

# ウラル語族とオーストロネシア語族の語頭子音対応法則と ウラル語族のスラウェシ語群近縁言語からの起源

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## Word-initial consonant correspondence laws between Uralic and Austronesian language families: The Origin of the Uralic language family from a language closely kin to Western Oceanic and Sulawesi language group

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**ABSTRACT:** Word-initial consonant correspondence laws between Uralic (URA) and Austronesian (AN) language families were almost completely established by extensive comparative analyses of URA and AN words obtained from refs. 6-8, and 3,9,10. The results summarized in Tables 1 ~ 7 confirmed that URA would have had diverged from a language which is most closely kin to Western Oceanic group (Manam, Motu, etc.) of Oceanic, and also kin to Sulawesi group (Wolio, Uma, Muna, and Konjo) and Bali-Sasak (Balinese, Sasak), of Western Malayo-Polynesian. These results strongly suggest that proto-Uralic seems to have emerged from an ancient language of Western Oceanic or its kin language group. Results of closest similarity analysis were discussed.

### Part 1: 語彙比較と子音対応法則の導出

1.1. はじめに ウラル語族(URA)の系統については、ウラル・アルタイ語族、エスキモー・ウラル語族、ウラル・印欧語族、ウラル・ドラビダ語族、ユーラシア大言語族等の仮説を巡って長く議論されてきたが、音韻対応法則を伴う厳密論議に耐える学説は提示されなかった (refs. 1, 2, etc.)。また、URAとオーストロネシア語族(AN)との本格的比較研究の例はない。一方、最近のMacro-comparative Linguistics においては、アフロアジア語族やエトルリア語などを除く多くのユーラシア諸言語 (Tungus, Tibeto-Burman, Indo-European, Turkic, Mongolic, Chukchi-Kamchatchan, Japanese, Korean, Ainu, etc.)が、ANに由来する可能性を示唆する興味深い解析結果が示されている(3,4)。これらのユーラシア諸言語とANの比較過程で、URAはANとの子音対応関係がよく保存されており、全子音の対応法則を確立するためのよい言語族であると判断し(5)、まず、語頭子音の対応法則を比較解析した。

1.2. 方法 本研究では、K. Rédei (1988) の"Uralisches Etymologisches Wörterbuch (Bde I-III)" (6)のウラル語語彙や再構築語彙を、D.T. Tryon (ed.) (1955) の"Comparative Austronesian Dictionary (Parts I - IV)" (7) にリストされているANの80言語の約1200項目の語彙資料やMuna語語彙(8)をと詳細に比較し、約110項目についての同祖語彙(cognate)の関係を抽出した。また、Ohnishi(1999) (3)やOhnishi *et al.*(2005) (5)の語彙比較資料も参照した。Finnish (Finn.)とHungarian (Hung.)の語頭子音を基盤としながら、URA子音やウラル祖語(pU)子音をTables 2-6のように ([Finn.] p-, [Hung.] f-) = (p-, f-) 等の子音の組み合わせを指標としてウラル語の子音を分類表示し、対応する同祖語彙関係から矛盾を含まない子音対応法則を導出した。印欧語(IE)との比較はrefs. 3, 9-11 に基づいた。

1.3. 結果と考察 上記の方法で得られたURAとANとの語彙84項目についての同祖語彙(cognate)の関係のうち、代表的で比較が厳密と判断できるものを84項目を選んで、Tables 2-6 に比較の詳細を示した。Tables 2-6においては、URAとANとの最酷似語彙について、URAの語彙とその言語名を青字で、ANの語彙とその言語名を赤字で示し、後者の言語名には下線を引いた。ANの最酷似語彙が複数あって、ただ1つに決定できない場合には、複数の最酷似語彙とその言語名を赤字で示した。

Tables 2-6 の同祖語彙関係に基づいてTable 7 に示す語頭子音対応法則を得た。Tables 2-6 の語彙対

応リストにおいて、マラヨポリネシア語亜族(MP)の西マラヨポリネシア語諸語(W. MP)のスラウェシ語群(SLW)(Uma, Wolio, Konjo, Muna 等)やスンダ諸語(Sundic, SND)のJava-Bali-Sasak語群(JBS)あるいはBali-Sasak語群(BaSa)(Balinese, Sasak)、および、オセアニア諸語(Oceanic, OC)の西オセアニア諸語(W.OC)に酷似語彙が頻度高くあらわれる傾向が顕著であった。語形的にはウラル祖語(pU)とSLWとの酷似はかなり著しいものがあるが、pUとW.OCの酷似も著しく、pUがSLW, JBS (or BaSa), OC (or W.OC)の何れに最も近縁であるかを決定するには詳細で慎重な解析を要する。いずれにせよ、SLWはBaSaやオセアニア祖語(pOC)と近縁な関係にあり、その結果としてこのような類似関係が観察されるのであろう。一方、pUはフィリピン諸語(PHIL)や台湾先住民諸語(Formosan, FORM)との同祖語彙含有率は明らかに低い。

j-, h- などの子音の対応を厳密比較すると(Part 2, 2.3節, 3節参照)、pUは、SLWよりもW.OC(パプアニューギニア海岸域と周辺諸島域)により近縁な可能性が高い。特に、pANの\*D-, \*h-, \*q-の反映のされ方などから、OCの早期にW.OCまたはそれに近縁なOCの分枝からpUが起源した可能性などに興味もたれる。

子音対応法則は極めて厳密に成立し、印欧語(IE)内の子音対応法則と同等程度に規則的と言える。Table 7において、Finn.に表れるほぼ全ての語頭子音がAN子音からの由来子音として説明できることが示されたことの意義は大きい。特徴的なことは、(1) pAN(= proto-AN)の\*k- / \*q- は単一の[pU] \*k- で表れ、印欧祖語(pIE)では\*k- / \*gh- に対応する。(2) pAN \*p- / \*b- は、[pU] \*p- / \*w- として区別され、(Finn. p-, Hung. b-) < (MP) \*b- はonomatopoeticである。(3) [pAN] \*h- は[Finn.] h- として保たれている。(4) [pAN] \*z- は[pU] \*r- で表れ、表1例 §8.3のように原印欧語(pIE) \*d- に対応する。

ユーラシア諸言語群(モンゴル諸語、チュルク諸語、ツングース諸語、ドラビダ語族、日本・琉球語(JR)、印欧語族(IE)、朝鮮語、エスキモー語(Esk)、アイヌ語、etc.)との比較も行なったが、SLWやW.OCよりもURAとの共有cognateの多い言語を発見できなかった。但し、ユカギル語については資料不足のため、今回は比較の対象としなかった。pUとpIEにはTable 7に示すような子音の対応関係があるが、直接的近縁関係を反映していると解釈する必要はなく(すなわち、単系統群を構築しているのではなく)、MPの少し異なる分枝に由来しているが故結果である可能性が高い。特に、OCのうちのメラネシア地域の言語に由来する可能性の高い言語群として、pU, pIE, 日本・琉球語祖語(pJR), proto-Dravidian などがあるが、これら相互の基礎語彙の共有率がかなり低いことなどから、OCの異なる分枝からの進化である可能性の方が高いように見える。比較の詳細は Part 2 で述べる。

BaSaやpOCに見られるverbal prefix N- の進化的レリックがpUに見られることは、URAがこれらの言語に近縁であることを示す。N-のrelicは、pIEにも明瞭に見られる(Ohnishi, 準備中)。一方、pUとpAN, pMPの子音対応法則の確立により、pIEとAN, その他、ユーラシア諸語とANの比較(3)が格段にやりやすくなったものと思われる。

このように、URAとANの子音対応法則の確立は、ユーラシア諸言語族とAN子音との対応法則の発見(やOCの起源解析)を容易なものとする重要な基礎知見を与える可能性が高く、その視点からの広域比較言語学の確立を目指したい。Tables 2-5には、ユーラシア諸言語群の子音との対応関係も適宜含めて、広域比較言語学の有効性の一端を示した。

**1.4. 暫定的結論** Finnishの全ての語頭子音に関して、URAとANの子音対応法則を、**Tables 2-6**の比較を満足するものとして、**Table 7**のようにほぼ確立することができた(但し、今後の一層厳密な検証や修正を要する部分を含む)。この比較と子音対応法則から、ウラル祖語(pU)は、ANのMPの分枝に由来することが確実である。pUが直接MPから生じたか、それともユーラシアのいくつかの言語との共通祖先語がMPの枝から直接由来したかについては定かではないが、pUは、pSLW(スラウェシ祖語)やW.OCやpOCに近縁であると考えられ、どの分枝に由来するかを決定する必要がある。

## 1.5. 文献

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 11) Ohnishi, K. (準備中)

## Part 2: 各論

Part 2 では、Tables 2-6の同祖語彙対応における子音対応法則の導出の詳細と、pUの最近縁語の発見のための解析と解釈等を実践する。

始めに略語の一覧を Table 1 に示す。

Table 1. Abbreviations used in the Tables 2.- 6.

### Abbreviations:

**General:** \*xxxx = reconstructed form, "A < B", "B > A" = A has/had been derived from B, B has/had converted to B, "A <> B" = A is phylogenetically related to B. ; pXX = proto-XX (e.g., pU, pURA, pAN, pEsk), dial.= dialect, Wr.= Written, Mod.= Modern, Mid.= Middle

### Language names:

# URA=Uralic, U: (1) FU=Finno-Ugric ( Finn.= Finnish, Est.= Estonian, Lapp.= Lappish ( N = Norwegianish-Lappish dial.), Zyr.= Zyrian, Hung.= Hungarian), FV= Finno-Volgaic, FP= Finno-Permian. (2) SAM= Samoyedic.

