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Introduction to *Mother Tongue* VII

The passing of Professor Joseph H. Greenberg was observed in the previous issue of *Mother Tongue* (MT VI) with a eulogy written by Harold C. Fleming. At the time of Greenberg’s death MT VI was in final stages of production, and the volume had been designated as a *Festschrift* for the late Roger W. Wescott. Now the present issue, MT VII, is dedicated to the memory of Joseph H. Greenberg. All of the articles are either directly stimulated by Greenberg’s work, or further elucidate the paths he blazed in language classification, typology, and universals.

In the first section, “Studies in Language Classification,” scholars continue to refine, redefine, and elaborate the hypotheses of classification proposed by Greenberg. Harold Fleming writes about two obscure languages of Ethiopia, Shabo and Ongota, and discusses how (and whether) they fit into Greenberg’s revolutionary classification of African languages (made long before the discovery of Shabo and Ongota). Timothy Usher discusses the extinct Tasmanian languages, arriving at a partial revision of Greenberg’s Indo-Pacific hypothesis. Allan Bomhard offers a response to Greenberg’s Eurasian hypothesis, adding grammatical cognates from other languages that Greenberg also considered more-or-less remote relatives of Eurasian. Ronald Thornton responds to the Eurasian hypothesis as well, adducing grammatical cognates in Basque that he attributes to a deep kinship between Eurasian and Dene-Caucasian.

The second section, “Focus on Southwestern Asia,” deals with languages from Iran to Orissa. Václav Blažek and George Starostin discuss the genetic affiliation of the extinct Elamite language of Iran. In another article Blažek continues with lexical parallels between Afroasiatic and Dravidian (a family often connected with Elamite). Panchanan Mohanty offers a fascinating glimpse of the Orissa region of India, where diverse language families (Indo-Aryan, Dravidian, Munda, Tibeto-Burman) have interacted for millennia.

Ironically, in view of the 1866 prohibition by the Société de Linguistique de Paris of discussion of the origin of language, in this issue it is precisely the Parisians who venture into the deepest chronological levels of human language. Pierre Bancel and Alain Matthey de l’Etang analyze the global etymon KAKA ‘*mother’s brother/elder brother/grandparent’*, and attempt to unravel the original Proto-Human kinship system. John Saul offers a scenario that would explain the very origin of human language, as a deliberate invention.

Legend has it that Edward Sapir, in a lecture at Harvard, said that there are two classes of languages: Andamanese, and all the rest. We are not sure whether he meant this in a genetic, typological, or perhaps some other sense. Greenberg included the Andamanese languages in his Indo-Pacific phylum (see above). Here Harvard professor (and ASLIP President) Michael Witzel treats us to an essay on the unusual numeral system of one Andamanese language, Jarawa.

This issue of *Mother Tongue* has turned out to be the largest ever, in terms of pages. We trust its contents further the methods and objectives Joseph H. Greenberg held dear.
Taxonomic Proposals by Joseph H. Greenberg

Languages of Africa (Greenberg 1963):¹

Families:

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<th>AFRO-ASIATIC:</th>
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<td>IV CHADIC</td>
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<td>E SOUTHERN</td>
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<td>NILO-SAHaran:</td>
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<td>I Songhai</td>
<td>Gao, Djerma</td>
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<td>II SAHARAN</td>
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<td>IV Fur</td>
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<td>V CHARI-NILE:</td>
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<td>A EASTERN SUDANIC</td>
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<td>Bongo, Logbara, Mangbetu</td>
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<td>Kunama</td>
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<td>Bega, Kwama, Twampa</td>
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| NIGER-KORDOFANIAN:                     | Katla, Logol, Tegali                  |
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| II NIGER-CONGO:                        | Fula (= Peul), Wolof, Temne           |
| A WEST ATLANTIC                        | Vai, Mandinka, Mano                   |
| B MANDE                                | Bariba, Gurma, Lobi                   |
| C GUR (= VOLTAIC)                      | Ewe, Yoruba, Igbo                     |
| D KWA                                  | Tiv, Bantu (Duala, Swahili, Xhosa, etc.) |
| E BENUE-CONGO                          | Longuda, Gbaya, Zande                 |
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### INDO-PACIFIC:

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<td>(hundreds of New Guinean languages, not widely known outside ethnographic literature)</td>
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<tr>
<td>NUCLEAR NEW GUINEA:</td>
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<td>EQUATORIAL-TUCANOAN:</td>
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<td>Puinave, Nambikuara, Tucano</td>
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### EURASIAN:

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<td>Atka Aleut, Yupik, Inuit</td>
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2 Greenberg (1971), “The Indo-Pacific Hypothesis,” in Current Trends in Linguistics 8. For Andamanese, see Witzel’s article, this issue. For Tasmanian, see Usher’s article, this issue.


Shabo: a New African Phylum
or a Special Relic of Old Nilo-Saharan??

Harold C. Fleming
Gloucester, Massachusetts

At a conference in Bayreuth, Germany in 1989 I gave a paper trying to classify Shabo, a newly found language spoken in the forests of extreme southwestern Ethiopia. It was never clear whether that paper was published or not in the proceedings of that conference. Presuming not and (more importantly) wishing to publish the greatly increased corpus of data gathered by four field workers, I offer this summation of all available data on Shabo and a brief attempt at the end to show some of the evidence leaning towards a Nilo-Saharan solution to the taxonomic problem. With luck many good scholars will grapple with the Shabo problem and one day we shall have a consensus on what Shabo means in African prehistory.

We first present the crucial parts of the Bayreuth paper, so as to set the stage.

"SHABO: PRESENTATION OF DATA
AND PRELIMINARY CLASSIFICATION"

One of the rewards of linguistic field-work, and indeed of comparative study, is that occasionally we find something different and important. Historically speaking, when one finds a major branch of a linguistic phylum or even a new phylum, there is cause for celebration and praise for the field worker. So it is to be with the language called Shabo by its own speakers and Mekeyir by its neighbors, the Majang of southwestern Ethiopia. Until very recently, both names were found sometimes on maps of Ethiopia. Nothing much could be made of them because there were no data to stand with the names and Shabo at least looked like a possible mishearing of Shako, an Omotic language spoken not far away.

This mystery disappeared recently (1984 and subsequently) when three diligent field workers and a wise comparativist produced data on Mekeyir, re-named it Shabo, produced more data, and perceived the most important aspect of Shabo – it is a major linguistic entity. Initially, Harvey Hoekstra of the American Mission in Illubabor recorded 247 words and told M. Lionel Bender of Southern Illinois University of their possible significance. Bender realized that Mekeyir was "something else" and sent the data to various colleagues for appraisal. Later, on Bender's suggestion, Peter Unseth of S.I.L. and Addis Ababa University and Anbessa Teferra of Addis Ababa University undertook more field-work. They have increased the corpus considerably, while Anbessa Teferra has settled in for a long-term study of Shabo, thus becoming the world's first expert on it. We ought truly to praise these scholars because Shabo is a major discovery. Its presence in our books and our thinking will significantly alter one major African linguistic phylum as well as the prehistory of the African Horn.

The present paper is an attempt to classify Shabo from a genetic linguistic or historical standpoint. Four alternative hypotheses have been suggested from the beginning of our knowledge, from the time when it was still called Mekeyir. One, Shabo is another member of the Surma (or Surmic to Unseth) group of languages, themselves members of East Sudanic within the Nilo-Saharan phylum of languages as proposed by Greenberg (1963). It shows numerous resemblances to Majang (Masongo) of the same group. Two, Shabo is a member of Nilo-Saharan, to be sure, but one so different as to constitute a major branch of that phylum. Three, Shabo is a member of the nearby Omotic branch of Afroasiatic (Afrasian, Semito-Hamitic) because there are many resemblances to Omotic languages and to socially dominant

1 Past ASLIP President, Professor of Anthropology, Boston University.
Amharic (Semitic) and Oromo (Cushitic). Four, Shabo is a phylum unto itself, i.e., it is not a branch of any known phylum, nor can it be shown to be related to any known phylum. Many linguists prefer to call this sort of phylum an Isolated Language.

Considerable ethnological and prehistorical interest also adheres to the Shabo because they are nomadic forest hunters, living amongst a people (the Majang-ir) who are also hunters, but settled ones who do some farming too. One might suppose that the Shabo people and/or their culture could have something to do with Africa's other famous forest hunters – the Pigmies of the Congo. But we know very little about Shabo culture or ecological adaptations, except whatever is contained in the words 'nomadic forest hunters'. Physically, the field workers report that the Shabo may be shorter than the Majang and have rounder faces but otherwise their general appearance matches that of most other peoples of the west Ethiopian borderlands, called Shanqilla in Amharic or African Negro in anthropology. It is not just the case that the Shabo cannot be called Pigmies; more importantly they resemble their neighbors and linguistically kindred peoples (Nilo-Saharan), as well as more than a few Omotic speakers.

There are also problems with the linguistic database. Severe difficulties in eliciting data have been reported by the field workers and an unusual amount of variation in recorded data for any particular lexeme has been mentioned, not to mention verb paradigms or morphology in general. Much of that will be reduced by Anbessa Teferra's patient inquiry into these matters. For the present, however, we are stuck with the variation. The reader will appreciate all this when s/he reads the data presented. Basically, the problems arise from (a) the lack of schooling among the Shabo and (b) the lack of any language of interrogation except Majang.”

Presentation of Data

In 1989 the data were displayed without regard to the particular person who contributed them, aiming to spare the reader “needless complexity”. They were arranged in three columns; one showing the English meaning, the second giving the Shabo forms in all their variation, if such were present, and the third trying to relate the Shabo forms to some form in an outside language. The third column did not incorporate all the suggestions made by my colleagues; to do so would have sharply increased the complexity of presentation and the space demanded by the paper. Instead of that, I chose to give credit in general to Lionel Bender, Peter Unseth, Anbessa Teferra, and Christopher Ehret for their proposed cognations, whether published or personally transmitted. It was thought sufficient to say that their suggestions were instrumental in moving my hypothesis from #4 above to #2 – to the Nilo-Saharan hypothesis. In the case of those forms marked p-NS* the form involved is from Christopher Ehret and his unpublished reconstructions of proto-Nilo-Saharan, as of 1989. Forms labeled p-Koman are either from Ehret or Bender via Peter Unseth. The reader will note that p-Koman to me is the same as Bender's p-Komuz. In the section following the presentation of data I am entirely on my own, using some cognations proposed by colleagues and rejecting some others. Ultimately, a hypothesis of taxonomy is subjective, representing the best that any one person can make of a complex set of data. I wish to be clear about that.

The current presentation of data is new and different. The data are arranged in five columns. As before the first is the English gloss. The next three columns are devoted to the data presented by three different field workers. The second column, or the first of those three, is given over to and dominated by the large corpus gathered by Anbessa Teferra and stored on an exotic floppy disk whose data have been 'translated' by myself. It is basically a glossary of around 715 words. (More on Anbessa's data below.) The third column consists of data gathered by Ayyalew Mitiku of Addis Ababa University in the early 1990s, entirely independent of either Anbessa or Hoekstra but apparently using the same difficult informant who they used. Ayyalew’s list consists of 244 items but many of them are grammatical phrases of importance. Ayyalew worked with Aklilu Yilma and I on Ongota and understands field problems unusually well. The fourth column is a summation of about 295 items gathered by Harvey Hoekstra; incorporating about 35 recorded by Peter Unseth would make his list 330. Hoekstra’s is the basic corpus
upon which my original article of 1989 was based. One can easily see that Anbessa’s and Ayyalew’s new data have roughly tripled the information we have to work with nowadays, compared to 1989.

There are highly unusual peculiarities attached to Anbessa Teferra’s new corpus. When he gave the floppy disk to me in 1989, it was with great pain and regret that he did so. He was giving up on Shabo because he found the field conditions intolerable and the principal (indeed only) informant simply impossible to work with. Moreover he was scheduled to move to Israel whence his true love had gone. Knowing that I was interested in Shabo and having worked on Mao of Diddesa with me that year, he decided that his work might be of interest to me. Just before going to Israel, he gave me a floppy disk with Shabo data on it. His instructions were clear: I give you this disk and the data on it are yours to do with as you choose. I wash my hands of the bloody Shabo business! Unfortunately, I did not get around to looking at his Shabo data until after he had left. Then my computer itself died. Thus it was not until much later that I tried to read the data on his floppy disk. I found that I could not read it at all. Moreover, the disk was a Hong Kong export, popular among non-wealthy African students, and so was his computer. No one who I asked could read it. So I put it aside as a ‘lost cause’ for several years, until more recently I tried to read it again. There was no success – again. Then just in frustration and without hope I asked the computer to print the Shabo ‘tape’. I must have fooled it somehow because lo and behold it printed the whole corpus!

It took quite a long time to decipher the phonetics because the Hong Kong computer has no ASCII or other ways of writing ‘exotic’ phonetics. Thus such a word as ‘anklet’ was recorded as [lij@‘an@%] or ‘comb!’ was {p‘ic@‘a} and there were many such transcriptions. Like most scientists I rather like puzzle-solving and so I took on Anbessa’s Shabo data. Eventually I solved 99% of his representations because of the logic of the Shabo language and the areal tendencies of southwestern Ethiopia and comparisons with Hoekstra’s data. And it was fun! ‘Anklet’ turned out to be [lij@] and ‘comb!’ became [p‘ic@‘a]. So after all Anbessa’s pain and hard work and distress there was a payoff. His valuable data finally got published for scholars to use. Finally the legitimate question can be asked of this retrieved and translated data: are they any good? My answer would be yes, for the most part, because the Hong Kong representations are regular and ‘lawful’ (predictable) and because I have worked with Anbessa in the field and know him to have a good ear and to be a competent field worker. The difficulties with the Shabo informant were experienced by later field workers.

Finally, the fifth column of data is occupied by the Uduk language of the Koman group of Nilo-Saharan. The Uduk live in the eastern Sudan near the Yabus river next to the Ethiopian border. A considerable dictionary of Uduk was published by English scholars (Beam and Criddle, 1970) but has apparently escaped notice by those working on Koman in recent decades. The main reason for putting these data in this context is to get it all into circulation and for the striking similarities to Shabo to be noticed, occasional though they may be. In Greenberg’s original work on Koman he put Uduk as coordinate to the rest of Koman. Later field work by Bender and others recorded ‘T’wampa’ as the self-name of Uduk. The T’wampa data are very much like the Uduk data of Beam and Criddle, although not nearly so extensive. However, the Uduk recorded by Evans-Pritchard in 1932 (Sudan Notes and Records 15, 1-61) differs systematically from the Uduk of Beam and Criddle and in the direction of Gule where earlier Koman [*s*] as in [*sum*] ‘meat’ has been replaced by [f], at least in some words. At a minimum the 79 words recorded by Evans-Pritchard represent a different dialect.

The data are phonetic, phonemicization having been Anbessa Teferra’s problem. The symbols used are mostly those of standard Africanist tradition, except for a few consonants and most of the vowels. The limitations of my computer are a major factor. No tonal data at all are presented. Among the noteworthy consonant symbols are [g] which represents the velar nasal stop "ng", [s] for the voiceless palatal fricative "sh", and [c] which represents the usual pre-palatal voiceless affricate [ʣ], as in English "ch", rather than the "ts" so commonly perceived of [c] in Europe. The implored or ingressive stops, usually either bilabial or retroflex, are represented by [b’] and [d’]; they are very common in both Shabo and Uduk and indeed in southwestern Ethiopia generally. The velar ingressive [g], while fairly common among Omotic languages, is not reported for Shabo or Uduk. Since aspiration is reported for both Shabo and Uduk, the
consonants so affected are represented by [ph], [th], [ch], and [kh] respectively. One of these, [kh] has clearly been merged with the velar fricative [x] in the recordings of Uduk. The vowels are shown "as in Italian", except that length is rarely shown. To render the short midfront unrounded vowel as in Italian "petto" or English "bed" the symbol [e] is used. For the low-mid back rounded vowel as in Italian "giotto" or British English "job" the symbol [ö] is used. In the majority of cases this should probably be represented by [o], since the source (Bender) seems normally to perceive [o] as [ö]. The longer and shorter varieties of 'schwa', as in English 'bud' and 'sofa' are rendered as [a]. Finally, either the high central vowel of Amharic /t'id/ = 'juniper' or the shorter back version of [i] as in English /tit/ = 'teat' are rendered by [i]. The glottalization of any consonant "C" is shown by raised diacritic ['] so that [t'j for example is a glottalized [t], as in Amharic /t'ut/ "breast". However, the simple glottal stop itself is shown by [?].

Some of the data have letters in parentheses after them, e.g., 'tongue' handa (CU), which means that Cushitic relates to this in some way. Most entries are followed by one of these three letters, (MJ), (AM) or (OR) which mean Majang, Amharic or Oromo, the sources of most loan words in Shabo or resemblances which might be loans or cognates. Other labels are, as follows:

AA = Afrasian, OM = Omotic, SOM = South Omotic or Somotic, NOM = North Omotic, CU = Cushitic, DI = Dizoid branch of NOM, GO = Gongan branch of NOM, Ong = Ongota, NS or N-S = Nilo-Saharan, CS or C-S = Central Sudanic (of Greenberg), ES or E-S = East Sudanic, SU = Surma or Surmic, UDUK = Uduk, Masai = Maasai, KO = Koman, Tabi = Tabi

GLOSS in {SHABO (MEKEYIR) | KOMAN | ENGLISH | HOEKSTRA | UDUK}

Aardvark
Able, be / unable, be
Absent, be
Ache / weak ache
Addiction
Advise, to
Afraid, be; suspect, to
After
Afterbirth, placenta
Afternoon
Again
Alive
All
""
Animal
Annoyed, be
Ant
Anger
Ankle
Antelope, 'deer'

b’oosi (MJ)
fakkee / fakku-be
addake
k’ondu/k’ondu omoke
nima d’eet
mabuma
laaSa
yebagidiŋ ada
dindiŋ
būdala (MJ)
wēe’yte b’aar
ufebec b’eles
yiŋkapo b’ilb’il
hab’a
geta to?e
mōrodięŋ (MJ)
gongoš koph
<table>
<thead>
<tr>
<th>English</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach, to</td>
<td>ootu (AA)</td>
<td>kép (NS)</td>
<td>bwambi</td>
</tr>
<tr>
<td>Arm, shoulder</td>
<td>c’eggise</td>
<td>fun'ka/punj’wa</td>
<td>a-c’ilaθ'</td>
</tr>
<tr>
<td>Armpit</td>
<td>abbi amme</td>
<td>a-kaphany</td>
<td></td>
</tr>
<tr>
<td>Arrive, to (?)</td>
<td>kaajit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>embers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aunt, MoSi, FaSi</td>
<td>luwwa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid, to</td>
<td>at’om</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baboon, species</td>
<td>sasale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baby (to 3 yrs)</td>
<td>gisatt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back (adj)</td>
<td>sakki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back (noun)</td>
<td>šaka / sak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backbone, spine</td>
<td>sakkı imaha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backyard</td>
<td>apuur</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bag, sack</td>
<td>keese (AM?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bark (tree)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barren, grassless place</td>
<td>c’aamu</td>
<td></td>
</tr>
<tr>
<td>Basket</td>
<td>kante</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathe, wash, to</td>
<td>hoora</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beard</td>
<td>b’ec’c’a (NS,OM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed</td>
<td>beero</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bee</td>
<td>soy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beehive</td>
<td>daana (DI, CU)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before (adv.?)</td>
<td>accaki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin!</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bell, stomach</td>
<td>šuk’uma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bell, liver</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bell, fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird (a spec.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird, sp., pigeon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bite!</td>
<td>p’illa</td>
<td>b’illa/p’illa</td>
<td></td>
</tr>
</tbody>
</table>

2 See Ongota /ootu, otta/ ‘to go’ and its many Afrasian cognates.
<table>
<thead>
<tr>
<th>English</th>
<th>T'boli</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bite, to</td>
<td>k’aw-ge woc’</td>
</tr>
<tr>
<td>Black, blue</td>
<td>c’iiŋ c’in</td>
</tr>
<tr>
<td>Black</td>
<td>c’iiŋ/c’iiŋ d’okhol da’okhol</td>
</tr>
<tr>
<td>Blind</td>
<td>bēbēerk</td>
</tr>
<tr>
<td>Blood</td>
<td>domo (NOM)</td>
</tr>
<tr>
<td>Blacksmith</td>
<td>dēmmo (NOM) a-bas</td>
</tr>
<tr>
<td>Blind</td>
<td>caan</td>
</tr>
<tr>
<td>Blood</td>
<td>yērom (DI)</td>
</tr>
<tr>
<td>Blow, inflate, to</td>
<td>fiffi</td>
</tr>
<tr>
<td>Dust off!</td>
<td>fiff</td>
</tr>
<tr>
<td>Blow a nose, to</td>
<td>ŋuk-eet (SOM)</td>
</tr>
<tr>
<td>Blue (cf green)</td>
<td>šolo</td>
</tr>
<tr>
<td>Blush, admire, be happy</td>
<td>giitfi</td>
</tr>
<tr>
<td>Boat</td>
<td>goona (OM) akhur</td>
</tr>
<tr>
<td>Body</td>
<td>éék (MJ) is</td>
</tr>
<tr>
<td>Body, whole, person</td>
<td>bungwar</td>
</tr>
<tr>
<td>Boil, to</td>
<td>hop / kop</td>
</tr>
<tr>
<td>Boil, a</td>
<td>metwak</td>
</tr>
<tr>
<td>Bone</td>
<td>ēmēha (MJ) a-sima?</td>
</tr>
<tr>
<td>Bottle</td>
<td>luŋ</td>
</tr>
<tr>
<td>Bow! (bend down)</td>
<td>ogoon</td>
</tr>
<tr>
<td>Bowl</td>
<td>saani (AM)</td>
</tr>
<tr>
<td>Boy (cf child)</td>
<td>c’o</td>
</tr>
<tr>
<td>Boys, children</td>
<td>k’ufa k’ufaa</td>
</tr>
<tr>
<td>Bracelet, anklet, bead</td>
<td>lijah</td>
</tr>
<tr>
<td>Braid hair, to</td>
<td>hed’d’a</td>
</tr>
<tr>
<td>Brain</td>
<td>d’unk’u</td>
</tr>
<tr>
<td>Bread</td>
<td>matnoy</td>
</tr>
<tr>
<td>Break, to</td>
<td>set’t’a</td>
</tr>
<tr>
<td>Breakfast</td>
<td>k’ursi (AM)</td>
</tr>
<tr>
<td>Breast (♀ presumed)</td>
<td>du duh</td>
</tr>
<tr>
<td>Breast “ “</td>
<td>kowan ako</td>
</tr>
<tr>
<td>Breast, chest</td>
<td>kokoŋ (MJ?) a-bor</td>
</tr>
<tr>
<td>Breathe, to</td>
<td>hooppu</td>
</tr>
<tr>
<td>Bridge</td>
<td>dankare</td>
</tr>
<tr>
<td>Bridge of nose</td>
<td>koomoš</td>
</tr>
<tr>
<td>Bright</td>
<td>k’anja</td>
</tr>
<tr>
<td>Bring! Bring here!</td>
<td>tamm / tam</td>
</tr>
<tr>
<td>Bring another!</td>
<td>tam (NS)</td>
</tr>
<tr>
<td>Brother</td>
<td>yuka tam</td>
</tr>
<tr>
<td>Brown</td>
<td>maa</td>
</tr>
<tr>
<td>Buffalo, Cape</td>
<td>gašša /gaša</td>
</tr>
<tr>
<td>“ “ (♂ only)</td>
<td>booj/boŋ/booy (MJ)</td>
</tr>
<tr>
<td>“ “ (♀ only)</td>
<td>geyuum (MJ)</td>
</tr>
</tbody>
</table>

4 Literally it is 'half black', although 'half' is a verb in form.
<table>
<thead>
<tr>
<th>English</th>
<th>Roman</th>
<th>Phonetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bull</td>
<td>t’iito</td>
<td>t’iyito (GO&lt;AM)</td>
</tr>
<tr>
<td>Burn, to</td>
<td>eb’er</td>
<td></td>
</tr>
<tr>
<td>Bush; uncultivated land</td>
<td>sa</td>
<td></td>
</tr>
<tr>
<td>Buy! Sell!</td>
<td>ab’al</td>
<td></td>
</tr>
<tr>
<td>Calf (of leg)</td>
<td>seelak</td>
<td></td>
</tr>
<tr>
<td>Calm</td>
<td>zimteñña</td>
<td></td>
</tr>
<tr>
<td>Carry, to</td>
<td>k’oc’c’u</td>
<td></td>
</tr>
<tr>
<td>Cat</td>
<td>ga}am</td>
<td></td>
</tr>
<tr>
<td>Chair</td>
<td>barsum (CU)</td>
<td></td>
</tr>
<tr>
<td>Chance, by</td>
<td>yabba</td>
<td></td>
</tr>
<tr>
<td>Change (noun)</td>
<td>getumphu</td>
<td></td>
</tr>
<tr>
<td>Chase, to</td>
<td>ub’i</td>
<td></td>
</tr>
<tr>
<td>“ back and forth</td>
<td>jo ame</td>
<td></td>
</tr>
<tr>
<td>Cheek</td>
<td>b’akiwon</td>
<td></td>
</tr>
<tr>
<td>Chew, to</td>
<td>atumak</td>
<td></td>
</tr>
<tr>
<td>Chief (political)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child</td>
<td>c’o</td>
<td>c’oh</td>
</tr>
<tr>
<td>Child, boy</td>
<td>umb’a c’o</td>
<td></td>
</tr>
<tr>
<td>Child, female</td>
<td>ull c’o</td>
<td></td>
</tr>
<tr>
<td>Child (cf male)</td>
<td></td>
<td>uul</td>
</tr>
<tr>
<td>Child, toddler</td>
<td>gogoy (MJ?)</td>
<td></td>
</tr>
<tr>
<td>Child (4 to 7 yrs)</td>
<td>toon</td>
<td></td>
</tr>
<tr>
<td>Chin</td>
<td>nigem (MJ)</td>
<td></td>
</tr>
<tr>
<td>Circle</td>
<td>atull</td>
<td></td>
</tr>
<tr>
<td>Civet cat</td>
<td>bogaroy (MJ)</td>
<td></td>
</tr>
<tr>
<td>Claw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claw, fingernail</td>
<td>seyŋse</td>
<td></td>
</tr>
<tr>
<td>Clay</td>
<td>cup’oy</td>
<td></td>
</tr>
<tr>
<td>Clever, cunning</td>
<td>kecca</td>
<td></td>
</tr>
<tr>
<td>Cliff</td>
<td>komše</td>
<td></td>
</tr>
<tr>
<td>Climb, to</td>
<td>geera</td>
<td></td>
</tr>
<tr>
<td>Clitoris</td>
<td>bacci k’oy</td>
<td></td>
</tr>
<tr>
<td>Close (vb)</td>
<td>gifo</td>
<td></td>
</tr>
</tbody>
</table>

* The phonetic value of the } in this word and a few others cannot be determined; it may be [?].
<table>
<thead>
<tr>
<th>English</th>
<th>Clarens Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close (your) eyes!</td>
<td>muutu</td>
</tr>
<tr>
<td>Blink, to</td>
<td>mit’t’ak’</td>
</tr>
<tr>
<td>Clot, to</td>
<td>gojen</td>
</tr>
<tr>
<td>Cloth, clothes</td>
<td>seemmo</td>
</tr>
<tr>
<td>Cloud</td>
<td>guuppo (NOM)</td>
</tr>
<tr>
<td>Cloud</td>
<td></td>
</tr>
<tr>
<td>Coat</td>
<td>kooti (AM&lt;ENG)</td>
</tr>
<tr>
<td>Coffee</td>
<td></td>
</tr>
<tr>
<td>Cold</td>
<td>k’eend’e</td>
</tr>
<tr>
<td>Cold, a (disease)</td>
<td>baac’e</td>
</tr>
<tr>
<td>Color</td>
<td>k’alami (AM)</td>
</tr>
<tr>
<td>Comb, a</td>
<td>paakset</td>
</tr>
<tr>
<td>Comb, to</td>
<td>p’ic’c’a (GO)</td>
</tr>
<tr>
<td>Come! / pl.</td>
<td>amm / am-ce</td>
</tr>
<tr>
<td>Command, to</td>
<td>ad’a</td>
</tr>
<tr>
<td>Confused, be</td>
<td>inon habba</td>
</tr>
<tr>
<td>Continued, he</td>
<td>tukeete</td>
</tr>
<tr>
<td>Cook!</td>
<td>satta</td>
</tr>
<tr>
<td>Cook under embers, to</td>
<td>nasi</td>
</tr>
<tr>
<td>Corpse (breathe not)</td>
<td>hoopu d’eb-be</td>
</tr>
<tr>
<td>Cotton</td>
<td>yirbi (OR)</td>
</tr>
<tr>
<td>Cough, to</td>
<td>k’oŋhu</td>
</tr>
<tr>
<td>Cousin, FaBrSo, MoBrSo</td>
<td>kaamay</td>
</tr>
<tr>
<td>Cover!</td>
<td>aguc’</td>
</tr>
<tr>
<td>Cow, cattle (head of)</td>
<td>minja (NOM)</td>
</tr>
<tr>
<td>“ Heifer, calf</td>
<td>minja c’o</td>
</tr>
<tr>
<td>Cow house (cattle stall)</td>
<td>minj-e aha (NOM)</td>
</tr>
<tr>
<td>Coward, blunt (?)</td>
<td>t’op’a</td>
</tr>
<tr>
<td>Crack, to</td>
<td>badawe</td>
</tr>
<tr>
<td>Crocodile</td>
<td>ugulke (MJ)</td>
</tr>
<tr>
<td>Crooked limbs</td>
<td>gongood’e</td>
</tr>
<tr>
<td>Cross-eyed</td>
<td>se wollo</td>
</tr>
<tr>
<td>Crossed (eyes)</td>
<td>wollo</td>
</tr>
<tr>
<td>Cross hands, to</td>
<td>mayowe</td>
</tr>
<tr>
<td>Cry of rejoicing</td>
<td>c’iiŋa</td>
</tr>
<tr>
<td>Cut, to; cross, to</td>
<td>c’ota</td>
</tr>
<tr>
<td>“ “</td>
<td></td>
</tr>
<tr>
<td>Dark</td>
<td>dindim ⁶</td>
</tr>
</tbody>
</table>

⁶ This is a world cognate. For example see Omotic /d’un/ and Burushaski /tumtaŋ/. [And Proto-Sino-Tibetan *dhVmH ‘dark, shade’; Yeniseian *tum- ‘dark’; Sanskrit tāmas-, Latin tenebrae (< *tems-r-), German finster ‘dark’ (< *9im-st-ra- !); Amerind: Ayoman tem ‘black’, Miskito timia ‘night’, Araucanian thumiñ, tumiñ ‘to darken’, etc. Ed.]
<table>
<thead>
<tr>
<th>Day</th>
<th>hayum</th>
<th>a-cim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day after tomorrow</td>
<td>jaal'dooku</td>
<td>d'ik / diye</td>
</tr>
<tr>
<td>Deaf, to</td>
<td>k'iti d'eb-be</td>
<td></td>
</tr>
<tr>
<td>Decide, to</td>
<td>inon d'eb</td>
<td></td>
</tr>
<tr>
<td>Deep, to</td>
<td>jooli (Tabi)</td>
<td></td>
</tr>
<tr>
<td>Desert, to</td>
<td>c'eenna</td>
<td></td>
</tr>
<tr>
<td>Despise, to</td>
<td>k'alli</td>
<td></td>
</tr>
<tr>
<td>Dew, wet</td>
<td>waad'i</td>
<td></td>
</tr>
<tr>
<td>Diarrhea, to</td>
<td>k'at'ama</td>
<td></td>
</tr>
<tr>
<td>Die, to</td>
<td>k'o</td>
<td></td>
</tr>
<tr>
<td>Dead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dig, to</td>
<td>k'ec'c'a</td>
<td></td>
</tr>
<tr>
<td>Dip!</td>
<td>bina }am</td>
<td></td>
</tr>
<tr>
<td>Disappear, to</td>
<td>doogu</td>
<td></td>
</tr>
<tr>
<td>Disease</td>
<td>beesta (AM)</td>
<td></td>
</tr>
<tr>
<td>Distilled liquor</td>
<td>arak'e (AM)</td>
<td></td>
</tr>
<tr>
<td>Distinguish, to</td>
<td>erk-eeti</td>
<td></td>
</tr>
<tr>
<td>Disturb, to</td>
<td>k'albi košša</td>
<td></td>
</tr>
<tr>
<td>Ditch</td>
<td>fook'u</td>
<td></td>
</tr>
<tr>
<td>Dive!</td>
<td>cicoku</td>
<td></td>
</tr>
<tr>
<td>Do something slowly</td>
<td>agaaje</td>
<td></td>
</tr>
<tr>
<td>Do something slowly again</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dog</td>
<td>kaani (NOM)</td>
<td>kaan/k'aan</td>
</tr>
<tr>
<td>Donkey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door (way)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downhill, cf step</td>
<td>goomu</td>
<td></td>
</tr>
<tr>
<td>Dowry, bride-price?</td>
<td>ohe</td>
<td></td>
</tr>
<tr>
<td>Dream, a</td>
<td>maša</td>
<td></td>
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<tr>
<td>Dress, a</td>
<td>k'amiši (AM)</td>
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<tr>
<td>Drink, to (water)</td>
<td>wo</td>
<td>wuo / wo</td>
</tr>
<tr>
<td>Drink, without stopping</td>
<td>kewu</td>
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<tr>
<td>Drive (animals), to</td>
<td>min-eete</td>
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<tr>
<td>Drizzle</td>
<td>c'ak'an</td>
<td></td>
</tr>
<tr>
<td>Drum</td>
<td>targuy (MJ?)</td>
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</tr>
<tr>
<td>Dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry</td>
<td>c'ooto</td>
<td></td>
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<tr>
<td>Dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially dry</td>
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<td></td>
</tr>
<tr>
<td>Dust</td>
<td>duudur</td>
<td></td>
</tr>
<tr>
<td>Eager, be</td>
<td>nima</td>
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</tr>
<tr>
<td>Ear</td>
<td>k'itti</td>
<td></td>
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<tr>
<td>Ear wax (earshit)</td>
<td>k'itti-ke k'a</td>
<td></td>
</tr>
<tr>
<td>Earrings</td>
<td>k'iti amb</td>
<td></td>
</tr>
<tr>
<td>Earth</td>
<td>bok'k'u, bok'i</td>
<td></td>
</tr>
<tr>
<td>Floor</td>
<td>bok'i giwase</td>
<td></td>
</tr>
<tr>
<td>Earth quake</td>
<td>bok'i giwase</td>
<td></td>
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</table>

<p>| Ear wax (earshit)            | k'itti-ke k'a |  |
| Earrings                     | k'iti amb |  |
| Earth                        | bok'k'u, bok'i |  |
| Floor                        | bok'i giwase |  |
| Earth quake                  | bok'i giwase |  |</p>
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<tr>
<th>English</th>
<th>Kanuri</th>
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<tr>
<td>Earth, split</td>
<td>bok’k’u bada-we</td>
</tr>
<tr>
<td>East, sun road</td>
<td>oha homa</td>
</tr>
<tr>
<td>Eat-s / ate / to eat</td>
<td>t’a (imp.)</td>
</tr>
<tr>
<td>Food remains</td>
<td>t’a</td>
</tr>
<tr>
<td>Grain remains</td>
<td>t’a</td>
</tr>
<tr>
<td>Egg</td>
<td></td>
</tr>
<tr>
<td>Elbow</td>
<td>koggod</td>
</tr>
<tr>
<td>Eldest child, 1st born</td>
<td>tey</td>
</tr>
<tr>
<td>Elephant</td>
<td></td>
</tr>
<tr>
<td>&quot; (♂ only)</td>
<td></td>
</tr>
<tr>
<td>&quot; stomach</td>
<td></td>
</tr>
<tr>
<td>&quot; cow</td>
<td></td>
</tr>
<tr>
<td>&quot; ear</td>
<td></td>
</tr>
<tr>
<td>&quot; toes</td>
<td></td>
</tr>
<tr>
<td>&quot; trunk</td>
<td></td>
</tr>
<tr>
<td>&quot; tusk, ivory</td>
<td></td>
</tr>
<tr>
<td>Elephant shrew, giant</td>
<td></td>
</tr>
<tr>
<td>Enemy</td>
<td></td>
</tr>
<tr>
<td>Enough, it is</td>
<td>(ɗebe) gaye</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>seett</td>
</tr>
<tr>
<td>Equal</td>
<td>iššak</td>
</tr>
<tr>
<td>Eternal</td>
<td></td>
</tr>
<tr>
<td>Evil eye (cf greedy)</td>
<td>k’ooro</td>
</tr>
<tr>
<td>Eye</td>
<td></td>
</tr>
<tr>
<td>Eyelash, eyebrow</td>
<td>se c’ee k’a</td>
</tr>
<tr>
<td>Pupil of eye</td>
<td>c’iin-in se</td>
</tr>
<tr>
<td>Face (body)</td>
<td>jaar</td>
</tr>
<tr>
<td>Fall, to</td>
<td>fuu</td>
</tr>
<tr>
<td>Far</td>
<td>teema</td>
</tr>
<tr>
<td>Farm, a, field, a</td>
<td>tawa</td>
</tr>
<tr>
<td>Farmer</td>
<td></td>
</tr>
<tr>
<td>Fat (adj?)</td>
<td></td>
</tr>
<tr>
<td>Fat (noun?)</td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>babbe</td>
</tr>
<tr>
<td>Grandfather</td>
<td>appa</td>
</tr>
<tr>
<td>Great “</td>
<td>orey</td>
</tr>
<tr>
<td>Fear, to; startled</td>
<td>bance</td>
</tr>
<tr>
<td>Feather, hair</td>
<td>c’eeeka</td>
</tr>
<tr>
<td>Feces, shit</td>
<td>k’a</td>
</tr>
<tr>
<td>Feed, to</td>
<td>owo</td>
</tr>
<tr>
<td>Feline, sp., serval, cat</td>
<td>adure (CU)</td>
</tr>
<tr>
<td>Feline, genet</td>
<td>goyin (MJ)</td>
</tr>
<tr>
<td>Fell an opponent, to</td>
<td>mandi</td>
</tr>
<tr>
<td>Fence</td>
<td>masare</td>
</tr>
<tr>
<td>Fill up, to</td>
<td>kawaw</td>
</tr>
<tr>
<td>“ (♂ only)</td>
<td></td>
</tr>
<tr>
<td>“ stomach</td>
<td></td>
</tr>
<tr>
<td>“ cow</td>
<td></td>
</tr>
<tr>
<td>“ ear</td>
<td></td>
</tr>
<tr>
<td>“ toes</td>
<td></td>
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<tr>
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<tr>
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<td>fuu</td>
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<td>Fat (adj?)</td>
<td></td>
</tr>
<tr>
<td>Fat (noun?)</td>
<td></td>
</tr>
<tr>
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<td>babbe</td>
</tr>
<tr>
<td>Grandfather</td>
<td>appa</td>
</tr>
<tr>
<td>Great “</td>
<td>orey</td>
</tr>
<tr>
<td>Fear, to; startled</td>
<td>bance</td>
</tr>
<tr>
<td>Feather, hair</td>
<td>c’eeeka</td>
</tr>
<tr>
<td>Feces, shit</td>
<td>k’a</td>
</tr>
<tr>
<td>Feed, to</td>
<td>owo</td>
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<tr>
<td>Feline, sp., serval, cat</td>
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<tr>
<td>Feline, genet</td>
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</tr>
<tr>
<td>Fell an opponent, to</td>
<td>mandi</td>
</tr>
<tr>
<td>Fence</td>
<td>masare</td>
</tr>
<tr>
<td>Fill up, to</td>
<td>kawaw</td>
</tr>
</tbody>
</table>

| Equal          | oroom                                                                  |
| Eternal        | is§ak                                                                  |
| Evil eye (cf greedy) | k’ooro                                                               |
| Eye            | se                                                                     |
| Eyelash, eyebrow | se c’ee k’a                                                            |
| Pupil of eye   | c’iin-in se                                                            |
| Face (body)    | jaar                                                                   |
| Fall, to       | fuu                                                                    |
| Far            | teema                                                                  |
| Farm, a, field, a | tawa                                                                  |
| Farmer         |                                                                        |
| Fat (adj?)     |                                                                        |
| Fat (noun?)    |                                                                        |
| Father         | babbe                                                                  |
| Grandfather    | appa                                                                   |
| Great “        | orey                                                                   |
| Fear, to; startled | bance                                                               |
| Feather, hair  | c’eeeka                                                                |
| Feces, shit    | k’a                                                                    |
| Feed, to       | owo                                                                    |
| Feline, sp., serval, cat | adure (CU)                                          |
| Feline, genet  | goyin (MJ)                                                             |
| Fell an opponent, to | mandi                                                              |
| Fence          | masare                                                                 |
| Fill up, to    | kawaw                                                                  |

| Food remains   | t’a                                                                    |
| Grain remains  | t’a                                                                    |
| Egg            |                                                                        |
| Elbow          | koggod                                                                 |
| Eldest child, 1st born | tey                                                                   |
| Elephant       |                                                                        |
| " (♂ only)     |                                                                        |
| " stomach      |                                                                        |
| " cow          |                                                                        |
| " ear          |                                                                        |
| " toes         |                                                                        |
| " trunk        |                                                                        |
| " tusk, ivory  |                                                                        |
| Elephant shrew, giant |                                                            |
| Enemy          |                                                                        |
| Enough, it is  | (ɗebe) gaye                                                            |
| Epilepsy       | seett                                                                  |
| Equal          | iššak                                                                  |
| Eternal        |                                                                        |
| Evil eye (cf greedy) | k’ooro                                                               |
| Eye            | se                                                                     |
| Eyelash, eyebrow | se c’ee k’a                                                            |
| Pupil of eye   | c’iin-in se                                                            |
| Face (body)    | jaar                                                                   |
| Fall, to       | fuu                                                                    |
| Far            | teema                                                                  |
| Farm, a, field, a | tawa                                                                  |
| Farmer         |                                                                        |
| Fat (adj?)     |                                                                        |
| Fat (noun?)    |                                                                        |
| Father         | babbe                                                                  |
| Grandfather    | appa                                                                   |
| Great “        | orey                                                                   |
| Fear, to; startled | bance                                                               |
| Feather, hair  | c’eeeka                                                                |
| Feces, shit    | k’a                                                                    |
| Feed, to       | owo                                                                    |
| Feline, sp., serval, cat | adure (CU)                                          |
| Feline, genet  | goyin (MJ)                                                             |
| Fell an opponent, to | mandi                                                              |
| Fence          | masare                                                                 |
| Fill up, to    | kawaw                                                                  |

<p>| Enemy          | dowwol                                                                 |
| Enough, it is  | (ɗebe) gaye                                                            |
| Epilepsy       | seett                                                                  |
| Equal          | iššak                                                                  |
| Eternal        |                                                                        |
| Evil eye (cf greedy) | k’ooro                                                               |
| Eye            | se                                                                     |
| Eyelash, eyebrow | se c’ee k’a                                                            |
| Pupil of eye   | c’iin-in se                                                            |
| Face (body)    | jaar                                                                   |
| Fall, to       | fuu                                                                    |
| Far            | teema                                                                  |
| Farm, a, field, a | tawa                                                                  |
| Farmer         |                                                                        |
| Fat (adj?)     |                                                                        |
| Fat (noun?)    |                                                                        |
| Father         | babbe                                                                  |
| Grandfather    | appa                                                                   |
| Great “        | orey                                                                   |
| Fear, to; startled | bance                                                               |
| Feather, hair  | c’eeeka                                                                |
| Feces, shit    | k’a                                                                    |
| Feed, to       | owo                                                                    |
| Feline, sp., serval, cat | adure (CU)                                          |
| Feline, genet  | goyin (MJ)                                                             |
| Fell an opponent, to | mandi                                                              |
| Fence          | masare                                                                 |
| Fill up, to    | kawaw                                                                  |</p>
<table>
<thead>
<tr>
<th>English</th>
<th>Yoruba</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finger, thumb (only)</td>
<td>pölpöl (AA)</td>
</tr>
<tr>
<td>Finger, toe, digit</td>
<td>cöpulkoi (MJ) meď, ufūm</td>
</tr>
<tr>
<td>Little finger</td>
<td>hedebru efu</td>
</tr>
<tr>
<td>Finger tip</td>
<td>efi k’oy</td>
</tr>
<tr>
<td>Finished / to finish</td>
<td>koore / kooru</td>
</tr>
<tr>
<td>Fire</td>
<td>cuuwa/šowa/c’owa od’</td>
</tr>
<tr>
<td>First, front</td>
<td>jaari&amp;-t</td>
</tr>
<tr>
<td>Fish</td>
<td>caja / c’anja a-paama</td>
</tr>
<tr>
<td>“</td>
<td>a-dulaŋ</td>
</tr>
<tr>
<td>Flat</td>
<td>k’uchi med’</td>
</tr>
<tr>
<td>Flat ground, pasture</td>
<td>bake</td>
</tr>
<tr>
<td>Flea</td>
<td>naako</td>
</tr>
<tr>
<td>Flee, to</td>
<td>utaalét/utnalét a-Θ’ikab’</td>
</tr>
<tr>
<td>Flesh (see meat)</td>
<td>piš</td>
</tr>
<tr>
<td>Flood</td>
<td>cuuwa/šowa/c’owa od’</td>
</tr>
<tr>
<td>Flour</td>
<td>c=ti 7</td>
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<tr>
<td>Flute</td>
<td>koyte</td>
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<tr>
<td>Fly, a</td>
<td>kayaj (NS) a-ðe?o</td>
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<td>Fly, a</td>
<td>jefd / zefa (MJ?) a-yime?</td>
</tr>
<tr>
<td>Fly, a</td>
<td>tēr khanti</td>
</tr>
<tr>
<td>Fly, to</td>
<td>phe mis</td>
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<tr>
<td>Foam</td>
<td>šile</td>
</tr>
<tr>
<td>Fog</td>
<td>ñilai / ñilal</td>
</tr>
<tr>
<td>Fold, to</td>
<td>d’uk (NOM) šok’ / šo?</td>
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<td>Food</td>
<td>bica</td>
</tr>
<tr>
<td>Foolish</td>
<td>buye?</td>
</tr>
<tr>
<td>Foot</td>
<td>gaaga (ENG?)</td>
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<tr>
<td>Foot</td>
<td>caam</td>
</tr>
<tr>
<td>Forbid, to</td>
<td>yiinga</td>
</tr>
<tr>
<td>Forehead</td>
<td>caant / caart bwaany-owa</td>
</tr>
<tr>
<td>Foreigner</td>
<td>taare</td>
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<td>Foster parenting</td>
<td>ot’om</td>
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<td>Foster parenting</td>
<td>košša</td>
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<tr>
<td>Fox, jackal</td>
<td>waŋgoy (MJ)</td>
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<tr>
<td>Fragrant</td>
<td>c’iime</td>
</tr>
<tr>
<td>Frequently</td>
<td>weec’i imme</td>
</tr>
<tr>
<td>Friend</td>
<td>saam</td>
</tr>
<tr>
<td>Frown, to</td>
<td>se c’iin</td>
</tr>
<tr>
<td>Frog</td>
<td>mareen a-c’er</td>
</tr>
<tr>
<td>Gall</td>
<td>miraaño/meenaro</td>
</tr>
</tbody>
</table>

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7 The phonetic values of [c=] are not known. [ufūm] from Evans-Pritchard is cognate to [efu].
<table>
<thead>
<tr>
<th>Gate</th>
<th>sank'a (AM?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gather, to</td>
<td>atull</td>
</tr>
<tr>
<td>Get up!</td>
<td>p'ala</td>
</tr>
<tr>
<td>Girl, maiden</td>
<td>peet</td>
</tr>
<tr>
<td>Give, to</td>
<td></td>
</tr>
<tr>
<td>Glutton</td>
<td>šuk'uma mat</td>
</tr>
<tr>
<td>Go, to</td>
<td>no</td>
</tr>
<tr>
<td>Go, to</td>
<td></td>
</tr>
<tr>
<td>Go slowly &amp; carefully</td>
<td>elebu</td>
</tr>
<tr>
<td>Goat</td>
<td></td>
</tr>
<tr>
<td>God, god</td>
<td>juku (+ chief)</td>
</tr>
<tr>
<td>Gold</td>
<td>work'e (AM)</td>
</tr>
<tr>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>Gossip, to</td>
<td>d'eeewe</td>
</tr>
<tr>
<td>Granary</td>
<td>gootare (AM)</td>
</tr>
<tr>
<td>Granary</td>
<td></td>
</tr>
<tr>
<td>Grass</td>
<td></td>
</tr>
<tr>
<td>Grass</td>
<td></td>
</tr>
<tr>
<td>Grave, burial</td>
<td>ufa-ka kol-de</td>
</tr>
<tr>
<td>Greedy (cf evil eye)</td>
<td>k'ooro</td>
</tr>
<tr>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Green, blue</td>
<td>soolo</td>
</tr>
<tr>
<td>Grey (half white)</td>
<td>bangas-eet d'aac'a</td>
</tr>
<tr>
<td>Grey hair</td>
<td>bukko</td>
</tr>
<tr>
<td>Groan, to</td>
<td>aguuman</td>
</tr>
<tr>
<td>Grudge</td>
<td>dimme</td>
</tr>
<tr>
<td>Gum (mouth)</td>
<td>ñaari</td>
</tr>
<tr>
<td>Gun, rifle</td>
<td>k'awwe (OR)</td>
</tr>
<tr>
<td>Hail (ice)</td>
<td>sappo</td>
</tr>
<tr>
<td>Hair, head</td>
<td></td>
</tr>
<tr>
<td>Hair</td>
<td>c'eeek'a</td>
</tr>
<tr>
<td>Half, middle</td>
<td>bangat@% (UDUK)^8</td>
</tr>
<tr>
<td>Hammer</td>
<td>powac</td>
</tr>
<tr>
<td>Hand</td>
<td>ifu (+ palm)</td>
</tr>
<tr>
<td>Hand, finger / thumb</td>
<td>efu / efi</td>
</tr>
<tr>
<td>Hand (2ndary form)</td>
<td></td>
</tr>
<tr>
<td>Handful, palmful</td>
<td>ifu kawang</td>
</tr>
<tr>
<td>Hang, to</td>
<td>šeppu</td>
</tr>
<tr>
<td>Hard-hearted</td>
<td>košša</td>
</tr>
<tr>
<td>Hat</td>
<td>sooro</td>
</tr>
<tr>
<td>He (see Pronouns)</td>
<td></td>
</tr>
<tr>
<td>Head, skull</td>
<td>k'oyi</td>
</tr>
<tr>
<td>Head (of dead sheep, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

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|                     |                               |

Phonetic value of /@&/ is unknown. See also ‘open’, ‘count, to’ (the latter under “Numerals”).
<table>
<thead>
<tr>
<th>English</th>
<th>N'ot'om</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head louse, hair louse</td>
<td>k’oyi nena</td>
</tr>
<tr>
<td>Hear, to</td>
<td>atcète/ écèt</td>
</tr>
<tr>
<td>Help!</td>
<td>ʔot’om</td>
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<tr>
<td>Hen, chicken, fowl</td>
<td>luunce khwasinycama?</td>
</tr>
<tr>
<td>Cock, rooster</td>
<td>d’undët (MJ)</td>
</tr>
<tr>
<td>Here / I am here</td>
<td>dithadit</td>
</tr>
<tr>
<td>Hero (cf husband)</td>
<td>p’ena thiŋkila</td>
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<tr>
<td>Hill</td>
<td>bako / baaka</td>
</tr>
<tr>
<td>Hip</td>
<td>aŋ-wa</td>
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<td>Hippo</td>
<td>bako umba</td>
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<tr>
<td>Hit, to</td>
<td>korma (OR)</td>
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<tr>
<td>Hoe</td>
<td>ad’an, mahan</td>
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<td>Hole</td>
<td>boole</td>
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<td>Hollow (adj)</td>
<td>gace</td>
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<td>Honey</td>
<td>utui</td>
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<td>Hook</td>
<td>jis</td>
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<td>Hope, to</td>
<td>šina</td>
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<td>Horn</td>
<td>kwete (MJ)</td>
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<td>Horse</td>
<td>apoome?</td>
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<td>Hot</td>
<td>kulba (MJ)</td>
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<td>šumarum</td>
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<td>House</td>
<td>b’at’</td>
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<tr>
<td>House (archaic)</td>
<td>caagt (German!)</td>
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<tr>
<td>How much?</td>
<td>akathin</td>
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<tr>
<td>Hunch-backed</td>
<td>kédëp (cf small)</td>
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<tr>
<td>Hungry, be</td>
<td>warabiše (OR)</td>
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<td>Hunt, to</td>
<td>a-nyuruny</td>
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<tr>
<td>Hunter</td>
<td>c’olo</td>
</tr>
<tr>
<td>Husband (cf male)</td>
<td>c’olo-ŋkuş</td>
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I (see Pronouns at end) | tanka |
<table>
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<tr>
<th>Large intestines</th>
<th>lundu mattee</th>
<th>gaam (NS)</th>
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<tbody>
<tr>
<td>Intoxicated, be</td>
<td>oppe</td>
<td>nigém (MJ)</td>
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<tr>
<td>Investigate, to</td>
<td>maandi</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>awwe</td>
<td></td>
</tr>
<tr>
<td>Jaw</td>
<td>gaama</td>
<td></td>
</tr>
<tr>
<td>Chin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jealous, be, hate</td>
<td>yaw</td>
<td></td>
</tr>
<tr>
<td>Joker</td>
<td>anyaayi</td>
<td></td>
</tr>
<tr>
<td>Judge, a</td>
<td>b'oogo ufa</td>
<td></td>
</tr>
<tr>
<td>Jump, spring, to</td>
<td>cicoku</td>
<td></td>
</tr>
<tr>
<td>Kick, to</td>
<td>atti</td>
<td></td>
</tr>
<tr>
<td>Kidney</td>
<td>juhuma</td>
<td></td>
</tr>
<tr>
<td>Kill!</td>
<td>haa</td>
<td></td>
</tr>
<tr>
<td>Kill, courage(?)</td>
<td>n'ahuma</td>
<td></td>
</tr>
<tr>
<td>Kill animals, slaughter</td>
<td>guuru</td>
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<tr>
<td>Kindle a fire, set fire</td>
<td>tekkan</td>
<td></td>
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<tr>
<td>Kinsman, relative</td>
<td></td>
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<tr>
<td>Close kin</td>
<td>tekkan</td>
<td></td>
</tr>
<tr>
<td>Far kin</td>
<td>tekkan ootu</td>
<td></td>
</tr>
<tr>
<td>Kiss, to</td>
<td>c'umba</td>
<td></td>
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<tr>
<td>Knead!</td>
<td>sukum-eet</td>
<td></td>
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<tr>
<td>Knee</td>
<td>hutu</td>
<td></td>
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<tr>
<td>Kneel, to; crawl, to</td>
<td>kurgup</td>
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<tr>
<td>Knife</td>
<td>aare</td>
<td></td>
</tr>
<tr>
<td>Knock!</td>
<td>totok-eet</td>
<td></td>
</tr>
<tr>
<td>Know, to / I know</td>
<td>d'e</td>
<td></td>
</tr>
<tr>
<td>Lake</td>
<td>hukkum</td>
<td></td>
</tr>
<tr>
<td>Lap (of thighs)</td>
<td>salla</td>
<td></td>
</tr>
<tr>
<td>Laugh, to</td>
<td>abale</td>
<td></td>
</tr>
<tr>
<td>Lazy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaf</td>
<td></td>
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</tr>
<tr>
<td>&quot;Learn!&quot;</td>
<td>appo</td>
<td></td>
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<tr>
<td>Left (side)</td>
<td>hando (NOM)</td>
<td></td>
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<tr>
<td>Left handed</td>
<td>hando ufa</td>
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<tr>
<td>Leg, upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leg, lower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lend, to / borrow, to</td>
<td>maš-eet / maš-en</td>
<td></td>
</tr>
<tr>
<td>Leopard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black leopard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White leopard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leprosy</td>
<td>doop'oy</td>
<td></td>
</tr>
<tr>
<td>Lick!</td>
<td>nap’p’a (GO)</td>
<td></td>
</tr>
<tr>
<td>Lie, to</td>
<td>minc’i</td>
<td></td>
</tr>
<tr>
<td>Lie down!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light (adj)</td>
<td>fonk’a</td>
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</tbody>
</table>

chiθ’
abas pem
adhana
kutti/hutu
k’uphad’uphun
aaré
d’e / tij d’ea
cóöké
caam/c’am
c’emen
jiphi
cam
chumpal
biša (NS)
šela (SOM)
yoro?
buu
bu / ba
a-kwa
t’ed’
iši ki tar
<table>
<thead>
<tr>
<th>English</th>
<th>Mijana</th>
<th>English</th>
<th>Wolof</th>
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<tbody>
<tr>
<td>Lightning</td>
<td>ancana</td>
<td>deeppe (MJ)</td>
<td>b’elec’</td>
</tr>
<tr>
<td>Lion</td>
<td>k’eek’k’ee</td>
<td>deeppe umb’a</td>
<td>d’ëpë</td>
</tr>
<tr>
<td>Lioness</td>
<td>ec’ethi</td>
<td></td>
<td>adoph</td>
</tr>
<tr>
<td>Lip</td>
<td>b’ab’u</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lip, upper</td>
<td>ec’ethi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lip, lower</td>
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<td></td>
<td></td>
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<tr>
<td>Listen, to</td>
<td></td>
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<td></td>
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<tr>
<td>Liver</td>
<td></td>
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<td></td>
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<tr>
<td>Lizard</td>
<td></td>
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<td></td>
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<tr>
<td>Loaded, he</td>
<td></td>
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<td></td>
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<tr>
<td>Lock</td>
<td></td>
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<tr>
<td>Long</td>
<td></td>
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<tr>
<td>Look at, to</td>
<td></td>
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<tr>
<td>Loosen!</td>
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<tr>
<td>Louse</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>“(2ndary form)”</td>
<td>šombo / sombo</td>
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<tr>
<td>Lung</td>
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<tr>
<td>Mad, crazy</td>
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<tr>
<td>Maize, corn</td>
<td></td>
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<tr>
<td>Make bed, to</td>
<td></td>
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<tr>
<td>Malaria</td>
<td></td>
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<tr>
<td>Mammal, small</td>
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<tr>
<td>Man, male</td>
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<tr>
<td>Man</td>
<td></td>
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<tr>
<td>Man, person</td>
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<tr>
<td>Man, adult (35-45 yrs)</td>
<td>booloŋ</td>
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<tr>
<td>Man, old (45 yrs +)</td>
<td>gutann</td>
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<tr>
<td>Many, much</td>
<td></td>
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<tr>
<td>Plenty</td>
<td></td>
<td></td>
<td></td>
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<td>Mark, facial or tribal</td>
<td>gaaše/ gaace</td>
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<tr>
<td>Market</td>
<td></td>
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<td>Mate (animals), to</td>
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<tr>
<td>Mead, honey wine</td>
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<td></td>
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<tr>
<td>Honey wine</td>
<td></td>
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<tr>
<td>Measles</td>
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<tr>
<td>Measure, to</td>
<td></td>
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<tr>
<td>Meat (tone diff from ‘kill’)</td>
<td>haa</td>
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<tr>
<td>Medicine</td>
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<tr>
<td>Meet, to</td>
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<tr>
<td>Merchant</td>
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<tr>
<td>Midwife</td>
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<tr>
<td>Milk (cow’s)</td>
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<td>Milk (human)</td>
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<tr>
<td>Miscarry, abort, to</td>
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</tbody>
</table>

9 This is also listed as [yeese], meaning 'open your eyes wide!'
<table>
<thead>
<tr>
<th>English</th>
<th>Koki/Ming</th>
<th>English</th>
<th>Koki/Ming</th>
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<tbody>
<tr>
<td>Mongoose</td>
<td>kooki (MJ)</td>
<td>a-kuθ'</td>
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<tr>
<td>‘, banded</td>
<td>yetun</td>
<td>a-b'uθ'</td>
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<tr>
<td>Monkey</td>
<td>watiri (MJ)</td>
<td>appee</td>
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<tr>
<td>Moon</td>
<td>kasipu/kašip</td>
<td>monθ'amo</td>
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<tr>
<td>Morning</td>
<td>c’iinya</td>
<td>kaθ'oma</td>
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<tr>
<td>Early morning</td>
<td>kobin</td>
<td>miltit</td>
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<td>Mosquito</td>
<td>kasi</td>
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<tr>
<td>Mote, sand in eye</td>
<td>mook’u</td>
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<tr>
<td>Mother</td>
<td>indii (AA)</td>
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<tr>
<td>‘ in law, HuMo, WiMo</td>
<td>b’eenda</td>
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<td>Greatgrandmother</td>
<td>jjii</td>
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<td>Mountain</td>
<td>goom</td>
<td>goomu</td>
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<td>Mouth</td>
<td>kaw</td>
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<td>Mouth, teeth</td>
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<td>Face (body)</td>
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<tr>
<td>Mud</td>
<td>t’ink’o (MAO)</td>
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<td>Mule</td>
<td>appo</td>
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<td>Murmur, to</td>
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<tr>
<td>Naked</td>
<td>seemmo d’eb-be(^{10})</td>
<td>nekki</td>
<td>wuŋka/ŋkaye</td>
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<tr>
<td>Name</td>
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<td>nimma</td>
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<td>k’os / j’us</td>
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<td>New</td>
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<td>“</td>
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</tr>
<tr>
<td>Night</td>
<td>deppō/deppu</td>
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<td>Nipple, teat</td>
<td>du k’oy</td>
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<tr>
<td>Nose</td>
<td>sona</td>
<td>sona (AA +)</td>
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<td>Nose-bleed</td>
<td>sone dammo</td>
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<td>Not, verbal negative</td>
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<td>-be</td>
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<td>Now</td>
<td>mooha</td>
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<td>moh</td>
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<td>Ogre, monster</td>
<td>soonno</td>
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<td>Ointment</td>
<td>diikuy</td>
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<tr>
<td>Old man, monk</td>
<td>gutare</td>
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<tr>
<td>Elder</td>
<td>gutanše</td>
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<tr>
<td>Old woman</td>
<td>jarti (OR)</td>
<td></td>
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<tr>
<td>On, upon</td>
<td></td>
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</tr>
</tbody>
</table>

\(^{10}\) Literally = ‘clothes has-not’.
Open!
Other
Other
Otter shrew
" " giant
Paddle, to
Pain
Palm (of hand)
Pant, to
Pants, trousers
Paralyzed
Pass by, to
Pass on, to
Pasture
Patch-ed
Peel, to
Penis
Uncircumized
Circumcized
Pepper, red
Perfume
Perhaps
Person (sg)
" (pl)
That person
Pierce, to
Pillow
Pimple
Pinch!
Pipe, smoking
" " " " of clay
Pipe, tobacco bowl of
Place (noun)
Plan, to
Plaster mud, to
Play!
Please, to
Plural (grammeme)
Pocket
Pole cat, striped
Pool
Poor

di'ingi
di'ingi c'ota be-ge
k'aph, phwa
yis
warkat'o
iinki
upa
ja upa
k'o yi amb
b'oot'on
k'engecê
šombar
hooba
booli
mamank
ikokom
usuk'k'ut
c'ippa
mo giid'I
yeero
-k / -ka
kiisi (AM)
kaawe (MJ)
yuka/yuu
ma?am
jamu?
See footnote 8.
Porcupine
Porridge, food
Pot
Coffee pot
Prefer, to
Pregnant
Priest
Pubic hair ♀
Purple
Put!
Question, to
Quickly, fast
Rabbit, Spring hare
Rain
Rainbow
Rat
Recovered, I
Red
Refuse, to
Reins
Relations tween wives
Remains (of food)
Remove (horizontally)
Remove (vertically)
Remove clothes, take off
Resemble, to
Rest, to
Return home, to
Revenge
Rheumatism
Rib, chest
Rich
Right (side)
Ring (noun)
Ring (noun)
River
Road, path
Highway, big road
Roast!
Roll, to
Roll up, to
Roof (head house)
Roof top
dek’e
yaph
jak / jah (SU)
bwa (cf belly)
bilbilte (MJ)
delikeš (MJ)
d’im (KO)
heθ
ambēšoy (MJ?)
kilto (MJ)
c’aara (CU)
caara/c’aara p’eri mo ki phiyu
bacci c’ee’k’a
daama
jana
jojo
d’im
alimmi
d’im (KO)
ašok’
bacci c’ee’k’a

d’im
jima
caara
nimbe
sansalate (AM)
ňakiyę
pilpari (AM)
guam
jama
jaabu
guam
batte
sesek’o
jo / jo&
k’oro
musar’
huwwan
wori yinga
sisawo
amatti
k’aahko
koi duka
mirinko (SOM)
wor
komaj/khoma/homa bway
k’idi-ke bway tur
d’āŋkaliid’
k’uch
Root
Rough, sticky
t’ank’a
Round
Rub, to
anña
Run! Escape!
kol
Saddle
koora (AM?)
Salt
mooyi
Sand

Sand
iiwor’ (?)
Satisfied, be, satiated
huma
Say, to
Say, to
“ “
Scab
karsoy
Scarf
diiidi
Scorpion
Scalp, to
k’ik’k’o
Scream! Shout!
kewu
Scrotum elephantiasis
d’opte
Secret
yimba
See, to
See, to
Seed
Seed
Send, to
wošša
Separate, to (?)
iinki
Sew, to
luulu
Shade
Shake, to
giimba
Sharp
buuja
Shave, to
musate
She (see Pronouns)
Sheep
Lamb (cf small)
baggo (GO)
Shepherd
k’oro
Shield
gasín (MJ<AM)
Shirt
šurabi (AM)
Shiver, to
aḍ’ud’u
Shoe, shoes
c’aama (AM)
Shop, store
Short
hikkira
Short of breath, be
ubbup-eet
Shoulder
go
Shy
saame
Sibling: Br, Si
hiyya
Noun
Adj
Verb
Verb
Verb
Sickness
Side k’acco
Sin, a b’ooša
Sing, to baayo (NS)
Sip, to laak’ak
Sister k’oonda
Sit, to mo (CS) k’o pen
Sit, to man’ka chab’ad’
Sit down! moopa
Sit ɪ legs spread taam
Skin wann
Skin, six (error) hoop’a
Sky poont
Slave ha b’wah
Sleep to hab’afa
Sleep, to c’eda (sleepy)
Sleepless hab’afa d’eb-be
Sleep a little, nap set’ol hedebed
Slide to dert-eeti
Slide through, to apura
Slippery dert-eet
Slowly saara
Toddling saara
Small hedebed
Small c’umbu
Smallpox gošša
Smell, scent sotoom
I smell (tr) munsam
Sister to hab’afa
Smoke c’imbi
Smoke hoob’a
Smoke (tr), to ruuc’u
Smooth
Snake
Sneeze, to c’imb’a
Snore, to dunk’u
Soft laak’a
Sole (of foot) bicca b’e / b’e
Sometimes yut’ol sett
Sorcerer ufe k’o
Sort, ilk, kind tuukan
Soup pe
Sour c’iiki
Space between teeth karten
Sp. Antelope gongoc
Sp. Antelope komi (MJ)
<table>
<thead>
<tr>
<th>English</th>
<th>Wolof</th>
<th>English</th>
<th>Wolof</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sp. Gazelle</td>
<td>goggo</td>
<td>Sp. Gazelle</td>
<td>k’wandi?</td>
</tr>
<tr>
<td>Sp. Monkey</td>
<td>manj (MJ)</td>
<td>Sp. Monkey</td>
<td>a-ciš</td>
</tr>
<tr>
<td>Speak, to</td>
<td>appo</td>
<td>Speak quickly</td>
<td>jojo appo</td>
</tr>
<tr>
<td>Spear</td>
<td>bak’k’e</td>
<td>Spear handle (shaft?)</td>
<td>bak’ee</td>
</tr>
<tr>
<td>Spear</td>
<td>gère</td>
<td>Spear handle (shaft?)</td>
<td>b’ake</td>
</tr>
<tr>
<td>Spleen</td>
<td>medemet (Uduk)</td>
<td>Spleen</td>
<td>a-mamađ’a</td>
</tr>
<tr>
<td>Split wood, to</td>
<td>badda (NS)</td>
<td>Split wood, to</td>
<td>poňka b’aala</td>
</tr>
<tr>
<td>Spotted</td>
<td>tetekaan</td>
<td>Spotted</td>
<td>roga</td>
</tr>
<tr>
<td>Spread, to</td>
<td>faakki</td>
<td>Spread, to</td>
<td>a-cul</td>
</tr>
<tr>
<td>Spring (H2O)</td>
<td>tuunše</td>
<td>Spring (H2O)</td>
<td>marion (MJ)</td>
</tr>
<tr>
<td>Stab, to</td>
<td>nj</td>
<td>Stab, to</td>
<td>aphphor jee</td>
</tr>
<tr>
<td>Stand, to</td>
<td>hitta</td>
<td>Stand, to</td>
<td>hitta (imp.)</td>
</tr>
<tr>
<td>“ “</td>
<td>baalakit</td>
<td>“ “</td>
<td>doš</td>
</tr>
<tr>
<td>Star</td>
<td>rooga</td>
<td>Star</td>
<td>poňka b’aala</td>
</tr>
<tr>
<td>Step, to</td>
<td>goomu</td>
<td>Step, to</td>
<td>roga</td>
</tr>
<tr>
<td>Stew</td>
<td>wod’i (AM)</td>
<td>Stew</td>
<td>a-cul</td>
</tr>
<tr>
<td>Stick</td>
<td></td>
<td>Stick</td>
<td>marion (MJ)</td>
</tr>
<tr>
<td>Stink, to</td>
<td>bonc’a</td>
<td>Stink, to</td>
<td>aphphor jee</td>
</tr>
<tr>
<td>Stir (food)!</td>
<td>ajan</td>
<td>Stir (food)!</td>
<td>gum (MJ)</td>
</tr>
<tr>
<td>Stomach ache</td>
<td>c’oona</td>
<td>Stomach ache</td>
<td></td>
</tr>
<tr>
<td>Stone</td>
<td>maana</td>
<td>Stone</td>
<td></td>
</tr>
<tr>
<td>Pebble</td>
<td></td>
<td>Pebble</td>
<td></td>
</tr>
<tr>
<td>Strain</td>
<td>k’ii</td>
<td>Strain</td>
<td></td>
</tr>
<tr>
<td>Stranger</td>
<td>tekkan d’eb-be</td>
<td>Stranger</td>
<td></td>
</tr>
<tr>
<td>Strangle, to</td>
<td>akkiti</td>
<td>Strangle, to</td>
<td></td>
</tr>
<tr>
<td>Stretch self, to</td>
<td>t’iimee</td>
<td>Stretch self, to</td>
<td></td>
</tr>
<tr>
<td>Stripe, vertical</td>
<td>geherag</td>
<td>Stripe, vertical</td>
<td></td>
</tr>
<tr>
<td>Stripe, horizontal</td>
<td>boleyeya</td>
<td>Stripe, horizontal</td>
<td></td>
</tr>
<tr>
<td>Strong, hard</td>
<td>b’oogo</td>
<td>Strong, hard</td>
<td></td>
</tr>
<tr>
<td>Stumble, to (?)</td>
<td>fu bege</td>
<td>Stumble, to (?)</td>
<td></td>
</tr>
<tr>
<td>Struggle, to</td>
<td>abura</td>
<td>Struggle, to</td>
<td></td>
</tr>
<tr>
<td>Suck, to</td>
<td>du</td>
<td>Suck, to</td>
<td></td>
</tr>
<tr>
<td>Suck a pipe, to</td>
<td>kengese</td>
<td>Suck a pipe, to</td>
<td></td>
</tr>
<tr>
<td>Suddenly</td>
<td>dingate (AM)</td>
<td>Suddenly</td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td>c’ic’c’a</td>
<td>Summer</td>
<td></td>
</tr>
<tr>
<td>Sun</td>
<td>oha / oxua</td>
<td>Sun</td>
<td></td>
</tr>
</tbody>
</table>

12 First form = fall, [be] = 'not', so basic meaning is 'does not fall' or 'did not fall'.
13 This could be called 'rainy season' or 'dry season', depending on location, etc.
<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunrise, dawn</td>
<td>jaayn k’aş</td>
</tr>
<tr>
<td>Swallow!</td>
<td>k’obu los</td>
</tr>
<tr>
<td>Swear, to</td>
<td>woguy-eet jithi</td>
</tr>
<tr>
<td>Sweat</td>
<td>huppuna</td>
</tr>
<tr>
<td>Sweet</td>
<td>beelte</td>
</tr>
<tr>
<td>Sweep!</td>
<td>agaal</td>
</tr>
<tr>
<td>Swelling</td>
<td>ad’in</td>
</tr>
<tr>
<td>Swim, to</td>
<td>liy-eet k’uluš</td>
</tr>
<tr>
<td>Syphilis</td>
<td>k’uuc’u li-eet (NS) ḫan ɣi’d’e</td>
</tr>
<tr>
<td>Table</td>
<td>tarbiise (AM)</td>
</tr>
<tr>
<td>Tail</td>
<td>cundum aras</td>
</tr>
<tr>
<td>Sweat</td>
<td>huppuna jithi</td>
</tr>
<tr>
<td>Sweet</td>
<td>beelte</td>
</tr>
<tr>
<td>Sweet</td>
<td>beelte</td>
</tr>
<tr>
<td>Sweeping</td>
<td>agaal</td>
</tr>
<tr>
<td>Swelling</td>
<td>ad’in</td>
</tr>
<tr>
<td>Swim, to</td>
<td>liy-eet k’uluš</td>
</tr>
<tr>
<td>Syphilis</td>
<td>k’uuc’u li-eet (NS) ḫan ɣi’d’e</td>
</tr>
<tr>
<td>Table</td>
<td>tarbiise (AM)</td>
</tr>
<tr>
<td>Tail</td>
<td>cundum aras</td>
</tr>
<tr>
<td>Tail</td>
<td>cundum aras</td>
</tr>
<tr>
<td>Take, to</td>
<td>uttuku</td>
</tr>
<tr>
<td>Tasty</td>
<td>gi’di</td>
</tr>
<tr>
<td>Tasteful</td>
<td>gi’di-be</td>
</tr>
<tr>
<td>Teach!</td>
<td>itote</td>
</tr>
<tr>
<td>Tear (with teeth)</td>
<td>haat’a (AA)</td>
</tr>
<tr>
<td>Tender (of meat)</td>
<td>maaja</td>
</tr>
<tr>
<td>Tendon</td>
<td>doono</td>
</tr>
<tr>
<td>Testicle</td>
<td>hungu uŋgu</td>
</tr>
<tr>
<td>One testicle</td>
<td>hungu inki</td>
</tr>
<tr>
<td>Thank (persons), to</td>
<td>naadit</td>
</tr>
<tr>
<td>Thank (God), to</td>
<td>ageet/ag-eet (?)</td>
</tr>
<tr>
<td>That</td>
<td>ḳa</td>
</tr>
<tr>
<td>That one</td>
<td>ḳa / ḳaṭi</td>
</tr>
<tr>
<td>There</td>
<td>ḳanka chaan</td>
</tr>
<tr>
<td>They (see Pronouns)</td>
<td>ḳanka jantan</td>
</tr>
<tr>
<td>Thick</td>
<td>b’iili</td>
</tr>
<tr>
<td>Thick, fat</td>
<td>dondom</td>
</tr>
<tr>
<td>Thief</td>
<td>d’ili</td>
</tr>
<tr>
<td>Thigh, upper leg</td>
<td>b’iili b’aphab’apha</td>
</tr>
<tr>
<td>Thin</td>
<td>keeji</td>
</tr>
<tr>
<td>Thin</td>
<td>salsaln korakor</td>
</tr>
<tr>
<td>Thing</td>
<td>ambc= hédébu</td>
</tr>
<tr>
<td>Think, remember +</td>
<td>inon rephareph</td>
</tr>
<tr>
<td>Thirsty, be</td>
<td>fari amp</td>
</tr>
<tr>
<td>This</td>
<td>ma ton/tonŋ</td>
</tr>
<tr>
<td>“</td>
<td></td>
</tr>
<tr>
<td>This one</td>
<td>ma</td>
</tr>
<tr>
<td>These (right here)</td>
<td>ma</td>
</tr>
<tr>
<td>Thou (see Pronouns)</td>
<td>ma</td>
</tr>
<tr>
<td>Throat</td>
<td>huuruše</td>
</tr>
<tr>
<td>Clear throat, to</td>
<td>guute</td>
</tr>
<tr>
<td>Thumb</td>
<td>efi leta</td>
</tr>
<tr>
<td>Thunder</td>
<td>kuman med’</td>
</tr>
</tbody>
</table>

Note: The table above lists English words and their corresponding Arabic translations. The Arabic words are provided in lowercase to represent the transliteration or spelling in Arabic script, as provided in the document. The document appears to be a list of English to Arabic translations, possibly for educational or dictionary purposes. The page number 22 is also visible at the bottom of the page.
<table>
<thead>
<tr>
<th>Term</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tie!</td>
<td>hiippi</td>
</tr>
<tr>
<td>Tired, be</td>
<td>omoke/omooke</td>
</tr>
<tr>
<td>Tobacco</td>
<td>tumbayoo</td>
</tr>
<tr>
<td>Today, this day</td>
<td>maa bees</td>
</tr>
<tr>
<td>Tongue</td>
<td>handa</td>
</tr>
<tr>
<td>Tongue</td>
<td>k’add (NS)</td>
</tr>
<tr>
<td>Tooth</td>
<td>kaw/k’aw (NS)</td>
</tr>
<tr>
<td>Canine tooth</td>
<td>šeŋ-k’a</td>
</tr>
<tr>
<td>Incisor tooth (lower)</td>
<td>šem p’ena c’eš</td>
</tr>
<tr>
<td>Molar teeth</td>
<td>a-guje</td>
</tr>
<tr>
<td>Touch, to</td>
<td>ad’aŋ’ap</td>
</tr>
<tr>
<td>Town</td>
<td>katéma (AM)</td>
</tr>
<tr>
<td>Trap, a</td>
<td>goomo</td>
</tr>
<tr>
<td>Tree</td>
<td>k’onna</td>
</tr>
<tr>
<td>Tree branch</td>
<td>konna/k’ona (NS) owa</td>
</tr>
<tr>
<td>Trouble maker</td>
<td>buuja</td>
</tr>
<tr>
<td>Trousers</td>
<td>bc=ntaale (AM?)</td>
</tr>
<tr>
<td>Try, to</td>
<td>ida</td>
</tr>
<tr>
<td>Try!</td>
<td>teecci</td>
</tr>
<tr>
<td>Turn, to</td>
<td>getumba</td>
</tr>
<tr>
<td>Umbrella</td>
<td>jant’ele (AM)</td>
</tr>
<tr>
<td>Uncle, maternal</td>
<td>deend</td>
</tr>
<tr>
<td>Uncle, paternal</td>
<td>wasil (OR)</td>
</tr>
<tr>
<td>Uncle’s daughter</td>
<td>kiya-malti</td>
</tr>
<tr>
<td>Uncle’s son</td>
<td>kaamay</td>
</tr>
<tr>
<td>Uncultivated land</td>
<td>sa</td>
</tr>
<tr>
<td>Under the tree (?)</td>
<td>šunšet</td>
</tr>
<tr>
<td>Up hill / top</td>
<td>poonk / poont</td>
</tr>
<tr>
<td>Vagina</td>
<td>bacce</td>
</tr>
<tr>
<td>Vein, artery (?)</td>
<td>keer</td>
</tr>
<tr>
<td>Venus, evening star</td>
<td>bonboloti</td>
</tr>
<tr>
<td>Vest</td>
<td>kanateera (AM)</td>
</tr>
<tr>
<td>Village</td>
<td>weyska duk</td>
</tr>
<tr>
<td>Virgin</td>
<td>tngoon (?)</td>
</tr>
<tr>
<td>Vomit!</td>
<td>tappala</td>
</tr>
<tr>
<td>Wait! Stay!</td>
<td>k’orro</td>
</tr>
<tr>
<td>Wake up, to</td>
<td>s’alla</td>
</tr>
<tr>
<td>Walk, to</td>
<td>laak’a</td>
</tr>
<tr>
<td>Walk slowly due to disease</td>
<td>goore</td>
</tr>
<tr>
<td>Walk incorrectly, to</td>
<td>oppe</td>
</tr>
<tr>
<td>Want, to</td>
<td>seenga</td>
</tr>
<tr>
<td>Warm</td>
<td>ind’-eet</td>
</tr>
<tr>
<td>“</td>
<td>t’eema</td>
</tr>
<tr>
<td>Warthog</td>
<td>šuubu</td>
</tr>
<tr>
<td>Water, river, stream</td>
<td>eduga</td>
</tr>
<tr>
<td>Water</td>
<td>wo</td>
</tr>
<tr>
<td></td>
<td>wuá/wo (NS) wor (’wadi’)</td>
</tr>
<tr>
<td></td>
<td>wuf’ (?) (NOM) yиде</td>
</tr>
<tr>
<td>English</td>
<td>Wolof</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>Waterfall</td>
<td>seyse</td>
</tr>
<tr>
<td>Wave (H2O)</td>
<td>boodo</td>
</tr>
<tr>
<td>Way</td>
<td>weloce</td>
</tr>
<tr>
<td>This way</td>
<td>ma welace</td>
</tr>
<tr>
<td>We (see Pronouns)</td>
<td></td>
</tr>
<tr>
<td>We men</td>
<td>yij ul</td>
</tr>
<tr>
<td>Weak</td>
<td>omoke</td>
</tr>
<tr>
<td>Wear (clothing)!</td>
<td>eetta</td>
</tr>
<tr>
<td>Wedding</td>
<td>tawwc=</td>
</tr>
<tr>
<td>Week (1 moon)</td>
<td>kewwu</td>
</tr>
<tr>
<td>Weep, gurgle, to</td>
<td>meezane (AM)</td>
</tr>
<tr>
<td>Weigh, to</td>
<td></td>
</tr>
<tr>
<td>Wet</td>
<td>mundu</td>
</tr>
<tr>
<td>Wet but ripe</td>
<td>kii-na išeet (?)</td>
</tr>
<tr>
<td>Wet, cold</td>
<td></td>
</tr>
<tr>
<td>What?</td>
<td>nambi</td>
</tr>
<tr>
<td>When?</td>
<td>hambo</td>
</tr>
<tr>
<td>Where?</td>
<td>hamat</td>
</tr>
<tr>
<td>White</td>
<td>daac'a</td>
</tr>
<tr>
<td>White</td>
<td>daac'a</td>
</tr>
<tr>
<td>Who?</td>
<td>ne?ebe</td>
</tr>
<tr>
<td>Who?</td>
<td>naafe / naape</td>
</tr>
<tr>
<td>Who art thou/</td>
<td></td>
</tr>
<tr>
<td>Whore, prostitute</td>
<td>sent'a</td>
</tr>
<tr>
<td>Why?</td>
<td>boosu</td>
</tr>
<tr>
<td>Wide</td>
<td></td>
</tr>
<tr>
<td>Wind, air</td>
<td>yipo (KO)</td>
</tr>
<tr>
<td>Window</td>
<td>mastoot (AM)</td>
</tr>
<tr>
<td>Wing</td>
<td></td>
</tr>
<tr>
<td>Winnow (cf blow)</td>
<td>fifi</td>
</tr>
<tr>
<td>Witness</td>
<td>miit'o</td>
</tr>
<tr>
<td>Woman, female</td>
<td>umb'a/umb'a</td>
</tr>
<tr>
<td>Wife, fiancée</td>
<td>umb'a</td>
</tr>
<tr>
<td>Women (cf person)</td>
<td></td>
</tr>
<tr>
<td>Womb, child house</td>
<td>c'oy aha</td>
</tr>
<tr>
<td>Word</td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>ijaagan (vb)</td>
</tr>
<tr>
<td>Work</td>
<td>apuur (MJ)</td>
</tr>
<tr>
<td>Work hard, to</td>
<td>d'oogun ijagaan</td>
</tr>
<tr>
<td>World</td>
<td></td>
</tr>
<tr>
<td>Worm</td>
<td>munga</td>
</tr>
<tr>
<td>Wound</td>
<td>hayase</td>
</tr>
</tbody>
</table>

Note: The Wolof words are not in standard or widely recognized forms, and their meanings may vary based on the context and dialect.
Wrinkle, a k’oy c’oona-we
Wrist c’oobse
Write, paper stab worek’eto ŋa
Year (cf dust) takafut yil
Yellow mukungul daama
Yesterday jaabu katili?
You pl (see Pronouns)
Young breast du c’umbu
Young man (7-35 yrs) atiyiñ
Young woman, maiden kato
Younger child k’oondu
Youngest child geetenee
Youth (♂) man

NUMERALS

GLOSS in { SHABO (MEKEYIR) } KOMAN
ENGLISH ANBESSA AYYALEW HOEKSTRA UDUK

Count, to ikom@%
One inki inki oga yiinki
One om, om d’e?
“ énka / iijki
Two bap bab bab, baba su?, (iññecen)
Three jiita (MJ) jita ajan kwara, (ñalaata)
Four ajan (ES) agay agan donjon
Five tuul (MJ) tul tuul mude’
Six tuul-a-inki tula inki tuula ön pe-∂e
Seven tuul-a-bap tula bab maha pe-su?
Eight tuul-a-jiita tula jita tuula jita pe-kwara
Nine tuul-a-ajan tul aja tuula babai (?) pe-donjon
Ten bap’-if bab if bab if k’umed’
Eleven bab if na inki pe-∂e? k’upha k’umed’
Twelve bab if na bab
Thirteen bab if na jita
Fourteen bab if na ajan
Fifteen bab if na aggan
Sixteen bab if na tul kharpac’

14 Literally it says 'head cut was' or 'head cut been'. Here 'cut' is a somewhat different root from /c’ot/-
15 But this also means 'tomorrow', hence it really means 'day next to this one, before or after'.
16 See footnote 8.
Seventeen
Eighteen
Nineteen
20
21
30
40
50
60
70
80
90
100
1000
one third
one fourth

GLOSS in SHABO (MEKEYIR) KOMAN
ENGLISH ANBESSA 18 AYYALEW 19 HOEKSTRA UDUK

I ♂ tiŋ tiŋ
I am ♂ tiŋ taŋka
I, female
inka umb’a

Thou yih
Thou ♂ kuk
Thou ♂ kuŋu
Thou ♂ kunk umb’a
He yih
She kotto
We ♂ yiŋ yiŋa
We ♂ yiŋ ul
“ men
You-plural, ye
“
You-plural, ye

bab if na tula bab
bab if na tula jita
bab if na tula ănggay
ink ufee koor
ink ufee koor na inki
ink ufee koor bab’
bab ufe koor
bap’ ufe koor
bap’ ufe koor bab’ if
jit ufe koor
jiita ufe koor bab’
ajaran ufe koor
ajaran ufe koor bab’ if
d’ibba (OR)
bab ufe koor tul
kumma(OR)
jiita (batik) c’ota-de
ajaran c’ota-de

kharpac’ pe-dojon

is-su?

isi ufe koor

isi-dojon

isi ufe koor bap’

isi muđe’d

(bi = body)

(pei = and)

PERSONAL PRONOUNS

17 This seems to equal 'one person body'; the problem is that a body could be '21' (with head and 20 digits) or it could be '23' (with genitalia and/or breasts). Along with Surma peoples, Shabo takes a body as twenty digits.
18 Anbessa Teferra's pronouns were merged with Hoekstra's in 1989. Anbessa's tape has no grammar section.
19 Ayyalew reports that gender is very important in Shabo; he tries to record it always.
You-plural, ye  
You men  
" women  
They  
They  
"♀  
They ♀  
My, mine (error for 'thy')  
My, mine  
Thy, thine  
Thy  
His  
Her  
Our  
"  
Ours  
"  
Your (pl)  
" "  
Their  
Their ♀  
Me  
Us

sitalak (error?)
anc ul
anc umb’a
sitalak/sitalak
kuka
uni
otala
sitalak
oda
subâk / Šubâk

SAMPLING THE GRAMMAR: AYYALEW MITIKU’S EFFORTS

Despite the difficulties of working with the famous Shabo informants, who remains nameless, Ayyalew persisted patiently and was able to get a rough sketch of Shabo’s grammar. It bears a striking resemblance to Ongota in some respects, mostly verb phrases. But is quite different in others.

