

BENGT ORRE

SOUND-SYMBOLIC STRUCTURE OF DRAVIDIAN

Abbreviations of languages etc. are the same as in DED with the exception and/or addition of the following readings:

Ar. = Arabic	Gr. = Greek	La. = Latin	ss. = sound-
B. = Bantu	IE. = Indo-European	Le. = Latvian	symbolic
C = consonant	it. = iterated	Li. = Lithuanian	Sw. = Swedish
Ba. = Baltic	Ja. = Japanese	Lp. = Lappish	Tü. = Turkish
Du. = Dutch	Jv. = Javanese	PD. = Proto-Dravidian	UA. = Ural-Altaiic
En. = English	Kd. = Kodagu	Ru. = Russian	v. = variat
Fi. = Finnish	Ko. = Korean	Sk. = Sanskrit	V = vowel
Fr. = French	Kt. = Kota	Sl. = Slavic	
Ge. = German	Kx. = Kurukh	Sp. = Spanish	

I. *Introduction*

As late as in the nineteen-sixties it was a generally accepted idea that sound-symbolic words form only a small part of the word-store of a language. Today, on the contrary, it may rather be questioned whether any word at all can be quite free from the sound-symbolic load of its phonemes. If indeed a word should happen to get totally rid of all sound-symbolic functions, then it would probably soon die out, not being able to stand the competition from more expressive words.

Thus it is quite evident that a word can never escape the sound-symbolic pressure from its own intrinsic phonemes or from the great mass of partly or completely homophonemic words, alliterative words or rhyme-words. Lexical works of the common type with only partly equivalent correspondence will still be needed. Their limitation must however be fully recognized. The meaning of a word can never be exactly rendered by simple pseudo-equations.

Words and phonemes behave like living organisms. They attract and repel each other. They clash. They change form and place. They struggle for their existence. The microcosmos of a language is reminiscent of the atomic system in the field of chemistry.

Dravidian-Ural-Altai affinity has been discussed since 1856¹. In fact there are phonemic as well as grammatical correspondences between Dravidian and Ural-Altai. On the other hand, similarities can be found in almost all linguistic groups in Europe, Asia and Northern Africa². A great deal remains to be done before we know how and how much they differ or coincide.

Here is not the place to question whether the Dravidian-Ural-Altai similarities are occasional, or if they depend on affinity or even adherence to the same geolinguistic area. The phonetic correspondences however give a good reason to compare Dravidian and Ural-Altai roots and words. Also Indo-European and other linguistic groups will be involved in the following comparison.

Among the Indo-European languages especially, Tokharian has traces in common with Dravidian. The Tokharian phonemic structure, case system, system of postfixes and postpositions etc. are typical for the Pamir area and its surroundings. The same can also be said to a certain extent of Dravidian. Beneath this suspected influence from the North stand the Austroasiatic traces. The Dravidian-Harappan connection, discussed since the discovery of the Indus Valley Civilization in 1921, is hard to establish because of the sparse knowledge of the Harappan sound-shapes.³

The basic structure of Dravidian word-roots is (C)VC, regulated by the three laws of quantity.⁴ This basic cluster can be extended by a (mostly sonantic) suffix (-L, -R, -M, -K) or by a nasal infix.⁵

There is also, however, another frequent root-type CVCV (it. CVCV-CVCV) which can be called the "pacific-oceanic" type because of its predominance in Austronesian (Melanesian, Micronesian, Polynesian). This root-type appears also in the semi-maritime parts of the Asian continent within reach of pacific-oceanic influence. So also for example in "Semi-Ural-Altai" languages like Korean and Japanese.

Also typical for Dravidian are the onomatopoeic words of "direct quotation" of the type X-in and X-id.⁶ They are reminiscent of Japanese X-suru and Korean X-hata, which might be another pacific-oceanic trace?

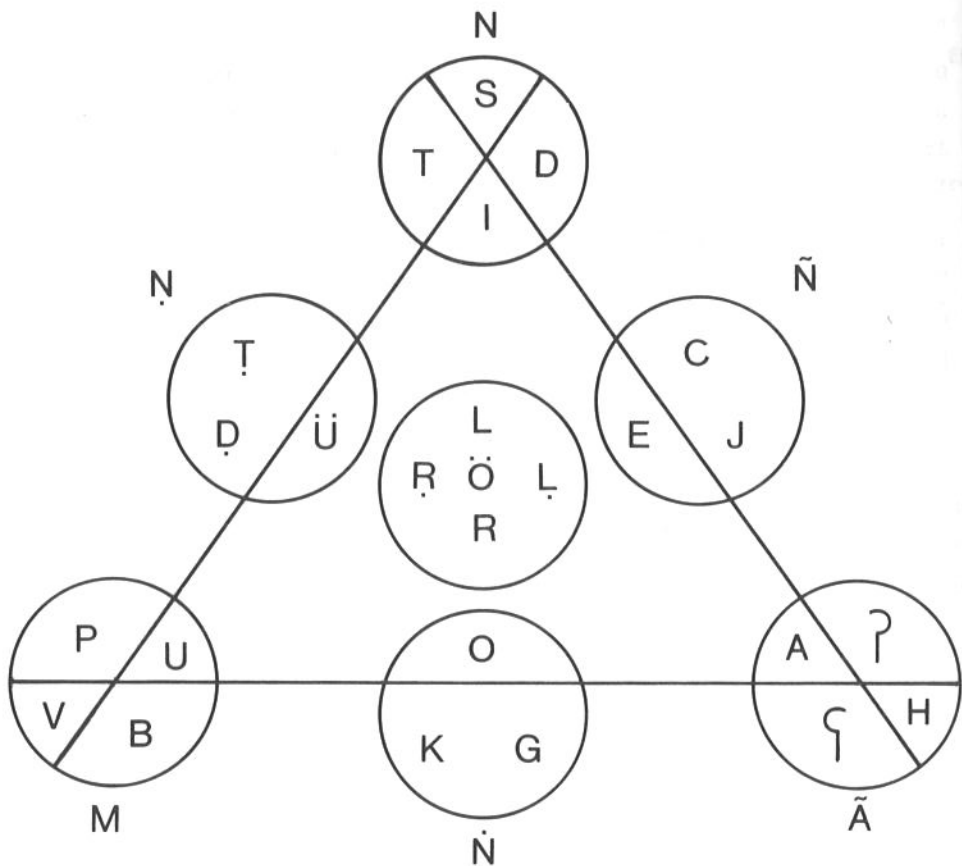
Dravidian cerebrals are seldom found in initial position. They can perhaps be explained as the result of phonemic combination, as for example with the Swedish cerebrals (rn=ŋ, rs=ʃ, rd=d, rt=t̥). The Dravidian cerebrals,

however, are much more frequent than their Swedish counterparts. They also seem to have special sound-symbolic functions. This phenomenon as well as the Dravidian palatals, flaps and liquids would also require a sound-symbolic analysis.

Dravidian roots often show a multitude of variants forming some sort of a sound-symbolic spectrum which can shift over the whole phonemic scale. It is extremely difficult to master this phenomenon by means of conventional linguistic methods.

Thus it might well be worth trying an interpretation and reconstruction of Dravidian roots and phonemes in sound-symbolic terms by forming a skeleton of sound-symbolic spectra where all semantic structures have their given place whether we know them or not. Mistakes can be corrected gradually while approaching a total sound-symbolic spectrum for Dravidian.

Sound-symbolic words do not necessarily reflect reality - they rather show how one chooses to look upon reality.