# AN= Austronesian : (1) FORM.= Formosan.

(2) MP = Malayo-Polynesian: W.MP= Western MP { Taga. = Tagalog, Kal.L.= Kalinga Limos, Sar.Blaan= Sarangani Blaan, Bang.Sama= Bangingi Sama, Goron. = Gorontalo, SND= Sundic ( Minang.= Minangkabau, IndoN= Indonesian, Java.= Javanese, Bali.= Balinese) ; SLW= Sulawesi }, C.MP = Central MP (Mangg.= Manggarai), SHWNG = South Halmahera-West New Guinean, OC. = Oceanic [ADMI:= Admiralties, W.OC.= Western Oceanic, Re.OC= Remote OC, C.E.OC= Central-Eastern OC {NwCAL= New Caledonian, C.Pac.= Central Pacific (E.Fiji./W.Fiji. = Eastern/Western Fijian, MelN= Melanesian, PolyN= Polynesian)} ].

# Other languages: Esk= Eskimo, Esk-AL.= Eskimo-Aleut, ALT= Altaic, Trkc= Turkic, MONGc= Mongolic (Wr.Mong.= Written Mongolian), TNG= Tungus, JR= Japanese-Ryukyuan (Ml.Jpn.= Mailland Japanese, RYU= Ryukyuan), KOR= Korean, IE= Indo-European, pIE = proto-IE, MxZq= Mixe-Zoquean, STb= Sino-Tibetan, TbB= Tiberto-Burman

**References:** Most materials are obtained from; CAD\*= Comparative Austronesian Dictionary ( Tryon, 1995), UEW\*= Ualisches Etymologisches Wörterbuch (Rédei, 1988, Wiesbaden ), CED\*= Comparative Eskimo Dictionary, YH\* = Nihongo no Tanzou ("The Birth of the Japanese Language") (Yasumoto and Honda, 1978), MelL\*= The Melanesian Languages (Codrington, R., Oxford, 1885), EML\*= "Evolution of Mongoloid Languages" (Ohnishi, K., 1999)

**Reconstructions:** Redei\* (from UEW\*), Zorq\*(from CAD\*), Coh\* (Cohen, E.M.K., "Fundermentals of Austronesian Roots and Etymology", ANU, Camberra, 1999), K.O.\* (by Koji Ohnishi).

### 2.1. 両唇音および唇齒音 (Table 2 参照)

(Finn. m-, Hub. m-) < [pMP][pAN] \*m- はURAにおいてよく保存されている。

Finn. p- は (p,-p) < [pMP] \*p- と, (p, b-) < [pMP] \*b- とに分けられ、後者は比較的少数の onomatopoeicな語彙にみられる傾向が強い。

Finn. v- は、(v-, ø-) < [pMP][pAN] \*b-, と (v-, v) < [pAN] \*w- などに分けられる。

§3.2 では、(ve-, ve) < \*ua- < \*uRa- では、[pFU] \*veri ~ \*wäri / [Finn.] veri は (SLW) [Da'a] uva

/[Uma] ua? よりも (W.OC)[Dami] warī "root" に近く、W.OC-likeであると言える。このことは、pUがOC由来かSLW-likeなW.MP由来かの判断材料の一つとなる。

Table 2. BILABIAL and LABIODENTAL ([Finn.] m-, p-, v- )

**1. [Finn.] m-** |||| § 1.1. ( [Finn.], [Hung.] ) = (m-, m-) < [pU] \*m- < [pMP] \*m- < [pAN] \*m- |||| # DAUGHTER-IN-LAW: [pU] \*minä / [Finn.] miniä / [Hung.] mēny || SAM: [Yurak] méje || W.MP: (SLW)[Uma] minia / [Wolio] mania |||| # EARTH: [Finn.] maa "earth, land, country" ||| OC: (PolyN) [Tongan] maamani, maama "world" (< \*maa-ma < \*maa-maa < \*maa )

**2. [Finn.] p-** |||| § 2.1. (p-, f-) < [pU] \*p- < [pMP] \*p- < [pAN] \*p- || [pJR] \*p- |||| # CHEEK: [pU] \*poske (< \*pos-ke ?) / [Finn.] poski ||| W.MP: [Yami] poŋŋi (< \*poŋ-ŋi) ||| Note: Possibly related to; OC: [Manam] poa-poa ||| JR: [Ml.Jpn.] hoho (< [pJR] \*po-po) |||| # NEST: [pU] \*pesä || FU: [Finn.] pesä / [Est.] pesa "nest", [Hung.] fészék "bird's nest" ||| W.MP: (SLW) [Uma] peta "nest" |||| # HEAD: [pU] \*päŋe ~ \*päŋ(e)a "head" ( \*päŋe, UEW\*, p.365) || FU: [Finnish] pää / [Est.] pea "head" (< \*pea < \*peŋa, [Mordvin] pe, pä "end", [Hung.] fey, fő (accisative form: fejet) (< \*peŋe- ) ||| OC: (W.OC) [Manam] peŋa-na, paŋa-na "head" |||| # TREE: [pU] \*puu (K.O.\*) ( \*puwe, UEW\*) / [Finn.] puu / [Zyrian] pu / [Hung.] fa / [Selkup] pō "tree, wood" (< (MP) \*puu < \*puʔu < puhu < \*puqu "tree" ) ||| W.MP: [Wolio] puu / [Muna] pughu "tree" (< \*puqu) || C.MP: [Ngada] puʔu kaʃu "tree" (puʔu < \*puqu ). Note: [Wolio] -ø- / [Ngada] -ʔ- / [Muna] -gh- < [pAN] -\*q-.

§ 2.2. (p-, b-) < [pFU] \*p- < (MP) b- ( Onomatopoeitic ) |||| # BOSOM/BREAST: [pFU] \*poŋe / [Finn.] povi (genetive: poven) / [Chremis] poŋgəš "bosom, breast" (< \*boŋe- ~ \*bʷāŋe "chest" ) ||| OC: (W.OC) [Tolai] boŋboŋi- (< \*boŋi ) "chest" ||| # INSIDE: [pFU] \*pälz "Inside", [Votyak] pəl-, pol- "in", [Hung.] bél "intestines" ||| OC: (W.OC) [Tolai] bəla- "belly, inside" ||| # KNOT: [pFU(K.O.)] \*bok(ol) "knot, swollen object" (< (MP) \*buku(l) ), [Hung.] bog "knot", [Mordvin] pokol "Klumpen" (Cf. UEW\*, p.404) ||| W.MP: [Bangingi Sama] buku / [Sarangani Blaan] bukul "knot" || C.MP: [Ngada] buku "knot" ||| OC: [E.Fijian] i-buku / [Mbula] mbuk / [Maringe] pʰuku / [Roviana] puku "knot" ||| # SWELLING: [pFU] \*poŋka "swelling" (< \*boŋ(o)ka ), [Est.] pung (Gen. *punga*) "Hervorragendes, Rundliches (Knolle, Beule, etc.)" (UEW\*, p.404) ||| C.MP: [Roti] bo-boŋo-k "sphere, ball, round" (< \*boŋo-k )

**3. [Finn.] v-** |||| § 3.1. (v-, ø-) < [pFU] \*w- ( ~ \*v-) < [pU] \*w- ( ~ \*v- ~ \*b- ) < [pMP][pAN] \*b- || [pJR] \*b- |||| # FIVE: [pFU][pU?] \*witte / [Finn.] viisi / [Lapp.](Lule dial.) viht(t)a / [Zyr.] vit / [Hung.] öt / (SAM)[Enets] biu? / [Tavgi(= Nganasan)] bīʔ "five" (< \*vihu-(t)t- ? < \*bihu- ) ||| OC: (ReOC) [Raga] bihu "finger" ||| W.MP: [Taga.] bīsīg "finger" # SMOOTH: [pFU] wälʹ3 / [Zyr.] volʹk / [Ostyak] welʹəy "smooth (glatt)" ||| W.MP: (SND, BaSa)[Bali.] balig "smooth" (No SLW Cgn's) |||| # STOMACH: FU: [pFU] \*waća ~ \*watta "stomach" (or, \*waća < \*watta) (Cf. \*waća, UEW\*, p.547) (< [pU] \*watta / \*vatta ~ \*batta ~ \*batsa ) ; [Finn.] vatsa, (dial.) watta "belly, stomach, inside", [Est.] vats (Gen. vatsa) "belly" ; [Vogul] vaś "stomach" ||| ?FORM: [Paiwan] vəʧəkad-an "middle, center" (< \*baCa- ~ \*batta- ?) ||| W.MP: (SND, Jawa-BaSa) [Javanese] wətəŋ / [Balinese] basaŋ // (SND, SLW)[Konjo] battaŋ "stomach" (< \*battaŋ ) ||| SHWNG: [Irarutu] əta "stomach" ||| OC: (New Caledonian) ?[Xaracuu] bʷati "stomach" ||| JR: [pJR] \*batta / [RYU] (Yaeyaman) batta, bata, (Northern RYU) bata, wata "bowels", [Old Ml.Jpn.][Ml.Jpn.] wata "bowels, cotton" ||| IE: [Shinhalise] bada "belly" |||| # WATER: [pU] \*vu (K.O.\*) "water" (< \*bu) ||| FU: [Votyak] vu "water", [Finn.] vuotta- "to pour" ; [Hung.] önt "to pour" (probably, < \*vu-ont) ||| SAM: [pSAM] \*bu / [Kamas] bu / [Motor][koibalisch] bu "water" ||| W.MP: [Da'a] buvu (< \*bubu < \*bu) / [Gorontaro] butu "spring, well", [Uma] βuβu "well" ||| OC: (W.OC)[Yabem] bu "water" ; [E. & W. Fijian] βure "spring, well", (?) [Roviana] bukaha "spring bubbling out of ground" (< \*bu-kaha ?) |||