Noun Phrases

bak-ke c’eeka  a hen’s feather. Hen-of hair
kani-ke c’eeka  a dog’s hair. Dog-of hair
matti lek  they are big. Big are.
tin-ke-iif  my hand. I-of hand.
tin-ke maati  my father. I-of father.
tin-ke k’aw  my gun. I-of gun.
ku-ke bak’e  thy spear. Thou-of spear
yik-ke tawa.  His field. He-of field
oca-ke kaan  their dog. They-of dog.
koto-ke kaan  their(♀) dog. They (♀)-of dog
minja-ke ersee a cow’s milk. Cow-of milk.
but
and
seem-e nena clothing louse. Cloth-of louse
(Sans doute a genitive marker taken from Gongan)

---

20 Hoekstra also records for ‘they’ two forms [hêdébu] and [kêêje] which have other meanings in all three corpora.
**Simple Verb Phrases**

<table>
<thead>
<tr>
<th>Copula Absent</th>
<th>Simple Verb Conjugation in one Tense</th>
</tr>
</thead>
<tbody>
<tr>
<td>tįg</td>
<td>I am good</td>
</tr>
<tr>
<td>kuk</td>
<td>thou art good</td>
</tr>
<tr>
<td>yih</td>
<td>he is good</td>
</tr>
<tr>
<td>kotto d’anka</td>
<td>she is good</td>
</tr>
<tr>
<td>yin</td>
<td>we are good</td>
</tr>
<tr>
<td>anc</td>
<td>ye are good</td>
</tr>
<tr>
<td>sitala</td>
<td>they are good</td>
</tr>
</tbody>
</table>

**More Complex Verb Phrases**

<table>
<thead>
<tr>
<th>tiŋ b’ala-ba</th>
<th>I go not, I’m not going</th>
</tr>
</thead>
<tbody>
<tr>
<td>kuk b’ala-ba</td>
<td>Thou goest not, art not going</td>
</tr>
</tbody>
</table>

Note: the tense differences in the verb [t’ag] or [t’ah] – future versus present, reflected in the different consonants of the verb roots in each tense, viz., [-h] versus [-g]. That difference cannot be accounted for phonetically. [h] and [g] are not allophones of one phoneme. In fact [h] is a variant of the /k/.

---

21 Ayyalew originally recorded [d’oku takan] which would mean ‘in the house, inside the house’, but the meaning ‘earth’ persuades that the initial consonant was [b] or even [b’] instead of [d’]. It is an easy field error to make.
phoneme; also [x] which underlies [kh].

An attempt at tense differences:

wo present tense root of `to drink`
wo-ge past tense root of `to drink`
get wi-ge past tense base of `to drink`
get wo future tense of `to drink`

REVISITING THE TAXONOMIC QUESTION

Since the Bayreuth conference in 1989 where the Shabo is Nilo-Saharan thesis was presented, several other opinions have been offered. Bender rejected Fleming’s thesis and argued for Shabo being either Omotic or related to it. Somewhere near that time he proposed that Shabo and Ongota were mixed languages or maybe pidgins. Christopher Ehret proposed several years ago that Shabo was a singular phylum, not related to any other in Africa. More recently he is alleged to have said that Shabo was probably coordinate with Koman within Nilo-Saharan. If that is truly his position, then it agrees precisely with what I said at the Bayreuth conference. Finally, the new data on Shabo do not seem to contradict the Nilo-Saharan hypothesis. However, neither Bender nor Ehret have seen the new data, so their new opinions are solicited. But more work needs to be done to focus sharply on the question of what Shabo’s true relationship with Nilo-Saharan is, because it surely is not very close to any other branch or sub-phylum of Nilo-Saharan.

Herewith are some proposed etymologies to show Nilo-Saharan and Afrasian cognations with Shabo. One remarkable thing about Shabo is that it shows some very old or archaic ties to both phyla – in sufficient strength to justify hypotheses of genetic connection. In one case `tongue’ Shabo has a form which resembles the proto-Nilo-Saharan form, to wit, k’add versus *k’al1 , while another word for `tongue’ handa resembles old South Cushitic *kanda `tongue’ and Ongota fada `to lick’.

Here follows a search for Shabo’s genetic relationship, if any, with Afrasian and Nilo-Saharan. Ties to the Nilo-Saharan etymologies in Greenberg (1963) are sought firstly so as to avoid controversial recent proposals.

A. NILO-SAHARAN RESEMBLANCES

(Shabo form with meaning)

kěp `arm, shoulder’ Songhai: Gao kamba, Djerma kamba

Saharan: Daza kòbé, Berti abi, Zaghawa ba
Maba abi / bi `shoulder’
Koman: Koma (Madin) kwop, Uduk k’uphbi `shoulder’,
Uduk (Twampa) abí
proto-Nilo-Saharan *(k)bì abi ’upper arm’ (Ehret, PC)

22 The first Uduk is from Beam and Cridle, our best source on Uduk. This Koman form was also borrowed into Nomotic Ganza kwopa `arm’ and Sezo kwabbe `shoulder’. Greenberg erred in merging Gunza, a variant of Gumuz, with Ganza an Omotic language, since there was no published data on Ganza at the time he wrote.
funk’a / punk’wa ‘ashes’  
Koman: Beica pikín, North Koma pikín, Anje ufún, Kwama p’ek’in  
proto-Koman *pik’in (Bender, PC)

kosa / koš ‘bad’  
C-S: Kabu kasu, Kreish gosidi, Moru kozi-ro, Logo kònzi,  
Keliko ńzì, Gulai ose  
E-S: Nile Nubian: Fadidja uuz, Mahas, Dongola uus, Old  
Nubian akossì, Kenuzi uus / kos  
Surma: Didinga gashi  
Nara (Barea) koš-ko

šamum ‘beard’  
proto-E-S *θaam (Ehret, P.C.)  
(< Majang ?)  
E-S: Surma: Suri camun (Abink)  
Tirma čamon (HF), Didinga camón

bêéro ‘bed’  
proto-C-S or common C-S mbed (Bender, PC)  
(And of course, English bed, Germanbett!)

mat / matti ‘big, thick’  
proto-Nilo-Saharan *mad’ (Ehret, PC)

p’iida / pilla / b’illa ‘to bite’ Berta piid’a

kowan ‘breast (of woman)’  
proto-Nilo-Saharan *ako + *-an (noun suffix) (Ehret, PC)  
E-S: Nubian Debri oku, Kadaru oko, Kenzi og, Nobin og  
Koman: Uduk (Twampa) ako ‘breasts, udder, milk’, Langa kwoi,  
Gumuz (Disoha) kuuwê

tam ‘bring!’  
proto-Nilo-Saharan *tam ‘put out hand to get’ (Ehret, PC)

kiik ‘claw’  
proto-Nilo-Saharan *keeg ‘to scratch’ (Ehret, PC)

c’ota ‘cut; cross (water)’  
Koman: Uduk c’ith ‘to cut, amputate; cross path or water’

ka’al ‘dog’ (archaic)  
proto-Koman *k’au (Bender, PC)  
Koman: Gumuz k’awa, Gumuz (Disoha) k’owa, Uduk ak’á  
(The dominant form in Shabo is [kaan] or [kana] as in some Koman languages, both presumed to  
be borrowed from older Nomotic, not from more recent Gongan or Dizoid forms.)

boka / bok’k’u ‘earth, soil,  
Koman: Lunga buka ‘ashes, ground’

t’a-g/h ‘to eat’, ‘to bite’  
Koman: Uduk t’wa ‘mouth’, North Koman t’òwa ‘mouth’

godo ‘elephant’  
E-S: Surma: Majang gooro ‘bull elephant’,  
Mursi ńgorio, Kwégú gádi ‘big male elephant’  
(A localism but not necessarily a borrowing, i.e., fortuitous common retention in a limited area.)
se / şe / ʂe  `eye'  
Koman: proto-Koman *zi (Bender, PC), Asosa Komo zi?, Langa jii / źiai, Opo je, swi, Gumuz ca
Maba si
(Note: This very conservative word is limited to Koman, Maba and Shabo, which suggests either old retention, old borrowing, or a special relationship. Maba is found in far away Dar Fur.)

kaya  `fly (noun)'  
E-S:  
Nubian: Mahas, Dongola kul-ti
Surma: Didinga, Murle, Longarim kirojít
Nyima: kwêlêŋ, Afitti kwôlâŋga
Nilotic: Bari kadongontí, Nandi kaliaŋ
(This form proposed by Greenberg in 1963 requires a correspondence of Shabo [-y-] with Nilo-Saharan [-l-] or [-r-]. It may be false.)

kent-eet  `foreigner'  
(kemt) + {eet}
E-S:  
Nara (Barea) hõmet / hõmena
Nilotic: Dinka kaman, Shilluk kemo `to visit',
Bari komonit

anjay  `four, 4'  
E-S: common Nilotic anjan, Surma (the same)

b'nl / b'aal  `to go'  
Songhai: Djerma, Timbuktu farta `go out'
C-N: Kunama foro `go out'
E-S: Nubian: `go out' Mahas fal, Dair bal, Old Nubian pal
Gaam (Tabi) pala `go down'
Nilotic: `go out' Shilluk welo, Dinka fal `leave',
Bari wala

no  `to go'
walla  `goat'
wuya  `granary'
if / epu  `hand'
k'oi / k'oy  `head'

(Note: Omotic Shako and Maji have [k'oi] `one' which is not as convincing semantically as it is phonetically.)

apura  `hole'

Saharan: Daza bolo, Aza buru
C-N: Kunama aburr, Berta boro
C-S: Mangbetu polo, Lugbara b'uro
E-S: Lango bur

hob'u  `hot'
E-S: Kuliak: proto-Kuliak *hab', Ik hab', Tepeth ab',

31
Nyangeya ab (Heine, 198-)

gaama 'jaw' 'chin' Songhai: Djerma kabe, Gao kaba 'beard'
(nigem 'chin' < Majang) Saharan: Kanuri gumi, Daza,jaŋ 'to chew'
C-N: Kunama goma 'jaw, chin, beard'
C-S: Kreish uñammo 'chin'
E-S: Nile Nubian: Kenuzi, Dongola jakum
Gaam (Tabi) ijum 'beard'
Nilotic: Bari nyëkëm 'chin, jaw', Lotuko éñoxóm
'chin', Suk ḏacam 'chin', Dinka gëm 'chin',
Nuer jëyom 'cheek'
But also Afrasian: Omotic: Dizoid (Jeba dialect) gagum 'jaw, chin'. Jeba is not far geographically from Majang.

kutti / hutu 'knee' proto-Nilo-Saharan *kudt < *kud 'to bend' (Ehret, P.C.)
(It seems not well supported by the evidence)
Saharan: Zaghawa kurr
Maban: Maba kikkirjì
C-N: Berta kudu, kusu
C-S: Mangbetu kati
E-S: Nubian: Mahas, Kenuzi kur-tì; Dilling kute, Kundugr kuttu
Surma: Murle koɗọŋ , Longarim kuɗun, Bale kušun-at
Nilotic: Nandi kutuŋ , Tatoga guduŋ-da

c'am 'leaf' Koman: Uduk c'emen

hab'a 'lie down, sleep' Songhai: Gao hahaabu 'yawn, sleep'
Saharan: Kanuri bo
Maban: Maba abi / bi
C-N: Kunama abe
C-S: Mangbutu ubu / abu, Mbai, Madjinngay bii, Dindje,
Kaba bi, Efe abuabu, Kreish bibi, Lese k-abu
E-S: Nile Nubian: Dongola, Kenuzi bu, Fadidja fii
Merarit ab-(ney)

deepee 'lion' E-S: Surma: Majang d'epe
deepee umb'a 'lioness' Koman: Uduk aœop
(Note: Both Shabo and Majang forms are isolated, so that borrowing from Majang is not necessarily required.)

cukuma / sukuma / šuk'uma Koman: Opo c'okom, Shiita (Langa) c'ok'om
/jukuma 'liver, belly'

ulu 'man' 'male' Songhai: Gao aru
Saharan: Daza oro
E-S: Nubian: Midob erre
Nilotic: Lotuko allê / alyawa, 
Turkana (eki)-li, Masai ô-lê 
Surma: Muguji huur / wurr 'man', 
Tirma hiri 'person'

ga 'to mate (of animals)' 
Koman: Uduk ha² / hak' 'to mate, interbreed'

ill 'milk' 
C-N: Berta: Fazoglu err, Sillok iiri
E-S: Nile Nubian: Kenuzi er-/ir-ti
Surma: Didinga iira
Nyima elo, Afitti ôlô
Nilotic: Bari lê, Teso aki-le, Turkana aki-li, , Masai kûle

wuŋka / iŋkaye 'name' 
E-S: proto-Daju *aŋge
Nilotic: Anuak ŋiŋ

nôödô 'neck' 
E-S: Surma: ŋud'e

cô / tso 'new' 
Koman: Gumuz cica

up'h 'person' 
Saharan: Kanuri bi 'male', Berti fa 'husband, man'
Fur: aba 'husband'
C-N: Kunama abe
C-S: Mangbetu mbi 'person', Keliko, Lugbara b'a 'person', Lendu ba
E-S: Nilotic Lotuko x-aba 'husband',
Tabi -fui / -fiuk 'male'
Koman: Opo opuo (self-name), Shiita (Langa) opuo, Uduk
up'h 'woman'.
(Note: Bender gives proto-Koman *ba which is rejected here as unsupported by the evidence.)

jak / jah 'pot' 
E-S: Surma: Murle ijuh, Suri jût

d'im / d'im 'rain' 
Koman: Chiita diiba, Shiita (Langa) diiba, Gumuz dama/damma, Sai dàma
(possibly) E-S: Nilotic: Dinka de

com / som 'sand' 
proto-Nilo-Saharan *som- (Ehret, PC)
(Note: The /§/ is a retroflex which corresponds perfectly to Shabo's probable underlying ⟨$⟩. Cf
'say' below and 'nose' for other cases. Often [s] is another allophone, with [c] and [z].)

com / sum 'to say' 
proto-Nilo-Saharan *som (Ehret, PC)

baayo 'sing' 
'S to dance':
Saharan: Teda abî (noun)
Koman: Koma baa (noun)
C-N: Kunama ba
C-S: Mangbeta obe, Mamvu ube, Lendu be
E-S: Nile Nubian baane
tooru 'smoke'
   Saharan: Gao, Djerma dullu
   Koman: Gule dyurret
   E-S: Nile Nubian tulli
   Nilotic: Dinka tol, Nuer tuol

badda 'split (wood)'
   E-S: Nile Nubian: Mahas, Fadidja fag, Kenuzi, Dongola bag
   Nilotic: Bari paggu, Lotuko ppék, Shilluk paaŋ, Nuer bak
   C-N: Kunana fak
   (Note: This seems erroneous; it is only included on the assumption that the Shabo form is
   underlyingly {bag-da}.)

gum 'stick'
   Majang gumboi 'club'
   Koman: Gumuz (Sai) gomba

oka / oxa / oha 'sun'
   Koman: common Gumuz oka

lieet --> li-eet 'to swim'
   Majang leyêt
   proto-Nilo-Saharan *lêy 'become wet' (Ehret, PC)
   Koman: Uduk li'-a-li' 'wet, cold'
   (Note: Both Shabo and Majang forms are isolated. Since the Shabo can be segmented to a root [li]
   plus a common verb suffix [-eet], it is more likely to be the source than is the Majang. Or the
   Shabo may have made a folk etymology for a Majang word and generated the [-eet] themselves.
   Less likely links can be found in Cushitic, to wit, Beja l'a 'cold' and Saho lay 'water'.

k'add 'tongue'
   proto-Nilo-Saharan *k'al 'eat' --> *k'alt 'tongue'. (Ehret, PC)
   C-N: Kunama ɲee làa
   Berta: Sillok, Malkan kula, Tornasi unkala, Fazoglo halad
   C-S: Mangbutu kadra, Mamvu kedru, Mongbutu kadru,
       Lendu leda (?)
   E-S: Nubian: Garko jalde, Kondugr jaldu
       Gaam (Tabi) kalat
       Merarit laat
       Dagu (western Kordofan) kuldaŋ

kaw k'aw / khaw 'tooth'
   C-S: proto-C-S *kwa (Ehret, P.C.)
   k'aw-ge 'to bite'
   proto-Nilo-Saharan *k'ay 'bite' (Ehret, P.C.)
   kaw / k'awut 'mouth'
   E-S: 'bite' Surma: Kwegu kaw, Bale kauwa, Majang kaw-k
   Koman: Uduk k' a 'chew, gnaw or eat meat, corn, peanuts'

k'onna / konna / k'ona 'tree'
   E-S: Nubian: Birked kaan
   Surma: Didinga kêt / kêna, Tirma kiano
   Merarit kidi / kiŋ
   Nilotic: Masai ol-cani, Nuer jiat / jèn, Shilluk yat / yèn
   Lotuko (nâ)-yaŋi
   Kuliak: Tepeth kêen 'wood for house'
silla 'urinate' 'urine': Saharan: Kanuri collo, Kanembu njelli
Maban: Mimi (N) saar
C-N: Kreish soddo, Berta sara
E-S: Surma: Didinga dolo 'urinate'

bacce 'vagina'
Songhai: Gao buti, Djerma bute
Koman: Koma Madiin bitt, Ganza pit

ne 'who?'
Saharan: Daza nya
Maban: Maba nya
C-N: Kunama na 'who? which?'
E-S: Nile Nubian: Mahas, Fadida na, nai, Kenuzi, Dongola ni
Surma: Didinga ñani, Nara (Barea): na, nan, Nyima: ña;
Merarit: na
Nilotic: Nuer, Dinka, Anuak, Lango ña
Karamojong ñai, Bara ña, Lotuko ña

naafe / naape 'who?'
E-S: Surma: Zilmamu naape

umba / umb'a 'woman'
proto-Nilo-Saharan *mbwa 'to give birth' (Ehret, PC)
proto-Koman *b'amb 'woman' (Bender, PC)
Koman: Uduk ab'om 'wife, woman'

B. RESEMBLANCES TO BOTH PHYLA

ke 'of' Pronoun suffix
Koman and Nilo-Saharan
Omotic

b'ec'c'a 'beard'
Nilo-Saharan: C-N: Berta bus
C-S: Kreish bibusu, Mangbetu busu 'white hair'
Koman: Gumuz bes, Ganza (E.Koma) ponzo, Ganza (Gwama)
punzu
Usually presumed to have been borrowed into Afrasian:
Ongota buše 'beard' (Probably a loan), biidā 'beard' (Probably
native)
East Cushitic: Tsamai buuše 'beard', Gidole pāć'ā-t 'beard'
Nomotic: common Ometo bucc- 'beard', Mao: Hozo p'üutse,
Sezo poose 'beard'
Somotic: Dime bâtși, Hamar buushi, Kara booci

k'endi / kendi 'cold'
Nilo-Saharan: E-S: Nubian Gulfan, Dair kid
Merarit kiiri
Nilotic: Nandi kaitit
C-N: Kunama giggida
C-S: Moru kid'i, Mamvu ketu
Saharan: Teda kiri-de, Daza kiri
Afrasian: Somotic: Dime k'izin & ?izu 'hail', Galila k'azi, Ubamer qaizi / 'azi, Hamar k'aji, Kara k'aza
Nomotic: Dizoid: Maji k'ec-us
East Cushitic: Alaba k'iiza, Sidamo k'ido, Hadiyya k'iid
Central Cushitic: Abala k'iza, Sidamo k'ito, Hadiyya k'iid
Semitic: Ethiopic: Agau Bilen k'wita-xw 'wet'
        Be 'not'. Verb suffix. See Greenberg's Nilo-Saharan and Char-P-Nile Morphological Elements # 46
        'Verbal Negative in m or b. Kanuri ba, Fur a..ba; E-S: Nubian m-, Surma: Didinga ma, Merarit m-, Nara (Barea) ma, Dagu of Darfur ba, Nilotic: Shilluk ba.
        However, this is also found in Afrasian in equal strength. For example, Ongota has both ma and mi in verbs and baa for "no."

jigu 'bull'

aha 'house, hut'

nap'p'a 'lick! taste'

minja 'cow'

b'unc'u '(to) peel.

indii 'mother'

sina 'honey'

c'aara 'red'

Global: cf. Proto-Caucasian *ma (prohibitive); Proto-Sino-Tibetan *mā(H) 'not'; Indo-European prohibitive *mē (> Greek μῆ, Armenian mi, Sanskrit mā), etc. (= Greenberg's Eurasian "Negative M"): see also Bomhard's and Thornton's articles in this issue. Ed.
several times by highly competent field workers, we have 'red' as ts'irara. It is absent in Mbugu, Asa and Qwadza, changing then to 'blood', as follows: Iraqw ts'eere, Gorowa ts'eere, Alagwa e'eere, Burunge e'eede.

**handa `tongue'**

**Proto-East Cushitic** *?ent` `lick, nurse' (Arvanites)

**South Cushitic: Dahaloan**

- ćéna `tongue' Dahalo
- ćanć: `ants' - `to lick' Dahalo where the [ć] represents a dental click (Tosco)
- ćaća: `ats'a `to lick' (Damman)

**South Cushitic: Mbuguan**

- lu-ćanda `tongue' Ma'a (Mbugu)

**South Cushitic: Rift**

- ondalimo `tongue' Qwadza

Ehret (1980) reconstructs proto-South Cushitic /*ćanda/ for `tongue' which looks cognate with Ongota /ada/ `to lick'. The more developed form for Ongota `tongue' or /ada/ + /ba/ also has cognates in Omotic and Kuliak (Nilo-Saharan).
Ongota Lexicon: English-Ongota

Harold C. Fleming
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Foreword: The Ongota language, spoken in southern Gemu-Gofa (Ethiopia), in the valley of the Woito river, has been previously reported. However no English-Ongota glossary was given in that article, although there is an Ongota-English glossary therein. Subsequent to the original research on Ongota which was carried out in 1990 in situ and published later, field workers from the SLLE group of Addis Ababa University recorded and published about 150 words of Ongota. This was followed more recently (2001) by about 62 words recorded by Sava and Tosco and announced in a paper given at the Ethiopianist conference in Addis Ababa. All are incorporated in the present glossary. Additional data on Ongota have apparently been collected by Sava and Tosco but they have not communicated such to me.

Opinions now vary as to the position of Ongota in African linguistic taxonomy. Ehret’s most recent classification (personal communication) has Ongota as a coordinate of Omotic within Afrasian. Bender dismisses Ongota as a mixed or pidgin type. Václav Blažek (personal communication) believes it to be Nilo-Saharan, and Sava & Tosco (hearsay) believe it to be a pidgin of some sort. So again a presentation of the greatest amount of data will help settle these matters.

The classification that follows is one I worked out in 1996.

A New Afrasian Taxonomy (1996), incorporating Ongota

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### Ongota Lexicon: Alphabetized by English meanings

**Note:** & = cited by Sava & Tosco, # = cited by SLLE

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<td>VERB SUFFIX, CONJUNCTION, and</td>
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<td>VERB SUFFIX, INFINITIVE MARKER</td>
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| aardwolf, Spring Hare / Spring Hare          | gala / ?ala / alate | ³a / i / a | an’ãkara | &fà’a | ³i’a | b’ad’d’e / #bad’le | fuga / pfuga | -na |
| able, be (cf ‘be possible’)                  |                      |            |           |     |     |                   |            |     |
| able, thou art; thou can                     |                      |            |           |     |     |                   |            |     |
| Adam's Apple, to swallow                     |                      |            |           |     |     |                   |            |     |
| add, add to, to                              |                      |            |           |     |     |                   |            |     |
| aim at, to; take aim at                      |                      |            |           |     |     |                   |            |     |
| all                                         |                      |            |           |     |     |                   |            |     |
| Amhara                                      |                      |            |           |     |     |                   |            |     |
| and (NOUN SUFFIX)                            |                      |            |           |     |     |                   |            |     |
and, then, so

animal (cf 'lion')
ant, big black
  small ants
ant
anteater
Arbore (cf Tsamai for same word)
Arbore
Ari / Aari (cf Banna)
armpit
arrive, to (cf 'to reach') (from Tsamai)
arrow
arrow (cf Tsamai)
  the arrow stung
ashes
ask, to (cf 'Tsamai')
axe (cf 'Tsamai [urgayo])
baboon
baby
  baby baboon
  baby cried
  baby warthog
baby, offspring (Formally like Tsamai)
  baby dog-of, puppy, whelp
back, upper
back, lower
backbone / back
bad (cf 'jealousy')
  bad, crooked (cf 'dirty')
bamboo pipe
banana (cf Amharic, Wanderwort)
Banna (cf 'Ari')
bark, to (cf 'scream, shout')
bark of tree
bark, inner bark
bark, outer bark
bark of tree, outer (Lit. = skin of tree)
bark? (inadequate translation)
barley (cf 'Tsamai')
basket (cf Arbore)
bat (not the Tsamai form)
bat (cf 'Tsamai [xibide])
beads
beak
bear a child, have a baby, to
beard
beard (it may be the native word)
beat, to, strike
bed
bee, bumble

bu
# oxaya
d'axa
rā'o / ra'o
# moiyolee / # moyyolee
gōdū
rumate
arbore
bača
baaro
&daggab
fald'i / fali' / pald'o
tebele
tebl-mi ki-ra'e
tāuni / # taauni
# gaačaXti
irγa'a / irγa'a / # irγa'a
da ámb'aša / d'abaša
maara
nā'a / nā'asu
nā'a booni
nā'a ga'so
otoko
otoko k' aski-ti
lēpša
kālkù
bāgado / bagada, # bagada
adala
# ' adala
warka
muusi / # muz
baša
# riri
aqata goiti-te / aqatagoite
kāáda / káád'a
' ag' ate / aqata
# darbo hanša-ti
gurče
borto
kodu
wa'ko
# xibiri
q'ala / qala
' iffā karbo-ti
xod'i / xodi / # Xodi
buše
# biidā
hoo / ho'
koora
? innako
small bee, flea, small fly
one fly
beehive
beer, Oromo variety [farso] (cf Ari)
belly (cf Hamar ‘lower belly’) 
bend down, to
beside (something). Preposition
bicep (muscle)
big (but cf ‘wide’)
big (but cf ‘many’)

Birale (outsider’s name for Ongota)
bird (cf’Surma & East Sudanic)
bird (cf’fly, to’)
bite, to / I bite
black, blue

blacksmith
bladder
puff, to; puff out, to
bleed, to (cf’hand bleeds)
bleed, to (intransitive) 
blind (cf Oromo or Dullay)
blink, to
blood
blood bled
blood of ox, ox blood
blow, to / blow!
blow, to (cf’Tsamai)
blow (one’s) nose, to
boat, canoe
body
boiled
bone
born, be
bow (of bow and arrow)
bow (cf’arrow’)
box (e.g., for snuff tobacco)
box for tobacco
boy
boy (cf male)
brain
branch (cf’Tsamai)
breast (woman’s) (cf’suck)
bridge (cf Tsamai & old South Ethiopic)
brown
buffalo, Cape buffalo
buffalo is killed (translation error)
bull
bull (cf Tsamai)
inakko
?inako kalbam
gorgora / #gorgora
góóla / gòóla
búusa / #buusa
gurri
demiti-to
mági’nti
arba
gadaxune / gadahune /
#gaddahino
biráále
karbo / karbú
#’aHáá
ga’a / #ka-ga’
d’ak’-muni / dakka-mone /
#dag’a-muná
gitama
fugo / fuuge
fug-ad’
ilkato
d’ubak’am / dubaqam
b’ála’ato
daf
šoxo / šuxo / şoho / šaho
šuxo d’ubak’am / šoxo dubaqam
šuxo ra’asa
fusa / fuusaa
#’upi
ipása / ippassa
#gabata
bíša
foolisa
mič’a / #miča
’a-xod’e
’ooma
#faldo
šuulo
šuulo dampu-te
ja’aka
šokuta
ñoólu
zêmitti
’aama / ’amama (pl) / #’ama
#dildila
#moora
baya’a / #bayya’a
baya’a ji’a
muumi
horonko
bullet (cf Amharic)
  gun's bullet
burn, to (intransitive)
  burn, to / it burn
burn, to (intransitive)
burn, to (transitive)
burp, belch, to (maybe cf Tsamai)
bur, burdock
bury, to (cf old man)
  burial, grave
bush pig, Giant forest hog / pig
butt, to (à la goats butt heads)
butter (cf Tsamai)
buttock, backside, rectum, ass (baboon)
buttocks
buy, to, sell, to
by, with, by means of (NOUN SUFFIX)
cackle, to
  she cackled
calf (leg) (cf Tsamai 'shin, shank')
calf bone (leg)
calf muscle (of leg)
caracal (feline) (isolated in Tsamai)
carry on shoulder, to
carve, to
carve wood   (1st part < Tsamai)
cat, Kaffir cat
catch, to (a phylum cognate for Nostratic)
centipede
chest, breast, thorax
chest (of body) (cf Dullay)
chew, to (cf Dullay)
chicken, hen, fowl
chicken (cf Tsamai)
child / children
child
  infant, small or tiny child
child (cf 'baby')
chin

choke, to (cf Tsamai)
civet cat, pole cat (maybe skunk too)
clan, lineage (cf Tsamai)
clap (hands), to
claw, fingernail
claw (the dominant form)
claw

\[3 \text{ Cf. Indo-European } *\text{kap}- \text{ 'grasp' (Lat. capio, Gk. καπτω, Eng. have, etc.); Uralic } *\text{kappV}- \text{ 'seize'; Altaic } *k\ '\text{ap }V\text{ 'seize, hold', Dravidian } *\text{kav- } \text{'seize (with hand), catch'} \text{' etc. [Ed.]}\]
claw, hoof, Pangolin's claw (cf Tsamai)
claw
claw, finger (cf Tsamai)
nail, fingernail (cf Tsamai)
fingernail
clay
clitoris (problem of analysis)
close (door), shut (door)
shut the door!
close (mouth)
close, shut (the eyes)
clothes, cloth, loin cloth / clothes
clothing
cloud (cf Hamar)
cloud (cf older Tsamai or Dullay)
cock's comb
coffee
cold (cf 'warm' for problem)
cold / it freezes
collar bone
come, to
I go
come out, go out, exit
come! (Irregular imperative)
container
conversation, talk
cook, to (probably < {entisini)
corpse (cf Tsamai, in form)
cotton
cotton (as crop)
cough, to
cough, to (maybe same verb) (from Tsamai)
count, to
cover, to
cow
my cow(s)
cow (cf Tsamai)

..
dance and sing, to
European music, *ferenji* music

dark, darkness
completely dark
(to) be evening
dawn, to / the dawn
deep (adjective) / deep, be (which')
dew (cf Kwegu)
dew (*sono dubbio*, probably a verb)
dewlap (of cattle)
die, to / die!
she die
dig, to
dig, to
dig, to (maybe = we dig)
digging stick
dirty (cf 'bad')
do, to
dog (cf Hamar)
two dogs
dog-by bite-me
dog bit me
dog, African hunting dog; jackal
donkey (cf Oromo)
door (movable part) (cf Tsamai)
door / gate
down there (cf over there)
down there (inadequate translation)
downward
downwards
down (kind of vague)
dress oneself, put on clothes
drink, to (cf 'water')
drum (cf Arbore for resemblance)
dry
dry (maybe is verb & = it dries)
dull (not sharp)
dust (cf Tsamai)
dysentery, have (cf Somotic)
ear
ear wax
earth, ground (cf Oromo)
eat, to / eat! pl
thou, eat! (possibly or unclear)
causeto eat, feed / feed! pl
egg (cf Gavwada dialects, not Tsamai)

---

From Arabic *Ferenji*, ult. < *Frank* = ‘European’ [Ed.].
eight
ejaculate, to; have male orgasm
elbow, ankle
elbow, ankle (cf Tsamai & Arbore čilig)
elder brother, ElBr (cf Tsamai)
elder brother, elder sister, ElBr, ElSi
elder sister, ElSi (cf Ari)
elephant
elephant (cf Oromo arba)
eleusine
embers (cf Tsamai)
empty
enter, to
doorway, i.e., entryway
enter, to
errection, get an (cf Dullay)
European, American, Ferenj
exchange, to (plural subjects) (cf Tsamai)
eye (human, elephant)
eye brow (eye's hair)
eye lash
eye lid
face (visage) / face, eyebrow
fall, drop, rain, to
farm (noun) (cf 'field')
farmer (cf Amharic)
fart, break wind, to
fat (of meat), pot belly
fat, thick, stout (he is)
father, Fa
father, Fa, FaYoBr
FaSi, paternal aunt
fear, to (incomplete analysis)
fear-ing (incomplete analysis)
cause fear, to
feather, ostrich feather (cf Tsamai)
feel, to (cf Tsamai)
fence (cf Tsamai)
few (morphology not understood)
field
fight, struggle, to
I find (probable morphology)
    hit, spear, sting, to / cause to hit
fill, to / make pour (cf Tsamai [húčč'i])
find, to
    cause to find
finger (cf Tsamai ota-ko = fingernail)

See note 4.
finish, to
fire

fish (cf Banna or Hamar)
a big fish
big fish (species)
fishnet (cf 'hook') (cf Tsamai)
five, 5 (cf Tsamai)
flea, bedbug
flash (of lightning)
flour
flow, to
cause to flow; pour, to
flower (cf Tsamai)
flute (cf musical instrument, file)
flutter one's hands, to
fly, to; stand up, to
fly, to (semantically incomplete)
fly (insect) (generic term), beetle
fly (insect) (from Tsamai)
fog (cf Tsamai)
food (unusual d ~ n variation)
fool (morphology')
foolish
foot, front foot of elephant (cf hand)
foot, leg
rear foot of elephant
foot
forearm, fore arm (from Tsamai 'elbow')
forehead
forehead
forest (Tsamai has [orro])

bush
four, 4
fox, bat-eared
frog
fuck, to
full
gallop, to (cf 'run')
garlic
Gawwada
Gawwada, to Gawwada
gazelles (generic term)
genet, serval (cf leopard & mongoose)
get down (from something), to
giraffe
girl, unmarried young woman, daughter
give, to
give me! give to me!
give him! give to him

rawi
'ôxona / 'oxone / ohone
/ &oxóni
kaara / #kaara / &kára
kaara gadahuni
q'alti
#korumi
hobbe / hoppe / xubbe
filaye / fillaye
k'owadi / qawade
d'iila
fad'-tam / fa'-tam
fad'a / fa'd'da
#bisku
tuule
kiskisi
'axay / axaya / &áxay
#'axay-bákurruru
b'ànnádo
#'innako
'ur'urratte / 'ururate
na'ana / da'ana
#dima-tsiin'i
zarako
'i'i'â / iyyâ
haka / #haka
hááka
#'têdi
#tsigili-ko
náára
#baliti
waara
#waara
talaxa / talaha / taraha
fuğa
#moga'iti
šoq'eni / šoqeni / &sóxele
#niítsina
gey / ga'i
tooma / tuma
ale
gewad-ke
hórôn-ku / xolân-ku
mèrle
rex / rehi
d'am'ate
juuka / juka
na'a / &na'
na'a naaku
na'a wanna
I give
give, to
give us! give to us!
gland
go, to / go! / go
walk, to
go, to
go, to / let us go!
go out, exit, to

go out, exit, to (morphology?)
goat
many goats
other goat, another goat
goat (2nd form is probly fem.) (Dullay)
goat (inferred form) (cf Tsamai)
goat (cf Somotic)
god, God (cf Lowland East Cushitic)
God give to thee (for me)
gold (from Amharic)
good (homonym c tobacco)
good (for others, not self) / (general)
good (for self)
gourd
with gourd
by means of gourd he drank
gourd (kind of)
grain, a (e.g., grain of sand)
grandfather, GrFa
grass (cf Tsamai)
grass (a kind)
grasshopper, striped
green, wet, green tree (not dry)
grind, to
grind grain, to
grow, to / cause to grow, to (cf Tsamai)
guardian spirit (cf Oromo ayana)
guitar (cf Tsamai but widespread)
gun, rifle
my gun
gush, flow, flood, to (meaning unsure)
flood
hail (precipitation)
hair (of head, of arm), head, fur
of hair, of head
shaved, he
he pulled out, plucked out hair
hair, body
hair, body (cf Tsamai)

#ka-nnaá
bi'e
bi'e juu-ku
q'i'ildí / qild'e
roo / rootá / &ròo
#roota
?áskam / asxam / #aaskam
ootu / ottu
kaat
kola / ko-la
mááta
maata gedahuni
maata keesa
dala / dalí-te
orgai-ko
#k'oolu / #g'oolu
waga / waq
waq-na jata
#wérk'
tampo
?abba / #?abba
wanna
k'umu / q'umo / #Xumu
q'umo-?u
k'umu-mi č'a'awa
?urbo
?anni
?akka
#haaši
č'alq'âmíne
tsi'au
hawle
čark'a-muni / čekrka-mun
zaxi / zahe
zahe ?anni / zaxi ?anne
&g'óh / g'óh-is
?ayante rehki
zonqe / zoonqi
č'awo
č'awo s-ine
dufi / d'ufi
ča'aw ki-dufi
?abzite (Tsamai azbite)
b'ine / #b'ini / #bini
b'ini-tí
b'ine ki-g'esi
b'ine ki-futti
faya
bááya
hair, pubic
hair (cf Tsamai)
hand (cf Tsamai)
hand (of armpit, eye brow) (cf Tsamai)
Hamar, Banna / Banna / Hamar
hand, shoulder, arm
hand (secondary form) (cf Tsamai)
hand bleeds
hand, palm of hand (cf Tsamai)
clapped hands, he
hard (from Amharic)
harvest
he, subject & object Clitic
to him, for him
he, 3rd pers. sg. pronoun, masc., focal
he, 3rd pers. sg. masc. (dubious)
his
he, over there
he (sceptical, mistranslation)
head rest, warrior's pillow or stool
my head rest
hear, to (hear/ditto/hear!)
hear, listen, to
heart
heart (cf Tsamai)
hearth, fireplace of 3 stones
heavy, be
hedgehog
heel (cf Tsamai)
here
over there
to here, towards here
hiccough, hiccup, to
hide, to
hippo (from Tsamai or lent to Tsamai)
hips (cf Tsamai)
hit, to
beat! strike! / beat! pl
hit each other! pl
hit! / hit! / to hit / to hit
hit, to (or) / she hit
hoe (cf Tsamai)
hold, to / (maybe) I hold
hole, passage, nostril
nostril, hole of nose
honey / bee, honey
bee honey, honey
honey
honey bee (SLLE X = γ or q' ?) (cf Tsamai)
honey
boštétti
gazo
rifan-ko
orga / orgo / orgita
iia / iya / i'a / #'ii'ii'a
harko
i'a ilkato
gan'a
gan'a ki-ho'i / x'oyi
#t'éŋkarrá
#lak-haata, #lakhata
ki / &ki
wanna / waana / &wa-na
kita / &kiita
?ind'ad'ate
s-ëena / &s-ëena
?ad'd'a
#roota
kere
kere s-iine
?aa$ / ?a$ / ?aa$-a
#aa$a
#lâåta
zâ'-ko / za'a-ko / zææ-ko
kid'iša / kidiša / kidisa
?addiši / ?ađiši
tâŋatâŋačo
teken-kó
?ünkona / #wūŋkı
hunkona had'd'a
na'anki
hak'ad'
#čaHda
rento
úŋgóro
kape
kappe / kappe-ta
kappe-ta íla
xo'a / xoha / xo / xob'
#'i' / #kù-ii
#gaita
#Ha / #ka-Ha
fulle / falle
fulle sina-te
šókaya / šokaya
šokaya nēë
nēë
#tsoonaxu
#šookaya
honey bee (cf Tsamai)
  honey bee stung me (cf Tsamai)
honey, ground, Amharic /t'azma/
honey, wild (not found in honey barrels)
honey comb
honey wax, wax of honey
hook (cf Maji)
horn (cf Tsamai)
horn (cf Tsamai, but less likely)
horse (cf Oromo)
hot (cf rays of sun)
  it's hot
house
  my house
  house is burnt, house-the it burn
how?
how many?
how much?
hug, embrace, to
hug me, embrace me!
hump (bovine's) (cf Tsamai)
hundred (cf Oromo)
hundred
hungry, be
hunt, to
hyena
hyrax, rock (cf Hamar)
I, 1st pers. singular pronoun, focal
I, me, subject & object Clitic
  for me, to me
  my
  I am
in (e.g., in the water) (Preposition)
inside
inside, inside of
  inside the brain
insult / to curse (the same word)
  insult each other, to
intestines, guts
iron (areal term)
itch, an (cf Omotic 'scratch', 'itch')
jaw (cf Tsamai)
jealousy (cf bad)
jump, to (cf Tsamai)
jump over, to / jump, to / jump, dance, sing
kick, to
kidney (cf Tsamai)
kill, to
kill, to / ditto / kill! pl
  to kill
s'onk'o
s'onk'o ga-ka
dande
k'oya / qooya
leefi / lefi
'uure
kormiço
gattakkko / gatako
#gasani
fardo
šooni
#ku-šooni
wūra / ura / hura / #uura
ura s-ine
hura-ko ko k'ow
#'ašana
miyá
ašana kuyda
ka'i / 'ka'i
šemé'ani
dóólte
d'iib'a
#sën-čoma
gaši / #gaaši
'adam
gurr'e / gurre? / guri
šóóni
kaata / &kata
ka / -k / &ka
naa-ku / na
s-ine / &s-iine
káá'ana
gusko / gusku
gusk-i-to
uskutu
uskutu nóólu
s'ali
s'alete ila
mér'àmète / #mér'émata
sibila
k'as'o
gawgawe
'ádala
b'uli
g'uttal / #gutal / &gutal
d'iti
de'sesiti / di'sètte
šup
ji'/ ji / ji-ta
#jita
cause to kill! / cause to kill! pl
he hunt
kindle (a fire) (cf 'burn')
kiss, to (cf Tsamai)
knee
knee cap
back of knee
kneel, to
knife
sharp knife
with knife, by knife
machete, pangö
know, to (problem with finding root)
I know (see glottalic switch)
lake
lake (from Amharic, with Tsamai suffix)
lame
laugh, to
leaf, grass (cf Tsamai)
left (side) (cf East Cushitic)
left (hand, side) (cf Tsamai)
leg (cf Oromo miila)
leopard
lick, to / ditto / cause to lick
light (noun)
light (not heavy) (morphology?)
lighten, to, flash, to (cf Tsamai)
lightning
limp, to (cf Tsamai, Dullay)
lion
lion cub
lion's claw
lion's mane
lip (cf mouth)
lower lip
upper lip (cf 'on, above')
upper lip
lips (cf Tsamai)
liver (widespread form)
load, burden
long, far
it lengthened
louse
head lice
clothing lice
lung (not necessarily from Tsamai)
maize (cf Tsamai)

ji-šan-a / ji-šan-ta
#ki-jii
g'úyy-o
mayyi / mayi
ghiba / giliba / #ghiba
q'ubulo / qub'ullo
q'as'anto / q'as's'anto
gilip
šéera / #šéera
šera ē'are
šer-mi
#maačure
s'ii? / s'ii'i / s'ii?i?
#k'a-šii-ni < {ka-ši-ši-ni
basin-ko
#bahare-ko
tonako
mux' / muhi / #muXee-ša
hááše / xaaše
#biha
warkata
mééla / melaa
merila / méɛr'la / #mërila
č'adi / &č'ad / &č-ad-as
zooba
#nagai-kota
b'ak']
#gawa'a
hokolini
'óoxaya / óoxaya / ooxaya
'óxay na'a
'óoxay-tà soŋk'e
gofare
'iifa / 'iifa / iifa
záála
ruugi
#xiitti
xíb'be / yíb'be
tière
?aga / agaki
'orma / urma / #uurna
kita orna / kito orma
s'amiš'a / t'amit'a /
#čaamija
s'amiš'a b'ini-ti
s'amiš' ke labili-te
soma
game / #gami

---

6 Panga is the Swahili term for a broad-bladed machete or cutlass common in East Africa. [Ed.]
Male (neighboring people)
maale
maal (humans and fowl, at least)
maale fowl, cock, rooster
maale, masculine, vir
man, person
man he good, good man
man's nipple, teat, breast
many (but cf 'big')
many (cf 'big' and 'thick')
market (from Amharic)
marry, to (possibly = cause to enter)
marry, to
mead, honey wine (cf 'Tsamai')
the mead is drunk
mean, to, talk about, to (ca veut dire)
mean
meet, to (Lit. = they met)
meet
melt, to
milk
milk!
millet (Dullay and Male)
millipede (cf scorpion)
mix (trans), to / mix (intrans), to
mix, to
molar, molar tooth
money (from Amharic)
mongoose (generic)
mongoose, broad-striped, genet
moon (widespread)
moon rose early, started to be seen
moon rises, after sunset
mosquito
mother, Mo
MoElBr, MoYoBr, maternal uncle
MoElSi, MoFa
MoYoSi
mote, sand in eye, sand of eye
mountain (cf Oromo)
mountain (cf 'Tsamai')
mountain, hill (cf 'Tsamai')
mouth (human, elephant), snout (baboon)
mouth, he opened
mouth, he closed
mouth of bird, beak
mouth, small/narrow
mud (cf 'Tsamai but from Ongota?)
mule (cf Oromo)
music (meaning may be 'ferej' instead)
musical instrument (thin bamboo pipe)
name
maale
soqta
soqta baaasha
soqta
'inta / hinta
'inta ku-abba
'int-ta 'ama
geduhuni / gadahin
gaddahuni
#gabeya
#ga'i-san
&ifam
koron-ko
xoron-ku 'a-č'a'awa
'alone
č'ata / čata
kad'e-čela-ke
raw / rab
'eefe / &eefi
fiyia / fiyia / fiya
diškaro
hanago 'arafkutti
&lax / lax-am
&čangat
čango
#gënzëbo
gord'isa
wálta
lě'a / le'a / lea / #le'
lě'a ki-kad'i / ki-k'ad'i
lě'a ki-dukanis
q'ínáno
'aaaya / 'aaye / #'aaai
'abija
'aabo
'indo
č'umaraq'ē / č'umaraqi
#gaara
kotun-ko
kaško
'ëifa / 'ëifa / ifa
'ëifa ki-b'ak'
'ëifa ki-ka'ilaki
'ëifa karbo-ti
'ëifa mod'uni
#čok'e
gange
táání
file
miša / #miša
what is thy name?
narrow
navel (looks native!)
navel, belly button
near
neck (widespread form)
nest (cf 'house'. 2nd segment not bird)
new (cf 'good')
new (cf Tsamai)
nibble, to
night
night (')
night, blackest night
nine, 9
nose (SLLE agrees)
now
nimb, be
old, thou art
old, I am
old man (cf to bury)
old woman (Probably < Tsamai)
on, above, up hill, up slope, over
up there
one, 1
one, 1
one who, one that
one who wants
Ongota, Birale (person, people)
Ongota language, Birale language
Ongota hamlet, village (name of)
ions (1st form < Amharic)
open (mouth), to
ostrich (cf 'Tsamai)
other, another
other person, another man
otter
ox (possibly means male cattle)
goat? Maybe billy goat?'
palate
pancreas / gall bladder / spleen
pangolin
pass the night, to (metathesis?)
peck at the ground, to
pencil ( < Amharic)
penis
people
two people
three people
four people-pl (or 4-people-are)
five people

miša s-īdu haka
maage
#šooma
handurte
d'exo / deeho
#luRoma
#wuura-ka'ubat
#'abba
k'awtita / q'awtita
nagaska / nnagaska
#'uo
ekiti
ekiti ku girim
gólankë / golanke
šìna / šìnà / šìnà
háyki
šìk'om' / šìkumod'
'i gešwi / i gešwi
ka gešwi
'?adiba / adiba
hadigde gečàâte
ruuge / ruugge / rugge
rugge-ki
akala / ákalbano
#atkalbano / #akkalbano
'?oola
'?oola ki-xabiini
'ōŋgotà / 'ōŋgotà
'?iif'ōŋgotà
muus'e
šìnkurt tuma
b'ak'
balgiddo / balguto
kesà / kesa / #keesà
'?inta kesa
dábârsa / dábârsa
ra'asa / ra'asa / raesa
raasa orgai-ko
d'anga
land'e / lande / land'e
mársëtte
tagahu'u / hutaga
so'ad-ini / so'ad-ini
irsasi
móolu / moolu
yooba / #yooba
yoobà lama
yoobà zéha
yooba talaha-wa
yooba hobbe
pile, pile up, heap, to / heap it!
pimple
placenta, afterbirth
plant, we (cf `sow')
play, to
we played
pluck out, to; pull out, to
porcupine
porcupine quill
possible, be (cf be able)
pot, jar
pound!, hammer!, forge!
pour, to
puff adder (sp. snake)
pull, to (cf Tsamai [doyi])
pull to here!
pull, to (cf Tsamai)
punch, to
purse
purse (< Amharic)
push, to
push, to (morphology)
push away, store, to / cause to store
python (cf Tsamai)
quit, to / quit it!
rabbit, Grass hare
rabbit, Spring Hare, aardwolf
rain (noun)
rainbow
rainbow (cf Tsamai [ziila])
ram, sheep (cf [xuuna])
rat (cf shrew, Rufous elephant)
ratel, honey badger
reach, to (cf `arrive')
red
rest, to, breathe, to (cf Tsamai)
rhinoceros (maybe < Tsamai)
right (hand, side) (cf Tsamai)
ring, iron ring on finger (cf Tsamai)
rinse mouth out, swish H₂O in mouth, to
ripe, be / it ripe (unclear pronoun)
rise (of sun), to
rise (of moon), show up after sunset
river
to, towards a river
he crossed river, forded
river (cf `water')
road, path
road is narrow
the car road is wide

tagas'/ tagas’a
ţiša
‘aage
jo-goši
&işki
&ju-işki
futti
giršu
şile / sile
‘algas-am
kaba / #k’aba
tunta
#baHatin
buute
doxa / doha
doha na’anki / doxa na’anki
#ziita
tumat
korogo / korojo
borsa
tuğula / tungula
#hegistake
&tiid / tiid-san
ba-f-ko
hur / hura
gubale / gubale
qalate / alate
haaje
gurbbi
#zilaňka
hóóña
#díbita
gisu / gissu
d’agap / dagab’
romini / rumine / #ruuminâ
na’s-ad’ / nas-ad’
orša’të
mizgitte / #mizgita
g’ob’b’e
muč’muč’-ad’a
#kuheen / #ku-heen
bezam / bezab
dukanis
golle / góóle
golle-ke jaara
golle-te ki-şap
&ca’avg
kiti / #kiti
kiti maage
kiti mooq’ad’e lab’a
path (lit. = foot-by go)
roar, to, bellow (cTsamai)
root, blood vessel (c/Tsamai)
rope (c/Tsamai)
rotten (cTsamai)
round
run! gallop! / (ditto SLLE)
cause to run! make 'er gallop!
run, to (c'Tsamai `run away')
saliva, drivel
saliva (c/Tsamai)
saliva he produce / salivates
saliva, make or produce saliva by moving
tongue around in mouth
salt
(widespread term)
salt has been added
sand (c/Tsamai [sumaxa])
much sand, many sands
a grain of sand, sand tiny
sandal(s)
say, to
scorpion
scorpion (c/Tsamai)
scratch, to
scratch at the ground, to
scream, shout, cry out, to (c/Tsamai)
see, to
see, look at, to
seed
send, to
send, to
seven, 7
seven, 7
sew, to / I sew
shade, shadow (homonym c spider)
shaman, Qallicha?
shame, it's a
sharp (maybe native)
sharp (c/Tsamai)
make sharp (c/Tsamai)
shave, to
she, 3rd pers. sg. pronoun, feminine, focal
she, her, subject & object prefix or Clitic
her, hers
to her, for her

# akami rottat
me'i
Hizete / #hezi-ta
#siibdi
#lugmat
#ku-lugmat
mulko / mulq'o
geya / #d'eyya / #d'eyya
g'ey-sana
bag'ad'
b'aq'aq'e / baqae
waq'e / waqi / #waye
#waye tufat
waq'e ki-`elisi
?elisi

sook'o / sooqo / #sooxo /
&soqo a-fa'a
sumaxa / sumaha
sumaxa gadaxune
sumaxa mo'one/mu'uni
tahata / takata / #tayata
'is / #gisa
hanago / #hanago
gaytakko
haabi / &xáab
harransadi / harransadi
riri
yop / yob / #yoobi / &yóob
noq'ot / nok'k'ot / &noqot
bodixo / bad'aho / #bora
luq'e / luqe
yaq / yak'
tæxænke / tæxxänke
#daHänki
#garis / ka-garis
tagara
baaxa / baha
śomani
#śida
č'are
č'arayise
g'esı
kuuta / &kuuta
ko / &ku
s-u'wa / s-uwo / &s-u'uu
waa-ta / &wa-ta

Qallicha is an Amharic word denoting a pagan shaman or high ritual figure.
sheep
shit, feces / defecate, to
shiver (from fear), to
I fear
shiver (from cold), to
shoot an arrow, to
he shot an arrow
short (cf Tsamai [mana])
shoulder (cf Tsamai)
shrew, Giant elephant
shrew, Rufous elephant; Cape rat
sick, be / be sick / sickness
be sick < he sick
sing, to
sing, to (from {dance-I-sing})
sip, to / suck, to
sit, to (sit/sit/sit!-pl)
sit! rest! (pl) / sit, rest, to
six, 6
skin, hide, leather, cow-hide
sky (cf some Ometo)
sleep, lie down, to
lie down, to
sleep, to, pass the night, to
let me sleep!
let us sleep!
small, very small
small / narrow (SLLE)
narrow
smear (esp. butter), to
smell, to (but cf 'snout')
smell (something), to
smile, to
smoke
smoke, I make (cf Tsamai)
smooth (cf Tsamai)
soft
snake (generic), cobra
snap fingers, to
sneeze, to (verb parts may be united)
sneeze, to
sniff, to (cf below 'snuff')
snore, to
snout, of baboon
snuff tobacco
I sniffed tobacco (= snuff)
solifugid, large hairy spider
sorghum

xuuna
báxa / baxi
{naH} / nax / na°h
#ka-naH
bara
haat / xaat
feld'i ki-xaat
#maŋgatinà
katye / #kači-ta
bálo
dišita
roos / ros / roose
#gi-roosi , {ki-roosi}
d'iiiti
#šúa-xo-°aa
s’oob’i / s’uub’i , s’o°bi
°aam / °aam-e / aame-ta
#°aami-ta / #°aame
tsanafa / #tsanafa
d’árbo / #darbu / &darbo
munto / muntu / #muntu
k’aade / qade / k’ad’d’
#ká-xaadì
#tagam
ka-tagam
c’a-tagam < *ja-tagam?
mo°onne / mod’oni /
monnoeni / mûnnu’ëni
#mûnnu’ëni
&šuguc-o
#°aarmata
sins-adi’ / sinsadi
kasod / γasod / yasod’
arto / #’arto
c’ara / ?’ara
#xampa
#xampatin
gábare
hatini / xatini
siina ka xo / ka-k’o
#°iigàsi / &iikkisi
&súg
horisi / xorisi
armata
#°armata
’iifa
hindawi / kindawi
&tampo ka-súg
sásâbi / sássâbe / sabsabe
musko
grain (crop) (generic term)
sorghum (cf Tsamai)
sow, to (cf Oromo [gosal])
sp. antelope, Bates dwarf antelope
sp. antelope, Bohor, gerenuk (cf Tsamai)
sp. antelope, bushbuck
sp. antelope, Hartebeest, Topi
sp. antelope, Kob, Lechwe (beautiful)
sp. antelope, Kudu / eland
sp. antelope, oryx, eland
sp. antelope, waterbuck, Defassa
sp. bean, Amharic /adoggware/
sp. bird, Abyssinian Ground Hornbill
sp. bird, crow
sp. bird, guinea fowl
sp. bird, hawk
    hawk flies
sp. bird, partridge
sp. bird, vulture
sp. gazelle, dikdik (cf Tsamai)
sp. gazelle, ibex, Abyssinian ibex
sp. insect, railroad train bug
sp. insect, tick
sp. lizard
sp. lizard, unspecified
sp. lizard (cf Tsamai)
sp. monkey, (probably baboon)
sp. monkey, Colobus or gureza
sp. monkey, guenon, Patas (cf Tsamai +)
sp. monkey, 'lemurs' of Madagascar
sp. rodent, small, eats corn stalks
sp. tree, acacia
sp. tree, fig, sycamore, Amharic /warka/
sp. tree, juniper (cf Tsamai or Oromo)
sp. tree, palm
sp. tree (local variety)
sp. tree, Amharic /girawa/.
sp. tree, Amharic /weyra/
speak, to / cause to speak
spear
    with spear, by spear
spend the day, to (Amharic /w/al/)
sperm (cf seed)
spider (homonym c shade)
    spider she crawl
spider
spit, to
spit, to
spoiled, be, get spoiled
spoil, to (transitive) (cf Tsamai logi)
spring (of water)
squeeze, make a fist, to / squeeze!
squeeze out, to
squirrel, tree
squirrel, ground (not chipmunk)
stalk, cane (cf Tsamai)
stammer, stutter, to
stand, stand up, get up, to / get up! / stop
stand, to (cf ‘fly, to’)
star
star (sono dubbio, unless < Dime)
star (secondary form) (cf Tsamai)
steal, to (cf Tsamai & Arbore)
stick (noun)
  stick-by I struck
stick out, put out (of tongue)
sting, bite in, to
stink, to
stink ant (cf Tsamai)
stomach rumbles (inadequate analysis)
stone
stool, head rest
strangle, to (cf Tsamai, also choke)
stretch one’s body, to (cf Tsamai)
striped, spotted (cf Dullay)
stroke (something), to (cf Tsamai)
  sweep, to (lit. = earth-he-stroke)
suck (at a breast)
sun

  rays (of sun) / sun rays
sun rises
swallow, to
eat food!
  food is eaten
sweat, to (cf Tsamai)
swim, to (cf ‘cross’)  
swim, to (cf Tsamai)
swoop down like a bird, to
tail, tail of elephant
tail (from Hamar)
take, to
taro (Colocasia esculenta)
taste, to (from Amharic)
taste good, be sweet, to
tear (H₂O) (cf Tsamai)
tell, to
tell me!
ten, 10

eleven, 11
twelve, 12

termite (cf Arbore [limmè])
termite (cf Tsamai [ilmate])
termite mound, termite hill (cf Tsamai)
testicles, buttocks (cf Tsamai)
that
that person is good
that tree
that
they, 3rd pers. plural pronoun, focal
they, subject & object Clitic
their, theirs
they (probly = their)
to them, for them
thick (cf 'big' & 'many')
thigh (cf Tsamai [gubis-ki])
thigh
thin
thin (equals small-long, I think)
thing (not the same as 'one who')
a thing, one thing
thirsty, be (cf Dullay)
this
this woman
this mouth
this man, this male
this tree
this
thorn
thorn (cf Tsamai)
thou
thou, object prefix or Clitic
thou, subject prefix or Clitic
to thee
thou, subject prefix or Clitic
thou art good man
I mean thee; talking about you
thy, thine
thou (somewhat doubtful)
thread (unchecked phonetically)
thread (cf Tsamai)
three, 3 (cf Tsamai)
throat, Adam's Apple
throw, to
thumb (cf Tsamai [oã-ku])
thunder (cf Tsamai)
thunder (cf 'lightning')
tie, to
tie, to
tire, to
(tire, to (cf 'Tsamai re final ab')
tobacco, cigarette / tobacco
tobacco pipe, Arab style 'hookah' today

today it rains, it falls
together
tomorrow
tongue
tongue, he sticks out
tooth, teeth, tusk of elephant
tooth, dog-of
tooth, it's a dog's
touch, to
trap, to, catch in a trap (cf 'hug')
trap it!
trap (a) (cf areal 'iron')
I trap with a trap of iron
tree, wood, dry wood (dominant form)
tree (inferred from bark of tree)
trunk (of elephant)
try!
Tsamai, Tsamakko
turns around, it
twenty, 20
two, 2 (cf Hamar)
two eyes
under (Preposition)
under, below. Locative grammeme
up (adverb of location)
upper arms, shoulders, self (re hugging)
he embraced himself
urine / to piss / urinate
uvula (not in our Tsamai data)
vagina / menstruation
vein, blood vessel (cf Tsamai)
velum, uvula
venom (snake), poison
Venus (the planet), star-the woman
vomit, to / I vomit
waist
want, seek, search, to
war
warm (cf 'cold' for problem)
warthog
wash self, to
I bathe (wash self)
wash, to / wash self, to

#gaaˇkiˇk
&&Hed
gafad’
k’ard’ap / qard’ab’
tampo / dampu / #tampo
?orabo
hunne / hunni / hune
huni ke-wak
?ilele / &illa
baram / &barama
?adabo / #adabo / #? adabo
?adabo ki-bun / ?adabo ki-bul
?itima / itima / #?itima
?itima q’aski-ti
ke q’aski-ti ?itima
berri
ka’ / ka’a
qaˇasa / kaˇasan
sibila
sibli-mi ka-kaˇasan
hanˇa’a / #hanˇa
goiti / goite
‘umbiti
’ekteˇsi’ayo
ö’amako
maginˇsap
#sˇen-lama
lama
‘aafo lamo
zal-to
zala
#ta’ta
zagari
zagari ki-ka’i / ki-ˇka’i
šaaha / šax / šaˇcˇh
le’e leˇo
kano, kaanu / kanu
hezi-te
aygalauti
tonte
hizki-te ?ayma
’ebˇe’e-ni / #ka-ibe’e
bilide
xab-ini / #Haabe / &Haaab-
#toraˇeni
sˇantuni / sˇantune
gaiˇsˇo
hoob
#ga-xobi
&hob-at / hob-at-i’
water
flood, water gushes
water dripped, fell
a drop of water, water tiny drips
warmed (the) water, he
in the water
we, 1st pers. plural, focal
we, us, subject & object Clitic
to us
our
we good, we are good
we all, all of us
wear (coat, toga) (cf Tsamai)
wedding (as a noun) / (as a verb)
well (water) (cf Tsamai ['eelego])
wet (cf 'green')
wet (cf Tsamai)
wheat (many connections)
what?
what? / what? why?
what did thou drink with?
what is it? (inadequate translation)
what?
when?
when did they go?
where? / from where? / whence?
where to?
which?
which woman?
whistle, to
a whistle
white
who? / what?
whose? / who?
wide (cf Hamar)
wide (maybe mishearing of above)
wind (air)
wing (cf Tsamai)
wink, to (he winked = eye one)
wipe, sweep (he wiped, swept)
witchcraft, black magic (cf Amharic mwart)
wizard, be a (Note: verb is causative)
woman
woman, wife
woman's breast
woman came
č'a'awa / č'a'awa / č'aw
# čaahawa / &ča'aw
č'a'awa ki-dufi
č'a'awa ki-wak
č'a'awa mod'd'one ki-wak
č'a'awa s'antuni
č'a'awa gusko
#jota-bati / &juuta
joo / Zoo / &ju
&ju-ku
&si-ju
jóöte 'abba
jootā b'ad'e / joo b'ad'e
šud'am / šud'an / &šud-am
#kičaki / #ki-čaki
#looRe
#jérka-muni
xu-č'abi / ku-če'ab'i
gabzo
&na
neeni / #něčeni
neeni-mi č'a'aw
'e nene
niike
bari / bari-ki / #bare
bare ki-'áskam
hawuto / haawto / #haawa
gara 'aytake / gara waytake
háytà
hayta 'ayma-ko/-ka
fidis / fid'isi
#fidisá
'at-muni / atto-moni /
#?'attu-mune
haakà / haka
saaye / #sai
lab'a
#?'abba
hábura / #hábura
#koola
'āafa kalbano
'a 'oša bag'aresa
maršà
zu'u-sani / zu'z-sani
'āyma / 'ayma / aima
#'?aima
'?ayma-tá 'ama
'?ayma ko-ee
woman cried, wept
woman dog, bitch
woman, this (closer)
woman, thou
womb, house of birth
worm, inch, reddish caterpillar, 22 feet
   worm (cf Tsamai)
wrist
yawn, to
   yawn, to (cf Tsamai [sammaZ])
yellow, grey (different informants)
yellow (may be native word)
yes
yesterday
yogurt (Amharic ţrgo)
young man (cf Oromo, Amharic)
YoBr (cf Tsamai)
YoSi (cf Tsamai)
   YoSi (cf Tsamai)
you, ye, 2nd pers.pl
to you, for you
   you (pl) are good
your (pl), yours
   you (pl) (direct object)
zebra / pl (cf Tsamai for sg/pl)
zebra (cf Male)

Problem Words

again (translation accurate?)
chief (noun) (morphology)
cold (both probly errors)
dawn
down, there (or something like that)
God, god (loan translation < Amharic?)
heavy (morphology very unclear)
hunter (internal morphology?)
many fathers (data conflict)
night (?)
scratch, to (somo dubbio)
straight (morphology?)
teach, to (morphology?)
think, to (morphology?)
unknown element in 'twill rain today'
weed (no clue to its structure)
whose (morphology unclear)
woman, that (translation?)
More Possible Cognations

bladder (but cf' Tsamai `puff')
catch, to (a Nostratic phylum cognate)\textsuperscript{8}
rise early, early stage of rising (moon)
the sun rises
shiver from cold
shiver from fear
sorghum
termite (cf' Arbore [limmê] of SLLE)
(Hayward's Arbore [ririnb'])
termite (cf' Tsamai [ˈilmate])
tomorrow
dawn

fugo
qāfi
kādi / kād'ī (Amharic qdd)
&axaco ki-kata
bari (re Semitic b-r-d)
naH (Somaloid)
musko (Oromo, et al.)
rimarimo

#'irmati
baram (Oromo bóru)
bə'ri

\textsuperscript{8} See note 3.
The Origin of the Tasmanian Languages

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This paper results from an ongoing project aimed at classifying all the Indo-Pacific (Greenberg 1971) languages of Indonesia and the Australias by descent. The Tasmanian languages are now extinct, due primarily to a shameless campaign of genocide conducted by Australian settlers in the first half of the nineteenth century. This paper follows anthropological tradition by discussing them and other extinct languages in the ethnographic present.

Methodology

A spreadsheet-style database was created including several hundreds of words, when available, of all the non-Austronesian languages of New Guinea, Indonesia and the Pacific islands and some Australian languages. Dozens of Austronesian languages spoken in and around these areas were used as a control group, and to identify and factor out loanwords from Austronesian into Indo-Pacific. A similar database created by Paul Whitehouse contains wordlists from around the world, most pertinently nearly every language of Australia and many New Guinean languages. This database played a major role in the later parts of this study.

Etymologies were identified across this vast array of languages. Their distributions and qualitative agreements were then analyzed into factors that are held to represent either vertical retentions by taxa (classes of descent) or horizontal patterns of borrowing.

In general, grammatical features were analyzed as lexemes, rather than as typological features. Despite numerous sources and wordlists, very little is known about Tasmanian grammar, so the placement of Tasmanian by necessity relies primarily on lexical agreement.

Both the distributions across and qualitative agreements within these etymologies clearly show Tasmanian to be a member of the Pacific branch of Indo-Pacific. Each of a handful of salient counterexamples is explicable by relatively recent borrowing from the Kulinic languages of Victoria, directly across the Bass Straits from Tasmania.

Classification

The New Guinean branch comprises all of Greenberg’s New Guinea mainland groups as well as his Pacific group. Within New Guinean, Pacific and Madang-Adelbert together constitute the Madang-Pacific group.

The Tasmanian languages share a common origin with the Pacific branch of Indo-Pacific. The membership of Pacific is as delineated by Greenberg (1971: 815-819), but with the addition of Yele as per Würm’s (1975a) East Papuan Phylum, which in most respects is identical to Greenberg’s Pacific, and Tasmanian.

The Solomonic languages, including Pele-ata (Wasi) on New Britain and all of the non-Austronesian languages of the Solomons and beyond, comprise a distinct group within Pacific. Tasmanian is a member of this group:
I. Pele-ata
II. Bougaineville
   W. Bougaineville
   E. Bougaineville
III. Central Melanesian
   Central Solomons
      Baniata-Bilua
      Lavukaleve-Savosavo
   Rossel-Santa Cruz
      Yele (Rossel Island)
      Reef-Santa Cruz
IV. Tasmanian

The languages of New Britain and New Ireland, with the exception of Pele-ata, stand beside Solomonic as coordinate members of the Pacific group. This arrangement differs from Greenberg’s only in the inclusion of Tasmanian and Yele, and in the creation of the Rossel-Santa Cruz subgroup of Central Melanesian. Further sub-grouping is desirable, but has not yet been definitively resolved.¹

Maritime Migration

This internal sub-grouping of Pacific, along with Pacific’s special relationship to Madang-Adelbert within New Guinean, suggests a maritime exodus from New Guinea beginning in the Bismarcks and proceeding as far as Tasmania to the south and Santa-Cruz to the southeast (and possibly beyond).

It has generally been assumed that the Tasmanians arrived on foot from mainland Australia at a time when ice-age sea levels left Tasmanian connected to the continent. But because the speakers of every other known Solomonic language reached their current locations in boats, it is reasonable to allow that the speakers of the ancestor of the contemporary Tasmanian languages might have arrived by sea.

The feasibility of this scenario is proven by the early date of human settlement in the Solomon Islands (28,000+ b.p.; Spriggs 1992: 418), which necessitated watercraft seaworthy enough to cross several hundred miles of open ocean. While Tasmania is much further, most of this voyage could be made along the Australian coast, perhaps resulting in one or more intermediate settlements that were subsequently eliminated, abandoned, or absorbed into local populations.

In this light, the identification of several pockets of “Tasmanoid” or Barrinean physical types along the East Coast of Australia (Birdsell 1967) need not in itself imply the temporal priority of Tasmanians on the Australian continent.

¹ The extinct Kazukuru dialects of New Georgia, known only through the scantiest documentation found in Lanyon-Orgill (1953), do not really belong with Indo-Pacific, despite the claims of Lanyon-Orgill, Capell (1969) and Wurm (1975, 1982). For instance, Kazukuru pronouns show an unmistakable parallelism with Roviana, the main (Austronesian) language on the island (Rov. arau, Kaz. rau-no 1sg., Rov. agoi, Kaz. goi-no 2sg., Rov. asa, Kaz. sa-na 3sg., Rov. ghiia, Kaz. nggito 1pl.incl., Rov. ghami, Kaz. gimo 1pl.excl., Rov. ghamu, Kaz. guno 2pl., Rov. arini, Kaz. riniai 3pl.) However, there are several items on the Kazukuru wordlists which belong to Central Melanesian etymologies, demonstrating that the Kazukuru people once spoke a Pacific language, prior to the time of documentation.
Previous Publications on Tasmanian Languages

The first published work to seriously examine the Tasmanian tongues was E.M. Curr’s voluminous *The Australian Race* (1887), which, despite its title, concerns itself primarily with aboriginal languages as they were attested shortly after the time of conquest. Appendix One (pp. 593-675) is devoted to the presentation and comparison of primary-source vocabularies and a brief discussion of Tasmanian’s relationship to Australian in which Curr concludes that “both are descended independently from Negro languages” (p. 603).

H.Ling Roth’s *The Aborigines of Tasmania* (1890) discusses the Tasmanian people and their culture. Chapter twelve (pp. 178-190) deals with several aspects of the languages, and while too brief to provide an adequate basis for further linguistic analysis, is nevertheless a careful and sober-minded commentary of value to the linguist.

Alfredo Trombetti (1923), an early proponent of global linguistic monogenesis, and his student Ricardo Gatti (1906-9), discussed Tasmanian within the context of Trombetti’s broader global classification. Both Trombetti and Gatti believed Tasmanian to be a member of a vast family including the languages of New Guinea and Australia along with Andamanese, and proposed many hundreds of etymologies, of widely varying credibility, to support this contention. However, very little data from Indo-Pacific New Guinea was available to them, and their “Papuan” data is mostly Austronesian.

Wilhelm Schmidt, in *Die tasmanischen Sprachen* (1952), having compiled all the primary materials he could find with great care and attention to detail, delineated and reconstructed five Tasmanian languages along with proto-Tasmanian. The primary source attestations underlying these determinations are indexed in the latter portion of the book.

Arthur Capell (1956) excluded Tasmanian from his Common Australian, and evaluated resemblances between Tasmanian and Victorian languages, which are discussed later in this paper. “What do we know of Tasmanian language?” (1968) offers a short analysis of Tasmanian phonology and grammar, including several interesting text examples.

Joseph Greenberg (1971) in his landmark “The Indo-Pacific Hypothesis” concluded that Tasmanian belonged with the non-Austronesian languages of New Guinea, Indonesia and the Pacific Islands in an Indo-Pacific family. Drawing solely from Schmidt’s reconstructions, he provisionally established Tasmanian as an independent branch of Indo-Pacific. His classification was based on material gathered in his Indo-Pacific Notebooks (n.d.), which was transcribed with great accuracy from the majority of published sources available at the time.

Stephan Wurm (1972) compared Tasmanian with the rest of Australian, and concurred with Capell that Tasmanian did not belong in the Australian taxon, to which all other languages spoken on the continent belong. Following Capell, he also discussed resemblances between Tasmanian and the Kulinic languages of Victoria, which he attributed to borrowing.

Later (1975b), Wurm evaluated Greenberg’s placement of Tasmanian with Indo-Pacific, and while maintaining that Greenberg’s evidence was insufficient, noted that “any similarities present tend to be more with languages now recognized as belonging to the East Papuan Phylum [i.e. Pacific]...” (p. 927).

N.J.B. Plomley (1976) presented lexical material in Tasmanian from all extant primary sources in their original orthographies and glosses. A loose organization of related items is offered, but in a far less processed form than that of Schmidt, and without reconstructions. He included extensive material from the diaries of George Augustus Robinson, which were not available to Schmidt at the time of publication.

R.M.W. Dixon (1980) saw the languages of Tasmania as unrelated to those of Australian or any other family, insisting that, “The genetic affiliation of Tasmanian is, and must remain, unproven” (p. 233).

The author extends his apologies to any whose valuable contributions were not mentioned in this section or that following.
Language Names, Locations and Sources

The distinction between languages and dialects in Tasmania might be debated. Certainly there were at least three, these being the Western, Northern and Eastern. For our purposes here, we shall follow Schmidt (1952) in recognizing five Tasmanian languages, with the Eastern group divided into its Northeast, Mideast and Southeast portions.

Besides Tasmanian, the following languages and language groups, listed here by area, are frequently cited in this text, with material drawn from the following sources:

Madang-Adelbert

New Britain

New Ireland
Kuot (Panaras); Beaumont (1972), Capell (1967), Chung & Chung (1996), Lithgow & Claasen (1968)

Bougainville

Central Solomons

Santa Cruz and Reef islands

Rossel Island
Yele (Yeletnye) and dialects thereof; Henderson & Henderson (1974), Henderson (1975), Ray (1938)

Victoria
Kulinic family; Blake & Reid (1998), Blake, Clark & Krishna-Pillay (1998), Blake, Clark & Reid (1998), Hercus (1986)

Finally, material from Greenberg's Indo Pacific Notebooks (n.d.) was available for most of these languages, although considerably overlapping the sources listed above. Words from languages not listed above were taken from the Usher or Whitehouse databases, the sources of which are available on request.

Orthography

A practical orthography has been adopted here for Australian languages in the tradition of the literature. No Australian language appearing in this paper distinguishes voiceless from voiced stops; here they are all shown as voiceless, with th, ty and rt indicating the dental, palatal and retroflexed stops respectively. Similarly, nh, ny, rr and ng indicate dental, palatal, retroflexed and velar nasals. In many cases, dental and palatal articulations are not phonemically contrastive, but here we avoid these determinations in following the source.

The single r in Australian generally refers to the retroflex glide or flap in contrast to rr which is an alveolar tap or trill. Outside Australia, including Tasmania, a single r is used to mean any rhotic, none of which are contrastive.

Capital R and T in provisional reconstructions are used to indicate rhotics and lingual stops of indeterminate quality.

Schmidt's (1952: 106, 110-113) "arabischen Laut", supposedly a voiced laryngeal fricative, but just as likely a velar (Capell 1968: 2), is written here as gh.
All unmarked vowels have Latin values. \( \hat{e} \) and \( \hat{i} \) are mid- and high-central vowels respectively. Schmidt's use of \( \hat{o} \) for what was probably a schwa is preserved, as is Wurm's \( \hat{o} \) in the Reef-Santa Cruz dialects.

Hyphens within cited words indicate morpheme boundaries, although not necessarily separability. Material that is definitely optional is parenthesized. Forward slashes indicate paradigmatic alternations.

Abbreviations of Taxa

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Mad</td>
<td>Madang</td>
</tr>
<tr>
<td>Rai</td>
<td>Rai Coast</td>
</tr>
<tr>
<td>Mab</td>
<td>Mabuso</td>
</tr>
<tr>
<td>Ade</td>
<td>Adelbert</td>
</tr>
<tr>
<td>J-W</td>
<td>Josephstaal-Wanang</td>
</tr>
<tr>
<td>PIM</td>
<td>Pihom-Isumrud-Mugil</td>
</tr>
<tr>
<td>NBr</td>
<td>New Britain and New Ireland (sub-grouping unclear)</td>
</tr>
<tr>
<td>Was</td>
<td>Pele-ata (Wasi) language</td>
</tr>
<tr>
<td>Bou</td>
<td>Bougaineville</td>
</tr>
<tr>
<td>CMe</td>
<td>Central Melanesia</td>
</tr>
<tr>
<td>CSo</td>
<td>Central Solomons</td>
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<tr>
<td>RSC</td>
<td>Reef-Santa Cruz</td>
</tr>
<tr>
<td>Ros</td>
<td>Rossel Island (Yele)</td>
</tr>
<tr>
<td>Tas</td>
<td>Tasmanian</td>
</tr>
<tr>
<td>Kul</td>
<td>Kulinic</td>
</tr>
</tbody>
</table>

Citation of Tasmanian forms

Schmidt's divisions of Tasmanian are abbreviated W., N., NE., ME., and SE. below. Some lists cited in Plomley (1976) have not yet been reconciled with Schmidt's dialects; words drawn from these lists are accompanied by the name of list as it appeared.

Although Schmidt's forms are technically reconstructions, and hence appear in his book with asterisks, they are not proto-forms in the classic sense and are thus shown here without any special marker.

Most of the spelling variations in Tasmanian words from the same dialect reflect the diversity of the primary sources. In his drive to regularize Tasmanian spellings, Schmidt also eliminated some valuable information and introduced some elements, such as a supposedly laryngeal fricative, of questionable fidelity. Here our goal is only view primary attestations as they appeared. Transparent orthographic variations have been regularized, for instance 'ee' from English-speaking informants is represented as \( \hat{e} \), 'gn' from French informants as \( \hat{ny} \), etc. but no further second-guessing of attestations has been attempted, even though some doubtlessly contain minor errors in interpretation.

It is unclear to what, if any, extent voiced and unvoiced stops are contrastive in Tasmanian; variations here follow the source.

Pronouns

One unusual feature of Tasmanian pronouns is the apparent lack of distinction between singulars and plurals in all persons:
1 sg. or pl.

*mV-

W. *ma, N. *manga "I, we"
NE., ME. *mina, SE. *mina, *mana "I, we"

2 sg. or pl.

*ni-

W. *nina, N. *nena, *ninga "thou, you"
NE., ME., SE. *nina "thou, you"

3 sg. or pl.

Tas W., N. *nara "he, she, they"
NE., ME., SE. *nara "he, she, they"

The finals on the first and second persons are suffixes, as may be seen in their Southeastern
possessive forms, -mia and -nia respectively, and the Western first person which shows the bare root.
It might be suggested that these suffixes are identical in origin to the -na of common nouns discussed
below. But the variant -nga of North Tasmanian weighs against this interpretation; the alternation is not
phonological, as -na appears in Northern common nouns unchanged. On the second person, both
variants are cited.

The first person is directly comparable to plural forms in other Pacific languages:

1 pl.

NBr Anêm min (excl.), ming (incl.)
Kol mang
Qaqet m- verbal subject
CMe CSo Lavukaleve me, Savosavo mai (incl.)
RSC Nanggu ni-mwe, Banua ni-mu (excl.)
Ros Yeletnye n-mu (free), ma- (intr. V. sbj.), -ma, -mo (V. obj.)

This pronoun is found throughout Indo-Pacific usually signifying the exclusive, often with a
nasal suffix.

Anêm shows the same -n ~ -ng alternation in the first person plural with a clear semantic
significance; min (excl.) vs. ming (incl.). It is unclear whether this is related to the variation in
Tasmanian suffixes.

A parallel development to that proposed here for Tasmanian "I, we" may be found on the other
side of the Indo-Pacific language area, in Önge of the Andaman islands, where at least one dialect
(Brown 1914) has expanded the use of the (cognate) first person plural m- to include the singular.

The Tasmanian second-person pronoun base, ni, is characteristic of Indo-Pacific as a whole
(Greenberg 1971: 844-5), and apparent cognates are well-attested in every branch save Timor-Alor-
Pantar, including Madang-Pacific and Australian (where *ni or *nhi is overwhelming attested as the
Australian second-person singular, despite Dixon’s inexplicable contention that Tasmanian ni(-na)
“shows no significant similarity with recurrent Australian forms” (1980: 233)). It gives rise to both
singular and plural forms, which can be distinguished from each other by ablaut, suffixes or, less often, a
contrast between n- and ng- in the root, which is presumably secondary. Following are some Pacific
reflexes in both numbers:
It appears likely that in Proto-Pacific, the numbers had become distinguished, at least in part, by the quality of the initial consonant, as in Anêm. In this way, the Tasmanian is closest to the singular forms listed above, but the substitution of initial *n- for *ng- is very common, and it is easy to see how merger of these sounds in this case could result in homophony.

Whether one form has replaced the other, as with the first person, or the erstwhile plural and singular forms have converged, is impossible to say without a rigorous examination of the sound correspondences pertaining between Tasmanian and the other Pacific languages.