II. *The sound-symbolic triangle*

The Dravidian phonemic system can be illustrated by the sound-symbolic triangle sketched above. A preliminary analysis of the Dravidian material gave the following basic sound-symbolic functions of the seven circles of this triangle:

1. Dental circle: 1-dimensionality (point, tip, little, tiny, sharp, bright, shrill, pitch)
2. Palatal circle: vacuum-functions (kiss, suck, suckle, click, smack, champ, splash)

3. Glottal circle (=A): 2-dimensionality (gape, angle, yawn, catch, crack, large, vast, flat, expand)
4. Postplatal circle (except O?): hardness (hard but not springy collision, inner pressure)
5. Labial circle: 3-dimensionality (orifice, lip, mouth, cheek, grow, swell, bloat, big, stout, dark)
6. Cerebral circle (ü?, T, D): hindrance (clumsy, awkward, lame, blunt, stout, groping)
7. Inner circle (except ö?): duration, frequency, partition, separation, multitude, iteration (R)

As can be seen from the analysis of the seven circles the functions of the vocal triangle do not fit in exactly with the functions of the consonantal triangle. Separation is justified. Concerning the different articulation-types of the phonemes basically the following sound-symbolic functions can be distinguished:

1. N a s a l s: closeness, inner resonance, hollow, dark, hindrance (mute, deaf, dumb, numb, blind)
2. N a s a l + P l o s i v e: springiness, elasticity (jump, bump, bound, rebound, bounce, swing, blench)
3. P l o s i v e s: high-energy functions (touch, collision, percussion, stop, explosion, press, force)
4. F r i c a t i v e s: often have functions more typical for plosives than for fricatives
5. T r e m u l a n t s: roughness, plurality, iteration, frequency, grinding, scattering, partition
6. L a t e r a l s: smoothness (level, sleek, flat, glib, glide, slip, slide, slime, lapse, loose)
7. V o w e l s: type of opening (I = fissure, slit, chink, A = gape, abyss, U, O = round opening)

The preliminary results accounted for here under the heading of the sound-symbolic triangle must now be closely examined. It will be practical to begin with the three extremities, i.e. the glottal, labial and dental circles, because extreme functions are easier to keep apart from each other. The functions of the three intermediate circles can be supposed to show functions intermediate between their respective extremities. The function of the inner circle is problematic.

The present first part of this work will mainly treat the vowel A and the glottal circle. The postpalatal circle will be mentioned in its function as a consonantal substitute for the glottal circle. The rest will be published elsewhere.

Glottal consonants are not very frequent as independent phonemes in Dravidian (except in the dialects). They can however be heard before vowels in initial position like in UA and IE. This might also be the reason why words signifying glottal functions like for example "hickup, cough, vomit, vociferate etc" so often begin with a vowel.

The sound-symbolic functions of the missing glottal consonants have been taken over in Dravidian, as in UA and IE and many other linguistic groups, by the postpalatal consonants (K, G, X), the voiceless vowels (H) and the voiced vowels in initial position. Hence there is a frequent interchange and interaction between the glottal circle and the postpalatal circle.

In Dravidian the vowel A is the predominant representative of the glottal circle. The following pages will give an idea of the sound-symbolic functions and combinations of the vowel A and the glottal (-postpalatal) circle.

III. The vowel A and the glottal (-postpalatal) circle

The vowel "A" differs from all other vowels by its extreme openness of articulation. The angle of the jaws is extremely wide and open. The position of the tongue is low, which gives a wide opening of the oral cavity so that the inner parts of the mouth/throat can be seen.

The acoustic character of A is above all characterized by a wide and maximal clang, a dominating vibration of the vocal cords, a preceding - often clearly perceptible - glottal consonant (ʔ or ʕ) in initial position, and the almost total absence of oral and nasal secondary sounds.

The sound-symbolic functions of A are mainly based upon the idea of "openness, clangfulness, wide amplitude, 2-dimensionality, largeness, flatness, wide open light":

- a. S p e e c h o r g a n s: wide open mouth, gape, throat, pharynx, larynx, vocal cords
- b. C o r p o r a l f u n c t i o n s: gape, gasp, yawn, stare, straddle, open the mouth widely

- c. O r a l f u n c t i o n s : babble gäbble, jabber, chatter, slander, bark (with wide open mouth)
- d. E x p a n s i v e f u n c t i o n s : swell, bang, crack open, burst out, explode, bud, blossom, fat
- e. Q u a n t i t a t i v e f u n c t i o n s : 2-dimensionality, large, vast, broad (big)
- f. D i s t a n t i a l f u n c t i o n s : wide amplitude, (a)part, separate, astride, asunder, scatter
- g. P e r c u s s i v e f u n c t i o n s : beat/fall flat, flatten beat with palm/instep, clap, flap, slap
- h. F o r m a l f u n c t i o n s : flat objects (palm, instep, blade, plate, plank, cake, bar, yard)
- i. O r i f i c e - f u n c t i o n s : wide opening, broadmouthed vessel; uncover an opening
- j. O p t i c f u n c t i o n s : dawn, day, open daylight, flame, blaze, flash, gloss from flat surface
- k. C a p t i v e f u n c t i o n s : (open the jaws widely and then) catch, snatch, snap, snack, take
- l. M a n d u c a l f u n c t i o n s : champ, chew, gnaw, gnash, crush, crunch (with wide jaw-movements)
- m. I n t e n s i t y f u n c t i o n s : form the basic part of the categories Aa-Al above. These functions will be cited as Aa, Ab, Ac... or Aabc..., or Aa-c... etc.

A. AN INITIAL "A" emphasizes the vocal-glottal function of the root. In this function the initial A is often followed by sonants or flaps, less often by stops. Duration can be expressed by a long rootvowel (here- \bar{A} -) or by a final sonant. Example: \bar{A}^{\sim} \bar{A}^{\sim} (Kt) "donkey's bray" (with long \bar{A} , nasalization and glottal initial stop).⁷

1. A f i n a l c l u s i l e often has percussive function (beat, clap, slap etc) but can also signify that "the wide open mouth (-A-) is shut again". A posterior clusile (\dot{N} ,G,K,X) strengthens the function Ab in the sense of "open the mouth so widely that the innermost parts of the mouth/gape can be seen". The root-vowel A often shows the functions Aa, Ab, Ac, Ag, Am. With Ab: compare especially Fi. aukaista "to open" (auki, aukko, avoin, aava), ammollaan, ammottaa "be wide open, gape", haukotella "yawn", IE. bha-, gha-, Gr. xaínein, xáos, xásma, Ge. gaffen, gähnen, Fr. bâiller, En. yawn, gape gasp, Ja. ha-ha "gasping" with Dravidian:

33-36 ANK, ANG "open the mouth, gape, yawn, stare, glare; palate, gape; cry lament",

333-34 AV, AK, AM "gape, yawn, sigh (gasp?), breathe, open the mouth to vociferation"; 1928b AP ('AP?) "clap, slap, flap, tap, touch, plaster" (ss. variant of 1928a CAP?) Aghm.

2. A final *f l a p* or *l i q u i d* stresses the meaning of "fluent vociferation" or adds (esp. with long root-vowel) a "durative-frequentative" meaning to the root (compare with *Fi.* frequentatives in *-tella* and *Li.* frequentatives in *-telëti, -terëti*). The laterals tend more towards the "smooth-linear-durative" and the tremulants more to the "frequentative", the flaps seem to be in between. The tremulants (*-R, -R̄*) also paint a "raw, hoarse, coarse sound" or a "multitude of sounds or particles", (partition, separation, crushing, grinding):

175 AR "cut, gnaw, nip, reap" (*Fi.* *nakertaa*) and 176 AR "sift, strain, filter, separate"

191 AR "grind, rub, macerate, mash, crush, pulverize, destroy, file friction, attrition"

211 AL "babble, prattle, chatter, talk, bellow, bleat, cry" (*Fi.* *lörpötellä, jaaritella*) *Ac, Am*

215 ALK "laugh" (*En.* *laugh, Ge.* *lachen, Sw.* *skratta, Sk.* *has-, Fi.* *nauraa* with *A-vocalism*)

240 AR "cry, weep, lament, howl (with wide open mouth?)" cf. 33 ANK, 221 AL, 1085 KAR

253 AL "talk together, chatter, gossip" (primary?); "blend, mingle, mix, join" (secondary?)

269 AR "cry, shriek, bray, sound, speak, prattle, bark, crow, boast" (*Fi.* *parkua*) cf. 240, 4237

312 AR(-AR) "cry, call, roar, shout, blabber, bellow, make a loud/hoarse/coarse noise"

328 AL "bawl, halloo, cry, roar, sound, shout, screech, make noise" (*Fi.* *huutaa* with long *ū*)

343 AL "howl (dog), cry out, roar" (*Ar.* *walwala, Fi.* *ulvoa, Ko.* *ulta, La.* *ululare, Sw.* *yla* "howl")

345 AR "slander, calumn, scorn" (ss. intensive of 269 or 312?)

B. AN INITIAL POSTPALATAL STOP (K-) is often a sound-symbolic substitute for the glottal stop (ʔ) which can be regarded as the consonantal counterpart of the vowel A. Thus, the combinations "AK, KA, KAK" often serve as a kind of sound-symbolic "intensive". The sequence "clusile + A + clusile" usually

paints the idea "from closed state (=clusile) open the mouth etc. widely (= A) and then shut it again (=clusile)" or "repeated touch/percussion/collision with wide amplitude". Remarkable are the functions Ka-e, g, k, l:

- a. O r a l - g u t t u r a l o r g a n s : palate, gape, gullet, throat, pharynx, larynx, glottis
- b. C o r p o r a l f u n c t i o n s : open the mouth widely so that the gape/palate can be seen
- c. O r a l f u n c t i o n s : cry, crow, caw, cackle, call, chatter, chide, scold, scream, laugh
- d. G u t t u r a l f u n c t i o n s : cough, hawk, quaff, gargle, gurgle, retch, vomit (spit)
- e. K i n e t i c f u n c t i o n s : repeated clattering of the feet etc. against the ground
- g. P e r c u s s i v e f u n c t i o n s : hard, not springy touch/collision/percussion (of teeth, chain, bell)
- k. C a p t i v e f u n c t i o n s : catch, fetch, snatch, snap, take grasp (+A of "wide open jaws")
- l. M a n d u c a l f u n c t i o n s : gnash, gnaw, knock, crack, champ, chew, press, squeeze (+A as in Ak)

I. A f i n a l v o c a l (-A) without a following root-consonant stresses the "vocal" function of the root where the initial K- stands as a substitutive stop instead of the missing glottal stop (?), being the typical sign of "intensive participation of the vocal cords" and the final -A stands for "wide open mouth, intensive participation of the vocal cords". Here a similar root-structure has also the nomenclature of almost all birds of the crow-type (Tü. karga, Ko. kamagwi, Ja. karasu, Fi. harakka, hakkinen, naakka, Sw. kråka, kaja, skata, Sk. kākāḥ, kākālah, Le. kaḳis, etc.) and the natural sounds of these birds. Cf.: 1197 KĀ(-KĀ) "cawing" (Ta. kakkai, Ma. kākka, Kt. kāk, Ka. kāge, Te. kākī etc. "crow")

2. A f i n a l p o s t p a l a t a l s t o p (-K, -G) strengthens the initial K- in the sense of "inner or glottal function" and the intermediate -A- in the sense of "wide open mouth, guttural-glottal function". The root 909 has the -K substitutivum for the glottal stop (?) in the sense of "cough" (Ar. ʔaḥḥa) and for the glottal fricative (ʕ) in the sense of "vomit" (Ar. qayaʔa, ʕaʕara). Compare Fi. oksentaa, Hu. kihány, Tü. kusmak, Sw. kråkas, B. kaṅga "vomit", all having K substitutivum. So also Sw. äcklas "nauseate". S181 has probably the K demonstrativum in the sense of "gape so as to show the palate/throat":

909 KAK "vomit, retch, eject, regorge, disgorge, expectorate, cough"
(cf. 1236 KĀR "vomit")

S181 KĀK "gape, yawn" (Fi. haukottaa, haukotella, IE. ghā-, bhā-, Lp. kāvastit)

3. A final p a l a t a l s t o p (-Ķ, -Ĝ) is found in roots which nowadays mostly show an affricate (-C, -J) or a fricative -Ś, -S, -Y). They can be extended by sonants, e.g. R frequentativum. The root-vowel -A- stands for "wide amplitude of the jaws, intensive participation of vocal cords, vociferation". The initial K- stands for "hard touch/pressure, cracking/crushing" in the sense of "bite, gnaw, gnash" (in the mouth) and perhaps for "intensive participation of the glottal cords" in the sense of "laugh, quarrel". The -C is suspected to derive from an older -K, but stands also for vacuum-phenomena like "smack, splash":

914 KAC "walk in mud and sticky clay, fall into mud, splash" (cf. 1893, 1926, 3162, 3166)

917 KAC "quarrel, scold, scorn, angry speech" (often iterated: "multitude of words"?)

920 KAC "bite, gnaw, gnash" (Ge. knabbern, Sw. knapra, Fi. nakertaa, Ar. qarasa)

1053 KAY-ŃG (<KAC-ANĶT?) "laugh" (Ar. qahqaha, Jv. kakah, Ko. kaka tāso ha-)
1172 KARC "laugh" (Ja. kāra to warau, Fi. nauraa, Sw. skratta, Ge. lachen)
cf. 1053, 1672

4. A final c e r e b r a l s t o p (-Ṭ, -Ḍ) strengthens the initial K- in the sense of "variegated touch/collision/pressure". The -A- stands for "open resonance" and "wide amplitude" of chewing/cutting movements. The plural-frequentative-variegated meanings partly depend on root-iteration, often with vowel-alternation A:U (kaṭukuṭu, gaṛum-guṛum etc) to express the semantic alternation "open/closed resonance" or "high/low pitch" etc. Rhyming root-compounds (KATaPAT, etc) likewise paint a "richer complexity of sounds or movements":

930 KAṬ (it) "grind, crack, crackle, chew asunder, clatter, rattle, rumble, thunder, roll"

933 KAṬaPAṬ "hullabaloo, bustle, puzzle, tumult, confusion, disorder, vexation, noise"

945 KAṬ "bite, eat, chew, champ, gnaw, cut, divide, part" (En. cut, Fi. kalvaa) cf. 920 KAC

946 KAṬ "cut, divide, part" (originally "cut with the teeth, chew asunder"?)

5. A final *d e n t a l s t o p* (-T, -D) strengthens the initial stop *k*- in captive functions like "clutch between the jaws, catch, snap, press, squeeze", in percussive-kinetic functions like "iterated footsteps, run, hurry", in verbal-percussive senses "flutter with the mouth-organs, babble" and similar. Root-vowel is the -A- of "open resonance, intensive vociferation, wide amplitude (of catching/chewing jaws, hurrying foot-steps): 997 KAT "be angry, quarrel, anger, fury, hate, wrath" (cf. 917 KAC "quarrel, scold")

999 KAT "run, hurry, be hasty, shake, shatter, totter, shiver, quiver, rock, stir, move"

1000 KAT-R "thunder, roar, growl, cry, menace, scare, scold, check, rebuke, beat, din"

1008 KAT "seize, grasp, take, snatch, snap" (with gaping jaws etc) cf. 920, 930, 945, 946

1009 KAT "approach, meet, join, copulate, press, squeeze" (originally "between the jaws"?)

1012 KAT "cut" (sound-symbolic variant of 945/946 KAT "bite, cut" and 920 KAC "bite"?)

1013 KAT(T) "chatter, caw, croak, cry, roar, growl, scream, screech, yelp, bleat, babble"

6. A final *t r e m u l a n t* (-R, -R) often symbolizes "plurality, iteration, frequency, fraction, vibration, drumming, dispersion, dismastication, partition, separation". Primary verbs of this type are e.g. "grind, cross, crack, crackle, break, bruise, tear" (Fi. *murentaa, pureksia, puristaa, pusertaa, raapia, repiä, rikkoa, ruhjoa, rutistaa, rypistää, särkeä*) all having similar root-structure. Here belong also the *nomina resultativa* and similar formations of these verbs in the sense of "small frequent particles" (En. *berry, corn, crumble, grain, granule, gravel, grit, groat, ruin, trifle*, Fi. *marja, muru, puuro, raha, rakeet, ryyni*). Further adjectives like "raw, rough, rude, coarse, hoarse" (Fi. *karhea, karkea, raaka*), referring to the voice or to an unpolished surface or similar (sandpaper etc). In IE and UA almost all words of this type have plosives and tremulants in the root and often also an *r*-suffix. The root-vowel -A- shows the primary meaning "wide amplitude (of the jaws by mastication/vociferation)" and the secondary meanings "open resonance, intensity, expansion, cracking, separation, solution":

- 1056 KAR (Ka. garasu etc. "gravel, sand") cf. Sp. arena, Ar. raml, Ko. cakar, morä
- 1060 KAR (Ta. karati etc. "drum") cf., Ru. barabän, Tü. trampete
- 1061 KAR "rough, uneven, unpolished, harsh, coarse: teeth, notch, dent, thorn, millstone"
- 1064 KAR "scrape, paw, gnaw" (with -R for "tearing/gnawing/grinding asunder")
- 1085 KAR "sound, roar, groan, moan, weep, lament, cry, call, caw, crow, bellow, neigh"
- 1086 KAR "dissolve, digest, melt" (semantic chain "chew-crush-grind-dissolve"?)
- 1167 KAR "crack(le), rattle, gnash, gnaw, chew, saw, scribble, write, crisp"
- 1170 KAR "chew, eat, bite, husk" (probably identical with 1167) cf. 930 KAT (ss. variant?)
- 1172 KAR "laugh" (see B.3)
- 1227 KAR, KÄR "biting, pungent, hot, acrid, saltish, nagging, worrying, irritating, hoarse"
- 1233 KAR, KÄR "gnaw, bite, eat" (mastication-circle, cf. 1167, 1170, 1227)
- 1232 KAR, KÄR (Ka, kÄru "pincers, tongs" etc.) nomina agentis or instrumenti of 1233?