§ 3.2. (v-, v-) < [pU] \*w- < [pAN] \*w- ||| # FAT: [pFU] \*woje (UEW\*) ~ \*wāj (K.O.\*) "fat", [Finn.] voi / [Vogul] wāj "fat", [Hung.] vaj "butter" ||| W.MP:(PHIL) [Kagayanen] waig "wayer" ||| OC: (Remote OC)[East.Fiji.][Western Fijian] waiwai "oil", [Raga][W.Fijian][Maori] wai "water" ) |||| # to LEAD: [pFU] \*wetä- / [Hung.] vezet- "to lead", [Finn.] vetä- "to pull" ||| OC: (W.OC) [Yabem] -we "to lead" || ?W.MP: [Sasak] awək "to pull" 軀 ||| ??#FLOWER: Ugric: [Hung.] virág "flower", virul "to bloom" ||| OC: (Re.OC)[Raga] vira-n yai "flower" ( yai "tree" )

**§ 3.2a. (ve-, ve-) < [pFU] \*we- < \*uwe < \*ue- < [W.MP] \*ure ~ \*ura < [pAN] \*uRa- ||| # BLOOD: [pFU] \*weri ~ \*wäri / [Finn.] veri / [Hung.] vér / [Mordvin] vér, văr, văr "blood" (< \*weri ~ \*wäri < \*uweri ~ \*uwarī < \*uarit "sinew, vein" < \*uRa-ruaC < [pAN] \*uRat "vein" + \*ruaC "sinew", where \*ruaC cognates with [Paiwan] ruaç "vein, artery", [Ainu] rit "sinew" ) [ Cf. [pFU] \*wire (UEW\*) ||| Turkic: [Turkish] verit "vein" (< \*ve urit) ||| [pAN] \*uRat "vein, sinew" (> [pHF] ""root") || OC: (W.OC)[Dami] warī "root" (< \*uarit "sinew, vein" < \*uRa-ruaC < [pAN] \*uRat "vein" + \*ruaC "sinew", where \*ruaC cognates with [Paiwan] ruaç "vein, artery", [Ainu] rit "sinew" (< \*rit < \*ruaC ) ||| W.MP: (SLW)[Bugis] uri? "root, vein, artery" (< \*uari? < \*uari(?)t < \*ura-ruat < \*uRa-ruaC < [pAN] \*uRat "vein" + \*ruaC "sinew ~ vein" ; [Batak Toba] urat / [Minang.] ure? "root" (< \*uRat ) ; [Da'a] uva / [Uma] ua? / [Konjo] ura? rara / [Wolio] uwa "vein, artery" (< \*ua? ~ \*ura? < \*uRa? (+ rara ) < [pAN] \*uRat "vein" ) || OC: [Mbura] ura- "vein, artery" ; [Manam] uarige-rige (< \*ura-rige < \*uRat + \*ri-(ge), where \*ri- < \*rit < \*ruaC)**

## 2.2. 齒茎音 (Table 3 参照)

Finn. t- = (t-, t-) では [pAN] t- が保存されている。

Finn. n- は、\$5.1~\$5.3を含み、W.OCとの一致などが目立つ。\$5.1.a は1例のみ。[pAN][pMP] \*n- は (n-, n-)/[pU] \*n-として、[pAN][pMP] \*ñ- と \*ŋ- は (n-, ny-)/[pU] \*ń- として反映(reflection)される。

Finn. s- は、\$6.1~6.3のように多様な形でpMP/pANの子音を反映し、また、ユーラシアの諸言語と関連している。

**Table 3. ALVEOLAR ( [Finn.] t-, n-, s-, l-, r- )**

**4. [Finn.] t- ||| § 4.1. [Finn.][Hung.] t- < [pU] \*t- < [pAN] \*t- || [Wr.Mong.] t- ||| # FIRE: [pFU] tule / [Finn.] tuli "fire" ||| W.MP: [Gorontalo] tulu "fire" ||| # FULL: [pFU] \*täwðe ( \*tälk ) / [Finn.] täysi / [Est.] täis / [Vugul] täwl "full" ||| C.MP: [Buru] tau-n "full" ||| # to PUSH: [pFU] \*toj3- (< \*toly- ?) / [Zyrian] toj- "to push (stoßen)", [Votyak] tuj- "stecken" ; [Hung.] tol- (veralt. toly- ; dial., toj- ) (< \*toly- ) "schieben, stoßen" ||| OC: (W.OC)[Tolai] tulən / [Samoan] tulei "to push" || W.MP: [Minang.] tula? / [Kagayanen] tulud / [Molbog] tulak / [Taga.] tülak "to push, to shove" ||| MONGC: [Wr.Mong.] tülki "to push" (< \*tül-ki )**

**5. [Finn.] n- ||| § 5.1. (n-, n-) < [pU] \*n- < [pAN] \*n- ||| # SISTER-IN-LAW: [pU] \*natə / [Finn.] nato / [Est.] nado, nadu "sister-in-law" ||| OC: (W.OC)[Manam] natu / (Admiralty) [Nyindrou] nadu tine-n "sibling" ||| # to SEE: [pFU] \*näke- / [Finn.] näke- / [Est.] näge- / [Hung.] néz- "to see" ||| W.MP: (SLW) [Da'a] naḡgita "to see" ||| # WOMAN/WIFE/FIRE: [pFU] \*naje "woman, wife, fire" (< \*naŋe "fire, sun", which cognates with [Buang] naŋ<sup>w</sup>ay "fire" ) ; [Finn.] nainen / [Est.] naine "woman" ; [Ostyak] (Vach dial.) näj "lady, fire, sun", näj-öyi "fire" ( öyi "Tochter, Mädchen" ) ||| OC: (W.OC)[Buang] naŋ<sup>w</sup>ay "fire, firewood" (< \*naŋ-wayi < \*naŋ- "sun ~ fire" + \*wayi "wife ?", where \*wayi < \*uayi < > (SHWNG) [Irarutu] a uagə "wife" (< \*uagi ?), and where \*naŋ- "sun ~ fire" is related to (OC)[N.Tanna] naŋam / [Kwaio] nap<sup>w</sup> "fire" and (URA: [Hung.] nap "sun". ) ||| STb: [pTbB] \*nəy "sun, day" (< \*naŋ- "sun ~ fire")**

**§5.1a. (n-, n-) < [pFU] \*ń- < (MP) \*mn- ||| # FOUR: [pFU] \*ńeljä (\*neljä) (< \*ńal- ~ \*mnal-)/ [Finn.] neljä / [Est.] neli / [Hung.] négy ||| OC: (W.OC)[Kaulong] nal, mnal (< m-nal ?)**

**§ 5.2. (n-, ny- ) / [Zyr.][Mordvin] ń- // [Yurak] ń- / [Kamas] n- < [pU] \*ń- < [pMP] \*ñ- ||| # BIRCH-TREE: [Hung.] nyír "birch-tree" (< \*ñiur ) ||| W.MP: [Aklanon] niyug / [Kaga.] niug / [Madurese][Sasak] ñiur "coconut" ; [Palawan] ñug "palm tree, coconut", [Muna] nii (ka-nii nii "bayan tree" ) ||| OC: (Re.OC)[Ponnapean] nī / [Marshallse] ni / [Mele Fila] niu "palm tree, coconut" ||| [Ainu] ni "tree" (< \*nī < \*niu )**

**§ 5.3. (n-, ny-) < [pU] \*ń- < [pMP][pAN] \*N- ||| # to LICK: [pU] \*ńóle // (FU) [Finn.] nuole- / [Hung.] nyal- // (SAM) [Selkup] ńu- / [Kamas] nu- "to lick" (< \*ŋole) ||| OC: (Re.OC)[Port Sandwich] ŋole "to lick" ||| # to SNIFF: [pFV] \*nuska- / [Finn.][Esat.] nuus-kaa- "to sniff" (< \*ŋuus- < \*ŋuʔus- < \*ŋuzus ~ \*ŋudus- ?) ||| FORM: [Atayal] ŋuhuy / [Paiwan] ŋujus "nose" || C.MP: ?[Ngada] ŋizu "nose" || OC: (W.OC)[Takia] ŋudu-n "nose"**

**§ 5.4. [Finn.] ? / [Zyr] ń- < [pHF] \*N- (Zorc\*) ||| # "A SPECIES OF GRASS": (FU)[Zyr.] ńáč, ńáča "ein**



weiches wasseriges Grass" ||| AN: [pHF] \*NáCen "vegetable" ||| ?[Jpn.] na "vegetable"