There is also a Northeastern (Ben Lomond tribe) form nôko “thou” (*nucco’), attested only in the singular, which might be compared to Madang-Adelbert *na(-kV) id., where *-kV is a suffix found on most free pronouns (e.g. Mad/Mab/Murupi naga etc., Ade/J-W/Moresada na-gh etc.), as well as many other similar forms throughout New Guinea (e.g. Dadibi na-gi/na-go (abs./erg.), Foe na-xa (abs.). The significance of the Tasmanian final in this case is presently unclear.

A possibly parallel case is offered by the following Tasmanian demonstrative series:

Similar demonstratives are found throughout Indo-Pacific, including the Pacific branch; e.g. Bilua nei “this (f.sg.)”, ni “these.” In several Madang-Adelbert languages, this base is found with a suffix *-kV, possibly the same as that discussed above (e.g. Ade/J-W/Moresada mîl, Wadiginam mîl-k, Musak na-ku “this”), but the evidence here is too scant to warrant certainty.

Finally, consider this word for the third person singular:
This form is only attested in the west, presumably having been replaced by *nara*, a form found in all dialects which encompasses both singular and the plural third persons. This might be itself connected to Qaqet *ngar* "they", but the attestation is too thin to warrant any certainty.

**Articles**

**singular -na**

A suffix *-na* is found on the vast majority of attested Tasmanian nominals. This particle stumped Dixon who that “a most careful checking of the data and investigation of all sorts of hypotheses fail to throw any light on the function of these ‘suffixes’ [-na and -ga]: they appear not to be markers of number, or case, or pronominal possession.”

Roth (1890 p.184) treats it as a singulative, writing, “It is possible that the plural may have been expressed by simply omitting the singular termination -na, but this is merely surmise.”

Capell (1968: 5-6) presents several text examples which illustrate the uncertainties surrounding the use of *-na* in the Eastern dialects, and suggests that the variations seen therein “point to rules of definiteness and indefiniteness which cannot now be recovered.” Some rules, though, are very clear. It is absent when the noun is incorporated or preposed as the first member of a compound or phrase, and when another suffix appears; e.g. *wi(-na) “fire”, wi-ni “by/in the fire.” And it may be dropped when the noun refers to an mass (e.g. “darkness”) or plural noun (upon which the paucal -*lia* may appear instead; see below.)

Greenberg (1978) proposed a path for the development of gender markers and fossilized articles in general from what were once definite articles. In this analysis, stage I refers to a fully active definite article, stage II to an article which has lost its connotation of definiteness and now stands a mere marker of nominality (along with whatever gender connotations may be present), and stage III to an erstwhile article which is now fossilized and without synchronic significance.

By this measure, East Tasmanian -*na* is or is well on its way to being a stage II article, with no implication of definiteness or in this case even gender, but merely singular nominality. In North and West Tasmanian, -*na* seems for the most part to be totally fossilized, bringing it to Greenberg’s stage III.

Close analogues to this suffix may be found in the Bougainville and Central Solomon branches of the Pacific group. In the Nasioi and Siwai languages of Bougainville, -*na* is a definite (stage I) article. In the Lavukaleve language of the Solomons, *na* is a singular stage II article following masculine nouns, and is also found as a third-singular masculine demonstrative *hoi-na* (*hoi- distant demonstrative prefixed to all third persons*). Savosavo postposes *na* to subject nouns and stressed personal pronouns. Finally, Baniata suffixes *-na* to demonstratives and predicative adjectives with neuter gender.

This suffix is not restricted to the Pacific languages. It is found as an article in various parts of New Guinea, e.g. Kwerba -*na*, Orya -*na* definite article, Kunimaipa *na* indefinite article, etc. Most germanely, in the the Pihom-Isumrud-Mugil branch of Madang-Adelbert, we find *-na* and variants -*na*, -*ne*, -*no* and -*ng* glossed as singulatives.

Whatever connotation of gender this particle may once have carried, if any, is presently unclear, but its transition from stage I definiteness as in Nasioi to stage II in East Tasmanian and finally to stage III in North and West Tasmanian is well-documented.

**paucal -*lia***

Southeastern Tasmanian (and perhaps other dialects as well) uses *-lia* as a plural or paucal form. Although Roth, Capell and Schmidt agree in treating this as a plural, all of the published examples
are consistent with a paucal interpretation (e.g. hands, ears, family, (slices of) bread), and in fact most are natural pairs.

A dual or plural suffix of the form -\( li \) or -\( le \) is widely attested throughout Indo-Pacific; e.g. Andamanese/Onge -\( le \) nominal plural; Timor-Alor-Pantar/Bunak -\( li \) etc., pronominal dual. etc. Reflexes of this ancient suffix are well-attested throughout Madang-Pacific.

For instance, both the Rai Coast and Mabuso branches of Madang use -\( le \) to indicate the dual on pronouns. The Josephstaal-Wanang branch of Adelbert has a suffix -\( rV \) with the same significance; in some languages (e.g. Siliebi, Katiati, Musak) this has come to include the plural.

In the Rotokas language of Bougainville, -\( re(l) \) is the dual on pronouns and regular nominals. Lavukaleve of the Solomon Islands uses -(\( V \)l) on common nouns and -\( la \) on pronouns, while Savosavo has -\( lO \) for the dual on common nouns. Finally, the Aiwo language of Santa Cruz uses -\( le \) for the pronominal dual.

However, no other reflex of this suffix shows a vocalism comparable to the diphthong of Tasmanian. Perhaps it is more convincing to derive this suffix from the Eastern word for “a few (2-4)”; SE. l\( â \)xye, l\( â \)a-wa, ME. l\( â \)(gh)a-wa, lu-wa, NE. la-wa “a few (2-4)”.

**Tasmanian-Pacific Etymologies**

Although several fairly regular and obvious sound correspondences have been identified between the languages dealt with below (e.g. Pele-ata -\\( x- \) = Tasmanian -\( g- \) in “hair, leaf”, “leaf”, “sing”, and “water (fresh)” below), none are dealt with in this paper. In any case, no connections are presented which require extensive or unusual phonological transformations. For let us consider the lexical evidence as presented, which can serve as the basis for future work of this nature.

This list is not by any means an exhaustive inventory of Indo-Pacific reflexes in Tasmanian; items were selected only to demonstrate Tasmanian’s membership in the Pacific subgroup.

Note again that there is no phonemic distinction between voiced and unvoiced stops in Tasmanian; variations in this regard belong to the sources.

Etymologies that are known to be reflexes of older Indo-Pacific forms are marked with an asterisk. Some of these were noted by Greenberg (1971); these are noted in brackets as Gr71, followed by the page number and the number of the etymology as it appeared.

<table>
<thead>
<tr>
<th>word</th>
<th>CMe</th>
<th>CSo</th>
<th>RSC</th>
<th>Tas</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>bell</em>y</td>
<td>Lavukaleve <em>pala, vala “belly”, Savosavo boli “guts”</em></td>
<td>Nea <em>bolu, bola, Nambakaengô bole</em></td>
<td>NE. <em>pla-na “stomach”</em></td>
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<tr>
<td><em>bone</em> [Gr71: 856; IP12]</td>
<td>Yeletnye <em>tine, dono, donagai, E., W. dona, SW., Kwai, Olango dôna</em></td>
<td>SE. <em>tena, tene(-na), teni(-na) “bone, rib, side”</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>child</em> (2)</td>
<td>Siwai <em>pehkoro</em></td>
<td>SE. <em>pagarai</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>cloud, fog</em></td>
<td>Siwai <em>muna, imuina “cloud”</em></td>
<td>NE. <em>muna, mina “fog”, muni(-na) “cloud”, ME. mune(-ke-na) “fog”, mien-teia-na “clouds</em></td>
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</tbody>
</table>
in sky" (really "cloud cover"; tei(a)(-na) "fog, obscurement")

c.f. Rai/Usim menē, Mab/Munit min "cloud"

*cold

Bou Buin kamara- "be cold"
          Nasloï kama-ri "cold"

Tas          N. kavala
          NE. kawlik, - : sn kawala

c.f. Madang-Adelbert *kVm(b)ri.; e.g. Mad/Rai/Jilim imbri-, Ade/J-W/Katiati kümri, Musak kitbr
          "cold", Paynamar gumrir- "be cold."

*day

NBr          Kuot la
          Qaet lei "today"
          Kol al

Was          Pele-ata le'ai+a "tomorrow"

CMe          CSo          Lavukeleve le "day", Bilua lea "tomorrow"

Tas          N. loi-na "sun, moon, day"
          NE. le-na "day, (sun) shines"

*day

NBr          Anem u-gō-pēkpēk "dawn"

Bou          Konua bogi "day", Rotokas voki "period, day"

CMe          CSo          Bilua pokoza "daylight", Savosavo ivago "day"

Tas          ME. pōgō-li(-na) "sun", pōga "sun" (homophonous with "man")

c.f. Ade/PIM/Mawak peki etc., Bunabun bagen "daybreak", etc., Mad/Rai/Saep fekēn
          "tomorrow" etc.

*?ear

CMe          Ros          Kwai nggwaia, Yeletnye ngwâne, nganea, Wamiu ngania, SW. nania, Olangu
          W. wayi
          SE. kwigi, kwengi, kûe(n)yī, wayi, v(u)egi, voigi


egg

CMe          RSC          Nea tapiō, dapiu

Tas          ME. tabi(-na)

eye, face

CMe          CSo          Lavukeleve lemi "eye", Savosavo la(m)bi "face"

RSC          Banua utu-leimī "face"

Tas          N. limōn(-rika) "eye"
**finger, hand**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
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<tbody>
<tr>
<td>NBr</td>
<td>Qaqet</td>
<td>rika “finger”, rix-igl “hand”, rix-it “arm”</td>
</tr>
<tr>
<td>CMe</td>
<td>Savosavo</td>
<td>ririkina (m.) “finger”, nae-ririkina “toe”</td>
</tr>
<tr>
<td>Tas</td>
<td>N.</td>
<td>ri “hand”, rigl “heel” (?rily)</td>
</tr>
<tr>
<td></td>
<td>ME.</td>
<td>rika-(be)-na “hand”, rika-teni-na “finger”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(teni(-na) “bone”), Big River ri (k)-na, SE.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ri(a) “hand”, ?SE logi (also ME. ‘drega’)</td>
</tr>
</tbody>
</table>

C.f. ENGH/Kewa rikini “fingers, toes”.

**fire (1)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bou</td>
<td>Rotokas</td>
<td>tuitui</td>
</tr>
<tr>
<td>CMe</td>
<td>Yeletnye</td>
<td>nduenh, ndauwe, ndua, ndia, deua, E. nduwe, W. ndiu, Olango, SW. ndé,</td>
</tr>
<tr>
<td>Tas</td>
<td>W.</td>
<td>tol</td>
</tr>
<tr>
<td></td>
<td>SE.</td>
<td>to</td>
</tr>
</tbody>
</table>

C.f. East New Guinea Highlands/Wiru toe.

**fire (2)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBr</td>
<td>Kol</td>
<td>kuong “fire”</td>
</tr>
<tr>
<td>?Bou</td>
<td>Siwai</td>
<td>kunakuna</td>
</tr>
<tr>
<td>Tas</td>
<td>G.A. Robinson (?NW)</td>
<td>kwiong</td>
</tr>
</tbody>
</table>

C.f. “wood” below.

**hair, leaf**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was</td>
<td>Pele-ata</td>
<td>laxu, laghu, lagu-singe (kisinge “head”)</td>
</tr>
<tr>
<td>CMe</td>
<td>Bilua</td>
<td>lekona (c.f. Baniata -na neuter 1 noun class), Lavukaleve legis “leaf”</td>
</tr>
<tr>
<td>CSo</td>
<td>RSC</td>
<td>Nea lengu, langu, lengi(-nwa) “leaf”</td>
</tr>
<tr>
<td>Tas</td>
<td>NE.</td>
<td>legowi-na, ligowi-na, ligéwe “hair”, ME. lagowé-na “moss”, - : sn lagôna “hair”</td>
</tr>
</tbody>
</table>

**heavy (1)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bou</td>
<td>Buin</td>
<td>mokinasi</td>
</tr>
<tr>
<td></td>
<td>Nasioi</td>
<td>manki</td>
</tr>
<tr>
<td>Tas</td>
<td>ME.</td>
<td>mônge “load (n.)”</td>
</tr>
</tbody>
</table>

**heavy (2)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMe</td>
<td>Banua</td>
<td>mule, Nea mile, Nanggu imalwe</td>
</tr>
<tr>
<td>RSC</td>
<td></td>
<td>ME. mura</td>
</tr>
</tbody>
</table>

**leaf**

<table>
<thead>
<tr>
<th>Language</th>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBr</td>
<td>Pele-ata</td>
<td>boloxu</td>
</tr>
<tr>
<td>Bou</td>
<td>Rotokas</td>
<td>purukou “hair”</td>
</tr>
<tr>
<td>Tas</td>
<td>N.</td>
<td>paraka “flower”</td>
</tr>
<tr>
<td></td>
<td>NE.</td>
<td>paroko “leaf”, ?SE. poroki, paroge, perogi “tree, eucalyptus branch w/leaves”</td>
</tr>
</tbody>
</table>
many, all

Bou Buin turuge/turugogo “all (sg./pl.)”
CSo Savosavo supu(-torongo) “many”
Tas N. torangaty “plenty”
ME. tiranga-na “crowd”, tolan(y)a “plenty”

mother

NBr Taulil tie (c.f. tie “father”)
Was Pele-ata tie
CMe RSC Nambakaengō tyia, Nanggu ite, ise, Aiwo ist(i)o
Tas NE. ityie (c.f. ityale “father”) [supposedly Pidgin English; Plomley 1976]

*rain

CMe RSC Aiwo teuwa, Nambakaengō tewa, Banua tewado
Tas W. taiva

run, walk

Bou Buin rugor- “walk”, Siwai kura-rakei (Buin kuro- id.)
CMe Savosavo ra(n)ge, raghe “run”
CSo Tas ME. röngwe, rene, dringe, rönyi “run”

*sing

Was Pele-ata lexī
CMe CSo Savosavo linge
Tas NE. legōne “sing”, langkana, SE. -la(ng)gana “dance”, ME. lyene

*shoulder

CMe CSo Bilua vakare, Lavukaleve nga-fakas
Tas ME. pugare-na

speak

NBr Sulka mun
Tas SE. muna “word”

thirsty

CMe CSo Bilua kabare
Tas N. kabruta

water
In his classic work on the Australian family, which excluded Tasmanian as a member of Common Australian, Capell (1956: 94-95) examined claims of resemblances between Tasmanian and Australian, first with the languages of the supposedly “Tasmanoid” Barrinean pygmies of Cape York and second with the Kulinic languages of Victoria.

Capell found ten lexical resemblances between Tasmanian and Australian: “man,” “head,” “mouth,” “hand,” “tooth,” “tongue,” “foot,” “smoke,” “fire” (listed below as “tree” etc.), and “stone.”

In the interest of history, we should mention that four of these, “fire,” “smoke,” “two,” and “tongue,” were presented sixty nine years earlier by Curr (1887: 596), along with the second person singular discussed earlier in this article.

Following Capell, Stephan Würm (1972: 168-74) added “two” to this list, and concurred that “The agreements are essentially with the forms of the Australian words as they appear in the Kulinic and Kurnic Groups of Victoria. Eight of the words are Common Australian in Victorian phonological forms, and three (‘man’, ‘mouth’ and ‘stone’) belong to the Victorian regional vocabularies.”

Each of the most convincing comparisons listed below (Capell’s comparisons involving “foot,” Tas. *toko-na*, Vic. *dina*, and “head,” Tas. *elu:ra*, Vic. *wala*, are highly unlikely) is consistent with a scenario in which the Tasmanian tongues have borrowed a fair number of prominent lexes from Kulinic or some very close relative thereof. There is thus far little evidence for loans in the other direction.

The identification of these loanwords addresses one of the most obvious objections to Tasmanian’s inclusion in Pacific: specifically, if Tasmanian were seen to retain a good number of words
which are clearly Indo-Pacific (c.f. esp. “tongue,” “tooth,” “two” below), but are not found in other Pacific languages, this would imply that Tasmanian is an independent branch of Indo-Pacific, coordinate with Pacific but not a member thereof.

In the Kulinic words below, $R$ indicates a rhotic, the precise value of which could not be determined from the primary source.

hand

<table>
<thead>
<tr>
<th>Language</th>
<th>Tas</th>
<th>NE.</th>
<th>Kul</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mònenga</td>
<td>“am”</td>
<td>marna(-ng(i))</td>
</tr>
</tbody>
</table>

Wannon, Warmambool maRang (Bunganditj marna, maRa id.)
Wuywurrung, Thagungwurrung, Boonwurrung marnang, Wadi-wadi manangi (c.f. Wemba-beraba, Wimmera, Tjapwurrung, Wergaia manya, Wemba-wemba manyê, Madhi-madhi manha, Djadjawurrung, Wathawurrung mama)

Very possible.

?man

<table>
<thead>
<tr>
<th>Language</th>
<th>Tas</th>
<th></th>
<th>Kul</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N.</td>
<td>*pëna</td>
<td>Tjapwurrung, Djadjawurrung pang, Wemba-beraba, Wimmera peng “man”,</td>
</tr>
<tr>
<td>ME.</td>
<td>*pëna</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

smoke

<table>
<thead>
<tr>
<th>Language</th>
<th>Tas</th>
<th></th>
<th>Kul</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SE.</td>
<td>bura-na</td>
<td>Bunganditj purluny</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wadi-wadi pu(R)i, puRi-ngi, Ledji-ledji puRi-ngi, Wimmera puriny, Tjapwurrung purt, puRi,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Djadjawurrung, Wathawurrung, Wuywurrung, Thagungwurrung purt, Madhi-madhi puyuti</td>
</tr>
</tbody>
</table>

Cf. Mad/Rai/Sumau buru, etc., /MabMunit ebur, Adel/PIM/Waskia bur id.

Schmidt (1952: 391) places this word with *progu:-na “smoke” (?c.f. Bou/Rotokas purukai “ashes”), but derivation from Kulinic might also be considered. There is no special resemblance to nor divergence from the Kulinic forms. It is therefore difficult to say whether the Tasmanian word represents a retention from Pacific or a Victorian loanword.

stone

<table>
<thead>
<tr>
<th>Language</th>
<th>Tas</th>
<th></th>
<th>Kul</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>**låna (Schmidt 1952: 257) [maybe really tånga]</td>
<td>N.</td>
<td>Wuywurrung, Boonwurrung la:ng, Djadjawurrung laarr, Wemba-wemba,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>longa</td>
<td>Wemba-beraba la(rr), Tjapwurrung, Wathawurrung laa</td>
</tr>
<tr>
<td></td>
<td>NE.</td>
<td>låna, ME., SE.</td>
<td>lôna, lôna</td>
</tr>
</tbody>
</table>

This word is apparently found nowhere else in either Pacific or Australian, unless it is to be compared to Eastern Australian *thangka; e.g. Dadidadi dhangga, Gugu Bujun dhan.ga, etc; c.f. “tooth” below where Kulinic reflects initial *T- as l-.
tongue

Tas  W. tōle(-na), tōlani

Kul  *thala(-ng(l))
    Boonwurrung, Thagungwurrung, Wuywurrung tyalang "tongue", Djadjaia, Wergaia

tyaling, Wemba Wemba tyaling/tyalingin/tyalinyug (olithylts), Madhi-madhi thalinhu, thalingi
    "language, tongue",

c.f. Yuin-Kuiric/Gadang talany, Dhuwal thalany

This ubiquitous Australian root (Capell 1956:74), while also common in New Guinea,
Andamanese and indeed much of the world (e.g. Austronesian/W.Cham dalah etc., Kordofan/Jomang
dhulunge etc.),² appears in no other Pacific language. The West Tasmanian form *tōlani is basically
identical to those of either Kulinic or Yuin-Kuric, and the separation of the article -na is a back-
formation, either by the Western Tasmanians or by the source, Joseph Millagan, who often separated
words into their constituent parts, but was not always sensitive to small differences in pronunciation

It is instructive to compare the distribution of this word with that of Tasmanian *mena
"tongue" presented earlier which is widely cited across Tasmania, as opposed to only in the west, but is
absent from Australia. Indeed, its distribution within Indo-Pacific is limited to the New Guinean branch.

tooth

Tas  N. liana "tooth, bite"
    e : st liana "teeth"

Kul  *lia(-ng(l))
    Boonwurrung, Wathawurrung, Wuywurrung, Thagungwurrung liang
    Madhi-madhi liangli, lia-ngi, Wadi-wadi liangi, Ledji-ledji liang(ı)
    Wemba-wemba, Wemba-beraba, Wimmera, Tjapwurrung, Djadjawurrung,
    Djadjaia, Wergaia lia

The Kulinic word is likely a reflex of Australian *TirrV(-ngk) (Capell’s (1956: 74) Common
Australian *liirang), which itself derives from Indo-Pacific *TiRV(-ngk) (e.g. Lower Sepik/Yimas
tiring, Chambri sêlangk, South New Guinean *terV; etc.; also c.f. Austroasiatic/Munda/Kurku tiring
(Gatti 1908: 53)), however this word does not appear in any other Pacific language, and the Kulinic form
is phonologically distinct from other Australian reflexes in showing initial *-l- and in eliding medial -rr-

Either North Tasmanian has borrowed this word from Kulinic, or from earlier inhabitants of
Tasmania, and then loaned it to Kulinic. The first scenario seems more likely.

tree, (fire)wood, fire

Tas  W. wi(a)(-na) "tree, (fire)wood"

² Note also Proto-Indo-European *dlnghu3a ‘tongue’ (Hamp), Turkic *dil/*dil ‘tongue’ (Starostin), Tungusic
    *dilga- ‘voice’ (Starostin); Dravidian *ta~r ~ *ta~r/rr- ‘tongue’ (Blažek); Amerind: Proto-Yokuts *thalsath,
    Tsimshian dula ‘tongue’; Khoisan *tali ‘tongue’ (Blažek), etc. [Ed.].
NE., ME., SE. wi(a)(-na) “tree, (fire)wood”

Vic Kul *wi(-ny)
Warrnambool, Wannon winy “fire”
Colac winy “fire”
Tjapwurrung, Djadjawurrung wi, Wathawurrung, Wuywurrung, Boonwurrung,
Thagungwurrung wi:ny, Gundidj winy “fire, firewood”

c.f. Mad/Rai/Yobong, Ganglau, Saep wi “tree”
c.f. Wiradhuric/Gamilraay wi, wi:, Yuwulaay wi: “fire, wood”, Ngiyambaa
wi:(-n), Wiradhuri winy “fire”, Waka-Kabic/Drambala wi:nga, Batjala wing “fire”

It is difficult to say whether the Tasmanian word has been retained from New Guinean *wi plus
the article -na, or borrowed from Kulinic (Australian *wi(-N)) with the nasal suffix reinterpreted as the
common Tasmanian article. Its presence in Rai Coast shows the root to have been present in Madang-
Pacific, but it has not been found in any other Pacific language. In either case, the expected Tasmanian
form is exactly the same.

two

Tas SE. pula, pura, puali

Vic Kul Warrnambool pulatya, Wannon pulaty, Bunganditj pulatya, puwaty, pulak
Colac pulatuk
Madhi-madhi puletha, pulerda, Wadi-wadi puli, pulaty(a), Wemba Wemba,
c.f. Vic/Yota-yota pulapul, pulthupul, Ganai pulaman.

This very widespread root (c 316-317) is present in several branches of Indo-Pacific, including at
least Andamanese (e.g. Aka-Bea pdr etc.) and Australian (Common Australian *bula(dj) (Capell
1956: 77-78)); however, it is absent from the Pacific group outside of Tasmanian. Schmidt (372) places
these Southeastern words with Tasmanian *pia(-wa), but the phonology seems a little unlikely. There is
nothing about the Tasmanian forms which resembles Kulinic in particular; instead it may as well reflect
either pre-Kulinic or some other Australian language, such as any one of a number of languages along the
coast of New South Wales which show *pula alone as well as with suffixes *-R(i) and *-ng, or
perhaps even the earlier inhabitants of Tasmania. Of the attested Kulinic languages, only Wadi-wadi
seems to show the bare form, and it is plausible that the final vocalism results from an elision of *-th.
On the other hand, at least two Kulinic dialects and the closely related Yota-yota of Victoria show a
reduplication of the bare form, while Ganai (Kurnic) appends a different suffix to the base.

Acknowledgement: Special thanks to the Santa Fe Institute, Merritt Ruhlen, Paul Whitehouse and to
the late Joseph Greenberg, and to John Bengtson for his uncommon patience.
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Reflections on Greenberg’s
Indo-European and Its Closest Relatives

Allan R. Bomhard
Charleston, SC, U.S.A.

One of the criticisms often leveled at the Nostratic Hypothesis is the relative dearth of morphological evidence presented by its proponents. Recently, this deficiency has begun to be filled. The late Joseph H. Greenberg has amassed a tremendous amount of morphological evidence in volume 1 of his recent book Indo-European and Its Closest Relatives. On the basis of the morphological evidence alone, I believe that Greenberg has successfully demonstrated that Eurasiatic is a valid linguistic taxon of and by itself. The morphological evidence that Greenberg has gathered for determining which languages may be related to Indo-European is the most complete to date and the most persuasive — it goes far beyond what Illič-Svityč was able to come up with, and it also surpasses what was presented in the chapter on morphology by John C. Kerns in our joint monograph The Nostratic Macrofamily.

I have tried to demonstrate in other works that Greenberg’s Eurasiatic is a branch of Nostratic. If, as I have claimed, that is in fact the case, then there should be clear morphological parallels between Eurasiatic and the other branches of Nostratic, and indeed there are. In what follows, I will present some of the morphological evidence for Nostratic. However, in this paper, I shall not attempt a systematic reconstruction of Nostratic morphology, but, rather, I shall present the evidence in the form of marginalia to Greenberg’s book. I hope that, by doing this, it will be clear that the morphological evidence for Nostratic is both abundant and persuasive. For the most part, I will not discuss the Eurasian data since these are discussed in detail in Greenberg’s book.

General comment

Greenberg did not reconstruct the vowels for the Eurasian pronoun stems he identified. However, this shortcoming can be easily remedied since the evidence from the daughter languages (both Eurasian and non-Eurasian) is fairly straightforward here. Thus: §1. First-Person M: first person independent pronoun (active) *mi, bound form *-m. §2. First-Person K: first person independent pronoun stem (stative) *ka, bound form *-k. §3. First-Person N: first person independent pronoun stem *na (on the basis of Korean na), bound form *-n. §4. Second-Person T: second person independent pronoun stem *ti, bound form *-t. §5. Second-Person S: second person independent pronoun stem *si, bound form *-s. For §6, Second-Person N, on the other hand, the evidence in Eurasian makes it difficult to reconstruct the vowel — indeed, as Greenberg notes, the very existence of a second person pronoun *N in Proto-Eurasian is questionable (but see below).

1 Past ASLIP President.
§1. First-Person M

**Etruscan:** Note Etruscan *mi* ‘I’, *mini* ‘me.’

**Afroasiatic:** This stem appears only in Chadic as an independent pronoun. It also serves as the basis of the first singular verbal suffix in part of Highland East Cushitic: cf. the perfect endings in Hadiyya: *-ummo*, Kambata: *-oommi*, and Sidamo: *-ummo*. In Burji and Darasa, on the other hand, the perfect suffixes are *-ammi* and *-emme* respectively, which are based upon the stem Greenberg discusses in §3. First-Person N.

**Kartvelian:** Proto-Kartvelian *me-*, *men-* first person personal pronoun stem > Georgian *me-*, *men-*, *mena-*; Mingrelian *ma-*, Zan *ma*, *man*; Svan *mi-*. Also note Georgian *m-* first person singular verb prefix (objective conjugation), which is also found in Svan as the first person personal formant (extravert).

**Sumerian:** (Emesal) *ma(-e), me-a, me-e* ‘I’.

§2. First-Person K

**Indo-European:** I have difficulty in accepting Greenberg’s basis for writing the Hittite (and Luwian) laryngeal as *x*. I prefer the traditional transcription *h*, which, of course, says nothing about the phonetics. Greenberg should have given a little explanation here and mentioned that some scholars (Sturtevant and Lehmann, for example) have interpreted *g* as a voiceless velar fricative /x/. I agree with Greenberg’s statement that “The perfect is originally stative and cannot take an object”, but not with his comparison of the Hittite-Luwian endings and earlier Indo-European first person perfect ending *-*Ha with the forms from the other Eurasiatic languages. Rather, I would prefer comparison with the heretofore unexplained first person perfect endings in *-k-* found, for example, in Tocharian A (preterit active) *takā* ‘I was’, Latin *fécē* ‘I made’, Greek *θηκα* ‘I placed’, etc. Elsewhere (Bomhard 1996:94), I have compared the Proto-Indo-European first person perfect ending *-*Ha with the Elamite first person ending -h (note that David McAlpin 1981:122, §552.0, derives the Elamite first person forms in -h from Proto-Elamo-Dravidian *H*). Let’s look at this in a little more detail:

The perfect reconstructed by the Neogrammarians for Proto-Indo-European was distinguished from the present and aorist by a unique set of personal endings in the indicative, namely, first person singular *-*Aa (cf. Sanksrit vēd-ā ‘I know’, Greek oīδ-α, Gothic *wart*), second person singular *-thAa* (cf. Sanskrit vēt-tha ‘you know’, Greek oīθ-θa, and Gothic *waist*), third person singular *-e* (cf. Sanskrit vēd-ā ‘he/she knows’, Greek oīδ-ε, and Gothic *wart*). Except for Armenian and Balto-Slavic, the perfect remained in all branches. It was least changed in Indo-Iranian, Celtic, and Germanic. In Greek, however, it was mixed up with a *k*-formation and, in Italic, with a whole series of non-perfect tense forms. According to Greenberg, the perfect was originally stative, and Winfred Lehmann,
Thomas Gamkrelidze and Vjačeslav Ivanov, Andrew Sihler, and others have made similar assertions. Sihler (1995:564—590) gives an excellent overview of the stative in Indo-European.

Now, Greek has a unique formation, the so-called “first perfect”, which would be better named the “κ-perfect”. As noted by Sihler (1995:576): “Its inception must belong to prehistoric G[reek], for it is already established, within limits, in Hom[er] and in the earliest records of other dialects.” Moreover, Sihler notes (1995:576): “In Hom[er] the formation is found in some 20 roots, all ending in long vowel (from the G[reek] standpoint), and in all of them the κ-stem is virtually limited to the singular stems which actually contain a long vowel... Later the formation, by now more accurately a κ-perfect, spreads to other stems ending in a long vowel, then to stems ending in any vowel (including denominatives), and finally to stems ending in consonants, and to all persons and numbers.” This is very important, for Sihler here traces the expansion of this stem type within the history of Greek itself. Thus, we are dealing with developments specific to Greek. Buck (1933:289—290) agrees with Sihler.

In Latin, we find first singular perfect forms feci ‘I did’ and ieci ‘I threw’ (N.B. faciō and iaciō are “secondary elaborations based on these” [Sihler 1995:562]). As in Greek, the -c-[k] is found in all persons (cf. third singular fecit), and, as in Greek, the -c-[k] has given rise to secondary formations.

The -k- forms are also found in Tocharian, as in first singular preterite active tākā ‘I was’, and, as in Greek and Latin, the -k- is found in all persons and has given rise to secondary formations. Van Windekens (1976:1:495—496) goes so far as to posit Proto-Indo-European *dheq-, *dha-q-, as does Rix (1998:120—121).

On the basis of the evidence from Greek, Latin, and Tocharian, we may assume that a “suffix” *-k- is to be reconstructed for late-stage Proto-Indo-European — what I have often referred to as “Disintegrating Indo-European”. This “suffix” originally had a very limited distribution — it seems to have appeared only in the perfect (< stative) singular of verbs that ended in a long vowel, when the long vowel originated from earlier short vowel plus laryngeal. All of the other formations found in Greek, Italic, and Tocharian are secondary elaborations. But, we can go back even farther — it is my contention that the -k- originally characterized the first person exclusively, from which it spread to other persons. Of course, this suggestion is not new. Sturtevant (1942:87—88) suggested that *-k- developed in the first person singular when a root-final laryngeal was followed by the ending *-xe (that is, *H₂e [Kuryłowicz would write *-าะe]). Though a laryngeal explanation along these lines has not been generally accepted, the suggestion that the -k- was originally confined to the first person singular is still worthy of consideration, especially in view of the extensive evidence from other Nostratic languages.

Elamo-Dravidian: David McAlpin (1981:119—120, §542.1) reconstructs a first person singular appellative personal ending *-kə for Proto-Elamo-Dravidian, and this undoubtedly belongs with the forms Greenberg is discussing. Note the first person personal possessive pronominal enclitic in Brahui: -kə; note also the locutive -k in Elamite in, for example, u...sunki-k ‘I am king’ or huttah halen-k ‘I made it at great pains’ (hutta-h, predicate; halen-k, included form, locutive).
For Proto-Dravidian, Zvelebil (1990:35—36) reconstructs a first person singular non-past personal ending *-N-ku, found, for example, in Old Tamil (archaic non-past) -0-ku and in Gondi (future) -k-ũ, while the first person plural exclusive non-past personal ending was *-N-kum, found, for example, in Old Tamil (archaic non-past) first person plural exclusive -0-kum and in Gondi (future) first person plural exclusive -k-em, first person plural inclusive -k-ât.

Afroasiatic: Diakonoff (1988:72—73) lists independent personal pronouns of the direct case in a table. For Proto-Semitic, he reconstructs first person singular *'an-ãku, *'an-ã, and *'an-î, that is, a stem *'an- followed by three suffixal elements, the first of which, *-ãku, appears to contain a double suffix, that is, the *-ã found in the second form further extended by *-ku (cf. Moscati 1964:103—104, where the Proto-Semitic form is reconstructed as *'anã[ku]). *-ku is a widespread marker of the first person singular in the stative (cf. the table in Diakonoff 1988:92—93). However, note that Dolgopolsky (1984:70) does not analyze *-ãku as a compound suffix. In the same article, it may be noted, Dolgopolsky reconstructs a Proto-Nostratic *HVkE, which he describes as either a “non-pronominal word liable to replace the independent pronoun” or as a “nomen regens following an appositional nomen”. This *-ku also appears in the Egyptian first person singular pronoun in-k and the Tashelhit (Berber) first person singular pronoun nki in the table given by Diakonoff. It is this *-ku that I would compare with the forms Greenberg is discussing. This appears to be a more plausible explanation, by the way, than that offered by Barth (1913:4), where *'anãku, -ki is analyzed as *'ana plus demonstrative *ku, *ki. There is also evidence in several non-Semito-Egypto-Berber Afroasiatic languages: in Oromo of Wellegga (East Cushitic), the first person singular possessive suffix is -koo, and this is also found in Dasenech (East Cushitic) -cũ; in Gamo (Omotic), the first singular indicative negative marker is -ke, while the first plural is -ko; Xamir of Lasta (Central Cushitic) first person singular past verbal suffix -ékun, plural -nekũn; Xamir (Central Cushitic) first person singular non-past verbal suffix -ãkũn, plural -nãkũn; Quara (Central Cushitic) first person singular non-past verbal suffix -ãkũ, plural -nãkũ.

§3. First-Person N

Afroasiatic: There is evidence for a first person singular *nV in Afroasiatic as well: (1) Chadic independent pronoun: Hausa ni 'I, me'; Ngizim na(a) 'I'; Mubi ni 'I'; (2) Semitic: first person verb suffix: Akkadian -ni, Ugaritic -n, Hebrew -nil, Arabic -nî, Geez -nî, etc.

Indo-European: Note Tocharian B first singular (nom.) ŋōš/ ŋīš, Tocharian A nâš (nom. m.)/ňuk (nom. f.). Initial ŋ- may be derived from earlier *ŋj(ã-) (ultimately < *n-i- ?). Indo-Europeanists have been at a loss about how to account for the Tocharian forms (cf. Adams 1999:265—266), and most of the explanations offered to date have been makeshift at best. Assuming that Tocharian has preserved an original *n(-i)-, which has been lost elsewhere within Indo-European, may be a simpler explanation. This is quite speculative, however.
Sumerian: In Emegir, the first singular (subject) is 珺.e (= /rja-/) ‘I’. This may belong here if we assume that the original form contained an initial velar nasal, which was retained in Sumerian, having been replaced by a dental nasal in Nostratic.

More common is first person plural stem *na-/*na-:


Kartvelian: Svan 珺j ‘we’.

Afroasiatic: Proto-Afroasiatic *na- ~ *nu- first person plural personal pronoun stem: cf. Arabic nahnu ‘we’; Old Egyptian n ‘we’; Tamazight (independent) nukni ‘we’, (indirect, after prepositions) nax; Oromo of Wellegga first plural present suffixes (affirmative) -na, (negative) -nu, independent (subject) nuy, (base) nu; Dizi first plural suffixes (with auxiliary) -n, (without auxiliary) -ino, (subject) inu, (object) in, (possessive affix) ü-

Dravidian: Proto-Dravidian *nãm- ‘we’ (inclusive).

§4. Second-Person T

Etruscan: Perhaps ßi — the meaning is unknown, but it may well be the second singular personal pronoun in view of the second singular imperative endings -ti, -θ, -ði.

Afroasiatic: In Semitic, it occurs first as the second component in the second person independent pronoun: cf. Arabic second person singular masculine ’amta (= ’an- + ta), second singular feminine ’anti (= ’an- + ti) (cf. Moscati 1964:102: “The first and second persons singular and plural belong to the same system [’an- plus suffixes] ...”). Next, it appears as a second person personal affix, prefixed in the imperfect (“atelic”) and suffixed in the perfect (“telic”):

<table>
<thead>
<tr>
<th></th>
<th>Imperfect</th>
<th>Perfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>masculine</td>
<td>*ta-</td>
<td>-*t-a</td>
</tr>
<tr>
<td>feminine</td>
<td><em>ta-...-t</em></td>
<td>-*t-ı</td>
</tr>
</tbody>
</table>

In later Egyptian, it also forms part of the second person independent personal pronoun: (m. sg.) nt-k ‘you’, (f. sg.) nt-t; (m. pl.) nt-m, (f. pl.) nt-sn. In Berber, this stem also appears as a second person personal affix (cf. the Tashelhit second person personal affix (m./f.): t-...-t), and likewise in Beja (Cushitic) (second person personal prefix, “old” conjugation: [m.] te-...-a, [f.] te-...-i). Also note the Highland East Cushitic second singular nominative pronouns: Burji a-ši, Darasa a-ti, Hadiyya a-ti, Kambata a-ti, Sidamo a-ti, and the conjunctive suffixes (sg.): Burji -ši, Darasa -lee, Hadiyya -ta, Kambata -ti(ke’ı), Sidamo -te.
From Southern Cushitic, cf. the second singular independent pronoun in Dahalo, for example: (m.) ?at:a, (f.) ?at:a.

Elamo-Draavidian: In Proto-Elamo-Draavidian, this stem appears as the second singular appellative ending *-ti > Proto-Elamite *-tə, Proto-Draavidian *-ti (cf. McAlpin 1981:120, §542.3). Cf., for example, the conjugation of hutta- ‘to do, to make’ in Middle Elamite:

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>hutta-h</td>
<td>hutta-hu (&lt; h + h)</td>
</tr>
<tr>
<td>2</td>
<td>hutta-t</td>
<td>hutta-ht (&lt; h + t)</td>
</tr>
<tr>
<td>3</td>
<td>hutta-š</td>
<td>hutta-hš (&lt; h + š)</td>
</tr>
</tbody>
</table>

§5. Second-Person S

When I was doing research for my co-authored book *The Nostratic Macrofamily*, I considered the evidence for a second person pronoun stem *si* and rejected it. At that time, I thought that this stem may have been secondarily derived, at the Proto-Nostratic level, from *ti* as follows: *ti > *tși > *si*. I thought that the Georgian second person pronoun šen may ultimately have had the same origin (*ši(I) < *tši < *ti*). However, I reasoned that the original stem must not have been lost either, so that there was a split which resulted in two competing forms at the Proto-Nostratic level. Considering the evidence Greenberg presents, my former views should be abandoned, and two distinct second person pronoun stems should be recognized, viz., *ti* and *si*. This certainly is much more straightforward than the scenario I had previously envisioned.

Kartvelian: Note the second person verb prefix s- found in Old Georgian (present) s-c’er ‘you write’ and the second singular personal pronoun in Mingrelian: si ‘you’, Laz: si(n) ‘you’, and Svan: si ‘you’. Klimov (1998:164) reconstructs Proto-Kartvelian *sen ‘you’ (sg.). In Georgian, this stem has been replaced by that of the possessive pronoun: šen- ‘you’ (< *škwe[n]-). The Kartvelian evidence strengthens the case for an independent second person pronoun stem *si* in Proto-Nostratic.

§6. Second-Person N

While the evidence for this stem in Eurasiatc is not plentiful, it is found in other Nostratic languages. Note, for example, that the Proto-Draavidian second person pronoun has been reconstructed as (sg.) *nm-, (pl.) *nlm-, while Elamite has (nom. sg.) ni ~ nu ‘you’, (acc.) nun. Interestingly, one finds this stem as far afield as Omotic (cf. Zayse second singular [subject] nél[j] ‘you’, bound form -n; Gimira [subject] nen³ ‘you’, [oblique] ni³; Yemsa [Janjero] ne ‘you’; etc.). So perhaps we might be justified in reconstructing a Proto-Nostratic second person pronoun *ni*, which has survived only in relic forms in Eurasiatc.
§7. Pronoun Base GE

First, note that this element is also found in Kartvelian: Old Georgian demonstrative stems ege (second person) ‘that’ and i gi (third person) ‘that yonder’, which are to be analyzed as e+ge and i+gi respectively. On the Indo-European side, the only evidence for *egʰ-ₐ-m, with -gh-, comes from Indo-Iranian (and perhaps Slavic). Elsewhere, the evidence from the daughter languages points to earlier *egʰ-m (Greek, Latin, Germanic) or even *ekʰₐ-m (Lithuanian and Armenian). What this means is that there were multiple pronominal elements involved (at least in Indo-European), not just *-gh-.

§10. Demonstrative KU

The evidence from all of the Nostratic daughter languages seems to point to the existence of two stems here: (A) *ku- ~ *ko- (distant) and (B) *ka- (proximate).

Afroasiatic: Highland East Cushitic: Burji (m. sg.) kà ‘this’, (m./f. sg./pl.) káaci ‘that, those’, (m./f. pl.) ci ‘these’; Darasa (m. sg./pl. kuuni ‘this, these’, (m. sg./pl.) ikki ‘that, those’; Kambata (m. sg./pl., f. pl.) ku ‘this, these’; Sidamo (m. sg.) ku ‘this’, (m. sg., m./f. pl.) kuugu ‘that, those’, (m. pl.) kuni, kuri ‘these’. Proto-Southern Cushitic (m.) *ŋuukaa ‘this’, (m. bound) *ŋaŋ ‘this’ > Iraqw ka ‘this’ (neuter ?); Burunge (m.) ki ‘this’, (m.) kaŋa ‘that’; K’wadza -(u)ko masculine gender marker; Asa -(u)k-, -ok masculine gender marker; Ma’a ka ‘this’; Dahalo ḡuukwa ‘this’.

Kartvelian: Proto-Kartvelian pronoun stem *-k-: Georgian [-k-]; Mingrelian [-k-]; Laz [-k-]. In the modern Kartvelian languages, this stem is found only in historical derivatives (cf. Klimov 1998:211).

Etruscan: Note the demonstratives (archaic) ika ‘this’, (later) eca, ca.

§11. Demonstrative T

It seems that three separate stems are to be reconstructed here, indicating three degrees of distance: (A) *ta- (proximate), (B) *tu- ~ *to- (distant), and (C) *ti- ~ *te- (intermediate).

Afroasiatic: Proto-Afroasiatic *ta- (~ *tu- ~ *ti-) demonstrative stem: Proto-Semitic *tā-, *tā/i-tā/-tā/-demonstrative stem > Arabic (m.) ī, (f.) ī ‘this’; Tigre (m.) ū, (f.) ū ‘this’. Egyptian (f. sg. demonstrative and definite article) nū ‘this’, the’, (f. sg. demonstrative adj.) nū ‘this’; Coptic τ-, τe- f. sg. definite article. Proto-East Cushitic *ta, (subj.) *tu/*ti f. demonstrative pronoun stem > Burjii (dem. f.) ta, (subj.) ci ‘this’; Somali (dem. f.) ta, (subj.) tu; Rendille ti f. gender marker and connector; Oromo / Galla ta-, (subj.) tu-; Sidamo -ta, (subj.) -ti f. article; Kambata (f. acc. sg. demon. det.) ta ‘this’; Hadiyya (f. acc. sg. demon. det.) ta ‘this’. Proto-
Southern Cushitic (f. bound demonstrative stem) *ta ‘this, that’ > Iraqw ti ‘this’; Burunge ti ‘this’, tağa (f.) ‘that’; K’wadza -(i)to, -(e)to f. gender marker; Asa -(i)t(o), -(e)t(o) f. gender marker; Ma’ä -eta suffix on f. nouns; Dahalo ūd- in ūdāgi (f.) ‘they’.

Dravidian: Tamil tām (obl. tam-; before vowels tamm-) ‘they, themselves; you’; Malayalam tām (obl. tam-, tamm-) ‘they, themselves; you’; Kota tām (obl. tam-) ‘themselves’; Toda tām (obl. tam-) ‘themselves’; Kannada tām (obl. tam-), tāvu (obl. tav-) ‘they, themselves; you’; Koḍagu tānga (obl. tānga-) ‘themselves’; Telugu tāmu (obl. tam-, tamm-), tamaru, tāru ‘they, themselves; you’; Naikri tām ‘they, themselves’; Parji tām (obl. tam-) ‘they, themselves’; Gadba (Ollari) tām (obl. tam-) ‘they, themselves’; Kūrux tām- (obl. tam-) ‘they, themselves’; Malto tām, tāmi (obl. tam-) ‘they, themselves’.

Etruscan: Note the demonstratives ita, ta ‘this’.

§12. Demonstrative S

Afroasiatic: Traces of this stem may be found in East Cushitic. Sasse (1979:34—35) reconstructs Proto-East Cushitic third person personal pronoun stems (m.) *'us-uu, (f.) *'is-ii (secondary palatalization of -s-). Note also the third person accusative suffixed pronouns in Kambata and Sidamo:

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masculine</td>
<td>Feminine</td>
</tr>
<tr>
<td>Kambata</td>
<td>-si</td>
<td>-se</td>
</tr>
<tr>
<td>Sidamo</td>
<td>-si</td>
<td>-se</td>
</tr>
</tbody>
</table>

And, in Omotic, we find Zayse third person singular independent pronouns (masculine) ṗēsi, (feminine) ṗīsi, and bound suffix pronouns (masculine) -s, (feminine) -is.

§13. Substantivizer RE

It is interesting to note that Sumerian (which is not a Nostratic language but which I consider to be distantly related to Nostratic) has a distant demonstrative stem ri ‘that yonder’, which may be compared with the form Greenberg is discussing. Also, note the -r found in the Elamite third singular personal pronoun i-r (I accept McAlpin’s view that Elamite and Dravidian are related, and I consider both to be Nostratic). Within Indo-European, a trace of this element may survive in the Cuneiform Luwian enclitic particle -r (on which, cf. Melchert 1993:182 and Laroche 1959:83).
§14. Dual KI(N)

**Sumerian:** Of interest here are the forms ki-*me-en min* ‘two’, *ki-2-en-ta* ‘twice’, and *ki-2-še*(*to*) ‘twice’, where the common element *ki-* resembles both in form and meaning the dual form *ki(n)* that Greenberg posits for Eurasatic.

**Afroasiatic:** Note Egyptian *ky, *ki, *kî* ‘other, another’; Coptic *ke* ‘another’.

**Indo-European:** At the very end of the discussion (p. 106), Greenberg briefly mentions the Armenian plural ending -*kʰ* (= -*k*'), which, as he notes, has always been enigmatic. I would remove Armenian from this section and put it in §18. Plural KU. The Armenian ending -*kʰ* has no known parallels in other Indo-European languages and is usually considered to be a development specific to Armenian, without clear explanation (cf., for example, Godel 1975:102, §5.22, and Rüdiger Schmitt 1981:111—112). To be sure, a suffix *-*k(o)- is well represented in other Indo-European daughter languages — it is found, for instance, in Latin *senex* ‘old man’, Greek *μῖσυς* ‘young man, lad’, and Sanskrit *sanaká-h* ‘old’ —, but it usually does not change the meaning except in a few cases where it seems to add a diminutive sense (as in Sanskrit *putráká-h* ‘little son’). Nothing would lead one to think that this ending could have been the source of the Armenian plural ending -*kʰ*. At the same time, I find it hard to believe that a Proto-Eurasiatic plural marker *-*k(V) could have been preserved in Armenian and have left absolutely no traces in the other Indo-European daughter languages, at least none that I can find — and yet, there it is!

§15. Plural T

**Kartvelian:** Note that a plural marker *-t(a)* is also found in Kartvelian in the so-called “n-plural”; cf. the Old Georgian *n*-plural case forms for *perq-i* ‘foot’:

<table>
<thead>
<tr>
<th>Case</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td><em>perq-n-i</em></td>
</tr>
<tr>
<td>Ergative</td>
<td><em>perq-t(a)</em></td>
</tr>
<tr>
<td>Genitive</td>
<td><em>perq-i(t(a))</em></td>
</tr>
<tr>
<td>Adessive</td>
<td><em>perq-i(t(a))</em></td>
</tr>
<tr>
<td>Dative</td>
<td><em>perq-i(t(a))</em></td>
</tr>
<tr>
<td>Instrumental</td>
<td><em>perq-i(t(a))</em></td>
</tr>
<tr>
<td>Adverbial</td>
<td><em>perq-i(a)</em></td>
</tr>
<tr>
<td>Vocative</td>
<td><em>perq-n-o</em></td>
</tr>
</tbody>
</table>

Thus, there are really only three distinct case forms in the *n*-plural, namely, nominative, vocative, and oblique (that is, all the other cases). There is also a plural marker *-eb-* , which was probably originally collective. The plural ending *-t(a)* is also found in pronoun stems in the oblique cases. Finally, note that a plural marker *-t* is found in verbs as well — cf., for instance, the Old Georgian present forms of the verb *c* ‘er-* ‘to write’.
Afroasiatic: A plural marker -ta is also found in Cushitic: In Kambata, for instance, the most common plural suffix is -ata: duuna ‘hill’, (pl.) duunnata. This suffix occurs elsewhere in Highland East Cushitic: cf. the Sidamo plural suffix -oota in ballicca ‘blind one’, (pl.) balloota. Also note Oromo: nama ‘man’, (pl.) namoota.

§17. Plural RI

Dravidian: Note here the Proto-Dravidian plural marker *-(V)r, used with nouns of the personal class and pronouns (cf. Tamil avan [sg.] ‘that man’, [pl.] avar ‘those people’). Particularly interesting is the close agreement here with Manchu, where, as Greenberg remarks, the plural -ri is confined to certain kinship terms. Moreover, the *-ri that Benzing reconstructs for Tungus as the plural of reflexive pronouns also fits in with what is found in Dravidian.

Etruscan: Note the plural endings -ar, -er, and -ur (cf. [sg.] clan ‘son’, [pl.] clenar ‘sons’).

Afroasiatic: A plural marker -r is also found in Omotic: cf. the typical Zayse plural suffix -ir in šőos ‘snake’, (pl.) šőos-ir.

Kartvelian: Also worth noting is the Svan plural ending -ăr. In Upper Bal, this is changed to -aıl, but in Lower Bal, -adar has mostly been generalized.

§18. Plural KU

Dravidian: The most common plural marker in Proto-Dravidian has been reconstructed by Zvelebil (1977:12—15) as *-(n)kV(ɯ). According to Jules Bloch, however, this suffix has developed from the coalescence of the two plural markers *-k(V) and *-V(ɯ). Specifically, Zvelebil remarks: "...from the existence of only the reflexes of *k in North Dravidian (Brahui) and Gondi-Konda Kui-Kuvi, we may infer that the velar stop is preferably to be regarded as the earliest Dravidian suffix of substantive plurals of the nonpersonal class." The Dravidian plural suffix *-k(V) may be compared with the forms Greenberg is discussing.

Indo-European: On Armenian, see above (§14. Dual KI[N]).
§20. Collective L

Dravidian: We should probably include the Dravidian plural marker *-\(V(\nu)\) mentioned directly above.

§21. Personal N

My comments will only address the pluralizing function of N.

Afroasiatic: In Geez, the masculine external plural is -\(\tilde{\alpha}_n\), which is related to the Akkadian plural marker (nom.) -\(\tilde{\alpha}nu\). This may belong with the forms Greenberg is discussing. This suffix occurs elsewhere in Afroasiatic: In Burji, for example, there are a few plurals formed with a suffix -\(\text{nmal-nmo}\): got-\(\tilde{\alpha}\) ‘hyena’, (pl.) got-\(\text{inna}\); saa-\(\tilde{\alpha}\) ‘cow’, (pl.) saa-\(\text{annya}\), saa-\(\text{ynna}r\); rud-\(\tilde{\alpha}\) ‘sibling’, (pl.) rud-\(\text{dánnoo}\) (data from Sasse 1982). Note also the plural suffix -\(\text{n}\) in Berber: Tamazight ass ‘day’, (pl.) ussa-n; as if ‘river’, (pl.) i-saaff-\(\tilde{\alpha}n\). In Tamazight, \(\text{i}\) is prefixed, and -\(\text{n}\) is suffixed to masculine nouns to form so-called “sound plurals”, while the prefix \(\text{ti-}\) and the suffix -\(\text{n}\) serve the same function for feminine nouns (in rare cases, one finds \(\text{ta-...-in}\) instead). Nouns ending in vowels add one of the following suffixes: -\(\text{tn}, -\text{wn}, \) or -\(\text{yn}\). Thus, the common marker for “sound plurals” in Tamazight is -\(\text{n}\). (There are also so-called “broken plurals”, which do not add -\(\text{n}\).) In Semitic, there is a so-called “intrusive \(\text{n}\)” found in the plural of the personal pronouns. Though Gelb (1969:50—53) explains this as “a consonantal glide introduced in order to avoid two contiguous vowels”, it is curious that it is only found in the plural and that no such “consonantal glide” appears to be needed elsewhere. This leads me to suspect that we may be dealing here with a relic of the suffix Greenberg has identified.

Sumerian: In Sumerian, the plural of animate nouns is indicated by the suffix -\(\text{ene}\). This appears to be close both in form and function to the material Greenberg has gathered.

Indo-European: There is also evidence for a plural marker *-\(n\) in Indo-European. In Hittite, the first person plural personal endings are (present) -\(\text{weni}\) (occasionally also -\(\text{wani}\), but -\(\text{meni}\) after stems ending in -\(\text{u}\)), (preterit) -\(\text{wen}\) (-\(\text{men}\) after stems ending in -\(\text{u}\)); the second person plural personal endings are (present) -\(\text{teni}\) (occasionally also -\(\text{tani}\), (preterit) -\(\text{ten}\). In Greek, there is a first plural ending (primary and secondary) -\(\text{ve}\) (there is also an alternative ending -\(\text{ve}\)). In Sanskrit, in addition to the second plural personal endings (primary) -\(\text{tha}\) and (secondary) -\(\text{ta}\), there are extended forms -\(\text{thana}\) and -\(\text{tana}\) respectively. In Sanskrit, the first plural endings are (primary) -\(\text{mas}\), -\(\text{masi}\) and (secondary and perfect) -\(\text{ma}\), that is to say, they do not contain the plural marker -\(\text{n}\) found in Hittite and Greek. It is thus now clear how the different plural personal endings found in the daughter languages came to be. The earliest forms were (first person plural) *-\(\text{me}\) and (second person plural) *-\(\text{te}\). These could be extended (optionally) by an ancient plural marker *-\(\text{n}\), yielding *-\(\text{men}\) and *-\(\text{ten}\) respectively. At a later date, when the so-called “primary” endings were formed, these endings could be further extended by the primary marker *-\(\text{i}\), giving *-\(\text{meni}\) and *-\(\text{teni}\)
respectively. On the other hand, the plural marker *-s could be used instead, at least with the first person plural, yielding *-mes, and, later, with the addition of the primary marker, *-mesi.

§23. Absolutive K

Elamite: Perhaps Elamite passive participles, which “are formed by the addition of the morpheme /k/ to any verb-base” (cf. Reiner 1969:84, §5.1.2), should be considered here. The examples that Reiner gives are: hutta-k- ‘done’, turu-k- ‘said’, hutla-k- ‘messenger’ (literally ‘sent’), and miši-r-ma-k ‘ruined (?)’.

§24. Accusative M

Dravidian: The Proto-Dravidian accusative ending has been reconstructed as *-(V)n (cf. Zvelebil 1977:27—31). Note also the Elamite accusative ending -n found in the declension of personal pronouns: first singular (nominative) u ‘I’, (acc.) un; second singular (nom.) nu ‘you’, (acc.) nun; etc. McAlpin (1981:109, §522.1) sets up a Proto-Elamo-Dravidian accusative singular ending *-n. This is not, however, quite as straightforward a comparison as I have made it out to be. In general, final *-m is preserved in Dravidian (though, in at least one case, namely, the Proto-Dravidian nominative suffix of some nouns with stems ending in -a, *-m alternates with *-n finally; cf. Zvelebil 1970:127), and, therefore, we would expect the accusative ending to have been *-(V)m instead of *-(V)n (but note McAlpin 1981:92, §314.2: “The reflexes of PED *m are clear only in the first syllable. After that Elamite and Dravidian attest both n and m finally; n more commonly in Elamite, m more commonly in Dravidian [symbolized as PDr. *N]. This is really no different from the situation in Dravidian where the common formative PDr. *-aN ... is attested in both m and n [but never in alveolar n] ...”). But, considering that an -m ~ -n variation occurs throughout Nostratic for this case, the Dravidian forms may still belong here if we assume that the variation went all the way back to Proto-Nostratic itself.

Etruscan: Note the accusative singular ending -n found in the following demonstrative stems: (archaic) ikan ‘this’, (later) ecn; itan, itun, etan, tn ‘this’.

Afroasiatic: There may be traces of this ending in Omotic. In Aari, “[i]n direct object function the head of a definite NP receives an accusative suffix -m.” (Hayward 1990:443). Likewise in Dime, “[d]irect objects are indicated by the suffix -im attached to the stem of the object noun” (Fleming 1990:518).
§25. Genitive N

In Greenberg’s book, this whole section is extremely powerful and well presented. Many of the same conclusions were reached by John C. Kerns in his discussion of Nostratic morphology in our joint monograph (1994:141—190, Chapter 3: “Nostratic Morphology and Syntax”).

**Dravidian:** Note the Proto-Dravidian genitive ending (adnominal) *-in. McAlpin (1981:110) reconstructs Proto-Elamo-Dravidian genitive singular (adnominal) *-in, from which he derives Proto-Elamite *-inni and Proto-Dravidian *-in. In the following section, he also discusses the genitive -na found in Achaemenid Elamite.

**Etruscan:** In Etruscan, in addition to the regular genitive endings in -s, there is an archaic genitive in -n (-an, -un): cf. lautn ‘family’, (genitive) lautun or lautn; puian ‘wife’, (genitive) puian.

§26. Dative KA

**Dravidian:** The Proto-Dravidian dative has been reconstructed as *-(k)ku (cf. Zvelebil 1977:31). For Proto-Elamo-Dravidian, McAlpin reconstructs an adessive ending *-aKKa, which develops into the dative in Dravidian.

**Kartvelian:** In Svan, there is a nominal postposition -ka with the meaning ‘out, through’, also found in the compound -xänka with the meaning ‘out of’. When used as a verb prefix, ka indicates outward direction. There may have been a semantic shift from ‘direction to or towards’ to ‘direction out from or away from’.

§27. Locative M, and §28. Locative BH

In my joint monograph with John C. Kerns (1994:218—219, #23), I reconstruct Proto-Nostratic *bi ~ *be ‘in addition to, with, together with’ on the basis of the Indo-European material discussed below plus Afroasiatic *ba ~ *bi ‘in, with, within, among’ and Sumerian bi ‘with, together with, in addition to’. In Sumerian, this stem is also used as a conjunction: -bi, bi-da, -bi-(da) (literally, ‘with its...’) “...used in the sense ‘and’ with nouns and without the disjunctive force of it” (quote from Thomsen 1984:84). Perhaps Etruscan pi ‘at, in, through’ belongs here as well.

**Indo-European:** I believe that two separate stems are involved in Indo-European, namely, (1) *me-/m̥- and (2) *bhi-, just as Greenberg indicates. Pinning down the exact meaning of each is not easy, however. In Germanic, the primary meaning of the derivatives of the first stem is ‘with, among’: Gothic mīþ ‘with, among’; Old English mid, mīþ ‘together with, with, among’; Middle High German mite, mit ‘with, by, together’; Old Icelandic med ‘with, along with, together with’. Greek μετά means ‘(with gen.) in the midst of, among; (with dat.)
among, in the company of; (with acc.) into the middle of, coming among’. The original meaning seems to have had to do with ‘accompaniment, conjoinment’, that is, ‘with, along with, together with’, as in Old Icelandic. In other words, a stem is involved that is more instrumental or comitative in meaning than locative, at least in Indo-European. As Greenberg notes, the use of this stem as an inflectional ending is restricted to Germanic, Slavic, and Baltic. As Greenberg points out in §28, the stem *bhi- also exists as an independent stem in Germanic: Gothic bi ‘about, over; concerning, according to; at’; Old English be, bi; bê (preposition, with dat., indicating place and motion) ‘by (nearness), along, in’; Old High German bi-; bi adverb indicating nearness, preposition meaning (with dat.) ‘(near) by, at, with’, as adverb ‘from now on [von jetzt an]’. The original meaning, based upon the Germanic evidence, seems to have had to do with ‘proximity, nearness’, either of place ‘(near) by, at’ or time ‘now, at the present time’. There is a compound in Sanskrit, namely, abhi (either < *e-/o- + bhi- or *y- + bhi-), whose primary meaning is ‘moving or going towards, approaching’ — as an independent adverb or preposition, it means (with acc.) ‘to, towards, in the direction of, against, into’; as a prefix, it means ‘to, towards, into, over, upon’. Another compound is found in Greek ἄμφι (*y- + bhi-), preposition used with the genitive, dative, and accusative with the basic meaning ‘on both sides’, as opposed to περι, whose basic meaning is ‘all around’ — (with gen., causal) ‘about, for, for the sake of’, (of place) ‘about, around’; (with dat., of place) ‘on both sides of, about’; (with acc., of place) ‘about, around’; (as independent adverb) ‘on both sides, about, around’. This compound is also found in the Latin inseparable prefix ambi-, ambii-, meaning ‘on both sides; around, round about’. Further relationship to words meaning ‘both’ is usually assumed, though uncertain. When we look at the use of *-bhi- as a case ending, we find a slightly different semantic range than what is indicated by the above evidence. I think it is significant that it is specifically this ending that shows up in the instrumental singular in Greek and Armenian. This seems to indicate that the original meaning was similar to *me-/*mo-, that is, ‘with, along with, together with’. Indeed the choice between *-me-/-mo- as a case ending in Germanic, Baltic, and Slavic, on the one hand, and *bhi- as a case ending in Italic, Indo-Iranian, Greek, and Armenian, on the other, seems to indicate that they were close, if not identical, in meaning. Considering this, it appears to me that the Germanic meanings are secondary. Thus, we can reconstruct two separate stems for Proto-Indo-European, the first of which, *me-/*mo-, meant ‘with, along with, together with’, the second of which, *bhi-, meant (on the basis of its use in case endings) ‘in, with, within, among’. The evidence from Afroasiatic and Sumerian mentioned above reinforces the interpretation that the original meaning of Proto-Indo-European *bhi- was ‘in, with, within, among’.

Sumerian: I did not reconstruct a Proto-Nostratic ancestor for Proto-Indo-European *me-/*mo- in my 1994 joint monograph — perhaps I should have looked more diligently. In Sumerian, for example, one finds -m- conjunctive prefix and -m-da- third person singular comitative prefix inanimate. The -da- in -m-da- is the standard Sumerian comitative element. The -m- may be distantly related to the Indo-European forms we have been discussing.
Etruscan: In Etruscan, we find the enclitic copula -m (-um after a consonant) ‘and’ (< ‘together with, in addition to’ as in Sumerian -bi, bi-da, -bi-(da) mentioned in [b] above), which may also be compared.

Elamite: Note especially the locative affix (postposition) -ma ‘in’, variant -me (there is also a genitive affix -ma, variants -mi and -me). McAlpin (1981:68, table 2.1) lists the Elamite postposition -ma ‘in, on; according to’, used with things and time units and indicating location inherent in place names. I can find nothing comparable in Dravidian.

Afroasiatic: In Egyptian, we find m (preposition, with suffixes) ‘in; with, by means of; from, out of; as, namely’. Note Gardiner (1957:124—125, §162): ‘...m, before suffixes...jm, indicates position generally, the main lines of development being ‘in’, ‘from’, and the instrumental ‘with’.’ Also worth noting are the following forms from Semitic: Ugaritic ‘m (= ’amma ?) ‘with, to’, also ‘mm; Hebrew ‘im(m-) ‘with, together with’; Syriac ‘am ‘with’; Aramaic ‘im(m-) ‘with’; Arabic ma’a ‘with, together with, accompanied by, in the company of’, ma’an ‘together, at the same time, simultaneously’.

Given all of the considerations discussed above, I would now reconstruct a Proto-Nostratic stem *ma—*mo— as in Egyptian, it was used to indicate position and had a similar range of meanings, that is, ‘in; from; with’. I propose that it was this stem that was the source of the locative forms Greenberg discusses. In Indo-European (and Etruscan), the instrumental/comitative sense prevailed, while elsewhere in Eurasian, the locative sense was emphasized.

§29. Locative RU

Sumerian: In addition to the common form -ni-, Sumerian also has a locative prefix -ri- (cf. Thomsen 1984:234). This may be compared with the forms Greenberg lists.

§30. Locative N

Sumerian: Note the locative prefix -ni-.

Dravidian: As noted by Zvelebil (1977:32, §1.1.3.5.6): ‘*-in/*-il may probably be reconstructed as the underlying shape of a number of related forms which are markers of a locative function’. The first member of the pair, namely, *-in, may be compared with the locative forms in -n- found in Eurasian.

Afroasiatic: In Highland East Cushitic, we find the following: In Darasa, the ablative-locative (‘from, in, at’) suffix is -ni, and the instrumental suffix is -nni, while in Hadiyya and Kambata the locative-instrumental suffix is -n. In Sidamo, on the other hand, there is a multipurpose postposition -nni with the meanings ‘from, at, on, by, with’. In Omotic, there is
a widespread instrumental-locative-directional marker -nV (cf. Zaborski 1990:626—627). Zaborski notes that some of the forms may be borrowed from Highland East Cushitic.

§31. Locative I

**Sumerian:** In Sumerian, there is a locative-terminative postposition -e, which is only used with inanimate beings. The locative-terminative is used to indicate the direction 'near to' or 'near by'. As an adverb, e simply means 'here'. I suspect that this may be related in some way to the locative -i Greenberg is discussing.

**Etruscan:** In Etruscan, the locative ending is -θi. I regard this as a hypercharacterized form in which the locative ending -θ has been added to a locative -θ (< the comitative-locative ending *da discussed in the following comment).

§32. Locative TA

On p. 155, Greenberg discusses the Indo-European suffixes *-dhe and *-dhe found in adverbs of place. I believe that this is to be compared with the Sumerian comitative element da (also -dē). As noted by Thomsen (1984:99): "The basic meaning of the comitative is 'with', 'together with', expressing accompaniment as well as mutual action." A comitative-locative particle *da ~ *do with the basic meaning 'along with, together with, in addition to; in, at', shows up all over Nostratic (cf. Bomhard—Kerns 1994:275—276, #89). It appears in Kartvelian as a conjunction: Georgian da ‘and’, Mingrelian do ‘and’, Zan do ‘and’ < Proto-Kartvelian *da ‘and’, and probably as the adverbial case ending -adl/d found, for example, in Old Georgian (in Modern Georgian, the ending is -ad(a)). In Afroasiatic, it is found in Chadic: Hausa da ‘with; and; by, by means of; regarding, with respect to, in relation to; at, in, during; than’; Kulere tu; Bade ds; Tera nds; Gidar di; Mokulu ti; Kanakuru ds < Proto-Chadic *ds ‘with, and’. It may also survive in Highland East Cushitic: note the Burji locative suffix -ddi. Elamite has da ‘also, too, as well, likewise; so, therefore, consequently, accordingly, hence; thereby, thereupon’. Particularly interesting is Altaic, where this particle functions as a locative suffix on the one hand, *-da, and as an independent particle on the other, *da ‘together with, and, also’: Common Mongolian dative-locative suffix *-da > Mongolian -da; Dagur -da; Khalkha -do; Buriat -da; Kalmyk -do (cf. Poppe 1955:195—199). In Manchu, the dative-locative particle is -de. In Turkic, it also appears as a locative suffix: Common Turkic *-dad/*-då (cf. Menges 1968:110). It is preserved in Indo-European in the suffixed particle appearing, for example, in Sanskrit as -ha and -dhi: sa-ha ‘with’ (Vedic sa-dha), i-ha ‘here’ (Prakrit i-dha), kū-ha ‘where?’, ā-dhi ‘above, over, from, in’; in Avestan in ika ‘here’, kudā ‘where?’; and in Greek in the locative particle -θ in, for example, oikō-θi ‘at home’, nō-θi ‘where?’. I would equate the forms Greenberg lists with the widespread Proto-Nostratic comitative-locative element *da ~ *do discussed here and would, therefore, derive them from Proto-Eurasian *da instead of TA. Thus, I suggest that it would have been better to have written "§32. Locative DH." This is a case where material from the non-Eurasian Nostratic languages can help explain developments in Eurasiat.
Dravidian: The Proto-Nostratic locative element *da ~ *də may also be found in the Proto-Dravidian sociative (comitative) ending *-打卡. Particularly noteworthy are the Tulu locative endings -du ~ तु, -dिः ~ ति, which may, perhaps, be compared with the Tamil locative postposition -itai (Proto-Dravidian medial -t < Proto-Nostratic *-d-; cf. Bomhard—Kerns 1994:125).

Etruscan: As noted above, in Etruscan, the locative ending is -θi. I regard this as a hypercharacterized form in which the locative ending -i has been added to a locative ending -θ (< the comitative-locative ending *-da [there is no voicing contrast in stops in Etruscan]). The Etruscan form particularly reminds me of the Greek locative particle -θι.

§33. Ablative TA

This ending is widespread in other Nostratic languages. The Sumerian ablative-instrumental case ending is (inanimate) -ta, (prefix chain) -ta-, and this agrees with the Proto-Uralic ablative ending *-ta in both form and function as well as with the Proto-Elamo-Dravidian oblique/locative ending *-ta. Also worth noting is the Old Georgian instrumental ending -it(a)/-jt(a), which may ultimately come from the same source.

§34. Comitative KO-N ~ KO-M

In my co-authored book (Bomhard—Kerns 1994:414—415, #256), I reconstruct a Proto-Nostratic stem *kʰam- ~ *kʰom- ‘to gather together, to collect; together, together with’ on the basis of Proto-Indo-European *kʰem-/*kʰom-/*kʰm- ‘to gather together’, *kʰom- ‘together with’; Afroasiatic: Semitic: Akkadian kamāsu ‘to gather, to collect, to bring in (barley, persons, animals, objects, or documents)’; Proto-Altaic *kam- ‘to accumulate, to collect, to gather together’ (cf. Mongolian gantu ‘together, along with; jointly, simultaneously’, qamu ‘to gather together; to sweep together, to scrape up, to rake up’, etc.). I suggest that Proto-Nostratic *kʰam- ~ *kʰom- ‘to gather together, to collect; together, together with’ is the source of the forms Greenberg is discussing.

§39. Nominalizer M

Elamo-Dravidian: McAlpin (1981:107, §511) reconstructs a Proto-Elamo-Dravidian *-maj (> Proto-Elamite *-may [> -me], Proto-Dravidian *-may), which “is used to derive abstract nouns from other nouns and occasionally from verbs”.

Kartvelian: In Georgian, an m-prefix is used in various prefix + suffix combinations to form active participles; these include the following: m-...-ar (also m-...-al), m-...-el, ma-...-el, me-...-ar, mo-...-ar (also mo-...-al), mo-...-e (for a complete list of Old Georgian active
participles formed with m-prefixes, cf. Fähnrich 1994:76—77; for Modern Georgian, cf. Fähnrich 1993:66—67 and Vogt 1971:249—250. Some examples are: m-sm-el-i ‘drinker’ (v-svam ‘I drink’), me-om-ar-i ‘warrior’ (v-om-ob ‘I wage war’), m-c’er-al-i ‘author, writer’ (v-c’er ‘I write’), etc. Other m-prefix + suffix combinations figure in nominal derivation as well. This may be an example of where Georgian is using as a prefix what appears as a suffix elsewhere. This is not unusual. It seems that Kartvelian underwent several syntactic shifts in its prehistoric development (possibly SOV > SVO and then back to SOV, each change leaving a trace in the surface morphology of the daughter languages), no doubt due to prolonged contact with North Caucasian and (perhaps) one or more unknown other languages. Thus, I believe that these Georgian m-prefix + suffix forms are comparable to the forms Greenberg is discussing. Similar verbal substantives with m(V)-prefix are common in other Kartvelian languages: cf. Svan me-sgwre ‘sitting; servant’ (li-sgwre ‘to sit’), me-sed ‘one who remains’ (li-sed ‘to remain’), me-yral ‘singer’ (li-yral ‘to sing’), etc.

Afroasiatic: In Semitic, prefix m- figures prominently in nominal derivation. For example, in Arabic, one use of prefix m- is to form passive participles from simple verb stems (for all of Semitic, cf. Moscati 1964:157—158). Note also, for example, forms such as Hebrew ma-mläxäh ‘kingdom, dominion’ from the root mlk ‘to rule, to be king’). Prefix m- forms are found in Egyptian as well (cf. m-sdm-t ‘cosmetics’ from the root sdm ‘to adorn, to paint [the eyes]’). These forms also belong with the material Greenberg is discussing. As in Kartvelian, I believe that Afroasiatic also underwent several syntactic shifts in its prehistoric development. Surely, the VSO pattern found in Semitic, Egyptian, and Berber is an innovation. While it is not possible to trace the exact developments, I believe that the original pattern was SOV, which is what is found in the majority of Cushitic languages. One little aside: The more I look at the matter, the more I am convinced that, within Afroasiatic, Semitic is the odd man out. In view of this, notions of what Proto-Afroasiatic might have been like, based primarily upon the Semitic model, are likely to be false.

§40. Possessive L

Kartvelian: In Hittite (Indo-European), one of the primary functions of the suffix-li- is to form adjectives indicating nationality (cf. Kronasser 1966:211—214); examples include: Hurrili- ‘Hurrian’, Ḥattili- ‘Hattic’, Palaumnili- ‘Palaic’, Luwili- ‘Luvian’, Našili- and Nešumnili- ‘Hittite (?)’, etc. In Georgian, there is a suffix -el- which is used in the same way, that is, to form adjectives of nationality designating human beings; examples are: kartveli and kartuli ‘Georgian’, megreli and megruli ‘Mingrelian’, ingliseli ‘English’, čineli ‘Chinese’, etc. This same suffix is used to derive adjectives designating human beings from common nouns: kalakeli ‘citizen, city-person’ (< kalaki ‘city’), sopleli ‘peasant, country-person’ (< sopeli ‘village’), etc. The fundamental meaning of the Georgian -el- suffix appears to be similar to what Greenberg posits for Indo-European, namely, ‘pertaining to’ or ‘belonging to’.

Etruscan: In Etruscan, personal names often have a genitive ending -al: cf. aule velimna larðal clan (= aule velimna larðalisa) ‘Aulus Velimna, son of Larth’ (larðalisa is a
patronymic form in which the ending -isa replaces clan). The general scheme may be represented as follows:

<table>
<thead>
<tr>
<th>Nominative</th>
<th>Genitive</th>
<th>Patronymic</th>
</tr>
</thead>
<tbody>
<tr>
<td>larð</td>
<td>larðal</td>
<td>larðalisa</td>
</tr>
<tr>
<td>arnð</td>
<td>arnðal</td>
<td>arnðalisa</td>
</tr>
<tr>
<td>laris</td>
<td>larisal</td>
<td>larisalisa</td>
</tr>
</tbody>
</table>

We can venture a guess that the original meaning of -al was ‘belonging to’, so that larðal would have originally meant ‘belonging to Larth’. The patronymic can be seen as a hypercharacterized form in which the genitive ending -isa was added to the ending -al. The ending -la could be added again to the patronymic to indicate the grandfather: cf. larðalisla in the phrase arnð velimna aules clan larðalisla, where Larth is the father of Aule and, therefore, the grandfather of Arnth. Interestingly, in this example, aules contains the genitive ending -s. Thus, we can render this loosely as ‘Arnth Velimna, son of Aule, belonging to Larth’ or, in better English, ‘Arnth Velimna, son of Aule, whose father was Larth’.

§41. Adverbial Participle P

It appears that the original form was *ba and not *P, though this creates problems with the Turkish data, which point to *pa instead. That the Eurasian stem as *ba instead of *pa seems particularly likely, however, in view of the fact that Greenberg derives the Anatolian forms from an Indo-European particle that Pokorny reconstructs as *bhe, *bhō. Note also the consistent single writing in Hittite, which points to a voiced stop, according to “Sturtevant’s Law”. The evidence from Mongolian also points to original *ba. The material from Uralic is phonologically ambiguous.

**Indo-European**: The Indo-European forms Greenberg cites from Gothic and Old Church Slavic correspond very well with the Mongolian conjunction ba ‘and, also’. (On Gothic ba, cf. Lehmann 1986:55. On the same page, Lehmann lists a Gothic adverbial suffix -ba and illustrates its use with an example, namely, baitraba ‘bitterly’. He remarks: “Isolated, both in Gmc and the IE languages; origin obscure”.) In Mongolian, “There are modal adverbs with the meaning ‘completely’, derived by reduplication of the first syllable of the word with the inserted consonant -b. If the first syllable of the word concerned is no, the adverb is nob; if the first syllable is qa, the adverb is qab, and so on” (quote from Poppe 1974:59—60, §218). The Gothic and Mongolian forms may thus be related.

**Altaic**: The Classical Mongolian conditional gerund -basu (also -besü and -ubasul-ubesü after b and r; Modern Mongolian has -balal-bele) is used to indicate an act which is the necessary condition of the following action coming into effect (as Greenberg notes, -basu is made up of the past converb [i.e. adverbial participle] -ba- plus a-su ‘would be’; the suffixes used to indicate past tense are -bal-be and -bail-bei, as in ögeb or ögebi ‘he gave’, odba or odbai ‘he

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went, he departed' — for details, cf. Poppe 1974:164—165, §§588—589). Constructions using the conditional gerund are usually translated with 'when, if', as 'when this happens, then that', 'if this happens, then that', so that there is an implied temporal relationship as well as an implied cause and effect relationship. Thus, this construction could easily develop into a causative, as Greenberg notes.

Kartvelian: In Georgian, the causative of intransitive verbs is built by means of the character vowel -a- and the suffix -eb (cf. Fähnrich 1993:139—140). I suspect that the Mongolian and Kartvelian formations may be related in some way.

Dravidian: Also note the Proto-Dravidian causative suffix reconstructed by McAlpin (1981:45—46) as *-pi.

On the basis of what has been discussed above, I think we are justified in setting up a Proto-Nostratic particle *ba ~ *ba meaning 'then, therefore', just as Greenberg suggests. This particle was inherited by Eurasian. *ba ~ *ba could be used with verbs to indicate a conditional relationship, but without necessarily any reference to time, that is to say that the actions could be either simultaneous or successive, thus: 'when this happens, then that happens (at the same time)', 'when this happens, then that comes about'. This is basically the situation found in Turkish. The next stage is found in Mongolian, where there is an implied temporal relationship as well as an implied cause and effect relationship. The implied cause and effect relationship develops into causatives in Kartvelian and Dravidian.

§42. Participle N

Etruscan: We may also bring in the Etruscan present participles ending in -an: turan 'giving', mulvan 'founding', etc.

Elamite: As noted by McAlpin (1981:79—80): "Verbals in Middle Elamite consist of two participles, one in -n and one in -k... The participle in -n is 'active,' which seems to be nonpast and progressive." Note also Grillot-Susini (1987:34): "The participle in -n represents a passive or an intransitive of unaccomplished-durative aspect (present-future tense, durative)...

§43. Passive Participle T

Etruscan: Here, we find active past participles ending in -bas, as in avil svalbas LXXXII 'having lived eighty-two years'.
§44. Participle NT

**Indo-European:** The idea that the Indo-European third person plural ending *-nti* of the present tense is to be derived from the participle *-nt* is not new. Oswald Szemerényi and Thomas Burrow proposed a similar theory. In my 1988 article on “The Prehistoric Development of the Athematic Verbal Endings in Proto-Indo-European” (1988:475—488), I accepted the views of Szemerényi and Burrow. However, I have since proposed a new explanation (1996:76). Basically, I see the incorporation of the third person ending *-t* into the conjugational system in Proto-Indo-European as an innovation, which, nevertheless, must have taken place at an early date since it is found in Anatolian as well as later stage daughter languages. I believe that the third plural was indicated by the ending *-n* at the time that *-t* was added and that, with the addition of the *-t*, a new third plural ending was created, namely, *-nt*. At a later date, this was further extended by a deictic *-i* to form so-called “primary” endings. Thus, while the new third plural ending *-nt* was identical in form with the participles ending in *-nt*, I believe that, ultimately, they had a different origin. Note that there may be evidence from the Indo-European daughter languages for an unextended third plural ending -n: cf., for example, the so-called “secondary” third plural forms in Sanskrit ābharaṇa, Avestan barha, and Greek ἕφεσος. These are usually interpreted as being derived from *-nt* through loss of the final -t. But, could they not be simply relics of an earlier unextended *-n* instead? Quite honestly, it is probably impossible to tell whether or not this suggestion has any validity given that regular phonological developments in each of these daughter languages can also account for loss of final -t rather nicely.

§45. Gerundive-Participle L

**Dravidian:** Caldwell (1913:543) describes a group of verbal nouns ending in -al (or -dal) in Tamil. Unfortunately, he does not give an in-depth explanation of the uses of this ending. He does mention, however, that “[i]t is remarkable that / or al is used also in Mongolian as a formative of verbal nouns...” McAlpin (1981:52) also mentions this ending: “It is possible that the ending *-al* on the verb stem could be Proto-Dravidian in origin; see Andronov, 1979, p. 69.” And that is all he says! In his descriptive grammar of Tamil (1982:20, §1.1.2.2.1), R. E. Asher gives a little more information:

The most usual marker of a noun clause is a nominalized verb form. In the formal variety of the language, these nominalized forms fall into two types: (i) nominalized forms marked for tense. The most common — one found for all verbs — is one consisting of verb stem + (t)tal, e.g. varutal ‘the coming’, kōtutal ‘the giving’...

Obviously, the ending -(t)tal described by Asher has been built by adding -al to -(t)t-. The Dravidian verbal nouns ending in -al should be included with the forms Greenberg is discussing.
Kartvelian: In a long section on Georgian participles, Vogt (1971:246—254) devotes considerable attention to perfect passive participles (he uses the term [p. 247] “participes passés passifs”) in -ul-/il- (see also Fahnrich 1993:67—69, and, for Old Georgian, Fähnrich 1994:77): c'er-il-i ‘written’, k'r-ul-i ‘tied, bound’, etc. Note also the noun c'er-ili ‘letter’ (that is, ‘that which has been written’).

