

INTRODUCTION TO THE SĀMAVEDIC NOTATIONS

The Jaiminīya Syllable Notation

The sāmavedic notations (the summary here based upon descriptions in SC 29-152, NVL 309-16, LSJS 18-20, and Part III of VRV) are essentially systems of symbols designating hand positions (mudrās), indispensable elements of any recital. The mudrās evoke svaras, musical phrases and motives typical of a particular chanting style.

The J syllable notation consists of 16 signs representing single svaras, 16 signs showing double or compound svaras, and 2 signs signifying absence of svara. The traditional list of J symbols, as found in Sabhāpati's Dhāraṇalakṣaṇa and in the Sāmālakṣaṇa, makes use of an arrangement by phonetic category (voiceless non-aspirates, voiced non-aspirates, voiced aspirates, voiceless aspirates; these followed by nasals, semivowels, conjuncts, h, l, and s). The major defect of this method is its mixing of compound svaras with single svaras. Much more logical is the system adopted at Koṭuntirappuḷḷi village (Kēraḷa), where the signs for single svaras, mostly in alphabetic order, are given first, followed by signs for compound svaras, also (with some exceptions) in alphabetic order. The two symbols denoting absence of svara conclude the list. The svara names are those

used by Tamil chanters (see SC 142-47, LSJS 19); this terminology is not followed by all Jaiminiyas.

Single Svaras

1. k (avaroha)
2. kh (anvaṅgulya, anvaṅgulimardana)
3. c (udgama)
4. t (yāna)
5. n (ṇa-svara, anāmikodgama)
6. t (āvartta)
7. th (uttāna, kevalottāna)
8. p (kṣepaṇa)
9. ph (ph-svara, madhyamāṅgulīyāvaroha)
10. bh (mardana)
11. y (marśana)
12. s (tarjanī-(abhi)marśana)
13. pl (pla-svara, anāmikāvaroha)
14. ṅ (ṅa-svara, kaniṣṭhikodgama)
15. tr (tra-svara, kaniṣṭhikā-(abhi)marśana)
16. kru (kruṣṭa)

Compound Svaras

17. g (avarohakṣepaṇa, k-p)
18. gh (yānamarśana, t-y)
19. ch (udgamottāna, uccair upakramyottāna, c-th)
20. j (avarohamarśana, k-y)
21. jh (āvarttakṣepaṇa, t-p)
22. ṭh (avarohottāna, nīcair upakramyottāna, k-th)

23. ḍ (udgamakṣepāna, c-p)
 24. ḍh (āvarttamārśana, t-y)
 25. ḍ (udgamamārśana, c-y)
 26. ḍh (kṣepānamārśana, p-y)
 27. ḷ (avarohayāna, k-t)
 28. ṇ (yānānvaṅgulya, yātvānvaṅgulimardana, t-kh)
 29. v (avarohāvartta, k-t)
 30. h (udgamayāna, c-t)
 31. ḷ (udgamāvartta, c-t)
 32. b (yānakṣepāna, t-p)

Absence of Svara

33. ś (occurs after a svara symbol)
 34. ṣ (occurs before a svara symbol)

The Koṭuntirappuḷḷi paṇḍits do not make use of the symbol ṣ (kanisthāyās samudgatyānvaṅgulimardana), and indeed I have not encountered it anywhere in the manuscripts.

The number of textual syllables covered by a sign is shown by its combination with vowels, anusvāra, and visarga (a = 1, ā = 2, i = 3, ī = 4, u = 5, ū = 6, r = 7, ṛ = 8, e = 9, ai = 10, o = 11, au = 12, am = 13, aḥ = 14). For example, symbol pe, p combined with the ninth vowel, designates p on nine syllables of text (the syllable on which the sign is notated and the eight preceding syllables). Some manuscripts use the semivowel y to take the place of one vowel; hence kya is the same as kā, kyā the same as kī, kyi the same as kī, and so forth. The following fragment illustrates this principle:

tū pā śā
/ GĀYIRĀGIRĀ CĀ DĀKŚĀSĀYI /.