**6. [Finn.] s-** ||| \$ 6.1. (s-, ø-) / [Zyr.] s- / [Chremis] sʃ / [Vogul] t- / [Kamas] t- < [pU] \*s- < (W.MP) \*s- < [pAN] \*s- ||| [pIE] \*s-, [pTbB] \*s- ||| **to BE BORN:** [pFP][pFU?] \*sente- / [Finn.] synty- / [Est.] sündi- "to be born", ?[Hung.] ell- "Junge werfen" ||| OC: (Re.OC)[W.Fijian] sene "to be born" ||| # **BLOOD VESSEL:** [pU] \*səne ( söne ) / [Finn.] suoni / [Churemis] šün / [Zyr.] sən "blood vessel, sinew", [Vogul] tēn, tān / [Hung.] ín "sinew" ||| OC: (W.OC)[Mbulu] sinji- "blood" ||| TNG: [Wr.Manchu.] seŋgi "blood" ||| IE: [Old English] sinewe (oblique form of *seonu, sinu*) "sinew" ||| # **to ROW:** [pU] \*suyə- (< \*su-ye ) // (FU) [Finn.] souta- / [Chremis] šua- / [Vogul] yow- // (Samoyedic)[Selkup] tua- / [Kamas] tu- ||| OC: (Re.OC)[Rotuman] [Mele-Fila] sua / [Raga] hua (< \*sua ) ||| # **SISTER:** [pFU] \*sāce "sister of father or mother", [Lapp.] siessa "father's sister", [Ostyak] šāsə "younger sister of mother" ||| OC: (Re.OC)[Rotuman] sosaŋa "younger sister", (W.OC)[Yabem] sa-ḏ "father's sister"

\$ 6.2. ( s-, sz- ) < [pFU] [pU] \*ś- (< [pAN] \*S-, \*C-, \*d₂- (Ross\*) )

\$ 6.2a. ([Finn.] s-, [Hung.] sz- / [Old Hung.] Z- ) < [pFU] \*ś- < [pAN] \*S- / [Atayal] sʃ ||| [pTNG] \*č-, [Wr.Mong.] s-, [Jpn] s- ||| # **to CUT:** [pFU] \*śälä- "to cut" (< \*Sila- ), [Finn.] säle "splint(er)", sälöilä "splinter", [[Vogul] sil- "to cut", [Hung.] szel- "to cut" ||| FORM: [Atayal] ma-šifʔax "to break" (< \*šifʔa-x ) || W.MP: [Isnag] nasiʔlāt "to split" (< \*na-siʔlāt ?) ||| ?[Tlingit] s'eł' "to tear" ||| # **EYE:** [pU] \*śilmä / [Finn.] silmä / [Est.] \*silm / [Hung.] szēm / [Koibal] sima "eye" (< \*Silma < \*Sil- "to see ~ to look at" + \*-mä ~ \*ma "eye" ) ||| FORM: [Rukai] wa-silapa "to seek, to look for" (< \*sila-pa < \*sila- < \*Sila- "to see ~ to look for" ) (Note that [Rukai] s- < [pAN] \*S- ) ||| OC: (Re.OC)[Samoan] sila-sila "to see" (polite), [Mele Fila] sirea / [Tongan] sio "to see" (< \*sila < \*Sila ) ||| Note: \*-mä "eye" cognates with; OC: (Re.OC)[Lau][Kwaio] mā / [Marshallese] mæc (< [pAN] \*maCa ) "eye", or [Paamese] me-tok / [[Ajie] pie-mə "eye" ||| # **FLESH:** [pFP] \*siw₃-l'₃ "flesh" ( \*siw₃- < [pFP] \*siwə- < \*siə < \*Siə ~ \*Ssiə ) < [pAN?] \*Sisi "meat, flesh" ~ \*Si- "meat ?". cf. [pAN] \*Si-káʔen "fish" < \*Si- "meat" ? + \*káʔen "to eat" ); [Mordvin] sivel', šivel' / [Chremis] šəl, šəl, šíl "flesh" ||| W.MP: [Aceh] siə "meat" ; [Yami] ašiši / [Konjo] assi "meat" (< \*ašiši < \*aSisi < \*a-Sisi < [pAN] \*Sisi "meat, flesh" ) ||| JR: [Ml.Jpn.] sisi "wild bore, deer, lion" (< \*Sisi "meat" ) ||| # **LIGHTNING:** [pFU] \*śala / [Finn.] salama / [Vogul] salna "lightning(Blitz)" (< \*Sal- ) ||| FORM: [Atayal] šatwan "bright" ||| W.MP: [Bang.Sama] sawa "bright" (< \*śalwa ), [Isnag] salʔit "lightning" ||| Tungus: [Udehe] čaligi / [Nanai] čägʂan "white" (< \*čāli- "white") ||| JR: [Jpn.] sara-su "to whiten", sara- "clean, white, new" ||| # **SALIVA:** [pFU] \*śil'ke, \*śül'ke / [Finn.] sylki, sylke- / [Est.] sülg- / [Vogul] sül'k- / [Hung.] ? "saliva" (< \*sül'ke- < \*süle-kie < \*süla-kie "saliva" (= "tongue-spit") < \*süla "tongue, flame (= tongue-of-fire)" + \*kie "spittle" ||| OC: (Re.OC)[Lewo] silani "to light, to ignite" (< \*sila-ni ) ||| C.MP: [Ngada] sile / [Sika] hile "lightning" ||| W.MP: [Yami] čičilāt "lightning" (< \*čilāt < \*silāt ) ; [Palawan] siluʔ / [Madurese] sulət "to light, to ignite" ||| [Jpn.] sira- "white, bright" ; siranuhi "fire of fishing boat" (< \*sila-nu-pi "flame-of-fire" < \*sila "flame" + \*-nu- (CONNECTIVE) + \*pi "fire" ) ||| Hokan-Coahuiltecan (Oceanic affinity): (Coahuiltecan) [Comecrudo] kie "spittle" (Cf: [Kilivila] -giu / [Kaulong] kimos (< \*ki-mos) "to spit" ) ||| Note: Cf. [Quechuan](Ankash dial.) shulla "morning dew" (< \*Sulla ~ \*Sula ?)

\$ 6.2b. (s-, ?) < [pFU] [pU] \*ś- < [pAN] \*C- ||| # ? **KNEE:** [pU] \*śānc / [Ostyak] (Vach-dial.) čānc / [Vogul] šānš ||| FORM: [Paiwan] ɕuŋaʔ "knee" ||| # **SMOKE:** [Finn.] savu (< \*Cavu < \*Cavu) ||| FORM: [Paiwan] ɕavuly "smoke" (ɕ- < [PAN] \*C-)

\$ 6.2c. (s-, sz- ) < [pU] \*ś- < (MP) d- < [pAN] \*d₂- (Ross\*) ; [Paiwan] z- ||| # **HAIR (of head):** [pFU] \*śāŋe "hair (of head)", [Hung.] sző- "weave (weben)" ||| OC: (W.OC)[Manam] doŋa "hair (of head)" ||| ?Mexican: [Nahuatl] zon-tli "hair" (< \*zoŋ-) ||| # **to PUSH:** [pFU] \*śurwa- / [Finn.] survaa- / [Chremis] šure- "to push", [Hung.] szúr- "stechen" ||| FORM: [Paiwan] z-əm-uruŋ "to push" (< \*d₂uruŋ (Ross\*) ) ||| W.MP: [IndoN] mən-doroŋ "to push" ||| C.MP: [Mangg.] dūr "to push" ||| OC: [Tawala] dudu / [Roviana] dudua "to push" (< \*du-dua < \*dua < \*dur-a ) ||| Note: Correspondence to "[Hung.] sz-" means that "[pFU] \*śurwa-" is unrelated to; W.MP: [pW.MP] \*suruŋ "to push forward", [Madurese] suruŋ / [Sasak] soron "to push".

(?) \$ 6.2d. (sy-, szí-) < [pU] \*śu- < (W.MP, SLW) dū- / [Wolio] dū- (< [pAN] \*su- ) ||| # **HEART:** [pU] \*śüð ɕm₃ ( \*śið ɕm₃ ) (< \*dudu "breast" ) ||| FU: [Finn.] sydän / [Est.] süda / [Mordvin] šed'eŋ / [Votyak] sülem / [Hung.] szív ||| SAM: [Yurak] šej / [Kamas] šī "heart" (< (W.MP; SLW) \*dudu "breast" ) ||| W.MP: [Sar.Blaan] duduʔ / [Sasak][Bugis][Da'a][Wolio] susu / [Wolio] dudu "breast" (< [pAN] \*śusu "breast" ) ||| South

Caucasian: [Georgian] juju "breast" ||| North Halmahera: [Galea][Loloda] susu / [Tobelo] huhu "breast" ||| STb: (West Hymalayish) [Manchat] šudža "heart"

**\$ 6.3. (s-, cs-) (before -u- or -o-) < [pU] \*ć- < (MP) č- (< \*t- ~ \*s- ?) ||| # FLEA: [pFU] \*ćoŋča ||| W.MP:** [Batak Toba] tuŋir / (SLW)[Bugis] čuŋŋo ||| # HILL: [pU] \*ćuk3 "hill, Spitz", [Lappish] (Nothern dial.) čok'kâ-kk- "summit, mountain top", [Finn.] (?) sukki "spitzfindig, listig", [Zyr.] čuk "bugor ( )" ||| W.MP: (SND)[Sundanese] ŋuŋ-čūŋ (< čūŋ-čūŋ) / [Madurese] kuŋ-ču? "pointed", (BaSa)[Bali.] mə-muñ-čuk "having a pointed extremity", ?[Sar.Blaan] tukə? "tip" ||| # NARROW: [pFU] \*ćuppa / [Finn.] (?) suppa "narrow" (< \*čup-pa), [Zyr.] šopjd "eng, dicht" (< \* ||| W.MP: [Kalinga Limos] sūpit / [Batak Toba] səppit / [Java.] səmpit / (BaSa)[Bali.]čupit "narrow", ([Konjo] seppaŋ "narrow") ||| N Ote: Cf. STb: [pTbB] \*duŋ "mountain", [Wr.Tb] r-duŋ "small mound, hilllock"