§47. Imperative KA

Afroasiatic: I was immediately struck by the resemblance of the forms Greenberg is discussing with the widespread second person personal pronoun stem *kV- found in Afroasiatic. In Semitic, this stem appears as the second person singular and plural personal pronoun suffix (table taken from Moscati 1964:106, §13.14):

<table>
<thead>
<tr>
<th></th>
<th>Akkadian</th>
<th>Ugaritic</th>
<th>Hebrew</th>
<th>Syriac</th>
<th>Arabic</th>
<th>Geez</th>
</tr>
</thead>
<tbody>
<tr>
<td>m.sg.</td>
<td>-ka</td>
<td>-k</td>
<td>-k</td>
<td>-k</td>
<td>-ka</td>
<td>-ka</td>
</tr>
<tr>
<td>f.sg.</td>
<td>-ki</td>
<td>-k</td>
<td>-k</td>
<td>-k</td>
<td>-ki</td>
<td>-ki</td>
</tr>
<tr>
<td>m.pl.</td>
<td>-kunu</td>
<td>-km</td>
<td>-kem</td>
<td>-kön</td>
<td>-kun(u)</td>
<td>kəmmū</td>
</tr>
<tr>
<td>f.pl.</td>
<td>-kina</td>
<td>-kn</td>
<td>-ken</td>
<td>-kēn</td>
<td>-kuna</td>
<td>-kōn</td>
</tr>
<tr>
<td>dual</td>
<td></td>
<td>-km</td>
<td></td>
<td></td>
<td>-kumā</td>
<td></td>
</tr>
</tbody>
</table>

In Akkadian, this stem is also found in the genitive/accusative and dative second person singular and plural independent pronouns: (m. sg. gen./acc.) kāti/a, (f. sg. gen./acc.) kāti, (m. pl. gen./acc.) kunūti, (f. pl. gen./acc.) [kinātī]; (m. sg. dat.) kāšim, (f. sg. dat.) kāši(m), (m. pl. dative) kunāšī(m), (f. pl. dat.) [kināši(m)]. In Egyptian, the second person singular masculine suffix pronoun is k ‘thou, thy, thee’, while it appears as k- and -k in Coptic. Also, we find the following in East Cushitic: Proto-East Cushitic (m.) *ku, (f.) *ki second person singular personal pronoun (object) ‘thee’ > Saho ku, Afar ko-o, Burjji šee, Somali ku, Rendille ki, Boni ku, Dasenech kuu-ni ‘thou’, ko ‘thee’, Oromo si, Konso ke, Gidole he(d’e), Sidamo hee, Hadiyya kee-s, Dullay ho-~he-. In Southern Cushitic, the following forms occur: Proto-Southern Cushitic *ki second person singular feminine personal pronoun ‘your’ > Iraqw ki, kiŋ ‘you’ (f. sg.), -k in -ok ‘your’; Burunge igi ‘you’ (f. sg.), -g in -og ‘your’; Alagwa ki ‘you’ (f. sg.), -k in -ok ‘your’. Proto-Southern Cushitic *ku second person singular masculine personal pronoun ‘your’ > Iraqw ku, kuŋ ‘you’ (m. sg.), ku- in kunga ‘you’ (pl.), -k in -ok ‘your’; Burunge ugu ‘you’ (m. sg.), -g in -og ‘your’; Alagwa ku ‘you’ (m. sg.), ku- in kunga ‘you’ (pl.), -k in -ok ‘your’, K’wadza -ku, Asa -ku, Dahalo -ku.
§48. Hortatory L

**Elamite:** In Old Elamite, there is a precative-hortative marker *-li* (cf. McAlpin 1981:80—81, §242.443). Grillot-Susini (1987:40), however, considers *-li* to be “an ancient or dialectal form [used to] mark the optative”. Achaemenid Elamite uses *-ni* in the same function.

**Afroasiatic:** A precative *l-* occurs in Semitic (cf. Moscati 1964:144: “*l-* , which occurs in Talmûdic Aramaic lehēwē ‘he is’, may be considered a remnant of precative *l*”).

§50. Causative S

**Afroasiatic:** There are various causative prefixes in Semitic, the most common of which is *š-* , which is found in Akkadian, Ugaritic, and South Arabian (except Sabaean): cf. Akkadian *ušamqît* ‘he caused to fall’, from *maqātu* ‘to fall down, to collapse; to fall, to fall to the ground’. A similar formation, with prefix *s-* , is found in Egyptian: *s-sdm* ‘to cause to hear’, from *sdm* ‘to hear’, *s-nfr* ‘to cause to fall’, etc. The same goes for Berber: cf. Tamazight *ssërwel* ‘to cause to flee, to rout’, from *rweł* ‘to run, to flee’. In several Afroasiatic languages (such as East Cushitic and Hausa, for example), causatives are formed with a suffix *-s:* cf. Burji *gat-is-* ‘to cause to sell’, from *gat-* ‘to sell’, etc. Causatives in *-s* (or extended forms) are also found in Omotic: cf. the Aari causative suffix *-sis-* in *wur-sis-* ‘to cause to hear’, from *wur-* ‘to hear’, or the Dime causative suffix *-s-* in *wuy-s-u* ‘cause to stand!, stop!’, from *wuy* ‘stand!’ . Clearly, these formations are related to the ones that Greenberg is describing.

§56. Negative N


**Kartvelian:** Proto-Kartvelian *nu* ‘no, not’ (prohibitive particle) > Georgian *nu* ‘no, not’; Mingrelian *nu* ‘no, not’; Svan [no]. Proto-Kartvelian *numa* ‘no, not’ (prohibitive particle) > Mingrelian *numu, nema* ‘no, not’; Svan *nöma, nöm-* ‘no, not’.

**Afroasiatic:** Egyptian *n, nn, nš, ny, nw* ‘not’.

**Sumerian:** Note the following: *na* ‘not’, *na-* prohibitive prefix, *nu* ‘not’, *nu-* negative prefix.

**Elamite:** To these, we should add Elamite *in-* , element of negation, *inni* , negative particle, and *ani* , prohibitive particle.
§57. Negative M


Kartvelian: Svan (particle of modal negation) mād ‘no, not’, mām(a) ‘not’, māma ‘no’; Laz mo(t) verbal prohibitive particle.

Afroasiatic: Proto-Semitic *ma(?) negative/prohibitive particle > Arabic mā ‘not’; Harari mē? ‘not’. Egyptian m prohibitive particle: ‘do not’. Proto-East Cushitic *ma(?) negative particle > Afar ma; Somali ma? (Central Somali mœ main sentence negative particle); Rendille ma- negative prefix; Dasenech ma.

§58. Negative E/ELE

In my joint monograph, I set up a Proto-Nostratic *?al- ~ *?əl-, element of negation, which, in addition to serving as a negative particle, is also used to form negative auxiliary verbs in Uralic and Dravidian (cf. Bomhard—Kerns 1994:580—581, no. 449).

Indo-European: Hittite li-e element used with the present indicative to express a negative command.


Dravidian: Proto-Dravidian *al- ‘to be not so-and-so’ > Tamil al- ‘to be not so-and-so’; Malayalam alla ‘is not that, is not thus’; Kolami ala ‘to be not so-and-so’; Kannada alla ‘to be not so-and-so, to be not fit or proper’; Kodagu alla ‘to be not so-and-so’; Malto -l-negative morpheme; Brahui all- base of past negative tenses of anning ‘to be’, ala, alavā ‘certainly not, not a bit of it’.

Sumerian: li negative particle: ‘not, un-’.

§60. Interrogative K

In my co-authored monograph (Bomhard—Kerns 1994:478—479, no. 324), I set up two separate stems, one of which is relative, the other interrogative: Proto-Nostratic *kwhi- ~ *kwe- relative pronoun stem, *kwhε- ~ *kwe- interrogative pronoun stem.
Afroasiatic: The interrogative stem \(*kwha- \sim kwha-* is preserved in relic forms in several Semitic languages. Proto-Semitic \(*ka-m* 'how much?, how many?' > Arabic *kam* 'how much?, how many?'; Harsüsi *kem* 'how much?, how many?'; Mehri *kam* 'how much?'; Soqotri *kam* 'how much?'.

§61. Interrogative J

This stem is one of the strongest Nostratic etymologies. The data supporting this etymology are extremely rich, and derivatives are found in every branch of Nostratic. Rather than list all of the data, I will only give a summary here. Those interested in the details should consult my joint monograph (Bomhard—Kerns 1994:594—595, no. 467).


In my co-authored monograph, I further assume that this stem serves as the basis for an interrogative verb stem meaning ‘to do what?, to act in what manner?’ (Bomhard—Kerns 1994:595—596, no. 468):

Indo-European: Proto-Indo-European \(*?yo-* originally an interrogative verb stem meaning ‘to do what?, to act in what manner?’; later simply ‘to do, to make, to perform’ > Proto-Anatolian \(*iya- \sim *a(ya- \sim *ya-/\*yē- (< *HyeH-* ‘to do, to make, to perform, etc.’) > Hittite (3rd sg. pres. active) i-ya-(az)-zi, i-e-i-z-i ‘to do, to make, to treat, to beget, to perform (duty, ritual), to celebrate (deity, feast)’; Luwian (3rd sg. pres. passive) a-a-ya-ri ‘to make’; Hieroglyphic Luwian a(i)ja- ‘to make’; Lycian (3rd sg. pres.) ati (< *ayati) ‘to make’; Lydian i- ‘to make’.

Dravidian (?): Proto-Dravidian \(*iya-* ‘to do, to effect, to cause, to induce, to cause to act; to be possible, to be proper’ > Tamil iyāl ‘to be possible, to befall, to be associated with; to accept, to agree to, to approach, to resemble’, iyaiḷpu ‘nature, proper behavior, goodness, propriety’, iyaiḷvu ‘nature, means of attaining’, iyaiṟṟu ‘to do, to effect, to cause to act; to control the movements of, to create, to compose’, iyariṟṟi, iyaiṟṟal ‘effort’, iyaiṟṟak ‘nature, custom’, iyai ‘to join, to connect, to adapt’, iyaiṟṟipṟu ‘union, harmony, appropriateness’, iyaiṟṟu ‘union, joining together’; Malayalam iyaiḷukṟa ‘to agree, to go fairly, to be proper’, iyaiḷ ‘what is proper; nature, condition; strength, power’, iyaiṟṟukṟa ‘to cause, to induce’, iyaiṟṟṟu ‘joint, joining together’, iyaiṟṟukṟukṟa ‘to join’, iyaiṟṟukṟa ‘to be agreeable, to harmonize’; Telugu iyaiṟṟuni, iyaiṟṟu ‘to be sufficient’; Telugu iyaiṟṟa-konṟu, iyaiṟṟa-konṟu ‘to consent’.

Altaic: Common Mongolian \(*yaya-\sim *yeyi- (< *yayi-), *yeki-* interrogative verb stem: ‘to do what?, to act in what manner?’ > Mongolian yai-, yeki-, yeyi-, yaraki-* ‘how to act?, what to
§62. Interrogative M

As with the stem mentioned above in my comment to §60. Interrogative K, in my co-authored monograph, I set up two separate stems, one of which is relative, the other interrogative (Bomhard—Kerns 1994:645—647, no. 524): Proto-Nostratic *mi- ~ *me- interrogative pronoun stem, *ma- ~ *mə- relative pronoun stem.

**Indo-European:** Proto-Indo-European *me-/*mo- interrogative and relative pronoun stem > Cornish (conjunction) ma, may ‘that’; Breton (conjunction) ma, may, Middle Breton maz (from ma + ez) ‘that’; Tocharian B mäksu (a) interrogative pronoun: ‘which?, who?’, (b) interrogative adjective: ‘which?, what?’; (c) relative pronoun: ‘which, who’, B mäkte (a) interrogative pronoun: ‘how?’, (b) comparative: ‘as’, (c) causal: ‘because’, (d) temporal: ‘as, while’, (e) final: ‘so, in order that’, (f) manner: ‘how’, A mänt, mät ‘how?”; Hittite maši- ‘how much?, how many?’.

**Kartvelian:** Proto-Kartvelian *mi-n- (?) interrogative pronoun: ‘who?’ > Georgian vin- ‘who?’; Mingrelian mi(n)- ‘who?”; Laz min- ‘who?”. (The Proto-Kartvelian form has also been reconstructed *wi-n-.) Proto-Kartvelian *ma- ‘what’ > Georgian [ma-] ‘what”; Mingrelian mu- ‘what”; Laz mu- ‘what”; Svan ma(f), mäf ‘what’.


**Sumerian:** Note the interrogative stem *me- found in me-na-àm ‘when?’, me-a ‘where?’, me-še ‘where to?’.

§64. Interrogative N

**Sumerian:** I cannot help wondering whether the Sumerian inanimate interrogative stem a-na ‘what?’ may be related to the forms Greenberg is discussing. On the other hand, might the Sumerian animate interrogative stem a-ba ‘who?’ be connected in some way with the Etruscan relative stem ipa ‘who, which?’.
And there is more!

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Basque Parallels to Greenberg’s Grammatical Evidence for Eurasian

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O. Introduction
This paper identifies eleven Basque grammatical morphemes which parallel a like number of grammatical formatives included as a part of Joseph H. Greenberg’s grammatical evidence for a Eurasian language family (Greenberg 2000: Chapter 3). It also invites consideration of four additional formatives which Basque seems to share with Japanese at least, but which are not among of Greenberg’s original seventy-two. The resulting fifteen comparisons I offer as supplemental evidence in support of a deep connection between Dene-Caucasian (including Basque) and Eurasian/Nostratic. The list is no doubt not exhaustive, as probably would become evident especially if Nostratic were to be examined against Greenberg’s findings.

Most of the following comparisons conveniently cite examples from Japanese, which exhibits more than a few striking similarities to Basque, especially phonological and syntactic. In instances where no Japanese reflex is found by Greenberg, an Ainu or Korean example is taken from his evidence, in accordance with his tentative classification of Ainu, Japanese and Korean in a separate grouping somewhat apart from Altaic.

1. Basque parallels to Greenberg’s grammatical formatives

1.1 Diminutive k (Greenberg’s No. 26)
The similarity of the Basque suffix -ko and Proto-Indo-European *-ko has attracted considerable attention, but that between Basque -ko and Japanese ko seems equally, if not more, compelling. Oddly, R. L. Trask, in his otherwise exhaustive survey of attempts past and present to discover a genetic link for Basque, does not mention any such attempt involving Japanese (Trask 1997: 358-429). He does, however, carefully examine the Indo-Europeanist Antonio Tovar’s claim that Basque -ko and Proto-Indo-European *-ko must share “some single common source” by virtue of the ancestors of Basque and PIE having been “members of an ancient European linguistic area,” one which must have been extraordinary cohesive (Trask: 373). Trask contrasts the differing properties of PIE *-ko with Basque -ko and describes the latter’s additional functions, which depart from its principal, syntactic, function (that of deriving adjectival modifiers). One of the additional functions of -ko, as he points out, is to form derivatives, including diminutives, and both the Basque and IE suffixes perform this function. This, he concedes, does produce “something resembling a convergence between the Basque and IE suffixes” (Trask: 376), but he concludes that Tovar’s proposal “must remain at best an implausible conjecture, at least until someone turns up more extensive evidence for an ancient Sprachbund involving Proto-Basque and PIE” (Trask: 376).

There should be no doubt concerning the antiquity of either Pre-Basque *-ko or Proto-Indo-European *-ko. Trask distances Basque -ko from Indo-European -ko on the grounds that the Basque suffix, unlike Indo-European -ko, “is not a derivational suffix but a syntactic element which can be added freely to any constituent of an appropriate type” (375). He points out that Basque -ko “is attached to adverbials, regardless of their internal structure” and that it “derives adjectival modifiers which behave quite differently from lexical adjectives” (Trask: 375). He categorizes this -ko as a “relational” suffix (Trask: 100): it can be added to “virtually any kind of adverbial phrase, regardless of its syntactic structure, to produce a complex adjectival modifier which can appear within a noun phrase” (Trask: 100), e.g. guarko eguraldia ‘today’s weather’ (guar ‘today’).

In his discussion of Indo-European -ko and Basque -ko Trask includes the Proto-Indo-European suffix *-sko, which he regards as “perhaps a compound suffix *s + *-ko” (Trask: 374). It is instructive to recall that *-sko became highly productive not only in Germanic (from *-isko), as noted by Trask, but also as preserved in the adjectival ending-sko and its variants in Slavic languages as well (e.g. Polish neuter gender polsko ‘Polish’). I contend that Proto-Indo-European *-sko must be a compound formation of instrumental *s + *-ko, as the following
The notion of a narrowing in on a delimited space. The same notion of the defining property of time. The concept of ‘location’ apparently was associated with the idea of ‘small’ through the forms -ko (distal) alone. In sum, the following pronouns of location are derived with ‘there’, ‘here’, ‘there (mesial)’, and to the declarative pronominal morphs ko-, so-, doko, koko, soko do-suffixes only to the interrogative pronominal morph ‘wh-?’ (‘where? which? how?’ only) cannot be suffixed to adverbs, nor can it derive adjectivals. Other than to the unlike Basque -ko, -ko features diminutives, as we have seen, it may additionally be attached to the above, producing a pronominal phrase, -a singular article derives an interrogative pronoun of location, with the verb (copula) conforming to the verb-final rule. (Basque, also a verb-final language, nevertheless allows considerable syntactic flexibility to g), producing the lexeme ‘everywhere’. In the Japanese sequential voicing of k dago (with In the Basque example, -ko suffices to the (third-person singular) verb (copula) da (with sequential voicing of k to g), producing the lexeme dago ‘everywhere’. In the Japanese example, by contrast, -ko suffices to the pronominal interrogative morpheme do- ‘wh-?’ to derive an interrogative pronoun of location, with the verb (copula) conforming to the verb-final rule. (Basque, also a verb-final language, nevertheless allows considerable syntactic flexibility on the phrase level.) Observe, however, that Basque -ko can be suffixed to the interrogative as well, as in Japanese, as in nongo (non + ko) ‘pertaining to, where from’, and that moreover the singular article -a may additionally be attached to the above, producing a pronominal phrase, nongoa ‘where from, native of where’ (King and Elordi: 15-16).

Japanese doko ‘where?’ likewise is a pronominal, as we have noted, but Japanese -ko, unlike Basque -ko, cannot be suffixed to adverbs, nor can it derive adjectivals. Other than to the limited sphere of suffixing to female personal names to form diminutives, as we have seen, it suffixes only to the interrogative pronominal morph do- ‘wh-?’ (‘where? which? how?’ only) and to the declarative pronominal morphs ko- ‘here’, so- ‘there (mesial)’ and aso- ‘there (distal)’ alone. In sum, the following pronouns of location are derived with -ko: the interrogative doko, the declaratives koko, soko and asoko. (Compare these with the deictic forms kotira, sotira, atira.)

The semantic connection of ko as ‘location’ with ko as ‘small’ must go back very far in time. The concept of ‘location’ apparently was associated with the idea of ‘small’ through the notion of a narrowing in on a delimited space. The same notion of the defining property of
smallness would seem to have become operative in the adjectival-forming action of Basque relational -ko, in a kind of attributive, focusing action.

1.2. (Passive) Participle t (No. 43).
Basque forms gerunds most commonly by suffixing -te ~ tze, e.g. ikuste ‘seeing’, ekartze ~ ekarte ‘carrying’ (Trask: 215). Similarly, Japanese forms gerunds by suffixing the conjunctive particle -te, e.g. hanasite ‘speaking’). Puzzlingly, Greenberg does not include a Japanese example of this grammatical formative, despite taking note of what seems to me to be an identical morpheme in Ainu, identified in Bronislaw Pilsudski’s texts of Sakhalin Ainu as “a suffix -te listed as a ‘participial’ by [Alfred and Elzbieta Majewicz] in their concordance (1883-85: 5), for example, an-ki-te ‘I making’ (‘i-make-te’), 1912: 12) ...” (Greenberg: 180).

The Basque imperfective participle is formed with the suffixes -tzen ~ -ten; it derives, according to Trask, from the gerund by the addition of locative -n (Trask: 215). As a present tense it expresses either a general or a habitual act, e.g. Zer egiten duzu? ‘What do you do?’ Here, Japanese does not exhibit a similar construction.

However, again similar to Japanese, Basque forms progressives, except for a few verbs with special single-word forms, by suffixing to the verbal stem -tzen ~ -ten followed by a compound auxiliary composed of the item ari followed by a form of the be-verb, izan, which agrees in person and number (here: third-person singular da), e.g.:

Euskara ikas-ten ari da.
Basque study-ten ari be 3rd SG.
‘He/she is learning Basque’

Let us compare the Japanese semantic equivalent. (Note that in Japanese, which does not have verbal agreement, the copula da is invariable; note also that, again in contrast to Basque, in which case marking is ergative, case marking in Japanese is accusative.)

Basukugo benkyô-o si-te iru.
Basque-study ACC do-te iru
‘He is learning Basque’.

As in Basque, the Japanese progressive (continuous) form is constructed on the verb stem to which -te is suffixed and followed by a single auxiliary consisting of the base form of the existential verb iru. This construction can be called the continuative or durative: depending on the action described by the verb, it produces a stative expression, e.g., Kanojo wa okásan-to nitteiru ‘She looks like her mother’, or a progressive one, e.g., Kanojo wa ryôri-o siteiru ‘She is preparing the meal’. Optionally, the copula da may be added after the insertion of n (a contraction of the genitive particle no) to produce an affirmative variant: Baskugo benkyô-o si-te iru-n-da. We now have a compound auxiliary, similar to Basque. (The combination no da yields a morph expressing the idea of ‘confirmed fact’.)

Modern Japanese existential iru refers to animates whereas existential aru refers to inanimates. The formation -te iru is not attested in Old Japanese but rather -te ari.1 There seems to be a lack of consensus among Japanese language historians as to whether iru was existential in Old Japanese. It seems originally to have meant simply ‘stop moving’ and eventually ‘remain standing in one place’, which suggests a locative existential.

Despite the high incidence of parallelism between the Japanese and Basque gerund, in neither language does its formation appear to be very ancient. This raises the question of the

1Katsue Akiba-Reynolds explains why Old Japanese existential ari did not take the regular conclusive or “final” suffix -u: “The final suffix U seems to fit perfectly in the aspectual category which Bickerton ([1974]) calls ‘nonpunctual’. It indicated durative or iterative aspect for action verbs, and it was indifferent to the past-nonpast distinction. The fact that the existential ari and its derivatives, which were the only stative verbs in Old Japanese, did not take the regular Final suffix u is also in accordance with the observation that nonpunctual aspect markers cannot normally co-occur with stative verbs” (Akiba-Reynolds: 13-14).
degree of likelihood that Japanese -te and Basque -te share a common origin. In either language its formation must long postdate any period of linguistic unity. Trask asserts that the Basque -te gerund “is clearly of later formation than the participle”. As for its source, he presents evidence that -te “probably derives from a specialization of the word-forming suffix -te, which forms nouns of duration, like eurite ‘rainy spell’ (euri ‘rain’)”. He sees -te as being “probably identical with the noun-forming suffix -tze ~ -tza, which has several functions, one of which is forming nouns of abundance, as in jendetze ~ jendetza (‘crowd’ (jende ‘people’)”. He concludes on the evidence that “the modern gerunds are all late formations obtained by adding noun-forming suffixes mostly meaning ‘duration’, ‘abundance’ or ‘activity’ to verb-stems . . .” (Trask: 215).

The process by which the Japanese gerund was formed appears to have been quite different, but also not to have been very ancient. As Katsue Akiba-Reynolds points out, Old Japanese had two auxiliary suffixes, tu and nu, and a negative suffix, zu, and that these conjugated in the same manner as main verbs (except that, curiously, some of them did not fully conjugate) (Akiba-Reynolds: 3). She concurs with certain others that the conjunctive particle te derives from te, the conjunctive form of the Old Japanese (conclusive) perfect auxiliary tu, regarding it as “the most plausible hypothesis in every respect.” She observes that “most of the serial constructions found in Old Japanese [eighth to tenth centuries approximately] were from zero-conjunctions . . . The serial constructions with te between serialized verbs are never or very rarely found in Old Japanese though they are common in modern Japanese” (Akiba-Reynolds: 12). As to why te became a conjunctive particle, “the change seems to have been triggered by a change in the system of tense-aspect” (Akiba-Reynolds: 13).

How then, considering their apparent differences of derivation, are we to account for the striking syntactic similarities of Basque -te and Japanese -tel? The parallels cannot be fully explained by coincidence, and certainly not by borrowing. The derivation of the Basque or the Japanese gerund would seem in either language to go back to probable commonly inherited internal resources. These would seem to have provided the impetus for the formation respectively of the progressive constructions with ari in Basque or ari in Japanese. There would seem to be no doubt of the antiquity of either Basque ari or Old Japanese existential ari, on the basis of Basque and Japanese internal evidence alike. Trask notes that “[t]he item ari hardly has any independent existence today, but it is attested in the literature in the sense of ‘busy, hard at work’”. As he points out, this auxiliary can also be used without a verbal complement: lanean ari da ‘he’s working’ (literally ‘he’s busy at work’)” (Trask: 238). I cannot but consider that this could be evidence that ari originally or once may have been an existential verb, as suggested by its similarity to Japanese aru/ari.

1.3. First-person n (No. 3)
This morpheme is not represented in Japanese; however, Ainu, like Basque, has first-person n: compare Basque first-person singular ni, Ainu first-person singular object pronoun en. Note (as in Ainu) the presence of first-person agreement in n(-): Basque ni naiz ‘I am’.

1.4. Pronoun base ge (No. 7)
This morpheme is not represented in Japanese, Korean, or Ainu. However, it may be represented in Basque by the first-person plural pronoun gu.

1.5. Genitive n (No. 25)
Although Trask (Trask: 201) raises a question of the antiquity of Basque genitive -en, at least relative to the doubtless antiquity of Basque instrumental -z (see 1.8 below) and certain other suffixes, the presence of an n- genitive in Japanese and, for example, in Chechen, suggests to me a considerable antiquity. We can compare the Japanese genitive particle no, which Greenberg cites as possibly being an example of the genitive n, with the Basque genitive -en/-ren, e.g. Elinen laguna ‘Elin’s friend’, Josebaren laguna ‘Joseba’s friend’. (Historically Japanese no had an attributive function: it marked the subject of a nominalized clause in Old Japanese [Shibatani: 347-348]).
1.6. Locative n (No. 30)
For Japanese Greenberg cites adverbs of time in -na, e.g. asa-na ‘in the morning’, yū-na ‘in the evening’ and the locative postposition -ni ‘in’ as possibly belonging here. Compare Basque locative -n, e.g. Bilbon ‘in Bilbo’.

1.7. Ablative t (No. 33)
Greenberg considers the basic meaning of this formative to be “evidently ‘source,’ from which genitive (e.g. Balto-Slavic), instrumental, and ablative uses are easily derived” (Greenberg: 158). For Ainu he cites an ablative form -ke-ta, e.g. tumu-ke-ta ‘in the middle’, and for Japanese he points out that Pröhle (1916: 160) considers tu in the archaic Japanese formula ama-tu kumi ‘the god of heaven’ (‘heaven-tu god’) to be cognate with the Uralic ablative-partitive -ta” (Greenberg: 159). I believe Basque ablative -tik, -dik ‘from, through’ as in Bilbotik ‘from Bilbo’ may be identical.

1.8. Instrumental s (No. 37)
Greenberg notes that Korean suffixes -ss9 to nouns with the instrumental case marker -lo. We saw an example of Basque instrumental z in our discussion of diminutive k above, in section 1.1. Greenberg’s instrumental s may be represented in Basque by this instrumental morpheme. Trask (Trask: 201) affirms the antiquity of Basque instrumental -z.

1.9. Adverbial participle p (No. 41)
Basque prefixes ba- to the auxiliary (if there is one) or to the main verb to form ‘if’-clauses (King and Elordi, 127)—that is, to a finite verb form (Trask: 225). Oppositely, Japanese suffices the conjunctive particle -ba to the verb to form hypotheticals or conditionals. Compare Japanese ikeba ‘if you go/he goes etc.’ and Basque joaten bazara ‘if you go’ (joan ‘go’).

1.10. Negative m (No. 57)
Greenberg suggests prohibitive formative is perhaps to be found in the Ainu negative existential verb isam ‘not to be’. Perhaps we can compare the Japanese prohibitive exclamation Dame! ‘Impermissible!’ (not cited by Greenberg) with Basque damurik in the exclamation Damurik ez baitu atxeman! ‘Too bad he didn’t find it!’ (cited in Trask: 226) as possible (seemingly no longer productive) representatives of this formative.

1.11. Interrogative n (No. 64)
Greenberg cites, among other Ainu examples, Ainu nen, neni ‘who?’ “a form strikingly suggestive of Japanese nan, nani ‘what?’” (233). Also strikingly similar to all the above is Basque non ‘where?’ Trask identifies the stem of non as no- (Trask: 97) (see 2.2 below). Is the -n of non the locational suffix -n? It would seem so.

2. Basque-Japanese grammatical formatives not indicated in Greenberg’s grammatical evidence

2.1. Negative s
In Old Japanese negation was expressed by the negative verbal suffix -zu. The reader will recall that -zu and the two auxiliary suffixes, -tu and -nu, conjugate, but not fully, as mentioned above, in section 1.2 The conjugation of -zu, according to Akiba-Reynolds, was: Unrealized, --; Conjunctive, zu; Final (conclusive), zzu; Nominal, nu; and Realized, ne (Akiba-Reynolds: 8). Note that the nominal and realized forms are with n-, not z-; negatives in modern Japanese are formed on n-, e.g. nai ‘does not exist’ and -n, e.g. arimasen ‘does not exist (polite)’. Old Japanese had both arazu and araru ‘does not exist’.

Modern Basque expresses negation with the particle ez ‘not’, which, as Trask points out, immediately precedes the finite auxiliary or verb (Trask: 110). He reports that in Bizkaian Basque a variant form ze is found in early texts when followed by a subjunctive or an imperative (Trask: 209).

There is an important syntactic difference here, which presents a challenge, but, one hopes, finally not an insurmountable one, to the thesis of an ancient genetic connection between
Basque and Eurasian. The Basque negative particle *ez, similarly to the hypothetical or conditional prefix *ba-, precedes the verb, whereas the Japanese conditional conjunctive particle -ba, like the negative particle -zu, is a suffixed form.

2.2. Interrogative 

In addition to the stem no-, Basque has a second stem, ze-, on which interrogatives are formed, examples of which are zer ‘what?’, zein ‘which?’ and so on. One wonders if -ze of the Japanese lexeme naze ‘why?’ is related to this Basque stem. Japanese na- resembles the Basque stem no-(cf. item 1.11 above, “Interrogative n”).

2.3. Perfective participle -i

Based on Trask’s analysis of non-finite verb forms (Trask: 211-214), I refer to this formative as perfective participle -i, after his discussion on the history of the Basque prefective participle. Trask observes that “it is notable that the language shows traces of an ancient adjective-forming suffix -i. The clearest case is gatz ‘salt’, gazi ‘salty’. A number of others have been proposed, especially by [the Basque linguist R. M. de] Azkue (1923) . . . Since perfective participles are conspicuously adjectival in nature, it may be that an ancient adjective-forming suffix was pressed into service to derive participles both from ordinary nouns and from verbal nouns, but here I confess I am stretching the evidence to the limit” (Trask: 212).

It may be possible that the Japanese and the Basque adjective-forming suffixes -i are related and that the Japanese reflex of this perfective participle -/ is represented in what Shibatani (1990: 215) calls the “adjectival noun”. Called “adjectival verb” in the traditional grammar because the copula, da, is optional, it is derived by suffixing -i to a nominal root, e.g. too-i ‘far’ (root too-), negative too-ku nai ‘not far’, aka-i ‘red’, aka-ku nai ‘not red’. This suffix appears to be ancient; its predicate-like behavior indicates a likely verbal origin.

2.4. “Mysterious” prefix i-

Basque and Old Japanese exhibit a prefix i- whose origin or function is “mysterious” (Murayama 1976: 422; Trask: 211). Trask observes: “Virtually all ancient verbs show a prefix *e- in all their non-finite forms; this appears today variously as e-, i-, j- or zero. . . . The function of this prefix is not known . . . . [Elsewhere] I argue that it originally derived a verbal noun from a verbal root” (Trask: 211). Old Japanese, as Murayama points out, had a “somewhat mysterious and unclear ‘prefixed / -’ that appears in a variety of Old Japanese verbs”. Examples given by Murayama include i-tuk-u ‘build’ alongside the more usual tu-k-u ‘build’ (Murayama 1976: 423).

Admittedly, this is an extremely tenuous linkage of Basque and Eurasian. Obviously much more study is called for. And was Japanese iru, for instance, derived by this prefix? Do both aru and iru share some link to Greenberg’s locational -ru formative (No. 29) in the very remote past? Murayama identifies this prefix, rather convincingly in the context of the fairly impressive argument that he makes in support of his hypothesis of Japanese as a mixed language, with a Malayo-Polynesian “proto-prefix” *mi- that derives verbs from nouns (Murayama 1976: 422-423), but discussion of Murayama’s hypothesis is beyond the scope of the present paper. We note only that whereas according to Murayama this Old Japanese prefix may have derived verbs from nouns, Trask’s analysis of the possible function of the Basque prefix differs somewhat.

3. Simplification in Japanese

3.1

Japanese scholarship in the last several decades, perhaps led most prominently by Ōno Susumu and Murayama Shichirō, has tended to explain the difficulty of establishing a genetic relationship for Japanese by appealing to a “superstratum-substratum” hypothesis (Ōno) or a “hybrid” or mixed-language hypothesis (Murayama), in either case involving a coming-together of an Altaic language from northeast Asia and a Malayo-Polynesian or Austronesian language from southeast Asia in the Japanese archipelago. (Ōno has subsequently added a third language input, Tamil, of which more below in section 3.2).

Following Murayama, Akiba-Reynolds argues for a pidgin-creole or mixed origin of
the language “largely based” on Altaic and Malayo-Polynesian (Akiba-Reynolds: 20). She rejects the Altaic hypothesis as inadequate to explain many Japanese singularities, an argument that accords with Greenberg’s reluctance to connect Japanese, Korean and Ainu closely with Altaic. She observes that her reconstructed Pre-Japanese seems to resemble pidgin-creole languages “in a significant number of respects” (Akiba-Reynolds: 18-20) and offers rather impressive evidence in support of her contention.

On this basis Akiba-Reynolds sees pidginization progressing “to such an extent that the grammar of the resultant pidgin would be no longer comparable with the grammar of the source languages” (Akiba-Reynolds: 18). This could explain the comparative simplicity of Japanese morphology in contrast to the complexity of the Basque. The strong Basque similarities to the formatives examined in this paper can be taken as one indication, however, that pidginization did not occur to an extent significant enough to alter grammatical formatives. Rather, the similarities support an overall view of language replacement over hybridization.

In support of the language replacement hypothesis, it can be argued that Basque phonology, for instance, does not differ greatly from Japanese, and that the phonology of the language which arrived via the Korean peninsula in turn must not have been significantly different from the indigenous, supposedly Austronesian, language already present at the point of contact, presumably in northern Kyūshū and western Honshū. Adoption of the CV pattern, present already in Old Japanese, would have resulted, following Murayama’s hypothesis, from the influence of Malayo-Polynesian phonological rules.

Another possible argument for language replacement is the presence of sequential voicing in Basque (the example dago (from da + ko), was noted in 1.1 above). Murayama cites the presence of this phonological phenomenon in Japanese and Malayo-Polynesian (he refers to it as intervocalic consonantal voicing) as one of many pieces of evidence that the Malayo-Polynesian elements in the Japanese language “constitute a vital and powerful structural component (kōsei yōso) of that language” (Murayama 1976: 420). Once again, however, a similar phenomenon is observed in Basque (although a kind of sequential devoicing as well is present).

Third, as Akiba-Reynolds points out, Murayama (1969) presents data to show, in support of his hybrid language hypothesis, that, like Malayo-Polynesian, Old Japanese had prefixes in addition to suffixes (Akiba-Reynolds: 18). One example would be the intensifier ma-, which has an exact counterpart in Malayo-Polynesian. Japanese examples are naka ‘center’, manaka ‘exact center’ or kuro ‘black’, makkuro ‘jet black’. Trask reports the presence in Basque, however, of “a mysterious prefix ma-which has no identifiable semantic value. We find doublets like hegai and magal, both ‘pear’... In all likelihood, this ma- merely represents an obsolete way of forming ‘expressive’ variants of lexical items” (Trask: 258). While what Trask offers is an informed opinion rather than a proven fact, it seems possible to consider that Japanese ma- may be linked to the Basque prefix ma- and the Malayo-Polynesian prefix ma-alike.

3.2
Subsequent to the publication of Akiba-Reynold’s 1978 paper, Ōno has presented the case for a Tamil element or stratum in Japanese. He has produced some impressive correspondences for Tamil, for a third component in the formation of Japanese. (One example of his evidence is Tamil iru ‘to be located’.) He continues to argue for the introduction of wet-rice agriculture, metallurgy and the use of mechanical technology by Dravidian- (Tamil-) speaking immigrants to the Japanese archipelago in the Yayoi era (ca. 2400 to 1650 B.P.) (Ōno: 2002), but does so in the face of considerable logistical difficulty. Mark Hudson (1992) has argued convincingly for the impossibility of such a scenario on archeological, geographical and other grounds. Rather, I see the solution in the inclusion of Dravidian, as in the Nostratic grouping. Tamil appears to be perhaps the most conservative of the Dravidian languages, which accords with its geographical circumstance as the extreme southernmost member of the family (making it therefore the one that has migrated the farthest from the original homeland).
3. Conclusion

“Basque”, Trask observes, “in the last thousand years appears to have been an astonishingly conservative language . . .” (Trask: 47). Japanese likewise appears to have been deeply conservative, as the comparisons above, together with other aspects of the language, seem to bear witness. Like Tamil, Basque and Japanese are located at continental or sub-continental extremities. It has very recently been shown that the speech of the Kantō area of Japan, which includes Tōkyō, is more conservative, less innovative than that of the area where archeological evidence shows the immigrants from the Korean peninsula arrived at the beginning of the Yayoi era, to Japanese scholars’ surprise. This should not be surprising. It seems clear that the farther removed from the original linguistic unity, the more conservative morphology tends to be.

While many of the morphological parallels or similarities seen above may seem quite striking, given the time and distance which separate Japanese and Basque, one can cite the homogeneity of Turkic, extending from Turkey and the Balkans to the Tien Shan and to the far north-east of Siberia, as support for the view that a deep Eurasiatic/Nostratic connection with ancestral Basque and Dene-Caucasian is possible.

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References

Elam: A Bridge between the Ancient Near East
and Dravidian India?¹

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Abstract: Elamite is an extinct language of Western Iran attested from the beginning of the 3rd millennium BC in its own pictographic (later linear) script, perhaps of the same origin as the contemporary Sumerian script. The borrowing could have taken place during a colonization of Susiana from late Uruk (3300 BC). Beginning in the 23rd century BC a modification of Akkadian cuneiform script (peculiar to Elamite) as well as a linear simplification of Proto-Elamite script were introduced. The most recent inscriptions are from the period of Achaemenides (6-4 cent. BC) while the language was spoken probably till the end of the 1st millennium AD. The position of the Elamite language in genetic classification is not definitively solved. Besides evident borrowings from Sumerian, Akkadian and Old Persian, there are some quite hopeful morphological parallels to Dravidian. On the other hand, the number of convincing lexical cognates is so low that a close Elamo-Dravidian relationship cannot be accepted as proven. The following study offers an alternative hypothesis connecting Elamite with the Afroasiatic macro-family, not excluding a remote relationship with Dravidian.

1. Elamite language and script

The first certain attestation of the Elamite language is from the 23rd century BC. The so-called “Treaty of Naram-Sin,” written in cuneiform script, was concluded between Naram-Sin (2254-2218), a successor of Rimuṣ, the son of Sargon of Agade (2334-2279), and Hita, the ninth king of Awan, against their common enemies the Qutians (Hinz 1964, 64; the data are borrowed from Steve 1992, 4). Hita's successor, Puzur (alias Kutik) -Inšušinak, the last of twelve kings of Awan (falling around 2200 BC), had developed the so-called Linear Elamite (= Proto-Elamite B = monumental) script, today known from 19 inscriptions from the 23rd cent. BC. The creation of the script can be explained as a reaction against the centuries-old cultural (and occasionally political) domination of Elam by Mesopotamia. The content of one of the inscriptions (A) is known thanks to its parallel Akkadian translation. Naturally, it represents a key to the decipherment of this script. Although the results and their application for the interpretation of other texts are not unambiguous, the language is certainly Old Elamite (Hinz 1969; Meriggi 1969a & 1971, 184-220). The origin of the Linear Elamite script is not artificial. It has its predecessor in the Proto-Elamite script known from around 1400 inscriptions of an economic nature found especially in Susa (3100-2900 BC). The Linear Elamite script with 103 known (mostly syllabic) signs represents a simplification of the older pictographic Proto-Elamite script with at least 400 signs (Meriggi 1969b, 156 & 1971, 185, 193-205; Parpola 1994, 35). The language of the Proto-Elamite script is not known, but there is no reason to suppose any other language than Elamite. The oldest tablets with Proto-Elamite pictograms are from the so-called level 16 at Susa (3100 BC). Two ‘numerical tablets’ appear even on level 18 (3300 BC) – contemporaneously with Uruk IV in Sumer, where the first invention of writing was probably realized. This fundamental borrowing of the idea of writing (besides numerical symbols, and perhaps no more than 10 signs: see Vaiman 1972; Meriggi 1969b) has been connected with the so-called 'First Conjuncture' (3300 BC) – the first wave of cultural expansion of the Sumerians. In this period three sites on the periphery of Mesopotamia were colonized: (1) Habuba Khabira on the Euphrates in

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Northern Syria; (2) Godin Tepe in the Zagros mountains of NW Iran; (3) Susa on the Mesopotamian alluvium in SW Iran (Lamberg-Karlovsky 1986, 195). In the 'Second Conjuncture' (3000-2900 BC) the Proto-Elamites repeat the same pattern as the Sumerians during the First Conjuncture: colonize foreign areas. Within a century of 3000 BC the sites of Tepe Sialk, Tal-i-Malian, Tepe Yahya and (ca 2900) Shahr-i Sokhteh in Iranian Seistan were colonized by the Proto-Elamites from Susiana (Lamberg-Karlovsky 1986, 197, 199). The latter locality was transformed into a large urban complex of more than 100 hectares. It played an intermediary role in connecting Elam with cultural centres in Turkmensistan (Geoksyur, Namazga III), Afghanistan (Mundigak) and the Indus valley (Parpola 1994, 17). The famous Proto-Indus script has its origin (or at least its inspiration) very probably just in some later variety of the Proto-Elamite script (Fairservis 1992, 228; Parpola 1994, 53; Meriggi 1977 on the inscription from Shahr-i Shokta). The question of the genetic affiliation of Elamite is not definitively solved. There are several scholars who have cited some remarkable similarities between Elamite and Dravidian, especially in morphology. The most comprehensive study, by McAlpin (1981), must be completed and corrected (see Appendix 1).

In contrast with the relatively poor results of the Elamite-Dravidian comparison (especially in the core lexicon) the comparison of Elamite with Afroasiatic looks very promising (see Appendix 3). The hypothesis of a closer Elamite-Afroasiatic relationship can be supported, at least indirectly, by archaeological evidence as well. Before 3000 BC there are only two periods where the material cultures of Khuzistan (Elam) and Sumer are closely comparable: (1) Late Uruk expanding in Susiana during the 'First Conjuncture' (see above); (2) Choga Mami Transitional (Iraq) expanding at the site of Choga Sefid (phase 5) in the Deh Luran plain (Iran) sometime in the 6th millennium BC. The conclusion of a cultural expansion is based on the introduction of certain plants and animals apparently not previously attested in Khuzistan: domesticated cattle and swine and various hybrid cereals, including hexaploid wheat, indicating that irrigation (attested in Choga Mami in the 6th millennium BC) was also introduced into Khuzistan at this time. It has been noted that a certain type of mud-brick also appears in Khuzistan at the same time. These simultaneous introductions have been interpreted as signifying an actual movement of new people into Khuzistan (Oates 1991, 24-25).

2. Sumerian language and script.

The Sumerian language was spoken by the people who lived in the alluvial plains of the lower Euphrates and Tigris at least from Uruk III, resp. Jemdet Nasr period (3100-2900 BC) onwards, but very probably also in the Uruk IV period (3300-3100 BC) and even earlier (Parpola 1994, 30-31). During these periods the first pictographic script was developed, and at least its idea exported to Elam and Egypt (3100 BC ?), cf. the carved flint knife from Upper Egypt (Gebel el-C'Araq) depicting on its handle a man in Sumerian dress conquering two lions, a common Mesopotamian motif, and (on the reverse) a naval battle in which Sumerian-type ships defeat Egyptian ships (Parpola 1994, 35-36; on the Late Uruk presence in Egypt, see also Zarins 1992, 71). It is almost a general opinion that the Sumerians are not autochthons in Mesopotamia. Höyrup (1992[44], pp. 60-61) has collected some authoritative conclusions:

The fundamental observation is that no Sumerian etymology for the names of the oldest cities can be constructed, and that a large number of words of cultural importance (tools, products and professions) seem not to fit the normal phonology of Sumerian (Landsberger; Salonen). They are bisyllabic, which is rare for Sumerian roots, and often contain a consonantal cluster.

For more about pre-Sumerian toponyms see Appendix 2. Following I. Gelb (Höyrup 1992[44], p. 63, ftn. 82):

The existence of entries in the Mesopotamian lexical texts with known syllabic values but with no corresponding logographic values indicates originally non-Sumerian words, which were perpetuated in the Sumerian writing, but not in the Sumerian language.

E.A. Speiser tried to identify the pre-Sumerian substratal language as Elamite. This idea can be supported. Among Elamite personal names the last two syllables are frequently repeated: Silhaha, Kunene, Hilulu, Kinunu, Nabubu etc. (Meriggi 1971, 182-183). These forms are interpreted as 'Kosenamen' by Hinz & Koch (HK). A similar pattern is typical for some Sumerian divine names:
Bunene, Zababa, Kubaba, Inana, Igigi, Aruru. Diakonoff 1981, 48 (his examples are quoted here) calls the source "Banana-language". The same pattern was one of the productive ways of forming diminutives in Egyptian (hfll.t "lizard" (Demotic), hdqq "rat", hwrr "divine calf", hprr "scarabeus") and Berber: Shilh asélman "eel" vs. asèlm "fish" etc. (Vycichl 1961, 250). Höyryp (1992[94], 34) presents his very revolutionary hypothesis proposing that Sumerian developed from a mid- or late fourth-millenium Uruk creole. The idea of a local melting pot is doubtless fruitful; naturally, it does not exclude the external origin at least of one component of this glottogenetic process. The preceding opinions are in good agreement with archaeological data indicating an extremely large population growth in Southern Mesopotamia during the Early Uruk period (3600 BC) -- very probably as the result of immigration into this region (Lamberg-Karlovsy 1986, 196). In recent times more hypotheses concerning the genetic affiliation of Sumerian were formulated. Boisson (1989) has collected some lexical parallels between Sumerian and Dravidian. (See also Appendix 2.) The author and Bengtson (1995) include Sumerian in a large macro-phylum called "Dene-Caucasian," together with North Caucasian, Yeniseian, Burushaski, Sino-Tibetan etc., following Hüsling, Bouda, Braun, Christian. Militarev (1984; and later in a private communication) presents tens of Sumerian-Afroasiatic lexical parallels, which cannot be explained as Semitic borrowings.

3. Afroasiatic, Elamite and Sumerian, and the question of the Afroasiatic homeland

The following language families have been connected in the so-called Afroasiatic (= Semito-Hamitic/Hamito-Semitic = Erythraic = Lisramaic etc.) macro-family: Semitic, Cushitic, Omotic, Egyptian, Berber, Chadic. Their common origin is generally accepted, but their internal classification and a localization of their common homeland remain controversial. Two basic hypotheses for a localization of the Afroasiatic homeland have been presented: A. North East Africa; B. West Asia (Diakonoff 1991, 12-13 gives a good overview of them). The main argument against the Asiatic version (besides an aprioristic rejection of a biblical tradition) is the fact that all branches with the exception of Semitic are or were spoken in Africa. But the question of the homeland cannot be solved mechanically only on the basis of this disproportion. There are many examples of a similar or even more disproportional dispersion (Latin/Romance, Arabic, Indonesian, Swahili, English; Turkic). Not rejecting a priori the African hypothesis, I prefer the Asiatic localization for the following reasons:

(1) A neolithic character of Proto-Afroasiatic cultural lexicon. The only area, where the 'Neolithic Revolution' begins before the disintegration of Afroasiatic (ca. 11-10th mill. BC) is its primary area: the Fertile Crescent of the Near East. Militarev, [Pejros] & Šnirel'man (1984, 1988) identify the Proto-Afroasiatic ethos with the authors of the early neolithic Natufian culture from the Syro-Palestinian region (11-9th mill. BC). This conclusion is in good agreement with the fact that Egyptian cereals are of Asiatic origin (Diakonoff 1981, 45).

(2) The zoological lexicon reconstructible for Afroasiatic reflects wild fauna attested in both North East Africa and the Near East (e.g. elephant, hippo, but not giraffe or rhino; cf. Blazek 1994).

(3) Very early mutual borrowings between Afroasiatic (not only Semitic) and Northern Caucasian (Militarev & Starostin 1984, 1994).


(5) Exclusive Cushitic - South Semitic / dialectal Arabic isoglosses probably reflecting a Cushitic substratum in the Arabian peninsula (Militarev 1984b, 18-19; Belova 1989).

(6) The Nostratic hypothesis proposing a genetic relationship of several language families of the Old World (Afroasiatic, Kartvelian, Indo-European, Uralic and Yukaghir, Altaic, Dravidian, Elamite; probably also Chukchee-Kamchatkan, Nivkh, Eskaleutan).
The most natural "epicentre" of a primary disintegration is again the Near East. The preliminary estimates of the time of divergence of the Nostratic unity are not too different from the hypothetical time-depth of Afroasiatic (13th mill. BP). Starostin – an author of this rather paradoxical result – sees an explanation in the dichotomy Afroasiatic vs. "Micro-Nostratic" (=Nostratic minus Afroasiatic). A modified version is presented by Greenberg, who postulates a Eurasian macro-phylum consisting of the same language families as Nostratic, minus Afroasiatic, Kartvelian, Dravidian, and Elamite.

Finally, Greenberg also assumes a closer relationship of these languages and admits remote genetic links to his Eurasian. The authors of the classical Russian Nostratic hypothesis, Illič-Svityč and Dolgopol’skiy, trace a border between Western Nostratic branches characterized by apophony (Afroasiatic, Indo-European, Kartvelian) and Eastern Nostratic branches with a stable vocalism (for more detailed information see Blažek 1992b, 82-84).

The level of our knowledge does not allow any definitive conclusion. It is possible only to formulate certain models and to verify them in future research. The following partial solutions are the results of my own study of the problem. Abstracting from other Nostratic branches, the position of Elamite could be expressed as a bridge connecting Afroasiatic and Dravidian (Fig. 1), although the Elamite-Afroasiatic relationship seems to be closer than Elamite-Dravidian (cf. Appendix 3 vs. 1). An alternative but not diametrically different scheme is depicted in Fig. 2.

Elamite and pre-Sumerian ("Banana- language" ?) represent here peripheral dialects of an Afroasiatic continuum comparable with Chadic or Omotic. The central position of Egyptian correlates with a relatively high progressivity in development of its morphology (e.g. the loss of a prefixal conjugation) typical for a centre of any dialectal continuum in comparison with more conservative non-central dialects (Semitic, Cushitic, Berber).

Fig. 1

South-Nostratic

Afroasiatic

(10 mill. BC)

Pre-Sumerian

Elamite

Dravidian (4000 BC)
APPENDIX 1: Elamite & Dravidian

A hypothesis of an Elamite-Dravidian relationship, based especially on morphological comparisons, has had numerous proponents (Norris, Caldwell, Husing, Trombetti, Bork, Diakonoff, Vacek, McAlpin). The most detailed study of Elamite-Dravidian connections was presented in a series of papers and summarized in a monograph by McAlpin (1981). Besides some promising cognates, he presents several semantically or phonetically questionable parallels, including evidently incorrect comparisons based on erroneous interpretations of Elamite words, such as:

- **a. El(m) hun** "water" (König 1965, 190; correctly probably "light" - see HK 717) // Dr *uṇ - "to drink, eat a meal" (DEDR 600) - MA 145: El+Dr; Dr *uṇ - has a promising cognate in ECush *cun - "to eat / drink" (He 1978, 100)

  or very probable borrowings from Sumerian or Akkadian:

- **b. El(m) ukku** "head, chief; on" (HK 1210; cf. Sum ugu "head, skull, upper side; on" - IK 1104; perhaps Akk ukkum glossed SAG-SUHUR.SUHUR - see AHw 1405 - has the same origin) // Dr *uk(a)- "to ascend, rise, jump up" (DEDR 559; MA 95: El+Dr), but Kolami kok - "to climb", Parji cokk- id., cotip- "to raise" (DEDR 2828) signalize probably the initial *c-;

- **c. El(m) upat, upatta** "brick" (HK 1240; cf. Akk ur(u)bātu "coping stone" - AHw 1436) // Dr *uppar- "bricklaying, plastering" (DEDR 626,628; MA 96: El+Dr).

The new Elamite lexicon (HK) allows to extend the number of hopeful cognates:

- **d. El(n) ulkina** "weapon" (HK 1218), "reed arrow" ? (Bork) // Dr *alaku "blade of a weapon, head of an arrow" (DEDR 237) // cf. AA: CCh: Mandara ʾlkā, Gisiga helek, Mafa leked', Glavda lāgha, Margi laga "bow" (Lukas 1970, 30);

- **e. El(o) ik** "votive gift" (HK 746) // Dr *i- "to give" (DEDR 416);

- **f. El(n) katu** "cattle", (A) kiti "ox, calf, ass and cattle, foal of ass" (HK 548,489) // Dr *kūt-ay "bull, cow" (DEDR 2199) & *kūt-ay "cow" (DEDR 1886); cf. Sum gud "bull, steer, cattle" (IK 367) which can be a source of El words;

- **g. El(o) kun(n)a** "hair" (HK 513) // Dr *kūntal "hair" (DEDR 1892) - a compound; the second component is *tal-ay "head" (DEDR 3103); cf. also Dr *kunaṭi "hair / crest of bird" (DEDR 1634);
h. El(A) *maka/- "to consume, digest" (HK 861-2) /// Dr *mookh- "to eat / drink" (DEDR 5127);

i. El(A) *nari - in naranda, narante/i, narada, naru(nu)te "daily" (HK 991) besides na(n) "day" (HK 967, 968), compared by MA 103 with Dr *nā/ "day" (DEDR 3656) (having closer cognates in AA: ECush: Som *nāl "light" / EC: Ndīm nelīn "day") /// Dr *nē/ "sun, day, time" (DEDR 3774);

j. El(m) *nu "a sort of corn (barley ?)" (HK 1004) /// Dr *nā/ "sesamum" (DEDR 3720) and / or *nuvar-ay "Italian millet, panic seed" (DEDR 3712); cf. also Sum *num (mun) "seed, offspring" (IK 771,777);

k. El(n) piti "vessel" (HK 224-5) /// Dr *putți "(earthen) vessel" (DEDR 4265A);

l. El(o) ten "sweetness, kindness" (HK 305) /// Dr *tēn/ *ūn "honey", cf. *ū - "sweet" (DEDR 3266);

m. El(A) *udd(d)u "foal" (HK 345), "(camel) calves" (H 102) /// Dr *tūt/-*tuft- "calf" (DEDR 3378).

**APPENDIX 2: Sumerian & Dravidian**

Most of the Sumerian - Dravidian lexical parallels (Boisson), including the oldest Sumerian toponyms etymologizable via Dravidian (Fähnrich), can be supplemented by Afroasiatic data (Militarev sees in them an influence of a pre-Semitic Afroasiatic substratum in Sumerian):

n. Sum Buranun(a), Akk Purattum "Euphrates" (IK 157; Edzard, Farber & Sollberger 1977, 208) /// El(n) Pirin 'river name, probably Karun in Susiana' (HK 209) /// Dr *pur-ay "river" (DEDR 4318; Fähnrich 1981, 91: Sum < Dr); Note: Sum *idgina, Akk Idiglat "Tigris" has a hopeful etymology in the Sum compound *idi-gina "running river" (Albright 1976, 148).

o. Sum *uri "a city from south Sumer", *uru "city" (IK 1137) /// Dr *ūr "village, town, city" (DEDR 752; Fähnrich 1981, 91) or Dr *ūri "place, site, side" (DEDR 684) /// ? El *mur-/ *wur-?: (o) *mur ("some")where, *muru (g.) "the earth", *murun "earth" (HK 952, 954, 964; MA 106: El+Dr) /// ? AA *wē-* / *wur- > ECush: Oromo *warra "family, kin", Arbo *wari "household"; Ch: (W) Hausa *wurri "place", (C) Gabin *wūre "town", Muturua *wurri "Dorf", Makeri *wur "village", (E) Danagala *wēre "place", Somrai *wōrem "kin", ? Eg(OK) w (< *wə3 ?) "district, region" (EG I, 243; Takács p.c. EG+El) and / or (Pyr) *īru (< *īru3.t < *īru < *wur-t ?) "place" (EG I, 26); Note: Hattic fur(i) [wuri] "land" (Girbal 1986, 65, 69, 129, 150, 167) can represent the same term reflecting the beginning of a Near Eastern urban civilization.

p. Sum *ēri "city" (IK 278) /// El *ari "Dach, Obergeschoss" (HK 83; AHw 264) /// Dr *ar-agy "room of house" (DEDR 322) /// AA *cəry/-*cəry- > Sem: Ug *cīr "city", Hbr *cīr id., OSA *cīr "castle" (Segert 1984, 196; Aistleitner 1965, 241); ECush: Afar *cāri "house, tent", Saho *cari "family, house, kin"; ? Eg(MK) *t. (< *cî3.t) "chamber", (late) C. (< *cî3.t) "house" (EG I, 160, 159; Takács p.c.).

q. Sum *an "heaven; high up" (IK 65) /// Akk Anum "God of heaven" (AHw 55) /// Dr *an "upper part, above" (DEDR 110; Boisson 1989, 41: Sum+Dr) /// ? AA: Sem: Akk *an(a) "to, on" (AHw 47); ECush *hana "over, above" (Hudson 1989, 109).

r. El(o) *ēri-a "deserted country, steppe, pasture-land" (IK 254) /// Dr *ere- "black soil" (DEDR 820).

s. Sum *gār "cream" > Akk garūm "cream" (AHw 282), cf. Sum ga "milk" /// Dr *kar- "to milk" (DEDR 1385; Boisson 1989, 43: Sum+Dr) /// AA *kar- > Sem: Syr kar- "beestings, colostrum, curdled milk"; Cush: (N) Beja kar "butter"; (E) Rendille *kuč "fresh milk"; Barb: Ahagar a-kru "curdled milk, curds" (Militarev 1984, #23: Sum+AA).

s. *nun "sun, day, time" (IK 771,777); cf. also Sum *num (mun) "seed, offspring" (IK 771,777).

u. Sum si "to give" (IK 866) /// Dr *cī - "to give" (DEDR 2598; Boisson 1989, 17: Sum+Dr) /// AA *say- > Sem: Ug sī, Hbr sīy "gift" (Aistleitner 1965, 304); ECush: Som sii, Boni, Rendille sii "to give" (He 1978, 95), Arbo sīhīs-, Elmolo sīsē, Dananeh sīi-sī, Yaku -iši-či id.; ? Eg(Old) isw "compensation, salary, reward", Copt asu "price" (EG I, 131; Vyczichl 1983, 16; Takács p.c.: Eg+AA).
APPENDIX 3: Elamite - Afroasiatic comparisons

1. Body parts & space orientation

1. El(m) el(t) "eye" (HK 396,394) // AA *ʔiʔ-(at-) "eye" (Greenberg 1963, 56) > Cush *ʔiʔ-(at-). (Do 1973, 144-5; Eh 1987, #326) // Eg(Pyr) Ir.t (EG I, 106) // Berb: Shilh *tīf < *ʔiʔ- at- pl. al(ī)n Ch: (C) Hidkala ili, Alahaghwa iliya, Vizik irī ili, Buduma yil, Mandaghe ʔāl (pl.) // Dr *āl "pupil of eye, eye ball" (Zvelebil, JAOS 105, 1985, 658).

2. El(m) bunit "heart" (HK 234) // AA *bu[t]n- > ? Sem: ḫabbūnun(m) "navel, umbilical cord" (AHw 9) // Eg(Med) bn.tj (du.) "female breasts" (EG I, 457) // Ch: (C) Guflei ḫene, Makari ḫene "breast".

3. El(m) kassu "horn" (HK 409) // AA *kwsw-/y- "horn" (Blazek 1989, #66) > Cush(N): Beja koos horn; tooth " // Omot *kasim "horn" > Ubaider qošma, Dizi usum etc. // Berb: Senhaja Dizi kisu qosma, qis, // Omot Harawa Matmata *kusim "horn"

4. El(m) kīr, (A) kur "hand" (HK 469,523,529) // AA *far- "arm, shoulder" > Cush(E): Som qarṣar "upper part of) shoulder" // Eg(MK) q5h > *q3h (?) "arm, shoulder" (EG V, 19); -h is probably a body part suffix, cf. lībī "tooth", bāhī "penis", ḡūbī "wing, leg", gmn.tī "lock", sībī "toe", sīdī "calf (with foot)", sīhpī "Rippenfleisch" // Similar to lībī "body, flesh" (EG III, 37-8) // Berb: Shilh īgīr, pl. īgāriun "shoulder", cf. tāqāru, pl. tiqāraq "shoulder blade" // Dr *kīr- "ankle, wrist" (DEDR 1563).

5. El(A) mat, madda "with young" = "trächtig" (HK 855) // AA *m[a]t- > Cush: (E) Afar maddaq "uterus, womb", cf. maq - "to copulate", Burji maq-iss- (caus.) "to marry" (Sa 1982, 139) // Berb: Ahaggar temit- "uterus, womb".

6. El(m) put "foot; under" (HK 111) // AA *pVd- > ? Sem: ḫakkapānum "way, path", Mehrī awēḏḏī "to look for a footprint, Arab ḡafajada "to come, travel" // Eg(Med) p3d, (D 18) p3d "knee; to run", Copt put "knee, foot, leg, thigh" (EG I, 500; Vy 165) // Berb: Mzab ḡafā, Ghat ḡafūd, Zenaga offūd "knee" // Ch: (E) Mubi ēḏūlī "thigh" // Dr *pats-un "palm (of hand)/sole (of foot)", *patsi "step" (DEDR 3843,3850). Note: A similar semantic dispersion is known also in the case of the Indo-European etymon *pēd-s, g. *ped-es/-os "foot", *pedo-m "bottom, place", *pēdō-ī "sole, step, trace" (Pokorny 1959, 790), probably related on Nostratic level.

7. El(n) pur "fingernail" or "(nail of) thumb" (HK 241) // AA *pur- or *far- (Illī-Svityč 1984, 70-77, #362) > Cush(E) *far- > Som far "finger" (Do 1973, 41-2) // Omot: Koyra parta "finger" // Ch: (W) Hausa ḡarce "fingernail", Gwandara apiraci, Bolewa paala; (C) Hina mbraa, Mandara fajīde, Gidar purzhunay; (E) Mubi ēfērī, Jegū p3ʔlī /? Dr *vir-al "finger, toe" (DEDR 5409), cf. Dr *pur-aqī & *var-aqī "to scratch with fingernails" (DEDR 4023, 5322).

8. El(n) san "blood" (HK 1053) // AA *ṣān-(P-) (Blazek 1989, #17) > Omot: Zaye ṣonne "pus", Hamer zom(?)/bi, Karo Ṣumni "blood" // Eg(Pyr) ẓnīf "blood", Copt snaf (EG III, 459; Vy 1983, 193) // Berb: Ifgogas azeni, Ghat azeni, Ayr azeni, Ahaggar aheni id. // Ch: (W) *zənym > Hausa jīnī, Montol šīyım, Galambu źamān, Kuler zom; (C) Bata Ḫameb, Bachama źambiy, Gudu ḥṣīn id.

9. El *siha[n]: (m) siha "tooth", (o) sīhan NP (HK 1071) // AA *si[h]n- "tooth" (Do 1973, 91-2) > Sem *simm- (Ls 504) // Cush(S) *sihn- (Eh 1980, 180) // Berb: Ahaggar esīn, pl. isīnun // Ch: (W) SBAuchi *skin, Ngizim yaannau; (C) Hurzo šīhā, Musgu ṣiģ, (E) Jegū ṣuço etc. id.

10. El(n) siri "ear", cf. siri "true, right" (HK 1089) // Cush(C): Waag sār "to hear" // Eg(late) s3 "to recognize, know" (Fa 212; IEV 4, 30) // Ch: (C) Zerga tšrāq "to hear".

11. El(m) šara "under" (HK 1132) // AA *sar- "back" (Co #269) > Sem: Arab sarā "back", Soqotri sar, Mehrī sār "behind, after" // Cush: (N) Beja sarā "back"; (C) Xamir sarā id., Awngi sār "lower part"; (E) Afar sārā "back, rear", Burji sarā "tail"; Yaaku sērcy "below, down"; Dahalo sārē "back"; (S) Burunge sārī "buttocks" // Eg(Pyr) s3 "back" (EG IV, 8).
12. El(A) šimme "(his) nose" (HK 1170); originally maybe *šin-me with the same suffix as tui /tii-me "tongue" and the assimilation as imme "not" < *in-me (HK 342; 754,757,758) /// AA *śin-/√sun- > Cush: (C) *asáp-/√sun- "nose"; (E) *śin-/√sun-√/sun- id. (El 1987, #476); Dahalo sina id. // Eg(Pyr) sn, ssn "to smell" (EG IV, 153, 172,277) // Ch: (W) Hausa sunsuna id. Note: An alternative cognate can be seen in Sem *š-m-m > Arab ṣamma "to smell", ḥašm "nose".

13. El(m) reba /teppa / "before, up" (HK 307) // AA: Eg(Pyr) tp "head; on, upon" (EG 263, 273) // ? Cush: (E) Burji tip-dō "skull" (Sa 1982, 177).

14. El(m) tipi "neck" (HK 333) /// AA *duby- > Sem *d-b-r "to be hinder, back", Mandaic dibra "back, tail", Arab dabur "tail" // Cush: (E) *dib-√/dub-/*dab- "tail, back" (Sa 1982, 57), cf. Oromo dūba "back, behind" // Omot: Kullo duupiya, Karo dibini, Bako doobanna "tail" // Ch: (C) Gisiga, Mafa daba / Gidar dūbo "back".

II. Human society

15. El(m) ah(a)-pi "origin, kin, genealogy" (HK 15,33,35, 392); -pi = pl. suffix /// AA *ṭayw- > Sem *ṭayw- "brother", *ṭayw-√- "sister" (Cohen 1970, 15) // ? Cush: (E) Arbores ṭaw "maternal uncle" // Eg(BD,NK) h(wy) "child" (VY 258) // ? Ch: (B) Boka xwaya, Musgu aji "son".

16. El(m) bala "male" (HK 131-2) /// AA *bal-/*bil- > ? Sem *bal- /- "lord, husband" // Eg(OK) by3 "to be a powerful being", b33w.t "viritility" (EG I, 413,417) // Ch: (W) Sura ḏil "strength, strong, powerful"; (C) Logone bīle "man, male", Kusuri bèlom, Gulfè ña "man".

17. El *eri */iri "uncle" (HK 401,774) /// AA *ṭary- "kinsman" > Sem: Ug ṭary "son" or "brother" // Eg(Pyr) ṭary "companion" (Warl, JNES 20, 1961, 32; EG I, 105) // Cush: (N) Beja aar "female relatives"; (C) Awngi pārā "her husband" < *pi-ārā; (HE) aro"o "husband"; (S) Mbugu māro "neighbor; kind, related thing", Asa ṭarato "twins" // Ch: (W) Kulere ḏēr "father, brother", Bokkos re, pl. ṭary "man".

18. El(m) hiš "name", hiša "praise, glory" (HK 662,669) /// AA *ḥ/haS- > Sem: Akk ḥāsāsu "to remember", ḥāsāsu(m) "ear, wisdom", Ug ḥiš "to feel"; Arab ḥassā id., ḥiss "voice" // Eg(OK) ḥis "to sing" (EG III, 164) // Cush: (E) ḥāsaw- "to chat" // ? Ch: (W) Sura ḏil "strength, strong, powerful"; (C) Logone bīle "man, male", Kusuri bèlom, Gulfè ña "man".

19. El(o) hit "troops", (m) hitra "warrior" (HK 665-6) /// AA *cad-/*cid- > Sem: Hbr ḍgy-ék "the prime", Soqotri ṭed(e) "vie, esprit", Geez ṭed "viri, masculi, mariti, viri fortes", Tigrė ṭed "tribe, family,people" (LS 65) // Cush: (E) Som ṭed, ṭid "people", Rendille et "person, man", Arbores ṭidan "people" // Omot: Omoto *ad(d)e "man, male, husband", Aroid ṭ(e)d "man" // Berb: Shilh id "people", Ksur idu "man" // Ch: (C) Musuge ḥād "man". Note: The analogical semantic dispersion appears e.g. in Indo-European: Hittite tu-tzi- "army, camp" vs. West IE *tetē "people".

20. El(o) ḡi "brother" (HK 743) /// AA *ṭagy- > Cush: (C) Bilin ḡi, Kemant, Awngi ag, Xamir ig, Kunfāl ḡa "uncle"; (S) Asa ḡukok "mother's brother" // Omot: Ubamer aji "aunt".


22. El(o) ḡba "servant, groom" (HK 818-9) /// AA *ṭyab- (Do 1973, 164,229) > Cush: ?(N) Beja ṭəba "male; capable, able"; (E) ḡeb- "male; strong" (Sa 1979, 22; Id. 1982, 131); (S) Iraqw ḡawaale "slaves" // Omot: Dīzī ṭəbu, Na'o iaib, Sheko yaab "man".

23. El(o) *ma(ay) "might, power" (HK 846) /// AA *manwy- "man" (Illič-Svityč 1976, 58, #292) > Cush: (L) Som mun "male", (HE) *manna "man (people)" // Omot: Wolaita minoo "warrior", Kachamna mono "strong" // Berb: Zenaga miin, pl. mān "man", (u)man "kid", Zwāwa iman "person, life" // ? Eg(Pyr) mn "someone", Copt man "a certain person / thing" (EG II, 64-5; Vycichl 1983, 114) // Ch: (W) *manni "man, husband, people" (St 232, #801); (C) Logone meeni "man" /// ? Sum *men > *even > en, Emeals umun "lord" (Schretter 1990, 263) /// Dr *mag "king, lord, warrior" (DEDR 4774).

24. El(A) mal [wal?] "child, baby" (HK 903) /// AA *wayl-/√waly- "child" > Cush: (E) Sam *weil "child", *walaal "brother"; Elmolo wel, Dasenech wéél "child" // Berb: Libyan w "son" vs. w.l.t "daughter" // Ch: (C) Buduma wuli; (E) Sumrai will "child".
25. El(m) mu(h)ti "woman, wife" (HK 948, 961-2) // AA *mat-/matH- "woman, wife" // Sem: Arab-m-t-t "to be related with somebody through marriage" or m-t-2/iw "cohabiter avec une femme" (Vycichl, Alön 50, 1990, 80) // Cush: (E) Sidamo maie "wife" // Omot: Shinasha maion and/or Kachama mäto "woman" // Berb: Ahaggar tamät "woman", mat "femme sans aucun valeur", Djerba tamatiš "woman" // Ch: (W) *maτa "woman, wife" (St 232, #796); (C) Bachama mata "woman", Wadi militi "Weib".

26. El(o) nab or nap "god" (HK 966, 970-1) // AA *na(y)a-b "lord" // Sem: Arab nāb, pl. ʃaŋīb "tribal chief" (Ember, 3A 53, 1917, 1931) // Mehri nōb "grand" // Eg(Pyr) nōw "lord", Copt nāb (EG II, 227); Vycichl 1983, 138? // Ch: (E) Afar naba "to be big", nābam "very, much", Arbore nīb "greatly, very".

27. El(A) puhu "boy", cf. punna "young" (HK 230, 238,240) // AA *pt/pt[?]- > Sem: Ug pūgy "boy", ptgt "girl" (Segert 1984, 198) // Ch: (W) Bokkos ûš, Shàføy, Kuliere ûte, fo "boy, child" // Dr *ptoy "girl" (EDDR 4532).

28. El(A) ruh "man", (o) ruhu "offspring" (HK 836, 1044-6, 1049) // AA *rVh/h[w]- > ? Sem: Akk rāḫā, rebīm) "to beget, pair" (AHw 969) // Eg(OK) rhy. "people" (EG II, 441) or (Pyr) rhy.t "men" (EG II, 447), cf. rhy "to copulate" (Pa 152).

29. El(m) šak "male offspring, son" (HK 1110) // AA *Sak/k[w]- > Cush: (E) Oromo sooqiyaa "adolescent" // Berb: Ahaggar ašaŋ, p. šaŋet "young man" <*n-saŋuy/*sāŋuy (Prasse 1974, 62); Guanche suka "son" vs. sukaha "daughter" (Wo 408) // Ch: (W) Haussa saako "a younger brother" vs. saakwas "a younger sister".

30. El(A) žin "baby, suckling" (HK 1291) // AA *žin/žin- (? ) > Ch: (W) Nbauchi *žin- "child"; (C) Gisiga žuŋ, Bachama ze "son, boy" // Dr *cinja "small", cf. Brahuí cunα "child" (DEDR 2594; MA 100: El+Dr).

III. Natural phenomena

31. El(m) amni "mountains", (A) ammu "mountain"? (HK 55, 517) // AA *?abun- "stone" > Sem *?abun- id. (Ls 4) // Eg(Med) lbyw "mineral material, alun", Copt obn, ošen "alun" (Vv 48-9) // Cush: (N) Beja amwe "stone" <*?a帏u- (h) "Quartz" (Munzinger); (C) *fam- "mountain" <*?a фин- // Berb: *a½un "stone" > Sus awwum / aggun etc.; Guanche t-aboras (pl.) id. (Rössler, Orient 17, 1964, 214) // Ch: (W) *pabuni "millstone" (St 230, #781).

32. El(A) bel "year" (HK 188) // AA *½l½l- > ? Sem: Ph bl, Hbr bul "name of a month" (Cohen 1970, 51) // Cush: (E) Sam *bil- "month" (He 1978, 76), Sidamo bulu½ "year"; (S) Qwadza bala½eto "year", ? Alagwa balulu "days" // Ch: (W) Fyer wel, Sha wul, etc. "year".

33. El(o) häl "land, bottom, region, city" (HK 574,594) // AA *hal-/ "place" > Cush: (E) Som häl "place" // Berb: Mzab al "place", Zenaga al "id., country".

34. El(A) har "Stein" (HK 623) // AA *har- "mountain, rock" > Sem *har- "mountain" > Hbr har, herer, Ph hr id. (Klein 1987, 167) // Ch: (E) Yaaku hēér, pl. herer "(big) rock" // Berb: Ahaggar ahor "accumulation of rocks" // Dr *ar-ay "stone, rock" (DEDR 321).

35. El(o) hun "light" (HK 717,697,719-20); cf. (o) nahi[n]ti "God of sun", (m) nahrhunte "sun" = *naN "Tag" & hunni "Beleuchter" (HK 979-80) // AA *[h]Vn- > ? Ch: (E) Burji hinn-eco "sun" // Ch: (C) Zelgwa hane, Paduko hani, Hurzo hrade, Mandara hår "day" (24 hours).

36. El(m) ki-el "region, district", (n) ku-el "region" (HK 463; 501) // AA *ka[w]- > Cush: (E) Oromo kaloo "pasture land" // Berb: Adjhaq akal, Zwawa akkal, Nifà akäl etc. "earth" // Ch: (W) Tangale kâlaw id.

37. El(o) lali "source" (HK 813) // AA *lay-/[la]-y) > Cush: (N) Beja lîl "to be wet, damp, moist"; (E) Afar lay, pl. laaly "water", layhintii "source"; ? Oromo loola "flood" // Berb: Libyan lîlî "water" (Hesychios); Matmata lîlî "sea", Zenaga ell "id., big river". Note: Hititite lili- "lake, pond, sourcee, well" resembles rather El lali than Sum tül "source" connected with Hititte by Puhvel, IF 81, 1976, 27.

38. El(o) sud/šut-me "night" (HK 1018,1193-4,178) // AA *sud/-sut- > Sem: Arab swd "to be black", OSA swd: Cush: (N) Beja sootay, suutay, sooday "of dark color, dark-brown, -grey // Omot: Dime suut-u, Galîla šoyt-i, Ari soyt-i, Hamer soyt-i, soot-i "night".

39. El(n) tep / dèb / "rain" (HK 311) // AA *dib/-dúb- > Cush: (E) Rendille dapbat "cloud", Hadìya duba id. // Omot: Dizi dèb "to rain", Kafa dup id.; Dime dèeb, Ari døob "rain" // Ch: (W) Jimbin dabuna "rainy season"; (C) Daba dábweya "rainy season", Gidar dúbbya id.; (E) Kera dubuñi "rain".
40. El(n) uhi "stone, rock" (HK 1202) // AA *ʔuʔay- > Berb: Menacer uqi, Iznacen awq "stone" // Ch: (W) Montol oho "rock"; Sha wášay "mountain" or hów "stone", Daffo-Butura hayay pl. id., Fyer hów "mountain".

IV. Dwelling, agriculture, tools & weapons, transport

41. El(o) aspi- "to plough" (HK 15) // AA *hVb- > Sem: Arab habba "to cut" // Eg(OK) ħb "plough" (EG II, 485), Copt hebbe, hebi (Vy 288) // Sum apin "plough" (Bläzck & Boisson 1992, 22).

42. El(A) bardu "street" (HK 147) // AA *bV[r]-d- > ? Cush: (E) Konso pora "road" (p- < *b- regularly) // Omot: Nao burtan, Gimira bod "road" // Berb: Ahaggar abarid, Ayr abor, Augila tabarut "road" // Ch: (W) Buli badina; (C) Hwona banda; (M) Mubi bádí, Migama bóíl "way, road".

43. El(A) basram "hammer" (HK 126, 395) // AA *bVr-Vs- > Cush: (E) Oromo burrissa, Konso purriša; Dobase purruša "heft".

44. El(A) elpi "saw"? (HK 395) // AA *ʔalb- > Cush: (E) Oromo albee "knife"; Gollango albeni "sickle".

45. El(o) halki "sweet", (A) hal(-)-la?-ki "honey" (HK 599-600) // AA *hVl- > Sem *hluw > Arab ħalā "to be sweet, pleasant", ħluw "sweet", Syr hll to be sweet" // Eg(D 19) ħhhrg ħhlgl "to be glad, to rejoice", (Gr) hrg, Demotic blk "sweet". Copt hloč "to be sweet" (EG III, 34; Vy 298) // ? Berb: Tamasher sulleg’et "to be sweet" (caus.) (Vy 1934, 85).

46. El(m) *hvel/-*hvel- "portal, gate; yard" (HK 683,657,666,391,1201) // AA *ghul- > ? Sem: Aramaic ĝl, Arab gatla "to enter" // Eg(Pyr) ĝl (leaf of) door", (D 20) ĝy.t "Türbalken", (Pyr) ĝl(w)t "gate" (EG I, 209-11, 164) // Cush: (E) Oromo ula "gate, portal" // Ch: (W) Síri hwlv "doorway".

47. El(A) hapis "ax", cf. atti hipis "Spitzhacke" (HK 668, 395) // AA *hVb(-)s- > Eg(Pyr) ħbs "hacken" (cf. ħb3 id.), (BD) ħbsy.t "Hache" (EG III, 256) // ? Berb: Ahaggar ĝews "tailor, retrancher ce qu’il y a de trop".

48. El(n) menu-me "roof"? (HK 915) // AA *min- > Cush: ? (N) Beja mine "to create"; (C) *pon- "house"; (E) *mn-/*mn- id. (Sa 1982, 45), cf. Elmolo mindu "roof"; (S) *m- "house" (EH 1987, #436) // Eg(Pyr) mn(n)w "fortress" (EG II, 82; Takács p.c.) // Ch: (W) Bohle-Tangale *mina "hut" (ST 247) // Dr *ma-ny "house" (DED 1776).

49. El(m) mif[f] "needle" (HK 939) // AA *mutC/-*mitC- > Cush: (E) Elmolo midi, Dullay mut(u)C, Gedeo muta "needle".

50. El(m) ulhu "chamber", ulhi "dwelling-place; Tempel-Cella"; (A) ulhu "house, palace, yard" (HK 1216-7) // AA *ʔul- > Sem *ʔul > Akk ālu(m) "village, city", Ug ṣahl "tent, dwelling", Hbr ṣhel "tent, shelter" etc. (Cohen 1970, 10) // Eg(D 19) ħ🇬l,t, (D 18) ħhw "camp, stable" (EG I, 118) // Cush: (E) Oromo oll-aa "village", Arbore ṣollah "id., neighbors".

V. Fauna

51. El(A) bagimaš "halbwüchsig bei weiblichen Kleinvieh" (HK 118) = bakemaš "intermediate (female) goat" (Hallock 1969, 673) // AA *bagg- or *bagC- (Co #390) > Cush: (N) Beja bok "he-goat"; (C) *bag(g)- "sheep" > Geez baggeč "sheep, ram" // Berb: Ahaggar abagug "young ram", Iullemiden abbegug "ram". Note: El bagimaš can be a compound of a proper El word for "goat" and Sum maš "he-goat, kid, gazelle" (IK 657,660), cf. also maš "son, boy" (IK 657).

52. El(A) duma "wolf" (HK 356) // AA *ʔuʔm- or *dumm- > Sem: Akk dumām- "gepard", Arab (Yemen) dimm, dumm "cat" (LS 136) // Cushi: (S) *ʔuʔuma "leopard" (EH 1980, 347) // Omot: Koyra damaa "jackal" // Ch: (W) *damı "leopard, hyena" (ST 171, #240); (E) Bidiya dêmêm "lynx".

53. El(A) it-ra-un-ku/dranku? "donkey" (HK 794) // AA ?: Cushi: (C) *doqVwar- "donkey" // Ch: (E) Mubi dğürvil, Migama dôrkül, Dangla dûrkur, Bidiya dûrtikîlo id.

54. El(m) hidu "sheep" (HK 656) // AA *cid/-*cid-? > Cushi: (E) Saho çeydoçido "sheep" (coll.), Asa-Lisan çiddoo pl. "sheep", Elmolo edî "goat" > Dr *iti - "to herd (esp. goats)" > Malayalam ìtayan "a caste of shepherds and cowherds", Brahui ìtíchîng "to gather, herd" (DED 450); MA 97: El+Dr.

55. El(m) kumaš "he-goat" (HK 512); cf. èš "cattle, herd" (HK 84) // AA *kVm- > Cushi: (C) *kêm- "cattle" // Ch: (W) Bohle-Tangale *k’anV "cow" (ST 246).
56. El(A) *kar(r)-/*kur(r)- "lamb" (HK 441,442,531) // AA *karr- (Co #181) > Sem *karr- "(male) lamb" // ? Cush: (E) Dasenech kor-ac "male kid" // Berb: Qubyte ikorri, Ahaggar ekker "ram", Sus ikru "goat" // Ch: (W) Saya korâ, Wàndài kàrdor "sheep".

57. El(m) lakpilan "horse" (HK 811); ? < *laki-[i]pilan, cf. laki- "to travel" (HK 806, 811), comparable with Beja lagi "road"; Qwadza lagalako "path, road" (Eh 1987, #316) // ? AA: Sem *fib-(-) "camel" (Cohen 1970, 3) // ? Eg ib3w "Barbary sheep" (Fa 15; Takâces p.e.: Eg+Sem) // Dr *jvûfi "horse" (EDDR 500). Note: The domesticated horse (Equus caballus) was not introduced into South Asia until after 2000 BC. McAlpin 1981, 147 judges that Dr *jvûfi must refer to onagar (Equus hemionus). On the other hand, the domesticated horse was introduced into Sumer just from West Iran / Elam in the beginning of the 3rd mill. BC (Brentjës).

58. El(A) putu & pitu "kid" (HK 237,226) // AA *pVb(V)d- > Sem: Akk puḫadu "lamb, kid", Ug phd "lamb" (Gordon 1965, 467) // Berb: Ahaggar efd "ram", Ayr ëfâd id. (Prasse 1974, 21).

59. El(A) tila "calf" (HK 329) // AA *taly- > Sem *talay- "young of sheep, goat, antelope" (Ls 590) // Cush: (E) *tal- "to beget" (Sa 1982, 123), cf. Sidamo dala /tala "she-donkey" // Berb: Iullemiden â-âl "calf". Note: Cf. also Hurrian Tilla "a bull (of Teššub)" (RHA 35, 1977[79], 266).

60. El(A) zamama "bird" = "Geflügel"? (HK 1280) // AA *cum-an- > Sem: Akk summatu "dove", Arab summân "quail" (AHw 1058) // Eg(Pyr) smn "goose" (EG IV, 136) // ? Berb: Ahaggar a-ijam "sp. ostrich" // Ch: (W) *zin-an- "ostrich" (St 190).

61. El(A) zibar- "camel" (HK 1288) // AA *[z]br- > Cush: (C) Bilin dabra "bullock, Stier zum pflügen"; (E) Som dubeer "decrepit pack-camel". Note: The oldest discovery of the domesticated camel (Camel bactrianus) is known from Central Iran (Tepe Yahya, 4500-3800 BC) (Brentjës). Its spread is attested from East Iran (Shahr-i-Sokhta, 2700 BC) and Indus valley (2300 BC) (Banti 1993, 186). On the other hand, the dromedary (Camelus dromedarius), probably originating on the Arabian peninsula, was depicted in Mesopotamia before 3000 BC and in Egypt early in the 3rd mill. BC (Brentjës). The age of the presence of camel in Ethiopia and Somalia is discussed by Banti 1993, 193-9. The East African camel was imported from South Arabia. The similarity of the Elamite and Cushitic words certainly does not represent common heritage. If not accidental, it can be explained only as a result of a cultural diffusion.

VI. Flora

62. El(n) ahiš "pasture-land" (HK 34) // AA *çawîš- > Cush: (E) *çawîš- "grass" (Sa 1979, 44,45,47) // Omot: She oš "cane, Bambusa abyssinica" // Ch: (W): NBauchi *awasi "grass" (Skinner 1977, 24); (C) Ga`anda ušgna, Masa usna id.; (E) Bidiya Pâwso, Sokoro ûssii id.

