

**African origin of classifier-prefixed nouns in extra-African languages:
New evidence for Ruhlen's monogenesis theory of human languages
and further analysis of Mongoloid dispersion**

Koji OHNISHI*

Abstract

Among African languages, noun classifier-prefix system is most typically and frequently found in Niger-Kordofanian language family, and less frequently in some groups of Afro-Asiatic family, but not found in Khoisan family. Search for extra-African evolutionary reflexes (cognates) of Niger-Kordofanian-type classifier-prefixed nouns was made by comparing African vocabularies with extra-African ones. Comparison was also made from the aspects of Ruhlen's theory (1992, 1994) on monophyletic African origin of living *Homo sapiens sapiens* languages. Reflexes of classifier-prefixed nouns were found not only in Afro-Asiatic, Indo-European and Austronesian, but also in other language families in Asia, New Guinea, Australia, and America. Well-conserved fossilized classifier prefixes are frequently found in Indo-European and Austronesian. Comparative analyses of these African classifier-prefixed nouns and their possible cognates revealed that most or all extra-African languages would have almost undoubtedly evolved from Niger-Kordofanian languages or the likes, providing us with strong evidence for Ruhlen's theory.

In order to elucidate later history of extra-African human dispersion, macro-comparisons were also made for Eurasian and Pacific-rim languages from several different aspects. Eskimo and Japanese were found to be kin languages of Austronesian. Possible close relationship between Mayan and Tibeto-Burman was postulated. Evolutionary kinships among Quechuan, Uralic, Indo-European, and Austronesian were found in cognates of Quechuan words possessing word-initial *ll-*, and were discussed from the aspect of their possible Austronesian origin.

Key words: human languages, African origin, classifier-prefix, Bantu, Mongoloid languages

Introduction

Macro-comparative linguistics is a recent trend in evolutionary linguistics and linguistic anthropology. Long-range comparisons among different language families all over the world seem

* Department of Biology, Faculty of Science, Niigata University, Niigata, 950-2181, Japan.
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Table 1. Classification of African languages.

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| I. Khoisan [Sandawe, //Khegwi (S3), Tati, /Kham(S1), //Khau-/'e(N1), etc.] |
| **II. Niger-Kordofanian |
| 1. Niger-Congo |
| A. Benue-Congo |
| a. Bantoid [Bantu (Swahili, Conco, Zulu, etc.), Non-Bantu Bantoid, etc.] |
| b. Cross-River languages [Boki group (Okosom, Gure, Kahugu), etc.] |
| c. Jukunoid [Karim, etc.] |
| d. Plateau [Tsam, Guta, etc.] |
| B. Kwa [Lefana, Yoruba, etc.] |
| C. Gur [Mossi, Grushi, etc.] |
| D. Atlantic [Fulup, Kanyop, etc.] |
| 2. Kordofanian |
| III. Nilo-Saharan |
| *IV. Afro-Asiatic [Chadic, Cushic, Berber, Egyptian, Semitic, etc.] |

** Posseses well-developed noun-classifiers. *Less frequently possesses noun-classifiers.

to shed light on the origin and evolutionary dispersion of languages and populations of modern humans (Shevoroshkin, 1991; Cavalli-Sforza *et al.*, 1992; Ruhlen, 1992, 1994; Ohnishi, 1994, 1995). Monogenesis theory of modern human languages has been proposed by Trombetti (1905) and Swadesh (1955), and has recently been re-proposed by Ruhlen (1992, 1994) from a viewpoint of macrocomparative linguistics. Ruhlen's proposal of monophyletic African origin of living-human languages needs to be further analysed from various aspects of comparative linguistics.

On the other hand, African languages excepting Khoisan are characteristic in that nouns are prefixed with classifiers. In this paper, possible African origin of modern human languages was analysed by comparing classifier-prefixed African nouns with their extra-African possibly cognate words. Macro-comparative studies are also described concerning the analyses of further language diversification from Eurasian-Pacifico-Australian languages to American native languages.

Noun-Classifier System

Typical noun-classifier system in Bantu languages (which is a major group of Niger-Congo languages) is as follows. Swahili nouns are classified into 12 classes, of which six are singular, and five are plural. Each of these 12 classes has its own specific classifier prefix, as exemplified by; *m-tu* "person (singular)", *wa-tu* "persons (plural)", where *m-* and *wa-* are classifier-prefixes, and *-tu* is a noun meaning "person".

African languages are classified into four major families, namely, (1) Khoisan, (2) Niger-Kordofanian, (3) Nilo-Saharan, and (4) Afro-Asiatic, where Niger-Kordofanian [consisting of

Table 2. Abbreviations of language names and sources of vocabularies used in Tables 3-7.**#General abbreviations:**

A < B, B > A : A has been derived from B. (= B has evolved to A.)

A <> B : A cognates with B. (= A is evolutionarily related to B.)

#Abbreviations of language names :

AfAs = Afro-Asiatic; AN = Austronesian ; AuAs = Austrro-Asiatic; Austr.Ab.L.= Austrl.= Australian Aboriginal Languages; dial. = dialect; C.MP= Central MP; DRAV = Dravidian; ESK = Eskimo; IE = Indo-European; JPN = Japanese; MONG = Mongolic; MP = Malayo-Polynesian (Tryon, 1995); NB = North Buffin dialect of Eskimo; NHal = North Halmahera languages; NiCon = Niger-Congo; Ni-Kord = Niger-Kordofanian; Nilo-Sah = Nilo-Sahalan; OCE= Oceanic; STb = Sino-Tibetan; Tb = Tibetan; Trans-NwG = TrNwG = Trans-New Guinea language phylum; TUNG = Tungus; Tung.Man = Tungus-Manchu, URA = Uralic; WG = West Greenland dial. of Eskimo; West. MP, W.MP = Western Malayo-Polynesian (Tryon, 1995); Wr.= Written.

#Abbreviations of sources and references of vocaburaries used in Tables 3-7:

ADD* = Hattori *et al.*, 1964; AHD* = Morris, 1969; Ba*=Batchelor, 1938; CAD* = Tryon, 1995; DED* = Burrow & Meneau; ETD* = Winslow *et al.*, 1992; Gr*60 = Greenberg, 1960; Gr*87 = Greenberg, 1987; Kaw* = Kawachi, 1996; IKJ* = Ohno *et al.*, 1974, John* = Johnston, 1919-22, Kita* = Kitamura, 1981; Ru*94 = Ruhlen, 1994; SEL* = Kamei *et al.*, 1988-92 ; Sv* = Illich-Svitych, 1965; Wada* = Wada, 1982, YH* = Yasumoto and Honda, 1978; Yuk*84 = Yukawa, 1984; UEW* = Redy, 1988-1991.

#Major source-references for vocabularies used in Tables 3-7.

[major word-sources are given below, except otherwise noted within Tables 3-5]

Ainu = ADD*, Ba*; AN = CAD*; Djaru = SEL*; DRAV = ETD*, DED*; Eskimo = Spaling, 1979 (NB), Kubo, 1985 (WG), Miyaoka, 1978 (Alaskan Yupik); Khoisan = Ru*94; Narrinyeri = Taplin, 1967; NHal = Wada*, Proto-IE = AHD*, Pokorny, 1959-69; Niger-Congo = SEL*, John*; Others = YH*, SEL*, and Other dictionaries.

Numbering of languages (in Table 3 and Table 4) ||| Bantu languages (e.g., [56b. Nothern Makua], [225. Kaka] , etc.) = from Johnston, 1919-22. ||| Iryan Jaya languages (e.g., (TrNwG) [P20. Ninggirum]) = from Voorhoeve, 1975.

Niger-Congo (NiCon) and Kordofanian] is further classified as shown in Table 1. Classifier-prefixed noun systems are found, most typically and almost unexceptionally in Niger-Kordofanian languages, and less typically and less frequently in Afro-Asiatic languages (such as Ghadames language of Berber group. See pp.458-459 in Greenberg, 1960). Khoisan languages do not possess noun-classifiers. Although Nilo-Sahalan shares many basic words with Afro-Asiatic and Niger-Kordifanian languages (Greenberg, 1960), but does not possess typical noun-classifiers. It might be difficult to answer the question whether Nilo-Sahalan truly has not any type of classifiers, or has lost pre-acquired classifiers throughout later evolution, or else, has evolved from some unknown language which lost classifier systems in the past.

Macro-Comparison of Classifier-Prefixed Nouns

Classifier-prefixed African (especially Niger-Congo) words were compared with other African and extra-African words. Numerous African basic words with classifier were found to be true cognates with nouns from extra-African language families distributed all over the world including Eurasia, Pacifico-Australian area, and the North and South Americas (Table 3). Abbreviations used in Tables 3-7 are listed in Table 2.

In a typical example in #PERSON (or MAN) (See Table 3), the Bantu singular classifier, *mu-*, in [Congo] *mu-ntu* “person” can be found not only in Afro-Asiatic languages such as [Hausa] *mu-tum*, but also, as relics of classifier-prefix, in Trans-New Guinea (TrNwG) [Warenbori] *mando*, Indo-European (IE) [Danish] *ma-nd*. The Bantu plural classifier, *a-*, in [Congo] *a-ntu* “persons” is found, as a relic of plural classifier-prefix, in (IE) [Greek] *a-nd-r-* “man”. In the case of #EYE-1 = [Swahili] (sing.) *j-icho* (or *ji-cho*), (plural) *ma-cho*, the plural classifier, *ma-*, is found as classifier-relics in Austronesian (AN) languages, e.g. [Proto-Malayo-Polynesian (Proto-MP)] **ma-Ca* and [Malay] *ma-ta* “eye”, whereas [Maya] *wi-ch* “eye” seems to be a relic of the singular form of African classifier. Both singular and plural forms of Bantu-type classifiers are also found in IE words meaning #ANIMAL in Table 3.

In Afro-Asiatic, noun-classifiers frequently correspond to their Bantu cognates, as found in #BONE, #PERSON, and #WATER in Table 3.