7. A final lateral or flap bears meanings similar to those of a final tremulant "duration, frequency", but has also more specific "lateral" meanings as e.g. "glide, slide, glitter, gulp, flow, slip, slippery, slime, phlegm, loose, leave (Fi. laskea, liukua, liidellä, livah-taa, höllä, luiskahtaa, liukas, näljä, lima, laahata)". The -R often shows meanings typical for laterals (L?) but sometimes tremulant function is possible or probable (e.g. 1147, 1251, 1252). The initial K- is that of "touch/percussion/collision" (rustle, rattle, rumble, clang, toll, bell) and "that of glottal-guttural substitutive stop" (throat, gullet, gurgle, gargle, quaff, cough, hawk, laugh). The -A- is that of "wide amplitude, wide open mouth, open light". The iterated form KALAKALA "rattle, din, toll, etc." can be compared with Ru. kólokol "bell", kolokólit' "din, toll".

- 1095 KAL "rustle, rumble, rattle, chatter, gargle, gurgle, laugh, clang, tinkle, din (toll?)"
- 1133 KAR "glitter" (gliding light) cf. Ru. blesk, blestét', Ar. la'la'a, Fi. valkea, väikkyä
- 1136 KAR "slip/slough off, slacken, loosen, wave, move, shake, tremble" (Fi. laskea, höllä)
- 1142 KAR "elapse, slip away/off, disappear, leave, live, pass, spend (time), eject"

1147 KĀṚ (Ta. kaṛu, kaṛuku "griffin, vulture, eagle") of. 1197 KĀ-KA
"caw, crow"

1151 KĀṚ (Ta. kaṛuttu "neck, throat") Fi. kaula, kurkku, Li. kāklas, Ru.
gōrlo, La. guttur, En. gullet

1236 KĀL, KĀR, KĀṚ "vomit, retch, disgorge, eject, cough, hawk, spit"
(cf. 909 KAK, 1142 KĀṚ)

1237 KĀL "flow, leak, leap forth, ooze out, dribble, drool" (Fi. valua,
kuolata)

1239 KĀL "irrigation channel" (=1237) cf. Ge. (hervor)quellen-Quelle

1251 KĀṚ "pungent, stifling, acrid, hot, biting" (cf. 1227 KAR with same
meaning)

1252 KĀṚ "seed, stone, nut, kernel, pebble, gravel, corn, grain"
(cf. 1056 KAR id.)

8. A final voiced labial fricative (-V) is in Dravidian firmly connected with the labial stops (B,P) and is above all an "orifice-symbol", often painting the functions of the "lip-mouth-region". The initial K- is that of "glottal substitution, high-energy-action", the intermediate -A- is that of "wide open mouth, intensity" and the final -V paints the idea "shut the mouth-lip-region again". This root KAV is a rhyme-root of 4328 BAV, VAV "bark" (Fi. haukkua). In iterated form these roots have the meaning "repeated shifting between closed and wide open mouth" (BAW-WAW-words):

1127 KAV "chide, scold, slander, scandal, din, roar, angry language, loud laughter"

C. AN INITIAL PALATAL (C-, J-) is represented in roots with principally "vocal, vulgar, familiar, negative" meanings (cf. En. "chat, chatter, cheat, cheer, champ, chew, chuckle, giggle, jeer, jest, joke, munch" with mainly expressive palatal-affricative components). The palatal C also paints vacuum-functions like "champ, click, kiss, smack, suck(1e), stick in clay, walk in mud, splash". Also "flat touch, close contact" is often connected with vacuum-phenomena. The root-vowel -A- here stands for "wide open mouth/ jaws, open resonance, intensity" and in combination with stops also "open hand, flat palm, wide amplitude (and wide take off?) by clapping, slapping etc."

1. A final p l o s i v e (-K, -T, -P etc.) often doubled (KK, TT, TT, PP) stresses the sense of "touch, clap, slap, hit, beat". In this function the root-vowel (-A-) is generally short. Also the A of "expansion, explosion" (burst, crack open etc.) is represented.

1871 CAK "scoff, mock, jeer, quizz, deride, divert, make fun of" (glottal sphere)

1885 CAŃG "jump, bound, skip, caper, leap" (nasal + stop = springiness)
cf. Sw. skumpa, gunga

1892 CAṬ "with a jerk, quickly, suddenly, promptly" (Cf. Ko. tanpak, ttyspakk)

1893 CAṬ "fall, thud, snap, crack, crackle, smack, crash, break, shot" (sound-imitation)

1894 CAṬ, JAD "beat, pound, ram, crush, strike, hammer" (=1893)

1904 CAṬ(T) "flatness" (sound-symbolic variant of CAP "beat flat, flatten, flat")

1916 CAT "beat, break, bruise, blow, pound, crush, squash, hit, kick, strike, kill"

1924 CAP "flat, flatten, flatness" (resultative of 1928 CAP "slap with the palm...")

1925 CAP "slot, pour away slops, gush out sloppy water" (En. slop, slap, splash, Sl. čapati)

1926 CAP "sound, noise" (of slapping, slopping, clapping, smacking, sucking, chewing?)

1927 CAP "chew, champ, chomp, munch, masticate, smack, snap, suck, sip" (Sl. čamkati)

1928 CAP "clap, slap, flap, tap, pat" (with the open hand, with the flat hand palm)" cf. 1928b AP

1929 CAP "flat, insipid, tasteless, worthless, dull, empty"

1930 CAP "slack, flat, weak, lean, mean, emaciated, dull, soft, useless, bad" cf. 1924-29

1931 CAP (Ta. cappai...) "hip, haunch, shoulder blade" (= "flat bone"?)

1932 CAP (Ta. cappai...) "wooden spar, wedge, chip of wood, plank, rafter" (= flat objects)

2. A final l i q u i d o r f l a p (-L, -Ḷ, -Ṛ, -R, -Ṛ) basically symbolized "duration, movement, abundant outflow (of sounds, words, etc.)" In more specialized meanings: L for "flowing, gliding, laughing", R and Ṛ for "plurality, multitude, frequency, iteration" (e.g. foot-steps, run, rush, hurry, roll, drop, drip, drizzle, trickle, drum, tear into rags/

tatters, grin, grit, sand, pebble, trifle) and \bar{L} with meanings standing intermediate between laterals, tremulants and plosives. The sound-symbolic functions of liquids / flaps / plosives are often difficult to keep apart:

1943 CAR "quick, speedy, rapid, hurry" (-R of rapid steps) cf. Sk. car-, La. currere, En. run

1944 CAR (Ta. carakku...) "goods, articles, spices, cloths, drugs, movables"

1945 CAR "rough, rugged, coarse, gravel, granule, grit, sand, pebbles" (cf. 1056, 1061 KAR)

1946 CAR "rustle, glide, move" (Sk. sar-, srav- "run, flow") cf. 1095 KAL, 1237 KĀL

1949 CAR (Ta. Ma. aravu...) "serpent, snake" (nomen agentis of 1946)

1950 CAR "fall, tumble, stumble, roll, slide down" (cf. La. ruere, ruina, Sw. rasa, Fi. rapautua)

1951 CAR "tear, rend into pieces/rags/tatters" (cf. 3267 PAR, ss. variant)

1955 CAR "rustle, rizzle, ripple, purl" (smoother sound-symbolic variant of 1946 CAR)

1963 CAL "laugh, jest, fun, frolic" (= 1955 as "purling, rippling laughter"?)

1969 CAL(L) "sprinkle, spill, scatter, spread, shed, strew, throw out" (cf. 1955, 1925)

1987 CAL "babble, bubble, patter, prattle, prate, talk, splash (water, rain, talk)"

1991 CAL (Ta. caḷi...) "slime, mucus, phlegm, semen, sperma" (Fi. näljä, lima, Ar. balġam)

1993 CAL (Ta. caḷḷal...) "mud, slush" (= 1991) cf. Fi. lika, loka "mud, filth, dirt", En. clay

1998 CAR, JAR "jeer, rebuke, abuse, chide, scold" (= outflow of words from wide open mouth)

2030 CĀR "approach, reach, go near, come, arrive, occur, happen" (ss. variant of CAR)

2048 CĀR "fall down, slip off, slide, drizzle, flow, run, trickle, drop" (variant of 1950 CAR)

2052 CĀR "drum, proclaim, praise, preach, publish, call, speak aloud, explain, declare"

D. AN INITIAL CEREBRAL STOP (\bar{T} -, \bar{D} -) seems to occur mainly in sound-symbolic words. The predominating meaning is "touch, collision, percussion, beating, fluttering" which is still more emphasized if there is a stop also at the end of the root. The root-vowel -A- is that of "wide open

mouth, open resonance, intensity". A final nasal sonant (-N, -M, ...) symbolizes "long-lasting inner resonance, lingering note" after the touch (T-, D-) and the acoustic climax (-A-). Examples:

2398 ȚAK (Ta. Țakkiyam...) "flag, banner" (from the "beating/fluttering" of the flag?)

2399 ȚAK, DAG "cough" (La. tussire, Tü. öksürmek) cf. 909 KAK and 1236 KĀL

2400 ȚANK (Ma. Țankam...) "mace, cudgel, staff" (from the "thud, blow, beat") cf. 2459

2402 ȚAN, DAN "toll, sound of a gong/big bell/large clock/metal vessel etc" (= 2403)

2403 ȚANTAN, DANDAN "drumming" (En. tamtam, tomtom, tabor, tambour) = 2402

2404 ȚAP "crack, explode, burst, shoot, gun, drum, sound of hollow box when struck"

2405 ȚAP "wooden cattle-bell, cow-bell" (=2404?) cf. Sw. klocka-kläpp, En. clock-clapper

2406 TAM, DAM (usually iterated) "drum(ming), tamtam" (cf. 2403 TAN and 1941 CAM)

2408 ȚAT "lick, kiss, taste" (sound-imitating like 2698 TUT "lip, mouth"?)

E. AN INITIAL DENTAL STOP (T-, D-) has a sharper focusation than other stops. Therefore it shows a tendency towards more focused percussive meanings like "touch, hit, fit, sting, stir, tickle, bite, prickle" with a sharp or pointed instrument like "awl, tip, stick, point, corner, horn, drip, sharp light, staring eye". This function is quite clear if the initial dental is followed by i-vocalism and other phonemes of the dental circle. A-vocalism, however, can paint (the word "paint" here used in the sense of the term "Lautmalerei") ideas like "flat, large, vast, broad, straddle, gape, expand, explode, scatter, flame etc." being more or less completely opposite to the functions of the dental circle (i,n,d,t,s). In roots beginning with this "contradictory TA-, DA-" the initial dental therefore to some extent withdraws its function of "focusation" and retires to the general plosive function of "touch, collision, percussion" which is typical for all stops.

1. A final p o s t p a l a t a l s t o p (-K, -G) strengthens the percussive function of the initial dental stop in the sense of "beat, bite, blow, bruise, crush, crack, explode, knock, hit, fit, catch, take, stop, check" (cf. A1, B3, C1). The root-vowel A is that of Ad, Af-h, Aj, Ak, Am. A final suffix -L is similar to that of -R but the object remains whole (2434).

2425 TAK "flat; plate, blade, leaf, foil, sheet" (cf. 1924 CAP "flat, flatten")

2426 TAK/TIK- "bedbug" (flat/stinging?) Lp. tikke, Fi. täi (SKES 1474) Orre 1979.

2427 TAK "boil, bubble; dangle, dance; agile, quick" (A of expansion, wide amplitude)

2428 TAK, DAG "flaming, blazing, dazzling light, day" (A = Ad, Aj, Am) cf. IE Walde & Pokorný II 849.

2429 TAK-R "break, bruise, fract, crush, strike, scatter, shatter, crack open, explode"

2430 TAK-R "ram" (Tü. teke, Fi. pässi puskea, Sw. bock butta, Ru. barán borótsja) = 2429

2431 TAK-R "tin, tin foil, iron plate, metal sheet" (= hammered, flattened object?) = 2429

2432 TAK-R "wax-flower dogbane" (2429 "knocker"?, 2429 "shiner"?, 2430 "ram-flower"?)

2433 TAK-R "fetid cassia" (like 2432 a nomen agentis of 2428, 2429 or 2430?)

2434 TAK-L "touch, knock, fuck, hit, catch, chase, fix, meet" (cf. 2429 TAK-R) En. take

2435 TAK "fit, suit; proper, worthy, suitable, good" (to 2434: touch-hit-fit-proper)

2436 TAK "stop, check, catch, bind, fix, fasten, yoke, seize" (=2434, 2435). En. take

2. A final c e r e b r a l s t o p (-T, -D) strengthens the percussive functions of the initial stop in the sense of "beat, knock, pound, cut, kill, thud, fall", also documented in iterative functions like "tremble, quiver, shiver, palpitate, jerk, hurry, flurry, grope, rub" (i.e. repeated movements of limbs, foot-steps, hands, finger-tips etc). These ideas can also be expressed by iterated stop or by a tremulant (Fi. väristä, täristä, Sw. skaka, IE. dreb-, dhreugh,ter-, trem-, tres-, reir-) or by both (as in Du. titteren "tremble"). The root-vowel is the -A- of "expansion, intensity, wide amplitude". The meanings "swell, blotch, thick, big..." can be semantic

resultatives of the sememes "beat, blow, bruise" or be declared by the "A expansivum".

2449 TAṬ "large, broad, stout, thick, full, fat, swollen, plump, rude, clumsy, dense"

2450 TAṬ "tremble, quiver, shiver, palpitate" (cf. IE: Walde & Pokorny, III, 251)

2451 TAṬ, DAḌ "jerking, hurrying, flurrying, suddenly" (quick iterated foot-steps)

2452 TAṬ, DAḌ "blow, thud, fall, knock, beat, pound" (mostly iterated TAṬaTAṬa)

2454 TAṬ "stroke, grope, feel, seek, search, explore, rub" (Ge. tasten, Sw. treva, Fi. tuntea)

2456 TAṬ (Ta. taṭa "big pot"...) probably belongs to the swell-roots 2449, 2457

2457 TAṬ "swell, blotch, rash, mark, measles" (IE. tu-, Fi., paisua, tulvia, turvota)

2458 TAṬ "blow, cut, kill, hew" (2449, 2457 "swell from a blow/bruise"?)

2459 TAṬ (Ta. taṭi) "cudgel, bludgeon, club, stick, cane, rod" (to TAṬ "blow"?) cf. 2400

2460 TAṬ "stop, obstruct, hinder, impede, resist, forbid, inhibit" (cf. 2436 TAK)

F. AN INITIAL DENTAL NASAL (N-) is often the sign of "closed/inner/nasal resonance", sometimes with slightly negative meanings, perhaps just because of the "closed, hindered, hampered resonance". In Dravidian (and other languages avoiding initial L-) the dental nasal N- seems to replace the sound-symbolic L- in many typically lateral-lubrical meanings as e.g. "lingua, lick, like, love, long, glide, slip" and similar. The semantic opposition between N- (closed oral cavity) and -A- (wide open oral cavity) gives a sense of "shifting over from a closed/dense/centripetal state to an open/centrifugal state" (crack open, bursting out of buds, blossoms, laughter, fire) or iterated change "close-open-close-open..." (as by "babbling, bubbling, chewing, munching". The end of the root has plosives (-K, -C, -Ṭ, -T, -P) to express "touch, press, glottality", -Ṙ for "gliding, slipping" and -R for "partition, separation, cracking, scattering".