63. El(m) par "seed, offspring" (HK 148) // AA *pVr- (Cohen 1947, #367) > Sem: Akk pēru "fruit", Hbr pēr id., pârâh "to bear fruit", ? Arab wařara "to be numerous, fruitful" // Eg pry "to give birth" (Ward, JNES 20, 1961, 36-7: Sem + Eg) // Cush: (N) Beja fiiri "to bear offspring, fruit", faâr "blossom, flower, seed, bud"; (C) *för- "to flower, fruit; grain" (Eh 1987, #184).

64. El(o) huk "wood" (HK 686,689,714) // AA *haqqa-* *bak- ? > Cush: (E) Afar hak, Saho irob ã̃b "branch", (HE) *haqqa tree, wood" // Omot: Koyra akkaa "tree"; Ubamer aqa, Banna haqa, Bako (a)haka etc. id. // ? Berb: Ahaggar ékâ, pl. ikëwen "root".

65. El(o) husa "stem, stick, wood, tree, forest" (HK 702-3) // AA *çiç- > Sem *çîç- "tree, wood", cf. Akk īṣu, Arab Daṭina çalu, çuhul (Ls 1987, 57) // Eg (Med,BD) gêc "branch" (EG V, 535) // Cush: (N) Beja aça "pole, long stick"; (E) Afar ḥaadna "tree", ḥàḍña "stick" // Ch: (C) Mandara házalà "tree".

66. El(m) malu "wood" (HK 864) // AA *mal- > Ch: (W) Bolewa mala "forest", Gera màålà "bush" // Berb: Senhaja amalu "oak".

VII. Adjectives

67. El(n) hazza - "big" (HK 592-3, 653) // AA *çag- > Sem *ç-x-z "to be strong, mighty" (AHw 269-70; Ls 1987, 81) // Eg çé "to be safe, vigorous, prosperous" (EG I, 237) // ? Cush: (S) Mbugu -ezâi "long, tall" (Eh 1980, 275) // Omot: Benchon ez-at- "to become big", ez-ats- "to make big".
68. El(A) kara "old" (HK 437-8) // AA *gery- > Sem: Arab gārīn- "to be worn out (clothes), be trained (beast)" // Cushi: (E) *ger- "old" (Black 1974, 20); (S) Alagwa garmo, pl. gari "old man", garaʔo "old woman" // Ch: (W) Hausa gırme, girmaa "to be older than" // Dr *kery- "old" (DEDR 1579).

69. El(m) melu[-weli[-u-?]] "(for) a long time" (HK 912, 918) // AA *w[a]ly- > Eg(Pyrg) w3y "to be far", Copt w3i id., (Pyrg) w3y "to be long", (MK) w3h "to be long (in time)" (EG I, 245, 255,9; Vy 1983, 230) // Berb: Ahaggar slu "to be large" (Co 1947, #513 adds also Arab waliya "to be near").

70. El(o) mer "powerful" (HK 910) // AA *mrVr- > Sem *m-r-rt- "to strengthen" (Segert 1984, 193) // Eg mr "strong" (Ward, JNES 20, 1961, 36: Sem+Eg).

71. El(n) purna "brown" (HK 242) // AA *buʔr- > Cushi: (E) *boʔ- "yellow, brown, red" (Sa 1982, 39); cf. Rendille bórán "(dark)-brown", Arbore bórri "red" // Ch: (E) Bidiya bār "to become red", barga "red".

72. El(n) riša/-ir(ʔ)sa- "big" (HK 774,779-80,1041) // AA *riʔs- > Sem *raʔiʔs- "head" - cf. Geez r-ʔ-s "to rise above, become chief" (Ls 1987, 458) // Eg(Med) 3ys "brain" (EG I, 2).

73. El(n) sir "heavy, rich" (HK 1087,1089,1090) // AA *sˤʃr- > Sem: Akk esērū, Hbr yāšār "to be straight", Arab sarā (= s-r-w) "to be brave, manly, noble, be firm" (Albright, JAOS 47, 1927, 212: Sem+Eg) // Eg(Pyrg) wsr to be strong" (EG I 860) // Cushi: (E) *šor- "rich" (Sa 1979, 33) - add Boni *swar- "good" (He 1982, 110).

74. El(A) teman- "evening" (HK 317) // AA *vVm/-tVm- > Sem: Arab ḫaʔama "devenir sombre" // Eg: Cop tómīm "to become dark" (Vy 1934, 43: Copt+C Cush), derived perhaps from Eg ḫim (Vy 1983, 316) // Cushi: (C) *tem- "to be dark"; (HE) *tVm- "darkness" // Omot: Wolaita tuumoo id., Shinsasha tuumaa "night" (Do 1973, 53-4).

VIII. Adverbs, conjunctions & particles

75. El(m) am "now" (Hallock 1969, 666; HK 14,48,51,56) // AA *ʔam(m)- > Sem *ʔam/-ʔim- "if" (Cohen 1970, 22; Ls 1987, 22-3) // ? Eg(Pyrg) m(y) "how, if" (EG I, 1,36; Vy 1983, 105) // Cushi: (C) Bilin énuma, inma "nun denn, also"; e/immána "time; earlier"; (E) *ʔam(m-∧-) "time" (Do 1973, 132; Black 1974, 157; Sa 1979, 29) // NBerb *am "how" (Prasse 1972, 230: Eg+Berb).

76. El(n) da "also, yet, then" (HK 245) // AA *dVr > Cushi: (C) Bilin, Qwara -dii "together with"; (E) Som-daa 'emphatic particle' // Ch: (W) Angas da "also" // Berb: Libyan d "and, together with", Ahaggar ʔad "with; and" (Prasse 1972, 225).

77. El(n) hira "for" (HK 668) // AA: Eg(Pyrg) hr "for, (upon, through", orig. "face" (EG III, 132).

78. El(o) in- "not" (HK 754, 757-8) // AA *ʔin- > Sem: Akk yānu / yaʔnu "isn't", Ph yɛn id., Hbr ṭayin, ʔeen, Ug in, yamu "there is not", Arab ṭin, Geez ṭen (Ls 1987, 27) // Eg(Pyrg) n, (MK) mn "not" (EG II, 195) // Cushi: (E) Som an "not", Oromo en- id., Afar in (in negative verbal constructions mV-verb-inm).

79. El(m) sap "copy", (A) "how" (HK 1054-5; Hallock 1969, 751) // AA *zapped > Sem: Arab zaffät "once", zaftaʔa "twice" (Ember, ZÄ 51, 1913, 119: Arab+Ek) // EgOK zp "times" (= "mal") (EG III, 435).

IX. Numerals

80. El(o) ki "one" (HK 459,465,468-9) // AA *kav-

81. El(n) mar(V) /*wari ?/ "two" (HK 860,876,880) // AA *warV- > Cushi: (N) Beja kwo "unit"; (C) Bilin kaayaa "empty; only, alone, solitary" or Qwara kaw "to be in front, be first"; (E) *kavV- "one; alone" (Sa 1979, 44) // Omot: Dizi qōy, Sheko k(ʔ)V "one"; ? Gongka ʔik- id.

82. El(A) zitii "three" (HK 1305) // AA ?: Sem: Akk šizumm, šizū "Drittel-Elle" (AHw 1254) derivable from *šizū-, besides Sem *šīʔ-d- & *šiʔ-s- "6" > *šiʔ-siʔ = 3+3? - cf. Ug tšiww tšiww "6" = "3+3", tt tt "12" = "6+6" (Gordon 1965, 503, 501) // Berb: *saqīs & *sāqūs "6" (an old reduplication?) // Ch: (W&E) *sidu "6". Note:
There are suggestive parallels in Nilo-Saharan: Berta sititjini "3"; Kunama saute, lit satte; Berti soti id. The position of ECush *s/saz(ti)b- "3" & *s/sizent- "8" is not clear, cf. also Mao (Omot) t/síyaz- and Tirma (Surma) sisi, diz 3. A total puzzle is Soqotri (SSem) dàđeheh "3" recorded by Bittner against the usual form šíle / šate m/f. by Johnstone.

83. El(n) kut- "all" (HK 548, 565) // AA *gudd-*gut-/*gud-t-? (Greenberg 1963, 59) > Sem: Arab gadda "to be great, rich, honored" // Cush: (N) Beja gud "to be much, many, full, big"; (C) Awngi gut "good"; (E) *gudd-/*gud- "big", cf. Som giddi "whole" (Eh 1987, #37) // Omot: Wolaita guute "much" // Ch: (W) Kofyar gwëct "many"; (H) Higi gutigay id. // Berb: Zwarah-a-guda id.

X. Verbs

84. El(m) bakk- "to find" (HK 106) // AA *b/yk- > Sem *b-q-w "to seek, try" (Cohen 1976, 78) // Cush: (E) Som bego & biee-, Oromo bie "to know" // Omot: Benchnon biee "to see", Basketo bieq-, Kafa bieeq-id., caus. bieeq. "to know".

85. El(n) bera- "to read" (HK 185-6) // AA *ba?r- > Sem *b?-r "to explain" (Cohen 1976, 41) // Eg(MK) sb3 "to teach", (late) "to learn", cf. (Pyr) sb3.w "teacher" (EG IV, 84-5) with a frozen causative prefix s-? // Cush: (E) *bar-, cf. Afar bar-is- "to teach", bar-it- "to learn", Oromo Borana bar-ad- "to understand" (Black 1974, 164); Dahalo bar- "to know" (Eh 1980, 135) // Dr *parq-s "to speak, say, utter" (DED 4031; MA 105: El+Dr) or *peer- "speech" (DED 4439).

86. El(m) da-/ta- "to lie, put" (HK 248,254-5,262) // AA *d-q-c > Sem *w-d-c "to put" (Ls 1938, 125) // Cush: (N) Beja di "to make, be ready, put", caus. daa-s // Ch: (C) Musgu da "to do, build", Logone də "to throw, stand" (Do 1973, 186-7).

87. El(o) du- "to get, take, keep" (HK 346-7,356-7) // AA *d-w-y > Sem ndy > Akk naardu "to throw (away), put down", Ug ndy "to throw/drive away, remove", postibb. Hbr ndy "to banish" (AHw 705; Segert 1984, 193) & Sem wdy > Ug ydy, Hbr yādi "to throw", Arab ʿawīd "to take away", Geez wadaya "to put, add, lay, place, throw" (Ls 1987, 605) // Eg ldy, wdy, ndy "to give, put, throw" (Ember 1930, 116: Sem+El) // Omot: Kafa daw-("ap)portare; consignagare; pagare; (ri)tornare".

88. El(m) duna- "to give" (HK 361-2) // AA *d/yn> Sem: Akk (d)din "give!", nadānu(m) "to give", tādānu "to give (back)", Hbr nādān "gift", Arab dāna-ka "you have here, take!", ḏyn "to give on credit" // Eg(Pyr) wdn "to make sacrifice", Copt wōxen id. (EG I, 391; Vy 1983, 239; Ember 1930, 115: Akk+El) // Ch: (W) Ron: Sha nādi "to give". Note: There is a voiceless variant in WSem: Hbr, OAram ntn, Ph, Ug ytn "to give, pay" (Aistleitner 1965, 139-40).

89. El(m) halpa- "to beat, kill", halba "died" (HK 595-6, 605-7) // AA *b-l > Sem *b-l "to ruin, destroy" (AHw 302; Ember 1930, 81: Sem+El) // Eg(Pyr) bbl "to destroy" (EG III, 253).

90. El(o) hant- "(to) love" (HK 616-8) // AA *b[a?]- > Sem *bnn "to grant, favor, long for" (Aistleitner 1965, 105) // Eg(Pyr) bn "to grant, favor", Demotic xn, Copt hne-, hna- "to want" (EG III, 101; Vy 1983, 519; Ember, ZA 51, 1913, 119: Sem+El) // Cush: (E) Konso heen- "to want", heenaa "love" // Dr *ap-/*ap- "love, friendship" (DED 330; MA 97: El+Dr).

91. El(o) hapu "to hear" (HK 578-9,589-90,622) // AA *h-b- > Cush: (E) *h-b- "to know, be sure", cf. Afar-ob- "to hear" (Sa 1979, 38,40-41); Dahalo hub-at- "to know" (Eh 1980, 336).

92. El(m/n) hil-/hul- "to rob, loot" (HK 660,673,691) // AA *c-ul- > Sem *c-w-l & *g-w-l > Hbr ḡalawā "disobedience", Arab ʿala (c-w-l) "to deviate from the right course", Geez ḡalawā "to rebel, distort, reject, pervert" & Ug, OSA gily "wrath", Arab ḡ-w-l "to take unexpectedly, destroy" (Ls 1987, 78) // Eg(OK) ḡwayy "to rob, steal; robber; one robbed" & (MK) ḡwn "to rob, deceive" // Cush: (N) Beja ul, ul "to strike"; (E) *col- "war" (Do 1973, 162; Black 1974, 243; He 1978, 99; Eh 1987, # 492) // Dr *ula- "to become diminished, terminated, die, perish" (DED 671) // Sum hul "bad, evil; to ruin, destroy; enemy" (IK 446-7). Note: There are hopeful cognates in IE: Hittite *halla-/ haliu- "to lay waste, ruin, savage", Greek ἀλάμμι "I destroy", Lat aboleo id. (Puhlert, Hittite Etymological Dictionary, Vol. 3. Berlin-New York: Mouton de Gruyter, pp. 13-49-50 reconstructs IE *A2*MB-n-, rejecting the connection with Hittite hulla- "to smash, quash, defeat" - p.368).
93. El(m) huma- "to take, rob" (HK 691-4) // AA *hVm- > Sem *h-m-y > Akk hāmatū "to immobilize, paralyze", Geez hāmaya "to tie, shackle, chain" (Ls 1987, 262-3) // Eg(Pyr) hmt "to seize" (Ember 1930, 36: Sem+EG) and/or (Eg(Pyr) ḫmny "to reach, touch, grasp" (EG III, 281-2).

94. El(o) hutta- "to work, make", (linear script) ḫut "work" // AA: Sem *ḥ-t- > Akk ḫattū "to vanquish", Ug ḫṭ? "to disappear", Arab ḥāṭa, ḥāṭ, ḥāṭṭa "to be carried away" (Segert 1984, 187).

95. El kanī: (n) kanīra "friend", (A) kanī "I would like" (HK 431-2) // AA *k-h-n > ? Sem *kāhin "priest, prophet, augur" (Ls 1987, 278) // Cushi: (N) Beja kehan "to love, honor, venerate"; (C) Xamir (j)ēkan "to love, want", Awngi arkan- id.; (E) Afar-Saho kahan- "to love" // Dr *kagi- "to ripen grow tender", cf. Tamil kājīv "ripeness, love, compassion" (DEDR 1408). Note: The semantic dispersion is plausible, cf. Sem *m-n-y "to love, desire, wish" and "to count" (Ls 1987, 352-3).

96. El(o) kāt "place, throne", (A) kāta-u- "to live" (HK 410, 452-4) // AA *kVr- > Cushi: (N) Beja kēti "to seat, put together"; (S) Alagwa, Burunge kiti "settlement" // Omot: Chara kot-ūt, Kafa kot(e)-, Mocha kōta- "to sit" (Do 1973, 246).

97. El(o) kuḷḷa- "to ask, call" (HK 508,560-2) // AA *q-w-l > Sem *q-w-l "to say, speak" (Ls 1987, 426) // Cushi: (N) Beja kwali "singing"; (E) Som gailī "to cry, shout", Yaaku -qecel- "to sing"; (S) Qwadza kwa'utilisateur "voice", ? Mbugu-kalāʔe "to shout" (Eh 1980, 268; Id. 1987, #513) // Ch: (E) Jegu kōl- "to name, call", ?Gabin guaalt "to speak".

98. El(n) kūnī-/*kūnī- "to become, realize" (HK 515,564;477- 8) // AA *k-u-n > Cushi: (N) Beja kwisi "to mean; make, create", kwása "heritage" // Berb: Shilh imper. kkas, yakkus, Ahaggar a/; hi "to give" (Eh 1980, 388) // Cushi: (C) Bilin kwM in "to be exist"; (E) Afar-Saho kii(m) id. // Berb: Ahaggar eken "to do, arrange".

99. El(o) kuṟa- "to burn, roast" (HK 518-9) // AA *kawr- > Sem *kawr- "stove, furnace" (Ls 1987, 300) // Cushi: (LE) kar- "to boil" (Do 1983, 164) // Sem+ECushi.

100. El(o) kusu/-kuṣi- "to build, bear (children)" (HK 538-9,541) // AA *k[u]-s > Cushi: (N) Beja kwisi "to mean; make, create", kwása "heritage" // Berb: Shilh imper. kkas, fact. yokkus, Ahaggar kuṣi: yokkus "to inherit" (Rössler, Orients 17, 1964, 206: Beja+Berb).

101. El(n) kūti- "to carry, bring" (HK 505,546-7) // AA *guyt- > Čushi: (C) Xamir gwWit- "to pull"; (LE) gilit- id. (He 1978, 83; Do 1973, 245).

102. El(o) li- "to give; gift" (HK 818,820-1,826-8) // AA *li- > ? Sem: Arab (Taćizz) mà?allūs "there is not", Amhara ?all- "to be" (Co 1947, #20) // Cushi: (C) Qwara lee "to give"; (E) *leḥ- "having" (Sa 1979, 41; Do 1973, 164-5) < *li-hay "to be by" cf. Afar-Saho -ell- "to come to have, possess", Elmolo li "to possess"; (S) Qwadza lo- "to give" (Eh 1980, 388) // Ch: (C) Logone lii "to be"; (E) Mokilko ḫél- "to give" // Berb: Ahaggar āl: yata (*l-ʔ-y) "to have, possess", Rössler, Orients 17, 1964, 207: Som+Berb).

103. El(o) muri- "to grasp", (A) ma rri/*m[o]rrri- "to seize, hold, occupy" (Hallock 1969, 726; HK 885,905,953) // AA *mVr- > Cushi: (N) Beja meri "to take, get, find, seize", maray "to take, rob"; (HE) *moor- "to steal" (Hudson 1989, 143; ? (S) Mbugu mmarū "load" (Eh 1980, 154).

104. El(m) mirrī- "to smear" (HK 923,935) // AA *mVr- > Sem: Arab m-r-h "to smear" // Eg(OK) mrhb "fat" (EG II, 111), if it is not derived from wrh "to smear" (EG I, 334) // Cushi: (E) *moor- "fat, sealing-wax" (Sa 1982, 147) // Ch: (W) *ma/wra "fat, butter" (St 1987, 233) // Dr *mer- "to smear, rub" (DEDR 4709) and/or *mepuk- "to smear, plaster; wax" (DEDR 5082).

105. El(m) na- "to say" (HK 975,981,990) // AA *nV > Ch: (W) Fyer ne, Bokkos ni "to say"; Sura nexe; Bolowa ni na, Tangale nce; SBAuchi: Burrum ne, Kir no id. (St 1987, 235).

106. El(m) ni- "to be" (HK 1000-1; Hallock 1969, 738) // AA?: Sem: Arab ?inn, ?ānīya "l'ètre", Amhara na-"copula", Gafat sān- "to be" (Co 1947, #445) // Cushi: (C) Bilin, Qwara en, Dembea in "to be"; (E) Afar-Saho na id. // Ch: (W) Hausa na, ne "is, are, was, were".

107. El(n) para-/*pari- "to go; arrive, come; draw, pull" (HK 146, 149) // AA *s-p-r (with the causative prefix *s-) > Sem: Akk šāpāru "to send", Arab sāfāru "to travel" (Albright, JAOS 47, 1927, 228: Sem+EG) // Eg(Pyr) spr "to come, arrive, reach" (EG IV, 102) // Dr *pari- "to run, go out, move" (DEDR 3963; MA 104: El+ Dr).
108. El(m) suk- "to destroy, exterminate" (HK 1102) // AA *suk- or *sawk- ? // Cush: (C) Bilin suk-, Xamir soog-/sawq- "to kill (cattle)"; (E) *soq- "to beat, hit" (Sa 1979, 33) // Omot: Zala, Chara, Yemsa suk-, Kafa suk()-"to kill (cattle)" (Do 1973, 115).

**XI. Pronouns**

The correspondences between the Elamite and Dravidian pronouns and nominal and verbal personal endings are among the most convincing parts of McAlpin’s attempt to demonstrate their genetic relationship. Let us compare them with Afroasiatic:

### A. Middle Elamite (McAlpin 1981; Grillot-Susini 1987)

<table>
<thead>
<tr>
<th></th>
<th>Nom.-dat.</th>
<th>accusative</th>
<th>Genitive</th>
<th>possessive</th>
<th>verbal</th>
<th>nominal</th>
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<td>(A) unina/i</td>
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<td>-hu</td>
<td>(?)-unka</td>
<td>-un</td>
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<td>-hsi</td>
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<td>-pl / -pa</td>
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### B. Dravidian (*) / Brahui (McAlpin 1981; Andronov 1980)

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<td>*yam / kan</td>
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<td>*-ku</td>
<td>-v, -r, -t</td>
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<td>-s</td>
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<td>*t- / -te</td>
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<td>-k, -e, -s</td>
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<td>*-aŋ</td>
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<td>*tam / tēn</td>
<td>/ -tā</td>
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<td>-r, -s, -ō</td>
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### C. Afroasiatic (Blažek 1995)

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<td>*yivāti</td>
<td>*-ku</td>
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<td>*(?an-)ta</td>
<td>*ku</td>
<td>*kuwāši</td>
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<td>*-ta</td>
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<tr>
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</table>
The empty cells represent forms which are unreconstructible for more than one branch of Afroasiatic.

It is evident that some pronominal stems and even fragments of complete paradigms correspond. These cognates can be complemented by other pronominal roots:

109. El(m) akka "that, which" (rel.) (HK 37) // AA *Pak(k) > Sem: Akk ākāšt, Aram *pāk "how", ākām "how", Ug *ak, Mehr *ākšid. // Cush: (E) Oromo āka "like", akka "that, in order to; like" // Omot: Yemsa akka "thus, how?" // Ch: (W) Ngamo aaka "how"; SBauchi: Guruntum akwa "who", aaka "what", Geji yēk id.; (C) Ngala yaka "who".

110. El(A) -be: hu-be "that" ("jenes, das") where hu- corresponds to mEl hu/i "this, dies" (HK 681,676,654) /// AA *bV > Cush: (N) Beja nom. be-n, acc. be-b "that" // Omot: Shinasha bi/bo, Kafa bi/bonoosi 'sg./pl. of demonstr. stem', Yemsa baas/bar/baas-m./pl. id.

111. El(m) -ka /i "I am (now)" (HK 459, 464-5) /// AA *Paku & *Pak-Paku "I", *-ku '1sg perf.' /// Dr *-ku '1sg of verbal conjugation', cf. Brahui kan "me" & -ka "my" (see above: A, B, C).

112. El(A) kaš "him" (dat.) (HK 418,450) /// AA *kV > Cush: (C) *-yW: *la-yW m. vs. *la-ti f. "one"; (E) *ku (subj.), *ka (acc.) "this" (Sa 1982, 111) // Omot: Ari kooma "this" : kooma-see "that". Note: El -š may be a relic of old dative appearing in such the forms as *yiwašši, *kuwasi (Sem: Akk & Eblaic; C+HECush - see Blažek 1991).

113. El(o/m) ni/nu "thou" (HK 996,1004,1006) // AA: NOmot *ni(-ni) (subj.), *ni(-na) (obj.) "thou" /// Dr *nu(-tu) "thou" etc. (see above).

114. El(o/m) nika / nuku "we, us" (HK 1000,1003,1008,1011), where -ka/u can correspond to -ka dismiss "I (am)" or with -ku in (A) unan-ku "me here"; (A) -un 'ending of 1pl of nominal conjugation' /// AA *na */ni */nu "we, us, our" etc. (see above) /// Dr *nām "we", cf. Brahui -n 'verbal ending of 1pl'.

115. El(A) hi-su "he self" (HK 669), cf. hi "this" /// AA: Cush: (C) Qwara iššu, Bilin, Xamir šsu "self"; (E) *Pis- "self" (Sa 1979, 34,35; Id. 1982, 107).

116. El(m) -š 'ending of 3sg of verbal conjugation' /// AA *šuwa "he", *šiya "she" etc. (see above) /// Dr: Brahui -š '3sg verbal ending'.

117. El(m) -t 'ending of 2sg of verbal & nominal conjugation' /// AA *ti & *ta 'pronoun & ending of 2sg' (see above) /// Dr: Brahui -t 'ending of 2sg of verbal conjugation'.

118. El(o) u, (A) hu "I, me" (HK 1195,676) /// AA *?ju 'personal pronoun of 1sg' > Sem (Akk & Eblaic) *[j[w]/z]-š/ši 'dat./acc. of indirect case of a pronoun of 1sg' // Eg iwj, (later) wj "I" (dependent series) // Cush *yj*/yu 'object case of a pronoun of 1sg' // Ch: (W) Hausa -wa 'possessive pronoun of 1sg'; (C) Kotoko *nta-wu (indep.), *[j[wu] (obj.), *wu (poss.), Musgu *-u id.; (E) Sokoro -u, Mokilko -o id. // Berb *jw 'pronoun of 1sg of indirect object (simple)', *aw (compound) /// Dr: Brahui i "I" and/or -v 'verbal ending of 1sg'.

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<th>*šu</th>
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<tr>
<td>2f</td>
<td>*(?an)-šinya</td>
<td>*šinya</td>
<td>*-šinya</td>
<td>*ti-/*na</td>
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<tr>
<td>3m</td>
<td>*šunwa</td>
<td>*šunwa</td>
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<td>3f</td>
<td>*šinya</td>
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</table>
**Abbreviations:** AA Afroasiatic, Akk Akkadian, Arab Arabic, Aram Aramaic, Berb Berber, C Central, Ch Chadic, Cush Cushitic, Dr Dravidian, E East, Eg Egyptian (BD Book of Dies, D 18/19 18/19 Dynasty, Gr Greek period, M/N/OK Middle/New/Old Kingdom, Med Medical texts, Pyr Pyramids texts), El Elamite (A Achaemenid, m middle, n new, o old), H Highland, Hbr Hebrew, IE Indo-European, L Lowland, N North, NP personal name, Omot Omotic, OSA Old South Arabian, Ph Phoenician, S South, Som Somali, Sum Sumerian, Syr Syrian, Ug Ugaritic, W West.

The preliminarily established phonetic correspondences

<table>
<thead>
<tr>
<th>Afroasiatic</th>
<th>Elamite</th>
<th>Numbers of entries</th>
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<td>*b</td>
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<td>2, 16, 22, 26, 42, 43, 51, 61, 84, 85, 110</td>
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<td>p</td>
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<td>14, (26), 39, 41, 44, 47, 57, 71, 89, 91</td>
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<td>*p</td>
<td>p</td>
<td>6, 7, 27, 58, 63, 107</td>
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<tr>
<td>*d</td>
<td>d</td>
<td>52, 54, 76, 86 (d/t), 87, 88</td>
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<tr>
<td>t</td>
<td>t</td>
<td>6, 14, 19, 39, 53, 58</td>
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<td>*t</td>
<td>t / -tt-</td>
<td>13, 74, 96, 117</td>
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<tr>
<td>*[^3]</td>
<td>z</td>
<td>59, (74) / 5</td>
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<tr>
<td>*[^c]</td>
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<tr>
<td>*[^z]</td>
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<td>*[^3]</td>
<td>s / -z-</td>
<td>8, 79 / 67</td>
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<tr>
<td>*[^c]</td>
<td>z</td>
<td>60 ?</td>
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<td>*[^z]</td>
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<td>*[^3]</td>
<td>s</td>
<td>65</td>
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<td>*[^s]</td>
<td>s</td>
<td>9, 38 (s / ñ), 73, 100 ?, 108</td>
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<td>*[^s]</td>
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<td>*[^k]</td>
<td>k / -kk-</td>
<td>3, 4, 97 / 84</td>
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<td>*[^g]</td>
<td>h</td>
<td>27, 92 ?</td>
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<td>*[^h]</td>
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<td>*[^c]</td>
<td>h / -Ø -</td>
<td>19, 46, 54, 62, 65, 67, 92 / 86</td>
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<td>*[^r]</td>
<td>Ø</td>
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<tr>
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*w m 24, 69, 81?
*m m 5, 23, 25, 48, 52, 55, 66, 70, 74, 75, 93, 103, 104
*n n 2, 8, 23, 26, 31, 35, 48, 78, 88, 90, 95, 98, 106, 113, 114
*l l 1, 16, 22, 24, 32, 33, 36, 37, 45, 46, 57, 59, 66, 69, 92, 97, 102
*r r 4, 7, 11, 17, 28, 34, 42, 56, 63, 68, 70, 72, 73, 85, 99, 103, 104

Note: The borrowed cuneiform orthography does not differentiate voiced and voiceless stops (cf. Hittite).

Acknowledgement: I had a chance to study the Elamite language and its relatives thanks to a grant from the Alexander von Humboldt Foundation during my stay in Bonn and Cologne, Germany, in 1993-94.

References:

AAL Afroasiatic Linguistics.


AION Annali di Istituto orientale di Napoli.


Andronov M.S. The Brahui Language. Moskva: Nauka.


IF *Indogermanische Forschungen.*


JNES Journal of Near East Studies.


LRDIV Lingvističeskaja rekonstrukcija i drevnejšaja istorija Vostoka. Moskva: Institut vostokovedenija / Nauka.


RHA *Revue hittite et asiatique*.


*ZÄ* Zeitschrift für ägyptische Sprache und Altertumskunde.


*ZDMG* Zeitschrift für Deutschen Morgenländischen Gesellschaft.

*ZES* Zeitschrift für Eingeborenen Sprachen.


NEAR EAST (3000-2500 BC): THE DISTRIBUTION OF KNOWN LANGUAGES

Map by Václav Blažek

Abbreviations: Ak Akkadian, Ca Caspian, CS Central Semitic, Dr Dravidian, Eb Eblaic, EC East Caucasian, Eg Egyptian, El Elamite, Ha Hatti(an), Hi Hittite, HU Hurro-Urartian, II Indo-Iranian, Ka Kartvelian, Ks Kassite, Ku Kutian, Li Lullubian, Lu Luwian, Su Sumerian, WC West Caucasian
Elamite Royal Inscriptions in the Linear Script B: 23rd Century B.C.

Inscription A: from a stone block with an Akkadian translation; published in 1905.

(1) To the Lord, the god Inšušinak, this wooden post
(2) I, Kutik-I(n)šušinak, the king of countries
(3) a provincial heir from Susa
(4) of Šinpi-hiš-huk
(5) son, I have brought to the god as a dedication for the temple

Inscription D: from a stone snake; published in 1908.

“Help, lady! With mediation of a deity send the divine presence – help!
With mediation of the votive gift I am a victor over the Sun-God.”

Inscription Q: from a silver vase discovered near Persepolis in 1966.

“Help, lady, help! A donor of a victim drink for the deity, Kuri-Nahiti, I am. Bringing
vengeance and blessing, Divine Lady, appear! Let us remain awarded your affection, to a
staff of the temple! Help! Dedicate, thou, a guide of the divine closeness, this bowl to them as
a chosen day by day!”

Note the different directions of script: Inscriptions A and Q read from right to left,
Inscription D from left to right.

Interpretation after Walther Hinz

Thanks to Václav Blažek
On the Genetic Affiliation of the Elamite Language

George Starostin
Russian State University for the Humanities

**Introduction:** The Elamite language has long been considered a particularly irritating "white spot" on the ever increasing language map of the Ancient Near East and Mesopotamia. While most of the cuneiform languages discovered in those territories throughout the last two centuries have turned out to be of Semitic origin (Akkadian, Ugaritic, etc.), Indo-European origin (Hittite and other Anatolian languages), or Caucasian origin (Hurro-Urartian and possibly Hatti), Elamite, as well as its neighbor, Sumerian, presents no obvious connections with any of the aforementioned families.

Until recently, the most widespread and heavily supported hypothesis about the genetic relationship of Elamite has been the "Elamo-Dravidian" theory, which suggests that Elamite is most closely related to the Proto-Dravidian language and should even be grouped together with it in a single Proto-Elamo-Dravidian (PED) family. This idea, having originated as early as the mid-Nineteenth century – it was even mentioned in the pioneering work of Robert Caldwell on Dravidian linguistics (Caldwell 1856) – found its main supporter in David W. McAlpin, whose works on the subject (McAlpin 1974; McAlpin 1975; and particularly PED) practically shaped the entire theory in its modern form. In his works, McAlpin presented and explicitly described a large number of language features that are common to the different stages of the Elamite language, on one hand, and the reconstructed system of Proto-Dravidian, on the other. The main emphasis from the very beginning has been placed on the similarity between the Elamite and Dravidian morphological system; however, a set of phonological correspondences and a certain number of lexical comparisons have also been suggested.

On the surface, the "Elamo-Dravidian" theory seems rather convincing: indeed, the number of similarities between the two 'branches' cannot be explained by sheer coincidence. Consequently, the theory has been embraced by multiple researchers, mainly among specialists in ancient languages of the Near East (cf., for instance, Diakonoff 1979) as well as specialists in long range comparison.

Recently, however, an alternate theory of the Elamite relationship has been put forward by Václav Blažek (Blažek 1999). Having expressed a particular concern about the lack of credible lexical comparisons between Elamite and Dravidian (while at the same time never discarding the morphologic evidence), Blažek suggests a close relationship between Elamite and another huge language family, namely, Afroasiatic. Contrary to McAlpin, Blažek does not focus as much on the comparison of the Elamite and the Afroasiatic grammatical systems as he does on lexical evidence; his article quotes more than a hundred lexical correlations between Afroasiatic and Elamite, which is quite a significant number if we consider the relative scarcity of the known Elamite lexicon.

Blažek, however, does not view his theory as 'opposed' to McAlpin's; as he writes himself, he does not 'exclude a remote relationship with Dravidian', and essentially sees no major obstacles in grouping all three families together.
That said, the evidence presented by both McAlpin and Blažek certainly cannot be viewed as a final, totally convincing stage of establishing a certain genetic relationship. Instead of solving the problem, in fact, all these works seem to raise several additional ones. The most obvious question is—what exactly is necessary to firmly establish genetic relations between two different languages? This problem, well known and well-described by many researchers, still does not receive a uniform answer, and it is present in an even more complex form when we have to deal with a language as poorly described as Elamite.

Another problem is that language relationship is not an absolute value; some languages are related more closely than others, and some represent distant offshoots from branches of a single proto-language that diverged quite a long time ago. How closely, then, is the Elamite language related to Proto-Dravidian, or Proto-Afroasiatic? Does it form an 'equal' branch with other branches of those families, or does it represent a much earlier offshoot? (Even in these cases it is often hardly possible to give a straightforward answer—cf., for instance, the uncertain position of the Anatolian branch within Indo-European, sometimes regarded on par with the other Indo-European branches, sometimes joined with the other branches into a more archaic 'Indo-Hittite' family).

**Preliminary evaluation of existing hypotheses**

As I have already pointed out above, on the surface the Elamo-Dravidian hypothesis of McAlpin looks well backed up. His PED reconstruction is performed within the strict formal requirements of the classic comparative method, being based on regular phonetic correspondences and featuring a set of reconstructed morphological markers as well as lexical entries.

However, a more detailed analysis of McAlpin's comparisons is able to show that the similarities between the two families (branches?) are, in fact, exaggerated. Being somewhat limited by the space allowed in this article, I will only quote one major example of McAlpin's approach to morphological comparison, which is of crucial importance to his reconstruction of PED, and is, in fact, quite typical of the work in general. This is his reconstruction of the nominal declension system.

(a) For PED, McAlpin reconstructs the following cases: nominative (zero ending), accusative (*-Vn), adessive/dative (*-akka), possessive (*-a), adnominal (*-in), oblique/locative (*-to). All of these case endings have regular correlations in Elamite and Dravidian, and based on this, McAlpin proudly states that the case endings 'match as complete paradigms' (PED 112).

This can hardly be so. First of all, the functions and syntactic usage of these morphemes rarely match in both families. This may not be a major problem, as there is no special requirement for related morphologic elements to coincide in their functions in all related languages. However, a far more important problem is that the compared elements rarely present common Elamo-Dravidian isoglosses. Accepting the Nostratic theory that relates Dravidian to other large language families of Eurasia, such as Indo-European, Uralic, Altaic and Kartvelian, we will clearly see that most of these grammar elements are quite common in other Nostratic languages as well. Let us consider this situation in a more detailed aspect:

1) The Dravidian suffix *-Vn, *-an, commonly used to express the accusative case,
compared to the Elamite suffix *-n, used to express the same case in personal pronouns (cf. u 'I', obl. case un). This is a nice match, but not an exceptional one; in Elamite this marker is clearly just a relict, while in Dravidian it is used all over the place. Note, however, the similarity of this marker with the Common Nostratic marker for the accusative case, reconstructed by V. M. Illych-Svitych as *-mA (ND II 285). In the light of this comparison, it is interesting to note that in Old Kannada the accusative ending, besides the obvious -an, is also regularly featured in the form -am. Considering a frequent alternation of word-final resonants (cf., for instance, the irregular realization of the same ending as *-m in some Indo-European dialects, such as Indo-Aryan or Italic, and *-n in others, such as Hittite or Greek), one can safely assume these markers being related; the Dravidian-Elamite parallel is thus irrelevant for establishing a close relationship.

2) The Dravidian suffix of the dative case/indirect object *-kkV is compared to the Elamite postposition ikku, ikka indicating movement towards an object. Again, this is not an exact match, but more significant is the fact that the Dravidian suffix also has a Nostratic etymology: in (ND I 245) it is compared to Proto-Uralic *-kkA/-*kA (marker of the dative case) and Proto-Altaic *-ka (postposition with essentially the same meaning as in Elamite). The Elamo-Dravidian comparison is thus irrelevant once again.

3) The PED morpheme *-in is reconstructed on the basis of Dravidian *-in (genitive marker) and Elamite -inni (a somewhat rare Middle Elamite ending of the genitive; note that for all stages of Elamite but the Achaemenid Elamite, "genitive" is normally restricted to denoting the 'material' out of which something is made). Again, the morpheme has a valid Nostratic etymology (ND II 314), namely, PN *-n, a suffix used to form indirect bases of nouns and pronouns. It should be noted that the meaning of the genitive case, secondary in Dravidian (the original meaning of "indirect base formative" was still preserved in Old Tamil), is also present in Uralic, where -n functions as the regular suffix of the genitive in many languages. Again, the Elamo-Dravidian parallel turns out to be irrelevant.

4) McAlpin himself admits that the PED reconstruction of the 'locative/oblique' marker *-t is approximate, as it is based on the comparison between PD *-t-, marker of the indirect stem of certain nouns, and Elamite -ta/-da, an adverbial (sic!) suffix with an approximate locative meaning. Even if the comparison can be accepted, one cannot ignore the Nostratic morpheme *da (ND I 11), reconstructed with an approximate 'locative' meaning: Proto-Altaic -da/-dā, -du/-dū (locative markers), Proto-Uralic -δα/-δα (ablative markers), Proto-Indo-European *-d (ablative marker), Proto-Kartvelian -da/-d/-ad (adessive case). Here, the matches from other Nostratic languages correlate to the Elamite meaning even better than the Dravidian comparison.

5) The only comparison that does not seem to have an exact Nostratic parallel is PED *-a, the marker of the possessive case (PD *-ā, the genitive suffix, and Middle Elamite -(y)a, similar in use to -inni, cf. above). It goes without saying that such a weak match cannot serve as a convincing argument for establishing a close relationship or a 'match of complete paradigms' between Elamite and Dravidian.

It should, in fact, be noted that the very term 'complete paradigm' is rather questionable
when applied to either the Proto-Dravidian, or particularly the Elamite, language state. Apart from these case endings, Dravidian has certain other declensional morphemes which cannot always be successfully etymologized on Dravidian territory. As for the Elamite noun, it does not even have a real 'paradigm' to speak of, as the only cases in Elamite are the accusative (used exclusively for pronouns) and the genitive -na, which seems to be an Achaemenid innovation. We can only speak of postpositions fulfilling the functions of cases, whereas for Proto-Dravidian we can with certainty reconstruct a full-fledged case system.

Such an approach is rather typical for the morphological comparisons offered in PED. It should be noted, though, that I am in no way trying to reject any of them as false, coincidental, etc.; the only thing that I want to state is that, even if all of them are based on solid ground, they cannot qualify as evidence for a special Elamo-Dravidian relationship. At best, they present Elamite as a potential candidate for the Nostratic macro-family; at worst, similar morphemes could also be found in other Eurasian macro-families (some of them definitely have parallels in Afroasiatic, for instance), making the comparison even more feeble and indecisive than it is.

It gets even worse when we get to analyzing the proposed set of lexical cognates between Elamite and Dravidian. As I already said, the established phonetic correspondences mostly work, although we could certainly question the probability of some of the changes - like, for instance, the development of PED *š- to Proto-Dravidian *t- before a subsequent apical liquid and to Proto-Dravidian *0- in other cases (PED 90). However, a close analysis of the 'cognates' reveals a striking lack of semantic similarity between the compared entries; out of eighty proposed comparisons, less than a third can boast a distinct semantic identity, most of them usually indicating abstract notions like 'love' or 'collect, gather'. Far more often, we are offered comparisons like Elamite hisš 'name' - PD *ey- 'to know how to, understand', going back to a PED *hesš- 'to know how to'. Sometimes the comparisons can border on absurd, as PED *šin- 'to arrive, yield' > mE šinni- 'to approach, arrive', achE šinnu- 'to come', but PDr *̥n- 'to yield, yean, bear' (PED 102); the Dravidian proto-form clearly means 'to bear young', and comparing it with the main Elamite word for 'approach, come' is a bit of a stretch (not to mention that the comparison involves the questionable PED phoneme *š-).

Furthermore, some of the lexical entries presented by McAlpin could easily be explained as results of cultural interference and cross-borrowing; reconstructing PED *upat_ 'brick' on the base of mE upat 'brick, brickwork' and Proto-South-Dravidian *uppar- 'bricklaying, plastering' (PED 96) is, in fact, a far more dubious thing to do than to suppose a borrowing from Elamite into Proto-Dravidian.

All of the above considerations make me seriously question the validity of a special 'Elamo-Dravidian' theory. Simply put, the evidence presented by McAlpin, while definitely valid and interesting from a 'global' comparative point of view (apart from some truly dubious lexical comparisons), is not enough for establishing a separate Elamo-Dravidian language family as opposed to, say, Elamo-Uralic language family.

Turning now to the theory of V. Blažek on an Afroasiatic-Elamite relationship, it is easy to see that it has its serious drawbacks, as well. Unlike McAlpin, Blažek does not focus on the questions of morphology, which is quite understandable, considering the rather poor state of affairs in Afroasiatic reconstruction at the present time; trying to establish a joint "Elamo-Afroasiatic" morphological system would inevitably result in chaos, as among the endless sea of Afroasiatic languages it would be possible to find suitable parallels to just about any particular
Unfortunately, the same problem is evident in lexical comparison. Blažek approaches the lexical comparison problem with far more caution than McAlpin does, and generally, when we deal with his comparisons, both the phonetic correspondences between Afroasiatic (or different branches of Afroasiatic) and Dravidian, on one hand, and the semantic differentiation between the two branches, on the other, are quite evident and plausible. However, the one hundred or so comparisons that he quotes all have different degrees of reliability.

Thus, it goes without saying that one cannot simply bypass such interesting parallels as Elamite el/t/'ye - PAA *hil- id., or Elamite kassu 'horn' - PAA *kVsw/y- id., or the parallels between Elamite and Afroasiatic pronominal systems (which actually turn out to be just as strong as McAlpin's Elamo-Dravidian 'pronominal ties'). But too many of the proposed cognates have their own weaknesses, mainly due to their being underrepresented in Afroasiatic. For instance, parallel number 55 compares mE kumas 'he-goat' to PAA *kVm- 'cattle, cow', represented only in Central Cushitic and one West Chadic language; parallel number 66 compares mE malu 'wood' to PAA *mal-, represented only in a few West Chadic and one Berber language, etc.

It goes without saying that the scarcity of material is only a testament to the relatively poor state of the Afroasiatic reconstruction in general and can in no way serve as a definite argument for lack of relationship (close or distant) between Afroasiatic and Elamite. However, it also makes the issue of the Afroasiatic-Elamite comparison itself rather unstable and dubious, not to mention that if Elamite really constitutes a separate branch of Afroasiatic, we would probably expect a far higher number of lexical parallels (considering that the Elamite dictionary of Heinz-Koch, used by Blažek in his research, contains at least a thousand identifiable Elamite roots).

All the critique presented above seems to convince me that not only is there not enough evidence to establish a direct Elamo-Dravidian or Elamo-Afroasiatic at the present time, but that it is simply a near-impossible task to establish a close relationship of Elamite with any of the currently known families or macro-families. On an intuitive level, Elamite does not disclose any specific ties with any known languages (and one should certainly not underestimate the importance of intuitive perception of relationship); however, when we try to apply a purely scientific method, we face the usual problems that often accompany similar cases of isolated languages, most notably Sumerian: scarcity of lexical data, lengthy, unclear history of development, and "isolated language" status are serious impediments in establishing a proved relationship through strictly formal methods.

**General lexicostatistic comparison**

Some "preliminary" measures, however, can be taken, and one of these measures would be a tentative lexicostatistical analysis of the available Elamite data. An approximate comparison of the Swadesh 100-word-list for Elamite, on one hand, and for the most important of its neighbouring macro-families, on the other, could, if not necessarily clear the position of Elamite, at least point us in a certain direction for further research.

Below I will give a list of all Elamite words from the 100-word-list whose meanings can be more or less considered established, and try to find possible cognates for these words among the reconstructed roots of three macro-families whose relationship to Elamite, at least from a
geographical and chronological point of view, would seem most probable: Nostratic, Afroasiatic, and Sino-Caucasian. It should be noted that I support the variant of the Nostratic theory that counts Afroasiatic as a different macro-family, as well as the hypothesis that all three macro-families have a high probability of going back to a single "Eurasian" macro-family. However, these assumptions do not actually play any crucial role within the limits of this work.

Since at the present stage of studies in long range comparison it is usually extremely hard, and often impossible, to determine the exact "main" word for a certain entry in the Nostratic, Afroasiatic, or Sino-Caucasian list, the following principle will be assumed: if the Elamite root matches a root that serves or may serve as the "main" word for a certain 100-word list entry at least in one major sub-branch of Nostratic (Afroasiatic, Sino-Caucasian), such as, for instance, Dravidian or Kartvelian (or Semitic, or North Caucasian, etc.), the entry will be marked with a "+" sign, denoting an exact match, and will be included in the final count. Dubious matches (with extreme phonetic problems, underrepresented in compared families, or with semantics that do not match) will be marked with a question mark.

Thus, in entry N 12 the Elamite root *mak- 'to eat' is considered to form a match with Nostratic, due to its having the same meaning in an archaic sub-branch of Dravidian (Kurukh-Malto) and in certain sub-branches of Altaic. However, it does not match the Afroasiatic root *muk- due to semantic problems (in Afroasiatic, the common meaning is undoubtedly 'to suck').

Needless to say, there arise additional problems here. One of these problems is that the entire Elamite dictionary has been subjected to this analysis, with lexical entries taken from every period of Elamite, from Old Elamite (oE) to Middle Elamite (mE), New Elamite (nE) and Achaemenid Elamite (achE), which violates the principle of wordlist creation. Fortunately, an absolute majority of the entries are represented by New Elamite and Achaemenid Elamite entries, and most of the Old and Middle Elamite entries are also represented in the newer forms of Elamite. Out of all the comparisons, only four words are found in documents not younger than Middle Elamite, and since no clear lexical replacements for these words have been established in New Elamite, we can assume that they were simply not attested in that period.

Another problem is the incompleteness of the wordlist: out of the basic 100 words, only about 60 can be established for Elamite with a certain degree of assuredness. This is, however, not as relevant as it may seem, given that the final count will be given in percentage of coincidences rather than in absolute numbers.

Finally, the most difficult problem is the establishment of the very fact of relationship between the Elamite word and the correlate in the compared macro-family. It is a well-known fact that lexicostatistics and glottochronology are primarily used in determining the level of relationship between languages already known to be related, with an already established set of phonetic correspondences. Here, the only way to effectuate the comparison is by relying on the somewhat vague and somewhat subjective criterion of 'phonetic similarity', which may eventually result in matching genetically unrelated forms with a secondary similarity, or, more probable, in denying the matching of genetically related forms that have diverged so much they do not have any obvious phonetic similarity any longer. This, in its turn, leads to incorrect lexicostatistic results.

However, it should be noted that the main object of the comparison given below is not so much to establish a genetic relationship of Elamite with a given family as it is to delineate the probability of its relationship with certain language families, with 'relativity' as a key factor. It is obvious that if the principle of 'phonetic similarity' yields, for instance, twice as many matches of Elamite with Nostratic as it does with Afroasiatic, the probability of Elamite being closely
related to Nostratic becomes far higher than its probability of being closely related to Afroasiatic, etc.

Furthermore, the very critique of McAlpin's theory given above is enough to prove that Elamite is related, at least in some way, to some families within the huge 'Eurasian' branch. The morphological matches quoted by McAlpin, if not necessarily speaking in favor of the Elamo-Dravidian theory, are certainly enough to tie Elamite in with Nostratic; in a similar way, Blažek's Afroasiatic-Dravidian comparisons cannot be overlooked and can hardly be explained by mutual borrowings alone. It remains, then, to demonstrate the relative validity of these ties, and preliminary lexicostatistic analysis is an excellent way to do that.

All Elamite data are given according to the dictionary of Heinz-Koch (HK). Multiple sources have been drawn on for other data. For Nostratic, the primary sources of data are the works of V. M. Illych-Svitych (NE, ND). Additionally, Dravidian references and etyma are taken from (DED), with numeration given according to the number of entry in the dictionary (Proto-Dravidian reconstructions, all of which are available online as part of the "Tower Of Babel" project, are given according to my own interpretation of the PDr phonological system). Altaic etyma are for the most part drawn from the Altaic Etymological Dictionary by A. Dybo, O. Mudrak, & S. Starostin, currently in print and also available in the form of a WWW database. Uralic references are quoted according to the reconstructions in (Redei 1986); Kartvelian references are taken from (Klimov 1964).

Most Afroasiatic data in the article are taken from V. Blažek's article (Blážek 1994) and the dictionary of Orel-Stolbova (HSED). Additionally, I have consulted the 100-wordlists of selected Afroasiatic languages, compiled by A. Yu. Militaryov. I am also extremely grateful to A. Yu. Militaryov in person for checking out the main body of this article and helping out on certain interpretations of Afroasiatic data.

Sino-Caucasian data are for the most part taken from computer databases on Sino-Caucasian languages, compiled within the international "Tower of Babel" project; most of the actual forms can be found in NCED (North Caucasian), STED (Sino-Tibetan) and YD (Yeniseian).

Wordlists

1. "all": nE kut-ti-na, achE kut-tin-na, kut-tan, kut-tan-na (der.: mE ku-ut-ti-na 'altogether').

   No exact wordlist matches have been found in any of the analyzed macro-families.

   ? Nostratic: assuming a semantic change 'much, a lot' > 'complete, all', the root can be compared to Alt. *ket'o 'much, many, excessively', Drav. *kat- 'much, great, exceeding', also 'bitter, intense' (DED 1135).

   ? Afroasiatic: An alternate comparison is PHS *gid-/*gud- 'be big, be many' (HSED 919), suggested by V. Blažek.

2. "big": achE ir-šá-na, ir-šá-an-na, subst. ir-šá-ra 'the big one = great person, chief'. In older texts usually spelled as ri-šá-, cf. oE ri-ša-a-ri 'the big one', mE ri-ša-ar id., etc. This probably accounts for a syllabic r(=*řša).

   + Sino-Caucasian: a perfect match exists in Proto-East-Caucasian *iršV 'big, large, thick'. The main NC root for 'big' seems to have been PNC *řšaxE, with outside Sino-Caucasian
correspondences (PY *xe? 'big', etc.). However, PEC *iršV has an exact meaning big in languages of at least two different subgroups (Avaro-Andian and Tsezi) and cannot be excluded from view despite not having obvious Sino-Tibetan or Yeniseian correlations.

McAlpin compares the form with PD *iray 'great person, lord' (DED 527) > Tam. irai 'anyone who is great, king, lord, etc.', Kan. cpe 'state of being a master, master', OTe. cра 'lord'. The comparison is plausible if the Dravidian form indeed goes back to a PD *ir-/cə- and not to PD *id-/cə- (the latter variant allows me to compare it to Altaic *cdV 'host, husband', with even better semantics). However, even if we accept McAlpin's comparison, it cannot be proclaimed an exact match.

In a somewhat similar manner V. Blažek compares the form to Proto-Afroasiatic *riʔs- 'head, chief' > Proto-Semitic *raʔiš- 'head', Eg. (Med) ḫys 'brain', etc. This is somewhat better phonetically than McAlpin's comparison, but very vague from a semantic point of view.

3. "blood": nE sa-an. The form is rare, and its meaning slightly dubious, but so far, it is the only Elamite word for 'blood' that has been possible to suggest.

+ Afroasiatic: V. Blažek offers a credible comparison in AA *ʔyVn-(P-) > Eg. (Pyr.) znf 'blood', Copt. snof, Berb.: Ifoghas azeni, Ghat azani, Ayr azni, Ahaggar ahéni id., WChad. *zanyam id.; isolated parallels can also be found in Omotic. Cf. also HSED 2626, with Egyptian and Hausa data, where the root is reconstructed as *zKn-. According to A. Yu. Militarev, the root functions as the main word for 'blood' in Egyptian and certain Berber and Chadic languages. The comparison therefore looks perfectly justified and can be qualified as an exact match.

? Nostratic: An alternate route would be to compare the root with Indo-European *es(H)ar-/*es(H)an- 'blood' and Proto-Altaic *šegu 'healthy; blood' in reference to a supposed Proto-Nostratic *Vs(V)x- 'blood'. The Elamite comparison is extremely dubious as it would be based on the Indo-European suffixal (i.e. heteroclitic) form, but it is not altogether out of the question nevertheless.

4. "burn (tr.)": The basic form for 'burn' in mE is li-im-ma-, obviously a derivative of li-im 'fire', on which see below.

However, in certain texts we also find a verbal root kura- whose meaning in the Elamite dictionary is given as 'versengen' ('to sear, bake') as opposed to 'verbrennen' ('to burn') for li-im-ma-. It is regularly used as a 'pair-word' together with li-im-ma- in relation to "devastative" activities, cf. li-ma-fajk ku-ra-ak pa-at-pu-up ra-ap-pa-ak-na '(the enemies) should be burnt, seared, at my feet be bound!' (HK 518), etc. In oE and mE, the word is found in the past participle form ku-ra-ak, as well as in the 2nd p. sg. form ku-ra-at. Apparently, the meaning of "versengen" was attributed to the word because of the derivative ku-ra-am-ma, ku-ra-na with the meaning 'furnace'. However, on a fair basis the context does not allow us to make a clear distinction, and it is not excluded that the verbal base kura- has to be reconstructed as the basic word for 'burn' in middle Elamite.

+ Nostratic: obviously, the most apparent comparison would be to Proto-Indo-European
*g*"her- 'hot, to burn' (the Slavic forms, where the root is represented in its verbal form, are intransitive, but one cannot exclude the possibility of it being used with causative suffixes in Indo-European, where differences between transitive and intransitive conjugation are often extremely thin). The Nostratic root, reconstructed as *gUrA- by V. M. Illych-Svitych (see ND 95) with the supposed meaning 'hot coals', is also based on a tentative Altaic *gur/V- 'hot coals, to enflame'. We could, however, also point out a possible comparison with Proto-Uralic *korpe- 'to burn' (Redei 186), which further indicates that the word could have had an exact verbal meaning 'to burn' in Proto-Nostratic.

? Afroasiatic: For Nostratic *gUrA- Illich-Svitych further suggests a comparison with PAA *g/w/r 'fire, coal' > late Egyptian *dr 'fire', Beja *gür 'to boil, roast', etc. The meaning 'to burn' is represented in Sidamo *gir-. For Chadic parallels with the meaning 'ashes, coal' see also Stolbova 1996, p. 67. An alternate comparison is suggested by V. Blažek, who compares the Elamite root to Proto-Semitic *kawr- 'furnace' and East Cushitic *kar- 'to boil'. Both comparisons, however, can hardly qualify for an exact wordlist match.

5. "claw, nail": nE pu-ur (found in the expression pu-ur hw.hu-ba.na-h-pi-na ha-rák-qa 'the fingernail of Humban-alpi is pressed (i.e. to seal the letter)').

+ Nostratic: excellent parallel in *p/a/r/aV 'finger, fingernail' (ND III 362). The Indo-European (*per-), *prs- and Altaic (*para-ga, new reconstruction *p'jari) forms normally carry the meaning 'finger', but Proto-Kartvelian *prcxa is the basic Kartvelian form for 'fingernail'. From the Dravidian side, the usual correspondence pointed out is *ver- 'finger' (DEDR 5409), but the initial v- can hardly correspond to a Nostratic voiceless stop; a more probable correlate is PDR *par-and- 'to scratch' (DEDR 4023), further pointing out the 'fingernail' semantics.

+ Afroasiatic: apparently, the same root can be seen in what is reconstructed as *pr-, *prs- 'finger, fingernail' in ND III 362 and *par- 'finger' in HSED 1953 (cf. also the corresponding entry in V. Blažek's article). The meaning 'nail' is present in Chadic (Hausa far-çe, etc.), where it is one of the primary roots denoting the object. In ND III 362, an attempt is also made to trace Proto-Semitic *tupr- 'fingernail' (Akk. supru, Hebrew sipporen, etc.) to an original combination of the root *pr- with a special preformative marker, but the attempt is somewhat dubious (especially considering the parallels in other Afroasiatic languages given in HSED 513). Nevertheless, the Chadic forms still give us an exact match.

6. "come": achE ši-in-nu 'coming', ši-in-nu-ik 'he comes', ši-in-nu-ik-ni 'he should come', etc. This seems to be the most basic word for the idea of 'coming' or 'arrival', although a couple other roots can occasionally carry a similar idea.

? Afroasiatic: Cf. PAA *san?- 'to go, run' (HSED 2197). The root is the closest in semantics and phonetics that one could find, however, it is not very reliable within Afroasiatic itself (too little material) and does not correspond to an exact match.

McAlpin compares Elamite šinnu- to PDR *ti- 'to yield, yeam, bear' (McAlpin 102); we are, however, forced to reject that comparison, since the semantic similarity is very vague and the
phonetic comparison involves the rather dubious Proto-Elamo-Dravidian phoneme *s- (> Elam. š-, PD 0-). Furthermore, the Dravidian root has an ideal match in Proto-Altaic *ina ‘younger sibling’, going back to a Proto-Nostratic root *inV ‘young, bear young’ of a far more reliable character.

7. "die": Elamite *halb-, cf. nE hal-pi-ik 'he died', etc. The root is the same as for 'kill'; since all the possible external parallels are primarily connected with that meaning, we will discuss them under the entry for 'kill'.

8. "drink": achE si-kaš-da 'he had drunk'; cf. also nE si-ki-tu-um 'state of being drunk, drunkenness'. The verb is extremely rarely met and the meaning is somewhat dubious, but so far, it is the only known equivalent for 'drink' in Elamite.

+ Afroasiatic: cf. PAA *sek- 'to drink, give a drink' (HSED 2220). The distribution of the root is not very wide, but it is one of the main roots for 'drink' in Central Chadic (PCCh *syagwa-). In Semitic, the root has the meaning 'give a drink' (Akk. šaqū, Hebrew hišqā, etc.), but the primary non-causative meaning may have been preserved in Ugaritic šaq 'drink'. Plausible comparison.

? Nostratic: cf. Proto-Altaic *sōgā (~ -u-) 'drunk, alcoholic drink'.

9. "dry": cf. achE zī-ti-qa 'dried' (used in conjunction with 'grapes'), also achE zī-ut '(dried) fodder'. Both words can account for a common Elamite root *zit- 'dry'. However, no more or less apparent matches or even possible cognates for the root can be found in any of the surrounding macro-families.

10. "ear": nE, achE si-ri.

A totally mysterious root. Although it is certainly among the better established Elamite lexemes, it has no reliable cognates in the surrounding macro-families whatsoever. A very weak comparison can be found in V. Blažek’s article, where he relates it to certain Central Cushitic (Waag šar 'to hear'), late Egyptian (šy; 'to recognize, know') and Central Chadic (Zelgwa tsaraka 'to hear') forms; however, these are isolated and unclear forms with no reliable group etymologies, and even so, none of them carries the meaning 'ear'.

Likewise, within Nostratic one could compare the root with forms like Proto-Altaic *sārī 'to know, feel', or Proto-Dravidian *cūr- 'to see' (?), but such comparisons would not be of much use due to phonetic, semantic and distributional features.

11. "earth": mE, nE, achE mu-ru-un.

This word was apparently used in both the meaning 'element (soil)' and 'world/territory'. Cf. for the first meaning: zu-ul mu-ru-un a-ak li-im 'water, earth and fire'; for the second meaning: ak-qa h. mu-ru-un da-aš-da 'he who had created the Earth'.

The word itself is usually seen as a derivative of the Elamite root mur- with the meaning 'to
put, set in place; to sit'. The entire word-family is compared by McAlpin with PDR *ūr 'native place, village, town' and traced back to a hypothetical PED *vur 'place'. The comparison could be acceptable if the semantics of the root were not so vague; also, this is the only example of an Elamite mu- : Dravidian *ū- correspondence, which makes it even less reliable.

On the other hand, we have a reliable Afroasiatic comparison:

+ Afroasiatic: cf. Tigrai mārer 'earth' (Semitic), Ghadames ta-mmur-t id. According to A. Yu. Militaryov, the word is one of the primary roots for 'earth' in Berberic and has outside connections as well.

12. "eat": achE mak-.

A somewhat dubious entry, as the word is present mostly in an official meaning (cf. the usual German translations 'verzehren, verbrauchen' rather than 'essen') and used in contexts of the type "X consumes Y measures/portions in Z days". However, so far it is the only root for 'eating' at our disposal, and there are no valid arguments to suggest the presence of a different 'colloquial' root in Elamite.

+ Nostratic: in Dravidian, a similar root for 'eat' can be found in Proto-North-Dravidian \( *\text{mōq-} \) 'to eat' (Kurukh mōxnā, Malto mōqe), with a further parallel in Malayalam mōkuka 'to drink, sip' (DED 5127). The root can further be compared with Proto-Altaic \( *\text{mūk} \)e' 'to suck', which is given this meaning based on Proto-Mongolian \( *\text{meke} \) 'to suck, chew' and Proto-Tungus \( *\text{muku-} \) 'to fill mouth with liquid'; cf., however, Proto-Korean \( *\text{mak-} \) 'to eat, drink' and Proto-Japanese \( *\text{māka-nap-} \) 'to feed' (causative formation?). This can hint at a tentative meaning "to eat (of liquid food)" in Proto-Nostratic, with further generalizations in several language groups. The match is not thoroughly exact (unclear vocalism correspondences), but acceptable.

? Afroasiatic: Cf. PAA \( *\text{muk-} \) 'suck, drink' (HSED 1790). If the root is indeed of PAA character, it most certainly belongs here, but the weak distribution (Arabic + West Chadic) and the lack of exact semantic parallels (the meanings 'suck', 'sip', and 'chew' are attested) do not make this an exact match in any case.

13. "eye": mE el-\( \text{ti} \) 'eye', nE el-\( \text{ti-pi} \) 'eyes', achE el-\( \text{te} \) 'his eye'.

+ Afroasiatic: PAA \( *\text{ʔil-} \) 'eye' (HSED 1101) is one of the main roots for 'eye' in Cushitic (well-established Agaw and Eastern Cushitic parallels) and in Central Chadic languages. V. Blažek also adds Egyptian \( \varepsilon.t \) 'eye' to the compared forms, but, according to (HSED 112), this rather belongs to PAA \( *\text{ʔir-} \) 'eye' (with further Chadic parallels), so the comparison is dubious; however, further parallels can also be found in Berber (Ghadames a-well' id.). Cushitic, Chadic, Berber and possibly Egyptian evidence all point out that the root is a strong candidate for the main PAA root for 'eye'.

+ Sino-Caucasian: cf. Proto-North-Caucasian \( *\text{wila} \) 'eye', which may be further compared with Proto-Sino-Tibetan \( *\text{la(H)} \) 'to look' and Proto-Yeniseian \( *\text{de-s} \) 'eye'. This is obviously the main root for 'eye' in this macro-family.

? Nostratic: cf. Proto-Nostratic \( *\text{fela} \) (ND I 148) 'light, bright' > Proto-Kartvelian \( *\text{el-} \) 'to
shine, lightning’, Proto-Uralic *jela ‘light, bright’, Proto-Dravidian *el- ‘to shine’. The newly established Altaic root *ila > Proto-Ture *iler- ‘to be dimly visible’, Proto-Mongolian *ile ‘known, evident’, Proto-Japanese *arap-ar- ‘to appear’, if it belongs here indeed, could probably correct the original semantics from ‘light’ to ‘visible, appear’, in which case the comparison with Elamite el-ti is fully justified. However, the Nostratic root does not present an exact wordlist match in any case.

14. "fire": mE li-im, li-mi-in, hence also the verb limma- ‘to burn’ (see above).

+ Nostratic: the most obvious comparison is with one of the main Kartvelian roots for fire, well-represented in Swan dialects: Upper Bali lemesg, Lashkh lemes, Lentekh lemesk < Proto-Kartvelian *lmes' ‘fire’. A reliable Uralic parallel can be found in Proto-Uralic *lom3 ‘warmth, flame’. While the distribution of the root is not very wide, the correlation between Uralic and Kartvelian is strong enough to propose a Nostratic character for it.


15. "foot": mE, nE ba-at (also spelled pa-at in mE).

+ Nostratic: obvious parallel in Proto-Nostratic *pata ‘foot’ > Proto-Indo-European *ped-, Proto-Dravidian *pat- (NE 368). Taking into account the new Altaic reconstruction *p'agdi ‘foot, sole’, the Nostratic root may have to be reinterpreted as *paGd- (where *-G- represents an unknown velar), but that doesn’t really afflict the excellent quality of the comparison.

? Afroasiatic: V. Blažek offers several correlates for the word, including Semitic (Akk. padānu ‘way, path’, Arab. wasfāda ‘to come, travel’), Egyptian (p; d, pd ‘knee, to run’), Berber (Mzab fuūd, Ghat afūd, Zenaga offūd ‘knee’), and East Chadic (Mubi fuudi ‘thigh’). There may actually be several roots involved here, but none of them seem to share the meaning ‘foot’, so no exact match can be established.

16. "full": achE pu-, found in verbal forms like pu-qa ‘was full’, also in the nominal derivative pu-pu-man-ra ‘he who fills’. The root may stem from an earlier *pun-, cf. nE pu-un-qa-ak, pu-un-qa-qa ‘it was full, filled’.

No reliable external correlations have been found for the root. One could consider a comparison with Proto-Indo-European *planč- ‘full’, if the Elamite form goes back to an earlier *pul-n-, but this is a very vague probability.

Cf. also PST *phoH' ‘to fill in’. The root, however, has no Caucasian or Yeniseian parallels and does not qualify as an exact match.

17. "give": mE tu-ni-h ‘I gave’, mE, nE du-ni-h id., achE du-na-ąś ‘he gave’, etc.; the common Elamite root is *tun-.

A second root for 'give' is also fixed in documents, with unclear differentiation in semantics: cf. oE, mE, nE li-h ‘I gave’, der. oE li-e ‘his gift’, mE, nE li-en-ra ‘he who gives’, etc. The verb
could seem to be more archaic than \textit{tun-}, since the former is missing in Old Elamite; however, both verbs are present in New Elamite and the difference in functions between the two is unclear. We will, therefore, subject both roots to comparative analysis.

+ Afroasiatic: V. Blažek compares the Elamite Root with PAA *dšiš- 'to give', well represented in Semitic (Akk. \textit{nadānum} 'to give', etc.; the initial *n- has possibly to be taken as a prefix), and in Egyptian \textit{wda} 'to make sacrifice'. Although the root is hardly met in the meaning 'give' anywhere outside Semitic, within that particular branch it is one of the main roots denoting that activity. Not an exceptionally strong match, considering also some phonetic problems (a strange variant with voiceless -t- in Hebrew and Aramaic \textit{ntn}, for instance), but generally acceptable.

For Elamite \textit{li-}, Blažek quotes the following forms. Semitic: Arab (Ta‘izz) āla ?allās 'there is not', Amhara ?all- 'to be'. Cushitic: Qwara \textit{lee} 'to give', Proto-East-Cushitic *leh- 'having', etc. Chadic: Logone \textit{lii} 'to be', Mokilko ?el- 'to give'. I have a hard time trying to imagine these forms as going back to an even hypothetic PAA *le/-\textit{ele}- 'to give'; forms with the meaning 'give' are isolated and cannot pretend to be archaic.

+ Sino-Caucasian: on the contrary, Elamite *\textit{li-} seems to have an excellent match in the common PSC root for 'give', represented by PNC *i\textit{V} and PST *\textit{lā}.

? Nostratic: certain parallels can be traced with the common Nostratic root for 'give', namely PN *to/H/\lambda (NE 338) > PIE \textit{dō-} (*\textit{deH}w), PA *tā- (new reconstruction *t\textit{V}ųja), PU *tōye-, PD *tā/-\textit{ta}-). This would, however, presuppose, that the Elamite base \textit{tuna-}/\textit{tuni-} is derived from an older *\textit{tu}- with a nasal suffix. As indirect evidence in favor of this hypothesis we can quote such occasional achE forms as \textit{id-du-iš} 'they gave out, issued', \textit{id-du} 'give out!, issue!'. However, these considerations are somewhat speculative.

18. "good": oE, mE, nE \textit{ba-ha}.

? Afroasiatic: a perfect match for the root could have been PAA *ba\textit{huy-} 'be good' (HSED 191). Unfortunately, the root is extremely weak, being reconstructed on the basis of Arabic \textit{bhyy} 'be beautiful' and Zime (Central Chadic) \textit{bay?} 'good'. Besides being so drastically underrepresented, the root presents further problems with semantics and phonetics (metathesis? in which subgroup?). It cannot therefore qualify as an exact match.

? Sino-Caucasian: a tentative, but by no means, exact cognate might be found in PNC *b\textit{VHV} 'big, many', PST *\textit{phāH} 'vast, wide', PY *\textit{bej-} 'many'.

19. "green": nE \textit{hu-la-ap-na}.

The meaning reconstructed tentatively; according to HK, the word denotes a certain color and is used exclusively for describing clothes. The meaning 'green' is suggested due to an alternate form \textit{hu-ra-ap-na} which is then compared to the root \textit{hura-} 'to bloom, become green (of trees)'; in this case, \textit{hu-ra-ap-na} may be an erroneously contaminated form.

No reliable external parallels can be found. It would be interesting, however, to compare the form to PAA *\textit{hVčeb-} 'be green' (HSED 1385), particularly to Proto-Semitic *\textit{hVšib-} > Akk.
ḥasābu 'to be green', Arab ḥḍb 'to paint'. Considering that Proto-Semitic *-s- is usually reconstructed as a lateral affricate, it is not excluded that the Elamite form is, in fact, an old borrowing from a dialect of Proto-Semitic.

20. "hair": nE šē-c 'his hair' (?).
A very uncertain form attested in one extract, where it is furthermore dealt with animal (goat) hair. No reliable parallels have been found for this root.

21. "hand": mE ki-ur-pi 'hands', achE ku-r-pi id. (The original vowel of the root is unclear due to a regular confusion of -u- and -i- from Middle to Achaemenid Elamite).
No exact matches in any of the macro-families. V. Blažek suggests an Afroasiatic parallel in PAA *kār- 'arm, shoulder' > Somali qarqar 'upper part of shoulder' (East Cushitic), Egyptian qūb 'arm, shoulder'. Not only does the root not represent an exact match, it is also extremely weak and underrepresented on its own.

? Sino-Caucasian: potential correlates for the Elamite root can be seen in Proto-Yeniseian *gV?Vr 'hand', PST *Khwār 'fist, handful'; however, if these two are related to PNC *kwīl?i 'hand' (NCED 706-7), the original consonant of the root should be reconstructed as *-l- and can hardly qualify as a reliable phonologic match for Elamite. Cf. also PY *xīre 'arm'.

22. "head": mE, nE uk-ku. Judging by Elamite material, the word is usually seen as related to the postposition uk-ku with the meanings 'upon; because, due to, according to' (HK 1210). The meaning 'head' is probably primary here, with a later semantic derivation ("head" => "top, above" => later development as in Greek kata 'downwards; according to').

+ Nostratic: An exact match exists here in Uralic *uk3 'head' (Redei 542). McAlpin compares the root in its abstract meaning with PDr *uk-a- 'to ascend, jump up' (DEDR 559); we could also add PA *jāga 'to rise, fall over' > Proto-Japanese *a(n)ka- 'to raise; to give', Turkic *iag- 'to rise; to fall over', etc. One might suggest two different and often contaminated roots within Nostratic itself ("to rise, ascend", "head, summit"), or, more probably, suppose a certain polysemy within Nostratic dialects themselves.

V. Blažek rejects McAlpin's comparison assuming the Elamite form to be borrowed from Sumerian ugu 'head, skull, upper side, on'. This cannot be excluded, but the basic character of the lexeme (it forms part of Yakhontov's "ultra-stable" 35-word list) makes such a probability somewhat doubtful, considering the vast usage and semantic differentiation of the root in Elamite.

23. "hear": mE, nE *hap-, *habp-. Certain problems with establishing an exact meaning here, as the majority of the attested forms are usually assigned the meaning 'to listen' (ha-ap-hu 'we listen', ha-h-pu-un-ra 'listener', etc.). However, certain phrases like nE ku-ul-lak.ū-me ha-pu-it-ni 'may you hear my prayers' suggest that the word could be used in both the functions of 'listen' and 'hear'.

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In any case, the word has no apparent cognates in any macro-families. V. Blažek’s Afroasiatic comparisons (East Cushitic *hub- ‘to know, be sure’, Dahalo huw-at- ‘to know’) are scattered and unreliable.

24. "heart": mE bu-ni.

The syllabic notation bu is extremely rare in Elamite; in fact, apart from proper names, it is only met in this particular lexeme. It cannot be excluded that the word was actually dissimilated from an earlier *muni, with a specific graphic change to mark the process (while normally any old sequences of the *bu- type were marked in Elamite as pu-, whether it was just a graphical formality or reflected a real phonetic development).

If Elamite bunı indeed goes back to muni, the word finds excellent parallels in most macro-families:

+ Nostratic: PA *mn̂ù 'heart, breast' > Proto-Tungus *mianam 'heart', Proto-Korean *mainam 'heart', Proto-Japanese *muna-i 'breast'.

+ Afroasiatic: PAA *mun- 'heart, liver' (HSED 1794); the entry serves as the main word for 'heart' in Dahalo (muna) and Proto-South-Cushitic (Proto-Rift) *mun-.

? Sino-Caucasian: cf. PNC *mönqi 'breast, bosom'. The root does not present an exact wordlist match, but must certainly belongs here.

Overall, this common Eurasian root (*mun-, *munqi-) was not well preserved in daughter languages, which is due to it already possessing 'abstract' connotations on the Proto-Eurasian level. However, the exact parallels between Altaic, Cushitic, and North Caucasian make it a strong candidate for the common Eurasian word for 'heart'.

V. Blažek suggests an alternate comparison with PAA *b[u]n- > Akk. abunnatu(m) 'navel, umbilical cord', Eg. (Med) bn.tj 'female breasts', Gulfei funa, Makari fina 'breast' (Central Chadic). While these parallels do not presuppose any phonetic changes in Elamite, the suggested forms are scattered and do not present any exact matches.

25. "horn": mE, nE qa-as-su, nE kás-su.

+ Afroasiatic: V. Blažek compares the root with PAA *kVsw/y- 'horn' > Beja koos, Proto-Omotic *kusim, Senhaja a-qaśśaw, Matmata qiś, Harawa kiišu (Berber), Logone kāśśu, with the meaning 'horn' preserved everywhere. The root can certainly pretend to be of Common Afroasiatic origin, and is thus a perfect match for the Elamite entry.


Any observations on the connection between this Elamite pronoun and corresponding pronouns in other macro-families would be highly speculative. Thus, McAlpin reconstructs a Proto-Elamo-Dravidian *i > Proto-Dravidian *y- in *y-ān ‘I’; in Elamite he supposes that the usual vowel shift *i > u has taken place. However, this shift has a sporadic character, and in most cases, both variants are attested (cf., for instance, oE ni, but mE ni, nu, nE, achE nu 'thou'). The 1st person pronoun, on the contrary, shows a stable and regular *u at all stages, and there is little
ground to doubt its primary character, which nullifies the Dravidian comparison.

Blazek compares the Elamite pronoun with various 'labialized' forms of the Afroasiatic 1st person pronoun, scattered in various languages and dialects; some of these forms, like Eg. *w, later wy 'I' (dependent series), or the Chadic forms for 1sg possessive pronoun (Hausa -wa, etc.), look promising, but nevertheless, none of them constitutes an exact match.

To this, we could certainly add the PIE form *wei-, *wei-es 'we', the main root for 1st person plural pronoun. All of these comparisons point at a very archaic state of the Elamite pronoun, however, none allows for establishing any direct matches within the 100-word list.

27. "kill": achE hal-ba-, cf. forms like hal-ba-ra 'is killed', hal-ba 'dead, killed', hal-pi-iš 'he struck down' (the meanings 'to strike' and 'to kill' go hand in hand for the root). Cf. also the forms for 'die'.

+ Nostratic: assuming that Elamite -b- is of suffixal nature, one could compare PA *ālV 'to destroy, kill' > Proto-Turkic *Alk- 'to finish, destroy, be exhausted', Proto-Mongolian *ala- 'to kill', Proto-Tungus *āli- 'to crumble; to kill an animal'. Cf. also in Dravidian, Proto-Kolami-Gadba *al-y- 'to kill' > Kolami algy-, Naikri alyp- id. (DED 309), maybe also Parji anqkip- 'to destroy, kill', Salur anukci key- id. (DED 277; a few cases of irregular nasalization of lateral resonants are found in this subgroup, cf. PDR *kal'stone' > Ollari kand, Salur kandu, etc.).

? Afroasiatic: Blazek compares the root with PAA *d-b-l> Semitic *dbl 'to ruin, destroy', Eg. (Pyr) ḫb; id. Very weak comparison (not an exact word match, besides supposing a metathesis in Elamite). Cf. also PAA *gal- 'to kill' (HSED 1004), with, however, an extremely weak representation (meaning 'kill' in only two Central Chadic languages).

28. "know": mE, achE tur-, turna- (mE du-ur-na-āš 'he knew'; achE tur-na-iš id., etc.).

? Nostratic: cf. PA *terk'o 'to think' (Proto-Turkic *TerKe- 'to observe, research'; Proto-Mongolian *taraki 'brain, mind; head'; Proto-Tungus *terge- 'to think, to doubt') and particularly PD *ter-i- 'to be seen, clear', with constant meaning shifts to 'know' (DED 3419; cf. Tamil terul 'to know', Malayalam teriyuka 'to understand, know', etc.). However, nowhere in Dravidian does the meaning 'know' seem to be original.

29. "liver": nE ru-el-pa-mín. An unclear word with, furthermore, no wholly established meaning. No apparent cognates.

30. "man": achE ru-h, cf. also mE, achE ru-hu 'offspring' and other derivates.

? Afroasiatic: cf. PAA *reh- 'man' (HSED 2106) > Eg. (Pyr) ḥy.t 'men', Proto-West-Chadic *ryaH- 'male' (Bokkos re). The match is perfect phonetically, but the root is so drastically underrepresented that an exact match is out of the question. Blazek compares the root to Akkadian ṭadū, ṭedū 'to beget, pair', as well, but this is questionable from both phonetic and semantic points of view.
31. "many": achE īr-šē-ik-ki (*ršekki?). A derivate of *rša- 'big', see above.

32. "meat": nE i-iš-ti.
   + Afroasiatic: cf. PAA *rāc-/*rīc- 'meat' (HSED 13) > Gisiga rīše (Central Chadic), Proto-Agaw *rVi-/*Vi- > Proto-Omotic *rāc- 'meat, body'. Not quite reliable for phonetic reasons, but the root’s wide distribution in Omotic makes this a somewhat exact match.

33. "name": mE, nE, achE hi-iš.
   Comparisons have been offered for the word by both McAlpin and Blážek, but both remain dubious. McAlpin compares it with PD *ey- 'to know how to, understand' (DED 806), reconstructing a Proto-Elamo-Dravidian *hes- 'to know how to' (?).
   Blážek draws on the Elamite derivative hiša 'praise, glory', and compares both words with PAA *haS-, *daS- > Akk. *gassatu 'to remember', Ugarite gss 'to feel', Arabic hasa id.; Proto-East-Cushitic *haasaw- 'to chat'. This comparison looks somewhat more plausible than McAlpin’s, but is still nowhere near an exact match.

34. "neck": nE ti-pi (meaning approximate).
   + Afroasiatic: Blážek proposes a correlation with PAA *duby- 'back, tail'; according to HSED 731, where the root is reconstructed as *dub-, the primary meaning of the root is 'tail' and 'buttocks' rather than 'back'; either way, this is not an exact match. No other cognates have been found.

35. "night": oE, mE šu-ut-me, cf. oE su-de-it 'at night'.
   + Afroasiatic: According to Blážek, this root corresponds with one of the main Omotic roots for 'night', cf. Dime suur-u, Galila šoyt-i, Ari soyt-i, Hamer soyt-i, soot-i 'night'; he further suggests comparisons with Arabic swd 'to be black' and Beja sootay, suutay, sooday 'of dark colour'. The Omotic entry, however, constitutes an exact wordlist match.

36. "nose": achE ši-um-me 'his nose' < *šim-e?
   V. Blážek analyzes the form as *šin-me, with a suffixed -me as in tit, tit-me tongue and subsequent assimilation. From a "pure Elamite" point of view, though, such a hypothesis is highly questionable, considering that there exist other examples of roots ending in -n- with the same suffix and no assimilation: cf., for instance, mE murun-me 'arable land', achE nan-me 'day'. Much more probable is the 'traditional' interpretation of the form as *šim-e, where -e is the possessive suffix of the 3sg pronoun.
   On the other hand, reconstructing the initial form as *šin- would help bring in many reliable external cognates, such as PAA *san-/*sin- 'nose' (HSED 2194); PD *čund- 'beak, snout' (DEDR 2664); PU *s’apk3 'smell; to smell' (Redei 462); PNC *šHwin-t 'to smell', PST *šiäg or *sup 'to smell'. All these forms certainly point to a common Eurasian root; however, our not being able to satisfactorily rationalize the change *šin- > šim- prevents us from accepting the
comparisons.

Elsewhere, cf. PA *suma 'nose, part of nose' > Proto-Turkic *sum-/sim- 'nose' (Chuvash šumza), Proto-Mongolian *sumsaya 'wing of nose', Proto-Tungus *sogości 'nose, nose ring'. Unfortunately, the root is only represented in the meaning 'nose' in Chuvash and one Tungus dialect and has no reliable Nostratic parallels.

37. "no": nE, achE in-na\, oE a-\, mE a-\, a-\-i\, nE a-\, a-\, achE an-\, a-\ (the second root used in prohibitive constructions).
   + Nostratic: PA *əni 'not', probably related to the well-known Nostratic negative/prohibitive particle (PIE *ne, PU *ne, PK *nu, cf. ND p. 17).
   + Afroasiatic: PAA *ʔin- (Blažek): Akk. yānu 'isn't', Hebrew ?ayin, ?ēn id., etc. (the basic Semitic verb for negation), etc.; Eg. n 'not'; parallels also exist in Cushitic.

38. "one": achE ki.
   + Afroasiatic: while one can hardly speak of a common PAA root for 'one', the comparisons of Blažek look quite plausible. Cf. particularly the Omotic forms (Dizi qoy, Sheko k(w)oy 'one') and East Cushitic *kaww- 'one; alone'; other parallels include Eg. (Pyr) kyy 'another', Beja kwo 'unit' and a few tentative Chadic parallels.

No other parallels have been found for this numeral in Nostratic or Sino-Caucasian; connections with forms such as PU *iikte 'one' would be extremely tentative.

   + Afroasiatic: cf. PAA *tif- 'drop, rain' (HSED 2470) > Sem. *tipp- 'drop', West Chadic *taf- 'rainy season', Central Chadic *ta-tVf- 'drizzle'. Despite the root's rather weak representation in language branches, the parallel looks convincing, although not constituting a wordlist match.

Blažek compares the root to PAA *dib-/*dub- > Rendille dubbat, Hadiya duuba 'cloud' (East Cushitic), Dizi diab 'to rain', Kafa dup id., Dime deeb 'rain', Ari doob id. (Omotic), Jimbin dabuna 'rainy season' (West Chadic), Kera dubueni 'rain' (East Chadic). The comparison is also acceptable, but the distribution of the meaning 'rain' is too scarce in languages to present a convincing match.