Khoisan languages have classifier-non-prefixed cognate words of classifier-prefixed NiCon and other African nouns, as found in #ANIMAL, #BONE, #EYE-1, and #SNAKE. As found in #BONE, (Nilo-Saharan) [Nandi] *kowet* is a typical cognate of a prefixed noun, [Proto-Bantu] **likupa*, and a non-prefixed Khoisan noun, [Kham] *!kwa* “bone”, but [Nandi] *kowet* has no classifier element. It is also important to note that even those nouns which are prefixed with classifier in such typical Bantu languages as Swahili, Congo, etc., are often observed as being non-prefixed with classifier in other Bantu (or NiCon) languages (See examples in #ANIMAL and #BONE). Such classifier-non-prefixed words in NiCon languages whose cognates in other Bantu are classifier-prefixed would, probably in most cases, have had lost their classifier-prefixes throughout evolution.

In extra-African languages, Niger-Kordofanian-type classifiers seem to be well conserved in IE, AN, TrNwG and other New Guinean languages, North Halmahera languages (NHal), and Australian aboriginal languages (Austr. AbL). Relics of classifier in Uralic, Quechuan, Mongolic, Turkic seem to be rather less conserved than in AN and IE. However, all extra-African languages analysed here (which include almost all of major language families in Eurasia and Pacifico-Australian area, and some major groups of North and South Americas) are found to possess Niger-Kordofanian type classifiers, as shown in Table 3. These relationships might mean evolutionary oldness of the above-mentioned classifier-well-conserved language groups.

As shown in #BODY, [Proto-Tibetan (Tb)] **m-yi* “human being” is a reflex of [Swahili] (sing.) *m-wili* “body”, and [Proto-Tb] **m-yi-* is also found as a later evolved prefix meaning “human body part”, as exemplified by [Proto-Tb] *myi-khal* “kidney” (See Bayer, 1992).

Table 3. Comparison of African classifier-prefixed nouns with extra-African vocabularies.

#ANIMAL || **NiCon:** *Bantu: [Swahili] [Sambaa] m-nyama (pl. wa-nyama) / *Plateau: [Guta] bā-nama (pl. i-), [Gure] ku-nama, [Kahugu] ka-nama / *Cross-River: [Osokom] e-njam "animal" (SEL*) || **IE:** [Latin] a-nimus "animal", a-nima "life" / [English] a-nimal "animal" / [Proto-IE] *anə- "to breathe" (prefixed form: anə-mo-) (AHD*, p.1506) / [Greek] anemos "breath, wind" / [Tocharian(A,B)] ām- "life, ghost" || ?**Austral:** [Narri-nyeri] wa-ngami "kangaroo" (< > [Swahili] wa-nyama "animals"?)

Non-prefixed; Khoisan: [Sandawe] /nin "meat" ?(< *nim ?) || **NiCon:** *Bantu: [225.Kaka] nyamu "animal" / *Plateau: [Tsam] nam "meat" || **AfAs:** [Hausa] nāmāà || **AN:** *Oceanic: [Kwamera] nāmu / [North Tanna] nam / [Port Sandwich] na-ix "fish" || **JPN:** -na "fish" (found in fish names, iwa-na ama-na, etc.) || **NHal:** [Ternate] nyau / [Tobero] nauoko "fish" || **STb:** [Wr.Burmese] ngaa² / [Spok.Burmese] ṅā (Yabu*) / [Wr.Tibetan] nya "fish"

#ARM || **Bantu:** [Swahili] m-kono (pl. mi-kono) || [Proto-Panoan] *mi-kini / [Cashinahua] ma-ka "hand" (Gr*87) || [Quechuan] ma-ki "hand"

Non-prefixed; STb: [Lao] kaan⁴ / [Thai] khe'n (YH*)

#BELLY₁ || **Bantu:** [1.Olu-konjw] bu-kwle / [79. Toŋga, 79a. Ci-we] i-kulu / [71. Roŋga] khuri / [261. Bulom] kur "belly, bowel, stomach" || **Austral:** [Narriyeri] man-kuri "belly, stomach"

Non-prefixed; AN: *Central MP: [Dobel] k*ola "stomach" / *Oceanic: [Nengone] gure-ŋan "intestine, guts" || **Turkic:** [Turkish] karın "belly"

#BELLY₂ || **NiCon:** *Bantu: [73a. Se-sü:thw] lω-vala (pl. li-pala) / [74a. Se-maŋwatw] lω-bala / *Plateau: [Gure] ku-buri || **MONG:** [Wr.Mongolian] ke-beli || **TUNG:** [Modern TungMan] ke-vələ (YH*)

Non-prefixed; JPN: fara (< *para) || [**Korean**] *pəri (Ohno et al., 1974) || **AN:** [Malay] perut / [Maori] parō || **URA:** [Samoed] pārg (Yamanaka, 1976)

#BLOOD₁ || **AfAs:** [Tamazikht (Berber)] i-damman / [Arabic (Egypt)] damm || **Central Bird's Head:** [P129. Seget] sə-dam / [P130. Moi] s-dəm (prefixed ?)

Non-prefixed; Trans-NwG: [P20. Ninggirum] dam / [P21. Yonggom] yam || ?**AN:** *Formosan: [Paiwan] jamuk / [Atayal] ramūs (CAD*); [Ami] rümūs (YH*)

#BLOOD₂ || **Bantu:** [151a. Hōma] me-gerim, bu-gurrum "blood" || **Trans-NwG:** [P3. Moraori] ŋ-gorom / [P25. Wambon] [P26. Kaeti] ŋ-gom || **Bora i-Hattam** stock-level family (Irian Jaya): [P138. Hattam] ŋ-grom || **Gilyak:** [Amur dial.] ṅar (YH*) (< *ṅ-gar)

#BODY || **Bantu:** [Swahili] m-wili (pl. mi-ili) / [Sambaa] ng'-wii (pl. mi-i) "body" (Yuk84*) || **STb:** [Wr.Tibetan] mii "human" (< *mi-i) / [Proto-Tibetan] *myi "human being" [> [Proto-Tibetan] *myi- (prefix meaning "human body part". Cf. [Proto-Tibetan] *myi-tšin "liver", *myi-khal "kidney". From Bayer, 1992, pp.114-115) || **JPN:** [Old JPN] mu, mi / [JPN (Kansai dial.)] mii "body, meat, self, fruit" / [Ryukyuan (Hateruma dial.)] me: "meat" (< *my-i < > [Proto-Tibetan] *myi "human") || **AN:** *West.MP: [Wolio] mia "person, human being" / *Oceanic: [Kilivila] mi-na ... "people of ..." (mi-na Rabesi "people of Rabesi") (< *mi-i na ...)

#BONE || **NiCon:** *Bantu: [Proto-Bantu] *li-kupa / [2. Uru-nyorw] i-gufa (pl. ama-) / [1.Olu-Konjw] eri-kuha (pl. ama-) / [56b. Nothern Makua] ni-kuwa / [56b. Lomwe] li-kuwa (John*) / *Kwa: [Avatime] li-xwa / [Twi] e-kui / [Lefana] u-kubi (Gr*60) || **AfAs:** [Berber] i-ghes (Gr*60) || **East Bird's Head:** [P140. Meninggo] i-kofa (< > (Bantu) [Uru-nyorw] i-gufa)

Non-prefixed form; Khoisan: [//Kham(S1)] !kwa, [//Kha-//'e(N1)] !kú: || **NiCon:** *Gur: [Mossi] [Grushi] kobe(-re) || **NiLo-Sah:** [Proto-Nile] *kóg (SEL* 3: 419) / *E. Sudanic: [Nandi] kowet || **NHal:** [Proto-NHal] *kobo (ngo) / [Galela] kobo / [Loloda] kobongo || **AN:** *Oceanic: [Maori] koiwi (YH*); [Ponapean] ṭin kop*ou "net bag bone"; [Rapanui] kava-kava / [Buang] k*əben / [Nyindrou] kabede-n "rib" || **STb:** [Proto-STb] *kut ~ *kwət / [Old Chinese] *kwət / [Lolo] ghhé-poù "bone" || **AuAs:** [Mon] cút

#EAR₁ || **NiCon:** *Bantu: [Luba] kú-twi (pl. má-twi) (GDJ*) / [Sambaa] gu-twi (pl. ma-gu-twi) / [175. I-fumu (East Teke)] tcwi (pl. ma tcwi) / [176. Ki-mbunw] li-cui (pl. ma-ci) / [178. Itew] tswi (pl. a-tswi) (John*) / *Plateau: [Gure-Kahugu] (Gure) ku-to, (Kahugu) a-to / [Guta] ù-tuto (pl. tù-) / *Chawai

