüyü=to tie, sew, tüyre=to sew, attach</b>
79.tuw+, ~taw+	field or pasture, earth, down, mud [Ben96:116] <b>taw=mountain, toz=dust</b>
80.**abba~baba, **abba~baba, **abba~baba	= father, man [Ben96:120]  <b>appa=father, ancestor, akka=father, ancestor</b>
81.**êm+a	mother, sister, girl, child [Ben96:121] <b>amma = mother, egeç=sister, eke[t]=sister [m=k]</b>
82.**ku/ol-?,	round or ring, crooked or curved *külo+, **k'ül- [Ben96:122] <b>kıñır=curved, &lt;*kVd &gt; *kVr; kıvrık=crooked</b>
83.**ķür, **ķur+, *kur	fowl, pigeon or dove, partridge, kite[Ben96:123] <b>kuş=bird, kaz=goose, kuw/kuğu=swan, kanat=wing</b>
84.*nga, *anga ~+ing, *aň(iň)+	mother, woman, sister, girl or daughter, child or baby [Ben96:124] <b>ana=mother, amma=mother</b>
85.*ň+am, +am, *+am+a	food, dura, eat or bite or burn [Ben96:124] <b>em=to suck, yum=to close (e.g. mouth), yet=to swallow</b>
86.*bel, **bēl, Pal	knife, split=tear, cut=chop, hit=swim, pound, ax [Ben96:126] <b>böl=to divide, balta=axe, biç=to mow, bıçak=knife</b>
87.*d₂i, *ti(i), **tiy+a	give, bring, carry, catch, send, hold, take, buy [Ben96:127] <b>taşı=carry, tut=catch; iy=send &lt; *id</b>
88.*(k)+al	well, lake or sea [Ben96:127] <b>köl=lake</b>
89.kauň, *kauň, kaň	cut or fell, break or swim, knife, stab [Ben96:128] <b>sın =to break (*kin &lt; *kVn)</b>
90.*kôr, **kôr, kul	neck or throat, back, shoulder, buttocks [Ben96:128] <b>kıç=buttocks, kötü=rear end, arse, kudruk=tail</b>

- 91.kûr+, \*kor+k, kôr bark, skin, basket [Ben96:129]  
**kabuk=bark, skin**
- 92.t<sup>w</sup>k+, tik, tiķ feather, hair, beard, root [Ben96:130]  
**tük=feather, tawuk=hen, tox=hen**
- 93.t<sub>2</sub>ûŕ+, Ȑúŕ, Ȑér+ moon, star, sun, time [Ben96:130]  
**tün=evening, tünene=yesterday, dün=yesterday**
- 94.ar?, \*ar, or come, enter, exit, go or crawl, fall [Ben96:131]  
**kir=enter, bar/var=go, arrive**
- 95.baar ~ bir two, first [Ben96:131]  
**bir=one**
- 96.\*\*-do/u?, \*du~ud-, come, enter, go, fall or descend, jump [Ben96:132]  
**tüş=fall, descend**
- 97.ka come, go, walk [Ben96:132]
- 98.\*kar, kôr+, \*kal cut or chop, split or divide, ax, hit, break [Ben96:133]  
**kes=cut, kis=shorten, gıda=axe, kir=break**
- 99.\*kim+, kiň fly, mosquito, bee or honey, louse [Ben96:133]  
**çibin=fly**
- 100.\*kor+, \*kul+ ~kêr, kar fast [Ben96:133]  
**kızıw=fast; hızlı=fast, hız=speed**  
**terk=fast, tez=fast**
- 101.\*(k+)ôr+i, \*ar+i, ôr blood, red, white or yellow [Ben96:134]  
**kızıl=red, kan=blood**  
**kırmızı=red (\*karamzin),**  
The latter is said to be from Arabic beetle \*karamzin, and related to crimson.
- 102.\*ku/oŕ-, \*kûr+, k'ol+ worm, snake, tail [Ben96:134]  
**kurt=worm**
- 103.\*ta/ta+i, \*\*ta+i, tiya give, bring, catch, gather, hold, buy [Ben96:136]  
**tut=catch, hold**
- 104.\*\*garm+, garm+, sheep or ram or ewe, goat, buffalo [Ben96:138]  
kôr+ **koy=sheep, Tatar sarık < \*karık (Uralic?)**
- 105.\*kur+, \*kur, \*\*kur earth or soil, ashes, down, field or farm or pasture, sand, charcoal or black, family, mountain or stony [Ben96:139]  
**kir=dirt, kara=black, kömür=coal**
- 106.\*k<sup>(w)</sup>ar+a, \*kur+, \*\*k<sup>(w)</sup>ar+a mountain=hill, earth, field, mud, marsh [Ben96:139]  
**kara=land, küre=to shovel, \*karV=to dig**
- 107.ôr~ru, \*\*ôr ~ru, \*ir~ôr see, know, dream, watch [Ben96:139]  
**kör=to see, kara=to watch; uyu/udi=sleep**
- 108.\*\*shi, \*is~si , \*c~-z-? dung, urine [Ben96:140]  
**sigin=dung?**  
**siy=to urinate, sidik=urine?**
- 109.\*\*têm+, tam+ ~tiň, \*\*tim finish, kill, die or dead [Ben96:140]  
**tinkay=die (tin=life), tunçuk=choke**

- 110.\*\*t̪ēl+ň+, tongue or language, lick, taste, molar tooth [Ben96:141]  
\*d̪ēl+m+, \*t'ēl+~lēt'  
**tiş=tooth, til=tongue, tat=to taste**
- 111.\*t̪og, t̪ōk, \*\*duğ take, carry, catch, gather, give, exchange [Ben96:141]  
**değiş tokuş=exchange**
- 112.\*way+ay+, moon, sun, after, tomorrow, year [Ben96:141]  
\*\*ay+, \*ay+  
**ay=moon, month; yıl/cıl=year**

Version 2 entries are in blue.