2944 NAK "open up, blossom, laugh, smile, sneer, jeer, deride, giggle, titter, jest, joke"

2945 NAK "lick" (Lp. njoallot, Fi. nuolla, Tü. yalamak, Ar. laḥisa, laḥwasa, IE. lab-, ligh-)

2949 NAC "bruise, crumple, crush, mash, squash, press, squeeze, demolish"
(Fi. nakertaa)

2951 NAC "desire, long for, hanker, like, love" (cf. 2945 NAK and En. lick,
like, love)

2952 NAC "tease, vex, harass, trouble, worry, fret, annoy" (cf. 2944 NAK
"laugh at, sneer")

2954 NAC "babble, prate, mumble, mutter, utter indistinctly"

2960 NAT "shake, shiver, quiver, quake, tremble, stutter, totter, falter,
fear, cold"

2967 NAT "stammer, stutter"(sound-symbolic variant of 2954 NAC and 2960
NAT)

2996 NAR "slip away, skulk away, shuffle, evade" (with lateral function of
the -R)

2999 NAR (it. NARaNARa) "grind, gnash, snap, crack, crackle, crunch,
crash, chew"

3009 NAK (Ta. Ma. nā, nākku etc.) "tongue" (with N- for "licking apex"?)
cf. 2945 NAK

3016 NANḌ "open the eyes (newborn animals), stare" (and close the eyes
again?)

G. AN INITIAL LABIAL STOP (P-, B-) shows the primary sound-symbolic function of signifying the "lip-region" and its functions (close/open/smack the lips,? clapper the beak) as also transferred "orifice-functions" (leak or drop from an opening etc.). Primary is also the idea of "closed lips with swelling cheeks (as being part of the elastic lip-region in a wide sense), thus giving secondary quantitative meanings as "grow, increase, expand, swell; big, stout, fat, thick", mostly in combination with u-/o-/a- vocalism of the root (cf. Fi. pullistaa, paisua "swell", paksu "stout"). Here belong also nominal sememes as "bag, bed, bud, ball, belly, bull, boy, buttock, pocket, pouch, purse".

The combination PA-, BA- signifies the primary sound-symbolic sequence "closed lips (P-, B-) + swelling cheeks (P- and especially B-) + open the lips, crack open, burst, bang, explode", thus painting the sudden/abrupt transition from "dense/closed state" to "centrifugal, wide open state" (in the sense of "part, separate, straddle" and "blossom open, dawn, day, flash, flame up, lustre, gloss, beauty".

A root-final stop (-K, -C, -Ṭ, -T, -P etc) after the symbol of "expansion-explosion" (BA-, PA-) paints the sound-symbolic sequence "from closed state

(B-, P-) open the mouth or orifice widely (-A-) and then shut it again (-K, -C, T, -T, -P)", i.e. frequent shifting between open/closed state (e.g. in articulation etc). Here belong especially the vocal sememes "babble, bubble, gabble, jabber, bark, chatter, chant, warble, say, talk" (Fi. pakista, pakinoida, Fr. parler, bavarder, Sp. hablar, Sw. tala, prata, snacka, tjatträ) and percussive sememes as "beat, palpitate, catch, take, grab, grasp, touch, fall, jump" respectively "fall/beat/hammer flat, flatten, flutter, fly" with adherent nominal sememes like "hand-palm, instep, foil, plate, plank, rafter, cake, anvil, butterfly, bat". Further: "clattering of foot-steps, run, hurry".

The voiced labial stop (B) in Dravidian frequently alternates with the labial voiced fricatives (V,W). The bilabial W seems to represent an older stage than the labiodental V⁸. The sound-symbolic material not only supports this idea but even points in the direction of an original voiced stop (B). In fact very few Dravidian roots beginning with V- show sound-symbolic functions typical for fricatives. On the contrary there are many roots with initial V-/B- which possess sound-symbolic qualities characteristic for initial plosives (P-/B-). So for example 4255-56, 4262, 4264, 4269, 4272, 4276, 4279, 4288, 4340, 4342, 4345, 4370-71, 4373, 4385, 4400. Also the frequent alternation of this V-/B- with other stops points at the existence of an original stop (B). This will be examined more closely in the prepared research on the labial circle. Very rare in Dravidian is the initial combination VU-/BU-, instead of which is usually found PU- or only U-.

The sound-symbolic difference between P- and V-/B- is not very great. The former (P-) is frequent in the sense of "crack open, explode" whereas the latter (V-/B-) is a common "swell-symbol". This small difference is maybe not enough to prove the existence of two series of stops in Dravidian. It also remains to be proved whether this hypothetical duality is based upon the opposition "voiced/voiceless" as in IE, or on the opposition "voiceless/intensive" or "voiceless/glottal" as in UA.

1. Roots with final vowel ("duration"): 3348 PĀ "sing, chant, warble, hum"
2. A final p o s t p a l a t i a l s t o p (-K, -G) is documented in many roots of "high-energy-actions", most of which can be arranged in the semantic chain "expand-bend-bow-break-burst-burst out-crack open-opening-orifice-pour out-gush out-cry out-leak-bleed-blow out-blaze up-flame up-dazzle-dawn-day" (cf. Fi. palaa "burn"- päivä "day", Ba. degti "burn", dagis "day, summer", Sk. dah- "burn" -dinam "day", En. dawn -day).

- 3149 PAK "crackle, blaze up, flame up" (cf. Ja. pāchi-pachi "cracking", Vaccari 249)
- 3150 PAK-R "shift, move, change (suddenly, jerk?), exchange, revenge, substitute, copy"
- 3151 PAK (Ta. pakal) "dawn, day" (= 3149 PAK) cf. Ja. akaā-aka "brightly" (Vaccari 233)
- 3154 PAK "expand, crack open, burst, split, break, fracture, part, separate, share" (Fi. paukkua)
- 3157 PAK (K), PAKaPAKa "burst out in laughter" (Fi. pakahtua naurusta)
- 3160 PAŅG "part, separate, apart, astride, straddle" (A = wide angle of jaws/legs) = 4255
- 3249 BAG, BAY "wide open (door etc), open, clear, evident, obvious, conspicuous"
- 4255 BAK, VAK "separate, divide, cut, split, part, straddle, astride, open the legs" (= 3160)
- 4256 BAK, VAK "bark, talk, rave, chatter" (Fi. pakinoida, pakista, IE. vok-, bhā-, Sk. vac-, bhāṣ-)
- 4258 BAKK, VAKK (Ta. vakkā...) "white stork" (from the "gaping/clattering of the beak"?)
- 4259 BAK, VAKK "burn, singe, roast" (cf. 3149 PAK "blaze up, burn")
- 4260 BĀNK (Ma. Ka. Te. vañki) "sword, dagger, knife" (nomen instrumenti of 3160, 4255?)
- 4262 BĀNK, VĀNK "orifice, opening, hole, hollow, cave, cavern" (B/V = orifice-symbol)
- 4368 BĀK, VĀK "become beautiful, beauty" (blossom up?) = 3149 PAK "flame up", 3151 PAK "day"
- 4370 BĀK, VĀK "pour out, bubble out, leak, ooze out, bleed" (B/V = orifice-function)
- 4371 BĀ(Ñ)K, VĀ(Ñ)K "bend, bow, stoop, curve... (cf. 3154, 3160, 4255, and IE. bheug-)
3. A final palatal stop (-Ķ, -Ĝ) or affricate (-C, -J), later fricative (-S, -Y) is documented in "vacuum-functions" (3162 PAC, cf. Ja. pacha-pacha "splashing" Vaccari 249) and in "percussive functions" (3362, 4264). The initial B- shows orifice-function (4385, 4373 etc) which is typical for the whole labial circle (U, B, P, W, V, F, M). So for example in the sense of "lip" (D. bāci, vāji, Lp. paksim, bawsa, Ko. ipsul, Fi. huuli, Ar. šafta, Ru. gubā, IE. bu-, buk-, bus-, lab-).