Table 3. (Continued)

group: [Kurama] ɔ-to (pl. a-to) (LWAF*, p.109) || AuAs: [Mon] (k)aʔ-to
 || JAP: o-to "sound" || IE: [Greek] o-tos "sound", ou-s (stem = 0-t-)
 "ear"/[Latin] au-ris "ear"/[Proto-IE] *ou-s-, *au-s- "ear" (AHD*)
 Non-prefixed; AN: (Oceanic) [Rotuman] tō/[Lewo] to-na "sound"
 #EAR₂ || NiCon: *Gur: [Degha] diŋini (pl. diŋiná) ? "ear"/ *South Sierra
 Leone: [262. Mampa-Krim] ta-nye (pl. nye) "ear" || AN: [Proto-Hespero-
 nesian] *ta-ŋila "ear"/[Aklanon] du-ŋuŋ "to hear", dul*uŋan "ear"/[Atayal]
 čaŋia? "ear" (< > [Paiwan] čaŋia "ear")/[E. Fijian] daliŋa- "ear" (<
 *da-diŋa-) || ?TUNG: [Wr. TungusManchu] šan "ear"
 #EYE₁ || NiCon *Bantu: [Shabaa] zi-sho (< *zi-isho), me-sho (< *ma-isho)
 (Yuk*84, p.5), [Swahili] ji-cho (pl. ma-cho), [21.Swahili(= Ki-Hadimu)]
 j-icw (pl. ma-cw)/[21a.Ki-mvita] j-itw (pl. ma-yw) (John*)/[Khosha]
 ili-so (pl. amehlo) "eye",/*Plateau: [Guta] ri-zhi (pl. à-)/[Tsam] -yis
 (pl. à-yis) / *Cross-River: [Gre] nə-izi (pl. izi), [Kahugu] ri-dzi (pl.
 ɛ-ze)//[Osokom] e-tʃi (pl. a-)/ *Kwa: [Yoruba] o-jú || AfAs: [Hausa]
 i-dō (pl. i-dānu) || Mayan: [Maya] wi-ch, yi-ch i-ch "eye", ich-tah,
 tak ich "to see" (Cf. < > [Maya] cha'an "to see" ??) || ?Hokan:
 [Maricopa] h-iđo/[Cocopa] iju?/[Tlappanec] iđu/[Atsugewi] u-ji/[Comecrudo]
 u-ʔi "eye" (Gr*87) || AN: [Tsou] m-čo/[Paiwan] [Rukai] mā-ča/[Proto-
 MP] *ma-Cá/[Yam] [Indonesian] ma-ta/[Sawai] m-tɔ/[East Makian] m-to/
 [Sarangani Blaan] [Javanese] mɔ-to
 Non-prefixed; Khoisan: [//Khegwi(S3)] tsāi, tsāin "eyes"/[Tati] čai
 (Ru*94) || ?STb: [Thai] ta-/[Lao] dta' "eye"
 Verb; Mong: [Wr.Mongolian] ūje "to see" (< *ūče) || AN: *Oceanic: [Motu]
 ita-ia/[Tahitian] ʔite "to see"; [Ponapean] k-ilan "to look" (< *k-itan)/
 *Western MP: [Bugis] k-ita/[Sika] ʔ-ita "to see"/ *Formosan: [Atayal] m-ita
 #EYE₂ || Bantu: (Semi-Bantu) [274. Kōnyāgi] i-ŋgr (pl. wi-ŋgr)/[267.
 Biafada] a-gira (pl. ma-gira) "eye" || Austral. [Narrinyeri] wi-ngari
 "eye" (< > [Kōnyāgi] wi-ŋgr "eyes") || Eskimo: [Alaskan Yupik]
 ii-ŋa "eye" (< *wi-ŋa) || Ainu: ingara "to see" (< *wi-ŋar- "eye")
 Non-prefixed ?; West Papuan: (North Bird's Head) [Karon] ŋoro "eye"
 || Trans-NWG: [Wambon] [Kaeti] kero-p/[Siagha-Yen] kero "eye" ||
 Turkic: [Turkish] göz (< *gör-)/[Uighur] k'odzy "eye"
 Verb; Austral. [Narrinyeri] ngur-tun "seeking" || AN: *Oceanic:
 [Tawala] gale "to see"; [Raga] yarere "to look, to look at" || Turk-
 ic: [Turkish] gör-mek/[Uighur] k'oradu "to see"
 #FOOD : Bantu: [Sambaa] n-kande || AN: [Kalinga Limos] ma-kan/[Malay]
 ma-kan-an "food"; [Atayat] man-iq/[Malay] ma-kan/[Paiwan] k-əm-an (-əm- =
 infix) "to eat" || [JPN(Mainland)] ma-kana-Fu "to provide foods"
 Non-prefixed; AN: *West. MP: [Yami] kanə-kanən (< *kan-ən)
 Note: [Sambaa] n- < *ŋv- ? < > [Proto-AN] *ma- ?
 #HEART || Bantu: [120. Buma, 120a. Ki-bwma, 120b. Southern Buma] mω-
 kwal', mu-kwɔ/[151a.Hōma] bu-kali/[7.Kiguzii] eñ-korw/[248. Munši] ŋ-gwa
 || AN: *West.MP: [Isnag] bu-kal (< > [Hōma] bu-kali); *Central MP: [Dobel]
 Φ-u-k'a || Austral. [Narrinyeri] n-gele
 Non-prefixed; [Proto-IE] *kerd || AN: [Atayal] ka-ŋariyat || [Old JPN:
 kö-körö (< *kōrō "heart") "inner mind, spirit" || S.Cauc.: [Georgian] guli
 #NIGHT || NiCon: *Crossriver [Osokom] bù-tʃjú (pl. bà-)/[Abú] b̄-tʃú/
 [Erwe] ù-tʃi (pl. b̄-) (SEL* 3: 990) / *Plateau: [Gure] [Kahugu] kə-tuk/
 *Bantu: [Khosha] ubu-suku/[Swahili] u-siku (pl. siku) || NHal: [Galela]
 pu-tu/[Pagu] wu-tu || TUNG: [Wr.TungMan] butu (Kaw*) || AN: [Sarangani
 Blaan] bu-taŋ/[Balinese] bə-təŋ/[Tsou] f-riŋ-na/[Atayal] mə-hang-an, m-hatan
 (< *mə- + ha-tan) || AuAs: [Mon] haʔ-tɔm || Hokan-Coahuiltecan:
 [Comecrudo] patotiau (< *pa-to- ?)/[Jicaque] puiste/[Central, North Yanal]
 basii/[Yahi] bahsi (Gr*87, p.247) || Yeniseian-N.Cauc: [Proto-Yeniseian]
 *bis/[Ket] bis "night" (Ru*94, p.77) / [Proto-N.Caucasian] *baʂa "night" (Ru*94)
 || STb: [Tibetan] m-ts'an mo (?)
 Non-prefixed; AfAs: [Proto-SemHam] *tʃwm "dark" (Sv*) || IE: [Proto-IE]
 *temə- "dark" || URA: [Proto-URA] *tumʌ "dark" (Sv* p.368)

Table 3. (Continued)

- #PERSON || **Bantu:** [Venda] mu-thu (pl. vha-thu) (SEL* 1:815), [Swahili] m-tu/[Zulu] umu-ntu (pl. aba-ntu)/[Ganda.] omu-ntu/[Congo] mu-ntu (pl. a-ntu)/[Luba] mú-ntú (pl. bá-ntú) || **AfAs:** *Chadic: [Hausa] mù-tùm (masc.), mù-tùnyā (fem.), mu-tàänē (pl.) "person" || **Trans-NwG:** [P150. Warenbori] ma-ndo "man" || **AN:** [Javanese] ma-ntu "Schwiegersohn, Schwiegertochter"/[Balinese] mantu "child-in-law (of a man)"/[Rukai] oma-omas "person" (< *oma-(s) > *omu- "person" in (Bantu)[Ganda] omu-ntu "person") || [Proto-URA] *mä-ńće "man" || [Proto-IE] *ma-nu-, *ma-nw- "man" (AHD*)/[Sanskrit] mā-nuṣaḥ "human being"/[Sanskrit] ma-nu-/[Danish] ma-nd/[Gothic] ma-anna "man". [Hittite] a-ntuḫša "man"/[Greek] a-nēr-(stem: a-ndr-) "man, male person" (AHD*) [where a-ndr- < *a-nthu- "man" + *-er "suffix ?"]. [Greek] a-nthro-pos "human" < > [Congo] a-ntu "persons". || [Proto-Kartvelian] *m-n- "man" (Sv* p.349)
- #RIVER || **Bantu:** [Swahili][Sambaa] m-to (pl. mi-to) || **STb:** [Tibetan] m-ts'o (= m-fo) "lake" || ?[Georgian] m-dinare
Non-prefixed; **STb:** [Tibetan] ts'o "lake"/ *Na-Dene: [Tlingit] da "to flood" || **Ainu:** to "lake, a puddle of water" || **URA:** [Hungarian] tó "lake" || ?Yeniseian: [Ket] dε?
- #SKIN || **Bantu:** [20.Zigra] n-kanda/(Semi-Bantu) [249.Afudu] n-guanti "skin" (John*) || **Austral.** [Narrinyeri] wan-kande "skin of animal"
Non-prefixed; **AN:** [Sarangani Blaan] kindal "skin"
 Note: [Narrinyeri] wan- probably corresponds to the plural classifier, wa-, found in (Bantu) [Sambaa] m-nyama (sing.), wa-nyama (pl.) "animal".
- #SNAKE || **Bantu:** [Swahili] ny-oka || **AfAs:** [Hebrew] n-ah.ASH || **NHal:** [Pagu] n-gia/[Tobaru] ny-ia/[Galela] n-gihia/[Ternate] n-gohia/[Tidore] y-ega (< [Proto-NHal] *ny-ega "snake") || **AN:** [Maori] n-akahi
Non-prefixed; **Khoisan:** [//Ng-!'e (S2)] k'au, [Tati (C1)] /gauo, [Naron] /kaūba (Ru*95)
- #STONE || **NiCon:** *Bantu: [75. ǃōsa(Kafir dial.)] i-tara "stone, bare rock" : [96. Libōlō] li-tari/[95. Kisama] di-tadi "stone" (John*)/ *Plateau: [Guta] ri-shàrà (pl. à-)|| **AINU:** wa-tara
Non-prefixed; **IE:** [German] thal "valley" || **Mong:** [Wr.Mongolian] čilay-u-n || **South-Caucasian:** [Georgian] tal- (Sv*) || **AINU:** pi-tara "stone" (pi- < > pet "river" ?) (< > [Latin] pe-tro "rock, stone" ?) || **JPN:** o-tari (小谷) "(place name in Nagano-Pref.)" (< *tari "valley"?)
- #TONGUE || **NiCon:** [Mbe] lè-lé.m (pl. bè.-lé.m) (SEL* 4:1186) || **AN:** [Sawai] pe-plé-o/[Takia] ba-le-n/[Dami] ba-le/[Yabem] i-m-be-la || **JPN:** be-ro
- #TOOTH || **NiCon:** [Kebu] dōm-di (pl. e-rō-ir) (SEL*) || [Proto-IE] *dent-
- #TREE₁ || **Bantu:** [Venda] mu-ri (< *mu-ti ? > > [Swahili] m-ti "tree" ?) || **JPN:** [Jp] mo-ri "woods, mountain" || **DRA:** [Tamil] ma-ram
 Note: Probably related to #TREE₂ [Swahili] m-ti (pl. mi-ti).
- #TREE₂ || **Bantu:** [Swahili] m-ti (pl. mi-ti)/[Yombe] n-ti (?) (pl. min-ti) (SEL* 4: 642) || **South-Caucasian:** [Georgian] m-ta "mountain" || **JPN:** -mo-to "tree" (used only for counting trees, such as Fito-moto, Futa-moto, etc.) || [Basque]: men-di "mountain" (< > [Yombe] min-ti "trees")
- #WATER || **Kordofanian:** [Moro] ŋ-áwá (SEL* 1:1775-78) || **AfAs:** [Egyptian] n-wy "river" (AHD*) || **Trans-NwG:** [137. Borai] ŋ-war/[134.Amberbaken] war/[83.Aikwakai] k-warú "water" || **JPN:** k-awa "river" || ?**AN:** [Nyindrou] g-wa "river, water"/[Dobel] k-ar "water" (?)
- #WOMAN || **NiCon:** *Plateau: [Kuda] ma-dai, [Kudù] ù-màdé, ù-màndé, [Chamo] ma-tfi (pl. amadaja) (SEL* 1:1457) || **AfAs:** [Hausa] m-taj (< *m-tā) || **IE:** [Hindi] mā-tā "mother", [Persian] mā-da-r "mother" || **DRA:** [Tamil] mā-thā "mother" (< *ma-thay ?) (Cf. pē-thai "woman") || **AINU:** ma-t- "female" || **JPN:** -ma-ti (suffix for woman name, e.g., "Ono-no-Ko-mati") || **AuAs:** [Khmer] m-da:y "mother" || **Hokan:** [Marikopa] n-taj (< *m-taj) (Ohnishi, 1995)
Non-prefixed; **DRA:** [Tamil] thāy (ETD*), tāy (D364) "mother"/[Kannada] tāy, tāyi "mother"/[Telugu] tāyi "mother" || **Coahuiltecan:** [Coahuilteco] tai "mother", tayagu, tāgu "wife"/[Comecrudo] te "mother" (Ohnishi, 1995) || **South-Caucasian:** [Georgian] deda "mother" (< *daj ?)