**7. [Finn.] l-** ||| **\$ 7.1. (l-, l-) < [pU] \*l- < (MP) \*l- ||| # BIRD: [pFU] \*lintu / [Finn.] lintu / [Est.] lind "bird" (< \*lindu(ŋ) "cook") ||| W.MP: (PHIL)[Sar. Blaan] lunduŋ "cook, rooster" (< \*linduŋ) ||| # SAP / SOUP: [pFU] \*leme (lēme) "sap, soup", [Finn.] liemi / [Est.] leem "soup", [Hung.] lé "sap, soup" ||| W.MP: (SND)[IndoN] ləmak / [Minang.] lama? / (BaSa)[Sasak] ləmu // (SLW)[Da'a] lom "fat, grease" || FORM: [Rukai] lamaçə "fat, grease" ||| # SOUL: [pU] \*lew3 "soul, air, breath" || FU: [Lapp.] (N) lew'lu "vapour-bath" (< \*lew'leu "vapour" < \*laulau "s1. {oul}"), [Finn.] löyly "Badehitze; vapour"; [Votyak] lul "breath, air, soul, ghost, mind, heart, life"; [Hung.] lélek "soul, ghost, mind (Gemüt), heart, peraan" || SAM: [Yurak] lül, jül (probably, < \*lül) "smoke" ||| OC: (W.OC) [Mekeo] lau-lau "spirit, soul, image, idea, reflection, shadow, aura", (North-Western Mekeo) laulau "ghost", (Eastern Mekeo) laupa "presence, aura"; [Motu] lauma (< \*lau-ma) "soul, spirit" | (C.-E.OC, Polynesian) [Tongan] laumälie "soul, spirit"**

**8. [Finn.] r-** ||| **\$ 8.1. (r-, r-) < [MP] \*r- < [pAN] \*r- ||| # CHEST: [Finn.] rinta "chest, thorax" ||| W.MP: [Wolio] randa "chest" (< \*rinda) # GOOD: [pFP] \*reć(k)3 "beautiful, good" (< \*rañča-), [Chremis] rəž, ərəž "Zierlichkeit" ||| W.MP: (SND)[Minang.] rañča? "good" (< \*deŋ-ča? ??) ||| # SMOKE HOLE: [pFP] \*räppä "smoke hole" (< \*rampä < (MP) \*rambu "smoke"), [Finn.] räppänä / [Votyak] (VL) rəpəð "Rauchfang" ||| W.MP: (SLW)[Konjo] rambu, ambu "smoke" || C.MP: [Dobel] ?abun "smoke", [Mangg.] rəvəŋ "cloud" (< \*rabuŋ)**

**\$ 8.2. [Finn.] (r-, r- (?)) < [MP] \*r- < [pMP] \*R- ||| # to FLY: [Finn.] räppä (Gen. räpän) "knappernder Schlag", räpyttä- "to flatter"; (?) [Hung.] rəpít- "(auf)-fliegen lassen, rəpül "to fly" ||| W.MP: (SLW)[Konjo] a?ribba? "to fly" (< \*ribbak < [pMP] \*Rebbek "to fly" < \*Reb-baek)**

**\$ 8.3. (r-, r-) < [pFU] \*r- < [pW.MP][pMP] \*z- (Zorc\*, Coh\*), \*d'- (Dem\*) ; [Yami] ʃ- || [Ainu] h- || [pIE] \*d-** ||| # to BITE: [pU] \*ruŋk3- "to bite" ||| SAM: [Yurak (= Nenets)] (Kiseljovskaja dial.) ruŋkīpo / (Obdorsk dial.) luŋkība "to bite" ||| W.MP: [pW.MP] \*zuŋkit (Cohen\*) "to cut into, to incise", [Yami] ʃoŋit "to bite", [Gorontalo] duŋito "tooth" (< \*duŋi-to < \*zuŋ(k)i- "to incise") ||| [pIE] \*dent- "tooth" ||| # NEAR: [pFU] \*rakka "near" (< \*rah-kas); [Finn.] rakas (Gen. rakkaan) "lieb, innig, befreundet, geliebt"; [Lapp.] (N) rakkes, rak'kas "dear, affectionate, loving", (L) rāhkēs "verliebt" (< \*rāh-kēs ~ \*rāŋ-kēs < \*raN-kas < \*zaNī "near" + \*-kasu "near"); [Hung.] rokon "near" ||| AN: [pAN] \*zaNí "near" ([pMP](Dem\*) \*đahit (= \*zahit) "nähen") ||| W.MP: (PHIL) [Yami] maŋəŋ (< \*ma-ŋəŋəŋ < \*-zaNī-n) / [Isnag] adanni / [Kal.L.] adani / [Kaga] dani "near" (< [pAN] \*zaNí "near" (< \*zanni ?); (SND) [IndoN] dəkat] [Minang.] dake? / [Sundanese] dikit "near" (< \*daŋ-kat < \*zaN-kat); (SLW) [Wolio] ma-kasu (< \*kasu) "near" || C.MP: [Buru] b-raŋi-n "near" (< \*-raŋi- < \*zaNí), [Dobel] ren "near" || SHWNG: [Sawai] raken (< \*dake-n ~ \*zake-n) ||| OC: (W.OC) [Maringe] reña "near" (< \*deNa < \*zaN-a) ||| [Ainu] (All Hokkaido dialects) hánke / (Sakhalin) 'ehanke "near" (ADD\*); hange (< \*daŋ-ge), hanken "near" (Ba\*) ||| ??JR: [Jpn] dziki "soon, directly" (< \*diki (t) "near" ?)

## 2.3. 軟口蓋音 (Table 4 参照)

(k-, h-) < [pU] \*k- は [pMP][pAN] \*k- / [pIE] \*k- を反映するものと、[pMP][pAN] \*q- / [pIE] \*gh- を反映するものに分割できる。従って、Redeiの語源辞典(UEW\*)の再構築でいずれも[pU] \*k- の同一子音

となっているのは間違いで、pU時代の差が [Hung.]のh-とk-の違いとして引き継がれていると考えられる。

(k-, k-)は「ボC」g- / [pIE] \*ǵh- を反映する。

軟口蓋音においては、pU, pIE, pMP/pANの子音対応がきれいに見えるが、pUとpIEがいずれもpOCやW.OCやBaSaにかなり近縁な言語に共に由来していることによる二次的結果である可能性があり、pUとpIEの単一系統群の存在を示すものとする必要性は、ここからは示されないことに注意。

**Table 4. VELAR ( [Finn.] k- )**

**9. [Finn.] k-** ||| § 9.1. (k-, h-) < [pU] \*k- < [pMP] \*k- || [pIE] \*k- ||| # **EAR:** [Finn.] korva (< \*koruwa < \*koru-a) ||| FORM: [Tsou] koru ||| # **LONG:** [pU] \*kawka / [Est.] kaua "long" (< \*kaw-ka(w) ~ \*kau-(ka(u)) < \*kaw ~ \*kau "long"), [Finn.] kauka "das Ferne, Langswerige" ||| OC: [Aji'e] kau "tall, big" || W.MP: [Kagayanen] mlāṅkaw "long" (< \*mlāṅ-kaw), [Da'a] na-kavao / [Uma] kawao "far" (< \*kaw) ||| # **SKIN:** [Finn.] kuori / [Est.] koor "skin", [pU] \*kora (< \*kuora) "skin" ||| OC: (ReOC) [Kiribati] kuora "to peel" ||| # **WHO:** [Finn.] kuka "who" (< \*ku-ka), kun "when, as (conj.)" ||| AN: [pMP] \*kua "who?", (W.MP)[Murut] kua // (C.MP)[Buru] em-kua // (OC)[Mele-Fila] kua "why?", (W.MP)[Bali.] kudə "How many?" (< \*ku-də), (FORM) çuma na kua "why?(whai is the reason...?)" (< çuma "what" + na + \*kua) ||| IE: [pIE] \*kwo- (AHD\*) ~ \*kuo- (K.O.\*) (< \*ku-o-)/[Hittite] kuiš, kuit (< \*ku-) "stem of relative and interrogative pronoun"

§ 9.2. (k-, h-) < [pFU][pU] \*k- < [pAN] \*q- (FORM: [Atayal][Pai.] k̄ (= q-), [Tsou] ø- | W.MP: [Sundanese] h-, [Kal.L.] g-, [Yami] [Taga.] [IndoN] ø- | C.MP: [Dobel] kʷ- | OC:[Motu] kʷ-, [Tolai][Kilivila][Mbula][Nemi] k-, [Nengone][Adzera] g-, [Tongan] ?-, [Tokia] ø-) || [pIE] \*ǵh- || [pEsk] \*q- ||| # **BELLY:** [pFU] \*kačs ""Etwas gebogenes (something curved)" (< "belly" < "liver") (< \*qacy < \*qaCey "liver") ||| [Hung.] has "belly" (< \*kas) ||| [pAN] \*qaCéy "liver" || FORM: [Paiwan] kačay "liver" || W.MP: [Sundanese] hati / [Yami, Taga., Aklanon, Kaga., Bang, Sama] atay / [Aceh, Sasak, Konjo, Da'a] ate / [Malagasi M., Minang., Bali.] ati "liver" || C.MP: [Mang.] ati / [Ngada] ate / [Roti] ate-k "liver" || OC: (W.OC)[Tolai] kati- / [Kilivila] kate / [Tokia] ate-n / [Mbula] kete- // (Re.OC) [Nemi] kec / [Nengone] guat / [Tongan] ?ate "liver", [Maringe] khasil "kidney"; [Aceh] boh ate "kidney" ||| # **to BITE:** [pFU] \*kar3- "to bite", [Hung.] harap "to bite" (< \*hara-p < \*gara- ~ \*qara- < \*qara-) ||| W.MP: [Batak Toba] harat "to bite" (< \*qarat) || C.MP: [Dobel] ?a-?ara "to bite" ||| OC: (W.OC)[Manam] ?arati / [Adzera] gara- / [Tolai] kərət / [Roviana] yarata "to bite". ||| # **HAND/ PAW:** [pFV] kăppä / [Est.] kăpp (Gen. kăppa) "hand, paw", [Mordvin] kepe, kăpä "barfuss" ||| FORM: [Atayal] kaβa? "hand, arm" ||| OC: (Re.OC)[Lau] ?aba "hand, arm", [Rotuman] ?u-hapa "hand" (< \*-hapa < \*qappa) ||| [pIE] \*ǵhabh- "to give, to receive, to seize" || Note: [pIE] \*ǵh- regularly correponds to [pAN] \*q- / (W.MP, Slawesh)[Muna] gh-.