40. "say": achE na- (na-ās 'he said', na-\-an-be 'they are saying', etc.)
   + Nostratic: the only more or less solid Nostratic parallel for this verb is found in Dravidian. McAlpin compares Elamite na- with PDr *eg- 'to say, speak', noting a very close similarity in syntactic use between the two roots. One should, however, note certain serious phonological problems: the reduction in Elamite (McAlpin presumes a Proto-Elamo-Dravidian *ena- > Elamite na-), and also the fact that the etymon presented in DED 868 should actually be reconstructed as *yan- due to non-trivial vocal correspondences between Dravidian languages. Even so, the comparison is still acceptable.
   + Afroasiatic: cf. PAA *ʔan- 'to speak' (HSED 40) > Berber *ʔn-, West Chadic *ʔan-, East
Chadic *ʔan; cf. also Blažek’s comparison to certain West Chadic forms (Fyer ne, Bokkos ni, Sura naa, Bolewa ni na, Tangale naa, etc., all with the meaning ‘say’. Whether we are dealing with one or more roots in PAA is hard to tell, but there definitely is some kind of proto-language match with Elamite.

+ Sino-Caucasian: cf. PST *gaʔ ‘to speak’, PY *ga- ‘to speak, say’.

40. "see": siya-/*ziya- (both in the meanings ‘look’ and ‘see’; cf. achE zi-ya ‘I saw’, but mE si-ya-h ‘I watched’, etc.).

No evident matches can be found in any macro-families, unless certain non-trivial phonetic changes have to be supposed. ? Cf. maybe PST *sia(H) ‘to know, think’.

41. "sit": cf. nE mur-da-am-pi ‘they are sitting down’, achE mur-da-ak ‘he was residing, sitting’; nE mur-tin ‘seat (n.)’. The same root as in mu-ru-un ‘earth’, see above.

42. "skin": nE ha-te-en, achE ha-tin.

No matches. If -in is historically a suffix, one could compare the root with PAA *ʔad- ‘skin’ (HSED 15), *ʔadam- id. (HSED 17); that would, however, suppose a correspondence of PAA *ʔ = Elamite h-, which is questionable; also, the AFro-Asiatic root is very weak, being only represented in a couple of Cushitic languages (*ʔad-) and Arabic (*ʔadam-).

43. "stone": achE h.har.lg.


44. "sun": oE na-hu-te, mE d-na-h-hu-un-te, d.na-h-hu-te, nE d.nah-hu-un-te. The word is usually interpreted as *nan-hunte ‘keeper of day’, and can therefore be considered as a euphemistic substitute for the original Elamite word for ‘sun’, which is unknown.

45. "that": mE, nE, achE ak-ka, ak-qa.

If the final -ka can be considered as suffixal (cf. the similar pronoun ap-pa ‘what, that’), the root can easily be compared with Common Eurasian deictic particles:

+ Nostratic: PN *a ‘that’ (ND I 121) > PA *a/*o ‘that’, PU *a/*o- ‘that’, PD *a ‘that’, PK */h/a ‘this’.

? Afroasiatic: cf. the parallels in ND I 12, where Illich-Svitych compares the Semitic definite article (Aramaic -א, Hebrew ha with secondary h-ʔ) and a few Cushitic forms. Cf. also Blažek’s comparisons: PAA *ʔak/k- > Semitic: Akkadian akkāʔi, Hebrew ?āk, Aramaic ?akam ‘how’, ?aka ‘why’, Ugaritic ik, Mehri ükō id.; East Cushitic: Oromo aka ‘like’, akka ‘that, in order to, like’; Omotic: Yemsa akka ‘thus, how?’, West Chadic: Ngamo aka ‘how’, etc. Note, however,
that while the forms are certainly comparable, the meaning 'that' (demonstr. pronoun) in any of the Afroasiatic languages is exceedingly rare and cannot pretend to be of proto-language origin. Thus, it does not constitute an exact match.

? Sino-Caucasian: cf. PNC *hā, a base used for near deixis as opposed to *ʔā, used for far deixis. It is unclear whether it is PNC *ʔā that corresponds to Elamite/Nostratic *a- or PNC *hā with a later shift in meaning, so an exact match cannot be guaranteed.

46. "this": mE hu, nE hi, achE hi, hu, oE, mE, nE, achE i. The basic form is *i; forms with -u- show the usual Elamite graphic (phonetic?) variation between -u- and -i-.
  + Nostratic: PN *ʔi/*ʔe (ND 134) > PK *(h)i 'that’, PU *i-/*e- 'this’, PD *i- 'this’, PA *i 'this’.
  + Sino-Caucasian: PNC *ʔi 'this’, PST *ʔi id.

It is interesting to note that, while the basic deictic particles *a- and *i- are so widespread within Nostratic and Sino-Caucasian, they are nowhere near as strongly distributed among Afroasiatic languages. Reliable parallels certainly can be found, but there is no talk about reconstructing a stable PAA *a- or *i- in their basic deictic meanings. (cf., for instance, the scattered parallels that Illich-Svitych gives in ND 134, most of them having to do with the 3sg m. personal marker in verbal conjugation).

47. "thou": oE ni, mE ni, nu, nE, achE nu.
  + Nostratic: McAlpin's classic comparison with PDR *ni 'thou' is still working (although a more correct PDR reconstruction would be *njin for the direct stem). To this one should also add PA *na 'thou' > Proto-Turkic *g (ending of the 2nd person), Proto-Korean *ne 'thou’, Proto-Japanese *na id. While the basic Nostratic stem for 2nd person sg. is usually reconstructed as *ti/*si, the Altaic-Dravidian isogloss is too serious to go unnoticed.
  ? Afroasiatic: Blazek quotes North Omotic *ni, *ni-ni 'thou' (cf. Kefa nc, Welamo nenä); these forms, however, have no parallels in other branches and do not even qualify as a solid Proto-Omotic root, much less Proto-Afroasiatic.
  + Sino-Caucasian: cf. PST *nā- 'thou, you' (the main Sino-Tibetan root for 'thou', although it has no Caucasian or Yeniseian parallels).

  ? Nostratic: cf. Proto-North-Dravidian *tāt-qā 'tongue’ (> Kurukh tata, Malto tarte, DED 3064). The root has no other Dravidian or Nostratic parallels, however, and cannot be taken for an exact match.

49. "tooth": mE si-h-ha.

Two different self-exclusive comparisons can be offered in the case of this root. On one hand, mE *sihha can go back to an earlier oE *sīhhan, preserved as a proper noun and interpreted by Heinz-Koch as 'tooth'. This is the etymology accepted by Blažek, which makes it possible for
him to compare the root with:

+ Afroasiatic: *silḥhJa- 'tooth' > Sem. *šinn-, South Cushitic *silhn-, Ahaggar esiin (Berber), West Chadic (SBauchi) *sin, Ngizim yaanaa, etc. (In HSED 2250, the root is reconstructed as *sin-).

On the other hand, even if the Old Elamite proper name si-ha-an does belong here (which is not obvious), the final -a can well be a suffix. Assuming a possible assimilation, we can then trace *sihha- back to *silha- and compare it with:

+ Sino-Caucasian: PNC *cīiV' 'tooth', PST *CVj 'tooth, fang';
+ Nostratic: PU *c'ij3-m3 'fang', PA *siša 'sharp stick, tooth' > Proto-Turkic *siš- 'tooth, sharp stick';Proto-Mongolian *sidii 'tooth', etc.).

50. "tree": nE, achE GİŠ. hu-sa.
+ Afroasiatic: PAA *?[i]uc- 'tree' (HSED 1126) > Sem. *?[i]uš- 'tree', East Chadic *?[u]c- 'fig tree' (?). This is the main Semitic etymology for 'tree', and thus looks quite reliable.

51. "two": nE ma-ir, mar-ra, achE mar.

No reliable parallels for this root can be found. Blažek presumes a development *w- > m- in Elamite (i.e. Proto-Elamite *wari), comparing it with PAA *wary- (Beja wari 'other', Proto-Cushitic *wāri 'or', Hausa waari 'a pair'). Even assuming that his hypothesis for Elamite is correct, the comparison does not constitute an exact match.

An alternate comparison would be to Proto-Dravidian *mar- 'other, next' (DED 4766); however, according to the hypothesis expressed in (Starostin 1998), the reconstruction for the Proto-Dravidian root should rather look like *mad- (with an alveolar stop) which further complicates the comparison. In any case, this cannot be judged as an exact match.

52. "walk": nE, achE izzā-/izzzi- (iz-zi-iš 'he went', achE iz-zi-man-ra 'the walker', etc.).

The root has no exact semantic matches in any of the major macro-families, but can be easily compared to quite a few forms anyway:

+ Nostratic: cf. PA *?iče 'to reach, follow, go' > Proto-Turkic *Eč- 'to follow'; Proto-Mongolian *iču- 'to go back, get ready to go back'; Proto-Tungusic *is- 'to reach'; Proto-Japanese *isua(n)k- 'to hurry, get ready to'. Cf. also Proto-South-Dravidian *Is-aj/*faj-ag- 'to move, go' (Tamil iyapku, icapku, Kannada esagu 'to drive'; DED 469).
+ Afroasiatic: cf. PAA *si- 'go, come' (HSED 2225) > Eg. syx 'hurry, hasten'; WCh *siy- 'return', CCh *si- 'come'.
+ Sino-Caucasian: cf. PNC *išA 'to move, come' (Proto-Avaro-Andian *š:wV- 'to come, reach'; Proto-Lak *ajšːu- 'to retreat, go away'; Proto-Dargwa *ašː- 'to come', Proto-Lezghian *pišːə- 'to be, to come'; Proto-West-Caucasian *šə 'to move, come').

53. "water": mE zu-ul.
No exact parallels for this root can be found, except for words with rather remote semantics, such as PAA *sayal- 'water flow, current' (HSED 2213), PA *šīōl[u] 'river bed', etc. The relationship remains unclear.

54. "we": oE ni-ka, mE ni-qa, nE, achE nu-ku.
+ Nostratic: PN *nā- (ND I, p. 7) 'we (excl.)'. This base in Nostratic is represented by PD *nām 'we (excl.)', PIE *nē-/nō- 'we (oblique stem)', PK *naj 'we'. (Note that this is yet another case of potentially close Elamo-Dravidian relationship undermined by data of other Nostratic languages).
+ Afroasiatic: PAA *nī- 'we' (cf. the forms given in Blažek's table of Afroasiatic pronouns).
+ Sino-Caucasian: PST *yā- 'I, we' (Old Chinese *ghā 'I, we'; Tib. ga 'we', Burm. ga 'I', etc.).

Conclusion

As can be seen from the wordlists above, despite the scarcity of known lexemes with well established meanings, Elamite still presents sufficient surface evidence to help relate it to some of the surrounding macro-families. A particularly striking discovery is that Elamite seems to share a significantly lesser number of cognates among the 100-wordlist with Sino-Caucasian (7-8 pluses) than with Nostratic (14-15 pluses) or Afroasiatic (15-16 pluses). This would mean that, in case all of those three macro-families were interrelated, Sino-Caucasian would have to be considered more distant from the other two.

As for the Nostratic and Afroasiatic parallels, given the highly approximate reliability of the overall procedure in this particular case, it is nigh impossible to determine which of the two families is more closely related to Elamite. Afroasiatic seems to give somewhat better parallels within the "ultra-stable" 35-word list, and such exclusive Afroasiatic/Elamite matches as "blood", "earth", and "horn", look extremely promising. On the other hand, in most of the cases Elamite forms match a certain proto-form of one, or at the most two Afroasiatic sub-branches, which does not allow us to claim an exact match with Proto-Afroasiatic as such.

That said, there are certain things we can say for almost certain, based on the above comparisons. First, that there is absolutely no sufficient evidence whatsoever to claim a specific Elamo-Dravidian relationship (apart from the usual - and quite common - matches in personal and demonstrative pronouns, there are only 2 direct matches between Elamite and Dravidian in the entire wordlist). Second, that despite this, Elamite presents us with a far clearer case of relationship than Sumerian, lexicostatistical results for which look far more grim in general; both the lexical and the morphological evidence of Elamite find enough parallels in Eurasian macro-families to exclude the possibility of chance similarities.

At this point, I would probably describe Elamite as a "bridge" between Nostratic and Afroasiatic, perhaps a sole remnant of an old sub-branch of the global "Eurasian" or "Boreal" family that also includes Nostratic and Afro-Asiatic. This would explain many of the lexical and morphological parallels proposed by both McAlpin and Blažek, as well as by myself in the present article. As a working hypothesis, this solution seems rational to me, and unless further evidence from Elamite (or Afroasiatic) comes up to sever the ties between these two families, I think this is the most plausible way to deal with the current situation.
Abbreviations


References

the International Conference on South Asian Languages (July 1 - 4, 1997). Moscow.
Starostin S.A. 1995. “Sravnitel'nyj slovar' yeniseyskich yazykov (A comparative vocabulary of
Some New Dravidian-Afroasiatic Lexical Parallels

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The most promising genetic affiliation of the Dravidian language family seems to be its inclusion in the Nostratic macro-family. Dravidian languages have been compared separately with various branches of the Nostratic macro-family: Uralic (Schrader, Burrow, Andronov, Tyler, Marlow), Altaic (Bouda, Menges, Vacek), Kartvelian (Fähnrich), and Indo-European (Gnana Prakasar, Southworth). They have also been compared with several Nostratic branches in individual studies, such as with a combination of Semitic, Indo-European, Uralic, and Altaic (Caldwell) or Uralic and Altaic in conjunction with Japanese (Fujiwara). As concerns works specifically devoted to comparison between Dravidian and Afroasiatic languages, the only known works are only partial comparisons, the contributions of which are debatable. A few examples are the works by Homburger (Dravidian vs. Egyptian, Dravidian vs. Cushitic) and by Samsuddin (Dravidian vs. Semitic).

The Dravidian language data given in the published parts of the Nostratic dictionary (Illic-Svityč 1971, 1976, 1984: 378 roots altogether) correspond well with the data of other branches, as categorized by the following numbers (numbers in parentheses designate additional possible, but questionable, cognates):

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Number</th>
<th>(Number)</th>
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<tbody>
<tr>
<td>Dravidian vs. Afroasiatic</td>
<td>99</td>
<td>(125)</td>
</tr>
<tr>
<td>Dravidian vs. Kartvelian</td>
<td>58</td>
<td>(75)</td>
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<tr>
<td>Dravidian vs. Indo-European</td>
<td>104</td>
<td>(125)</td>
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<tr>
<td>Dravidian vs. Uralic</td>
<td>105</td>
<td>(115)</td>
</tr>
<tr>
<td>Dravidian vs. Altaic</td>
<td>107</td>
<td>(125)</td>
</tr>
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</table>

Dravidian material is represented in 144 roots in the 1971 volume, with the addition of 21 new roots in the 1976 volume, and the addition of another 9 new roots in the 1984 volume. Another addition of approximately 20 other roots has not been included in the dictionary; these, however, may be used as supplementary examples (see author's notes in Lexica Nostratica: Addenda et Corrigenda I, II). The primary goal of this contribution to the Nostratic lexicon is opposed to comparisons with a wider variety of Nostratic languages, not to mention comparisons with Sumerian alone.

This text presents more than 120 new lexical parallels between Dravidian and Afroasiatic, meaning that the corpus collected by Illic-Svityč (which also includes verbs and grammemes) is doubled. Four of these supplement Řeněněj jásykej nostratíčeských jazyků (1971, 1976, 1984); four others represent additions to Materialy k sravněnímu slovaru nostratíčeských jazyků (Etimologija 1965, Moskva 1967). Parallels from the Nostratic languages other than Dravidian and Afroasiatic are cited in 70 cases (Elamite 9, Indo-European 42, Kartvelian 9-10, Uralic 21-22, Altaic 21-23); the Sumerian data, not included in the statistics of the Nostratic comparanda, are cited in 13 cases. The comparison with Sumerian does not mean the affiliation of Sumerian in the Nostratic macrofamily. Together with Alexander Militarev we try to explain the numerous Sumerian-Afroasiatic parallels as a result of a merger of two language components in Southern Mesopotamia: a substratum, probably representing an independent Afroasiatic dialect, and an adstratum, with probable Sino-Caucasian genetical links (cf. Blažek 1999, 54-55).
The lexical material is divided according to semantic fields as follows: A. Body parts; B. Human society; C. Fauna; D. Flora; E. Inanimate nature / space / time; F. Culture. Many new cognates have been discovered which are distributed among several grammatical categories, including adjectives, terms from which the numerals have evolved, verbs, pronouns, and various grammatical particles. But for this article I am restricting the extent of my contribution to nouns only, with a few exceptions. In addition to the most basic lexical elements, such as body parts and natural objects, I have also included common cultural terms, which may reflect similar ecological conditions among the different communities (e.g. for flora or fauna) as well as the cultural levels of these communities as determined by the neolithic revolution (e.g. house, village / city, hoe / plough, to sow, to milk, honey, bow, arrow, etc.).

Data such as these seem to imply some sort of secondary contact between speakers of the Dravidian and Afroasiatic languages, perhaps through the habitation of the Mesopotamian area before the coming of the Sumerians. Nevertheless, we cannot exclude an alternative explanation: the possibility that Dravidian was a merger of two proto-languages which occurred prior to their emigration to the Indian peninsula, these languages being Northern Nostratic and Southern Nostratic (Afroasiatic). Of course, definitive conclusions regarding the preceding questions will require interdisciplinary research within the fields of archaeology, anthropology, and historical linguistics. Even now, however, despite the significant recent developments in Afroasiatic reconstruction, we can still rely upon the excellently validated system of correspondences between Dravidian and Afroasiatic formulated by Illic-Svityč.

The first version of this study originated in the late 1980’s. A very telegraphic report was published in the 'red series' edited by V. Shevoroshkin in Bochum (1992). The present version is based not only on frequently tentative reconstructions, but especially in the case of Afroasiatic, on concrete lexical data mostly with concrete sources.

**Lexical data:**

**A. Body parts:**

1. Dr *cik-* "flesh" (D 2549: III, V, VI)

AA *svk-* "flesh" > ? Cu: (C) *sax-* "flesh" > Bilin saxd, Kemant saya, Khamtanga saya (Appleyard) || (E) Dullay: Gollango saakan-ko, Gawwada sakan-ko "flesh" (AMS) || Om: (N) Dizi a8ku, Shako a8ko, Nao a8ku; Bambeši 8ike, Male a8ki "meat" (Bender) || Ch: (C) Mbara-Vulum 8uk (Tourneux), Musgu k-soog (Roeder) || (E) Kera ku-sùki id. (Ebert).

2. Dr *(e)6(6)- "flesh" (D 728: I, VIII; 3373: I, VI, VIII)


3. Dr *talay "head" (D 3103: I - VII)

AA: CCh: Daba group *talay "head" > Musgoy tâlâ, Daba talân, Kola tâlâ id. (Jglb 1994, 183).

Cf. Alt: Tk *tul(g)un "temple, plait"; cf. Chagatai tuluwum "Haarflecht" (Räsänen 1969, 498) || Mong toler "head" || MKor tâlkör "forehead" (AED #1092) || IE: Celt *talos- > Gaulish -tâlos (in proper names), Welsh, Breton tal "front" & *tal- > Olrich taul, tul "front" (Vendryes 1978: T 180-82).
4. Dr *mōk- "above, top" (D 5128: 1, VI)
AA: Cu: (E) *mug- "head" > Tsamakko mūg-ā-te id. (Hayward); Burji mūg-a "head"; Hadiya mūg-a "club" (Sasse 1982, 148) || Ch: (C) Musgu māge-ni "his head" (Rohlfs), Munjuk mōk "head" (Tourneux) = Musgu mōk id. (Overweg).

5. Dr: Konda musku "topmost part, upper side (of something)" (D 5128: VI)
AA: Cu (E) *misqa/i "brain" > Somali masqab, Boni miska id. (Heine), Jiddu massiha id. (Lamberti) || Om: (S) Ari-Jinka māksa "brain" (Fleming).
Cf. IE *mozgo/*mosko- "brain" (Pokorny 1959, 750).

6. Dr *kann- "cheek" (D 1413: 1) & *kenn- "cheek, jaw" (D 1989: I, II, III)
AA *gin-/*gun- "face, cheek, forehead" > Cu: (N) Beja gīnut "gum of teeth" (Roper) = gunuun "jaw" (Bechhaus-Gerst) || (S) Iraqī gīneēl "back of head" (Kiessling) || Eg (Med) dānn "Kopf" (WB. V 576) || Ch: (W) Ankwe gen, Montol gun "cheek" (Jg); Gera geni "face" || (C) Lame gini "cheeks" (Kraft) || (E) Mubi gīn "Stirn" (Lukas).
Cf. IE *gēn/*gēn- "face, jaw" > Greek γένος "jaw", Latin gena "Wange" etc. vs. Oldic hanu- "jaw" (Pokorny 1959, 381-82) || FeMd *kōn > Finish kuono, Estonian koon "jaws, chops", Mordvinian Erzya koña "forehead" (SKES 241).

7. Dr *mug- "front" (D 5020a: I-VIII) and / or *mind/i "eyelash, eyebrow" (D 4864: IV) & *mīn- "to wink, close the eyes" (D 4877: IV, VII)
AA *mān-/*mīn- "forehead" > Cu: (E) Afar minin "eyebrow"; Bayso munje "mouth, lip"; Konso mīn-tä "forehead, face", Mossiya miin-tä id.; Gawwada miin-të "Stirn, Vorderseite, Gesicht", Tsamakko mūn-te "face", Alaba, Kambatta mīn-e "forehead"; Yaaku māna "eyebrow" (Lamberti 1987, 533) || Ch: (C) Hina maneno "Stirn" (Strümpell).
Cf. IE *mēn- "face" > Hittite meni/ea- "face"; Olirish mēn "mouth", Cornish mān id., Breton min "Schnauze" (Jucqois, Orbis 16[1967], 177-79; Tischler 1990, 197).

8. Dr *pōk- "cheek" (D 4242: I, III - VII)
AA *būk(V?)- "cheek, head" > Cu: (E) Oromo bóq-ő’, Konso paq-o6-ta "jaw"; Burji bok-ò "cheek, side" (Black 1974, 134; Sasse 1982, 38) || Berb: (N) Rif abekka "face", Kabyle abka id. (Woelfel 1955, 43) || Ch: ? (W) Hausa baaki "mouth" || (C) Bachama bōkay "cheeks"; Banana fōkū-ñ "face" (Kraft).

9. Dr *muk- "face, mouth" (D 4889: 1 - VI)
AA *māku[i] "mouth" > Cu: (N) Beja muk "stomatitis, inflammation of mouth" (Hudson) || (C) Kemantmākāy ~ mōkāy "mouth" (Sasse), Qwara makiya, Khamir mīka id. (Reinisch) || | Ch: (C) Gidar mokō "mouth" (Strümpell), Musgu māgu id. (Lukas).
Cf. IE *mūkH- (?) "mouth, face" > Olindic mūkha- "mouth, face", Pashto māx ~ mūx, Parachi, Ormuri mūx "face", Ossetic mūkū "jaws, chops" (Morgenstierne 1927, 48-49; Abaev II, 131); ? Albanian mykē "stumpfe Seite, Rücken" < *mūkā (Orel, Zeitschrift für Balkanologie 23/2, 148).

10. Dr *kōrg- "tusk" (D 2257: 1, III, VI)
AA *k-war[i] "tooth" > Cu: (N) Beja kwire "tooth" (Roper) || | (E) Elmolo kārris "cheek, molar" (Heine), Oromo qarrīfi "canine tooth" (Gregg) || Om: (S) Ari-Jinkakari "tusk, tooth of hippo or elephant" (Bender) || | Berb: Senhaja aqarrus "tooth" || Ch: (W) Hausa hākōrī, Kulere ʔagweér "tooth" etc. (Stolbova 1996, 73: *ʔa-jaři ~ *-jaWVri).

11. Dr *kevi "ear" (D 1977a: I-VIII)
12. Dr *kur- "ear(-ring)" (D 1823: I, II, IV, VI)
AA "gur[y]- "ear; to hear" > Cu: (E) Oromo gurra "ear" (> Amhara joro id.), Konso kurra, Mossiya koword id. (Lamberti 1987, 534) ||| Om: (N) Beja liilii id. (Roper) || (C) Kemant il (Sasse), Awngi .Err (Hetzron) etc., id. || (E) *iil- id. > Somali il, Burji illa, Yaaku il id. (Sasse 1982, 104; Lamberti 1987, 534) || Dahalo ILLA id. || (S) Iraqw ila, Asa ilat, Qwadza ilito, Mbugu i'lla id. (Ehret 1980, 291) || Ch: (W) Buli 7iir, Guruntuun yeren || (C) Hikala ili, Lamang ili, Buduma yil "eye", Mandagate 7al "eyes" || (E) Mubi 7iiri "eye" (Jgb 1994, 126-27) ||| Berb: Shilah of Tazerwalt allin "eyes" vs. sg. gyff < *t-il-t, Ntifa pl. alln, Ghadames awel, pl. wallen (Lanfray). Cf. Mel el(t) "eye" (Blážek 1999, 58: Dr + AA + El).

13. Dr *ali "eyeball, pupil (of the eye)" (Zv 658: I)
AA *Fil- "eye" > Eg (Pyr) ir.t "eye" (Wb. I, 106) || Cu: (N) Beja liilii id. (Roper) || (C) Kemant il (Sasse), Awngi .Err (Hetzron) etc., id. || (E) *Fil- id. > Somali il, Burji illa, Yaaku il id. (Sasse 1982, 104; Lamberti 1987, 534). An old compound cannot be excluded. Cf. FelP *ripse > Finnish ripsi, Eston ripsa "eyelash", Lappic Lule rapsa "membrane, napkin" (SKES 809).

14. Dr *irapp- "eyelid, eyelash" (D 5169: I-IV, VI)
AA: Cu: ? (N) Beja simbehaani "eyebrows" || (E) Burji irimiyy "to close/cover the eyes" (Sasse 1982, 48); Gedeo himmi hass- (hass- "do"), Hadiya himbiipp-, Kambatta timbiipp-, Sidamo himbiil- id. (*him-biip-d-; Hudson 1989, 42 reconstructs *f). Cf. Kartv *cam- "twinkle", *cam-ćam- "eyelash" (EWKS 496).

15. Dr *cor- "hair, beard" (D 2894: VI)
AA *s/čOr- "hair" > Cu: (N) Beja šurga "pubic hair" (Hudson) || Om: (N) Dizi saaru "hair" (Bender) || Ch: (W) Hausa shaari & shiro "long hair on chest of of ram" (Skinner 1996, 184); cf. also Sem: Ugaršn(a'), Geez šorniy "wheat" (Leslau 1987, 534) and Eg (MK) šr.t "barley" (Wb. IV, 524), if the primary semantic motivation was "hairy", cf. Hebr šophar "barley" vs. šophar "hair" etc. Cf. Sum suthur "cheveux; Haarschopf".

16. Dr *iir-/*iuru- "internal organ" (D 546 & Zv 667: I)
AA *pir- "internal organ" > Semp: Akk ertya, iratum, ertu(m), gen. f. pl. irati "Brust, Lunge" (AHw 386; Holma 1911, 44), Ugar īrt, New Hebr re?ūa, Syr nūya, Arab ri?a "lungs", Harsusi 7arit, Sheri 7erli, Pirat id. (Leslau, Language 21[1945], 233, 236) || Cu: (E) Burji ir-a "stomach"; Yaaku 7ra, pl. iramo "belly" and / or Somali uur, Rendille ur id. (Sasse 1982, 106) || (C) Mogrum àrū, Murskum ρί(+t) "intestins" (Toureux) || Berb: (S) Ahaggar 7a?ū ās "poumon" (Prasse 1974, 215: *t-Harūt-t) || (N) Shilah of Tazerwalt turt, pl. turin "Lungeflügel" (Vycichl, WZKM 52[1955], 319-20: Berb + Arab). Cf. IE *ereu-/*oreu- "intestines" (Pokorny 1959, 782).
18. Dr *tar- "liver" (D 3120: II, IV, V, VI)

AA *tar-[aw]- "liver" > Cu: (E) Saho tiraw (Bender), Somali Tunni taraaw, Jiddu turuw (Ehret & Nuuh), Bayso toro, Arbore tirâ (Hayward), Oromo Waata tiruu (Heine), Konso tiraaw (Black), Tsamakko tîr- "liver" (Hayward), Gedeo tiro / tiêo id. (Lamberti) || (S) Mbugui tîr- id. (Ehret 1980, 225) || Om: (S) Galilia turi id. (Bender) || (N) Wolayta tira "chest", tirî "liver", Gamu tira "chest, liver" etc. (Lamberti & Sottile 1997, 523-24) || Ch: (W) Ngamo tîlî, Bolewa tiêo "heart" || (C) Musgu etel-el "liver" || (E) Tumak têlî, Ndam taalu id. (Stolbova 1996, 35 reconstructs pCh *te[H]-al-) or Ch: (W) Pelchi wa-têra "liver" (Shimizu), Pa'a tîr-"wasa "kidney" (Stolbova 1987, 166: WCh *ha-tîrsa).


19. Dr. *köl "belly" (D 2244: VII, VIII)

AA *kawly- "kidney" > Sem *kula-(at-) ~ *kalay-(at-) > Akkakulatu, Hebrew kilyâ, Arabic kulya, Argobba kulay id. || Cu: (N) Beja ânkwelâ & unkulâ "kidney" (Reinisch) or kalâwa "interior" (Roper) || (E) *kal-(al-) "kidney" > Som kelli, Bayso kalajja, Konso xalli-t-ta, Burji kalat-t-ee id. (Sasse 1982, 113); ECu > Dahalo kalle id. || Om: (S) Galilia kela id. (Fleming) || (N) Wolayta killahuwa, Gamu-Dache kilha-ho id. (Lamberti & Sottile 1997, 410-11), Koyra killee "liver" (Cerulli) ||? Ch: (C) Hwona kwuliSa, Bura kulSi "kidney" (Kraft).

20. Dr. *pôr- "chest, breast" (D 4592: I, III, VI, V) and/or Dr. *pôrr- "lungs" (D 4569: I, VI)

AA *kawry-/*wury- "back" > Sem *kula-(at-) ~ *kalay-(at-) > Akkakulatu, Hebrew kilyâ, Arabic kulya, Argo-bba kulay id. || Cu: (E) Som beer, pBoni *bôer (Heine) "liver" and/or Dasenech bal "chest, front", Burji bâr-â "chest" (Sasse 1982, 33) || (S) Burunge bâro-ô "spleen" (Ehret 1980, 338, 320) || Om: (S) Dime buru "kidney" (Bender).

Cf. IE *bôreU- "belly" (Pokorny 1959, 169 and/or 170-71) and also Sum bar "liver".

21. Dr. *mak(k)- "neck" (D 4622: IV)

AA *makU- "neck, back" > Cu: (N) Beja mok "neck" (Reinisch) || (C) Bilin makk*a "buttock" (Lamberti) || (E) Afar makuÔ, mukûh "spinal cord" (Parker & Hayward), Boni mûkkô "buttocks" (Heine), Yaaku muk "lower side of body" (Ehret) || Eg (MK) mukh3 "Hinterkopf", Coptic mâkS "nuque, cou", cf. Eg h3 "arriër de la tête" (Wb. II, 163; Vycichl 1983, 111).

Cf. Iranian forms from Pamir: Shugni, Wakhi mâk, Sarikoli mok, Ishkashim mak "back of the neck, nape" (Morgenstern 1974, 44) || Ural *muka "back" (Sammalahli 1988, 538) || Alt.: Tk *boyar "Kehle" (Rässänen 1969, 78) || Kor mok "neck, throat". Cf. Blázek, Archiv orientální 55[1987], 159: Dr + Kor + Tuk + Ural + Iranian + AA (Eg+Beja).

22. Dr. *verin "back" (D 5488: I-IV, VI)

AA *wary-/wury- "back" > Sem: Arab warâ? "hinter", Mehri wurâ "zurückkehren" (Müller 1975, 70) || Cu: (E) Oromo wirtuu "spine" (Gragg); ? Sidamo, Hadiya waro, Kambatta waru "under" (Hudson 1989, 160) || Ch: (W) Hausa wuyôa, Dera wuro, Tsagu wiro, Kir wuyar, Kulere wur, Nigizm wuru || (C) Higi Kamale wuri, Kilba wulya, Bachama wura, Daba weô, Buduma wur, Zime-Dari yore || (E) Migama urê, Jegu were, Mubi wîreU "neck" (Jgbl 1994, 252-53; Stolbova 1996, 90-91: pCh *ha-wuyar) || Eg (Gr) íw3y.t "Kehle (des Gegners, die durchbohrt wird)" (Wb. 1, 49) || Berb: (N) Central Morocco awôrur "derrière" (cf. Cohen 1947, #509).

23. Dr. *car(r)- "neck" (D 2419: I(?), III, V)

AA *sâr-/*sîr- "back, neck" > Sem: Arab sarât "back", Harsusi sár "behind, after" etc. || Cu: (N) Beja sâra "back" (Reinisch) || (C) Khamir sâra "back" (Reinisch), Awngi sâr "lower part" (Hetzron) || (E) Afar sârâ "back, rear" (Parker & Hayward), pBoni *sârid "backside of chest" (Heine), Burji saro "tail" (Hudson), Yaaku
24. Dr *cérk-* "back of the neck" (D 2817: VI)

AA *çahr-* > Sem *çahr-* "back" > Akk. šêru "Rücken, Oberseite", Eblaite za-lum [zahrum], Arab zahr "back", Mehri jahar "on" etc. (Müller 1975, 64, #10: Sem + Sumray) || Cu: (E) *çeer- > Bayso feere "buttocks" (Hayward), Konso jeera "shame", Dirayta dele-ta "vagina", Oromo teeri id., Sidamo teere "anus" (Haberland & Lambert 1988, 144) || Om: (N) Zayse deere "buttocks" (Lamberti) || Ch: (W) Hausa tsara "middle of the back" (Skinner 1996, 269) || (E) Sumray tàrìny "back", Ndam tår, Mokilko dår etc. id. (Jglb 1994, 7).

Cf. IE *ster-('g'w-?) > Latin termum "back", termus, -oris "harte Rückenhaut der Tiere, Fell, Rücken", Greek στέρος "Rückenhaut der Tiere, Fell, Leder" (W-H II, 670).

25. Dr *cu(k)- "nape of the neck" (D 2696: I, VI, VIII)

AA *sçug- "back, shoulder" > Cu: (C) Bilin ság "shoulder(-blade)", Khamir sig "shoulder, hinder part" (Reinisch), Khamta sig "back" (Conti Rossini) || (E) *sug- > Dasenech sug-u "back", Oromo fugiso "upside down" (Sasse, AuU 39[1975-76], 127-28).

Cf. Alt *sùy- "back of the neck" > Tk *sùg-sùn "hinder part of the neck" || Tung *sùg-li "mane" (Dybo 1989, 200).

Alternatively AA *[3]uk- "shoulder" > ? Cu: (E) Arbore zèh "nape of the neck" (Hayward), Kambatta zakko "back" (Hudson) || (S) Mbugu ki-zóga "shoulder" || Om: (N) Wolayta zokkuwa "back", Gamu zokko, Dawro zokke, Kachama zaahi, Koyra zaahi (cf. Arbore) id. (Lamberti & Sottile 1997, 560) || Ch: (C) Mada adzak, Mboku dzugwàm "neck" (Mouchet) || (E) Ndam jikàm "my arm" (Lukas) || Berb: Tamazight tazukt "buttock, hip, thigh"; Ahaaggar ayyazzuk "top part of the groin" < *ayàs & zuk "bone & back".

Cf. IE *steig- "shoulder, shin" (Pokorny 1959, 1018) || Alt *šúxán-* > Mong *šúxán "waist part of backbone" || Tung *šokon "a hollow between shoulder-blades, an inner corner" (Dybo 1989, 199).

26. Dr *pVf- "nape, back" (D 4146: I, II, III, V)

AA bu[?] - "shoulder" > Sem: Akk bûdum "Schulter", Eblaite bû-tum (Krebernik 1983, 36) || Cu: (E) Oromo Macha boda adv. "back" (LVC); Sidamo bûda, Hadiya bûdo "arm, shoulder" ("braccio") besides "horn" (Cerulli); only the latter meaning was recorded for Burjiju bùduá, Kambatta bùdua (Hudson 1989, 81) || Om: (S) Ari-Jinka buâd "upper back, back of thorax" (Bender), Ubamer buâdu (a) "back" (Fleming) || Ch: (C) Zelgwa bida "throat" (Mouchet), (E) Tumak bêd "arm" (Caprile), Ndam-Dik bîd id. (Jg).

27. Dr *kump- "back" (D 1747: I)

AA *gabb-/"gubb- "back" > Sem: Ugar gb "back (animal, human)"; Hebr gab, Jewish-Aram gabbâ id. || (E) Gedeo, Kambatta gooba, Sidamo goobb(a) "neck" (Hudson 1989, 104); Oromo Wellega gooba "hump of cattle" (Gragg) || Om: (S) Dime gumb "back" (Fleming) || (N) Kafa gubbo (Cerulli), Mochà gëbbbo "back of the body" (Leslau) || Ch: (C) Gidar goôbo "buttock" (Mouchet).

28. Dr *kol- "tail" (D 2135: VII)

AA: Om *gol- "tail" > (S) Ari go(o)-i, Hamer gul-i, Dime go(o)-i-an id. (Bender) || (N) Basketo go(š)ši (Bender), Dokka golse (Fleming), Dawro goîlano, Wolayta goyna etc. (Lamberti) || Berb: (N) Seghrushen ažlal, Menacer ažlîl "tail" (Destaiy).
AA *dub(y)- "tail, back" > Sem: Mandaic dibra "back, tail", Arab dubr "back, neck" || Cu: (E) *dib/-*/dub-/*dab- "tail" > Somali dabo id., dib "short tail of goat", Rendille dub "tail", Boni tib id., Bayso deb-e id., Elmolo dup "tup", Oromo dubb-a "back, behind", Konso tupa "behind" etc. (Sasse 1982, 57) || Om: (S) Karo dibini "tail" (Fleming), Banna doobanna id. || (N) Dawro duumya id. (Bender) || Ch: ? (W) Angas-Chip dáp, Ankwe dáp (Kraft), Sura dúp (Jg) "penis" (metaphorically "tail") || (C) Mofu dób, Gidar dúbó, Musgu dóbó (Mouchet), Gisiga dóbia "back", Gulfei dábé "buttlock" (Lukas), Zlime-Batna dub (Jg) ? (E) Kwang tawá "back" (Jg) || ? Berb: (S) lulümenidôêtadum "tail" (Barth).

Cf. NEI tipi "neck" (Blažek 1999, 59: AA + El).

30. Dr *pull- "penis" (D 4309: I, III)
AA *bulákk-oo "testicle" (Sasse); ECU > Gugne of Soddo bólía "penis" (Leslau) || Om: (S) Dime bólía id. (Bender) || (N) Basketo bólí, Dokko bólía "penis" (Fleming) || Ch: (W) Hausa bůúriaá, Bolewa bůla, Bokkos bůlé id. (Jg) || (C) Bata-Garwa bólía id. (Strümpell), Gulfei bólía e. (Lukas) || Ch: ? (E) Dangla pěːIć id. (Fédry) || Berb: Sus abellú, Warain abelul, Rif ábfur id. (Woelfel 1955, 47).

Cf. Kartv *bil- "Vogelkamm; Knospen am Baum; Penis" (EWKS 55) || IE *bhlo- "membrum virile" (Pokorny 1959, 120-21). FU *pol'a "tail" (UEW 393-94) (Dolgopolsky 1995: Nostr *bo/ulya or *bo/uliHa).

31. Dr *kunn- "penis" (D 1697: I, II)
AA *kandf- "glans penis, clitoris" > Cu: (N) Beja kanál "penis" (Roper) || (E) *qanc- "gland" > Somali qánn- "lymphatic gland", Konso qandítta "udder, swollen or abnormally big gland", Burji kánd "clitoris" (Sasse 1982, 124) || Om: (S) Ari, Galila qantí & kantí "testicles" (Bender) || Ch: (C) Pilidimí kándí, Boka káñdá "vagina" (Kraft) || (E) Lele gunjít "testicles" (JgIb 1994, 323).

32. Dr *máñi "penis" (D 4805: I)
AA: Cu: (E) *man/-*mun- "penis, vagina" > Bayso man-to "penis", man-tiíti "vagina" (Hayward), Oromo muno "penis", Gedco mičo no id. (Hudson), Burji múnn-aa "vagina" (Sasse 1982, 149).

33. Dr *kant- "membrum muliebre" (D 1210: I)
AA *kan- t- "glans penis, clitoris" > Cu: (N) Beja kanál "penis" (Roper) || (E) *qanc- "gland" > Somali qan-idi "lymphatic gland", Konso qang-intta "udder, swollen or abnormally big gland", Burji káñ-iti "clitoris" (Sasse 1982, 124) || Om: (S) Ari, Galila qantí & kantí "testicles" (Bender) || Ch: (C) Pilidimí kándí, Boka káñdá "vagina" (Kraft) || (E) Lele gunjít "testicles" (JgIb 1994, 323).

34. Dr *kutí "pudendum, membrum muliebre" (D 1888: I, II)
AA *kutí "vulva, penis" > Cu: (C) Khamir xówa "pudenda mulieris; anus" (Reinisch); ? CC > Amh kič "anus" (cf. Dolgopolsky 1973, 249) || Om: (S) Som good "penis cum testiculis" (Abraham) || Ch: (W) Hausa kódá "testicles", Karekare gáwýidá id. || (C) Gava kífínwá id., Wandala kuñá "penis" (Kraft), Masa húzá "testicles" etc. (JgIb 1994, 323; Stolbova 1996, 66: pCh *kuʔud-).

35. Dr *eñút- "pudendum muliebre, penis, anus" (D 2724: I, VI)
AA *eñút- "buttocks; vulva" > ? Sem *šit- "buttocks", cf. Jibbali šit "privates", Mehri šít "vulva" || ? Cu: (E) Som Rahawan šít ña "vulva" (Reinisch, Cerulli) || Om: (N) Yemsa seetoo "hymen"; Kafa šíttoo (Cerulli), Mochi šítto "vulva" (Leslau); Kachama seet "clitoris" (Conti Rossini) || ? Eg (Med) šd "vulva" (Wb. IV, 566) rather than (Pyr) šd "tail" compatible with Dullay (ECU) šító "tail" (t < *d) and Kachama (NOm) suto "buttocks" (Conti Rossini), Yemsa suutaa "neck" (Cerulli).

36. Dr *kolí "pudendum muliebre" (D 2138: I, II, III)
AA *gul[y]i "vagina" > ? Sem: Mehri gášót "clitoris", Jibbali gíʃít id., cf. Arab gášót "to be obscene" (see Leslau, Language 21[1945], 242) || Cu: (S) Iraqq gwalay "vagina", Wadzda gulaʔko id. (Ehret 1980, 372) || Ch: (C) Bachama gule "vagina"; Musgu gili "weibliche Scham" (Lukas).
37. Dr *k[i]- "pus, mucus" (D 1606: I-IV, VI-VIII)
AA: Om: (N) Kafa giyoo, Mocha geyo; Kachama giššee "pus" (Leslau 1959, 34).
38. Dr *æk-[c] "saliva, pollution" (D 780: I, III, VI, VII)
AA *+[c]- "excrements, urine" > Cu: (N) Beja iš "urine", oš "to urinate" || Om: (N) Kachama oyšaa "stercro di vacca" (Conti Rossini) || (S) Dime ḫuš "feces, dung" (Bender) || Ch: (W) Kofyar ḫuš "feces", Zaar yīš id. || (C) Zime-Batnā ḩisid "dirt, dregs" || (E) Sokoro ḩiš "feces" etc. (Jglb 1994, 128-29).
39. Dr *kal- "leg, foot" (D 1479: I-VI, VIII ?)
AA *kal(w)- "foot, leg" > ? Om: (N) Mao kelli "bone" (Grottanelli) || Ch: (C) Gulfei kalē "feet"; Masa kūl "Bein" || (E) Tumak de-gol "foot, leg", Sumray de-gel-ām "thy foot", cf. di-lēs-un "thy tongue" (Lukas).
Cf. Kartv *gwil- "bone of upper arm" (EWKS 415) || IE *kaul-/*kul- "bone; femur" (Pokomy 1959, 537) || Alt: Mong *köl "foot" || Tung *xor- "shin-bone" (Dybo 1988: 123).
40. Dr *at- "foot(print)" (D 72: I-III, VI)
41. Dr *kocc- "bone" (D 1288: VII)
AA *kasy- "bone" > ? Sem: Ar qassa "to pick a bone entirely and suck it out" (Steingass 835) and / or qasq "breastbone" (< *qass ?) || Cu: (E) Dasenech kēs "Bein" (Haberland) = kēs "foot" (Fleming) || Om: (S) Dime kōss (Bender) = kōs (Fleming) "bone" || (N) Nao kūs id., Shako 'us, Dizī us id.; ? Hozo kāši "foot" (Fleming) || Eg (Pyr) kēs "bone" (Wb. V, 68) || Berb *a-qishi, pl. *i-qis-un "bone" (Vycichl 1978, 73) > (E) Siwa ayes (Laoust), Ghadames yess (Lanfry) || (S) Ahaggar eyäs (Prasse) || (N) Kabye ijes (Dallet) || (W) Zenaga i'ssi (Nicolas) id. || Ch *kasi[i] "bone" > (W) Hausa kāši, Kariya kās; Bokkos kyas || (C) Musgu kēške || (E) Dangla kāša etc. (Stolbova 1996: 65-66).
Cf. IE *kost- "rib / bone" (Pokorny 1959, 616) || FePerm *kaskV "backbone" (UEW 648). Illič-Svityč (1971, #219) did not take into account the Dravidian (& Omotic) data.
B. Human society
42. Dr *maka "child" (D 4616: I-VII)
AA *mak- "young man / woman" > Cu: (C) Qwara māk-ıst, Dembea mekut "Jungling" (Reinisch).
Cf. ? IE: Celt *ma(k)k- "son" (Pokorny 1959, 696) || ? Ugrian: Mansimoki, mokh "child, descendant; belly" (Munkácsi) || ? Alt: Tung *muxan "(young) male" (TMS I, 543).
43. Dr *pär- "child, young animal" (D 4095: I, III, V)
AA *par- "child" > Sem *bar- > Bibl-Aram bar, Mandaic bra "son", Mehri, Soqotri bår, Jibbali bår id. (Johnstone) || Cu: ? (E) Afar / Saho bādā "son" vs. bādā "daughter" (*bar-t-?) (Parker & Hayward / Welmers) or Rendille bādar "brother(s)-in-law, wife's brother(s)") (Galboran & Pillinger) || Dahalo Šuore "boy" || (S) Mbugu mburat "older boy, young man" (Ehret 1980, 138) || Berb: Ahaggar abara "boy" (Foucauld) || Ch: (W) Hausa béérè "young girl"; Angas par "child"; Fyer bār "child", cf. (C) Giavda vird "to create"; Zime-Batnā vārālx "to give birth" (Stolbova 1996, 25).
Cf. IE *bher- "child" (Pokorny 1959, 131-32: apud *bber- "to bear") || Kartv *ber- "child" (Illič-Svityč 1971, #32: Sem + ECU + Berb + Kartv + IE).
44. Dr *kor- "young (of animal), child" (D 2149: I-VIII)
AA *k/r/kər- "boy, child" > Cu: (C) Bilin qʰər "boy", 'ax'ra, pl. 'aqʰər "son / daughter" (Palmer), Kemant xura "child" (Zelealem) etc. (Dolgopolsky 1973, 83) || Ch: (C) Mafa(k̕ə)x "child"; Daba krə id. || (E) Sumray gərən "son" (Jglb 1994, 74-75; concerning g-, cf. gusen "bone" < *k̕-).
Cf. IE *kur- > Kurdish kur- "youngster", Pahlavi kurrag, Farsi kurra "foal"; Armenian k'owrak id.; Hittite kurka- "foal, colt"; Greek κόρος "bastard son" (Hesych.) (Forssman, KZ 94[1980], 70-74; Puhvel 1997, 267-68) || Alt: Tk *kyē "girl" (Räsk 1969, 269).

45. Dr *tj- "young" (D 513: I-VIII)

AA: Cu: (E) *?ūl(V)m- "boy, son, child" > Somo ilmo "small boy" (Heine 1978, 87), ? Rendille ilim "seeds" (Heine 1981, 190); Oromo of Weltega ilma "son" (Gragg) || Ch: (W) Bokkos ?ūl "child"; Mburku ili "son" || (E) Mokilko ?ūlō "child" (Jglb 74-75).

Cf. FU *ilmV "man" > Finnish ilmine "man, homo", Lappic Lule älmats id., Norwegian älmâss "person", Mansi âl'ter-昶 "man, homo" where Ç. also means "man" (SKES 105).

46. Dr *cēr/r- "in-law" (D 2819: III, IV, VI)

AA *s[í]rw- "relative, in-law" > Cu: (E) *sVr- > Sahosera "Genosse, Freund" (Reinisch), Som saar "Mitglied des Gefolges", Oromo fira "relative, friend" (> Konso fira "relative, guest"), Dirayta sura "relative", Hadiya sulka id. (Sasse, AuU 59[1975-76], 126) || Ch: (W) Hausa sūrūkī "father of husband's wife"; Ankwe s'uur, Angas sīr, Kofyar soghūr "in-law" (metathesis ?); Karekare sūkwar id. (metathesis ?); Ngizim sūrak id. || (C) Tera sūrūk; Bata sūrā, Bachama sērwey; Mafa sūkwr; Daba sūkūl (metathesis ?); Musgu sūlū etc. id. (Jglb 1994, 206-07; cf. Newman, Afroasiatic Linguistics 5/1 [1977], 28, #74; Newman, Journal of African Languages 5[1966], 236, #52).

47. Dr *melk- "in-law" (D 5081: VII)

AA *mu[ al "brother / sister in-law" > Cu: (N) Beja ma'ali "brother / sister-in-law" || (E) Hadiya mollo "(close) relative" (Hudson) || Om: (S) Kara mulJa "family, kin" (Fleming) || Ch: (W) Angas mloł "brother", mōl "sister" (Foulkes); Bolewak mol "younger brother", molle "younger sister" (Benton), Karekare malī "brother" (Jg) || (E) Gamargu melē "elder brother" (Barth / Benton), Glavda māl id., Dghwed melē id.; Gidar mōlu id. (Jglb 1994, 48; cf. Greenberg 1963, 53, #14: Beja + Ch).

48. Dr *nāk- "female" (D 3634: I-III, VI?)

AA: Cu: (E) *naag/k- "woman, wife" > Som naag "woman", Boni (Jara) naag id. (Heine).

Cf. Tung *nekkun "younger relative" (TMS 1, 161-18).

C. Fauna

49. Dr *yan- "elephant" (D 5161: I-VI) - if derived from *iyan < *eiyan < *eigan ?

AA *jīg'an- "elephant" > Cu: (C) *jīxan- > Bilin jana, Kemant jana, besides zūhun < Amh zāhon (Zekealem), Khamir zāhon (if it is not borrowed from Amh too), Falasha ḏājān (Beke), Awngi ṣanī, besides zūhun < Amh (Hetron), Kunfūl eni (Cowley) id.; some Agaw language or directly a protolanguage was a source of the Ethio-Semitic denotation of "elephant": ? Tigray zāhol (Reinisch 1887, 181); Gafat zohūnīs (Beke), Amh, Argobba zāhun, Gurage: Masqan żāxanā, Endegeñ, Gogot żāhōnā, Chaña, Ennemor, Gyeto żāxārnā id., besides Selti dāhano, Wolane dāhāno id., and also Harari doxon (Leslau 1979, 721) - the d-forms are probably of Ecugu (Afar-Saho ?) origin || (E) Afar dākānu (Parker & Hayward), Saho dākāno, pl. dākun (Reinisch); Som dagon, pl. dagomo (Reinisch); Gdeo daana'ê, Alaba zānō, Qabenna zānō, Tembaro zānōo-çu (Leslau, AuU 63[1980], 120, 125) Hadiya daane-eco, Kambatta zane-ccu, pl. zanaakata, Sidamo daan-ico, pl. daaniwo id. (Hudson 1989, 56: peHcu *yaane); Yaaku sogom-ë (Heine; cf. csae, AuU 59[1975-76], 135: Yaaku + Dhalalo) || Dahalo dokōmō id. (Tosco) = dokkōmō id. (Ehret) || (S) Iraaq dāq, Burunge, Alagwa daw id. (Ehret 1980, 176) || Om: (S) Hamer donger, Bako dongor (Fleming) || (N) Zayye dongsor (Cerulli), Wolaya, Zala, Bakseto, Dawro etc. dongsor, Gamu dango, etc. || Kafa dānirgil, Mocha dengawo, Anfillo dāngec, Shinhata dāngš-ša (*dangri-); Nao, Maji door, Shakkoko doroo etc. (Lamberti & Sottile 1997, 344-45), besides Bambeshi tōngil, Sezo tōngil, Hozo tōngil (Fleming) with puzzling t-; Yemsa zakno, zahna (Cerulli), Koyra zākka (Hayward), Kachama zaakka (Conti Rossini), Ganjule etc. zakka id. (Fleming) probably represent Ethio-Semitic borrowings || Ch: (W) Kariyatākāyāl || (E) Tobanga dāgūrū (Jg),
Sokoro dógol id. (Jglb 1994, 124-25) ||| ? Eg dnhr, Demotic tnhr "elephant" (Müller, WZKM 10[1896], 203-05) - see Blažek 1994, 199-200: AA + Alt.
Cf. Alt *šiğan "elephant" > Tk: Chagatai jiyan, MTk jyan, Tuvin čan etc. id. (Råsänen 1969, 177-78) || Mong šigan id. (if it is not borrowed from a Turkic š-dialect).

50. Dr *äll·y-an- "female elephant"
AA *alw-/*al- > ? Sem: Akk aļū "mythical giant gull", perhaps "wisent; Bison bonasus" (Diakonoff, Altorientalische Forschungen 8[1981], 32: Akk + Berb), cf. Sum alim "wisent"? (AHw 39, 36) || Cu: (E) pBonī *alīshī "female elephant" (Heine 1982, 104) ||? Berb *Hiliw > Haggār ēłu (Prasse 1974, 125), Iulemidden elow, Ayīr īrō (Alojaly); Zenaga əļo (Nicolas) "elephant".

51. Dr *pōri "bull" (D 4593: I, II)
AA *pa·(r)· > Sem *parr- > Akk parru "Lamm, Jungschaf", parratu "weibliches Lamm", cf. also parrum "ein Rind" (AHw 834, 836). Ugar pr "young cattle", prt "young cow", Hebr pr "bull, bullock, steer", pāř(h) "cow", Jewish Aram parz id., Syr par-ō "ewe lamb", Arab farr "calf", farīr, furīr "lamb, wild calf, young gazelle", Mehr för "bull" (Aistleiter 1965, 159-60; Klein 1987, 522; Fox, Zeitschrift für Althebraistik 11[1998], 20; he separates it from the word *par(a)- "onager") || Ch: (C) Margī für "buffalo" (Hoffmann), Kīla fur id. (Meek) || Eg (MK) prī "Bezeichnung des Kampfstiers" (Wb. I, 526). Orel & Stolbova (1994, 416, #1950) mention isolated Mbara (CCh) faray "betail, dot", i.e. "bride wealth" (Tourneux, Seignobos & Lafarge 1986, 260).
Cf. Kartv *pur- "cow" (EWKS 363) || IE *por(w/stH)i- "young bull, calf" (Pokorny 1959, 818) - see Bombard & Kerns 1995, #50: Sem + Kartv + IE + Dr; Dolgopolsky 1995: Nostr *[m]ori "(female, young ?) ruminant artiodactyl (esp. bovine)" > AA + Kartv + IE + Dr.

52. Dr *mar- "deer, bison" (D 4724: I, III ?, VI) and/or *mūrī "bull, cow" (D 5041: I, VI)
AA *mar[w]- "bull, ram, goat, calf" > ? Sem *ʔimar- > Akk immurum(m), Assyr immerum(m) "Scharf, Widder", immertu(m) "Mutterscharf" (AHw 378), cf. also mērō "(female, young?) ruminant (esp. bovine)" > AA + Kartv + IE + Dr.

53. Dr *kaś-/*kiś- "male of sheep or goat, he-buffalo" (D 1123: I, II, III, VI, VII, VIII)
(i) AA *gady- > Sem *gady- "kid, goat" > Akk gardū, Ug gdi, Punic gd?; Hebrew gēdr, Aram gadyā, Ar ǧady (Cohen 1970f, 100) || Cu: (E) Oromo of Borana gadamnsa "antelope kudu" (Stroemer), Sidamo godanā "sheep, lamb" (Hudson) || Ch: (W) Ger gadere "bushbock", Nigizim gadowa "antelope duiker" (Skinner) or
(ii) AA *kid-/*kayd-: Berb yayd- "kid" > (E) Siwa iyd "ram", Sokna iyd "kid" (Laoust) || (N) Kabylī iyd id. (Dallet) || (S) Ayīr & Iulemidden eydīd (Alojaly), Haggār eydīd id. (Prasse) || (W) Zenaga iġdi id. (R. Basset); cf. further the Sem forms as Akk ṣiğidu(m), Hebrew nōqēd, Syrian nūqādīdū "shepherd", Arab naqād "sheep of weak race" and Om: (N) Kafa, Mocha qiddō "shepherd, herdsman" (Leslau) - see Militarev 1990, 49.
To both these etymons there are interesting parallels in IE: (i) IE *gād̥īd- > Slušgādīkīdī "ram" < *gādīka-; Latin haedus, Sabin faedus "he-goat", Germanic *gait- "goat"; *kad- > Middle Irish cadla, Middle High Germanic harte "goat", ONorse hōna "young goat" (cf. Boutkan & Kossmann, JIES 27[1999], 89-90), although AA *d- & Dr *t- imply Nostr *d- > IE *d- - from this point of view, AA *gady- agrees with Germ *kidja- "kid" < *gīd̥yo-; now the initials do not correspond.

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54. Dr *yātū "sheep, goat" (D 5152: I, II, III, VI, VII, VIII); cf. also *iy- "herdsman caste" (D 450: I)
AA *iayd-> Cu: (E) Saho *seydo "sheep" (Welmers) = *seydo/yido id., besides ida "female adult sheep" (Lamberti), Asa-Lisan *yīdoo pl. "sheep" (Conti Rosini), Afar ida "ewe" (Parker & Hayward); Som aği "sheep and goats", but ido "flock of sheep" (Abraham), Rendille ádi "goats, sheep", pl. adéy "flocks/herds of sheep & goats" (Galboran & Pillinger), Bayso *idaan and *iidaan "sheep" (Haberland & Lamberti); Arbore *ēfī "sheep and goats" (Hayward), Esmo édi "goat" (Heine), Dasenech *ēde "goat" (Tosco). The unexpected -d- is perhaps connected with a compensatoric loss of the initial *c- ||? Berb: (S) Ahaggarádidāita, pl. idaidān "chevreau cuir sous la cendre" (Foucauld; Militarev 1984, 58: ECU + Ahaggar + Sum udū "sheep", but it is better compatible with Siwa audad (Laoust) || Ahaggar udad "rnouflon" < pTuared *Hūdād, cf. Prasse 1974, 70). Cf. MEl hidū "sheep" (McAlpin 1981, 97: Dr + El; Blažek 1999, 64: Dr + AA + El).

55. Dr *cink- "antelope" (D 2504: I, II, III)
AA *jiṅk- "gazelle, antelope" > Berb: (E) Ghadames azenkād (Lanfry), Sokna azonkot; (N) Semlal azenkād (after Militarev); (W) Zenaga ażkād "gazelle dorcas" (Nicolas); (S) Ahaggar ḥān̄kād, lulemidden, Ayr azenkād "gazelle" (Prasse 1969, 60, #319: *z-n-k-d) || Ch: (W) Hausa zánké "buik duiker"; Anga zūng "the kanki antelope" (Foulkes) || (C) Kilba nžrj "gazelle"; Lamang zdghaarja id. (Stolbova 1996, 130).

56. Dr *kārut-ay "ass" (D 1364: I-V, VII)
AA *k/k-war- "ass" > Sem: Jibbali qerāḥ "donkey" (Johnstone 1987, 235 connects it with Mehrī qorāḥ "hornless"; cf. Cibbali qerī "to all the hair off") or Arab ḏakur "coat, wool", dial. ḏur "young of an ass" (cf. Militarev 1990, 46) ||? Cu: (E) Dasenech kirif "male donkey" (Tosco) || Om: (N) Chara kuro, Bench & She kur, Kafa, An'milla kuro "ass" (Cerulli), Mocha kuro id. (Leslau) || Ch: (W) Karakare, Bolwa koro, Ngamo koro; Ngizim kwara, Bade koro "ass" (Kraft) || (C) Tera koro (Newman), Chibak, Margi kwara, Kilba kwārā, Bachama kwârtyotō, Massa korotā (Kraft), Buduma koro, Ngala koro etc. (cf. Solken 1967, 237) || (E) Tumak kora (Caprine), Sumray korā (Friedrich), Nangire, Dormo, Kabalal kūrā, Gulei korū etc. id. (Lukas 1937, 79, 89, 91, 92, 94). A mutual influence of the Chadic forms and Kanuri koro id. is more than probable. Cf. IE: Old Indic khāra-"ass", Avesta xara- id., Khotanese khara-, Pashto xār, (Middle) Persian xar id. (Eilers, Welt des Orients 2[1959], 467, fn. 1 derived the Indo-Iranian forms from Ass [Mār]jārum id. vs. Ass ajārum < WSem *tiyaru(m) "ass" - cf. AHw 328); Alb kārī id. (Orel, Zeitschrift für Balkanologie 28[1987], 147).

57. Dr *iyuji "horse" (D 500: I, VIII), originally perhaps "onager; Equus hemionus", the only equid native in South Asia while the horse (Equus caballus) was introduced into South Asia after 2000 BC (McAlpin 1981, 147)
AA *?ibil-~*?īlib- > Sem *Zibil- "camel" > Akk ibrilu, Syrian hebaltu, Arab ?iβi(l)u, Thamudic, Safaitic, Sabaic ibril, Śerī ijet; cf. also Arab ραλαβ "rassembler les chameaux" (Cohen 1970f, 3) ||? Eg ibrilb "rhinoceros" (Wb. I, 115); rC3 can reflect a specific Egyptian spelling for *Cl or *IC, cf. png3, Coptic nχad "separate" vs. Arab falaq "separate in two" (Vychirikh 1958, 374); as a cognate to Sem, Takács. p.c. prefers Eg (OK) ḫibw "Barbary sheep; Ovis tragellas" (Wb. I, 62) - cf. Blažek 1999, 64)||? Berb *Hiliw "elephant" (Prasse 1974, 124-25) > Ayr hāw, lulemidden elaw (Alojally), Ahaggar ēlw (Prasse) etc. || (W) Zenaga ḥēlī, ḥēlī "elephant" (Nicolas) ||? Ch: (E) Mokīklo ṣīlīb id. (Jg), besides Lele ibī-hē "donkey" (Weibegu & Palayer; cf. Orel & Stolbova 1995, 24, #90: Sem + Lele). Cf. MEl lakpilan "horse", maybe from ḫāk[i]pilan where the first component corresponds to El ḫāk- "to travel" (Blažek 1999, 64: Dr + Sem + El).

58. Dr *iuv(v)anki "leopard, lynx, hyena" (D 2579: I, III)
AA *juvīb- "wolf, jackal, hyena, lion" > Sem *uvi/b- > Akk uβišu, zibū "jackal, vulture", Hebr zaʔeb "wolf", Aram of Palmyre dīb, Jewish Aram dēba, Syr dī(b)ā, Arab dīw "wolf, jackal", Mehri dīya:b (Nakano),
Jibbali ḏb, Soqotri ḏb "wolf", Geez ṭoḥu & ṭob "hyena", Tigray ṭabbi id., Amh ṭobb id. (Leslau 1987, 630; Cohen 1970f, 324); cf. also the Sabaic proper name Mdīb (Biella 1982, 90) || Cu: (E) HECU "dzooba" "lion" > Kambatta zoobba, Hadiya hooobba, Sidamo dobb-icco, pl. dobbe (Hudson 1989, 92) = doobba, Tembaro zobbē-ē, Aba zebbē-o, Qabenna zoobbo id.; cf. also SOM parallels (perhaps borrowed from HECU): Baka zabb id. (Leslau, AuU 63[1980], 120), Gallia zobb(ba), Hamer zobo, Karo zobo, Dime zop (Bender) || Eg (Pyr) ḏb & żb "jackal", besides dyby-w "wolves, jackals, hyenas" (Budge), cf. also ḏ-b plus the ideogram "jackal" in the Coffin Texts (Vycichl 1958, 383) || Ch: ? (W) Ngizim ḏibdē "civet cat" (Schuh) || (E) Migama jābīyā "hyena" (Jg), Bidīya jēbēje id. (Alio & Jg). Orel & Stolbova 1995, #2660 also quote Beja (NCu) diib "wolf" (Reinisch) and Zayan of Ishqem (NBerb) dōn̄fubun "jackal" (Loubignac). Both the words are apparent borrowings from Arabic; in the latter case "son of ḏib".

Cf. IE *stüb⁹-yo- > Slavic *stebjə "wild cat" > Church Slavonic stähb, OPolish (1472) step, later žeb & zdib, today zdib (Blažek 1992, 20-21: Dr + Alt + Slavic).

59. Dr *euruay "eagle, kite" (D 818: I)
AA *sary ev- "eagle" > Sem: Akk eru(m), arū "eagle" (AHw 247, 72), Jewish Aram ūrā, šaryā id. (Zimmern 1915, 51) || Cu: (N) Beja ērē "eagle" (Roper) = ērē "weissenschwanzige Seeadler" (Reinisch) = eeri "hawk" (Hudson).

Cf. Kartv *erb- "eagle" > Georgian orb-i, Swan werb id. || IE *H3ēr-/*H3-or- "eagle; bird" (Pokorny 1959, 325-26; Greppin in EIEC 173) and also Homeric in IE 173 and also English "eagle".

IIlিঞ-Svityč, Etimologija 1965[67], 352: Sem + IE. Bomhard & Kerns 1995, #406 compare IE + Dr + Sum + Eg ḫ(rw) "the hawk-like god Horus" (Vycichl 1983, 307-08). But the Egyptian theonym perfectly agrees with Arab ḫurū in ḫayr al-ḥurr "falcon" (Zimmern 1915, 51 connected the Arab word with Akkīṣur ḫurū "Steinhuhn" - see AHw 390, lit. "Höhlenvogel", but the correspondence of laryngeals is not regular).

60. Dr *eir- "sp. bird" (D 2582: VI)
AA *cir(VI)- (~ *IV-Vr-) "bird" > Sem: Akk ērē "bird" (but Arab īṣīfūr "kleiner Vogel", cf. Aistleitner 1965, 239; maybe a compound of *s-w-p "to fly" > Hebr ūp id., ūp "bird", & švr-) || Cu: (E) Oromo of Wellega cirii "bird" (Gragg); HECU *čida id. > Burji čīdadā, Hadiya čīicco etc. (Hudson 1989, 27 admits a borrowing from Oromo) || (S) Iraqwtsirī, Burunge, AlagwaciraTa, Asa īra?Ta "bird" (Ehret 1980, 226: *f'aarā-?) || Om: (N) Kachamacera id. (Bender) || Ch: (W) Hausa tsirya "parakeet" || (E) Kabalai ērrā, Ndam cădīny "bird" (Jglb 1994, 23).

Note: The Dravidian word is alternatively compatible with Kartv *sir- "bird" (EWKS 301) and perhaps with Alt *sa(i)rV > Tk *sar(y) "sp. falcon" || Mong sar "bird of prey" || Korean *sŏl "bird" (AED #995). With regard to Dr *r- one would expect Tk *f. On the other hand, IIlিঞ-Svityč (1971, 152) assumed the development *-rj/- *-jr > Dr *-r. The latter case agrees with the Alt reconstruction *sairV.

61. Dr *peła "pigeon, dove" (D 4420: I, III)
AA *(m-)bul- "dove" > Sem: Ar bulbul, pl. balābīl "nightingale", balāla "coo (dove)"; the Gurage forms as Soddo, Gogot etc. bullāl "pigeon" and Amh ḏubul "turtle-dove" can be of an Oromo origin (cf. Leslau 1979, 141) || Cu: (N) Beja bēbel "wild dove" (Reinisch 1895, 47: Beja + Arab + Oromo) || (E) Oromo bulula (Tutschek) = Macha bulula "dove" (LVC) || Berb: (N) Kabyle bāmella/i "dove" (F.W. Newman), B. Iznacen ḫmālā "turtle-dove" (Dersting) || Ch: (W) *buliv > Hausa bōlōo, Angas, Chip bul, Ankwe bēl, Sura mbul; Tangale tambul "turtle-dove", Bolewa mboole "dove" (Sto'bova 1987, 156) = bole (Kraft), Karekare bēlīwī (Kraft) || (C) Tera mbōola "dove" (Newman), Pidlimdi mbōledī; Hildi mbūrā, Wamdui būta id. (Kraft) || (E) Gabri bēlu id. (Lukas), Kwang bōlōki id. (Jg), ? Bidiya bulū "sp. bird" (Alio & Jg).

Greenberg 1963, 55, #24: Ch + Berb + Eg (OK) ʾmūn.t "Taube" (Wb. II, 79) which could be borrowed (probably during the New Kingdom) into Nile Nubian: Mahas & Fadidjāmin(n) ʾī id. (cf. Reinisch 1911, 109). The Eg ornithonym is safely compatible with the NBauchi (WCh) forms as Warji mūnwī, Kariya múnnu.
"bird" (Skinner) and maybe Bidiya (ECh) mininiyo "sp. bird" (Alio & Jg). The witness of both the external comparisons exclude the primary *-l- in Eg. Similarly Egmn.t "Schwalbe" (Wb. II, 68) continuing in Coptic BHNI id. (Vyeichl 1983, 28) indicates the medial *-n- and not *-l-.

Cf. IE *böl- "dove" > Osset Digor bełon, Iron bêlejw, Zaza baruž; Lithuanian balañdis id. (Abaev I, 249).

62. Dr *kor- "fowl" (D 2160: IV, V, VI)
AA *kur-/*karw- "fowl, partridge" > Sem: Syrian akkarýya "cock", Arab karawan "a kind of partridge" || Cu: (N) Beja kaakarret "hen" (Thelwall) || Berb: (S) Ahaggar ékert "nestling, esp. of an ostrich" (Foucauld) || Ch: (W) Hausa kurciya "dove" (Skinner 1996, 154), Montol kier "hen" (Jg), Buli kworr, Zaar kwar: "chicken" (Jglb 1994, 70) || (C) Gude kerkwutâ, Nzangi kurkuta, Glavda kakura, Lame kôrokù "dove" (Kraft); Mofu kwerewere "duck" || (E) Kera akorkoro "duck", Dangla kôkira, Jegu kôkôrê, Mubi kûrrî, Migama kûkûrê "chicken" (Jglb 1994, 71). Cf. Militarev (1984 ms.: Sem + Ahaggar + Ch + Sum). An onomatopoetic origin is not excluded.

63. Dr *tar- "duck" (D 3169: I)
AA *dir- "sp. bird (hen ?)" > Sem: Hebrew déror, OAram drr "sp. bird (swallow ?, dove ?), Arab durrat "parrot"?, ? Gurge of Maskat darrî "sp. bird" (Cohen 1970f, 319), if it is not borrowed from Hadiya dîre id. (Leslau 1979, 218) || Cu: (N) Beja andirhe & endirhe "fowl" (Rp) || (C) Bilin diruwa "hen, chicken" (Reinsch), Kemant dirwo, pi. diruk "hen, cock, chicken" (Conti Rossini), Awngi dura "hen" (Hetzron) etc.; Geez dor(o)ho "chicken, hen, rooster, cock, fowl", Tigré derho, Amh doro etc. id. (Leslau 1987, 142) can be of an Agaw origin || (E) Afardorroha "hens" (Parkar & Hayward), Som doro "chicken, hen" (Abraham), Jidda duuri "chicken" (Banti & Ibraw), Hadiya dîre "sp. bird" (Leslau) || Om: (N) Charadeera "hen" (Cerulli) || Ch: (W) Hausa durwaa "quail" || (E) Sumray dure "chicken" (Jg) and / or Mokilko déere (Jg), Kwang dëre "dove" (Luakas).

Cf. Sum dar "partridge" (cf. Militarev 1984, 58: AA + Sum).

64. Dr *cev- "fowl" (D 2818: I, VII) and / or *cuvv- "peacock" (D 2676: VII)
AA: Ch *(n)jabun "guinea fowl" (Stolbova 1996, 43) > (W) Hausa jaba66, Gwandara jabuwa; Pa'a jávuna, Diri ázâvná; Jimi zubben, Zakshi zubm; Ngizim záabánu, Bade sâávávníyín || (C) Tera ciwâh; Fadhiyale jawa, Lame jawa; Gude zövâñá, Gudu zóvûn; Laamang zâvâñalâ; Glavda zâvûr; Muñetle zóvûr, Gisiga tsuvoj; Daba zóvûn; Gidz zâvûn; Logone sâñj; Zime-Batna côñounkó || (E) Migama zôbî6; Jegu zôbólo etc. (Jglb 1994, 174-75).

65. Dr *mac- "python" (D 4793: I, V, VI)
AA *mVS- "snake" > Cu: (E) *ma3- > Som mas "snake"; Oromo mas-ka "serpente boa con le corna" (Thiene); Sidamo mas- (Cerulli) & hamašo (*hamašh), Hadiya hamaša, Burji hamasi id., Kambata hamaasu "roundworm" (Sasse, AUL 59[1975-76], 127; id. 1982, 90-91; Hudson 1989, 137: HECu *hamasa which can represent a contamination of the forms corresponding to the Somali synomnnsmas & abeeso) || Ch: (W) Hausa meesâa "python", Gwandara meše; Gera músi, Pero múci id. (Kraft).

Cf. Sum muš "snake". Militarev 1984[ms.]: Sum + ECu + Ch + Sem: Jibbali miss "to bite (of snake).

66. Dr *kapp- "frog" (D 1224: I-III, VI, VII)
AA *kub(b)- "toad" > Cu: (E) *kub- > Harso, Gollango hup-e; Konso kupa-aata id.; ? Burji köop-i id., if it is not borrowed from Koyra (Sasse 1982, 117) || ? Om: (N) Koyra koppe id.

Cf. IE *gëb(b)- "frog" (Pokorny 1959, 466).

67. Dr *kâr- "fish" (D 1476: I)
AA *karyw- "fish" > ? Sem: Aram (BabylTalm) kwurw?; Soqotri kér "sp. shark" (Naumkin) and / orkúwerhor "sp. fish" (Leslau) || Cu: (N) Beja kware in ašob kwaremng "fisherman" (Hudson) || (E) Dasenech kâara
68. Dr *malańçu "eel" (D 4737: I-III, VI)
AA *mal(w)- "fish" > Cu: (E) Som mallaay, May mallaay, Jiddu mallaay (Banti & Ibraaw), pBoni *målblå (Heine), Bayso moole; Mossiya moole "fish" (Lamberti & Sottile 1997, 461) ||| Om: (S) Ubamer mol-ta, Galila mola id. (Fleming) || (N) Wolayta moliya, Zala muoliya, Dawa mola, Gofa mola, Malo, Kachama molo, Gamu, Dache, Zaye mole, Koya malala, Chara mula etc. "fish" (Lamberti & Sottile 1997, 461) ||| Ch: (W) SBauchi: Mbaru mwalag, Guruntum mollaij id. (Shimizu) ||| Eg (D XVIII) mr.t "ein Tier (zwischen Fischen genannt)" (Wb. II, 105; cf. Takács, Lingua Posnaniensis 39[1997], 93: Eg + EC + NO + Guruntum; following Cohen 1947, #466, he also quotes 'Sidamo' muoliya, in reality 'West Sidomo', i.e. Omotic, concretely Zala after Cerulli) and, maybe, mr in the name NTr-mr (Narmer), the king of the 1st ('0th') Dynasty, lit. "Catfish"? (Takács, Ziva antika 48[1998], 134; he mentions other names of the "0th" Dynasty as K3 "Bull" or or Scorpion);
)

Cf. Ural *korV "sp. fish" (UEW 187) ||| Alt: Tk *kóra "trout" (Rasslen 1969, 282) || Tung *koru "pike" (TMS I, 404); cf. also Sum kiri, kiri, gir, "fish". Militarev 1984 [ms.]: Sem + ECu + Ch + Sum.

69. Dr *m7n(u) "fish" (D 4885: I-III, V, VI)
AA *m7n- "fish; lizard" > ? Sem: Akk (u)munu "Larve, Raupe" (AH 673), Syrian Zamuna "sp. lizard" (Zimmerm 1915, 52 assumed Akk > Syr) ||| Berb: (N) Susamun "sp. fish" || (S) Iulemidden eman (Alojaly), Adghaq emon, Taneslemt amon "fish" (Prasse 1974, 145: pTuareg *7-manahan; Militarev 1991, 260: Berb + IE). The semantic difference is comparable with German Raupe vs. Slavic ryba "fish".

Cf. IE: Arm moléz "lizard"; Osaxon, OHigh German mol, German Molch "salamander".

70. Dr *takVn- "bedbug" (D 5166: I, III)
AA: Eg (OK) rm "fish", Demotic rym & rm id., Coptic PAME "the fish Tilapia" (Wb. II, 416; Vycichl 1983, 172). Takács (Ziva antika 48[1998], 139-40) connected Eg rm "fish" with AA *rim- "worm, ant, termite", but there is a more preferable cognate in Dr *erumpu "ant" (see below).

71. Dr *kuńi/*kunni "bee" (D 1867: I, II)
AA: Cu: (E) *kan(n)-/*kinn- "bee" > Som šinn-i, Oromo of Wellega kann-iisa (Gragg), Borana, Waata, Orma kinn-iisa (Stroomer), Konso xan-ta, Dirayta han-t(a) id. (Sasse 1979, 24).

Bomhard (1984, 235, #143) connected it with IE *kunj- "honey-colored" > Germ *xunaga- "honey" in agreement with his system of correspondences. In the system formulated by Illič-Svityč, a regular correspondent of IE *k is AA *k.

72. Dr *takVn- "bedbug" (D 2996: I, II)
AA *tuk(an)- "biting insect: bedbug, tick" > Sem: Jewish Aram takk- "moth", besides Geez tok*an, Tigre, Gurage tokan, Amh tah*an, Harari tus*an "bedbug" (Leslau 1987, 573), although these forms can be borrowed from Agaw; does also belong here Arab kuttän, Mehri kettôn "bedbug" via metathesis ? || Cu: (C) Bilin, Khamir tax*ana "bedbug", Qwara tukan "Wazane" (Reinsich), Kemant taxona ~ tayona "bug" (Zelealem), Awngi tay*ana id. (Hetzron) || (E) Sahotukwan "fleas" (Welmers), Afar tokwaan "Wazane" (Reinsich), Oromo
of Macha tukani "bedbug" (LVC), Borana tukaani id. (Stroomer), Qabenna tuhaana id. (Leslau) || Dahalo tākkwa’ē "dung beetle" (Ehret) || (S) ? Iraqw tāhān-mo "bedbug" (Whiteley) || Eg (Pyr) tīkk-t "Schlupfwespe (Ichneumonida)" (Wb. V, 336). Orel & Stolbova (1995, #2359) add NBauchi forms as Mburku, Siri takwana, Diri takwan "bleed" (Skinner).

73. Dr *erumpu "ant" (D 864:1) and / or *elumpu "white ant" (D 837: V, VI)
AA *rim- > Sem *rimmat- > Akk rimmatum "Made" (AHw 986), Hebrew rimmā, Aram rāmat- "worms (in rotten meat, corpse)"; Arab rimmat "winged ant" || Cu: (E) *rim(m)- (with the variant *raam-, probably representing the a-plural) > Saho rimme, rimmi "termite, worm, maggot in rotten meat / corpse" (Reinisch), Rendille rim, Bayso iririm, Dasenech armaatti, Oromo iri(ma) "termite, white ant" (Thiene), Wellega raamoo "worm, parasite", rimma (Gragg), Macha rimma, rimma "termite" (LVC), Borana, Orma raamoo "worm" (Stroomer), Konso irmatta, Dirayta irrimaSS "termite" (Black), Gollango irmat "termite" (AMS), Burji hirima, Hadiya irm-acco, Sidamo raamoo "termite" (Sasse 1982, 97) || Ch: (E) Bidiya Piriri "insecte", Piriri "termite qui sort le jour" (Alio & Jg).

74. Dr *ko[t]- "black ant" (D 2096: I, III, IV?, V, VI?) and / or *ket(t)- "white ant" (D 1548: I, III, IV, VI)
AA *kaj[~]- "termite, ant, worm" > Sem: Akk lamattu (*lamantu), Eblaite la-ma-an (*lamān) "ant" (Sjöberg, Welt des Orients 37[1996], 24), besides Hebrew nāmāli(h), Arab naml "ant" with metathesis of the 1st and 3rd radicals || Cu (E) Som ilulo "larvae of mosquito" (Abraham); Oromo of Borana lume "termite" (LVC) || Ch: (C) Ngwaxi, WMargi lema, Chibak l#ma, Bura, Higi Kamale luma "termite" (Kraft) || (E) Jegu lôlmö "ant" (Jg).

77. Dr *tār- "bushes" (D 3401: I)
AA *tār- "bushes" (D 3401: I) || Cu: (E) Som tār "bushes" (Luling) || Eg (med; Dyn XVIII) twr "sp. reed ?" and / or (NK) twr.t "Stock, Stab aus Holz" (Wb. V, 252) || Ch: (W) Hausa taruwaa "sp. tree" || Berb: (N) Angsas tān "tree" (Foulkes); Kariya kāna id. (Skinner); Mangas klin, Zul klini "tree, wood" (Shimizu); Bade kūnū "forest" (Kraft) || (C) Musgu kwaanā "dom-palm" (Krause); Banana kunā (Lukas), Masa guna "tree, wood" (Kraft).

78. Dr *kar(t)- "firewood" (D 1418: I-III) or *kor(-) "firebrand" (D 2229: I, III, VI) or *kur- "piece of wood" (D 1842: I-III)
AA *kar(w)- "wood, tree" > Cu: (C) Bilin, Qwara, Kemant kana (Appleyard), Awngi kani "tree" (Hetzron) || (E) Som kayn, pl. kaimo "thicket" (Abraham); Burji kaan- "bark of tree" (Sasse) || (S) Iraqw kintu "thicket" (Ehret 1980, 331) || ? Eg (Greek) kwm. "Name eines heiligen Baumes" (Wb. V, 117) || Ch: (W) Angsā kān "tree" (Foulkes); Kariya kānā id. (Skinner); Mangas klin, Zul klini "tree, wood" (Shimizu); Bade kūnū "forest" (Kraft) || (C) Musgu kwaanā "dom-palm" (Krause); Banana kunā (Lukas), Masa guna "tree, wood" (Kraft).

D. Flora

76. Dr *ka[n] "forest" (D 1418: I-III)
AA *ka[n] "forest, tree" > Cu: (C) Bilin, Qwara, Kemant kana (Appleyard), Awngi kani "tree" (Hetzron) || (E) Som kayn, pl. kaymo "thicket" (Abraham); Burji kaan- "bark of tree" (Sasse) || (S) Iraqw kintu "thicket" (Ehret 1980, 331) || ? Eg (Greek) kwm "Name eines heiligen Baumes" (Wb. V, 117) || Ch: (W) Angsā kān "tree" (Foulkes); Kariya kānā id. (Skinner); Mangas klin, Zul klini "tree, wood" (Shimizu); Bade kūnū "forest" (Kraft) || (C) Musgu kwaanā "dom-palm" (Krause); Banana kunā (Lukas), Masa guna "tree, wood" (Kraft).

Cf. IE *derw- "wood, tree" (Pokorny 1959, 214-17).

77. Dr *tār- "bushes" (D 3401: I)
AA *tār- "bushes" (D 3401: I) || Cu: (E) Som tār "bushes" (Luling) || Eg (med; Dyn XVIII) twr "sp. reed ?" and / or (NK) twr.t "Stock, Stab aus Holz" (Wb. V, 252) || Ch: (W) Hausa taruwaa "sp. tree" || Berb: (N) Aksimen atru "a kind of pole" (Orel & Stolbova 1995, #2375, 2383).

Cf. IE *derw- "wood, tree" (Pokorny 1959, 214-17).

78. Dr *kar- "firewood" (D 1389: I, III-VI) or *kor(-) "firebrand" (D 2229: I, III, VI) or *kur- "piece of wood" (D 1842: I-III)
AA *kar(w)- "wood, tree" > Sem *kār- > Akk kāriṭu "Kornboden, Speicher", Hebrew kōrā, Aram, Syriac kālīṭ "beam", Arab qarīyat "stick" (Dolgopolosky 1983, 135) || Cu: (E) *kor- > Sahor- "to hew"; Som qori
"wood", Jiddu qorów "firewood" (Banti & Ibraw), Boni ʼóré, Rendille xóro "(fire)wood" (Heine), Baysoro "wood, forest" (Haberland & Lamberti 1988, 71); Arbore kor "tree" m., "wood" f. (Hayward), Dasenechoor id., Elmolo ḍe "tree" (Heine); Oromo of Wellega qor-aan "firewood" (Gragg), Konso qoyr-a, Dirayta ḍoyr "tree, wood" (Sasse 1979, 48) || Dahalo ṭoro "tree" (Tosco).