If we consider that Ainu has recently been demonstrated to belong to AN (Murayama, 1992, 1995; Ohnishi, 1994), that Japanese is most plausibly a member of AN (as is most clearly found in Hateruma dialect of Ryukyuan. See Murayama, 1995, and Ohnishi, 1995a), and that Austr. AbL share a considerable number of basic words with Ainu (Ohnishi, 1994), then the frequent conservations of Niger-Kordofanian type prefixes in Ainu, Japanese and Austr. AbL shown in Table 3 suggest that Proto-AN would have possessed a lot of relics of Niger-Congo type noun-classifiers.

Swadesh' basic 100 words includes 57 nouns (excepting numerals and pronouns). Out of the 21 different meanings listed in Table 3, 16 meanings belong to Swadesh' 100 basic words, 18 to his 200 basic words (Yasumoto and Honda, 1978), and the remaining three are #BODY, #FOOD, and #SNAKE.

Accordingly, wide distribution of Niger-Kordofanian type classifiers in extra-African basic words from all over the world most plausibly reflects African (Niger-Kordofanian or Niger-Congo) origin(s) of most or all of extra-African languages.

Furthermore, there are many Bantu/NiCon non-prefixed nouns whose cognates are found in both Khoisan and extra-African languages. These examples will be published and discussed elsewhere.

Numerals

In order to further confirm evolutionary kinships of African languages to extra-African languages, African numerals were compared with extra-African numerals. The resulting cognate relationships with possibly high reliability are summarized in Table 4.

A most astonishing finding is that AN languages well conserve Ni-Con-related numerals, as found in #ONE-1, #ONE-2, #TWO-1, #TWO-2, #THREE, #FOUR, #FIVE, #EIGHT, #NINE, and #TEN-1. In some cases (#ONE-1, #TEN-2), NHal possess numerals whose cognates are found in Africa, but not in AN. In #TWO-2 and #THREE, IE and AN share common numerals whose cognates are found in NiCon, which seem to suggest a relatively close evolutionary relationship between IE and AN.

Ainu reflex of [Proto-AN] *duva "two" is, almost undoubtedly, [Ainu] *rau "two", which is conserved in [Ainu] pinne-rau "two-year-old buck" (< [Ainu] pinne "male" + *rau., Ohnishi, 1994. Cf. (Sulawesi group of AN) [Da'a] binata "animal") (See #TWO-2 in Table 4). [Ainu] *rau is, most plausibly, more closely related to (Oceanic of AN) [Nyindrou] la?uh "2" and [Tokia] raru "2", than to [Fijian] rua "2", although I formerly compared [Ainu] *rau directly with [Fijian] rua (Ohnishi, 1994). Therefore, [Ainu] *rau < *ra?u < *raru < *rua-rua (repetition of first syllable) < *rua < [Proto-AN] *dua "2". This strongly suggests Oceanic origin of Ainu, as has been demonstrated by Murayama (1992, 1993, 1995).

Evolutionary meanings of Table 2 and Table 3 will be discussed after overviewing phylogenetic relationship among major families of extra-African languages in the following sections 5-7.

Table 4. Comparison of African numerals with extra-African numerals

ONE-1 || **NiCon:** (Bantu)[Luba] -mò / [Swahili] -moja ; (Cross-River)[Akpè-Ehom] -mùyì (SEL*) || **NHal.:** [Galela] [Loloda] moi (Wada*) || **AuAs:** [Santali] mi¹ / [Sakai] mui / [Khmer] muoi (Kita*, p.254) || **STb:** [Kachin] mji³³ (SEL* 1: 1181) || **AN:** (OCE)[Adzera] mu¹²- / [Raga] mua "first" ; (OCE)[Motu] mo "only" (CAD*)

ONE-2 || **NiCon:** (Plateau) [Guta] dèn / [Tsam] dwon (SEL* 2: 1011) / [Bisi] ri-don / [Janji] dinkè (SEL*) || **STb:** [Tibetan] deṅ- "first" || **AN:** (Formosan)[Tsou] ɸoni / (W.MP)[Murut] dondo? (< *don-don ?) (CAD*)

TWO-1 || **NiCon:** (Bantu) -bali "two" (most common form with variants such as; -bare, -bale, -wari, -vari, -bae, -ba, -wa) (John* I: 464) , [206. Ba-kwiri-Bam-bokw] -ba, -wa / [205. I-subu] -ba, -wai "2" (John* I: 464) || **AfAs:** [proto-Central Chadic] *kV-bwVr (Ru*94) || **AuAs:** (Mon-Khmer): [Sakai] hm-bar (= 'mbār, Kita*, p.255) / [Riang] (k-)ār / [Old Mon] ?bar (Ru*94) || **AN:** (OCE) [Xaracuu] bāru "2" ; [proto-AN] *ɸuwa (< *ɸu- + *-ba "2" ? See #TWO-2.)

TWO-2 || **Khoisan:** [Sandawe] hluba "2" || **Ni-Kord:** (West Atlantic) [273. Fulup] -luba "2" [< *-lu- (prefix) + *-ba(li) "2". See #TWO-1.] || **AN:** [proto-AN(Dempwolf)] *ɸuwa (< *ɸu-ba ~ *ju-ba ? < *ɸu- ~ *ju- + *-ba "2") / (W.MP) [Isnag] duwa // (OCE) [Nyindrou] la?uh (< *raruh ?) / [Takia] raru / [Fijian] rua "two" ; (W.MP) [Gorontalo] ?o-luwo "2nd" (CAD*) || **[Ainu]** *-rau "2" (< *ra?u < *raru. [Ainu] pinne-rau "two-year-old buck" (Ba*)) || **TUNG:** [Wr. TungMan.] juwe "2" (< *ʒuwa < *ɸuwa) || **IE:** [proto-IE] *dva "2" (< *ɸuwa ?) || **South Caucasian:** [Georgian] m-ʒuvn-ob-a "sich paaren" (< *ʒuwa-n-)

Note 1: [273. Fulup] -luba "2" (< *-lu-ba) possibly cognates with; **Ni-Kord:** (West Atlantic) [269. Kanyöp] taba (< *-ta-ba) / [271. Sarar] -tab / [272. Bøla] -taw "2" (Cf. John*, I: 466.).

Note 2: Cf. **AfAs:** (Cushitic) [Asa] hlam / [Galla] lama "2".

THREE || **NiCon:** (Plateau) [Tsam] tát / [Bisi] ti-tat / [Guta] tààru ; (Bantu) [Swahili] -tatu || **AN:** [proto-AN] *télú / [proto-Hesperonesian-Formosan] *ta-telu / [Tagalog] ta-tlo / [Isnag] tallu (CAD*) || **IE:** [proto-IE] *trei (AHD*)

FOUR || **NiCon:** (Benue-Congo) [Luba] -ná (SEL*) / [Guta] nàṅzi / [Anaguta] nanzi / [Efik] inang / [Tsam] naas / [Swahili] -nne ; (Kwa) [Twi] anan / [Lefana] nne ; (Voltanic) [Grunshi] naase (African data from Gr*60) || **Ni-Sah:** (East Sundanic) [Bari] ingwan / [Dinka] ngwan (Gr*60) || **AN:** (OCE) [Kaulong] nal || **DRA:** [Tamil] nālu, nan-ku || **URA:** [Finnish] neljä / [Hungarian] négy || **Gilyak:** (Amur dial.) nu- (nu-kyr, nu-x)

FIVE || **Khoisan:** [Nama] goro, [Naron] koro "five" (Ru*94) || **NiCon:** (Bantu) [81. Yeye] eñ-gorow / [104c. Northwest Luba] ci-kōla / [75c. Tebele] iñ-galw, u-galu "arm" (John*) || **MONG:** [Wr. Mongolian] ʒar "hand, arm" || **TUNG:** [Wr. TungMan.] gala "arm" (Kaw*) || **AN:** (W.MP) [Javanese] gəlaŋ "wrist"

SIX, SEVEN || **NiCon:** (Bantu) [105. South Luba] samba / [107. North Luba] sambowmw "6" (*-mw "one") ; [4. Lu-ganda] mu-samba / [23. Dzalamw] saba / [86. Lijazi] sambari / [105. South Luba] samba vidi "7" (vidi "two") (John*) || **AfAs:** [Old Arabic] sab' "7" (Unrelated to [proto-IE] *septm̥ "7")

SEVEN || **NiCon:** (Plateau) [Tsam] taarba (< *taa(r) "5 ?" + ba "2") / [Bisi] tarwa || **AfAs:** (Cushitic) [Galla] tórba || ?[Burshaski] talo || ?AN: [Molbog] turu?