§ 9.3. (k-, k-) < [pFU] \*k- < (OC) \*g-; [pIE] \*ǵh- ||| # **to GO:** [Finn.] käydä "to go, to work" ||| OC: (W.OC)[Maringe] yae "to go away, to depart" ||| [pIE] \*ǵhē-, \*ǵhēi- "to release, to let go, to go", [Germanic] \*gaian "to go" ||| # **HAND:** [Finnish] käsi / [Hung.] kés "hand" (< \*gesu "wrist" < \*lima-gesu "wrist = hand-neck") ||| OC: (W.OC)[Yabem] lima-gesu "wrist" (< lima "hand" + gesu "neck") ||| IE: [pIE] \*ǵhes- / [Greek] kheir / [Hittite] keššera-, keššar- "hand" ||| # **MIDDLE:** [pFU] \*k̄its (küt3) / [Ostyak] kōt "middle", [Hung.] köz, közép "middle" ||| W.MP: (PHIL)[Tagalog] gitna? "middle" (< \*git-na? < \*git- "middle") || C.MP: ?[Ngada] kisa "middle" (< \*git- ?) ||| # **TENT/ HOUSE:** [pU] \*kota / [Finn.] kota "tent, house" (< \*goda < \*godaṅ) ||| (?) W.MP: (SND)[Batak Toba] sopo godaṅ "meeting house" ||| Note: Cf. [Ainu] kotan "village" ||| IE: [Sanskrit] koṭa- "city, town"

#### 2.4. 硬口蓋音 (Table 5 参照)

§ 10.1. (j-, ?) < \*j- < (W.MP) \*j- は、SLWにおける\*j-の反映であるが、W.OCではy (= /j/) で反映しており、一方、W.MPでは /j/ への子音変化を遂げていないものと思われる。このことは、pUと



SLW は多くの酷似語彙を共有するにも関わらず、pUはpOCを経て、すでにOCとして分化した枝 (W.OCまたはその近縁言語群)から起源した強い可能性を示している。

\$ 10.2. (j-, ?) < \*j- < (W.MP) \*j- < [pAN] \*Z- についても、SLWにおける\*jj-と(OC)y-の間にもほぼ同じことが言えるようである。

Table 5. IPALATAL ( [Finn.] j- )

**\$ 10. [Finn.] j-** ||| \$ 10.1. (j-, ?) < \*j- < (W.MP) \*j- (< \*D- ) ; [Sasak] j- ||| (OC) j- (= y- ) ?, (W.MP) [Sundic, Slawesh] j-, (C.MP) j- ||| # to DANCE: [pFU] \*jekks "to dance" (< \*jegg3 < \*jegt < \*jeget < \*joget "to dance" ) ; [Votyak] ekt- / [Zyrian] jōkti "to dance", [Ostyak] jek, jok "dance" ||| W.MP: (SLW)[Sasak] joget / [Konjo] aʔ-joget "to dance" || ?OC: [Kaulong] yik "to dance" (< \*yek ? < \*yege < \*joge ) ||| # to GO: [pFU] \*jakka- / [Mordvin] jaka- "to go" (< \*jakka- < \*dakka- ) ||| W.MP: (SLW)[Bugis] jokka / [Konjo] a-dakka "to walk" ||| Gilyak: [Gil.(Sakhalin dial.)] jakka-nd "to come, to go, to reach, to arrive" ||| # LIGHT / SUN: [pU] \*jelä "light, sun, day", ??[Finn.] jalava "elm" (< "birch?" < "white" ) ; (SAM.) [Yurak] jāl'e / [Twig] jale "day, sun" ||| W.MP: (SLW)[Sasak] jəlo "sun" || OC: (ReOC) [Woleaian] yaŋo "sun" ||| [Yukagir] jeloze "sun" (UEW\*) ||| # RIVER: [Finn.] joki "river" ||| C.MP: [Mangg.] jōk "gulf, bay" || OC: (W.OC) [Mbula] yok / [Takia] you "river, stream" ; [Ajie][Xaracuu] jə "to flow" ||| Note: W.MP: [Yami] ayo "river, stream"

**\$ 10.2. (j-, j- ) < (Sundic) \*j- < [pAN] \*Z-** ||| [Wr.Mong.] j- || [Quechua] y- ||| # to WALK / FOOT: [Hung.] jár "to walk" (< \*jala < \*Zalan ), [pFU] jalka "foot, bone", [Finn.] jalka / [Est.] jalg "foot" (< \*jal-g), jalan "on foot" (< \*jal(a)- "to walk" < \*Zalan "road" ) ||| [pAN] \*Zalan "road" || FORM: [Paiwan] jaJan / [Rukai] ka-daJan-anə "road" || W.MP: [Yami] zəzəʔan / [Chamorro] chalan / [Kal.L.] dālan / [Molbog][Murut][Java.] dalan / [Minng.] jəlan / [Da'a] jala / [Wolio] dala "road" ; [Chamorro] channo / [Taga.] daʔan / [Batak Toba] mar-dalan / [Bali.] mə-jaJan / [Madurese] jhəlan / [Minang.] ba-jaJan / [IndoN] bəʔ-jaJan "to walk" || C.MP: [Ngada] zala / [Sika] lala-ŋ / [Mangg.] salaŋ / [Dobel] sala "path" || OC: (Re.OC)[Lewo] yali "to walk", [Nyindrou] san / [Takia] dal / [Mbula] zāla / [Motu] dala / [Lau][Kwaio] tala / [Raga] hala / [Woleaian] yaŋa / [Tongan] hala / ala / [Rapanui] ara "road, path" ||| MONG: [Wr. Mong.] jam / [Mod.Mong.] dzam "road" (< \*ja-m < \*jaa- < \*jala-) ||| Quechuan: [Quechua Boliviano] yan "road" (< \*yaan < \*yalan < \*Zalan)

## 2.5 声門音 (Table 6 参照)

\$11.1. (h-, ?) < [proto-Hesperonesian((pHN)) \*h- (< [pMP][pAN] \*h- ) は重要な情報を提供している。

(1) # WOOD: [Finn.] halot は語頭の h- を保存しており、このような保存はSundicやSLWでは見られないのに対して、OCでは # HAIR: [Finn.] hius "hair" (< \*hilu-s)におけるように、(W.OC)[Motu] hiu-na // (Re.OC)[Paamese] hiluk のようにh-を保存しており、このこともまた、pUがOCの分枝から起源したことを強く示唆する。さらに、(W.OC)[Motu] hiu-na と (Re.OC)[Paamese] hiluk を [Finn.] hius "hair" と比較すると、Remote Oceanic においては母音間の -l- が保存されているのに対して、pUでは (W.OC)[Motu]と同じく、-l- が消失していることは、多くの語彙がMotu語を含むW.OCと酷似していることを考えると、W.MPとpUとの著しい近縁性を表わしている可能性が高く、この視点の正否を詳細に検討する必要がある。

Finn. h- は、\$11.2~\$11.5 の複雑な子音変遷の結果であり、これらのそれぞれのケースがMPと対応付けられたことにより、Finn. h- とANおよび他のユーラシア諸言語との比較が従来よりも遥かに容易になったものと思われる。

Table 6. GLOTTAL ([Finn.] h-)

**11. [Finn.] h-** ||| §11.1. (h-, ?) < [pHN] \*h-. |||| # FEATHER: [Finn.] *höyhen* "feather" (< \*höy-hen) ||| OC: (W.OC)[Motu] *hui-na* "feather", *hui* "hair" ||| Note: [Jawa.] *suiwi* "wing" |||| # HAIR: [Finn.] *hius* "hair" (< \*hilu-s) ||| OC: (W.OC)[Motu] *hiu-na* // (Re.OC)[Paamese] *hiluk* "hair (of head)" (< \*hilu-k) |||| # STEAM: [Finn.] *höyriy* "steam, vapour" (< \*höy-riy < \*höy- (+ \*-riy) < \*hēŋo "cloud") ||| W.MP: [Gorontalo] *hēŋo* "cloud" |||| # WOOD: [Finn.] *halot* "wood", *halon-hakkaja* "woodcutter", *halko* "log" (probably, < \*hal-ko < \*hal(o)- "wood" + \*-ko) ||| AN: [pHN] \**halás* // (W.MP) (SND)[Java.] [Madurese] [Bali.] *alas* "woods, forest"