3162 PAC "clack, click, lick, smack, (s)plash, chatter, walk in mud, tread in clay"

3165 PA(Ñ)C "hungry, hunger, scarcity, famine, dearth, poverty" (cf.

3167 "desire")

3166 PAC "sticky, glutinous, viscous, viscid, adhesive, glue, gum" (vacuum-function)

3167 PAC "devotion, love, affection, desire, wish, eagerness" (=3165,3166);

3338 PĀC (Kt. pācan, ...) "beauty, beautiful" (ss. variant of 3149 PAK, 4368 BĀK)

3340 PĀC "excrement, diarrhoea" (cf. 4276 BĀD, BĀR "defecate with diarrhoea")

3362 PĀC, PĀJ, PĀY "jump, leap, pounce on, bound, butt, plunge, gush out" (cf. 4264)

4264 BAC "drip, drop, trickle, ooze, flow, gush, pour out water" (orifice + collision)

4373 BĀC (Ga. vāsi "lip", Koṇḍa: vey "mouth") cf. 3485 PUK "mouth, cheek" and 4385 BĀJ

4375 BĀC "adze, scrape, cut" (B-C "touch, contact", -A- "wide amplitude, intensity"?)

4385 BĀJ, BĀY "mouth, beak, orifice, lip, rim, edge, hole, opening" (B = orifice function)

4. A final c e r e b r a l s t o p (-Ṭ, -Ḍ) is documented in roots with percussive meanings "beat/fall flat, flatten, flatness, flat objects; shut, bang" and plural-iterative meanings "repeated foot-steps, run, hurry, spread, scatter, drop, drip, trickle" (cf. in the sense of "drop, drip": Fi. tippua, Ar. qatara, Sl. kápati, Ja. bara-bara, para-para, Vaccari 233,249). The plural-iterative functions are strengthened by the suffix -R.

3175 PAṬ (Ta. paṭaku) "raft, float, boat, ship" (flat-bottomed? cf. 3190-91, 1928-30, 2425 etc.)

3178 PAṬ "crack open, burst, break, blow, bang, explode, flap, fall, roll, rattle, gnash"

3179 PAṬ, BĀḌ (it) "hasty speech, hastiness, hurry, precipitancy" (cf. 4276 BĀD, BĀR)

3180 PAṬ (Ta. paṭam) "cobra's hood" (because of the flat form?) cf. 3175, 3181, 3207

3181 PAṬ (Ta. Ma. paṭam) "instep, palm, flat part of hand, foot etc." (cf. 3180, 3207)

- 3182 PAṬ (-R) "run, creep, climb, pervade, expand, spread, diffuse; bush, thicket, mass"
- 3183 PAṬ (Ta. paṭal "shutter, hurdle", Ma. paṭal "harrow", Kd. paḍi "door")
- 3188 PAṬ (Ta. Ma. paṭi) "step, stair, threshold, bench, sill" (flat objects? or sound-imit.?)
- 3190 PAṬ "fall/fell flat, prostrate, pave, cast, throw, lay/lie down, sleep, die, piss, fuck"
- 3191 PAṬ "touch, strike, dash, hit, fit, catch, endure, suffer, make, be made, happen, occur"
- 3192 PAṬ (Ta. paṭu) "tank, pond, pool, pit, field, swamp, hole, hollow" (flat surface?)
- 3193 PAṬ (Ta. paḍu) "refuge, cave, hole, crevice, hiding place for wild animals" (= 3192?)
- 3196 PAṬṬ (Ta. paṭṭaṭai) "anvil, smithy, forge" (cf. 3191 PAṬ "strike")
- 3207 PAṬ "flat"
- 3197 PAṬṬ (Ta. paṭṭaṭai) "necklace" (hammered, smithen, flat object?) cf. 3191, 3196, 3207
- 3198 PAṬṬ (Ta. paṭṭa-ppakai "dawn, day, daylight") cf. 3178 PAṬ, 3149, 3151 PAK
- 3204 PAṬṬ (Ta. paṭṭai "timber, rafter", Te. paṭṭika "plank, board, bar") flat object?
- 3205 PAṬṬ (Ta. paṭṭai "bark of tree") flat object?
- 3207 PĀṬ (Ta. paṭṭai "flatness", paṭṭam "level, surface, flat piece", Kd. paṭṭi "yard")
- 3346 PĀṬ (Ma. pāṭam "range, rice-field", Kt. pāṛm "level ground") flat surface
- 4269 VAṬ "drip, drop, trickle, drain, strain, filter, pour, flow, leak, percolate, ebb, shed tears"
- 4270 VAṬ, VAR, BAḌ, "dry up, decrease, diminish, fade, wither, emaciate" (<4269?) cf. 4286
- 4271 VAṬ "become beautiful, beauty, lustre, brightness" (cf. 3198, 3151, 3338, 4368)
- 4272 VAṬ, BAḌ "beat, blow, pound, bang, strike; cudgel, club, stick, cane" (cf. 2400, 2459)
- 4274 VAḌ (Te. vaḍi etc.) "quick, rapid, speedy, brisk, brave" (cf. 3179 PAṬ, 2451 TAT)
- 4275 VAṬ (Ta. vaṭu) "wart, mole scar, weal, injury, ulcer, wound" (resultative of 4272?)
- 4276 BAḌ, BAR, VAT "bubble, babble, gabble, jabber, prattle, drum, diarrhoea" (cf. 3340 PAK)

4278 BĀṬ, VĀṬ (Ka. baṭṭi) "belly, stomach, rupture, hernia" (B expansivum?)
cf. 3178 PAṬ

4279 BĀṬ, VĀṬṬ (Ta. vattuvam) "pouch, purse, bag, pocket" (B expansivum?)

4377 VĀṬ, BĀḌ "dry up, diminish, decrease, decay, wither, fade, weaken"
(4269, 4270, 4286f)

5. A final d e n t a l s t o p (-T, -D) is met with in a couple of roots with mainly vocal-orificial-percussive functions (iterated footsteps, fluttering of tongue/lips).

3230 PAT (Ta. patalai) "large, broad-mouthed clay pot" (P = orifice, A = wide, large?)

3231 PAT "hurry, flurry, flutter, quiver, tremble, thrōb, boil, bubble, babble, prattle" (3179)

4286 BAD, VAT "dry, fade, wither" (variant of 4269, 4270 VAṬ "drip-leak-dry up"?)

4287 VAD "leave, abandon, disappear, loosen, slacken" (leak-drip-drop things?) cf. 4286

4288 VAT, BAD "prattle, prate, talk, babble, jabber, chatter, cry" (cf. 3179 PAT)

6. A final l a b i a l (-B, -P, -V, -W) is documented in the semantic sequence "from closed state (B-, P-, V-) swing up the jaws/wings/hammers etc. widely (-A-) and then shut/clap them again (-B, -P, -V) e.g. in "beat flat, flatten, flutter, bat, butterfly, moth, bird".

3243 PAPP (Ta. pappāṭam) "flat cake, thin wafer" (beat flat?) cf. 1924, 1928-30, 2425, 2431

3360 PAPP (Ta. pāppāṭti) "butterfly, moth" (cf. La. papilio, Fi. perhonen, Ko. napi) cf. 4400

4328 BAV, VAV "bark" (dog, jackal) cf. 1127 KAV "bark" (Fi. haukkua "bark")
baw-waw words

4400 PĀP (Ta. Ma. vāval, Ka. bāval, Ku. bāpla, Kḍ. pāpakki "butterfly"
pakki "bird") cf. 3311, 3360

7. A final l a t e r a l o r f l a p (-L?, -Ḷ, -Ṛ, -Ṛ̣) often shows frequentative functions (glitter, tremble, bubble, slander), stressed by root-iteration; the -Ḷ shows also plosive functions and the -Ṛ mainly lateral functions "mucus, phlegm, slime, glue, slide, slip(pery), loose, lapse". The initial stop (B-, P-) shows mainly "lip-mouth-orifice functions" (bubble, babble, blame, praise, utter), stressed by the -A- of "intensity, wide open

mouth" and "expansive functions" (grow, great, burst, crack), stressed by the -A- of "expansion, explosion, openness, open light"