EIGHT || **NiCon:** [Guta] wùùru / [Tsam] awuur / [Bisi] u-wur (SEL*) || **AN:** [proto-AN] *walú / [Isnag] walu

NINE || **NiCon:** (Bantu) [230. Mbudikum and dialects] sipo, ʒibw / [146. Lubu-sese] subia, soɓya (John*) || **AN:** [proto-AN] [Paiwan] siva / [Tagalog] siyam || **NHal.:** [Galela] siwo / [Sahu] siworo (Wada*)

TEN-1 || **Ni-Kord:** [250. Boritsū] -tsug "hand" ; (Bantu) [38. Paṅgwa] -tsigw / [148. Lubu-sese] digi / [153. Ba-bali] -tuku / [162. Lōwō] -tugu "ten" (John*) || **AN:** (OCE) [Maori] tekau "ten" ; [Kaulong] tik / [Tolai] luk "to count" ; (W.MP) [Bali.] mə-tek "to count" || **URA:** [Finnish] luku "number" ; [Northern Lappish] loge "ten" || **IE:** [pIE] (Pok*) *dekm̥ "ten" ; [Dutch] reken "to count"

TEN-2 || **NiCon:** [Mande] mògò "person" || **NHal:** [Tobaru] mogiwoko "ten" (< "person" = "10")

Eskimo, Ainu, and Japanese, As Derived from Austronesian

Eskimo is known to belong to Eskimo-Aleut family consisting of Eskimo and Aleut (Miyaoka, 1978). Origin of Eskimo-Aleut is, however, an unsolved problem of macro-comparative linguistics. Although evolutionarily related words have been found between Eskimo and Uralic (Bergsland, 1959), the degree of kinship seems to be very distant.

On the other hand, some Eskimo words show remarkable similarities to AN, Ainu and Japanese. Typical examples from North Buffin dialect (NB) of Eskimo are shown in Table 5 [A].

Further analysis made by comparing Eskimo vocabulary with AN, Ainu, Japanese, Sino-Tibetan, etc. has revealed numerous word-correspondences summarized in Table 6. Word similarities of Eskimo to AN and Ainu are much more strong than those reported between Eskimo and Uralic (Bergsland, 1959). Thus it is most reasonable to conclude that Eskimo-Aleut belongs to Austronesian family.

Japanese is said to be related to Austronesian (Polivanov, 1906-30; Matsumoto, 1931; Ohno, 1957; Murayama, 1975; Sakiyama, 1978) and also to Austro-Asiatic (Matsumoto, 1931). Recent analyses of Hateruma dialect of Ryukyu Japanese seem to suggest that (Proto-)Japanese would be, very plausibly, a member of Austronesian (Murayama, 1995; Ohnishi, 1995a). Typical examples showing Japanese affinity to AN, especially to Oceanic, are given in Table 5 [B].

Both Modern Japanese and Old Japanese are considered to possess no prepositions. However,

[Kabira dialect of Ryukyu Japanese] *du-mana* “where” is evidently a Ryukyuan reflex of [Malay] *de mana* “where”, in which *de* is a typical preposition in AN. Thus we find that [Kabira dial.] *du-mana* < **de-mana* < **de* (prep.) + **mana* “where” (Ohnishi, 1995a). This is the first report that Japanese language possesses AN-type preposition (or its relic). Striking similarity between an affix, **na* in [Old Japanese] *ko-na-mi* “former wife, legal wife” (< “young woman”) and *na* in [(Sulawesi group of Western MP) Wolio] *ana-na umane* “young man” also strongly suggests possible belonging of Japanese to AN (See Table 5 [B] for details.).

Eskimo-Japanese affinity found in *LOW, *SNOW, *HEAD, and *BROTHER of Table 6, is therefore considered to reflect phylogenetic affinity between these two possibly AN languages.

Mayan as a Close Kin to Tibeto-Burman

Origin of Mayan languages and peoples is unknown, although Mayan is classified to the so-called “Amerind language family” in Greenberg’s classification of American native languages (Greenberg, 1987). Recently, I pointed out remarkable similarities in numerals between Mayan and Tibeto-Burman group of Sino-Tibetan language family (Ohnishi, 1995).

Table 7 shows comparison of Mayan numerals with Tibeto-Burman and Thai numerals. Mayan numerals for “1” - “5” well correspond to the numerals in North-Assam languages (Lhopa, Dafla, and Apatani) and Mishmi language group (Taraon, Digaru, and Idu), as shown in the underline portions in Table 7. As shown in this Table, Mayan numerals such as [Kekuchi] *uh*

Table 5. Typical examples showing evolutionary kinships between Eskimo and Austronesian / Ainu / Japanese languages (A), and between Japanese and Austronesian languages (B).**Abbreviations:** MP= Malayo-Polynesian, C.MP= Central MP, OCE= Oceanic, W.MP= Western MP**[A] Typical correspondences of North Buffin dialect (NB) of Eskimo to Austronesian / Ainu / Japanese.**

| | |
|-------------------------------|--|
| [Eskimo (NB)] (Spalding,1979) | [Austronesian/Ainu/Japanese] (Tryon, 1995, etc.) |
| <i>anuri</i> "wind" | (OCE)[Marringe] <i>nuri</i> "wind" |
| <i>tasik</i> "lake" | (W.MP)[Malay] <i>tasik</i> "lake" |
| <i>silā</i> "air, weather" | [Ainu] <i>sir</i> "weather" |
| <i>tisi</i> "den" | [Ainu] <i>cise</i> "den, house" |
| <i>pulaar-poq</i> "goes out" | (C.MP)[Ngada] <i>paru</i> "to run" |
| | [Ryukyu Japanese (Hateruma dial.) (Austronesian Aboriginal languages) [Djaru] <i>parun</i> "to go, to run" |
| | <i>pur-tya</i> "to run" |

[B] Typical examples showing Japanese affinity to Austronesian

| | |
|--|---|
| [Japanese-Ryukyuan] (Nakamatsu, 1987; Ohno et al., 1974) | [Austronesian] (Tryon, 1995) |
| [Ryukyuan] <i>mana</i> "where" | (W.MP) [Malay] <i>mana</i> "where" |
| [Ryukyuan] (Kabira dial.) <i>dumana:</i> "where" | (W.MP) [Malay] <i>de mana</i> "where" |
| (<i>du-</i> < * <i>de</i> "at") | (<i>de</i> = preposition) |
| [Old Japanese] * <i>na</i> "(affix)" | (W.MP) [Wolio] <i>na</i> "(affix)" |
| <i>ko-na-mi</i> "former wife, legal wife" | <i>ana-na umane</i> "young man" [< "child" |
| [< "child (<i>ko</i>) + <i>na</i> + woman (<i>mi</i>)" | (<i>ana</i>) + <i>na</i> + man (<i>umane</i>)"] |
| (= "young woman"), Murayama, 1975, p.261] | <i>mata-na eo</i> "sun" [< "eye (<i>mata</i>) of day (<i>eo</i>)"] |
| | (OCE) [West Fijian] <i>ni</i> "of ..." |
| | <i>mata-ni-hiḡa</i> "sun" |
| | [< "eye (<i>mata</i>) of light (<i>hiḡa</i>)"] |
| [Ryukyuan] (Hateruma dial.) <i>busa-han</i> "big" | (W.MP) [Malay] <i>busar</i> "big" |
| [Old Japanese] <i>migi-(ri)</i> "right" | (OCE) [Adzera] <i>muḡ²</i> "first" |
| (< "first") | (W.MP) [Buang] <i>muginsen</i> "first" |
| [Ryukyuan] (Obama dial.) <i>pinda-(ru)</i> "left" | (W.MP) [Wolio] <i>pen-dua</i> "left" |
| (< * <i>pin-da-</i> "second") | (* <i>-dua</i> < [pAN] * <i>ḡuwa</i> "two") |
| [Old Japanese] <i>ma-, ma-na</i> - "eye" | (OCE)[Lau] <i>mā</i> / [Kwaio] <i>mā(-na)</i> / |
| | [Mekeo] <i>maa</i> (< [pAN] * <i>maCá</i>) "eye" |
| [Old Japanese] <i>kata</i> "shoulder" | (C.MP) [Ngada] <i>kasa</i> "shoulder" |
| [Old Japanese] <i>a</i> "foot, leg" | (OCE) [Yabem] <i>à</i> "leg, foot" |
| [Old Japanese] <i>kapi-na</i> "upper arm" | (OCE) [Marshallese] <i>kəp</i> "shoulder" |
| [Old Japanese] <i>kapo</i> "face" | (OCE) [Cemuhi] <i>kōwɔ-n</i> "face" |
| | ([Eskimo(West Greenland)] <i>qao-q</i> "forehead") |
| [Old Japanese] <i>tura</i> "cheek, jaw" | (OCE) [Rapanui] <i>tira</i> "forehead" |
| [Ryukyuan] (Tokunoshima dial.) <i>kara-dzi</i> "head" | (OCE) [Motu] <i>kʷara-na</i> "head" |
| [Ryukyuan] (Hateruma dial.) <i>ssi</i> "pus" | (OCE) [Kaulong] <i>susu-an</i> "pus" |
| [Ryukyuan] (Takeshima dial.) <i>nnu:-fji</i> "breast" | (OCE) [Kilivila] <i>nunu-</i> "breast" |
| [Ryukyuan] (Takeshima dial.) <i>nudu</i> "throat" | (OCE) [Samoan] <i>ḡutu</i> "mouth" |
| [Ryukyuan] (Komi dial.) <i>kamatsu</i> "jaw" | (OCE)[Maringe] <i>gagama</i> (< * <i>gama</i>) "jaw" |
| ([Old Japanese] <i>kamati</i> "cheek (side of face around cheek bone)") | |