§ 11.2. (h-, s-) < [pFU] \*cɟ < (W.MP: SND/SLW) \*cɟ (< [pMP] \*s- ? (before u, o, etc. ?) |||| # DENSE / THICK: [pFU] \**čukkɟ* / [Zyrian] *ček* "thick", [Hung.] *sok* "viel, viele" ||| W.MP: [Minang.] *čukuy* / [Java., IndoN., Sundanese] *čukup* "enough" || FORM: [Atayal] *čka* "enough" (< \*Cuka) || OC: [Roviana] *soku* "much, many" ||| Turkic: [Turkish] *çok* "viel, sehr" |||| # to CHOKE (Ersticken): [pFU] \**čäkkɟ*- / [Votyak] *žokal* "to choke, to be drowned" ||| W.MP. (SLA) [Bugis] *ma-čikke* "narrow" |||| # TAIL/BACK: [pFU] \**čänčä* "back, tail" (UEW\*) (< \*čän-čəŋ < \*čəŋl- < \*čəŋ(əl) "nape of neck"), [Finn.] *häntä* / [Est.] *händ* "tail", [Votyak] *čəŋč* / [Vogul] *šiš* "back" ||| W.MP: (SND) [Java.] *čəŋəl* "nape of neck" |||| # THIN: [pFU] \**čupa* / [Mordvin] \**čova* / [Hung.] *sovány* "thin", [Finn.] [Karelian] *hupa* "schlecht" ||| W.MP: (SND) [Bali.] *čupit* // (PHIL) [Batak Toba] *səp'pit* / [Kal.L.] *sūpit* "narrow"

§11.3. (hV-, sV-) / [Votyak] žV- < [pU] \*čV- < \*siV- (V: vowel) |||| # DAMP: [pFU] \**čeŋke* "damp, warm" (< \*sienke < \*sii-aŋi-ke < \*sii-ŋaŋi-ke ~ \*sii-haŋi-ke < \*sii "damp" + \*(h)aŋi(n) "air" + \*-ke "?") , [Finn.] *henki* / [Est.] *hing* "air, life", [Votyak] *žog, žog* "very warm", [Hung.] -*ség, -ság* "Suffix zur bildung von Abstrakta u. Sammelnamen" ||| C.MP: [Dobel] *saŋin* "air" (< \*siaŋin < \*sii-aŋin) ||| (1) \*sii- "damp" : W.MP: (SLW) [Uma] *mo-sii* / [Da'a] *na-sii* "wet, damp" (< \*sii "damp") ||| (2) \*aŋi(n) "air" : W.MP: [pMP] \**háŋin* "air, wind" : [Tagalog] [Aklanon] *hāŋin* / [Isnag] [Kagayasnēn] *āŋin* / [Kagayanen] [Murut] [Balinese] *aŋin* / (SLW) [Konjo] *aŋiŋ* "air, wind", [Aceh] *aŋen* "wind, air", [Minangkabau, Sundanese, Javanese, Balinese, Sasak] *aŋin* / [Bugis] *aŋiŋ* "wind" || C.MP: [Sika] *ani-n* / [Roti] *anin* "wind" || ??OC: [E.Fijia.] [W.Fijian] *deŋu* (< \*heŋu ?) / [Rapanui] *haŋu-haŋu* "breathe, breath" (< \*haŋu) ||| MNGc: [Wr.Mong.] *aGar* "air" (< \*aŋar < \*haŋal < \*aŋi-ŋal ?) ||| IE: [pIE] *anə-* "to breathe" (< \*ani- < \*aŋi- < \*haŋi- < [pMP] \**háŋin* "air, wind"), [Latin] *ani-ma* "soul" |||| # SOUR: [pFU] \**čemɟ* / [Zyr.] (Ud.) *šom* / [Ostyak] *čim-, sim-* "sour" (< \*siem < \*siom < \*silom "sour") ||| W.MP: [Kal.Limos] *silom* / [Aklanon] *aslum* / [Taga.] *asim* "sour" (< \*(a)silum)

§ 11.4. (h-, ø-) / [Votyak] š- < [pU] \*š- < [pMP] \*d- (= \*d1-) ||| # BRANCH: (?) [Finn.] *hanka* "oarlock", [Hung.] *ág* / [pFU] \**šaŋka* "branch, twig" ||| AN: [pMP] \**daŋkaq* ~ *daŋkeq* "branch" (Coh\*); (W.MP) [Batak Toba] *dakka* "branch" (< \*daŋka) || C.MP: [Roti] *ndana-k* "branch" |||| # BROOK: [pFU] \**šerɟ* (\*šärɟ) / [Votyak] (S.) *šur* / [Zyr.] *šor* / [Hung.] *ér* "brook" ||| AN: [pW.MP] \**diRus* "water" |||| # to CUT: [pU] \**šur-* (~ \*šār- (K.O.\*)) / [Votyak] (dialects) *šjr-, šŋr-, šorŋ-* "to cut" (< \*siar-), [Hung.] *irt-* "ausrotten", [Kama.] *tārəl'a-* "teilen" ||| OC: (W.OC) [Motu] *dare-a* "to tear" |||| # GOOD / HEALTHY: [pFU] \**šerjā* / [Finn.] *hyvä* / [Mordvin] (E.) *čiv* / [Hung.] *igen* "good, healthy", [Lapp.] *sávve-* "to make heal, to heal" ||| W.MP: [Batak Toba] *de'ŋan* "good" ||| OC: (W.OC) [Mbula] *ndenŋama* "right, correct" ||| Note: (OC) [Tawala] *dewa-dewa* "good"

?§ 11.5.. (h, ?) < [pFU] \*j- ? (UEW\*) ~ \*ž- (K.O.\*) < (W.OC) [Buang] *z-* (< [pAN] \*z- ?) ||| # OWL: [pFU] \**(j)ipɟ* (?) (UEW\*) ~ \**žipɟ* (K.O.\*) ? / [Ostyak] *jěpə* "owl", [Finn.] *hyypiä, huuppo* / [Est.] *jänese-hüüp* / [Lapp.] *jipp* "eagle-owl" ||| OC: (W.OC) [Buang] *zūp* "owl" (z- < [pAN] \*z- ??)

2.6. 子音対応法則 (Table 7 参照)

以上の比較の結果を纏めたものがTable 7であり、Tables 2-6のすべての例と矛盾しない語頭子音対応法則である。この表によって、Finnishの全ての語頭子音が含まれており、しかpMPのほぼすべての語頭子音が含まれている。なお含まれていないpMPの子音としては、\*c- (Dyen), \*ʔ-, T- (Dyen)などの少数の稀な子音に限られている。pIEとANの対応はref.3,11により、また、JRとの対応はref. 3などによって一部記入した。

**Table 7. Word-initial consonant-correspondence laws between Uralic( Finn., Hung., pU, pFU) and Austronesian ( MP, pMP, pAN), with possible sound-correspondences to pIE, and Japanese-Ryukyuan (JR) sounds.**

(x, y) denote a sound whose Finnish (Finn.) and Hungarian (Hung.) reflects are x, and y, respectively.  
 Abbreviations: pXX = proto-XX (e.g., pFU = proto-Finno-Ugric, pU = proto-Uralic), MP = Malayo-Polynesian, AN= Austronesian, IE = Indo-European, JR= Japanese-Ryukyuan, Jpn= Japanese, Ryu= Ryukyuan, Zyr.= Zyrian,

(Finn., Hung.)	pFU / pU	MP	pMP/ pAN	pIE	pJR (Jpn, Ryu)
<b>I. BILABIALS</b>					
1. Finn. m- (m-, m-)	*m-	m-	*m-	*m-	*m- (m-,m-)
2. Finn. p- (p-, f-) (p-, b-)	*p- *p-	p- b-	*p-	*p-	*p- (h-/ -, p-) *b- ??
3. Finn. v- (v-,ø-)	*w- (or *v-, *b(w)-)	b-	*b-	*b-	*b- ( w, b-)
(ve-,ve-)	*we-	ure-, ura-	*uRa-	*ur-	
<b>II. DENTAL and ALVEOLAR</b>					
4. Finn. t- (t-, t-)	*t	t-	*t-	*t-	
5. Finn. n- (n-, n-) (n-, n-) (n- ?, ny-) (n-, ny-) (?, ?) [Zyr.] ní-	*n- *ń- *ń- *ń- *ń-	n- mn-	*n- *ń- *ŋ- [pHF] *N-	*n-	(n-, ?)
6. Finn. s- (s-, ø-) (s-, sz-/[O.Hung.] Z-) (s-, ?) (s-, sz-) (sy-, szí-) (s-, cs-)[Before u/o]	*s- *ś- *ś- *ś- *šü- *ć-	s- s- du-/đu-/su- č-	*s- *S- *C- *d <sub>2</sub> - (Ross*) *su- *t- ~ *s-	*s-	*s-
7. Finn. l- (l-, l-)	*l-	l-	*l-		
8. Finn. r- (r-, r-) (r-, r-) (r-, r-)	*r- *r- *r-	r- r- d-, ř-, r̥-	*r- *R- *z-	*d-	*dz- ?
<b>III. VELAR</b>					
9. Finn. k- (k-, h-) (k-, h-) (k-, k-)	*k- *k- *k-	k- h-,ø-,ʔ-,g-,k- (OC) g-	*k- *q- (pOC) *g-	*k- *gh- *ġh-	*k- (k-, k-) ? (k, k-/ʔ-)
<b>IV. PALATAL</b>					
10. Finn. j- (j-, ?) (j-, j-)	*j- *j-	ǰ-, j-, y- d-,ǰ-,s-,h-,z-	*D- *Z-	*y- ?	
<b>V. GLOTTAL</b>					
11. Finn. h- (h-, ?) (h-, s-) (hV-, sV-)	? (*h- ?) *č- *čV-	h-, ø- (W.MP) č- siV-	*h- (< *siV-)	*H <sub>2</sub> - ?	(V: vowel)

**VI. VOWEL:**

12. Finn. y-

(y-, ë- ~ é-)

\*i- ~ \*yi- i-, ü-, yi-

\*y- ?