Symbol tū (t coupled with the sixth vowel) encompasses the six syllables gāyirāgirā cā; pā (p with the second vowel) covers the two syllables dāksā; śā (ś plus the second vowel) is the notation for syllables sāyi. The notational consonants may form ligatures with y to produce the identical notation

tyu pya śya
/ GĀYIRĀGIRĀ CĀ DĀKŚĀSĀ-YI /.

Ordinarily textual syllables carrying notational symbols bear the svaras primarily connected with the symbols. In the above extract, therefore, the principal musical phrases are sung on syllables cā and ksā.

As previously stated, the notational signs designate hand postures or movements, which produce musical phrases representative of certain chanting styles. These hand motions are reflected in the names given to svara symbols by Tamil brahmins (for complete descriptions of these movements, see SC 142-46). But of greater pertinence to this study are the hand positions utilized by Nampūtiri Jaiminīyas of Kēraḷa (see SC 220-33). They hold the hand at three vertical levels: high (upari), middle (madhyam), or low (adhah). Moreover, this right hand may appear in any of three horizontal positions: right (dakṣiṇa), middle, or left (vāma). The hand may be held in four ways in each position:

- (1) malartti: the palm of the hand faces either the chanter (upper level), upwards (middle level), or the onlooker (low level).

- (2) kamiltti: the back of the hand faces either the chanter (upper level), upwards (middle level), or the onlooker (low level).
- (3) upariṣṭha-piṭikka: at the high, middle, or low levels the palm of the hand faces the chanter's left.
- (4) maṭakki-piṭikka: the hand is held in a fist, which may assume any of the three preceding positions.

In addition to these, kanakku ("counting") is sometimes executed by bending forward each finger separately, starting with the little finger, when the hand is motionless.

Attempts will be made in Part II to connect series of these hand postures with certain notational symbols; but a complete exposition of these relationships must remain, for now, a desideratum.

The Kauthuma-Rānāyanīya Numeral Notation

This system is more complex than the one just described. That "svara" in its K-R usage is likewise not synonymous with "tone" has been shown in Chapter 2 of SC and in Part III of VRV. This conclusion is valid despite the association of the svaras, by the Nārada-Śikṣā and other treatises, with the tones of the secular scale (see SC 32). This is but a symbolic exercise, however, for the same textbook equates the svaras with colors, castes, animals, and gods (Nārada-Śikṣā 1.4.1-4; 1.5.3-4, 13-14). More apropos is its description of the mudrās (1.7.3-4), though this passage too is guilty of misrepresentation

by its use of the terminology of secular music.

The five basic K-R mudrās are specified by numerals 1-5, which correspond not to tones but to the five fingers of the right hand:

- 1: the thumb (aṅgustha)
- 2: the forefinger (tarjanī, pradeśinī)
- 3: the middle finger (madhyama)
- 4: the ring finger (anāmikā)
- 5: the little finger (kaniṣṭhikā)

Mudrā 1 is the first (prathama) finger, the thumb itself, which is held somewhat apart from the remaining fingers. Mudrās 2-5 are realized by having the thumb touch the middle sections of the second (dvitīya), third (tr̥tīya), fourth (caturtha), and fifth (pañcama) fingers, respectively. Mudrā 1, occasionally with the thumb held at slightly higher elevation, signifies also a sixth svara, krustā ("loud"), probably a later addition to the notation. It is shown by either 1 or 11. Numeral 6, known variously as atisvārya, atisvāra, anusvāra, or antya, is also of secondary importance and may have originally denoted nasalization (see NVR 67; SC 132-33; 135, note 3; 138), perhaps that connected with the sacred syllable om. This number represents the thumb touching the base of the little finger.

The numbers appear above the text (the primary or prakṛti position) or within the text (the secondary or vikṛti position). The same number is not notated twice in succession; hence the excerpt

4r 5r r 4 5 5
 / TVĀM TVAN NO AGNE MA / HO6BHĀIH /

has the same mudrās and musical structure as if the notation were

4r 4 5r 5 5r 4 5 55
 / TVĀM TVAN NO AGNE MA / HO6BHĀIH /.