Table 6. Correspondences of Eskimo consonants (NB = North Buffin dial., WG = West Greenland dial.) to Austronesian, Japanese, Ainu, and related languages

[ESK] p- | AN: (OCE) p-, b- (< *p-), (W.MP) b-, p- | [JPN] p- | [Ainu] p- | [Tibetan] b- (?) ||||
***GOOD:** [ESK] (NB) piu-juq "good" // AN: (OCE) [Dami] biya // (W.MP) [Kalinga Limos] piya "good; well, health" // Bantu: -bia, -pia "good" (John*) || ***HOLE:** [NB] putu // [Ainu] pui // AN: (OCE) [Rapanui] pū, (W. MP) [Aklanon] būhu ? / [Kalinga Limos] abūt // STb: [Tibetan] bu-ga (?) "hole" || ***LOW:** [NB] pūkí- "low" | [Old JPN] piki-nari "low" (Ohno et al., 1974, p.1076) || ***READY to START:** [WG] piko-voq "makes himself ready to start" // [Ainu] pikai-shipini "to prepare for a journey" (shipini "(adverb) ready"; Ba*, p.392) || ***SMOKE:** [ESK] (WG) pujoq "smoke, steam" // AN: (OCE) [Lewo] viyu (< *piyu) "to smoke (of fire)" // [Ainu] puyuisse "to ascend as thin smoke" (Ba*) || ***THING:** [WG] pe "thing" // [Ainu] pe "an article, a thing" || ***to WALK:** (NB) pisuk-tuq "to walk" // AN: [Woleaian] peṣē "foot"

[ESK] t- | AN: (OCE)(W.MP) t- | Ainu: t- |||| ***ALL:** [WG] tama-q "entirely, all" // AN: (W.MP) [Kagayanan] tama // (OCE) [Cemuhi] tóme-n "much, many" || ***BACK (anatomical):** [ESK] (NB) tunu, (WG) tuno, tunuk "back" // AN: (W. MP) [Balinese] tundun / [Uma] toŋo? "back" || ***BODY:** [NB] timi // [Ainu] tumam // (AN) [Malay] tubuh "body" || ***LAKE:** [ESK] (NB) tasik // (AN) [Malay] tasik "lake" || ***to FLY:** [WG] tingi-voq "flies upwards", ting-miaq "bird" | AN: (OCE) [Kaulong] teŋ "to jump, to leap" || ***LIVER:** [NB] tinguk "liver" | AN: (OCE) [Paamese] tinok "guts" ("my guts") // (W.MP) [Kagayanan] tu'ŋul "stomach"

[ESK] m | AN: (OCE)(W.MP) m | [JPN] m |||| ***BEARD:** [WG] umik // AN: (OCE) [Roviana] ŷumi // (C.MP) [Sika] ?umi-ŋ / (W.MP) [Sarangani Blaauw] kumi "beard" || ***EGG:** [ESK] (NB) man-nik "egg" (< *man- "bird" + *-nik "food ?") // AN: (OCE) [Mbula] man // [Motu] manu // (C.MP) [Dobel] man // (W.MP) [Sundanese] manuk "bird" || ***NOW:** [NB] maana // JPN: [Ryukyuan (Hateruma dial.)] mana "now" // AN: (OCE) [Xaracuu] manīrī "to hasten" || ***ROOT:** [WG] mángoq "root" // AN: (OCE) [Motu] maho "yam"

[ESK] n | AN: n | [JPN] n |||| ***BROTHER:** [NB] ani "brother of a woman" // [JPN] ani "elder brother" || ***FOOD:** (NB) niqi "food" | AN: (OCE) [Nemi] nuk "fish" || ***TREE:** [NB] napaaq-tuq "tree" (< *nəpā "tree-leaf" < *ni-pā < *ni "tree" + *pā "leaf", where pā cognates with [Old JPN] pa / [Ponapean] pah (= pā) "leaf") // [Ainu] nf "tree", nf-ham "leaf of tree" (ADD*) // AN: (OCE) [Marshallese] ni, [Yabem] nip "palm tree" // [Middle Korean] nip "leaf" (< *ni-pa "tree-leaf") || ***WIND:** [NB] anuri // AN: (OCE) [Maringe] nuri "wind" || ***WHERE:** [NB] nani?, nau? // AN: [Dami] nain "where" | [JPN] nani "what"

[ESK] n- | AN: (C.MP) [Ngada] ŋ- |||| Gilyak: ŋ- (?) |||| ***HAIR:** [WG] nujaq "hair (of the head)" | AN: (W.MP) [Molbog] nuok "hair (of head)" | ? [Gilyak (Amur dial)] ŋaŋg "head" (YH*) || ***HEAD:** (NB) niaqu, (WG) niaqoq "head" | AN: (C.MP) [Ngada] ŋia "face"

[ESK] [Aleut] k- | AN: k- |||| ***HEART:** (ESK-Aleut) [Aleut] kanuux "heart" (Be*) | [ESK] (East Greenlandic) kanik "blood (shaman's word)", (Inupiak) kanuya "copper" (< "red" ?) (Be*) | AN: (OCE) [Meke Fila] ufi kānoa "heart", [Kilivila] mara-kana "red" || ***RIVER:** [NB] kuuk "river" | AN: (W.MP) [Sasak] koko? "river, water" || ***WHO:** [NB] kina? // AN: (W.MP) [Kagayanan] kinu "who"

[ESK] q- | AN: k-, g- |||| ***DAYLIGHT:** (WG) qauk "daylight" // AN: (OCE) [Kaulong] pikiŋ-kauk-aŋan, [Kilivila] kau-kwau "morning" || ***MOUTH:** [NB] qaniq, (WG) qaneq // AN: [Irarutu] gānə "mouth" "mouth" || ***SMALL:** [WG] qutsoq, qutsuk "small, tiny" // AN: (C.MP) [Sika] kəsik "small"

OTHER CORRESPONDENCES: *AIR [NB] sila "air, weather" // [Ainu] sŋr "weather, earth" space" || *DEN: [NB] tisi "den" // [Ainu] cfse "den, house" || *to DIE: [NB] tuqu-juq // AN: (OCE) [Buang] dŋk "to die" // [Middle Korean] tŋuk- (YH*) "to die" || *NIGHT: (NB) unnuk // AN: (W.MP) [Bugis] wŋni / [Konjo] baŋŋi "night" || *SMOKE: [NB] isiq // AN: [Tagalog] ūsok || *SUN: [NB] siqi-niq // AN: [Fijian] siga

“3”, *kwuqu-b* “7”, [Yucatec] *ho’* “5”, *wak* “6”, **-qaal* “20”, are most similar to the corresponding numerals in the Loh-pa language. Considerable similarities are also observable in the comparisons of Mayan with Mishmi, Written Tibetan, Written Burmese, and Thai.

The origin and etymology of [Classical Tibetan (Class.Tb)] *br-gyad* “8” has long been unsolved (In: Kitamura, 1981, pp.159-63). Comparison of [Class.Tb] *br-gyad* with [Lho-pa] *pi:ni* / [Atapani] *pinyi* “8” revealed that [Atapani] *pinyi* “8” < [Proto-North-Assam] **plyi-nyi* < **pilyi* “4” + **nyi* “2”, and [Class. Tb] *br-gyad* < **b(V)r-* “4” (cognates with [Apatani] *pilyi* / [Miau] *plu* “4”) + **g-yad* “2”. And moreover, Mayan (Kekuchi, Pocomchi, and Yucatec) numerals of “8” are closely related to [Wr. Burmese] *hrac* “8”, which further cognates with [Class.Tb] (*br-*)*gyad* “8” (See Note 3 in Table 7, for details.). North Caucasian [Chechen] *bar-xl* “8” closely resembles [Classical Tb] *br-gyad* (< **bVr-gyad*) “8”, which would support “Sino-(North) Caucasian theory” of Bengtson (1991).

Comparison of general vocabulary between Maya and Tibeto-Burman clearly demonstrates close relationship between these two language groups (See Table 7).

Thus we can now conclude that Mayan is a language group closely related to North-Assam languages. Domesticated elephants drawn in Maya glyphs (Tobe, 1990, p.11) would support the North-Assam origin theory of Mayan languages and peoples. Proto-Mayan people, almost undoubtedly, moved from Assam district or its vicinity, to Middle America via the Behring land-bridge.

Origin of Sino-Tibetan (STb) is unknown. It is important to note that STb seems to possess reflexes (or relics) of AN infixes, as exemplified by the followings (Data from: YH*; CAD*; Jaeschke, 1881):

- #to SEW: AN: (Formosan) [Paiwan] *ts-um-aqes*, [Tsou] *t-m-e?si* (YH*) ||
 [Yami] *t-um-inum* (Ohno, 1957), [Sarangani Blaan] *t-am-bel* (CAD*)
 STb: [Wr. Tb] *tem-pa* (< **t-em-pa*)
 #to DIE: AN: (Formosan) [Paiwan] *q-um-utsi* “to kill”
 STb: [Wr. Tb] *gum-pa* “to die, to kill” (< **g-um-pa*) (Cf. *gem-pa* “to kill”)

These observations suggest an interesting possibility that proto-STb would have had emerged from a branch of AN. Or else, AN might have had emerged from a branch of STb, or both proto-STb and proto-AN share a common ancestral language.