**2.7. Uralicと最近縁のAN言語群の検索**

URAとの最酷似語彙が、CAD\*に含まれる80のAN言語のうちの、どの言語やどの言語群にどのような頻度であられるかを最酷似語彙頻度分析(Closest similarity analysis, CSA) (Part 1, ref.3, pp.6869)を適用して解析することによって、pUがANのどの分枝に最も近縁であるかを推測できる場合が少なくない。

そのために Tables 2-6 の比較データに対してCSAを適用してその結果の解釈と考察を行って、URAの起源と系統をさらに詳しく論ずることとする。

**Part 3: 最酷似語彙頻度分析 (Closest similarity analysis)**

**3.1. Uralicとの最酷似語彙頻度分布解析(CSA)**

URAとの最酷似語彙が、CAD\*に含まれる80のAN言語のうちの、どの言語やどの言語群にどのような頻度であられるかをしらべることによって、pUがANのどの分枝に最も近縁であるかを推測できる場合が少なくない(Part 1, ref.3)。

そこで、UEW\*のURA語彙を"Comparative Austronesian Dictionary" (CAD\*)にリストされている80のAN言語と比較したTables 2-6 に対して最酷似語彙頻度分布解析(closest similarity analysis (CSA), Ohnishi, 1999) (ref.3)を行い、その結果をTable 8 に示した。

**Table 8. Closest similarity analysis of 84 Austronesian-related Uralic word items listed in Tables 2-6.**

CSS = closest similarity score (of each AN language(Lg)), SCSS = sum of CSS (for each Lg subgroup in AN), mCSS = mean CSS for a given subgroup (= SCSS/n, where n denotes the number of Lg's in the group). For every of the 84 AN-related URA word-items, score = 1 (= \*) if only one AN Lg has the closest cognate, score = 1/2 (= !), and 1/3 (= %), if 2 and 3 AN Lg's have equally most similar cognates. By summing CSS over Lg members in each Lg group, SCSS (=  $\sum_{i=1, n} CSS_i$ ) for each Lg group was calculated.

Language (Lg) group	mCSS = SCSS / n (SCSS = $\sum_{i=1, n} CSS_i$ , where n denotes number of Lg's in each Lg group)	CSS for each Lg (CSS = $\sum_{k=1, 84} (score)_k$ ) [score: *=1, !=1/2, %=1/3]
Austronesian (AN): (MP + FORM)	81.39 / 65 = 1.25	
Malayo-Polynesian (MP) (= I + II)	74.39 / 61 = 1.22	
I. Central-Eastern MP	37.0 / 34 = 1.09	
IA. Oceanic (OC)	32.5 / 26 = 1.25	
IA-1 Admiralties (ADMI)	0. / 1 = 0.	Nyindrou = 0.
IA-2 Western OC (W.OC)	26.5 / 15 = 1.77	
IA2.1 North New Guinea cluster	15.5 / 8 = 1.90	Manam = *** = 3.0, Takia = 0.0 Mbula = *** = 3.0, Dami = * = 1.0 Yabem = **** != 4.5, Kaulong = ** = 2.0
IA2.2 Papuan Tip cluster	6.0 / 4 = 1.50	Buang = ** = 2.0, Adzera = 0 Kilivila = * = 1, Tawala = 0, Motu = *** = 3.0, Mekeo = ** = 2.0
IA2.3 Meso-Melanesian cluster	5.0 / 3 = 1.67	Tolai = **** = 4.0, Roviana = 0 Maringe = * = 1.0

IA-3 Central-Eastern OC (C.-E.OC)	6.0 / 10 = 0.60	
IA3.1 South-East Solomons (S.E.SOL)	0. / 2 = 0.	Kwaio = 0., Lau = 0.
IA3.2 Remore OC (Re.OC)	6.0 / 8 = 0.76	
IA3.2.1 Micronesian (microN)	1.50 / 4 = 0.38	Marshalese = 0, Ponapean = 0. Woleaian = ! = 0.5, Kiribati = 1.0
IA3.2.2 North Central Vanuatu (N.C.VANU)	<u>4.50 / 4 = 1.12</u>	Lewo = * = 1.0, Raga = **! = 2.50 Paamese = 0, P.Sandwich = * = 1.0
IA3.2.3 Southern Vanuatu (S.VANU)	0 / 2 = 0.	North Tanna = 0, Kwamera = 0
IA3.2.4 New Caledonia (NwCAL.)	0 / 5 = 0.	Xaracuu, A'jie, Cemuhi, Nengone, Nemi = 0.
IA3...2...5 Central Pacific (C.Pac)		
IA3..2..5.1 Rotman-WFijian	<u>3./2. = 1.50</u>	Rotuman = !!! = 1.50, W.Fijian = 1.50
IA3..2..5.2 Tahitian-E.Fijian	2.5 / 6 = 0.42	
IA3..2..5.2.1 E.Fijian	0 / 1 = 0.	E. Fijian = 0
IA3..2..5.2 .2 Polynesian (PolyN)	2.5 / 5 = 0.5	Tongan = * = 1.0, Samoan = * = 1.0 Mele-Fila = ! = 0.5, Tahitian = 0, Rapanui = 0.
IB. South-Halmahera and Western New Guiana (SHWNG)	1.0 / 2. = 0.5	Irarutu = 0, Sawai = * = 1.
IC = Central Malayo-Polynesian:(C.MP)	3.5 / 6 = 0.58	Manggarai (Mangg.) = 0, Ngada = 1 Sika = 0, Roti = * = 1., Buru = ! = 0.5, Dobel = * = 1
II. Wester MP (w.MP)	<u>37.39 / 27 = 1.38</u>	
II-1. Sulawesi (SLW)	<u>13.5 / 5 = 2.70</u>	Da'a = * = 1., Uma = *** = 3.0., Bugis = *** = 3.0, Konjo = **! = 3.5, Wolio = *** = 3.0
II-2. Sundic (SND)	<u>16.89 / 9 = 1.88</u>	Aceh = ** = 2.0, Batak Toba = * = 1.9, Minangkabau = *** = 3.0 Sundanese = 0, Java = *!% = 1.83, Indonesian (IndoN) = 0, Madurra = !!% = 1.33, Balinese = ****!% = 4.83, Sasak = *!! = 2.0
II-3. Borneo	0 / 2 = 0.	Murut = 0, Malagasy Merina = 0
II-4. Sama Bajar	0 / 1 = 0.	Bangingi Sama = 0
II-5. South Mindanao	1.0 / 1 = 1.0	Sarangani Blaan = * = 1.0
II-6. Southern Philippines (S.PHIL)	3.0 / 2 = 1.5	Kagayanen = 0, Gorontaro (Goron.) = *** = 3.0
II-7. Meso-PHIL	1.5 / 4 = 0.37	Tagalog = * = 1.0, Aklanon = 0, Palawan = ! = 0.5, Molbog = 0
II-8. North PHIL	0.5 / 2 = 0.25	Isnag = ! = 0.5, Kalinga Limos = 0
II-9. Bantatic	1.0 / 1 = 1.0	Yami = * = 1.0
III Formossan (FORM)	<u>7.0 / 4 = 1.75</u>	
III-1 Atayalic		Atayal = **! = 3.0
III-2 Rukai-Tsouic		Tsou = * = 1.0, Rukai = 0
III-3 Paiwanic		Paiwan = *** = 3.0

Tables 2-6の比較において、URAの個々の語彙項目において、80AN言語のうちのただ一つの言語に最酷似形が見られるときは、そのAN言語の最酷似スコア(CSS)として CSS = 1 を与え、m個のAN言語が同等の最酷似形を持つときは、それらのAN言語に CSS = 1/m (m = 2,3) を与える。あるAN言語の最酷似スコア総和(sum of CSS, SCSS) は、Tables 2-6の比較のすべての項目におけるそのAN言語のCSSの総和として定義する。ANのある言語group(例えばSLW)の平均最酷似スコア(mCSS) は、そのgroupのCAD\*掲載言語数nでSCSSを除いたものである(mCSS = SCSS / n)。Table 8 には、mCSS と、個々のAN言語のCSS値をリストし、CSSの詳細を\*(1), !(1/2), &(1/3)で示した。

結果として、W.OC(n = 15) はSCSS = 26.5, SLW(n = 5) は SCSS = 13.5 であるが、1言語当たりのmCSS は、W.OCで 26.5 / 15 = 1.77, SLWで 13.5 / 5 = 2.70 と、SLWの方が mCSS 値は著しく高いという結果を得る。しかし、このような量的比較結果が系統の近さを反映しているかどうかについては、詳細な吟味を要する。Part IIで指摘した音韻推移の詳細などは、pUが、すでのOCとしての分化をある程度した後に、西方への民族移動を行ってUralic familyを多様化させたと考えるほうが矛盾がすくないように思える。

これらの視点のいずれが矛盾のない系統仮説であるかを、さらに詳細なデータ比較で検証していく必要がある。