Syllables that possess primary but not secondary numbers are allotted specific time units (mātrās) by the Mātrālakṣaṇa ("Description of Mātrā"), a relatively modern treatise which classifies these syllables as short (hrasva), long (dīrgha), or augmented/prolated (vr̥ddha/pluta). Short syllables have short vowels and are worth 1 mātrā. Long syllables have long vowels with the letter r (repha) placed above and contain 2 mātrās. Augmented syllables have long vowels that lack the r notation and are worth 3 mātrās. Syllables which have become diphthongized through the addition of gati (for instance, tā-(y)i) contain 3 mātrās for the two elements combined. According to these specifications, the following passage has the mātrā apportionment as indicated.

Notation: 5r r r 4 5
 Text : / EHY Ū SU BRAVAU HO NĀI TĀI /.
Mātrās : 2 2 1 1 2 3 3 3

The mudrās normally progress from one finger or finger position to the next lower position (11 to 1, 1 to 2, 2 to 3, 3 to 4, 4 to 5, 5 to 6). However, certain types of ascent (pratyutkrama) and disjunct movement (atikrama) are allowed. The permissible ascending patterns are 6 to 5, 5 to 4, 4 to 3, 3 to 2, 2 to 1, 5 to 3, 5 to 2, and 3 to 1. Disjunctive skips that are admissible include 11 to 2, 1 to 3, 3 to 5, 1 to 5,

5 to 3, 5 to 2, 3 to 1, and 5 to 1. These progressions are not restricted as to position, be it primary or secondary.

In SC, VRV, and MNUC I name the combination of a primary number followed, on the same syllable, by one or more secondary numbers a "sequence." I shall continue to use this term, with the caveat that the sāmavedic treatises have no general designation for this important feature of the chants. The names of particular sequences, however, are well-known. Unless otherwise indicated, they occur on augmented syllables.

- 1_2 : preṅkha or karṣana
 1_{23} : karṣana
 1_{234} : karṣana
 1_{2345} : karṣana
 $1r_2$: dīrgha-karṣana
 $2r_3$: dīrgha-karṣana
 1_2 : hrasva-karṣana (on a short vowel)
 2_3 : hrasva-karṣana (on a short vowel)
 S_3 or $1S_3$: namana
 1_{1111}
 2_{2345} : svāra
 2_{111}
 3_{345} : svāra
 3_{1111}
 2_{2345} : svāra
 5_6 : padānusvāra
 5_{656} : padānusvāra
 $1S_2$: vinata
 $1Sr_2$: vinata
 $1S_2$: vinata (on a short vowel)

- 2_3^{\wedge} : pranata
 $2r_3^{\wedge}$: pranata
 2_3^{\wedge} : pranata (on a short vowel)
 4_5 : utsvarita
 7: abhiḡita (2 followed by 1; not the same as
 2_1 ; mainly on a short vowel)

This is by no means a complete list, for most sequences are not named. Other common patterns include 1_2^{\wedge} , 2_1 , 4_3 , 3_5 , 3_{234} , and so on. Sequences that make use of special signs (the circumflex, for example) often call for special hand movements (see SC 80). In most cases, however, the traditional mudrās are employed: 3_{234} , for instance, requires the thumb to touch the third, second, third, and fourth fingers, in that order. The mātrā calculations for sequences given by the Mātrālakṣaṇa sometimes have little relevance to the oral traditions. Moreover, the time values of the numbers, whether they are above or within the line of text, vary from one sequence to the next. In spite of the fact that the musical interpretation of a particular mudrā varies according to context, with but few exceptions a specific sequence has fixed musical value in the K-R traditions.