Nishida (1974) reported that Tibetan shares numerous words with Japanese, which undoubtedly include a considerable number of true cognates. It is important to answer the questions, whether or not these words common to STb and Japanese could have had evolved from common AN words from which STb and Japanese might have had independently emerged, or whether Japanese could have evolved from an early STb branch (which might have had emerged from an AN branch).

On the other hand, Schumacher *et al.* (1992) recently demonstrated that Mayan vocabulary includes a considerable number of words closely related to Austronesian (especially to Oceanic). Therefore, Proto-Mayan would have originated from an ancient language closely related to Oceanic, from which Proto-Formossan and Proto-Sino-Tibetan might have derived. In order to know further detailed origin of STb and AN, it seems to be also important to analyse their relationship to

Table 7. Comparison of numerals and general vocabulary between Mayan and Tibeto-Burman languages.

≠ NUMERALS (Modified from Ohnishi, 1995)

| Mayan | Sino-Tibetan | | | | Thai |
|--|-------------------------|----------------|---|--|---|
| | Tibeto-Burman | | | | |
| Yucatec | Mishmi | | North-Assam Languages (Nishi-da, SEL* 4:1059) | | Classical Tibetan (Beyer, 1992) |
| (Yasugi, SEL*, 4: 120-29) | (Nishida, SEL*, 4: 273) | | Lho-pa/Dafla/Apatani (SEL* 4: p.1059) | | |
| | Taraon | Digaru | Idu | | |
| | (SEL*, 4: p.273) | | | | |
| "1" <u>hun</u> | <u>khum55</u> | <u>khín</u> | <u>khum55 ge55</u> | <u>aken/akhin/koñ</u> | <u>hnŋng</u> |
| "2" <u>ka</u> | <u>ka31 n55</u> | <u>kâyín</u> | <u>ka31 ni55</u> | <u>ani /anyí /anyi</u> | <u>g-nīs</u> (h-nac ⁺⁺⁺) |
| "3" <u>oš</u> | <u>ka31 swŋ35</u> | <u>kàsân</u> | <u>ka31 soŋ35</u> | <u>añum/ um /hiñ</u> | <u>g-sum sam</u> |
| <u>uh/uš⁺⁺</u> | | | | | |
| "4" <u>ce: </u> (kan "4") | <u>ka31 prai55</u> | <u>kâprayk</u> | <u>ka31 prwi55</u> | <u>api:/appi, apli /pilyi</u> | <u>bži si^l</u> (lei ² +++) |
| "5" <u>ho'</u> | <u>ma31 ŋa35</u> | <u>máña</u> | <u>ma31 ŋa35</u> | <u>oŋo/ango/yaño</u> | <u>lña ha², hâh</u> |
| "6" <u>wak,</u> <u>akak⁺</u> | <u>ta31 xro53</u> | <u>tahro</u> | <u>ta31 hro53</u> (< *ta drug) | <u>akw/akke (< *akre ?)/xi</u> | <u>drug hok</u> (khrɔk ⁺⁺⁺) |
| "7" <u>wuk</u> <u>kwuqu-b⁺</u> | <u>wen53</u> | <u>we</u> | <u>i55 hŋŋ55</u> | <u>kwnu/kani/kanu</u> (< *kwuŋu) | <u>b-dun,</u> (khu-nac ⁺⁺⁺) |
| "8" <u>wa-šak</u> <u>kwa-qšaq-ib⁺⁺</u> (< *kwa- + *hřaq- "8") | <u>(lium35</u> | <u>lim</u> | <u>i55 liŋ35)</u> (< *i plio-ŋi ?) | <u>pi:-ni/plö-nö</u> (/pi-nyi | <u>br-gyad päd</u> (< *br-grad |
| "20" <u>hun-qaal</u> | | | | <u>(< *pilyi-nyi</u> ("4 X 2") | <u>("4 X 2")</u> (hrac ⁺⁺⁺) |
| | | | | <u>ke:/-/-</u> | <u>khal</u> |

Note 1: + = Huastec, ++ = Kekuchi (Yasugi, 1990), | = Chontal (SEL*, 2:992-994), +++ = Written Burmese (Yabu, 1982, pp.78-79). Hymalayaish (Hym.) = SEL*

Note 2: STb: [Mikir] "2,3,4,5,6" = hini, kethom, phli, pho, throk (SEL* 4:247).

Note 3: (Mayan) [Kekuchi] kwa-qšaq-/[Pocomchi] wa-hřaq- (Yasugi, 1990) "8" < [Proto-Mayan] *kwa-hřaq "8" < *kwa (< > [Taraon] ka³¹ "prefix for numerals") + *hřaq "8" (< > [Wr. Burmese] hrac "8"). | | [Classical Tb] br-gyad "8" (< "4 X 2") < *br- "4" (< > [Apatani] pilyi "4") + *-g-yad "2", where *-g-yad (< > [Wr. Tb] g-nīs/[Proto-Apatani] *(k)a-nyi "2") < *g- + *yad "2", in which *yad < > (Hymalayaish = Hym.) [Manchad] džuža/[Tinan] ñidži "2" (SEL* 3:501). (Hym.) [Tinan] gyèdi/[Thebor] gyai < *br-g-yèdi < > [Wr. Tb] br-g-yad "8". [Old Chinese] *prəi (Kita*, p.159) < *pr-yəi < > [Wr. Tb] br-g-yad "8". (Hym.) [Kanaur] rəy "8" < *g-rəy > [Thebor] g-yai "8". Therefore, [Wr. Tb] br-gyad < *br-grad < > *br-hrac > [Wr. Burmese] hrac "8". (Hym.) [Langkas] džyad "8" (< *br-džyad "8" ?) < > [Manchad] džuža "2".

Note 4: (Caucasian) [Chechen] barxI "8" < > [Classical-Tb] br-gyad "8".

≠ GENERAL VOCABULARY (From Ohnishi, 1995) [Maya = Tobe (1990), Tozzer (1977); Wr. Tibetan = SEL* 4:1055-67; Tibetan = Tobe, 1989]

*TONGUE [Maya] ak' /Tb-Burm: [Lho-pa] ajo | | *LITTLE, SMALL [Maya] chan /Tb-Burm: [Tibetan] c' uñ-tse, c' uñ-ba | | *NECK [Maya] kal /Tb-Burm: [Tibetan] mgúl, mgur | | *to DIE [Maya] kim /Tb-Burm: [Tibetan] gúm-pa | | *to ROB [Maya] kō, okol "to rob", kol "despojar"/Tb-Burm: [Trung] khə', [Wr. Burmese] kho-² "to steal" (Nishida, 1978, p.227) | | *to SOUND [Maya] kot /Tb-Burm: [Tibetan] skad "voice, sound" | | *STRING [Maya] kots /Tb-Burm: [Lho-pa] kupe: / [Wr. Tibetan] skud-pa | | *LIGHTNING [Maya] lemba /Tb-Burm: [Mili] long "day"/[Lhopa] lo: "day" | | *HOUSE [Maya] na, nah /Tb-Burm: [Baima] ŋŋ35, [Lho-pa] ugu: [Nishida, SEL* 2: 792]/[Bodo] no?, [Garó] nok (Nishida, 1978) | | *TAIL [Maya] ne /Tb-Burm: [Tibetan] rñá-ma "tail of yak" | | *IRON [Maya] sak ta'ú /Tb-Burm: [Lho-pa] cak/[Wr. Tibetan] lcags | | *WORD, to SPEAK [Maya] l'an //STb: [Maru] dŋng/[Lashí] dang tēi/[Wr. Tibetan] g-dangs "voice" (Nishida, 1978) | | *BONE [Maya] tun // [Tibetan] γduñ | | *MALE GOAT [Maya] (ah) yuk / [Tibetan] γyag "male yak" | | *to BE [Maya] yan // [Tibetan] yin-pa

IE, since either two or all of these three families often share common vocabulary, as found in Table 3, Table 4, and Table 7.

Quechuan word-initial *ll-* and its reflexes in Eurasian and Pacific languages

Quechuan words possessing word-initial *ll-* have recently been found to show close similarities to Finn-Permic cognate words in Uralic language family (Ohnishi, 1994). In Quechua, word-initial, *ll-*, is found in about 70 words in case of Markham's (1864) dictionary. Such consonant cannot be found in other Mongoloid languages, and therefore, these words were compared with vocabularies from representative language families in Eurasia and Pacific area. These Quechuan *ll-* were found to very regularly correspond to *l-* (or *vl-* in some cases, where "V" denotes a vowel. See Ohnishi, 1994) in Finn-Permic languages of Uralic family, especially in Finnish and Zyrian. The resulting correspondences are shown in Table 8. Quechuan *ll-* corresponds not only to [Finnish] [Zyrian] *l-*, but also to *y-* in Turkish (and *O-* in Mongolic), and to *l-* or *r-* in Oceanic and other AN languages (See Table 8), *r-* in Ainu, and *l-* in Indo-European languages. A typical example is; [Quechua] *llocsi-* "to go forth" cognates with [Zyrian] *lok-ny*, [Fijian] *lako*, [Ainu] *raye* "to go". Extremely close similarity between [Quechuan] *llocsi-masi* "brother" (< *llocsi-* "to approach near" + *masi* "friend") and [Finnish] *lahim-mainen* "brother, neighbour" (< **lahin* "nearest" + **mainen* "friend?") would tell us a close evolutionary relationship between these two languages.

However, rough survey for possible cognates between Quechuan and Finnish resulted in a finding that Quechuan and Finnish words that do not possess initial *ll- / l-* do not show so close similarity than those possessing initial *ll- / l-*. This might mean that Uralic and Quechuan are relatively distant kins, both of which originated from the same language or different languages of ancient Austronesian family, and those words with initial *ll-* could have conservatively evolved in both of the Quechuan and Finn-Permic lineages.