Cf. IE *kwr-es-(no-) > Greek πρίνος "hill oak"; Welsh prenn, Old Irish crann "tree"; Old English hyrst "bush" (Pokorny 1959, 633).

79. Dr *mokk- "piece of wood" (D 5109: I, III, VI)

AA: Cu: (E) *muk- "sp. tree" > Som muk(o)i "sycamore" (Cerulli), pBoni *mūkay "tamarind" (Heine), Oromo of Wellega muka "tree, bush, woody" (Gragg) || (S) Burunge muka "chaff"; Asa mogengera "root" (Ehret 1980, 343, 324: SCu+Or).

80. Dr *tump- "Acacia arabica" (D 3335: III, IV, VI) and / or *tump(Vr)- "ebony tree" (D 3329: I, III, IV-VI)

AA *damw- "a big tree" > Sem: Arab dawn "wild palm-tree" (Steingass 380), cf. the proper names motivated by this tree-name in Thamudic Dwmt and Safaytic Dm (Müller 1962, 51-52); Mehri dôm "d.-tree" (Johnstone) = dôm(ut) "Doompalme; Hyphaena thebaica" (Jahn); Tigray, Amh dôma "baobab; Adansonia digitata", Tigre dôma "bust of baobab" (Littmann & Höfler 1962, 514) || Cu: (E) Oromo of Wellega dambli "sp. tree" (Gragg) [Beja doom "dom-palm" < Arab dawn] || Berb: (S) Ahaggar tâ-damam-t "sp. palm" (after Militarev), while Zenaga (W) tâ-dom-id, pi. tay-dumu "baobab" (R.Basset) is borrowed from Arab dawn || Ch: (W) Kereka dami, Kirfi, Galabru etc. dâmâ "tamarind" (Schuh); Kariya dombur, Mburku dömber etc. "baobab" - cf. Miya düm "tree" (Skinner); Ngizim dôm "wood", Bade dâm-ân "tree, wood" (Kraft) || (C) Gisiga dum "high tree" (Lukas), Muturua dum "tree" (Strümpell).

Cf. FePerm *tammo (Iliić-Svityč) = *toma "oak" (UEW 798) || Written Mong, Khalkha dom "lime-tree" (Dmitrieva 1972, 195).

81. Dr *câl- "Acacia" (D 2474: I, III)

AA *sul\-/*svl\- "sp. tree (Acacia ?) > ? Sem: Aram swl- "ulmus" (Brockelmann) || Cu: (E) Oromo of Wellega solooloo "sp. tree" (Gragg) || Om: (N) Mocha şolló "sp. tree" (Leslau), Kachama sola id. (Conti Rossini) || Eg (Dyn XVIII) s3 "tree" (Wb. IV, 400), Coptic ω\-λυ- stem, bit, rest (Vychichl 1983, 274) || Ch: (C) ? Kilba šilžbû, Hildi šilwû "wood" (Kraft); Wandala šúuí "Ficus syzingifolium" (Lukas) || (E) Sokoro sülë "Acacia albida" and / or sülë "Acacia sieberiana" (Lukas).


82. Dr *cup- "tamarind" (D 2672: IV, V)

AA *sapw- "sp. tree" > Sem: Arab safàn "a tree with thorns" || Cu: (E) Harso-Dobašešapakko "sycamore; Ficus vesta" (AMS) || Berb: (N) Ntīfā a-suf, Semlal ta-sâf-t, Kabyłe ta-sâf-t "oak; Quercus ilex" || Ch: (W) Hausa šafo "sp. tree"; pBole šufi "wood" > Geruma šifa (pi.), Ngamo šōhō, Bolewa šowì etc. (Schuh). Cf. SISAJ III, 6: Arab + Berb + WCh.

Cf. FeVo *Sapa "aspen" (UEW 783) || Alt: Tk *syba "Pinus" (Räsanen 1969, 414).

83. Dr *ti[k]- "Ficus" (D 3537: V, VI)

AA *tik- "sp. tree" > Om: (N) Yemsa teža "sycamore" (Cerulli) || Berb: (N) Warzazat tiiq, Igliwa tiq "juniper" (Laoust 1920, 490), Senhaja, Iznacen t’aqqa id. (Renisio), Zayan t’aqa "sorte d’arbuste épineux" (Loubignac), if t- is not the feminine prefix.

84. Dr *alli "water lily" (D 256: I-III)

AA *hil- "flower" > Cu: (E) Oromo illii "flower" (Thiene; Borello; Gamta) || Berb: (S) Taitoq, Ghat ñel (Masqueray, Nehl), Ahaggar ñol "laurier-rose" (Foucauld) < *Hilil (cf. Prasse 1974, 124) || (N) Shilh of
Tazerwalt alili (Stumme), Iznacen alili (Renisio), Zayan alili id. (Loubignac), Kabyle alili id. (Dallet), Ayt Seghrushen alili "flower" etc. (Laoust 1920, 472).

Cf. IE: Hititite ael-, dat.-loc. alili "flower, bloom", coll. alalesar "meadow", Greek λέπτον & Latin lilium "lily" (see Blažek 1996, 22).

85. Dr *kog- "millet" (D 2163: I, III? V, VI)
AA *gur-/*gir- "millet, bean" > Sem: PostbiblHebrew gērā "grain of a carob", BiblHebrew "1/20 of a shekel", Aram gērā "Johannisbrotsame" > cf. Akk girū "1/24 part of šiqlu (unit of weight)" (AHw 291; Cohen 1970f, 177; Klein 1987, 108) || Ch: (W) Hausa gééró "millet", Gwandara gyoro id.; Sura gyewuro id. (Kraft); Diri agyura id. (Skinner); Seya gyoro id. (Kraft) (Stolbova 1987, 219) || (C) Higi Futu garwa "millet", Lamang garañ id., Misme gwirany "sorghum" (Skinner 1996, 83) || (E) Sumray giri "Beans" (Friedrich) = jirī id. (Lukas), Dangla gērdyêñ id. (Fêdry), Jégul gir(k), Mubi jiragáºµ etc. id. (Jgelb 1994, 11).

Cf. IE *g khó-ro- "millet", *g khó-/*g khó- "sp. com or grass" (Pokomy 1959, 439-40, 445).
Cf. Sum gur "Getreidemass" (Zimmerman 1915, 21; here he saw a source of Akkkurru, Hebr kör, Aram körā > Arab kurr id.).

86. Dr *öl- "palm leaf" (D 1070: I, II)
AA *salw- "leaf, sprout" > Sem: ? Akk alû & elû "Tonrohre" (AHw 39: < Sum); Hebr šâle "leaf" (Klein 1987, 472), Syr šelwā "leaf, foliage" (Rabin 1975, 91; he also quotes Arab šalalā "to grow (plant)", šağâ "to strip a vine of its leaves") || Cu: (E) Som šaleen "leaf" || ? Eg (OK) Ŷr "Binse, als Schreibfeder", (Greek) Υr.t "Stengel der Lotosblume" (Wb. I, 208), Coptic ἱπειούε "jonc, roseau de marais" (Vycichl 1983, 16) - cf. Calice 1936, 26, #14a: Akk+Hebr + Eg ||| Berb: (N) Ayt Ndhir, Zayanala "leaves" (Laoust 1920, 471) || (W) Zenaga âžâ id. (Nicolas) || (S) Ahaggar ela, pl. ilattân "feuilles minuscules" < *č-laHah < *č-laHat-an (Prasse 1974, 76); also Ahaggar el, pl. ilâwun & âllin, East Iulemidden yel, pl. yellâtân "herbe fraîche" < *Hillâ(āwan) & *Hillâ (Prasse 1974, 129, 125) ||| Ch: (W) Pero alaw "leaf" (Kraft); Jimbin aluhu id. (Skinner) || (C) Muffu ččē "leaf" (Strumpell).

Cf. IE *H2/3el-/*H2/3ol-: Hititite hahhal- "Strauch, Busch" (*hahhal- ?), hahlawant- "green" (Tischler I, 123-24, 121); Latin ulva "Schilfgras, Seegras".

87. Dr *ůk- "leaf" (D 335: I, III, V, VI) and *ak(k)- "to sprout" (D 15: I, II, VII) or *ek- "leaf" (D 775: IV, V)
AA *[ʔ]ak/k- "part of a tree (leaf, branch, root)" > Cu: (C) Awngiekki "grass" (Conti Rossini) || (E) Avar-Saho hak "branch" (Reinsch), Saho ľorak id. (Hayward); Burji hašcā, hašcā "tree, wood", Sidamo, Hadiya, Libido, Gedeo, Kambatta hašcā id. (Sasse 1982, 90; Hudson 1989, 158) || (S) Mbugu ma-hako "grass", -hako "green"; ? Burunge hiqas- "to cook leafy greens" (Ehret 1980, 306) || Om: (S) Ubamer aqa, Galilia (h)asaqa, ahaqa, Bako (a)haka, Dime aax, aah (Fleming) = haayo, Banna haasa etc. "tree" (Bender) || (N) Koyra aka id. (Cerulli) ||| Berb: Ahaggar ēkē, pl. ikāwen "root" (Foucauld), Ayr & Iulemidden ekāy id. (Alojaly), Adghaq ekew id. ||? Ch: (W) Hausa haiki "grass", Pa'a hyeča "straw (stalks)" (Skinner 1996, 102). Cf. OEl ūk "wood" (Blažek 1996, 65: AA + El).

88. Dr *cappu "leaf" (D 2673: I, II)
AA *sappatu(m) "Binse" (AHw 1280) || Cu: (E) Gedeo šâfa "leaf" (Hudson), Hadiya, Qabenna šišī-ta > Gurage of Soddo šafo "round base made of leaves of the āsat and made for carrying loads or shoulders or head or used under a pot" (Leslau 1979, 572-73; he also quotes Oromo šâfo, but without any translation) || Ch: (W) Mya, Kariya šlêp, Mbirku šlîp "leaf" (Skinner 1977, 28; he incorrectly quoted 'Peve' tlâp id. instead of correct Peve, the language from the Masa group recorded by Kraft 1981; Stolbova 1996, 98 follows this misprint, using Pero) || (C) Logone tiivi "herbe, paille" (Mouchet); Banana labândâ, Lame láb, Peve tlâp, Zime šlâb "leaf" (Kraft).

Cf. IE *sop- > Olcelandic sef "reed"; Church Slavonic sopuč id. (Mann 1984-87, 1247).
E. Inanimate nature / space / time

89. Dr *aray "stone, rock" (D 321: 1)
AA *har- > Sem *harar- "mountain" > Tell Amarna ḫarrī, Ugar, Phoen ḫr, Hebr ḫar, hererī id. (Cohen 1970f, 459) || Cu: (E) Yaaku hékərə, pl. həkrə "big rock" (Heine) ||| Berb: (S) Ahaggar āhar, pl. āhərən "amoncellement de rochers" (Prasse 1969, 65).
Cf. El (Achaemenid) ḫar "stone" (Blažek 1999, 62: Dr + AA + El).

90. Dr *par- "rock" (D 4121: 1, II?)
AA *pVhr/I- "stone" > Sem: Arab fihr "stone of the size of a hand" (Steingass 807) ||| ?Om: (N) Kachamapalo "stone" (Bender) || Ch: (W) Sura kə-pərs "stone, gravel" (Jg), Mupun peer "stone" (Frayzinger) || (C) Hwona fəɾə; Higi Baza piʃə, Fali Kiria piʃi etc.; Fali Mucela fara(n), Gude farə, Mwulyen fūrə etc. id. (Kraft) || (E) Kera pər-ki "stone, rock, mountain" (Ebert), Bidiya peera "roche lisse" (Alio & Jg).

91. Dr *por(r)- "mountain, summit" (D 4567: 1, IV-VII) and / or *pər- "hill" (D 4595: 1, II)
AA: Cu: (E) *buur- "highlands, hill" > Som buur "mountain", Rendille būr "hill" (Galboran & Pillinger), Jiddu burti "mountain" (Banti & Ibraaw).
Cf. Alt: Tung *bur- "island" and / or *bori "mountain" (TMS 1, 111, 95).

92. Dr *var- "mountain" (D 5274: 1, II) and / or *vər- "mountain slope, side" (D 5360: 1)
AA *waʃr-/*war?- "forest, mountain" > Sem *waʃr- > UgaryTr "forest", Punic yr "wood", Moabite pi. yər-n "parc", Hebr yaʃar "forest", Aram-Syr yaʃəɾ "herbes non utiles, buissons, choses malheureuses", Arab (Yemen) waʃra "thicket" (Leslau 1987, 603, 617; Cohen 1970f, 380) || Cu: (E) Dasenech wor "mountain" (Fleming) = waʃr "stone" (Sasse); Tsamakko woro "forest" (< Ometo) ||| Om: (N) Wolayta, Zala, Gamu, Dache wora "forest" (Lamberti & Sottile 1997, 547-48; Ometo + Tsamakko + Bayso oro "wood, forest", but the latter form is derivable from ECu *kor-) ||| Ch: (W) Seyawur "mountain" (Kraft), Zaar wuru id. (Shimizu).
Cf. IE *wer- (?) > Persian bar "up, upon", Armenian ger id.; *wers/-*wəs- > vəɾʃman "peak, top", vəɾʃya-"higher", vəɾʃtiθa- "highest"; Old Irish ferr "better" (*werso- "higher"); Lithuanian viršus, Old Church Slavonic vřtxb "top", *werk-/*wək- > Irish fiere "peak, bulge", Welsh gwyrch "top"; *werks-/*wəks- > Old Indic vṛksə- "tree" (lit. "top"), Gypsy vəʃ "forest"; Avestan vəɾʃ "tree", Persian bīse "forest, thicket", Kurdish vēše id.; (Mann 1884-87, 1516, 1519, 1601; Pokorny 1959, 1151-52) ||| FU *wəɾə "mountain, forest" & Ural *wəɾə (FUV 126, 121-22; Iliić-Svityč 1971, XIX, XX, XIV: Ural + Dr) ||| Alt: Tunguz *bori "mountain" (TMS 1, 95), if it does not belong to Dr. *por(r)- "mountain, summit" studied above.

93. Dr *kur- "hilly country" (D 1844: 1, II, III, VI) and / or *kur- "island" (D 1860: 1, VI)
AA *kur- "hilly country" > Sem: Sabaic kwr "hill" (Beeston), Arab of Hadramawt kawr "mountain" (Müller 1962, 98), ? Arab kūrat "land, district" || Cu: (E) Saho kooroo "Berg, Gebirge" (Reinsch); Som kur "hill, mountain" (Abraham), Rendille kūr "hillock, small hill" (Galboran & Pillinger); Elmolo kōran "island" vs. kőran "mountain" (Heine) || Ch: (C) Tera kwărçax "hill" (Newman); Nzangi kūrōm "mountain", Glavda pəkwura "stone", Zeğhwana kwirə id., Gava, Nakatsa kūra id. (Kraft); Musgu kiri(d), krid "stone" (Krause); Kuseri kurr id. (Lebeuf) ||| (E) Ndam kūra "mountain" (Benton).
Cf. IE *gərH- "mountain", in Balto-Slavic also "forest" (Pokorny 1959, 477-78) ||| Ural *kərV "thicket" (UEW 217) and / or FiPe *kərV "Hügel, Anhöhe, Landrücken" (UEW 677); cf. also FiPe *kərkV "lightened place" (UEW 672); also Sum kur, gur "mountain, highlands, land".

94. Dr *tērī "sandhill, hillock" (D 3461: I)
AA *dary- "mountain" > ? Sem: Akk midru "eine Art Land" (AH 651); Post-BiblHebr meḏr "clod of earth", Syr meḏrə "clod, soil"; Arab madar "clods of earth, mud"; Sabaic mdr "territory, ground"; Mehri meḏrə "sun-
dried brick”; Geez mdr “earth, ground, soil, field, country, land, territory, district, bottom of a pit” (Leslau 1987, 330), if the first syllable represents the prefix *ma-/*mi- of nomina loci; the original root d-r-w can be preserved in the verb continuing in Jewish Aram d-r “élever, soutenir, emporter”; Harsusi dero “atteindre le sommet”, aro “grimper au sommet” (Cohen 1970f, 312) ||| Cu: (N) Bejadar “edge, bank of khor” (Hudson) ||| (E) Mousiyie (SLLE) = Bussa (Bender) aro “mountain” ||| Om: (N) Omo *dariya “mountain” > Zala daraya, Wolayta deriya, Gofa dere, Kachama dare etc. id., Gamu dare “country” (Lamberti & Sottile 1997, 348) ||| Berb: Ancient Libyan Δomega “Atlas mountains” ||| (E) Siwa aдрар, pl. idraren (Laoust), Ghadames adurar, pl. duraren “mountain” (Lanfray) ||| (S) Aghadag adrar, pl. idraren "mont, massif montagneux, chaîne de montagnes" (Foucauld), Ilemidden adar, pl. -en "mountain" (Berg) ||| (N) Kabyle adrar “mountain” (Dallet), Shilha adrar, pl. idraren, Tamazight dari, pl. tedwari id. (Cid Kaoui) ||| Ch: (W) Ngamo diri “hill” (Meek).

95. Dr *tipp- “hill, mound” (D 3229: I-III, VII)
AA: Cu: (N,C,E) *dab(b)-/*dib(b)- “hill” > ? (N) Beja dabba, debba, dibba “loose dry soil; mound (of earth soil, sand); bank; moving sand hill(s)” (Roper), if it is not borrowed from Arabic (dialect of the Egyptian beduins) debbah “Sanddüne” or from Tigre dabbat, Tigray dobbbat “hill of sand” || (C) Bilin dibba “erhöhter Platz vor dem Dorfe”, Qwara deba, Dembea debba “mountain” (Reinisch), Kemant dabba “colline, petite plaine montante” (Conti Rossini) || (E) Afar daaba “brow of a hill” (Parker & Hayward); Som dabo “Hügel, kleiner Berg” (Reinisch).

96. Dr *kivi “mountain” (D 2178: I, III, VI)
AA *gab-/*gub- “mountain” > Sem: Mehrigobi “side of mountain”, East Jibbali гёjd. (Johnstone) ||| Cu: (N) Beja gواب "heap of stones in the bed of a khor” (Hudson) = gواب “broad open flat ground with little or no vegetation” (Roper) = гaab “flache, steinige Ebene” (Hess) || (E) *gub(b)- > Afar gubb-i “high spot in undulating country”; Dasanech gum “mountains”; Oromo gubb-aa “up, above”; Dullay: Tsamakko g’up-o (Hayward), Harso gúp-o “mountain”; Burji gub-a “highland” (Sasse 1982, 85) || Dahalo gub’a “plains” (Ehret 1980, 238) || Eg (Pyr) Gubb ”Erdgott; Erde, Erdboden” (Wb. V, 164) || Ch: (C) Gava губа, Nakatsa губа “mountain” (Kraft).

97. Dr *meruvay “pyramid, high top” (D 5094: I, II, III)

98. Dr *cilli “hole” (D 2575: I, III) and / or *calim- “pit, hole” (D 2367: I-III, VI)
AA *čal-/*čil- “hole, cave” > Sem: Akk šalu(m) & šelu “Vertiefung” (AHw 1237; cf. p. 1152 šalu(m) & šalu “eintauen”); with another third radical cf. Arab šalām “breaking of a river bank”, šulmat “gap, split, cleft” (Steingass 208) ||| Cu: (E) *sill-/*sull- > Oromo of Wellega fulla’a “to pierce through, break through” (Gragg), Konso sill “small hole” (Black) - see Sasse, Auût 58[1974-75], 245 || (S) Qwadaa stillumaya “cave” (Ehret 1980, 326: Konso+Qwadaa) ||| Berb: (N) Kabyle tisilya “fossé; caniveau” (Dallet).
99. Dr *kolli "valley, bay, gulf" (D 2137: I, II)
AA *gul- "river" > Cu: (E) Afar golo "valley" (Parker & Hayward); Som golu "foot of hill"; Oromo gol-"corner, edge, gorge"; E Oromo gol-uu "valley"; Gollango-Gawwada kol-l-e "river"; Tsamakko golu-"slope" (Sasse 1982, 83) ||| Ch: (W) Hausa gulbi "river" || (C) Wadi golo "Bach, Fluss" (Strümpell); Mbara golonjy "marigot" (Tourneux et al.) ||| Berb: (S) Ahaggar agelnam, pl. igelnamen "reservoir d'eau naturel", Ayr elicnam "id., lac, mare", Ghat agelnam "lac" || (N) Beni Snus gelnem "petit lac", Senhaja agelnam "lac" etc. (Kossmann 1999, 158, #406), Kabyle agelmam, pl. igelmam "lake" (Newman 1887, 29 connected it with Kabyle gell "to be stagnant").
Cf. FU *koliv "hollow, hole; crack, rift" (UEW 174) ||| IE: Celt *glendo- "edge, valley" > OIrish glenn "valley", Welsh glyn id., if g- is from *g-. Cf. Bomhard & Kerns 1995, #349: Dr + ECu + FU + Celt + Kartv *yele- "ravine, river".

100. Dr *pun- "water, stream, river" (D 4338: I)
AA *[f]awan- "waterfall; rain" > Cu: (E) Sidamo fo"onêo "waterfall", Kambatta foofanêu, Qabenna, Alaba
tilaa id., cf. also Gurage: Muher, Maskat, Wolane f"an, Gogot f"anat id. (Leslau 1979, 233) ||| Om: (N) Mocha poCno "waterfall" (Leslau 1959, 45) ||| Ch: (W) *fawan "rain" > Sura, Angas, Ankwe fwan, Gerka fienn id. (Jg); Kiir fiwan, Zul fiwân, Zaar fiwan etc. id. (Shimizu) - see Stolbova 1987, 160).
Cf. IE *belo- "edge, valley" > OIrish bel "valley", Welsh bel id.

101. Dr *var- "to flow" (D 5356: I, VI)
AA *war- "river, lake" > Cu: (N) Beja *wer reconstructed after the record oh-wer "Fluss" of Krockow || (C)
Bilin wäräba "river", Khimar wirba id. (Reinisch), Khimta wirva id. (Conti Rossini) ||| (E) *war- (Sasse 1979, 42) > Som war "pool, pond", Rendille wor "well" (Galboran & Pillinger) or "river" (Fleming); Dasenech war "river" (Sasse) = wär "river (the Omo)" (Tosco); Burji wara "marsh, swamp" (Hudson) ||| Om: (N) Male uor "river" (da Trento) ||| Ch: (W) Hausa wuriya "stream"; Miya war "lake" (Kraft).
Cf. IE *velo- "to flow" (D 743: I, VI) ||| IE *belo- "edge, valley" > OIrish bel "valley", Welsh bel id.

102. Dr *käl "air, window" (D 1481: I) and *kälj "wind, air" (D 1499: I-IV, VI), cf. also Kurukh ëxñ-galñ "rainy season" (D 876)
AA *kal-/*kul- > Ch: (C) Mafa kwälñ "wind" (Kraft) || (E) Sokoro gâle (Friedrich), Gabri kal, Nancere käle, Dorno käl id. (Lukas), Kwang kâl; Kabalai kâlo, Lele kâlo, Sumray gâlï, Ndamgañ "wind" (Jglb 1994, 80-81) ||| Ch: (W) Zaar yâkñj ||| (C) Glavda aakkñha "cold" (Jglb 1994, 79).
Cf. Alt: Tk *kal- "air, heaven" (Rätsäinen 1969, 226 compared it with Mong galgan "clear sky").

103. Dr *ek- "cool" (D 741, 742: VII)
AA *(y)ak/k- "cold" > Cu: (C) Bilin eýaya "hail, ice, snow", Qwara eýaya "hail, snow", Awngi eýaya id. (Reinisch), besides Awngi oqumi "cold" (Lamberti) = gûmi id. (Beke) ? ||| Om: (N) Shinasha aakkâ, Kafa & Mocha akkô (Lamberti), Anfillo ako "cold" (Bender) ? ||| Ch: (W) Zaar yâkñj ||| (C) Glavda aakkñhyä "cold" (Jglb 1994, 79).
Cf. IE *yeg- "ice" (Pokorny 1959, 503). Dolgopolsky, Étimologija 1964[65], 263: Qwara + IE.

104. Dr *sim- "cold, chill, moistness" (D 2539: I-III, VI, VII?)
AA *(y)ak/k- "cold" > Berb: (S) Ahaggar esamid, lulemidden, Ghat sammid || (W) Zenaga ñammad || (N) Wargla asammad, Zayan asammad etc. "cold" (Militarev 1991, 254-55) || (E) Ghadames semmad "être froid" (Lanfry), Siwa asemmata "froid" n. (R. Basset < Bricchetti-Robecchi) ||| Ch: (W) Pa'a sâmfi, Tsagu ñfan, Diri ñimbûñf; Polci šiîntu, Zaar of Gambar šimda "cold" || (C) Gisigahimed; Gidar âmâ; Logone ñamâññ; Masa sîm, Zime-Batna simbéñ "wind" || (E) Kera sâyî "cool"; Tumak had "cold" etc. (Jglb 1994, 78-81).
Cf. Kartv *sim- "water, wet" (EWKS 317) ?.
105. Dr *vin- "sky, heaven" (D 5396:1, II, VII) and/or *věnt- "God", cf. also Kui věnu "God, spirit" (D 5530: V, VII)

AA *wan(y)- "light, day" > ? Sem: Gurage: Gyeto waZana, Muher wanna "day (in daylight)" (Leslau 1979, 640) ||| Cu: (N) Beja wàna adv. "at dawn, early morning" (Roper) ||| Om: (N) Yemsa wona "day, daylight, light", Wolayta "morning", woonto "tomorrow", Gofa wonta "morning, tomorrow", Gamu woonta "morning" etc. (Lamberti & Sottile 1997, 546), Koyra wont- "to dawn, become light" (Hayward), cf. also Kachama wanta (Lamberti), Koyra wonto, Zaye wonto "god", also borrowed in Burji wont-60 id. (Sasse 1982, 190) ||| Ch: (W) Hausa wuni "daytime"; Tangale wuni "day of 24 hours; to spend the night"; Ngizim wona id. ( Skinner 1996, 292) ||| (C) Musgueur wàŋ "day" (Mouchet) ||| ? Eg (Greek) wny, wyn "Licht" (Wb. I, 315), Coptic OYOGEI id. (Vycichl 1983, 213; he derived these forms from wn "to open", cf. the syntagms wn šsp "répandre la lumière", lit. "ouvrir la lumière", wn ňr "voir, faire voir, se montrer", lit. "ouvrir la face").

106. Dr *ic- "fire" (D 428: IV, VI)

AA *Zis- > Sem *?i§5-(at-) "fire" > Akk iSatu; Ugar lSt, Phoen ZS, Hebr Ze5, OAram Z§, BiblAram ZeSSa, Yudeo-Aram Zisštā, Syr Zešāt, Tigre Pāst, Harari isšt etc. (Leslau 1987, 44; on the basis of Arab Šisna "feuer" (Cohen 1970f, 35-36 proposed the skeleton VZ-n-5) ||| ? Ch: (W): SBauchi: Guruntum Zis id. (Jglb 1994, 138), Mbaaru is id. (Shimizu), Karekare yesi, Ngamo yasl, Bolewa osi "fire" continue proto-Bolewa *wasi (Schuh 1984, 208), cf. also Montol Žas, Sura wus etc.; Kulere wūš; Gerumai wūši, Kirfi wūši etc. (Jglb ibid.). Perhaps the apophonic pair *Zis-/*Zus-?

Cf. FU *asV- "heizen; sehr heiss, sehr warm sein" (UEW 27) ||| Alt: Tk: TurkishySy- "funkeln, leuchten", ySyk "hell" etc. || Mong isu "Russ", Kalmyk iSi "(Kien)russ" (Starostin 1991, 240, 277) || MKor saj-p^i "dawn", lit. "new day" (AED #696) || OJapanese pi "sun, day" (Starostin 1991, 113).

107. Dr *ak-/*avk- "to warm by the fire / in the sun" (D 18: VII)

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108. Dr *ak-/*avk- "to warm by the fire / in the sun" (D 18: VII)

AA *ak "fire" > ? Cu: (E) Arbore Péeg (Hayward), Elmolo éék "fire" (Heine), Dasenech Pege "ashes" (Sasse); Yaaku ikú "fire" (Heine) || Dahalo Péega id. (Tosco) || (S) Asa yogot id. (Ehret) || Berb: (N) Tamazight takat "fire" (Cd Kaoui), Shilha of Tazerwalt tak(k)at "Feuer(stelle)" (Stumme), cf. (S) Ayr, Iulemiden åskowy "griller, brûller" (Alojaly), Ahaggar ekwi "griller" (Foucauld) || Ch: (W) Himbin àkwà; Bade àkà "fire" || C) Chibak àkà; Lamang uvu; Gisiga àvo; Musgoy kù; Budumà au; Masa ku id. || (E) Sokoro ôko; Danglako; Mokilko õuwô; Birgit õku etc. id. (Jglb 1994, 138-39; Stolbova 1996, 81 reconstructs pCh *Pakw and compares it with Sem/Arab Vi-k-k "to be hot").

Cf. IE *aug- "light" (Mann 1984-87, 41).

109. Dr *poqitu "time" (D 4559: 1-VI)

AA *bar(y)- "time" > Sem: Soqotri bér, Mehri bêr, bôr, Šeri ber "already, just" (Johnstone); cf. Hebr, Aram kầhêr id. (Leslau 1938, 97; Dolgopolksky 1966, 57: Sem + ECu) || Cu: (E) *bar(r)- "time, age, year" (Sasse
1982, 35) > Saho bar- "old"; Som ber-i "time"; Elmolo parr-ae "daytime"; Oromo bar-a "time, year, age"; Konso par-a "year, age"; Harso-Dobase par-ko, Gollango-Gawwada per-ko "year", Gollango pår-a, Dobase par-anka, Tسامакко bar-an(ka) "when" (AMS); Sidamo barr-a "day, time", Hadiya ball-a "day, date", Gedee bar-o "time", Kamba bar-i "date", Burji bar-i (Hudson) = bër-i (Sasse) "year".

Cf. Ural *purkV "time" (UEW 407).

110. Dr *an "upper part, above" (D 110: I, II)
AA *[h]an- > Sem: Akkan(a) "to, on" (AHw 47), Eblaite Ïa-(NI)-na "to" (Krebernik, Quaderni di semitistica 18[1992], 102) || Cu: (E) Harso-Dobase ana "auf" (AMS); HECu *hana "over, above" (Hudson 1989, 109) || Eg (Greek) hn, hnn "head" (Wb. II, 492). Cf. IE *an- (*H 4 ?) "on, after" (Pokorny 1959, 39) and also Sum an "heaven; high, up" (see Blažek 1999, 57: Akk + HECu + Dr + Sum).

F. Culture

111. Dr *vær "way, road" (D 5297: I, II)
AA *varh-/*varh- "way, path" > Sem: Akkurhu(m) "Weg, Pfad, Bahn" (AHw 1429); Hebr poet. Ïorah "path; way (of life, etc.)", Sýr urhâ "road", OSArab Ïor "road" (Biella 1982, 26), cf. Geez marhâ ~ marhå ? "to show the way" || Cu: (E) Afararaa "road" (Reinisch), Saho arâh id. (Welmers); ? Bayso râh id. (Hayward); Gedeo ora id. (Hudson) || Ch: (W) Angasar "road, path" (Foulkes), Chip yar "road" (Kraft), Sura âr "Weg" (Jg); Kulere Ïur "Weg; Lohn" (Jg) || (E) Mokilko Purzi "Weg" (Lukas); Bidiya Ï6or id. (Alio & Jg); Kajakse lîf id. (Domoobs). Greenberg (1963, 61, #59) connected the Angas form with Ankwewar (plus Eg w3,t - see the preceding entry) and with (C) Gidar ura, but its meaning is "brousse" (Mouchet 1950, 16); it is apparently Greenberg's mistake because only the following entry is "chemin".

Cf. FeMd *ura "way, path" (UEW 804) || Alt: Tk *oram "street" || or < Mong oram "trail" (Råsånen 1969, 364).

112. Dr *årh- "way, road" (D 405: I)
AA *ʒarh-/*ʒurh- "way, path" > Sem: Akkurhu(m) "Weg, Pfad, Bahn" (AHw 1429); Hebr poet. Ïorah "path; way (of life, etc.)", Sýr urhâ "road", OSArab Ïor "road" (Biella 1982, 26), cf. Geez marhâ ~ marhå ? "to show the way" || Cu: (E) Afararaa "road" (Reinisch), Saho arâh id. (Welmers); ? Bayso râh id. (Hayward); Gedeo ora id. (Hudson) || (C) Dari war "Weg" (Strümpell), Peve, Zime vari "road" (Kraft). Müller 1975, 66, #37: Kafa + Eg.

113. Dr *teru- "street, road" (D 3422: I-III) and / or *târi "road, way" (D 3170: I-III)
AA *darh-/*dorh- "way, path" > Sem: Akkurhu(m) "Weg, Pfad, Bahn" (AHw 1429); Hebr poet. Ïorah "path; way (of life, etc.)", Sýr urhâ "road", OSArab Ïor "road" (Biella 1982, 26), cf. Geez marhâ ~ marhå ? "to show the way" || Cu: (E) Afararaa "road" (Reinisch), Saho arâh id. (Welmers), ? Bayso râh id. (Hayward); Gedeo ora id. (Hudson) || Ch: (W) Angasar "road, path" (Foulkes), Chip yar "road" (Kraft), Sura âr "Weg" (Jg); Kulere Ïur "Weg; Lohn" (Jg) || (E) Mokilko Purzi "Weg" (Lukas); Bidiya Ï6or id. (Alio & Jg); Kajakse lîf id. (Domoobs). Greenberg (1963, 61, #59) connected the Angas form with Ankwewar (plus Eg w3,t - see the preceding entry) and with (C) Gidar ura, but its meaning is "brousse" (Mouchet 1950, 16); it is apparently Greenberg's mistake because only the following entry is "chemin".

Cf. FeMd *ura "way, path" (UEW 804) || Alt: Tk *oram "street" || or < Mong oram "trail" (Råsånen 1969, 364).

114. Dr *pur- "house" (D 4294: I, II)
AA *birh-/*burh- "fort, fortress" > Sem: Akk birtu(m) "Festung, Burg" (AHw 129); Hebr bîrî "château, ville forte", Emperator Aram byrî?, Yudeo-Aram bîrî "forteresse, temple" (Cohen 1970f, 63) || Ch: (W) Pa’â mbura, Siri bori "place" (Skinner); Buli jârî id. (Kraft); Fyer bor, pl. Ïwar "Zuhause, Heim" (Jg) || (C) Bachama vûrâ-to "town", Gudu vûrâ-tsîi, Nzangi vûrâ-ci, Gude vîran id. (Kraft).

115. Dr *uði "place" (D 684: I) and *ûr "village, town; house" (D 752: I-IV, VIII)
AA *warh-/*warh- "kin, family, house, village, city, place" > Cu: (E) Arbore war "household" (Hayward); Oromo of Wellega warra "family, kin" (Gragg) || Ch: (W) Hausa wûrii "place" (Skinner 1996, 93); Daffo-Butura wûr "Gehöft, Haus, Heimstatt, Zuhause", Bokkos wur "Haus" (Jg) || (C) Gabin wûre, Ga’anda wîra
"town", Hwona wure "compound" (Kraft); Makeri woro "village" (Lebeuf) || (E) Dangla wère "place" (Fédry), Migama wërë "place" (Jg), Sumray wóram "kin, family" (Lucas) ||? Eg (OK) w (if from *w3 after Takacs, p.c.) "district, region" (Wb. I: 243) and / or (Pyr) j3.t (< *ju3.t < *jurt.. < *wurt..?) "place" (Wb. I, 26). Cf. Blažek 1999, 57: AA + Dr + Elamite murut/murun "earth" + Sum uru.

Cf. IE *wer- > Av vëra- "Deckung, Wehr", Pahlavi w8r "shelter, enclosure", Persian bär "Wall, Fundament, Burg" (Iranian > Hungarian bár "Festung, Burg"); OEnglish word "Hof, Wirtschaft" etc. (Pokorny 1959, 1161-62) ||| FU *werV "place" (UEW 569) || Alt: Tk-Mong *orun "place" (Rässänen 1969, 365); also Sum uru "city".

116. Dr *açav "room, house" (D 322: I-III, VI) AA *açar-/*çar- "city, house" > Sem: Eblaite l-ri-a-tum /çar-j-ri-at-am/ "suburb" (Fronzaroli, Quaderni di semitistica 13[1984], 143); Ugar àr, Hebr àr "city", OSArab àr "castle" (Aistleitner 1965, 241) || Cu: (E) Afar Ïri "house, tent" (Parker & Hayward), Saho Ïre "house" (Welmers) = Ïarii "family, house, kin" (Reichisch) ||| Om: (S) Ubamer Êri "house" (Fleming) ||? Eg (MK) Àt (if from *Àt after Takacs, p.c.) "chamber", (late) À (*Àt ?) "house" (Wb. I, 160). Cf. Blažek 1999, 57: Dr + AA + Sum Êri "city".

117. Dr *çar- "plough" (D 5907: I, III, VI) and / or Dr *mær- "axe" (D 4749: I, II, III, V, VII) AA *mær- "hoe, plough" > Sem: Akkmarru(m) "Schaufel, Spaten" (AHw 612) > Aram marrā, Arab marr "iron shovel"; ? Gurage of Selti mîrmârâ "to plough a field for the third time", Amh mîrîmârā "to dig" (Leslau 1979, 422), besides Tigre mārān "strap for the plough", Tigray mārānā, Amh mārānā "die Ochsen an den Pflug spannen" (Littmann & Höfler 1962, 114) ||? Cu: (E) Hadiya mòrā "Haken des Pfluges" (Plazikowsky-Brauner) || Eg (old) mīr "hölderne Hacke" [sign] (Wb. II, 98) || Ch: (W) Angas mār "to farm; a farm" (Foulkes), Chip mār "field", Montol māi id. (Jg); Bole-Tangale *mëra > Galambu mārā "farm" n., Dera mārā "farming" etc. (Schuh) || (C) Mbokuma "cultiver" (Mouchet); besides Mbar a mārāmāy "sickle", Vulum mārām id. (Tourneux), maybe Kuseri mëçëyë "knife" (Lebeuf), Gulei mîr id. (Roeder) || (E) Sibine mîr-î "house" (Jg).

Cf. Sum mār "shovel, spade; mattock, hoe" (see Blažek & Boisson 1992, 19-21: Dr + AA + Sum, with other [areal] parallels in IE & Sino-Tibetan).

118. Dr *çak- "to sow" (D 2431: VII) AA *suk- "to sow" > Cu: (E) Gedeosок- "to sow, mill" (Lamberti 1993, 374-75 explains the emphatic -k- from *-k- + the benefactive marker *?-?) || Om: (N) ShinashaSooka "seed" n. (Lamberti), Kafa søkk- (Cerulli), Mocha sø:kk(yë) "to seed" (Leslau) || Eg (Pyr) stëy "to sow", Copt stë id. (Wb. IV, 346; Vycichl 1983, 198) || Ch: (W) Hausa shuuka "to place seed in ground and cover with soil" (Skinner 1996, 246) || (C) Mbar a sok "semen", Vulum süki "faire le trou avant de semer" (Tourneux et al.). See Blažek & Boisson 1992, 26: Dr + AA. Skinner 1996, 246: Hausa + IE (Latin & Celtic) *seg- "to sow" (Pokorny 1959, 887).

119. Dr *çak- "honeycomb" (D 518: I-III, VI) AA *suk- "honeycomb" (Klein 1986, 261; his Geez wəsər does not exist!) and maybe Geez məsər / məsə "honey(comb)" (Leslau 1987, 326) or Arab ?ary "honey" (Cohen 1970f, 33) and / or ràhīyət "bee" || Cu: (E) Dasenceh aar "honey" (Haberland) || Berb: Iulemidden taraut "honey" (Barth).

120. Dr *çik- "salt", *çuk- "salty" (D 2201: I-VI) AA *aCub- "salty" > Cu: (C) Bilîn, Kemant šawã, Khamir čawã, Awngi čiwi "salt" (Appleyard 1984, 47: *či-) || (E) Afar ʃasbo, Som ʃasbo, Boni usubbo, Bayso ʃeso "salt", Oromo aššabo' "salt in small pieces" > Amh aššabo "salt for human consumption" || Om: (N) Anfilloašabo "salt", if not borrowed from Amh. (Lamberti 1986, 192, 302; Haberland & Lamberti 1988, 75).

Cf. Oj insults "salt" (> Ainu sippo id.).

121. Dr *καρ- "to milk" (D 1385: I)
AA *kar- "curdled milk, butter" > Sem: Syр kar`= "beestings, colostrum, curdled milk" || Cu: (N) Beja kar "frische, nicht geschmolzene Butter" (Almkvist) || (E) Rendille keéra "fresh milk" (Galboran & Pillinger) ||
Berb: Ahaggar akru, pl. ikrüten (Foucauld), Ayr akrü / ikrrüten "lait coagulé", cf. Iulemidden karaw "être coagulé" (Alojaly).
Cf. Sum ga "milk", gärä, "cream" > Akk garum id. (AHw 282). Militarev 1984[ms.]: Sum + AA (Syr+Beja+Ahaggar); Boisson 1989[ms.]: Sum + Dr; Blazék 1999, 57: Dr + AA + Sum.

122. Dr *alaku "blade of a weapon, head of an arrow" (D 237: 1, III)
AA *Hal/ra[kg]- > Ch: (W) Dera r/ga, Karekare rągkà, Gerumal riya, Boile ria || (C) Margi lągi, Kilba ląga; Hig Nkafrą riegi; Gude raga, Bachama rage; Lamang lęxe; Wandala ąlka, Glavda ąågha; Gisiga helek, Muktele ąlök, Mafa lękęd, etc. "bow" (Jglb 1994, 38-39) ||| ? Eg (Pyr) rwd "Bogensehne", (N) rwd t "etwas an Peitsche und Bogen" (Wb. II, 410), if it is not derived from (Pyr) rwd "fest sein" (ibid.), cf. Oromo rubuu tendon, nerve, string of bow" vs. Som rib- "strong" (Sasse 1982, 159). See Greenberg 1963, 53, #12: CCh + Eg; Blazék 1999, 56: Dr + CCh + NElamite ulkina "weapon" or "reed arrow".

123. Dr *cil- "bow" (D 2571: 1)
AA: Ch: (C) Balda sęlə, Mafa sulləm "arrow" (StrümPELL) = sältəm id. (Seignobos) = sultən id. (Kraft); Gulfie sęl id. (Lukas).
Cf: Kartv *mšwil- "bow" (EWKS 248) ||| ? Alt: MKorsár "arrow, sting" (AEW #920: Kor + OJp sas(i)- "prick, stab, sharp stick" || Tk *səl / *sılh "tooth" || Mong *sidün "tooth").

Dravidian Sub-grouping

I. Tamil, Malayalam, Irula, Kurumba, Kota, Toda, Kannada, Kodagu.
II. Tulu, Belari, Koraga.
III. Telugu.
IV. Kolami, Naiki.
V. Parji, Gadba.
VI. Gondi, Konda, Pengo, Manda, Kui, Kuwi.
VII. Kurukh, Malto.
VIII. Brahui

Abbreviations


References


KZ. *Zeitschrift für vergleichende Sprachforschung* ("Kuhn's Zeitschrift").


Militarev, A. 1984: *Afrazijsko-šumerskie leksičeskie svjazi*. In: *Lingvističeskaja rekonstrukcija i drevnejišaja istorija Vostoka*, I. Moskva: Nauka, pp. 58-61 [the full text written in English is available only as a ms.].


Prasse, K.-G. 1969: *À propos de l’origine de h touareg (tuhāggart)*. *Det kongelige Danske Videnskaberne Selskab Historisk-filosofiske Meddelelser* 43.3 (København).


1. Introduction

There is general agreement among a sizeable number of linguists and anthropologists that language and culture have developed in correlation with each other. Based on this agreement Colby (1985), Keesing (1979), and Silverstein (1985) among others have proposed that the ability of human beings to understand language is inextricably interwoven with their encyclopedic knowledge of culture. I need not emphasize here that words are the most intuitively satisfying and significant linguistic units that act as the carriers of all kinds of knowledge including cultural knowledge. This is the reason scholars like Brown (1979) and Kay (1977) have argued that there exists a close relationship between cultural complexity and the structure of lexicon. In other words, a close study of the lexicon of a language will lead to the discovery of its cultural complexity and an analysis of the cultural complexity of a language will reveal its lexical structure. I should mention here that between language and culture the former, being handy, is much easier to be dealt with than the latter, which consists of so many facets. It is an established methodology to unravel the socio-cultural realities of a speech-community on the basis of the words used in it. In order to support this position I should quote Sapir (1979:193-194), who emphatically stated: "The careful study of such loan-words constitutes an interesting commentary on the history of culture. One can almost estimate the role which various peoples have played in the development and spread of cultural ideas by taking note of the extent to which their vocabularies have filtered into those of other peoples."

Scholars working on Oriya language and culture, especially on Lord Jagannatha (pronounced [jagan(n)a:tha]), must have come across two typical words: /puri/ and /nitia:ni/. The former is actually the name of a small town in which Lord Jagannatha's temple is situated, and the latter is the word used in Puri for 'milk'. The point to be noted here is that Puri is a strange place-name in the sense that it should not be used independently, as it means 'abode'. In other words, it is a sort of 'bound word' that is required to be attached to a preceding 'free word', e.g. Vishnupuri 'Vishnu's abode', Shivapuri 'Shiva's abode', Indrapuri 'Indra's abode', etc. I am trying to make the point that /puri/ in the sense of 'abode' cannot have an independent existence. If that is accepted, the question that will be asked is: How is it that Jagannatha's dwelling place has been named Puri? As the other word /nitia:ni/ is used only in and around the Puri town, while the Standard Oriya word for milk is /khira/ or /dudha/, it is obvious that there is a cause behind it. As no attempt has been made so far to account for these two words, I intend in this paper to discover the sources of both these words and determine their significance in the context of the culture of Puri in particular and Orissa in general.

Situating the Problem

According to the description found in da:Thavamsa, Brahmadatta, the king of Kalinga (i.e. an ancient name of modern Orissa), had got a tooth of Buddha from Theraputta Kshema and worshipped it, placing it on a century and the most authentic and representative work on Oriya culture, bears testimony to this statement.

* In this paper [T, Th, D, R, N, L, S] have been used for the voiceless unaspirated retroflex stop, voiceless aspirated retroflex stop, voiced unaspirated retroflex stop, unaspirated retroflex flap, retroflex nasal, retroflex lateral, and retroflex sibilant, respectively.

1 Oriya is a Neo Indo-Aryan language and also the official language of the Indian state of Orissa.
2 Jagannatha is the most important and tutelary deity of the Indian state of Orissa. In the last millennium almost all the kings belonging to different dynasties have ruled this state by declaring themselves as His representative or deputy.
In fact, Jagannatha is addressed as Buddha time and again throughout this text. The following example will drive the point. There is a description in the Banaparba that after the unburnt part of Srikrishna's body appeared as a log of wood in the Blue Mountain, an old carpenter all of a sudden came to king Indradyumna and volunteered to construct the images. The carpenter along with Jara Savara and Basu Brahmin closed the door of the temple and started making the images. But just half a day and a full night before the stipulated 18 days were completed, the king, not hearing the sound of the instruments used in construction of the images, became impatient and opened the door in violation of the condition, and saw the great Buddha image in three separate bodies. (Banaparba, Part-II, p.188-9). Again, Srikrishna, in Musaliparba, tells Jara Savara:

"As per the wish of Lord Brahma I will spend four lakh and thirty-two thousand years in the Kaliyuga as the incarnation of Buddha killing the wicked people and protecting the saints." (p.109)

Many other ancient Oriya poets, like Salabega, have also described Jagannatha as Buddha. Most probably because of this close affinity between Jagannatha and Buddha there is an opinion prevalent in Orissa that the /brahmapadartha/ 'divine thing' inside Jagannatha's image is a tooth of Buddha. Based on this a hypothesis has been put forward that the name of this place was Dantapuri in the ancient times and today's 'puri' is just an abbreviation of it. But this hypothesis is a sheer conjecture based on the identification of Puri as Dantapura, though some other places have also been identified with it (See Ganguly 1975:25-27, Singh 1994:36).

Actually, this tooth of Buddha was worshipped in Kalinga for four generations until Guhashiva, who was Sunanda's son, Kashiraja's grandson, and Brahamadatta's great grandson. When Pandu, the king of Pataliputra (ancient name of modern Patna, capital of the Indian state of Bihar), came to know about it, he sent a large army to imprison Guhashiva. But by then the latter had left for Pataliputra on his own to present the tooth-relic to Pandu. Surprisingly, on the advice of his courtiers, Pandu tried to burn it, but in vain. Then he ordered that it should be thrown into the ocean; but nothing happened to it. These made Pandu realize that it possessed some supernatural power, and he allowed Guhashiva to go back to Kalinga along with the tooth-relic. After some time Danta Kumara, a prince of Ujjayaini (a town in the Indian state of Uttar Pradesh), came to Kalinga to worship the tooth-relic. Guhashiva was deeply impressed by Danta Kumara's devotion and married his daughter Hemamala to the latter. The newly wed couple lived happily in Kalinga. In the meantime some relatives of Kshiradhara, an old enemy of Pandu, reached Kalinga to take away the tooth-relic. In order to avoid any further danger, Guhashiva sent Danta Kumara and Hemamala with the tooth to his close friend and king of Lanka, Mahendrasena. But when Danta Kumara and Hemamala arrived at Lanka (now Sri Lanka), Mahendrasena's son Shirimegha was ruling there and he preserved the tooth-relic in a/caitya/at Mahagiri Vihara with full respect. (Rajaguru 1968:185-6).

Thus, there is no reason to believe that Puri is an abbreviation of Dantapuri. Here it must be noted that the name of this place is Dantapura, and not Dantapuri. So if the abbreviation hypothesis is accepted, the result should have been 'pura', not 'puri'. Another point that must be brought to the notice of scholars is that the epics and pura:Nas possess references to modern Puri as Purushottama, Nilagiri, Nilachala, Nilakandara, Shrikshetra, etc; but never as Puri. Even as recently as in 1840-41, it has been referred to as Purushottamakshetra in a map, and therefore, some scholars believe that Puri is a shortened form of Purushottampuri of Jagannathapuri (Mohapatra 1994: 27-8). Again, I will argue that it is not at all acceptable because no place name in and around the Puri district possesses the suffix 'puri'; it is 'pura' everywhere, e.g. Ramachandrapura, Chandanapura, Malatipatapura, Dandamukundapura, Patamahadeipura, etc. So Purushottampuri and Jagannathapuri have to be a blend of Purushottama and Jagannatha with the existing place-name Puri. There are others who hold the view that "Puri is the new name for Shrikshetra (the apex or the best of all sacred centres of the country) or Purushottamakshetra ... ." (Patnaik 1977:12), but they are silent about its source and the time when it came into existence.

3 One lakh = 100,000.
A close scrutiny of the extant records reveal that the name 'Puri' has become popular only after the advent of the British in Orissa. An important piece of evidence in support of this claim is found in *ma:daLa:pa:nji*, the Jagannatha temple's chronicle. Though everywhere else Purushottama and its variants have been used in this text, 'Puri' is found towards the end, i.e. during the reign of King Mukundadeva II (1795-1817):


(With Jagabandhu Bidyadhar's help Mukundadeva was taken to Cuttack as a prisoner. But as it was proved that he was innocent he was given Rs.2,333.00 per month for performing Lord Jagannatha Deva's worship as the lordship of Khurda and the Government ordered him to stay at Puri for generations to come. Tr. by P.M.)

I wish to argue that after the British occupied Orissa the name 'Puri' became popular. If this argument is accepted, the following question has to be answered: Why did the name 'Puri' not get a place in the epics and *pura:Nas*? Let us first look into it.

### 3. The Place Name Puri

Orissa occupies a strategic place in the Indian subcontinent from the linguistic as well as cultural point of view. It is, in fact, a confluence of the major linguistic and cultural traits found in this country, i.e. Aryan, Dravidian, Munda, and Tibeto-Burman (For a detailed discussion of linguistic area see Masica 1976; Mohanty 1997a, 1997b). As Jagannatha, the first deity of Puri in particular and Orissa in general, is believed to be a Savara (or Munda) god, I will deal with this aspect only. Out of a dozen of the Munda languages in total, almost all, except Korku, are spoken in Orissa. Again, as per the description given in *sa:raLa: maha:bha:ra:ta*, Nilachala is a very old place inhabited by the Savaras since time immemorial. For example, when Arjuna was cremating the mortal remains of Srikrishna, Lord Brahma made the following oracle:

Don't destroy that body oh great fighter  
Let that body be worshiped as Narayana of Kaliyuga  
Arjuna will take it out from fire and immerse it  
in the sea  
It will appear in the Blue Mountain  
He will be pleased with the kira:ta  
Jara Savara will worship that body. (*Bananaparba*, Part-II, p.182; tr. by P. M.)

Again Sarala Dasa has stated:

A Brahmin named Basukara  
He would reach the beautiful Blue Mountain.  
On the bank of Indrajamuni the Brahmin would wander  
In the north at a distance he would see the Savara hamlet.  
Then he entered the Savara village  
He saw a Savara woman on the way. (*Bananaparba*, Part-II, p.183-4; tr. by P. M.)

Besides all these, historians like Panigrahi (1986) hold the view that before the Bhaumas, who came from Assam, occupied Orissa in the first half of the 8th century the Puri region was ruled by the Savaras. The Bhaumas "... obtained the shrine from the Savaras, got the wooden altar carved into three images, enshrined
them in a temple built on the spot and gave it the name Nilachala which was the name of the famous shrine of Kamaskhya in their homeland of Assam." (Panigrahi 1986:338-9). Kulke (1978:130) also refers to Chodaganga's inscriptions of Korni and Vizagapatnam, wherein it is stated that his ancestor Kamarnava had conquered Kalinga after killing Sabaraditya, supposedly a Savara Chief.

From all these it follows that there was a Savara settlement at Puri, and most probably they were the earliest settlers there. Then, of course, it was natural on their part to give a name to this place. I very strongly believe the ancient Munda or Savara name of this place was nothing else but 'Puri', because in many Munda languages this word refers to 'sea' or 'water-reservoir'. For example, /pur/ means 'flood' in Bonda (Bhattacharya 1968:87). In another Munda language Santali, /puri/ has the following four meanings: (i) the world, (ii) the sea, (iii) place, and (iv) abode, and its source has been determined to be /puri:/ of Hindi (Bodding 1993, Vol.IV:680). Notice that though the senses like 'the world', 'place', and 'abode' tally perfectly with the Hindi word, so far as the remaining sense, i.e. 'the sea' is concerned the Santali word has nothing to do with that of Hindi. In other words, /puri/ in Santali is a homonym that comprises two words: one comes from Hindi while the other is native. What I claim here is that the native /puri/ of Santali refers to 'the sea'. Sora also has a word /purri:/ which means 'to corrode' (Ramamurti 1986:221). Finally, according to Hoffmann's (1990:3350) *Encyclopaedia Mundarica* /pur/ means 'the gushing out of boiling water from a covered vessel, the gushing up of water or dust into which red-hot iron is plunged, the gushing up of steam and ashes when water falls on fire' and /puri/, 'the bubbling on the surface of a boiling liquid' and 'the scum on cooking rice, on stew, on boiling liquids', etc. Taken together all these evoke the picture of a sea quite explicitly. It will not be out of place to state that /pur ~ pura/ is used in the sense of 'flood' in Desia spoken in Southern Orissa and Northern Andhra, and its source is the above-mentioned Munda word.

An important point to be mentioned here is that there is no separate word for 'sea' in the Munda languages in general. That is why in many cases they have borrowed words from neighbouring languages to refer to 'sea'. For instance, Bonda and Didayi use /samdar/ (Bhattacharya 1968:138); Sora, /samandra:n/, (Ramamurti 1931:74); Ho, /dorea/ (Burrows 1980:140) and Korku, /Derwa/ (Nagaraja 1999:301). The absence of a native word for 'sea' in the Munda languages is also indicative of the natural background from which the Munda people come. In all probability these people had never seen a sea before reaching the east coast of India. When they saw the sea for the first time in their lives, it is quite possible that they spontaneously used /puri/ for its violent effusion as well as the enormous amount of surf on its surface. To sum up this discussion, my contention is that the original Munda word /puri/ has undergone a semantic extension to refer to 'sea', and consequently, after the Savaras settled down in the tiny sea-side hamlet it acquired the name Puri for itself. It never found a place in the epics and pura:Nas as it was unsanskritic and was used by the masses in their day-to-day ordinary conversation, whereas Purushottamakshetra, Shrikshetra, Nilachala, Nilakandara, etc. were used in the epics and pura:Nas because these were considered sacred due to their Sanskritic origin. As a piece of supporting evidence for this observation it won't be out of place to mention that the Bhauma-Kara dynasty, which ruled over Orissa for about two centuries between 736 and 931, did not even find a mention either in the Sanskrit works containing some historic traditions (e.g. eka:mra pura:Na) or in the madaLa:pa:nji, the chronicle of the Jagannatha temple, most probably because the rulers of this dynasty were "unorthodox" and "non-Aryan" in origin. "The orthodox Brahmins, who were the repositories of all traditions, have ignored them for this reason". (Panigrahi 1981:66). This dynasty was discovered only in the beginning of the 20th century.

4. The Strange but Unique Word /nitia:ni/

Though Puri is included in the Standard Oriya speaking area, its language is conspicuously different from that of the rest of the area because of its use of the unusual word /nitia:ni/ for milk. The question that arises here is: What is its source and how did it come into use? The readymade answer which almost every person from Puri gives in response to this question is that /gauRa niti a:Nidie boli nitiai:/ or 'It is
/nitiami/ because the milk-vendor brings (/a:Nidie/) it daily (/niti/). But there is little doubt that it is a folk-etymology. So we will have to look for its source somewhere else. Actually, it is very intimately related to the foregoing discussion on Puri.

Munda is a branch of the Austroasiatic family of languages. "As regards the original home of these people all the present linguistic points to the east - very probably the south-eastern portion of China as the original home of the people speaking Mundari (Munda) and Monkhmer languages." (Karve 1965:315). Again, that most of the Munda speaking communities have entered India through the northern and north-eastern frontiers is well recognised by now (Bhattacharya 1976:1-15, Dalton 1978:224). Therefore, it is quite logical to expect that the Munda speech communities must have come in close contact with the Tibeto-Burman speaking people and there must have been a give-and-take between them at the linguistic, cultural and social levels. In fact, a comparison between the languages and cultures of both the stocks strongly supports this position. Let us take two examples: one from language and the other from culture.

It is interesting to note that when most Indo-Aryan and Dravidian languages derive their words for twenty from 'two-ten', meaning 2 x 10, most Munda and Tibeto-Burman languages have special words for this numeral. For example, though the North Munda languages like Santali (/isi/), Mundari (/hisi/), Birhor (/bis/) and Korku (/isa/) use words derived from Hindi /bi:s/ 'twenty', the South and Central Munda languages use a variant of /koRi/, e.g. Didayi /kuRi/, Bonda /kaRe/, Sora /bo-koRi/, Juang /kuRi/, etc. But Parengh still retains /mika:n/ which is certainly a cognate of the word for twenty used in some Tibeto-Burman languages, e.g. /maku/ in Tangkhul-Naga. Again, variants of /koRi/ are also found in some Tibeto-Burman languages, e.g. Boro /kuri/, Garo /kor-grik/, Meitei /kul/. These examples clearly show that the Munda and Tibeto-Burman languages not only share the same concept of twenty, but also the words expressing it are derived from the same sources.

Now let us consider an example from the domain of culture. In the typical Aryan India, i.e. in the states of Jammu and Kashmir, Punjab, Haryana, Himachal Pradesh, and Uttar Pradesh, as well as in the four Dravidian-speaking states, i.e. Tamil Nadu, Kerala, Karnataka, and Andhra Pradesh, there exists a normal relationship between married women and their husbands' elder brothers. On the contrary a relationship of avoidance is observed between them in the Munda and Tibeto-Burman-speaking communities. It is also customary for a younger brother to marry his elder brother's wife after the latter's death in the communities belonging to both the Munda and Tibeto-Burman stocks. (In the anthropological jargon this system is called 'levirate'). However, in this context I want to mention that similarly no married woman is allowed to talk with, or even look at, her husband's elder brother in the Oriya society. On the other hand, though hardly an Oriya man marries his elder brother's wife in the event of the latter's death they enjoy a very close and jocular relationship. It is evident that the prevalence of these customs in Oriya society is solely due to its convergence with those of the surrounding Munda communities. With these, let us get down to the problem of /nitiami/.

Studies on the Tibeto-Burman societies reveal that they never use milk; rather they abhor it. Regarding the Mishmis, Dalton (1978:15) states: "They do not use them (cattle) for agricultural purposes or for their milk." The Hill-Miris, according to him, also do not touch milk (Ibid:31). Again, with reference to the Garos he writes "... they have no aversion to any food, except milk, which they abominate..." (Ibid:62). The very same trait is found among the Mundas also. The following words from Dalton (1978:195) authenticate this observation: "The Kols plough with cows as well as oxen, but it is to be recollected that they make no other use of the animal as they never touch milk." Frazer (1986:293) has also reported that this practice is in vogue among some hill tribes, especially the Hos: "The cattle are used only for ploughing for the Hos, like many other hill tribes of India they never touch milk." In other words, for both the Munda as well as Tibeto-Burman peoples, milk is forbidden. This aspect of Munda culture is reflected in the language as well. Most Munda languages possess unrelated words for milk. For example, it is /Daktar ~ Da:ta: in Bonda, /toa/ in Santali, /a:duhan/ in Sora, /Dra:/ in Didayi, /nu:nu/ in Kharia, and /dud ~ Dud ~ Di:dom/ in Korku, etc. Notice that though there are lots of variations with reference to the word for milk, every Munda language uses either /da:/ or one of its variants for water. I
want to argue here that the word for 'water' is inherited by the Munda languages from their parent whereas the words for milk are either coined or acquired later from other sources.

A close look at the data obtained from various languages spoken all over the world shows that it is an established norm to use an equivalent descriptive and circumlocutory expression for a forbidden or taboo object. This is the reason Sanskrit, Greek and Latin, though daughters of the same Proto-Indo-European parent, use three different words, i.e. /candra/ literally 'shining', φεγγάρι /féngári/ (Modern Greek) 'that which shines', and /lu:na/ 'that which glitters', respectively, for the moon. In rural Orissa, people often use /ha:Ria:Ni/ or 'scavengress' for the house lizard and /lambajantu/ or 'long animal' for the snake.

If we count the words for 'milk' used in Oriya there are at least six, e.g. /gurasa/, /naLa:pa:Ni/, /okhara/, and /nitia:ni/, besides the commonly used /khira/ and /dudha/, while there is only one word /dahi/ for 'curds', and another, /ghia/ for 'ghee', used all over the Oriya-speaking tracts. My contention is that 'milk' has become a taboo in Oriya under the Munda influence, and that is why there are so many circumlocutory expressions to refer to it. /gurasa/ is derived by adding /rasa/ 'juice' to /go/ 'cow' and it literally means 'cow's juice'. /naLa:pa:Ni/ which apparently seems strange and unintelligible is actually a descriptive expression. It is a blend of the Dravidian word /nara:/ 'white' and Oriya /pa:Ni/ 'water'. In other words, it means 'white water'. I should mention here that as there is no word like /nara:/ in Oriya, and the Oriya speakers have changed it to an existing Oriya word /naLa:/ 'drain' without realizing the significance of the former. Of course, each language undergoes many such changes in its growth and development. Then /okhara/ is also a descriptive expression that consists of two Dravidian words: /o/ 'appropriate, equal, fit' and /kara/ 'sap issuing from trees, gum, juice of fruit, etc.' This /kara/ has become [khara] due to stress on the non-initial syllable as it has happened in the case [sakha:La] (/saka:La/) 'morning' or [majbhut] (/majbut/) 'strong'. The literal meaning of /okhara/ is 'appropriate, equal or fit (i.e. drinkable) sap or juice'. Thus, all these words are circumlocutory expressions for milk. Let us now consider /nitia:ni/.

Though the Savara or Munda god Jagannatha has existed since time immemorial, he gained importance only after the Dravidian Gangas had ascended the throne of Orissa. The Somavamsis, the Bhanjas, and the Nandas, who occupied the throne of Orissa before the Gangas, were worshippers of Siva. So it is obvious that Jagannatha did not gain much importance during their rule. The present gigantic and architecturally marvellous Jagannatha temple of Puri was in fact built by Anantavarmana Chodaganga (1078-1150), founder of the Ganga dynasty in Orissa. The devada:si: (i.e. God's maid-servant) dance ritual in the temple was also introduced by the Gangas. Thus, it can be claimed that the process of Dravidianization of Lord Jagannatha and his culture started with the Ganga rule, though Dravidian influence on the language and culture of Orissa certainly existed before that. The presence of an enormous number of Dravidian words in the temple register bears testimony to this claim. For example, /lenka:/ 'servant', /muduli/ 'chief', /kuRua:/ 'earthen pot', /koili baikuNTha/ 'temple Vaikuntha', /chera: pahara:/ 'dirt sweeping', etc.

I propose that /nitia:ni/ is also a Dravidian word. It should be recalled that during his visit to Puri (at the end of the 11th century or the beginning of the 12th century) Ramanuja (1056-1137), the great Vaishnava-theologist of the Chola empire, could not succeed in getting Brahmin priests appointed for the worship of Lord Jagannatha. From this it is evident that Savaras or Daitas were worshipping Jagannatha at that time (Sahu 1996:37-38). In other words, until then the Munda culture was dominant in Puri as well as in the temple of Jagannatha. So it is obvious that, along with other customs, the use of milk by the Dravidian Gangas must have been detested by the people, and there must also have been a strong resistance to its introduction in the temple. It could have been one of the reasons which forced Chodaganga, who was a /paramama:heśwara/ 'staunch Saiva' on his own admission in 1112, to proclaim himself /paramabhaTTa:rakah-paramavaisnavah-paramabra:hmaNya/ in 1135 (Rajaguru 1972:40). Thus, finally both the camps most probably settled for a compromise, and in this process milk was renamed as /nitia:ni/.

The other point I want to mention is that like /gurasa/, /naLa:pa:Ni/, and /okhara/ the expression /nitia:ni/ also consists of two words: /ney/, meaning 'butter, ghee, honey, etc.', and /taNNi/ meaning 'water'. This /ney/ is pronounced as /niy ~ ni: ~ ni/ in the Dravidian tribal languages, like Kui, Kuvi, Konda, and
Gondi, spoken in and around Orissa. Further, just as /akkhi/ and /paNNa/ of Prakrit become /a:khi/ 'eye' and /pa:na/ '(betel) leaf in Oriya, it is natural for /taNNi/ to become /ta:ni/ through cluster simplification and lengthening of the preceding vowel. Thus, we get /nita:ni/, and it is used for milk even now in some of the remote areas of Orissa. But it is a typical characteristic of the Puri dialect to pronounce /a:/ as /ya: ~ ia:/, e.g. [syainti] for /sa:nti/ 'peace' and [syapa] for /sa:pa/ 'curse'. Following this rule /nitya:ni/ has become [nitya:ni] or [nitia:ni]. Thus, the derivational history of this word can be proposed as follows:

ney-taNNi --> niytaNNi --> nita:ni --> nitya:ni ~ nitia:ni

5. Concluding Remarks

To conclude: firstly, it has been argued in this paper that Puri, as it was believed so far, is not an Old Indo-Aryan or Sanskrit word; but a Munda word that refers to 'sea'. This interpretation adduces evidence that the Savaras or Mundas were the first inhabitants of Puri, and this, in turn, further strengthens the Munda origin of Jagannatha. Secondly, the use of the Dravidian compound /nitia:ni/ – literally meaning 'butter-water, ghee-water, honey-water' – for 'milk' implies that milk was a taboo for the people of Puri. Most probably it was first introduced in Jagannatha temple, and from there it spread to the outer society only after the Dravidian Gangas occupied the throne of Orissa. It is also clearly indicative of the Dravidianization of Lord Jagannatha and his culture. Finally, this paper demonstrates that cultural history of the past can be discovered and reconstructed by analyzing some key lexical data, and thus, it vindicates the ethno-linguistic methodology.

References

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4 In Oriya, /NN/ is pronounced and heard as /nn/. For this reason /taNNi/ has become /ta:ni/, not */ta:Ni/, in this language.
5 Prof. R. C. Pradhan, my colleague in the Department of Philosophy at the University of Hyderabad, tells me that this word is used in Western Orissa even today.
6 For a discussion on the other origins of Jagannatha, viz. Buddhist, Brahmanical, and Jaina see Mishra (1995).


(reprint)


Tracing the Ancestral Kinship System:  
The Global Etymon KAKA

Part I: a linguistic study

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In memory of
Joseph H. Greenberg.

Abstract: The worldwide kinship etymology KAKA was first presented by Ruhlen (1994a, 2000a) with the meaning of ‘elder brother, uncle’ on the basis of essentially Eurasian, Oceanic, and American data. It is here extended to Africa, to Australia and to several other language families from the previous areas. The wide geographical distribution of this etymology, together with the striking phonetic and semantic consistency of its numerous cognates, entails several important consequences for both linguistics and social anthropology. In linguistics, the etymological series of KAKA is clearly compatible only with a unique origin of most, or all, extant human languages (Bengtson & Ruhlen 1994, Ruhlen 1994a). Uncovering a core part of Homo sapiens’ kinship system at the crucial time of the Great Dispersal (ca 100,000 BP – 40,000 BP) would obviously have tremendous consequences for our knowledge of the prehistory of human social organization.

1. Presentation

The first publication of two worldwide kinship etyma, namely KAKA ‘uncle, elder brother’ (Ruhlen 1994a, 2000a) and AJA ‘elder sister, aunt, grandmother, mother’ (Bengtson and Ruhlen 1994, Ruhlen 2000a) could entail important anthropological consequences¹. As a matter of fact, finding kinship terms in the lexicon of the Proto-Human language, ancestral to all extant or attested human languages, raises a crucial question: to what kinship terminological system would these terms have belonged?

The very idea of an ancestral kinship system runs counter to the admitted opinion of most anthropologists. For instance, while reviewing Transformations of Kinship (Godelier, Trautmann & Tjon Sie Fat 1998), the proceedings of an important round table on Dravidian, Iroquois, and Crow-Omaha kinship systems, Jamard (2000) states that “the monogenesis of terminological systems is doubtful for some and ruled out for others.”

As a consequence of this scepticism, and of the parallel aversion to deep linguistic comparison that prevails among many historical linguists, comparative studies of kinship terms and systems have, until now, been limited to linguistic families of low or middle antiquity, such as Siouan (Matthews 1959), Indo-European (Wordick 1970), Dravidian (Trautmann 1981), etc. These studies have nevertheless proven fruitful, leading to the reconstruction of original terms and, as a second step,
to the determination of the ancestral system in these families.

Multilateral linguistic comparison, as elaborated most notably by Greenberg (1987: 1-37, 1995, etc.), Bengtson and Ruhlen (1994: 277-292) and Ruhlen (1994a passim, 2000b), is, however, able to reach much greater time depths. It gives us the practical possibility to recover some kinship global etyma belonging to the corresponding kinship system of the Proto-Human language. Their validity will crucially depend on the abundance and the degree of convergence of the data, as well as on their geographical distribution and on the number of linguistic families involved in the etymological series.

Applying to Proto-Human kinship etyma the methods of social anthropology developed in the twentieth century implies fulfilling another crucial condition: namely, to define precisely the kin position(s) referred to by the etymon covering each series. The semantic convergence of the series will be of particular importance here.

This application makes possible and necessary a worldwide comparison of vernacular kinship terminologies, with the ultimate goal of uncovering the terminology and architecture of our ancestor Homo sapiens' kinship system. Such a system would date at least from the Great Dispersal that led our ancestors to settle the whole Old World (including New Guinea and Australia) between 100,000 BP and 40,000 BP.

As a first step in this direction, we have undertaken a new study of the etymon KAKA², already established by Ruhlen on a broad, though not exactly worldwide, geolinguistic basis. We went through a considerable (though still far from exhaustive) quantity of anthropological and linguistic works describing kinship terminologies used by peoples all over the world. We thus obtained a new series of data, adding to Ruhlen’s initial data or in some cases superseding them (all are reproduced in the Appendix).

In this Part I of our study, we present the set of data and discuss the intrinsic etymological validity of the KAKA series. Part II (Matthey de l’Etang & Bancel, this volume) will deal with these data from the anthropological viewpoint.

2. Methods

2.1. Building a lexical series

Multilateral comparison has had until now an almost unique goal: classifying languages of the world into genetic families. This will not be our aim here. However, we will make use of an inherent property of the method, namely to produce valid etyma of extremely old age independent of the complete reconstitution of the phonetic history of the linguistic family concerned. Thus, we will try to obtain, through a lexical comparison within the kinship field at the global level, a valid Proto-Human etymology.

We are lucky that the rough material for this study is available in abundant quantities in libraries. From the end of the nineteenth century on, a classical exercise for every field anthropologist has been to describe the kinship system of the people under investigation — often with a transcription of the vernacular terms. We thus looked for kin terms, referring to any position(s) with regard to ego, which would be phonetically likely reflexes of the etymon KAKA given by Ruhlen (1994a).

2. We will regularly label in SMALL CAPITALS the etyma obtained through a recurrent phonetic and semantic correspondence in a unique word series, in order to differentiate them from standard reconstructions (traditionally preceded by an *asterisk and written in lowercase italics), which derive from recurring phonemic correspondences in several word or morpheme series.
2.1.1. Building a semantic series

The conditions of sexed reproduction determine a double (ascending and descending) kinship position tree centered on ego. In this tree, each position may be described as a chain of elementary positions (mother M, father F, son S, daughter D, brother B, sister Z, wife W, husband H), themselves defined by a handful of features (male/female, consanguineal/affinal, generation + / = /-) to which may be added, mostly for ego’s closest kin, the feature older/younger in the same generation. Typically, a given vernacular terminology does not use a different term to designate each position. Rather, a few dozen reference and address terms designate as many as about two hundred relationships (the rough total of closest kin, beyond which people are no longer considered as belonging to one’s kin significantly enough to bear a specific designation). Thus, many terms refer to several different positions; for instance, Miwok (Penutian branch of Amerind) *kaka* refers to the class of parents including mother’s brother MB, mother’s brother’s son MBS, mother’s brother’s son’s son MBSS, etc.

One will also notice that not all the various positions referred to by a given term enjoy the same semantic status. In the case of Miwok *kaka*, the first meaning mentioned above (mother’s brother MB) constitutes the primary or “focal” meaning — as Lounsbury (1964: 356) accurately termed it —, while the other meanings (mother’s brother’s son MBS, mother’s brother’s son’s son MBSS, mother’s brother’s son’s son’s son MBSSS, etc.) are secondary or derived. To construct our etymology, we will deal mostly with the primary meanings of the terms.

These objective and structural facts make kinship a very tight semantic field. Thus, semantic stringency in selecting cognates is much easier to assess here than in other parts of the lexicon.

2.1.2. Building a phonetic series

We propose tentatively to classify the cognates that have been collected into an etymological series according to their contribution to the phonetic consistency of the series.

The first category contains terms reflecting all the phonemes of the etymon, either directly or in a slightly evolved shape (though we admit the loss of the final vowel). Here belong, for example, Proto-Australian *kaka* ‘mother’s brother MB, (grandfather GdF),’ Proto-Bantu *kākā* ‘grandparent GdPt’ [most probably from Proto-Niger-Congo *kaka* ‘grandfather GdF, (mother’s brother MB)], Tlingit *kak* ‘mother’s brother MB,’ Vietnamese *kaw* ‘mother’s brother MB,’ Proto-Indo-Hittite *xaxx(a)* ‘mother’s father MF, mother’s brother MB, father’s father FF,’ Yukaghir *xa’xa* ‘mother’s brother MB, grandfather GdF,’ and Proto-Austronesian *kaka* ‘elder brother B+.’

The second category includes terms such as Proto-Semitic *?ax* ‘elder brother B+,’ Proto-Altaic *a*ka ‘elder brother B+,’ Proto-Eskimo *akka-k* ‘father’s brother FB,’ Eyak *aqaq* ‘mother’s elder brother MB+,’ Haida *qā* ‘mother’s brother MB,’ or Hunza Burushaski *ggo* ‘mother’s brother MB.’ These terms exhibit substantial changes, losses, or adjunctions but nevertheless remain at a small phonetic distance from the etymon and strongly contribute to the validity of the series, though not as massively as the first category reflexes do.

A third category contains even more differentiated terms. These may be reflexes of the etymon under consideration, but their phonemes show equivalent phonetic compatibility with other potential etyma. Words belonging to this category participate only marginally in setting up the etymon’s shape and do not contribute much to its validity. Cognates such as Abelam (Indo-Pacific) *wau* ‘mother’s brother MB’ or Classical Latin (Eurasian) *aw-us* ‘grandfather GdF,’ *aw-unkul-us* ‘mother’s brother MB’ belong to this category. Both could derive from a range of pseudo-etyma such as *?BABA, ?GABA, ?BAGA*, etc., without marked complication of the phonetic derivative string.

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3. Classical hyperonyms such as Sp (spouse = W or H), Ch (child = S or D), GdF (grandfather = FF or MF), GdM (grandmother = FM or MM) or GdPt (grandparent = GdF or GdM) will also be used here.
Nevertheless, these words are interesting. On the one hand, Latin *sw-us* belong to a family where clear reflexes of the etymon are widely attested, being part of a Proto-Indo-European etymology (Pokorný 1959, Wordick 1970) going back to Proto-Indo-Hittite *xʷaxʷ*(A). These Abelam or Latin cognate reinforces the series at the local level without major bearing on its distribution.

Finally, a fourth category contains terms that are semantically coherent with the rest of the series. Phonetically, a sub-string of its shape exhibits a strong similarity with the etymon, while the rest of the word is a possible result of affixation or composition. Many Australian words for ‘mother’s brother MB’—besides the numerous clear reflexes of KAKA mentioned in the Appendix—fall into this category, e.g. Aranda *gamonna* ‘mother’s brother MB.’ We did not retain them in the series, though specialists in Australian languages might well show that they indeed belong to it.

### 2.2. THREE TESTS ON THE ETYMON KAKA

As explained above, we were working with an already identified etymon, trying to widen its geographical and genetic linguistic basis. This situation creates the conditions for a triple test.

**Test 1.** The rate of newly found cognates with regard to the number of investigated languages could (1) fall within the random convergence range, (2) largely exceed any reasonable random hypothesis or (3) fall into a middle range, leaving room for reasonable doubt. We do not give figures here to separate the three cases, because the statistical basis for it is lacking at the present time. Thus, we will have to rest on our subjective judgment to decide which cases are doubtlessly beyond or within random convergence. This has been customary for more than two centuries with regard to regular phonetic correspondences, which are rightly assumed to fall beyond any reasonable random convergence without a single probability calculation having ever been made. This surely does not deprive regular correspondences of reliability; impressionistic assessments only stretch the space for doubt, while a statistical calculation would shrink it.

**Test 2.** Ruhlen’s data show a distribution mostly in Asia and the Americas. This fact could lead one to consider the etymon as belonging to a remote antiquity, though not necessarily to the Proto-Human heritage. Thus, in the case of a non-random answer to test 1, the geographic and genetic distribution of languages included in the series would also be of importance.

**Test 3.** We sought to identify in more or less exhaustive kinship term lists possible reflexes of KAKA on an essentially phonetic basis, without regard to the kin relationship(s) referred to by the terms. This left the door open to discovering phonetic “cognates” widely spread over the whole range of kinship positions, causing semantic derivation problems in which the observed phonetic convergence were not correlated with any particular kinship position(s). To explain this phenomenon would raise unexpected problems and would probably not be entirely, if at all, compatible with a common heritage, at least in the classical sense.

### 3. DISCUSSION

#### 3.1. RESULTS OF THE TESTS

**3.1.1. Statistical validity of the series (test 1)**

The table given in the Appendix includes 531 reflexes of KAKA in 495 languages or proto-

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4. In a given language, forms differing only by the affixation or the composition—e.g. Bandi *kééye* ‘father F’, *kééye wál* ‘grandfather GdF,’ or Bassa Nge *(ndé)-òko* ‘grandfather GdF,’ *(nnde)-òko* ‘grandmother GdM’—are counted for just one. The total number of forms presented here is 653.
languages. Most of them (469, or 88.4%) are first- (234, or 44.1%) or second-category (235, or 44.2%) reflexes. These phonetically highly coherent reflexes certainly make this one of the more robust global etymological series ever built.

We retained only a handful of third-category cognates (66, or 12.5%) among numerous candidates (corresponding to the lower phonetic requirements for this category) in the two kinds of cases (respectively those of Latin and Abelam) described in section 2.2.

However, it would not be statistically valid to compare directly this total number of cognates with the total number of the languages we investigated. As a matter of fact, some of these cognates have been taken over from previous studies (such as Guthrie 1967-1971, or Ruhlen 1994a), in which the number of languages under investigation is unknown to us. Taking them into account on a one-to-one basis would clearly introduce a strong inflationary bias. Conversely, rating their number with regard to the total number of languages of the family they belong to (and at which level?) would assume that all the languages of this family have been investigated, certainly introducing a deflationary bias. Other cognates come from multilingual vocabulary lists giving only a subset of the kinship terminology. For instance, Koelle (1854) does not elicit in any form the crucial position of 'mother's brother MB,' while we know from other sources that at least some of the languages in his sample (e.g. Fula) have a cognate of KAKA for this position. Including the languages studied by Koelle in a general statistic would entail another deflationary bias.

Thus, some languages must be kept separate from our statistical approach. Practically, data from Ehret (1980), Guthrie (1967-1971), Koelle (1854), Ruhlen (1994) and Starostin’s database Tower of Babel have been excluded from the counts below. In the remaining 328 languages, we identified 364 reflexes (instantiated in 455 forms) of KAKA. Compared with the some 700 languages we investigated, this amounts to nearly half the languages that had at least one reflex of RARA. Given the time depth at which we are operating, such a rate of correlation is enormous. Is seems however quite coherent with the findings of Murdock (1957) concerning MAMA and PAPA.

Moreover, Koelle’s data, while omitted from the general statistics, constitute a statistical test for the Niger-Congo family. His work describes 10 kin relationships covering 12 positions (father F, mother M, grandfather GdF [= FF and MF], grandmother GdM [= MM and FM], son S, daughter D, elder brother B+, elder sister Z+, younger brother B−, younger sister Z−) in 200 African languages, most of which belong to the Niger-Congo family. Of these 200 languages, 55 (27.5%) have at least one reflex of KAKA. Among them, 52 languages have a reflex under the gloss ‘grandfather GdF’ (of which 37 attest the same reflex, identical or in composition/derivation, under the gloss ‘grandmother GdM’); 6 languages have a reflex under the gloss ‘elder brother B+,’ 3 under the gloss ‘father F,’ and 2 under the gloss ‘elder sister Z+.’ However, as mentioned previously, Koelle did not elicit the terms for ‘mother’s brother MB’ or for ‘uncle.’ But we know that at least some languages from his sample (e.g. Fula, Koelle’s “Puluć”) use the same reflex of KAKA to designate the mother’s brother MB and the grandfather GdF. This leaves open the possibility that the basic 27.5% figure of reflexes in Koelle’s language sample would be significantly increased if we could add the data for the mother’s brother MB from these languages.

These statistical facts make it extremely unlikely that the etymological series of KAKA is a case of coincidence.

3.1.2. Geolinguistical validity of the series (test 2)

Test 2 also receives a clear answer. The bulk of cognates is significantly spread over all the continents and over a number of language families.

Africa is widely represented by Niger-Congo, with cognates in Mande, West Atlantic and the large Central Niger-Congo branch. Data on Nilo-Saharan languages are somewhat scarcer; however, the presence of cognates in languages from four Nilo-Saharan primary branches (namely Songhai, Saharan, Central and Eastern Sudanic) clearly favors the original existence of KAKA in this phylum as
well. Afroasiatic is well represented as well, with Semitic, Chadic and Cushitic branches. Khoisan reflexes seem to be lacking, first of all because of the difficulty to compare the Khoisan clicks with consonants in other language families.

**Eurasia** is represented by all branches of Eurasian (in the Greenbergian sense) but Chukotian (i.e. Indo-Hittite, Uralic-Yukaghir, Altaic, Korean-Japanese-Ainu, Gilyak, and Eskimo-Aleut), Semitic (see above), Burushaski, Sino-Tibetan, and Austro-Eurasian (with Yao, Mon-Khmer and Austroasiatic). In Dravidian, an AKKA form is attested with the two meanings of either ‘maternal grandparent MF, MM’ (Central Dravidian) or ‘elder sister Z+’ (Southern Dravidian); a handful of KAKA forms having been borrowed from Indo-Aryan, which most clearly appears from their common meaning of ‘father’s brother FB.’