3297 PAR, PAR, PAL "blame, rebuke, slander, scorn, talk, gossip, abuse, censure" (= 3298?)

3298 PAR, PAR "praise, worship, adore, bless, tell, say" (= 3297 as "intensive talk"?)

3203 PAL (iterated PALaPALa) "glitter, gleam, flash, shine"

3304 PAL (it. PALaPALa) "burst, break, pop, crack, crash, clang" (variant of 3178 PAT)

4276 BAR, BAD, VAT (it) "babble, gabber, jabber, prattle, chatter, drum, diarrhoea" (3340)

4330 BAR, VAR, BAL, VAD "move, proceed, go, custom, use; utter, grudge, quarrel"

4333 B/VAR "besmear, rub in, scrape, wipe, efface, shave, plaster, polish, lime"

4334 VAR "(over)flow, let flow, shed", 4335 VAR "way, path, road, method, custom, use" (4330)

4336 B/VAR "slip, slide, slippery, loss, lapse, fault, failure, error, mistake"

4337 B/VAR "slime, mucus, oil, flat, grease, glue, ghee, butter", 4338 "pulp", 4339 "eggplant"

4340 B/VAL(-R) "abound, grow, increase, great, blossom, large, stout, thick" (cf. 4278-79)

4342 B/VAL, VAR, VAD "tremble, quake, shiver, quiver, shudder, shake" (cf. 3231, 3179)

4345 B/VAL (often it.) "babble, hubbub, talk, boast, noise" (cf. 4276, 4288)

8. A final t r e m u l a n t (-R, -R) is the symbol of "plurality, multitude, variety, frequency, iteration". Here belong verba dicendi in the sense of "intensive outflow of words from wide open mouth, babble, chatter, gabber, jabber, prattle, praise, pray, talk" (with mainly the same root-components B/P and R and A as in Dravidian), verba movendi in the sense of "rapid footsteps, run, rush, trot, hurry" (Ar. farra, haraba, Sk. car-, La. currere) and verba faciendi in the sense of "break, grind, tear into pieces, grope, spread, scribble" with adherent nouns like "gravel, sand, corn, seed, kernel, stone, pebble, bean, almond, pea".

Interesting is the semantic chain "drip-leak-lean-shrink-wrinkle" (cf. Ge. tröpfeln-trocknen-dürr-schrumpfen-runzeln).

- 3255 PAR "expand, expanse, extend, disperse, scatter, spread; flatten, multiply, creep"
- 3257 PAR "praise, extol, adore, worship, pray, bless" (cf. 3298 PAR, 3318 PAR)
- 3262 PAR "search, grope, grasp, take, seize" (R = groping movements?)
cf. 2454 TAṬ
- 3265 PAR "corn, grain, grit, gravel, sand, seed, pebble, stone" (cf. 1056 KAR, 1945 CAR)
- 3267 PAR "part, separate, cut, break, tear, rend, tatter, split, cleave, crack" (cf. 1951)
- 3267 PAR "run, gallop, move, flow, stream, ride; horse" (cf. 999, 405, 1943, 3182, 3179)
- 3272 PAR "grind (flour etc.), pound" (cf. 191 AR, 1167 KAR, 2999 NAR, 3089 NÜR)
- 3277 PAR "become large, bulky, plump, swell; pimple, pustule, boil" (cf. 3255 PAR)
- 3278 PAR "coarse, rough, rude, harsh, brutal, cruel" (cf. 1061 KAR, 1945 CAR)
- 3279 PAR "eat, drink, nibble" (P = orifice, cf. La. bibere, Sk. pā-, R = into pieces?)
- 3282 PAR (Ta. paruppu) "kernel, bean, pea, almond" (cf. 1056 KAR, 1945 CAR, 3265 PAR)
- 3286 PAR (Te. prālu) "husked rice" (= 3282)
- 3311 PAR "fly, flutter, flee, hover, flurry, hurry, run, rush, go, disappear" (cf. 3268 PAR)
- 3312 PAR "shaggy/bushy (hair), rough, harsh, curly, tangled (locks)
- 3313 PAR "scratch, scrape, claw" (R = rough touch, breaking of fibres) = 3317
- 3317 PAR "rend, tear, break, rag, scratch, cut, crop, pluck, rob, pull, uproot, pick"
- 3318 PAR "chat, chatter, prattle, say, speak, talk, utter" (intensive of 3257 PAR?, Fi. jaaritella)
- 3319 PAR "drumming" (P = beat, -A- = intensity, R = iteration) cf. 1060 KAR, 2052 CĀR
- 3320 PARR, PATṬ "grasp, seize, catch, touch, hold, fix, stick to, climb" (cf. 3262 PAR)
- 4300 PAR, VAR (Ta. varaku, Ka. baraga "millet") cf. 3286 PAR "rice", 3282 "kernel"
- 4302 VAR "scrape, rake, harrow" (Fi. harava, Sw. räfsa, rafsa, kratta, gräva)
- 4304 B/VAR "write, scribble, scratch, stripe, streak, draw, row, furrow" (cf. 1167, 4303)

4311 B/VAR "come, approach, arrive, happen, occur" (cf. 2030 CĀR, 3268 PAR)

4355 B/VAR "dry up, shrink, shrivel, parch, grow lean, fade, wither; barren"

4356 B/VAR (Ta. varatti "dried cowdung cake") probably belongs to 4355

4367 B/VAR "scratch, paw, tear, scribble, lacerate" (variant of 3313, 3317 PAR)

4360 B/VAR "fry, grill, scorch, cook, boil" (cf. Sl. variti "cook,boil", Ko. pārpār- "seethe")

9. A final n a s a l (-Ñ, -Ñ̃, -Ñ̄, -N, -M) often adds a sense of "closed room, shut mouth, inner resonance". The combination with a following radical stop often bears the meaning "springiness, elasticity, jumping, bounding, bouncing"(see §II above).

3216 PAṆ (Ta. paṇai) "drum, tabour", 3245 PAMP (Ta. pampu) "drum, ta(m)bour" (broken iteration)

3220 PAṆṬ (Ta. paṇṭi, paṇṭam) "belly, paunch, stomach, body (trunk?), crop" (swell-circle)

4262 VAṆK (Ta. vaṅku) "orifice, hole, hollow cave", 4294 V/BAMP (Ka. bambu) "hollow bambu"

H. AN INITIAL LABIAL NASAL (M-) is the sign of "shut mouth, closed room, cave, darkness, hiding, lip-function, mammal function". In the combination MA- the M- of "closeness, darkness" seems to neutralize the -A- of "openness, brightness".

2365 ÑAR "hum, grumble, groan, growl, roar, moan, caw, low, sound, drum" (R = it., rough sound)

2379 NĀR "smell, scent, stink, stench, musk", 3819 MAṆ "smell, scent" (nose-functions)

3799 MAṬ (it. "gurgle", 3801 MAṬ "vessel", 3807 MAṬ "suck, drink, eat" (mammal function)

3851 MAM "breast, milk, food, 3947 MĀR "woman's breast, bosom" (mammal functions)

3918 MĀ "black, dark, obscure, cloud, night" (cf. 3778 MAC, 3792 MAÑC, 3849 MAP, 3850 MAM)

3946 MĀJ, MĀY "hide, conceal, die, 3897 MĀR "forget, cover, hide" (cf. 3898, 3855, 3961)

3823 MAṆ "bell, gong" (-Ñ = long, inner resonance)

Notes

- 1) Cf. Caldwell 1913³, p. 61 ff; Joki 1947; Aalto 1971; Zvelebil 1980, p. 22 (with bibliography); Pudas Marlow 1974.
- 2) Cf. Orre 1979 (with bibliography).
- 3) Cf. Zvelebil 1970, p. 23 ff. (with bibliography); Aalto 1974; Parpola 1975 (with bibliography).
- 4) Cf. Zvelebil 1970, pp. 35 ff., 184 ff.; 1977, p. 3.
- 5) Cf. Emeneau 1969, pp. 275 ff.
- 6) Cf. Emeneau 1969, pp. 275, 279.
- 7) Emeneau 1969, p. 275.
- 8) Cf. Ramaswami Aiyar 1931, p. 99; Zvelebil 1970, p. 157.

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