It is important to note that, in Table 8, Quechuan *ll-* words seem to show close similarities to Oceanic group of Austronesian, rather than to Western Austronesian and other subgroups of AN.

This observation well coincides with Schumacher and colleagues' finding of close relatedness between Quechua and Oceanic (especially Vanuatu) languages found in several basic words (Schumacher *et al.*, 1992), strongly suggesting that both Quechuan and Uralic might have originated from (probably different) early Oceanic languages of Austronesian family. Observed similarities between Uralic and Dravidian languages (Tyler, 1968), and between Dravidian and Japanese (Ohno, 1994) suggest that Dravidian might also have been derived from Austronesian.

The Indo-European cognates shown in Table 8 strongly suggest that Proto-Indo-European could be a kin derivative of an early Austronesian language, or else (but seemingly less plausible), both Proto-Indo-European and Proto-Austronesian could share a common ancestral kin language.

On the other hand, Quechuan might possess some basic words common to non-Uralic Mongoloid languages (See some examples in Ohnishi, 1994). A typical example is [Quechua] *na* "I", which is widely distributed in non-Uralic Mongoloid languages such as Gilyak, Sino-Tibetan, Japanese, Korean, and Austronesian. These suggests evolutionary kinship among these Mongoloid languages.

Table 8. Quechuan word-initial *ll-* and its reflexes in Uralic and related Eurasian and Pacific languages. Revised and enlarged based on Ohnishi (1994, pp.290-291).

Abbreviations used in this Table: ALT = Altaic (Turkic and Mongolic), AN = Austronesian, Finn. = Finnish, FORM = Formosan, MONGc = Mongolic, OCE = Oceanic, Que.=Quechua, TRKc = Turkic, URA = Uralic, W.MP= Western Malayo-Polynesian, Wr.Mong.= Written Mongolian.

[Que.] *ll-* corresponds to ; [Finn.] *l-* ; [Turkish] *y-* ; [Wr.Mong.] \bigcirc - ; (AN) *l-*, *r-* ; [Ainu] *r-* ; [Gilyak] *l-* ; (IE) *l-*

*[Que.] llacca "thin" || URA: [Finn.] laiha "thin" || AN: (OCE)[Maori] rahi-rahi / [Tahitian] rai-rai "thin"

*[Que.] llaccu "lichen" || IE: [Greek] leikhēn / [English] lichen "lichen" || ?AN: (OCE) [Fijian] lumi "lichen" (< *luNi ??)

*[Que.] llacchapa "trap" || URA: [Finn.] loukku / [Estonian] lõks "trap" / [Zyrian] leč "snare for birds and hares"

*[Que.] llacta "town" || URA: [Zyrian] luok'ta, luovta- / [Finn.] lahti "bay, creep, inlet" || IE: [Lithonian] i'lanka "bay"

*[Que.] lapi "song" || URA: [Lappish] lāvut / [Finn.] laulaa "to sing" || [Gilyak](Sakhalin dial.) lu-nd "song, to sing" || (Cf. AN: W.MP; [Malay] ulit "to sing")

*[Que.] llaqui- "sad" || AN: (OCE) [Fijian] leqa "worried, anxious"

*[Quechua Boliviano] (Pea and Lara, 1994) llawaqhe "loose, slack, lax, relax" || ALT: (TURKc) [Turkish] yavaş "slow" || AN: (South Halmahera-West New Guinea languages)[Sawai] lew-lōw // (OCE)[Raga] rav-rava "slow" || [Ainu] ru "slow"

*[Que.] llampa "soft" || URA: [Finn.] lempi "love" || IE: [English] limpi "soft", [Old High German] luba "love" || AN: (FOM)/[Paiwan] ʃuməʔak // (W.MP)[Tagalog] lambot / [Indonesian (Malay)] ləmbut / [Kagayanen] yəmʔək (< *yəm-rək) / [Proto-Hesperonesian-Formosan] *Lemek // (OCE)[Fijian] lo-loma (< *loma) "soft" || [Ainu] renga "kindness", rengo "soft" || MONGc: [Wr. Mong.] amur "peaceful, easy", amurag "love" (< *yamurək ?)

*[Que.] llequi "dirty" || URA: [Finn.] likai-nen "dirty", lika "dirt, filth"

*[Que.] lloca- "to climb" || ALT: (TURKc)[Turkish] yokuş "ascending slope" ;; (MONGc) [Wr.Mong.] ügsü- "to climb" || AN: (FORM)[Atayal] r-um-akitaš (-um- = infix "to climb" || [Ainu] rikin "to ascend", rik "above"

*[Que.] lloccsi- "to go forth" || URA: [Finn.] läh-tea / [Zyrian] loč-ny "to go" || [Gilyak](Amur dial.) lah-d' "to go as a visitor", (Sakhalin dial.) laga-nd "to trip" || AN: (OCE)[Fijian] lako "to go" || [Ainu] raye "to go"

*[Que.] llocsi-masi "brother" || URA: [Finn.] lähim-maisen "brother, neighbour" (< *lähin-nearest, closest" + *mainen "friend ?")

Note: Cf. (URA)[Finn.] läh-i-nen "near, close", lähin "nearest, closest" || TURKc: [Turkish] yakın "near, closely related", yaklaş-mak "to approach"

*[Que] lloque "left hand" || URA: [Finn.] liku / [Lappish] loge "ten"

*[Que] lluchica- "to slip" || URA: [Finn.] liukua "to slip"

*[Que.] llula "a lie" || TURKc: [Turkish] yalan "a lie" || IE: [proto-IE] *leugh- "to lie"

*[Que] llutqui- "to escape" || URA: [Finn.] luiskahtaa "to slip, to escape" / [Lappish] luotit "to let (a person) leave"

*[Que] llutta- "to cover" || URA: [Finn.] ulottaa "to cover, to extend"

Discussions and Conclusion

Macrocomparative analyses described and discussed in this paper and in previous papers (Ohnishi, 1994, 1995) suggest a tentative classification of modern human languages as below;

1. Classifier non-prefixed languages: Khoisan
2. Classifier prefixed languages and its derivatives: Non-Khoisan
(Niger-Kordofanian and its possible derivatives) (derived from 1.)
 - 2-1. Niger-Kordofanian [Niger-Congo, Kordofanian]
 - 2-2. Afro-Asiatic (possibly derived from 2-1)
 - 2-3. Indo-European (Might belong to 2-5.)
 - 2-4. Dravidian (Might belong to 2-5.
 - 2-5. Austronesian (AN) and therefrom derived languages (traditional AN languages, Ainu, Japanese-Ryukyuan, Eskimo, Quechuan, Altaic (Turkic and Mongolic))
 - 2-6. Possible AN-related languages (Might belong to 2-5.)
 - 2-6a. Tungus (See Ohnishi, 1994)
 - 2-6b. Korean (See Mu*. Probably belongs to 2-5.)
 - 2-6c. Sino-Caucasian [Sino-Tibetan, North-Caucasian, Na-Dene]
 - 2-d. Gilyakoid [Gilyak, Hokan-Coahuiltecan] (See Ohnishi, 1995)
 - 2-6e. Austro-Asiatic (Possibly related to 2-4 and 2-7. See Kitamura, 1981 and Ohnishi, 1995)
 - 2-6f. Uralic [Possibly related to 2-4 (Tyler, 1967). Might cognate with 2-3 ?? (Joki, 1973.)]
 - 2-7. Australian aboriginal languages (?) (Related to 2-5.)
 - 2-8. Trans-New Guinea languages (Related to 2-5 ?)
 - 2-9. North-Halmahera Languages (Possibly related to 2-5. Related to other (Greenberg's) Indo-Pacific languages ?)
- (3. Unclassified): Nilo-Saharan (Probably derived from 2-1 or is its close kin.)

Table 3 and therefrom deduced classification given here strongly suggest that extra-African languages (from 2-3 to 2-9) have been most plausibly derived from Niger-Kordofanian (especially from NiCon). This result very well coincides not only with Ruhlen's (1992, 1994) monogenesis theory of human languages, but also with recently reported human evolutionary tree constructed by comparing mitochondrial DNA sequences (Hedges, 1992), in which Khoisan and non-Khoisan first diverged, and all of the extra-African populations have diverged from the non-Khoisan lineage.

This is a yet very hypothesized scheme of classification, and further detailed macrocomparative analyses would shed light to genuine evolutionary history and the detailed events concerning African origin and later evolutionary divergence of human languages.

On the other hand, principal component (PC) analysis of gene frequencies in 26 human populations in the Arctic region (Cavalli-Sforza *et al.*, 1994, p.227) shows that Komi (which is a

close kin to Zyrian, speaking a close kin language of Zyrian), Tuva (a member of North Turkic in southern Siberia), and Lapp (a close kin to Finnish) are located near to each other on a PC map spanned by the 1st and 2nd PC axes. This PC mapping might correspond to the above-mentioned (in section 7) language affinity among Finnish, Zyriann and Turkic vocabularies.

Cavalli-Sforza *et al.* (1988, 1994) discussed on possible parallelism of phylogenetic tree topology between languages and genes, but however, parallelism is not so beautiful. This would be partly because our present knowledge on language evolution is considerably erroneous, and partly because of other complex factors throughout evolutionary processes of humans and human languages. However, the tentative classification obtained above significantly differs from the traditional classification of human languages used by Cavalli-Sforza, and seems to show better parallelism to genetical classification of human populations, in at least two topological characters, i.e., (1) early Khoisan/non-Khoisan diversification, and (2) close kinship among Mongoloids (including Altaic, Sino-Tibetan, Japanese, Tiungus, and Korean, all of these might have been derived from Austronesian). The point (2) cannot be reasonably explained by the traditional language classification in which Altaic and Sino-Tibetan languages were hypothesized to be entirely unrelated to Austronesian. Further detailed macrocomparative analysis of human languages would give rise to better parallelism between genes and languages.

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