**America** is represented by all twelve primary branches of Amerind, all of which attest numerous reflexes. In Na-Dene, each of the three most divergent languages (Haida, Tlingit and Eyak) attests one or two excellent reflexes, and if the Athabaskan branch, whose some 30 languages have been investigated, attests KAKA only sporadically and with feminine meanings, its presence at the Proto-Na-Dene stage seems secure. Together with Burushaski and Sino-Tibetan in Asia, this makes it quite likely that the Dene-Caucasian macro-family had the word, even in its apparent absence from the three other branches, namely Basque, Yeniseian, and North Caucasian.

**Australia** is massively represented by Australian, with seven non-Pama-Nyungan and nine Pama-Nyungan branches, plus a number of unclassified languages from both sides.

Beyond the Austronesian languages spoken on its coasts, **New Guinea** is without doubt represented by the Indo-Pacific phylum. Clear reflexes of KAKA are found in quite a range of Indo-Pacific subgroups. If Rai Coast languages such as Nganglau or Saep exhibit obvious borrowings from Austronesian, with the typical meaning of ‘elder sibling of the same sex as ego,’ the same being probably true for some languages of the Timor-Alor-Pantar group, languages from other groups attest clear reflexes with no possibility of having borrowed it from Austronesian, nor from any other language family.

Few groups give openly negative results. Kartvelian (4 languages) is almost the sole language family where we found absolutely no reflex. In the Indo-Iranian and Indo-Aryan branches of Indo-European, the numerous kasaka words for ‘father’s brother FB’ must have been borrowed, replacing everywhere (except in Dardic) the Proto-Indo-European derivative of *pater ‘father F’ (e.g. Sanskrit pitroya or Classical Latin patruus ‘father’s brother FB’) which designated the father’s brother FB. Both Indo-Iranian and Indo-Aryan have lost any reflex of Indo-Hittite XXX(A) ‘mother’s brother MB’, ‘father’s father FF’, ‘mother’s father MF’ before their respective Avestan and Sanskrit stages, and have replaced the ‘mother’s brother MB’ with a MAMA-derived word (a rather rare, though not unique, fact). As we have seen above, the Athabaskan branch of Na-Dene (34 languages), exhaustively investigated, displays only four reflexes. In practically all the other language families, such as Indo-Pacific or Khoisan, the lack or the low number of identified reflexes express above all the scarcity of documentation and/or the difficulty to attain and interpret it.

This huge distribution covers at least four major continents (Africa, Eurasia, the Americas, and Australia) as well as eight to ten phyla (Niger-Congo, Nilo-Saharan, Eurasian, Dravidian, Dene-Caucasian, Amerind, Austro-Eurasian, and Australian, plus quite probably Afroasiatic and Indo-Pacific). Finally, the phyla contributing reflexes of KAKA at the stage of their proto-language represent a total of 3,500 to 4,500 languages out of the 5,000 to 6,000 known languages of the world: 1,032 Niger-Congo languages, 959 Austronesian languages, 583 Amerind languages, 258 Sino-Tibetan languages, 170 Australian languages, 138 Nilo-Saharan languages, 144 Indo-Hittite languages, 63 Altaic languages, 34 Na-Dene languages, 24 Uralic-Yukaghir languages, 19 Semitic languages, 9 Eskimo languages, 3 Yao languages, 1 Gilyak language and 1 Burushaski language, to which probably add

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5. Warm thanks to Tim Usher for his Indo-Pacific and Australian data.
731 Indo-Pacific languages and 241 Afroasiatic languages (figures from Ruhlen 1991). Thus, two thirds to three quarters or more of all the human languages are concerned.

Consequently, KAKA is certainly one of the most widely illustrated global etymologies in both geographical areas and genetic diversity.

3.1.3. Semantic validity of the series (test 3)

We have already stated that the phonetic validity of the reflexes is close to the maximum, with almost nine out of ten cognates belonging to the two unambiguous categories 1 and 2 delineated above (section 2.1.2), half of them being direct or nearly direct category 1 reflexes. This derives partly from the fact that it was a primary criterion in the selection of data.

As regards the semantic validity, some scattering of the reflexes within the kinship field could be expected. The 328 languages of our statistical reference sample exhibit 455 possible reflexes of KAKA, distributed over more than thirty different kin types as diverse as the father F, the mother's brother MB, the cousin FBS-FZS-MBS-MZS, the father-in law HF-WF, the nephew BS-ZS, the elder sister Z+, the mother's brother's wife MBW, the grandchild GdCh, etc. Does this not look like a typical case of random spreading of the KAKA phonetic form over the whole kinship semantic field?

A look at Table 1 instantly shows that the reverse is in fact true. Of all these kin types, only 5 or 6 are significantly represented. The mother’s brother MB (31.1 %) alone accounts for one third of the languages, and with the grandfather GdF (22.9 %) and the elder brother B+ (21 %), we round up exactly three-quarters of the languages and over half the reflexes. Furthermore, these three positions are found in almost all the major geographical areas covered by the series (Africa, Eurasia, the Americas, and Australia), and in a large number of language families. It is crucial here to observe that these three meanings, to which one may add the father’s brother FB, stand for a male elder direct consanguineal quite near to ego—with the remarkable exception of ego’s father F.

![Table 1. Number and percentage of reflexes of KAKA for the main kin positions in our statistical reference sample of 455 cognates from 328 languages (percentages are calculated with regard to the number of languages).](image)

An apparent exception is the high number of grandmother GdM represented in the sample. This results partly from the 26 grandparents GdPt which have been counted on the two positions of GdF and GdM (as the 7 elder siblings have been counted both as elder brothers B+ and elder sisters Z+). Furthermore, as is most conspicuous in Koelle’s (1854) data on Niger-Congo languages (not included in our statistical sample), using a reflex of KAKA to designate the grandparents GdPt, the meaning grandmother GdM is quite often secondary (as appears from their derived or compound form), while it never happens that the form for grandfather GdF is derived from grandmother GdM.

It is also noteworthy that three representative feminine positions, including the grandmother GdM plus the elder sister Z+ and father’s sister FZ, could represent a non-random minor subset of reflex meanings. They constitute the feminine mirror image of the three most widely represented masculine positions in the table (mother’s brother MB, grandfather GdF, and elder brother B+). Although the father’s sister FZ as such appears only six times in the reference sample, two more are mentioned by Ruhlen (1994a) and many of the ‘aunts’ appearing in this latter’s data might stand for the father’s sister FZ as well, according to the respective kinship system of the
concerned languages (the ‘aunt’ glosses might easily result from confusion or simplification made by
the primary descriptors).

Consequently, the terms are not scattered all over the kinship semantic field. To the contrary,
three positions, close to each other, account for a majority of the items collected. Also, the exclusion
of ‘father F’ is a factor of consistency, considering the particular position of this kin type in ego’s
kinship system. This very close semantic coherence strongly contributes to the etymological validity
of the series.

3.1.4. Conclusion

The results of the three tests for KAKA respectively lead to the following conclusions:
(1) In the languages under investigation the new cognates rate is very high.
(2) Their geolinguistic distribution is global.
(3) Their semantic consistency is compelling.

The conclusion is correspondingly unambiguous: we are faced with an etymological series at
the global level. To explain its existence requires examination of the various competing hypotheses.
In the next subsection, we will consider the three well-known conditions that may give rise to
apparent etymological convergence in the absence of a common inheritance—namely chance, sound
symbolism, and borrowing.

3.2. THE POSSIBLE EXPLANATIONS

3.2.1. Chance Resemblances

In test 1 above, we stated that no satisfying models had been built to calculate with precision
the probability of random similarities between words. We have to rely on impressions, as has been the
case for regular sound correspondences since the beginning of comparative linguistics more than two
centuries ago. However, nobody questioned the reliability of regular sound correspondences on the
grounds of hypothetical random convergence. Why? Because of the obvious unlikelihood of this
possibility, resulting precisely from the dividing effect of recurrent convergences on the probability
that these are due to chance.

In multilateral comparison, the degree of similarity and the number of presumed cognates
constitute two other types of recurrence that should be taken into account when appreciating the
validity of a particular etymon. Like regular phoneme correspondences, these recurrences mitigate the
initial likelihood of a random event. Naturally, one has to take into account the number of languages
where one has looked for similarities, but the more languages involved in a multilateral comparative
series, the less likely it is that cognates are due to chance.

Is it conceivable that the parallel phonetic and semantic similarities between Proto-Bantu
*-kààkà ‘grandparent GdPt’, (‘mother’s brother MB’), Proto-Semitic *ʔax ‘elder brother B+’,
Proto-Indo-Hittite x\textsuperscript{W}Ax\textsuperscript{A} ‘mother’s brother MB’, ‘mother’s father MF’, ‘father’s father FF’, Yukaghir
xa’xa ‘mother’s brother MB’, ‘mother’s father MF’, ‘father’s father FF’, Proto-Altaic *āka ‘elder
brother B+’, Proto-Eskimo *akka-k ‘father’s brother FB’, Vietnamese kàw ‘mother’s brother MB’,
Proto-Austronesian *kaka ‘elder brother B+’, Burushaski ngò ‘mother’s brother MB’, Haida qà
‘mother’s: brother MB’, Tlingit kak ‘mother’s brother MB’, Eyak aqag ‘mother’s elder
brother MB+’, Proto-Australian KAKA, ‘mother’s brother MB’, (‘grandfather GdF’), as well as all the
other cognates listed in the Appendix, result from chance convergence? We think that the question
answers itself.
3.2.2. Sound symbolism: Jakobson's hypothesis

Many linguists believe that the famous linguist Roman Jakobson had explained once and for all the world distribution of PAPA- and MAMA-like words by linking them to the early appearance, in babies’ babbling, of [p] and [m] consonants (Jakobson 1960). According to him, the ”nursery words” PAPA and MAMA would have resulted from spontaneous, convergent formations. This would explain their presence in many languages families from all over the world that were, in his time, allegedly unrelated. Jakobson, in the very first lines of his paper, axiomatically claims the unrelatedness of the languages covered by the impressive “World Ethnographic Sample” of Murdock (1957), the collection of which he had encouraged along with Joseph H. Greenberg, and which he used as a starting basis for his hypothesis.

A careful reading of Jakobson’s paper reveals, however, that he is far from committing himself as firmly as commonly thought. Admittedly he speaks of the ”nasal murmur” as the only possible vocal emission for the suckling baby to justify the association between consonant [m] of MAMA and the breastfeeding mother. Nevertheless, he immediately points out that, in at least one observed case the word papa was learned before mama. Note that Jakobson uses the verb ”learn.” In no way does he claim that the child, with or without the help of his parents, had invented any of these kinship terms. In fact, Jakobson does not claim positively that a single case of such invention had been directly or indirectly documented; nor does he even claim that such an event should be considered as likely. He only shows how such an event could be explained, had it really happened. This is a reality that merely follows from Jakobson’s assumption that languages of Murdock’s sample are unrelated, a belief he shared with most linguists of his time.

Now, as far as we understand Jakobson’s reasoning, taking his hypothesis seriously would imply that in every independent language group where we find apparent reflexes of PAPA and MAMA, a single human family had adopted as a permanent designation for the parents in relation with their child the first syllables uttered by their baby during the initial period of language acquisition. Further, it would imply that this designation had been preserved in their lineage, then extended to the neighbors, and finally generalized to all the speakers of the language.

Given the present extension of PAPA and MAMA, this process would have happened quite a number of times. Furthermore, the cases where these words had spread to all the speakers of a given language should be only a small proportion of the total number of times they had come into the world. In most cases, the term would have stayed confined to a family, a village, or a region, not to mention the many instances where the word would have survived for a couple of years within the family and then vanished, as do most real nursery words (in the sense of ‘words forged or modified by a particular child during the early stages of the language acquisition process’), which are forgotten as the child grows.

Validating these intermediate stages of transmission, implicit in Jakobson’s hypothesis, would suggest that the words papa ‘father’ and mama ‘mother’ spontaneously arise with almost every speech-endowed child. As a consequence, one would expect to find today, in many languages where the standard terms for ‘father’ (and ‘dad’) or ‘mother’ (and ‘mum’) are phonetically incompatible with the etymological series PAPA or MAMA, lots of papa and mama spontaneous formations at

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6. This is a much stronger claim than the classical claim that some languages may not be shown to be related. Here, what one supposedly cannot demonstrate to be true — the relatedness of all languages — becomes self-evidently false. In fact, Jakobson does not even mention two languages or language groups he would consider independent from each other in Murdock’s sample, just as if non-relatedness were an inherent collective property of human languages. Those whose relatedness had been successfully demonstrated thus become a rather meaningless exception to this non-relatedness general rule...

7. Given that languages exhibiting resemblances are unrelated, these resemblances must have another cause than common descent and thus do not demonstrate a common origin: unanswerable.
various degrees of generalization. To the best of our knowledge, the linguistic literature does not make mention of such facts. This raises more than a doubt about the general validity of the spontaneous generative theory.

Moreover, as observed by Ruhlen (1994a), the wide attestation of KAKA among the world languages constitutes another major problem for Jakobson's hypothesis, because consonant [k] is by no means an early-acquired phoneme.

There is another problem as well. The suckling infant's nasal murmur might account for a binary opposition between MAMA 'mother M' and PAPA 'father F' (even if, as we have said above, Jakobson himself did not go as far as to assert it overtly). In this hypothesis, the [m] is implicitly assigned to the 'mother M' by a Pavlovian conditioned response: through repeated co-occurrence, the vocal and auditory stimulus emitted by the infant would be mentally associated with the gustatory, olfactory, and tactile stimulus generated by breastfeeding. The non-nasal sound [p] corresponding to [m] would then be assigned by some kind of default rule to the non-breastfeeding relative corresponding to the 'mother M' in the family organization (i.e. the father F). This explanation fails as soon as the phoneme [k] of KAKA is added and a third relative, the 'mother's brother MB' and/or the 'elder brother B+'.

What kind of sound symbolism might explain why the 'mother's brother MB' and the 'elder brother B+' are represented in so many languages by consonant [k] and in almost none by [p], while the 'father F' is exactly in the reverse situation? If maternal breastfeeding may admittedly produce a correlation between the phonetic [nasal] and the semantic [maternal] features, it is difficult to find support for a correlation between the [labial] and [paternal] features as well as for the correlation between the [velar] and [avuncular / fraternal] features.

In a refined, two-tiered, structural version, the binary opposition between [m / n] - [maternal] and [p / t] - [paternal] could have generated an opposition between [nasal stop] - [feminine] and [non-nasal stop] - [masculine] on the one hand, while the fact that the four consonants [m n p t] designate direct ascendants had led to an opposition between [front stop] - [parental] and [back stop] - [collateral kinsperson]. Thus, the [k] of KAKA would intrinsically bear the semantic features [masculine] because of its non-nasality and [collateral kinsperson] because of its non-frontality.

Assuming that these oppositions are at work today or at least worked in historical times (which follows from the fact that they essentially discard the unity of origin hypothesis) would imply that the associations between phonemes and semantic features are extremely strong. Thus, one would certainly expect these phonemes to be used by many languages not only in the designation of the close kinship relationships, but also to designate things where the concerned semantic features are salient. In particular, in relation to the assumed most fundamental association between the nasality feature and the maternal breastfeeding, one would expect, in present-day languages which contrast genders in nouns, to find a nasal consonant (or a nasalized vowel) commonly associated with the feminine gender. Once again, this does not seem to be the case.

No doubt the congruence of Jakobson's hypothesis with the dogma of the obliteration of linguistic similarities prior to the Indo-European firewall (i.e. before 5,000 BP to 8,000 BP) was appealing to many linguists, because it accounted for two of the most conspicuous elements of the common world vocabulary^8. And the acceptance of this proposal, without debate, by the linguistic

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8. One will observe that PAPA and MAMA are more conspicuous than KAKA for a unique reason: they readily exist in the native languages of the linguists, i.e. mainly Romance or Germanic languages. Though KAKA is also present in these languages through the reflexes of Indo-Hittite XAWAXA, e.g. English uncle, German Oheim ‘uncle,’ Opa ‘grandfather,’ Oma ‘grandmother,’ Spanish abuelo ‘grandfather,’ French oncle ‘uncle,’ dieul ‘grandfather, ancestor’ (> Latin aviulus ‘little grandfather’), these forms are so opaquely modified by the (regular) phonetic evolution that no linguist before Joseph H. Greenberg (personal communication) and
community, in spite of quite obvious defects in Jakobson's treatment of Murdock's data, did in fact bury any attempt of a historical comparison of kinship terms until Ruhlen, thirty years later, happily questioned it.

In light of the preceding discussion, there seems little doubt that Jakobson's hypothesis was indeed hardly a hypothesis, but rather some kind of informed speculation 9; that its relevance to PAPA and MAMA, his declared objects, is certainly very relative and simply groundless as far as KAKA is concerned.

We would not deny, however, that these three words (and some other ones) display a particular phonetic structure, as well as quite interesting semantic and pragmatic peculiarities. We will return to this subject in the final section 4. In any event, nothing in these phonetic, semantic, and pragmatic characteristics explains the two world convergences PAPA 'father F' and KAKA 'mother's brother MB', 'elder brother B+', 'grandfather GdF' on the basis of two symbolic associations between these respective kin relationships and consonants [p] and [k].

3.2.3. Borrowing and diffusion

In linguistics, diffusion refers to the process resulting in so-called areal features, common to languages belonging to different families for which such features are not otherwise widespread, such as the presence of vowel [y] in Breton, French, German, and Hungarian. Such features are supposed to have spread from the bulk of languages already having it to new ones by the simple strength of vicinity and the linguistic exchanges that may result from contacts between neighboring speakers. We will not defend here any particular opinion about areal features and their diffusion. Anyway, it must be borne in mind that these features are different in nature from words, so that their possible diffusion may not be simply extended to these latter.

Borrowing, to the contrary, is the process by which a language acquires a new word from another one. Sometimes a word may be borrowed several times, and travel quite a long way from its linguistic origin. This is well known for cultural terms referring to particularly attractive goods such as alcohol, tobacco, or television: the words then travel with the object referred to. However, in this process, any new language borrowing a word borrows it from another particular language—not from several ones. One may quite clearly illustrate this point with English, which borrowed several thousand words from French—not from Romance languages, and even less from Western European languages.

What is the import of this distinction between borrowing and diffusion on our present discussion? If words are, as it seems to be the case, borrowed from one language into another, it may be for a specific reason such as for the traveling goods and their names; or by chance (i.e. for an unknown reason, pertaining to individuals and circumstances). Any word may be borrowed from one language into another, though basic vocabulary is much less subject to borrowing than other words or morphemes. However, a word borrowed by chance is not very likely to be borrowed a second time—from either of the first two languages—by a third language; obviously, the probability that the same word was borrowed a third time by a fourth language is still much lower, etc.

Merritt Ruhlen (1994) had the idea to link the KAKA words into a widespread comparative series. Who said ethnocentrism?

9. While Murdock's "World Ethnographic Sample" covered more than 500 languages, Jakobson quotes in his whole paper linguistic facts from only two languages, which were moreover personally quite familiar to him: Russian (his maternal tongue) and Bulgarian (pretty close to the former). This famous paper was written for a volume in homage to Heinz Werner, a psychologist who has today passed somewhat into oblivion. It seems as though Jakobson had taken the nice and well-documented data compiled by Murdock as an excuse to rid himself—astutely and brilliantly, indeed—of a chore he had probably been asked to perform hundreds of times.
This leads to an antagonistic contradiction between chance borrowing and language splitting: the more independent languages or language families exhibiting the same word, the less likely it is that they borrowed it from one another. In the case of global etymologies, and particularly in the case of KAKA, well attested as it is in several mega-phyla, this contradiction reaches its maximum. Then, how many independent language families would have borrowed this word from one another? Would it have been the several dozen low-level language families where this word is found? This is completely impossible—geographically, semantically, and statistically. Would it then have been the round half-dozen of mega-phyla where KAKA is today securely attested? Even this would be very unlikely. Perhaps one of the two primary branches of the Proto-Human family could have borrowed it from the other branch? If these branches were identifiable, this could be possible, though not the most probable explanation compared with common inheritance from the Proto-Human language.

One may further observe that, in the case of global etyma, areal diffusion is almost as unlikely as borrowing. It forces one to suppose that independent languages sharing the considered feature (or word, for that matter) were once joined into an area, i.e. were spoken close enough to one another to circulate this feature. Clearly, the several dozen low-level families for which KAKA is documented do not constitute a geographical area in the Paleolithic conditions of communication. If it were claimed that the Proto-Australian, Proto-Amerind, Proto-Niger-Congo, Proto-Eurasiat, Proto-Austrec, Proto-Dene-Caucasian (as well as, probably, Proto-Afroasiatic and Proto-Nilo-Saharan) speakers might once have lived close enough to each other to have exchanged such words as KAKA (and many others), the result would not be very different from what we are advocating here. However, it must be insisted here that such process of word diffusion, just like the alleged common invention by babies of MAMA-, PAPA-, or KAKA-words, is unknown in real languages.

Thus, neither borrowing nor diffusion may constitute a satisfactory explanation to the lexical series of KAKA.

3.3. Conclusion

None of the three considered factors is an acceptable explanation for the similarities among the data presented here. Thus, the only explanation left is common origin. The etymon KAKA must have been an element in the lexicon of a proto-language ancestral to all languages and language families covered in the Appendix—as well as many others, most probably. The worldwide scattering of these data dates this proto-language back to a major event in the prehistory of Homo sapiens, that we propose to call the Great Dispersal, which was Homo sapiens' first big expansion over the surface of the Earth (though not the first world expansion of a hominid). According to archaeological evidence, this expansion would have taken place between 100,000 BP and 40,000 BP, a date which seems compatible with the demographic bottleneck recently found by genetic means around 60,000 BP.

The only available general linguistic framework with which these data seem to be consistent is the unity of origin of all the world's languages advocated by Bengtson and Ruhlen (1994)—a framework into which Ruhlen (1994a) had initially started to build the etymon KAKA, and that finds here strong confirmation.

4. Perspectives

Such firm construction of a global etymon indicates the existence of a global mother tongue as old as 50,000 years or more. As new global lexical series are added to those already published, and
are refined and reinforced, the Proto-Human hypothesis will gradually become accepted.

Besides the anthropological insight into the kinship system of our ancestors at the time of the Great Dispersal, which we will address in the second part of this study (Matthey de L'Étang & Bancel, this volume), KAKA and the other kinship nursery words—such as MAMA, AJA, PAPA, NANA or TATA—have a linguistic interest of their own. The childlike properties of these words, often invoked to discard the common origin hypothesis, have been misinterpreted.

In section 3.2.3 above, we identified specific properties of several of their fundamental aspects—phonetic, semantic, and pragmatic. Phonetically, each nursery word relies on a single basic consonant (a plain oral [p t k] or nasal [m n] stop without any articulatory complication). Furthermore, all the nursery words use the same vowel [a], which may be regarded as a good candidate for the most basic vowel; its location at the apex of the vowel triangle maximizes its distinctiveness, while it is produced with minimal tension of the articulatory organs. The CV syllable made of one of these consonants plus vowel [a] is, in turn, the simplest of the compound syllables (another is the VC syllable, which is, however, commonly used in only a small proportion of languages). The word results from reduplication of this CV syllable. The salient property in this description is simplicity. Simplicity of consonants, simplicity of vowel, simplicity of syllable, simplicity of reduplication: the phonetic design of the kinship nursery words seems to conspire to avoid complexity.

This phonetic simplicity is, of course, one of the main reasons that these words were assigned to child language. However, if it is not the children who invent these words each time one of them learns an articulated human language—an idea we rejected in section 3.2.2 above—another childhood may have seen these words come to light: that of articulated language itself, or more exactly the stage corresponding to the invention of oral lexicon (that of syntax evidently being later). This stage of human language evolution naturally inaugurated a phase of rational exploitation of human articulatory abilities, and certainly began by using the simplest phonemes and syllabic structures—exactly what we are faced with here.

Semantically, many factors—sociological, psychological, or pertaining to survival and reproductive effectiveness—also make kin terms excellent candidates to have been among the first lexically individuated items.

At the pragmatic level, it is noteworthy that the appellative nature of many of these words (though the distinction between appellative and reference terms is frequently neglected by the descriptors) makes them particular linguistic objects, sharing several similarities with proper nouns. A range of syntactic properties shared synchronically by the appellative kin terms and proper nouns confirms this peculiarity. This limits the level of cognitive abstraction for an individual to associate a sound sequence with a class of objects (only his close kin is concerned); this may have been another factor favoring the emergence of articulated language.

One will notice that, according to this conjecture, ontogenesis of language in the human nursling would at least partly mimic its phylogensis in the species—another point where language evolution would parallel biological evolution.

That a Proto-Human language may be as old as 50,000 BP makes the preservation of kinship nursery terms striking. The transmission of MAMA, PAPA, and KAKA with little change over 100,000 to 200,000 years to modern languages disrupts our notions of the possible duration of human collective memory. We would then have to consider why some parts of language resist change much better than others. Most probably, the massive daily repetition of the kinship terms during childhood and youth, as well as the heavy affective investment of the speakers toward the persons referred to by these terms, should account for a good part of this resistance.

Although this idea is at present largely conjectural, the convergent elements above do not seem deprived of any strength. According to this conjecture, the words MAMA, PAPA, KAKA and some others would date from an unknown antiquity, though certainly much older than the Great Dispersal
of Homo sapiens and probably to be counted in hundreds rather than dozens of millennia. The linguistic means presently at our disposal do not permit us to judge this conjecture, which represents an unprecedented challenge for the linguistic community.

REFERENCES


MATTHEY DE L’ETANG Alain & Pierre J. BANCEL. This volume. Tracing the Ancestral Kinship System: The Etymon KAKA. Part II: An Anthropological Study.


Appendix

The etymological series KAKA

‘mother’s brother, grandfather, elder brother’

The table below gives the list of the likely reflexes of KAKA in four columns: MB (mother’s brother), B+ (elder brother), GdF / GdM / GdPt (grandfather, grandmother, grandparent), Others. The linguistic classification followed here is that of Ruhlen (1991); only partial subclassification is given. The forelast column gives our assessment of each reflex according to the categories described in section 2.2. The references of the reflexes given in the last column are listed at the end of the table.

<table>
<thead>
<tr>
<th>LANGUAGES</th>
<th>MB</th>
<th>B +</th>
<th>GdF / GdM / GdPt</th>
<th>Others</th>
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1. The languages quoted in Koelle (1854) have been identified with the help of the studies on the Polyglotta africana gathered in the Sierra Leone Language Review III (1964) and IV (1965), which are summarized in Dalby (1964). The glossonyms given by Koelle’s informants are between parentheses. Koelle’s transcription has been transposed as closely as possible to IPA. It must however be remarked that his acute accent (which he describes as transcribing a phonetic stress) must obviously have noted a high tone, the specific notation (and indeed the very notion) of which was unknown in the middle of the XIX° century. We reproduce here this accent as in the original.
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<td>Nupe (Núüpe)</td>
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**NILO-SAHARAN**

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**Saharan**

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2. We give here two “standard” Proto-Indo-European reconstructions (among others): *au- ‘elder, uncle’ (Pokorný 1959) and *H₁ewyH₁-os ‘mother’s father, father’s father, mother’s brother, etc.’ (Wordick 1970). However based on the same data, these reconstructions display at first glance quite serious phonetic and semantic differences, nor may either of them account satisfyingly for the common origin of these data. To remedy to some extent the defects of these reconstructions, we propose here an Indo-Hittite phonetic label xaxx(a) ‘mother’s father, father’s father, mother’s brother,’ taking into account the Anatolian data (Hittite and Lycian), which display in C₁ and C₂ velar or uvular consonants. As noted by Wordick (1970), the PIE “laryngeal” *H₁ could well stand for the labiovelarized velar fricative [xⁿ].
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<td>Baktamin</td>
<td>awárek my FF, MF, awók my FM, MM</td>
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**REFERENCES**


WOODS James Dominick & George TAPLIN. 1878. The Native Tribes of South Australia. Adelaide: E. S. Wigg.
Abstract: The semantic structure of the masculine etymological series GdF, MB, B+ is coherent with a kinship class that comprises the elder masculine relatives on the mother's side. The data also show a representative feminine series GdM, FZ, Z+, possibly representing the feminine elders on the father's side. Such terminological groupings suggest the existence of an ancestral terminology that recognized relatives according to sex, age status and filiation group. Such an ancestral model may easily have evolved into several well-known kinship systems such as the Crow, Omaha, or Dravidian systems.

1 PRESENTATION

1.1. Towards a proto-sapiens kinship terminology

The construction of the KAKA etymological series credits our hypothesis of the existence of a kinship terminology within Homo sapiens ancestral language, which one can suppose to be the origin of all existing kinship terminologies. This idea – which, as noted in the first part, most anthropologists reject – was outlined by Tooker (1992: 369). The present discussion aims to determine the original meaning of KAKA and to begin uncovering the semantic structure of the ancestral terminology to which this term belongs. Finally, as long as substantial features of this ancestral terminology can be brought to light, one of our objectives is also to examine the semantic relationships they might have with the terminology of the different systems that are used (or were used) by contemporary or historically known peoples.

1.2. Typology of kinship systems

Since Morgan published his monumental Systems of Consanguinity and Affinity of the Human Family (1871), in which he had brought together 139 complete terminological systems, social anthropologists have continuously collected kinship terminologies from every part of the world and have devoted much of their research to the study of kinship systems.
time and effort to interpreting them. This collective endeavour resulted in the working out of a global
typology of kinship systems, which is presently subject to a precarious consensus\(^3\).

The different systems are distinguished depending on the way they classify consanguineal and affinal
relatives.\(^4\) At ego's generation, for example, it is the matter of distinguishing or assimilating ego’s brother B
and sister Z, and the different varieties of cousins: “parallel cousins” P descending from the mother’s sister
MZ or the father’s brother FB or “cross-cousins” X, descending from the mother’s brother MB or the father’s
sister FZ. It is worth noting that this particular generation was chosen to differentiate all the various kinds of
systems. Convenient as it may seem, schematizing systems by using a single generation level has
nevertheless proven insufficient to express terminological equivalences that are not confined to just one
generation, as is the case for the Crow and Omaha systems\(^5\).

1.3 The origins of kinship systems

The questions dealing with the origins of kinship terminologies certainly constitute one of the most
tantalizing subjects within the field of social anthropology. What are the mechanisms leading to the formation
of kinship systems? Why are there several types of systems instead of just one? When did these systems first
appear? What are the existing relationships between all these different systems? These are but a few
questions that have been under constant scrutiny over the past hundred and fifty years.

\(^3\) Godelier, Trautmann and Tjon Sie Fat (1998: 5-6) observe that kinship systems typology is subject to constant
elaboration.

\(^4\) L. H. Morgan (1871, 1877) established a distinction that became classical, between the “classificatory
systems” which assimilate collateral and lineal relationships, and the “descriptive systems” which name
many collateral relationships and also certain lineal relationships by the extension or combination of the so-
called “primary terms”. This distinction has been abandoned. Today one distinguishes systems depending on
the way they classify collaterals at ego’s generation. The systems that concern us here are described with the
help of equivalences using the following symbols: german G for brother B and sister Z, parallel cousin P
(descended from FB or MZ), cross-cousin X (descended from MB or FZ), followed by a p or an m depending
on whether they are on the father's or the mother’s side.

The systems are the following:

Eskimo: G ? (X = P)

Hawaiian: G = X = P

Dravidian and Iroquoian: (G = P) ? X. At this generation level the Dravidian system differs from the Iroquoian in
using the same terms for cross-cousins X and husband H and wife W.

Crow-Omaha: (G = P) ? Xp ? Xm

Crow and Omaha systems also named “unilineal” or “skewed” systems, terminologically assimilate
relationships across several generations. Thus, one of the variants of the Omaha system (Omaha III) assimilates,
among others, the maternal grandfather MF, the mother’s brother MB, his son MBS, his grandson MBSS,
whereas one of the variants of the Crow system (Crow II) assimilates the maternal grandmother’s brother MMB,
the mother’s brother MB and the elder brother B+. Lounsbury (1964), published seven variants of these two
systems accompanied by ethnological examples.
From the very beginning, under the influence of Morgan, social anthropologists have considered kinship as an indirect reflection of biological (consanguineal) relationships, through the filter of social and marital relationships (thus including affinal relationships).

This opinion persists today. As Godelier, Trautmann and Tjon Sie Fat (1998: 5) have observed, the idea of the "influence" of marital rules upon kinship terminologies continues to be a major avenue in contemporary social anthropology. Meanwhile, modern research has abandoned the evolutionary cover in which this idea was wrapped until the beginning of the 20th century. Most anthropologists then considered the different types of systems as the expression of the different social and marital institutions that had succeeded one another through time. These social institutions were thought to be linked to the numerous stages successively reached by the different branches of mankind, on their way from "barbarism" to "civilization".

Today kinship systems are no longer considered to be traces of social evolution. Rather they are believed to be the result of choices made by societies and to be rooted in mental processes. Lévi-Strauss (1991: 87-88) always appealed to the "fundamental structures of the human mind" to account for the common basis of the various expressions of culture. As a result of this structuralist shift, that took place during the first half of the 20th century, scholars moved away from the former historical approach, denying any relatedness between structurally comparable systems other than those attributed to geographical proximity or linguistic community: "Identity of the type of kinship terminology between distant regions cannot be attributed to historical connections and must be explained in relation to general properties of the human mind" (Godelier, Trautmann and Tjon Sie Fat 1998: 6).

This methodological restriction consequently limits the historical approach of kinship systems to the field of local or regional linguistic families, which is precisely the field to which traditional comparative linguistics has limited its own investigations. This is a crucial point where these two disciplines meet and even more precisely, where social anthropology meets the requirements of comparative linguistics.

Despite this limitation, this approach has proven quite constructive and useful, showing that a number of well-established systems are deeply rooted in a remote past, proto-historical and even prehistorical. The Omaha system was already used in Proto-Indo-European (Wordick 1970), the Dravidian system in Proto-Dravidian (Trautmann 1981), in Archaic Chinese (Kryukov 1998: 297), most probably in Proto-Athabaskan some 3000 years ago, and perhaps in Proto-Algonquian at the same period (Ives 1998: 105-106). There is also a good chance that the Eskimo system was used in Proto-Eskimo and the Iroquois system was used in Proto-Iroquoian, etc.

But it would be erroneous to believe that social anthropology has once and forever banned long-term historical views about kinship from its scope. As noted previously, a hypothesis of kinship terminology ancestral to all existing systems was set up by Tooker ten years ago. Allen also joined in a similar direction. One of his recent papers (1998) deals with the prehistory of Dravidian systems. Assuming that simple systems must necessarily have preceded more complex ones, the author posits one or more simple terminological systems, reduced to four terms ("tetradic"), from which, he believes, all existing Dravidian systems (and, perhaps, all the other types of systems as well) could derive. Although he recognizes his model does not rest on direct historical evidence, but rather on a series of anthropological, sociological and historical "arguments," his attempt to investigate the prehistory of kinship certainly opens a new and important avenue of research.

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6 Allen speculates on what should be the simplest type of terminology most appropriate to evolve into a Dravidian system or, perhaps, into all other types of systems. He focuses on solutions involving a set of terms that do not address specific kin types but social units, as section names do in some Australian tribes. Finally, Allen draws an evolutionary sequence that supposes the reduction of the kin types designated by one term and consequently an extension of the terminology.
Our own approach is less pessimistic as regards historical evidence, as it relies on semantic regularities, obtained through a global etymological comparison, and how these regularities – such as they are – can be interpreted in terms of kinship or social structure. We think that the kinship lexicon at a global level constitutes global evidence, and may be indicative of the state of kinship at the time the ancestral language was spoken.

2 METHODS

2.1. Definition of a kinship etymon’s meaning

The etymological gloss of a comparative series (multilateral or standard) usually summarizes, in a somewhat intuitive way, the different meanings of the words that have been compared. Presenting their global etymologies, Bengtson and Ruhlen (1994) insisted they were not giving “reconstructions” but semantic or phonetic “labels.” In order to achieve a language classification, the distribution of the reflexes is more important than a precise reconstitution of its semantic content and phonetic shape.

But we are not aiming at establishing a language family (even though the exceptionally wide distribution of KAKA strongly advocates for a universal family). Our main objective is to highlight possible traces of the kinship system in usage among the Proto-Sapiens language speakers. This makes the semantic aspect of the comparison crucial.

The meaning of a kinship term is determined by the class of the various kin-types that it is likely to designate. (Such a class may of course consist of a single relative). This series of kin-types, which Wordick (1970: 63) termed “total meaning” encompasses, as we already noticed in part I, both the “primary meaning” (the fundamental kin-type designated by the term) and the “secondary meaning(s)” (all the other kin-types designated by the term) (Lounsbury 1964: 356-362).

But as Wordick (1970: 63-68) showed with regards to PIE, languages stemming from a common proto-language may preserve a reflex of a kinship proto-term without necessarily preserving its original meaning: sometimes the reflex has lost the secondary meanings, sometimes the primary meaning has been replaced by one of the secondary meanings, sometimes a new meaning has even been substituted for the original primary one7. These observations may also apply to kinship etyma like KAKA, the antiquity of which must be counted at least in dozens of millennia.

In the first part of our study we have established that the etymological series KAKA points to a set of meanings, at least a part of which, according to Wordick’s argument, may reflect the original meaning.

2.2. The four tests of meaning

One might ask: what are the means at our disposal to distinguish the original relationships covered by a proto-term, from the relationships covered by its reflexes?

Wordick (1970: 66) mentions two ways by which this objective may be achieved. The first is statistical. The “kernel set (the set of kin-type that is original) tends to predominate statistically among the total number of referents possible for that proto-form.” The second is semantic: “Finally, one can be sure that a particular meaning reflects a post-PIE development, when the referent in question overlaps with that of another securely established PIE kinship term.”

The first means has been already mentioned and used as criterion for testing the validity of the KAKA etymological series. It measures the distribution of reflexes within the range of kinship positions, revealing the degree of semantic scattering, and helps to establish the semantic series, composed of the statistically significant relationships (part I section 3.1.3. and table 1). Needless to say, comparing hundreds of cognates gives this statistical test great value and efficiency.

7 Wordick proposed for PIE *HewyH-os GdF, MB, but some reflexes preserve only one meaning, for example Armenian hânu grandfather GdF; other cognates present derived meanings, as Welsh ewythr "uncle" or Old Irish (h)dûe “nephew.”
The second means mentioned by Wordick has not been used, in the absence at this point of any other "securely established" kinship proto-term.

Two complementary tests have been used.

The first tests the semantic consistency of the series. This consistency is in proportion to the proximity each of the relationships will have in relation to the others within the kinship field. This includes the nature of the relationship (consanguineal or affinal), sex, age, etc.

The second accounts for the geolinguistic distribution of the different statistically representative relationships of a semantic series. The more numerous the major geographical areas and language families covered by one relationship, the more likely this relationship was part of the ancestral "total meaning."

We shall thus include in the class of relatives that might have been originally designated by an etymon (a class that can include one relationship), all the kin-types that meet the conditions of number, semantic consistency and geolinguistic distribution.

The most important criterion is obviously the first one, particularly on a global scale, and one should accept none of the meanings that do not meet this requirement.

2.3. A subsidiary test

The situation is different when dealing with statistically well-represented kin-types that either do not meet the consistency criterion (by displaying some sort of anomalous relationship within the series), the distribution criterion, or both criteria. These cases make the kin-type's pertinence to the series questionable.

That is why, in order to reach a decision, we shall appeal to a final test, anthropological in nature, which brings into play the different classes of relatives that are usually characteristic of the different types of systems. With regard to the ethnological reality, one must question the ability of several different representative relationships to build up a class of relatives that may be referred to a particular system. The answers to this last question do not have an absolute value, as they address contemporary realities, but they cannot be ignored when entering a complete discussion about meaning.

2.4. Building an anthropological model

We referred earlier to some of the numerous articles that address the question of proto-kinship systems reconstruction in various language families. As a matter of fact, most of them are mere lexical reconstructions, and only briefly address the problem of the original semantic structure (type) of the proto-terminologies, if not simply evading it.

Most of the studies that deal with this last question try to reach conclusive results by using methods generally based upon the comparison of the semantic features of the various kinship terminologies of the linguistic family under scrutiny. Trautmann (1981: 229) says he followed "the example of historical linguistics" when reconstructing the Proto-Dravidian kinship system (the system used by the speakers of Proto-Dravidian): "Having identified and eliminated the foreign elements in the data, we can confidently attribute those features that are universal to the Proto-Dravidian kinship system." The method used by Wordick (1970: 69-73) to determine the nature and extensively reconstruct the Proto-Indo-European kinship system, both lexically and semantically, also certainly deserves our attention. This author convincingly applied the formal techniques elaborated by Lounsbury (1964: 356-361) to data consisting of proto-terms reflexes taken from a large number of languages belonging to the IE family. This approach proved very productive and seems applicable on a broader scale as long as one has extensive etymological data available.

8 Lounsbury (1964: 357-358) formulates three main rules: the "merging rule," that "expresses the formal equivalence, in specified contexts, between siblings of the same sex," the "half sibling rule" that "expresses the formal equivalence between half siblings and full siblings" (FS and FD = MS and FD = B and Z) and the "skewing rule" that "expresses the formal equivalence, in specified contexts, between kin types of different generations". These rules make relationship terminologies in specified contexts predictable. Here is an...
Since we do not have such data at hand, we will rely on the semantic properties that emerge from the analysis of KAKA and interpret them in terms of kinship structure.

Inasmuch as the reflexes of a kinship etymon statistically refer to several relatives while meeting the semantic criteria just defined, information is to be obtained in terms of sex, age, generation, degree of kinship distance (either consanguineal or affinal), semantic pattern (the disposition of kin types upon the family tree), that can be referred to kinship structure, if not directly to particular types of kinship terminology. Generational diagrams are very helpful in building an anthropological model.

3. DISCUSSION

3.1.1. The KAKA semantic series

Since they meet the criteria defined in section 2.1, some of the relationships included in the etymological series (elder brother B+, mother’s brother MB, grand-father GdF) must be considered as belonging to the original class of relatives referred to by KAKA: they are statistically representative (B+ 21 %, MB 31.1 %, GdF 22.9 %), they are all masculine consanguineal relationships, and each one of them is found in most of the major geographical areas covered by the series (Africa, Eurasia, the Americas and Australia) as well as in a large number of linguistic families.

As mentioned above, some other relationships within the etymological series do not meet all the criteria of meaning. Particularly the father’s brother FB relationship, which is statistically less frequent (with 6.4%), and confined to a limited set of linguistic groups. There are also repeated occurrences of some feminine relationships, particularly at the grandparent generation level, which are at odds with the masculine majority relationships. It seems appropriate to question whether these meanings were indeed part of the original class.

3.1.2. The father’s brother problem

We will use the subsidiary – anthropological – test to question the attachment of the father’s brother FB to the class of relatives that KAKA originally designated.

There is no system that assimilates the four relationships of elder brother B+, father’s brother FB, mother’s brother MB and grandfather GdF statistically included in the semantic series. The mother’s brother MB is the relationship of our series with which the father’s brother FB is most commonly associated.

The Hawaiian system, on the one hand, generally uses a single term to designate the father F, the father’s brother FB and the mother’s brother MB.

On the other hand, there are systems, among which are those used in the French and English languages, which join the mother’s brother MB and the father’s brother FB in the same “uncle” class.

The reasons we do not think KAKA originally belonged to one of these systems are the following:

1. Had the original system been Hawaiian, one would have found traces of the father’s F relationship, to which primarily refers the {father F, mother’s brother MB, father’s brother FB} Hawaiian class. But occurrences of the father F relationship are very rare in our sample; furthermore, we have not found any example – given by Lounsbury (1964: 361-362) and quoted in Héritier (1981: 25) – of how, in the Omaha-type system of the Fox, one can predict the term designating the mother’s mother’s father’s sister’s son MMFZS. According to the skewing rule, in this Omaha context, the father’s sister FZ is formally equivalent to a sister Z, so we can rewrite the relation as follows: MM(FZ)S = MMZS. In applying the “merging rule,” according to which a mother’s sister MZ is equivalent to a mother M, one obtains M(MZ)S = MMS. Moreover, according to the “half sibling rule,” a mother’s son MS is equivalent to a brother B, so we can write M(MS) = MB. As a final result we obtain MMFZS = MB. This remote relationship will be thus termed “mother brother” MB.
system that has a reflex of KAKA encompassing the three relationships of \{father F, father's brother F and mother's brother MB\}

2. One might wonder whether the uncle class \{FB, MB\} can be the result of an evolution that led some languages, that used to assimilate the father F and the father brother FB, to create a new "uncle" category, including most notably this last relationship (FB) and the mother's brother MB relationship. The Romance languages evolved thus. The Latin term for father's brother FB *patruus* was abandoned and a new term was created to name the newly connected relationships, a term that could, as in French *oncle*, be a reflex of Latin mother's brother MB *avunculus*. A brief glance at the data will convince the reader that the same process – perhaps influenced by the Romance languages – also took place in many other non-Romance Indo-European languages.

3. A thorough examination of the data has indicated that there is apparently a limited number of anthropologically documented terms, that we know clearly refer to both mother’s brother MB and father’s brother FB, and among these an even more limited number of terms, that are cognates of KAKA. Most of the reflexes of KAKA referring to both avuncular relationships have been recorded in the Amerind family and glossed “uncle”, such as Totonac *koko* recorded by D. Pantaleon prior to 1752 and quoted in Radin (1931: 8), Kekchi *icau* (Sedat 1955: 79), Catawba *koKo* and numerous cognates recorded in South America and brought to light by Ruhlen (2000). It cannot be excluded that this Amerind series followed the same pattern of evolution as the PIE, although the gloss “uncle” might as well result from confusion between the avuncular positions made by the first European recorders\(^9\). In the absence of any documented evidence for such a linguistic evolution, one will not rush to a conclusion.

### 3.1.3. Feminine relationships

114 cognates (34.7 %) refer to feminine relationships as a kind of mirror image of the majority masculine relationships, especially at the grandparent generation.

78 terms (23.8 %) refer to the grandmother class: some designate, especially in Niger-Congo, Australian and Indo-European languages, both grandmothers MM and FM (e.g. proto-Siouan *ku*), to the paternal grandmother FM, and more rarely to the maternal grandmother MM.

Moreover, 30 reflexes (9.1 %) designate the elder sister Z+: in Africa (Luba-Katanga: *kaaka* Z+) in Australia (Karnic *kaku* Z+), in India (Telugu *akka* Z+, Tamil *akka* Z+, Malayalam *akka* Z+, Kannada *akka* Z+, Kodagu *akke* Z+, Tulu *akka*, *akke* Z+ etc.).

Finally a more limited number of reflexes (6, 1.8 %) refer to the father’s sister FZ (Hopi *ka’a* FZ, Zuni *kuku* FZ, Cheremys, *akaj* FZ- etc.). But this low number could be probably supplemented by some of the reflexes that may have been improperly glossed “aunt”, for the same reasons some mother’s brother MB reflexes were glossed “uncles” (see 3.1.2. above).

Considering the high statistical occurrence of these three relationships in the semantic series and their high semantic consistency, their affiliation to the original KAKA class of relatives cannot be ruled out.

### 3.1.4. Conclusion of part 3.1.

On the basis of the discussion developed in the present section, one will finally accept the masculine relationships of elder brother B+, mother’s brother MB, grandfather GdF (MF and FF) and possibly the feminine relationships of elder sister Z+, father’s sister FZ and grandmother (MM and FM) as the original relationships to which KAKA referred.

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\(^9\) Quite a few however have been fully aware of the difference between a father’s brother FB and a mother’s brother MB. For example, Juan de Cordova noted for Zapotec “FB” *pechetitia, pixioa* and “MB” *pizaana naaya* prior to 1576; Luis Gonzales Fray, for Zoque “FB” *tzeni, "MB" hamo*, prior to 1672; Fray Augustín de Quintana, for Mixe “FB” *tsucumteit* and “MB” *haim*, prior to 1733 (Radin 1931: 11-12), etc.
3.2. CONSTRUCTION OF AN ANTHROPOLOGICAL MODEL (diagrams A, B, C, D)\textsuperscript{10}

Data at hand do not require taking ego's sex into account in the naming of a kinship relation.

3.2.1 A cross-generational term

The semantic series, if one only takes into account the masculine relationships B+, MB and GdF, displays a remarkable structure. \textit{KAKA} refers to relationships at different generation levels. Peculiar structures that cut across generations are known in a number of variants of the so-called Crow-Omaha kinship systems, briefly mentioned in note 5 above. Lounsbury (1964) published seven variants of these two systems, illustrated by ethnological examples. One of these variants (Crow 2) assimilates the maternal great-uncle MMB, the mother's brother MB, the elder brother B+ and a few other relationships (MMB = MB = B+); another variant (Omaha 3) assimilates the mother's father MF, the mother's brother MB, the mother's brother's son MBS, the mother's brother's son's son MBSS (MF = MB = MBS = MBSS). As we can see, both variants partially account for the masculine relationships included in the \textit{KAKA} series.

3.2.2 A consanguinal relationship

\textit{KAKA} apparently refers to consanguineal relationships: elder brother B+, mother's brother MB and grandfathers FF, MF.

![Diagram A](image)

\textbf{Diagram A.} Full circles and triangles indicate the main relationships covered by \textit{KAKA}.

3.2.3 A (masculine) elder of the mother's group? Diagrams A, B, C.

With the exception of the grandmother GdM, the father's sister FZ and the elder sister Z+ relationships, the vast majority of the data refers to masculine relatives older than ego: elder brother B+, mother's brother MB, maternal and paternal grand-fathers MF, FF (diagram A). These indications suggest that age distinction and probably status pertaining to it, were of pre-eminent importance in the \textit{Proto-Sapiens} social organization.

\textsuperscript{10} These diagrams are built using anthropological symbols: a triangle for a masculine relationship, a circle for a feminine relationship; an \textit{=} sign signifies marriage; a horizontal line signifies sibling-ship; a vertical line signifies descent.
This mode of designation is in accordance with some contemporary ethnological realities. Numerous ethnic groups use a unique term (sometimes a reflex of KAKA) to designate the elders (or ancestors), just as in Latin avus ‘forefather, ancestor’, in Buriat aka ‘elder’ or Yakut āba ‘elder’, in Gorowa (Cushitic) åako ‘old man, in Mayoruna (Panoan) kuku ‘senior male cognate’, in Woaibaon (Australian) kaga ‘elder’, etc. Even more precisely, Shirokogoroff (1929: 174-175) noticed that the Northern Tungus used the term aki or oki to designate a man or a woman senior to the speaker inside his own (patrilinear) clan: the elder brother B+, the elder sister Z+, the father’s brother FB, the father’s sister FZ, the father’s brother’s son FBS, the paternal grand-father FF.

Moreover, the absence of the father F relationship, the marginal presence of the father’s brother FB relationship, contrasting with the pervasive presence of the mother’s brother MB relationship within the etymological series are powerful arguments indicating KAKA might have referred to elders belonging to the mother’s group. This idea is also supported by ethnological examples

From this consideration, one has to envisage the existence of exogamic filiation groups: classes, moieties, or clans.

Depending on the type of filiation (patrilineal or matrilineal), the elders on the mother’s side are not the same persons. In a matrilineal filiation, the masculine elders most notably refer to the elder brother B+, the mother’s brother MB, and the mother’s mother’s brother MMB. In a patrilineal filiation, they refer to the mother’s brother MB and the mother’s father MF. (Diagrams B and C)

One will observe that the KAKA semantic series refers to kin-types that can be accounted for, whether in a matrilineal filiation (B+), a patrilineal filiation (FF) or in both filiations (MB). This fact needs to be explained.

One must also explain the presence of the father’s father FF relationship in the series. The presence of kin-types pointing to opposite filiation types in a series of great antiquity can be accounted for, either by the fact that the Proto-Sapiens society had some kind of bilateral filiation, or the fact that some of the groups having emerged from this society, originally either matrilineal or patrilineal, changed their system of filiation at an early stage. The existence at an early period of both types of filiation can account for the corresponding relationships covered by the numerous reflexes. It does not seem that this hypothesis creates linguistic difficulties: the elders, members of the mother’s group would have remained KAKAs. The change would only have affected the relationships this term refers to, except for the mother’s brother MB, which remains in the mother’s group, whatever filiation type there is. This might furthermore account for the relative pre-eminence of this relationship within the series.

The presence of the father’s father FF relationship in the series finds an explanation when this relationship is associated with the mother’s mother’s brother MMB relationship (FF=MMB). This happens when the mother’s mother MM and FF are siblings (diagram B), but also when the father’s father FF and the mother’s mother MM, the mother’s father MF and the father’s mother FM are respectively husbands and wives, as in the marriage of exogamic moieties or cross cousin marriage (Diagram D).

This hypothetical situation is somewhat reflected in the data by some reflexes associating the father’s father FF and the mother’s mother’s brother MMB.

One can also explain the presence of the father’s father relationship by the early extension of the KAKA term to all kin at generation + 2.

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11 Meyer-Durlach (1928 : 21) provides an excellent ethnological example mentioning that the matrilineal Tlingit used the term k’a’k’ to designate the mother’s brother MB and that the plural of this form was used to refer to the ancestors (apparently masculine) belonging to the mother’s clan.
Diagram B. Relationships covered by KAKA in a matrilineal filiation.

Diagram C. Relationships covered by KAKA in a patrilineal filiation.
3.2.4. The feminine elders of the father’s clan?

As previously noted, the feminine series GdM, FZ and Z+ is structurally analogous to the masculine series GdF, MB, B+. For reasons similar to those exposed in section 3.1.2, one has to consider that this feminine series designates the feminine elders of the father’s group: the father’s sister FZ and the father’s mother FM in a matrilineal filiation (diagram B), the elder sister Z+, the father’s sister FZ and the mother’s mother MM in a patrilineal filiation (diagram C).

The question is now: were these masculine and feminine elders, apparently members of different exogamic groups, married to one another? Two series of arguments suggest they were.

At generation + 2 first, KAKA designates all grandparents in many languages and thus clearly refers to conjugal relationships. Furthermore, the grouping of the mother’s mother’s brother with the father’s father (MMB=FF) in some KAKA’s reflexes points to a marriage between FF=MMB and FM=MFZ, which is an expression of cross-cousin marriage at generation – 2

At generation + 1 the frequent grouping of the father’s sister’s husband FZH and the mother’s brother MB in many reflexes (Australian, Amerind) points to a marriage between the mother’s brother MB and the father’s sister FZ, which is also an expression of cross-cousin marriage at generation + 1.

3.2.6. A possible origin for all kinship systems

Our model opens into several types of kinship systems.

In the case of patrilineal filiation, it is compatible with Omaha type systems; in the case of matrilineal filiation, it is compatible with Crow type systems. These transformations, as far as KAKA is concerned, would entail the naming of additional positions. Lowie and Radcliffe-Brown after him were the first to emphasize how certain types of kinship systems, notably the Crow and Omaha systems, could derive

Cross-cousin marriage is a widespread institution. In its broader sense it means that marriage between FZS, FZD, MBS and MBD is practiced at each generation.
their architecture from the fact that ego calls all members of one lineage (except his own) or clan with just two terms, one for the feminine relationship, one for the masculine. Lowie (1934: 109) ascribed these semantic features to the clan's effect on the kinship nomenclature, whereas Radcliffe-Brown (1941: 9-17 and 1956: 68-88) ascribed them to a general principle of « lineages solidarity ». These Crow and Omaha systems show an almost perfect adequacy between the members of a clan and the class of relatives designated by a single term. In the Omaha 3 system for example, all the feminine members of ego's mother's clan, such as MZ, MBD, MBSD, MBSSD, are ego's « mothers » and all masculine members of the same clan, MF, MB, MBS, MBSS, MBSSS, are considered ego's « mother's fathers » MF.

In other respects, the anthropological model, as long as it is compatible with marriage between two groups (see section 3.2.6 above), can also be the starting point for the Dravidian system. Generating a Dravidian system from a system expressing groups of kinmen according to their age implies its splitting into generation levels. This splitting would entail marriage inside one generation between cross-cousins (diagram D). The consequence as regards terminology would be the reduction of the KAKA’s designations to only one generation and the invention of terms clearly differentiating each of the remaining relationships of the former KAKA series.

3.3.5. Conclusion of part 3

Our conclusion is that KAKA may have referred to masculine elders belonging to the mother’s group and feminine elders of the father’s group. There are also indications that these two groups, supposedly exogamic, were intermarrying groups.

4. CONCLUSION AND PERSPECTIVES

We have established that KAKA referred primarily to masculine elders on the mother's side and possibly to feminine elders on the father's side. This semantic grouping entails very important consequences regarding the nature of the Proto-Sapiens kinship system, the type of society that can be inferred from it, and the possible structural transformations of this ancestral terminology into other types of systems.

What this classificatory series suggests is that sex recognition, age of individuals with respect to ego, along with their membership to a group – that one supposes was a filiation group – must have been the essential features that the archaic terminology was designed to express. Filiation group means that “blood ties” were formally recognized, not individual kinship relationships. And as the individual relationships were not yet formally recognized, the number of terms that the system comprised was probably very limited. This system is certainly at the origin of the age differentiation (elder versus younger) that has been observed at different generation levels within all the different existing kinship systems.

This first lexical and structural insight into the ancestral system gives substantial credit to views expressed in the past, notably by Rivers (1907: 319-322) about the double nature of the ancient "classificatory" systems, expressing both consanguinity and status. Rivers did not specifically address a time frame within human prehistory; moreover, as his theory rested on scanty ethnological evidence, it has remained merely speculative until now. But the situation is rapidly changing, as the structural and semantic

In his well-known article about the origins of the classificatory system Rivers assumed that "at the time the classificatory system had its origin, the custom of exogamy was already in existence," and that this system "was in its origin expressive entirely of status. The terms would stand for certain relations within the group to which only the vaguest ideas of consanguinity need have been attached." But he also admitted that there were "definite evidence of the double nature of the classificatory system as an expression of status and of consanguinity, and definite indications of a mode of evolution of the systems by which they are coming to express status less and ties of consanguinity more."
properties of the ancestral system can be drawn using the combined evidence of hundreds of languages belonging to a range of macro-phyla.

What emerges from these remarks at the social level is that the custom of exogamy, in the simple form of two intermarrying groups (classes or moieties), as well as status based on age and sex, were already active factors shaping the Proto-Sapiens society.

Possible lines of evolution (or logics of transformation) are to be drawn, starting from what appears as a system expressing status based on age and moiety membership, to systems where clan membership is more central (like the Crow-Omaha systems), or systems that are regulated by the succession of generations and cross-cousin marriage (like the Dravidian systems).

A first significant step has been taken towards extensive knowledge of the Proto-Sapiens kinship system, and a blow has been dealt to an opinion that generally prevails within the social sciences: the supposed impossibility of investigating the social condition of prehistoric man. Moreover, a considerable amount of data remains unexploited within ethnological literature, singularly with regard to "nursery words," whose misinterpretation has already been emphasized. This makes a fairly complete lexical and structural account of the system as a thorough understanding of paleolithic Homo sapiens society a realistic goal and a thrilling task to undertake in the years to come.

REFERENCES


14 Claude Levi Strauss (1956: 266): “of the type of social organization which prevailed in the early stages of mankind, we know very little, since the remnants of man during the Upper Paleolithic Period of about 50,000 years ago consist principally of skeletal fragments and stone implements which provide only a minimum of information on social customs and laws.”

MORGAN Lewis H. 1877. Ancient Society, or Researches in the Lines of Human Progress from Savagery through Barbarism to Civilization. London: Macmillan


RUHLEN 2000a: see part I


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Was the First Language Purposefully Invented?

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In this work, the word “language” is employed to denote “all that which permits human beings to exchange complex ideas.”

The subject matter of the very first complex exchange, of the “first conversation,” must remain a matter of speculation. This admitted, it seems a near certainty that early exchanges must have touched on the subject of death and what might be done about it. Let us then assume that complex ideas about death were exchanged from the outset or very shortly thereafter, in times when there was just one language in existence anywhere in the world (perhaps employed by only two individuals). By the nature of things, the time-scale implied is less than a single generation for no one is primarily concerned with the immortality or lack thereof of his descendants.

Since neither the inevitability nor the ubiquitousness of death is self-evident, it must be learned, and aspects of such early conversations must have dealt with the nature of death and how it might be avoided. In the course of the totality of such early conversations, a convincing solution for the problem of death either was, or was not, found.

At least three lines of evidence exist indicating that a seemingly compelling solution to the problem of death was found. The first type of evidence is simply the ubiquity of religion in all subsequent times and places and the near-ubiquitous belief that the dead go to Heaven Above. (A common variation has the dead first going downwards for preparation before the ultimate upwards journey, hence a three-tiered cosmology.)

A second line of relevant evidence seems to be detectable wherever it is sought and may thus also be ubiquitous. This is the notion, and presumably the practice, of organizing the affairs of mankind on Earth Below in a manner hoped and held to reproduce or reflect the Heavens Above. (A common variation has the dead first going downwards for preparation before the ultimate upwards journey, hence a three-tiered cosmology.)

A few examples are now given, though many more are available:

In ancient Mesopotamia, the “informing thought of the Sumerian world feeling” was “What is above is below.” Similarly, the Chinese held that “everything terrestrial” had “its prototype, its primordial cause, its ruling agency in heaven.” In the West the same idea prevailed in the most familiar saying of the Western alchemists: That which is above is like that which is below and that which is below is like that which is above. It thus appears that a poorly understood backwater of the Western heritage and a major tributary of Chinese culture have tapped the same source of inspiration as does the mainstream of Sumerian thought. This

3 Ernest John Eitel, Feng Shui, Pentacle Books, Bristol (3rd edition, 1979) p.10; (first published in 1873). The Taoist text, the I-Ching, notes that the sage “…looking up, contemplates the brilliant phenomena of the heavens, and, looking down examines the definite arrangements of the earth… He traces things to their beginning, and follows them to their end… thus he knows what can be said about death and life…” (A. Bulling, The Meaning of China’s Most Ancient Art, E.J. Brill, Leiden (1952) p.12).
4 The alchemical citation comes from The Emerald Table, called “the bible of the alchemists”; see Frances A. Yates: Giordano Bruno and the Hermetic Tradition, Routledge and Kegan Paul, London (1978) p.150.
suggests an very ancient common origin for these three cultures. Likewise, in the Zohar (a Judaic mystical text of the 13th century which draws on much older sources), we find that “the inferior world is a reflection of the superior.” Similarly, the Micmac Indians of the Canadian Maritime Provinces hold that “In all things as it was and is in the sky, so it is on earth,” while in Colombia, many Indian cultures “conceptualize the sky as a blueprint for past, present and future occurrences on earth.”

Homology – here referring to a common historical origin in remote pre-Sumerian times – would seem to be the cause of the appearance of this same notion in different times and lands.

With these two lines of reasoning in mind, and the notion that the underlying intellectual and religious purpose may be to permit Earthbound mortals to beat death by acquiring the secrets of the Immortal Gods, a third and a closely related fourth line of evidence take on new importance, namely the observation that astronomy is everywhere the oldest of sciences and that astrological beliefs have been present in all times and lands.

To resume: language came into being; the awful matter of death was discussed; and a solution to it was seemingly found in the form of an “astro-religion” designed to obtain the supposed secret of Celestial Immortals. (The secret of the gods was immortality, not omnipotence; Jupiter/Zeus was unable even to manage his domestic affairs.)

This historical reconstruction is consistent with either of two scenarios concerning the origin of language.

**Scenario 1:** Language was invented once (or more than once(?)) and the matter of death was discussed for a long time and in many places before the solution of “As Above, So Below” was devised. While such talks were going on, language(s) differentiated. (I question whether language was invented more than once. This is because good ideas spread so rapidly that almost no time is left for the independent inventor. This constitutes the ultimate diffusionist argument, and I think it is a general rule, valid across a number of fields: good ideas travel well. An example: postage stamps were in use in Hawaii, Peru and Afghanistan less than a generation after the Penny Black.)

**Scenario 2:** Language was invented once, perhaps with the precise intent of discussing the problem of death, and possibly inspired by the cosmological-astronomical-religious insights of its inventor. The idea of organizing human affairs As Above, may have been present in the mind of the inventor of language even before he invented it. In this scenario, the matter of death was discussed by members of the first generation of language users.

Languages can be exceedingly frustrating to compare. To some extent this is because resemblances which appear evident on using one methodology may be undetectable when a different method is applied. A way out of this difficulty may be available in the context of

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Scenario 2. The solution consists of extending Alfred L. Kroeber’s concept of Stimulus Diffusion.

According to Kroeber (1876-1960), *ideas* diffuse or travel far better than *objects*. Thus, for example, the idea of making a pot may survive an intercontinental voyage that no real pot would. On the other hand, ideas are far less specific than objects and the new pots manufactured on a foreign shore weeks or generations later might be very different indeed from the *ur-pot* made back in the land where the voyage had commenced. Likewise, an abstract idea, lacking any physical manifestation may also travel well: “communism,” “psychoanalysis” and “channel surfing” are examples.

When Kroeber’s concept is applied to the diffusion of the seemingly death-defeating idea “As Above, So Below”, matters would have functioned on extremely compressed scales, both in time and distance. Thus, the third person ever to receive the idea of projecting Heaven on to Earth would have been the recipient of a diffused message (in Kroeber’s sense). Yet, even standing right next to one or both of the two first persons to exchange ideas on this matter (which is assuredly where he did stand), he would have gotten some things wrong, “wrong” in the sense that it was not precisely what the speaker(s) had intended.

None of the three or more people involved at this stage would have been a stickler for grammar; they would have had more important things in mind. At this stage, vocabulary would have been far more important. At the outset, 1 word = 1 concept and in context of Scenario #2, the first words would have been related to concepts that were applicable to the problem overcoming death.

Thus, as a consequence of short-range stimulus diffusion, languages may have begun to diverge even in the very first generation of speakers. (This is perhaps as should have been expected: a comparison with the Cambrian Explosion may be in order, as well as S.J. Gould’s broader arguments for early experimentation and later standardization. This may be why new languages are easily formed but not new language phyila.)

If the approach proposed here has merit, it might be testable by comparisons of terms such as those in the list which follows. These terms have been selected from the traditions of religions and mythologies worldwide. It is suggested that three sets of vocabulary comparisons be made at the outset i) among languages thought to have come into being at moderate northern latitudes, ii) among languages thought to have come into being in the tropics, and iii) among languages of the southern hemisphere not clearly relatable to members of either of the two previous groups. Linguistic considerations, as such, are not involved in this suggestion but rather, the fact that the sky over the tropics exhibits systematic differences with that over temperate regions. In a first effort, languages of the far north, where the sky is again different, should be omitted.

<table>
<thead>
<tr>
<th>Sky</th>
<th>Menstrual blood</th>
</tr>
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<tbody>
<tr>
<td>Heaven</td>
<td>Blood</td>
</tr>
<tr>
<td>Earth</td>
<td>Male</td>
</tr>
<tr>
<td>Above</td>
<td>Female</td>
</tr>
<tr>
<td>Below</td>
<td>Sun</td>
</tr>
<tr>
<td>Sky Father</td>
<td>Springtime</td>
</tr>
<tr>
<td>Earth Mother</td>
<td>Rain (from Above)</td>
</tr>
<tr>
<td>Lifeblood</td>
<td>Milky Way</td>
</tr>
<tr>
<td>Ochre</td>
<td></td>
</tr>
</tbody>
</table>
Stone Ax (which splits Heaven at Milky Way)
River
Star
Constellation
Pole star
Vega
Thuban
Polaris
Lyra
Draco
Ursa Major
Pleiades
Hyades
Lyre/Bird
Snake
Bear
other hibernating animals

Bee
Honey
Chrysalis
Frog
other metamorphosing creatures
Scorpio
Taurus
Orion
Scorpio
Bull
Hunter
Dog
Sirius
Jupiter, Venus, Mars, Saturn,
Mercury, Moon
Gold
Penis
Vagina

Once one is willing to consider the possibility that all human traditions, including the use of language, might be threads of a single multi-stranded story of Paleolithic authorship, it is no longer difficult to spot supporting evidence. No specialized training or expertise is needed. It is sufficient, for example, to take cognizance of the titles of some relatively obscure books such as *Phoenician origin of the Britons, Scots & Anglo-Saxons*, *Hebrewisms of West Africa*, *Celtes et Hébreux*, or *Black Athena: The Afroasiatic Roots of Classical Civilization*. Similar indications that all belief had had a single historical origin is evident in a report from 16th-century Peru, wherein Father Joseph De Acosta inadvertently indicated the true nature of his ubiquitous adversary, claiming that

...whoso shall neerely looke into it, shall finde this manner which the Divell hath vsed to deceive the Indians, to be the same wherewith hee hath deceived the Greeks and Romans, and other ancient Gentiles, giving them to vnderstand that these notable creatures, the Sunne, Moone, Starres and Elements, had power and authoritie to doe good or harme to men.

The diversity of odd-sounding cross-cultural claims reported in print is greater than most readers are likely to suspect. In many cases, observations have been tied to theories that

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assign outlandish or messianic roles to one people or another. A minute sampling of such reports (many cranky, but all containing some valid historical data) includes claims for:

- An origin of Finnish mythology in Mesopotamia;¹²
- The invention of Greek astronomy in the Caucasus;¹³
- A Pictish—Scottish—>Swedish diffusion route to which has been prefixed the notion that the Picts may have been Algonquin in origin;¹⁴
- The opposite, a sort of Viking-Kikapoo connection with “the Algonquin language” derived from Old Norse;¹⁵
- South Americans from Polynesia, and
- Polynesians from South America;
- “Egypt for the mouthpiece and Africa as the birthplace” of British, Hebrew, Akkado-Assyrian and Maori civilizations (4 vols.);¹⁶
- Egyptian origins from the Mayan “world mother culture”;¹⁷
- The foundation of China as an Egyptian colony;¹⁸
- The idea that “Everything, absolutely everything, is of Indian Origin”,¹⁹ which may seem difficult to reconcile with the notion that
- Belgian Gaul was “the original center and creator of civilization [with] the Flemish language [as] the world's first and richest”;²⁰
- Citadel-builders of Mediterranean origin in the Mato Grosso;²¹
- Belief that an unknown Christian had preceded the Spanish in Mexico, and
- Montezuma's conviction that the Spanish king was descended from the sacred Quetzalcoatl who had sailed away to the East long ago, promising a Return...
- The Galla of the Ethiopian highlands as descendants of the Gauls;²²
- Traces of Bushman in Indo-European languages;²³
- Tantric philosophy as "closely aligned to the law" of an Australian Aboriginal people,²⁴ and
- a neat Navajo-Nepali nexus.²⁵

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¹³ C.G. Schwartz, Recherches sur l'origine et la signification des constellations de la sphère grecque, translated from Swedish text, Migneret, Paris (1807).
¹⁸ Anonymous, De inscriptione quadam Aegyptiaca Taurini inventa et characteribus Aegyptiis olim et Sinis communibus exarata idolo cuidam antiquo in Regia Universitate servato, N & M Palearini, Rome (1761).
²⁰ Tollaire, cit., p. 418.
²¹ Sought in the 1920s by Colonel Percy Fawcett who disappeared in the attempt.
²⁴ Biggibilla, a Australian artist, cited in International Herald Tribune (31 July 1995).
²⁵ Noted with astonishment in the mid-1950s by a Nepali exchange student.
If supernatural explanations are excluded, the only straightforward way to accommodate the wonderful and bulky totality of valid elements in such claims is by attributing a single ultimate origin to all civilizations everywhere whatever their “levels.” This origin would have been long ago, though not at “the beginning of history.” It would have been at the beginning of prehistory, at the very instant “something extra” was first added to the purely biological heritage of the genus Homo when its members, by use of language, began to exchange complex ideas as well as genetic material.
The Numeral System of Jarawa Andamanese

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Recently, R. Senkuttuvan of the Anthropological Survey of India has published a booklet on the so far very little known Jarawa Language of the Andamans (Senkuttuvan 2000). It contains a detailed phonetical discussion, a few notes on grammar, and a list of some 500 words. This is a welcome addition to our meager knowledge of the Southern Andaman languages.

One point drawing attention is the curious system of numerals employed by the Jarawa. Senkuttuvan gives numbers 1-44 only, as follows.

1. oya
2. naya
3. ikkanddeyilo
4. mala
5. kuttu
6. otti
7. dabo
8. care, chare

1 ASLIP President, Wales Professor of Sanskrit, Harvard University
2 The numbered list, more or less in the order of the Indian alphabets, from a to v/y has 483 words, but the extensive section of phonetical analysis contains a few more not listed in the vocabulary. Also, there is a certain amount of hyper-phoneticism in Senkuttuvan’s list, so that the same word occurs several times with slightly different spelling. Especially, long and short vowels are confused or misprinted, as are dental and retroflex consonants; I suspect that Senkuttuvan was led by his Indian (Tamil) perceptions of Jarawa sounds. Actually, he says: “The present study about Jarawa’s language has shown linguistic resemblance with Dravidian families … five percent of root words … are found as similar” (p.2), or: “Jarawa language … comes under Dravidian feature” (p.29), and he --rather loosely-- compares 27 Jarawa words with Tamil ones (p. 4-6). His use of the apostrophe (as marker of separate syllables?) is inconsistent as well; apparently, it is not used for glottal stops or laryngeals. A phonematic spelling will result in a lower number of new words. -- The word list includes a few loans (e.g., kattā ‘dog’, pēpē ‘paper’) and some new coinages such as dāvdhōcca naiyile ‘scooter’, ālēva-ālēva ‘wrist watch’, enno cattīye ‘lorry’ (apparently from "body" enno + "house" cattā).
http://www.vuw.ac.nz/asianstudies/publications/working/hostile.html (with a useful bibliography); for recent conservation/protection developments in the Southern Andamans, see:
The list defies any immediate attempt at analysis; there seems to be no cogent system behind it. The usual ones, such as those based on systems of 2, 3, 5, 10, 12, 20, etc. (Blážek 1999: 327 sqq.) do not work here. On closer inspection, one will notice that the numbers start over again with number "32", though with forms that differ from the earlier set by a few variations in vowels, consonants or by the addition of a sound. Thus, 10. māre : 35. mare; 17. dhulle : 42. tule; 7. dabō : 32. dobho; 18. mē : 43. mēv; 14. lō : 39. lōvi.
Even this observation does not lead to an immediate solution. Which known system, based on body parts (such as 5 fingers, 10 fingers, 20 fingers and toes), would lead to one based on a repetition starting with 32? A hint is provided by those systems that include not just fingers and toes, as most counting systems do, but also other body parts.

Some have recently been described and analyzed by V. Blažek (1999: 325 sq.). The Papuan language Telefol starts with the little finger of the left hand = 1, ring finger = 2, etc., fist = 6, forearm = 7, elbow = 8, biceps = 9, shoulder = 10, side of the neck = 11, ear = 12, left eye = 13, nose = 14, and then continues downward on the right side: right eye = 15, ear = 16 etc. The Papuan languages Kombi, Korowai, and Wambon have virtually the same system (while Aghu has the more standard 'hand and feet' system of 20).

A similar system is reported by J. Lynch (1998: 250 sq.) for the Papuan language Kewa. Though it has a numeral system based on four (laapo '2', kode laapo '6, etc.), it also has another counting system, based on body parts, such as the Papuan systems already mentioned. As Lynch and D.C. Laycock explain, this second system should be called a "tallying system" as it is used to count valuables and to enumerate calendrical events. These systems "are used only for direct counting or 'mapping' of a set of objects against some other measuring code. There are no 'numerals' in a tallying system, so that one may not receive a reply to the question 'how many' or find the points of the tally-system qualifying nouns, as do true numerals (Laycock 1975: 219)."

Interestingly, such tally systems proceed from "the fingers on one hand, up the arm, across the face or the chest, and down to the fingers of the other hand."

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4 This system reminds of other tallying and arrangement systems, such as the use of a number of twigs in order to remember where exactly in the complicated arrangement of variations in singing the Vedic Šāmans one has arrived; or the medieval "palace of knowledge" and the fish skeleton used in the Pacific to "store" knowledge, see Witzel, How to enter the Vedic mind? Strategies in Translating a Brāhmaṇa text. Translating, Translations, Translators From India to the West. (Harvard Oriental Series, Opera Minora, 1) Cambridge: Harvard Oriental Series 1996.
However, even this kind of system does not account for the Jarawa one of base 32. Its numbers repeat only from 7 onwards (7 ~ 32, 8 ~ 33, etc.) while 1-6 have no counterparts in the published word list. If one would begin, for example with the left hand fingers and move up to the head, on would expect the system to start replication with no. 1 (oya) ~ no. 27 (something like *aya, oya, etc., not, as attested, tanku).

In order to make sense of the Jarawa system, one has to begin with the head, for example with a hypothetical 1= skull or forehead, 2 = eyes, 3 = nose, 4 = ears, 5 = mouth, 6 = neck. An admittedly vague hint that this guess may be correct is supplied when one takes a look at the names of the various parts of the head:

1. oya ~ eyippo 'eye', -epu 'eye ball'?!
2. nāya ~ yanbo, -nābo, -nāto, 'nose'; necciya 'forehead'
3. ikkandeyilo ~ kkuva 'ear'?
4. māla ~ -mu 'mouth'
5. kuṭṭu ~ -kitto 'neck', cf. kōṭṭā 'chest'
6. otti ~ -bittā 'jaw'??

Only then the tallying system starts with the two sides of the body: hypothetically, the left shoulder bone (7, dabo), shoulder, upper arm, elbow, lower arm, wrist, hand (12, ele) and the three phalanges each of the five fingers (13-31), perhaps ending with the first phalange of the thumb: 31 podi, cf. pōttā 'first finger'.

From 32 onwards one repeats this for the right arm, theoretically up to 53, though Senkuttuvan has recorded only the numbers up to 44.

As mentioned above, there are some inconsistencies, such as the double numbering of no. 13, and some obvious mistakes such as mare for no. 9 and 10. The inconsistencies in double numbering (13. n, mobiya; 21. onni, mē) may be due, in part, to the interferences of the actual numbering system with the tallying system. However, there also is some internal proof for the consistency of the tallying system. For example, the last phalanges of the middle finger and of the index finger are named in the same way (25. titto, titto : 28. titto). (But, this does not explain the same name for the middle phalange of the small finger: 15. titto, titto!)

Apart from the fact that this makes for an interesting study of a little investigated field, there is larger question involved, namely: is the very idea of tallying systems in Papuan and Andamanese a further indication of their ultimate relationship as Indo-Pacific languages?

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As the new booklet of Senkuttuvan an important addition to our knowledge of Indo-Pacific, I submit the items recovered from it for a Swadesh list (including Senkuttuvan's phonetic over specifications). The (closely related) Ōnge words (from Portman 1887) are given in brackets

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5 Some of the 'numbers' 1-6 may be the actual numerals. Note the suffix (counting word?) -ya in: 1 őya, 2 nā-ya, and in the second form of 13 mobi-ya. The co-existence of the numeral and tally system see below. -- It is also possible that Senkuttuvan was misled about some of the numbers, especially 1-6, and could not distinguish them from tallying numbers.

6 Note that body parts usually start with onnV-, unnV, or ennV-, such as onnō-lo 'knee', ōnni-nō 'finger', unni-ppo 'thigh', unna-da 'tongue', ennō-go 'tooth', ennō-lu 'knee'. Differences in meaning, here as elsewhere, seem to be indicated by a sort of vowel or consonant ablaut.
([...); (length of vowels is indicated by macron). Most North Andamanese words are clearly unrelated and are not given here.

1. I m̃i
2. thou ñi
3. we m̃allā(v), m̃allāv(u)
8. not nād̃um; nāde
11. one ōya
12. two nāya
13. big ōtkalā; cannāccō; tottāntōlā
15. small onnūttōn; pālī; poṇṇā (very short); ōṅṅā (short) [baai]a
16. woman dhōy, dhōyi, oṭṭāyā (wife) [unyāōlē 'wife']
17. man dā (male child), ūṭtu (big boy) [unyāgilē]
18. fish nāppō, nābo, nābo; lāppō [cōgē]
20. bird nōghāliye; noguva (chicken), navughā (hen); nōgha (duck); noga (peacock)
21. dog vēb; vēb; dhuvughu (boar)
23. tree dha, ḍhāghu (also: coconut); ḍaṅ; nā (wood)
25. leaf bēbe, ṭēbō [bēbē]
28. skin pīl, onnī-pplī; onnī-pplī; onnī-pfēl; unnā-ṭīvu; tōttā (fruit)
29. flesh onnā-tiṭya (human), unnī-cūṭbo (of leg)
30. blood cēyū(l)y (of pig)
31. bone uḷḷetā [ičindāngē]
35. tail yav, yav (of dog)
37. hair ennō-du; onnā-kkottāntōdū; gōtu (head hair); mōvdu (public) [maudē]
38. head muī (face); (onnē-)-nēcșiya (forehead, face) [ōṅṅō tolaʒbi]
39. ear ennī-kkuva; onnī-kkuva [ik quāgē]
40. eye ennē-cceṭbō; onnē-ebbō; onnē-puṭākka; onnē-eyippō; ippō; onnē-pu (eye ball) [unjē boi]
41. nose eriṣyappo; oṃī-ṭānbo, oṃī-yanbo; oṃī-ṭāpō; oṃni-ṭānbo, mu [unnyai boi]
42. mouth eru-mu; onnī-mu
43. tooth ennā-gō; onnā-gu; onnā-hō; del [makuē]
44. tongue ēnā-dālu; unnā-dā [alāndāngē]
45. fingernail ennō-pēṭta; onnō-bēyött; eruveṛā; māvume; nobēdhā [mōbe dunge]
46. foot ēnū-p; onnū-k; onnī-cī (leg); ṭēṭṭā (dog leg) [muge]
47. knee ennī-ṇānbo; ennō-lu; onnō-lō
48. hand ennī-pppt; onnī-kkinnu, kiya (arm), unnīḍōppayi uḷḷe (fist) unnī-palna (palm) [mōmē]
49. belly unnī-fēt/t; onnī-yōmbō; onnī-fē, unnī-fē
50. neck onnā-kkittō; oṃṇa-ṇḍū (back) [ōnāngitō]
51. breasts ghāgh (fem.); gāk (male nipple); ennā-kottā, onnē-kottā (chest)
54. I drink ñयa, ṃja, ṃcā; ṃcō; nābovu (drinking) [injōbē]
55. I eat ḍīṭṭā; ḍīṭṭa, onnī-biyā [ēnīlō quālēbē]
57. I see onnībiyā
60. I sleep ēyāvūṭu dhūle (fut.); omuxā; ummāmē (sitting); dēppāle; dhūle (I sleep today, sleeping); dhūle [ōmōkābē]
61. I die besame
63. I swim doppicca (swimming) [quâné]
65. I walk davug vaiyyâ (walking)
66. I come ayyovappa; väyyâ/vayya appa (come here) [mai öbabê, önuquângéme]
67. I lie (down) dêppâ ledhûle, dhûle (sleep, lie in bed) [gai nîbe; ömôkâbê 'sleep']
68. I sit ennâmpeyyâ; deghu [unântôkôbê]
69. I stand tokkâpde; dôkkâtikiyâ (up) [dhôkabê]
72. sun evu; likâ (pañañh, báhnâ(n) 'sky') [êke; bêng nongê 'sky']
73. moon dabe, dâbe
75. water inn (ullëlu 'sea') [înge]
77. stone ullivuv, ullva [táiyî]
78. sand bilu; [belai]
79. earth bellâ (mud) [tutânô; tôngkütê 'clay']
82. fire duvëv, duvëv; dhûha [tukë]
88. green dhùnna, dhûnna [tûtândângë]

Some features of grammar include (assembled mostly from Senkuttuvan's "few sentences" 2000: 27 sq.; my analyses indicated by hyphen):

Pronouns

mî 'I'

nî 'you'
muc 'he'
unne 'she'
mâllav 'we'
ôye? 'you?'
avt 'they'

Verbs: Present

mi

mi

- tîttîtan

muc
cellame kîkebbà
unne
bettatottola

malâvu/u b(h)eddud
malâv(a) in-cô
malâvu ðe yapppu

avt(ð)ô ðe/da in-ja/in-jca
avt(ð)ô ða bhëdød
avt(ð)ô ða dîttā
avt(ð)ô ða iñca/iñya
avt(ð)ô ða yappping/yapppu
avu(ð)ô ðe k-ettaye
avt b-ettaye
déppa  le-dhule  "I sleep" (today)
onnight  yāpii  "I dance"  
bheddiya  "I go"
na  abbellà  "I run" (sic!)
oye  ditta  "you eat"  
nt  abbellà  "you run"
mala  ditta  "we eat"
mala  catça  "going (they)" (sic!)

Past
ittà  le-dhule  "I slept here"
ni  besame  "you died"
malav(u)  besamé  "we died"
malavu  nî-jô  "we drank"
avïo de  bessami  "they were died(!)"

Future
ëyàvuțu  dhule  "I will sleep"  [omokabe]

Negative
titka  nadem  "I don't eat"
ikkô  nadém  "don't beat"

Imperative
vayya  "come"

Some verbs
Many verbs seem to end in -ya, or have the suffix -taiya/-taiye, et-taye 'brushing (soap on cloth)' (see k-/b-ettaye; diñ-taya 'soap patty for body'); unnina-ya 'to beat'; ôda-ya' cutting'; ôkki-ya 'throw'; cacca-loj-tai-ya 'jumping'; dökkât-di-ya 'to stand up'; dâvu(g) vaji-ya 'walking'; bhe̱t-tai-ya 'go' [ôni totôbê, bujîbê, le gânî]

Bibliography