Every sāmavedic chant is divided into sections, each of which should be sung in a single breath. The section (vacana, parvan), enclosed by vertical lines, is a self-contained notational and musical entity not affected by sections that precede and follow. The notation of a vacana depicts a series of mudrās which may be duplicated hundreds of times throughout the

repertoire. This repetition of musical material is essential, for the different mudrā combinations are limited to about three hundred. One sāman is differentiated from another by its unique grouping of selected phrases from this pool of three hundred "standard phrases." This "centonization" technique characterizes certain liturgical chants of other countries and regions, but the sāmavedic hymns are the world's oldest centonate chants.

An alternative method of showing the mudrās is the representation of each of the three hundred combinations by a particular syllable, which, in R grantha manuscripts, is placed after the first syllable of the text in each vacana. Lists of these syllables are arranged by varga (consonant category). The ka-varga (k, kh, g, gh, ṅ, l, v, kv) supplies consonants, semivowels, and conjuncts which are used to identify vacanas beginning with figure 1. The ca-varga (c, ch, j, jh, ñ, ś, s, ṣ, r, l) provides symbols to show vacanas beginning with number 2. Those starting with 3 use signs which are part of the ṭa-varga (ṭ, ṭh, d, y), while vacanas beginning with 4 and 5 use symbols drawn from the ta-varga (t, th, h) and pa-varga (p, ph), respectively. Each consonant can combine with ten vowels (a, ā, i, ī, u, ū, e, ai, o, au), anusvāra (am), and visarga (aḥ). The possible mudrā combinations, based upon the listing in D (Introduction, 29-35), with the variants of NVL 326-44 and SC 118, are given here. A syllable marked with an asterisk shows a mudrā sequence duplicated by another syllable. Some of these duplications involve au ho vā, a

stobha (non-textual insertion) that calls for special musical treatment.

Ka-Varga

<u>ka</u> : 1	<u>ga</u> : 132345
<u>kā</u> : 12	<u>gā</u> : 13 ¹¹¹¹ ₂₃₄₅
<u>ki</u> : 123	<u>gi</u> : 132345656
<u>kī</u> : 1234	<u>gī</u> : 13231
<u>ku</u> : 12345	<u>gu</u> : 132312
<u>ke</u> : 12345656	<u>gū</u> : 1323123
<u>kai</u> : 121	<u>ge</u> : 132312345
<u>ko</u> : 1231	<u>gai</u> : 151232
<u>kau</u> : 1321	<u>go</u> : 12121
<u>kam</u> : 12321	<u>gau</u> : 17231
<u>kaḥ</u> : 1232	<u>gam</u> : 1212312345
<u>kha</u> : 12343	<u>gaḥ</u> : 123231
<u>khā</u> : 123454	<u>gha</u> : 123123121
<u>khi</u> : 12352	<u>ghā</u> : 1231231212
<u>khī</u> : 13	<u>ghi</u> : 1212
<u>khu</u> : 132	<u>ghī</u> : 12123
<u>khū</u> : 1323	<u>ghu</u> : 121234
<u>khe</u> : 13232	<u>ghū</u> : 1212345
<u>khai</u> : 132323	<u>ghe</u> : 121234565
<u>kho</u> : 13234	<u>ghai</u> : 121232
<u>khau</u> : 132343	<u>gho</u> : 1212323
<u>kham</u> : 1323234	<u>ghau</u> : 12123234
<u>kaḥ</u> : 13232345	<u>gham</u> : 1212343 (NVL: 12343)

<u>gha</u> <u>h</u> : 12312	<u>vi</u> : 12323
<u>ṅa</u> : 123123	<u>vī</u> : 123234
<u>ṅā</u> : 1231234	<u>vu</u> : 1232343
<u>ṅi</u> : 12312345	* <u>vū</u> : 1232345
<u>ṅī</u> : 1232123	* <u>ve</u> : 1232345
<u>ṅu</u> : 123212345	(5 on <u>au ho vā</u>)
<u>ṅū</u> : 12123 ¹¹¹¹ ₂₃₄₅	<u>vai</u> : 1232345656
<u>ṅe</u> : 121212	<u>vo</u> : 1212 (NVL: 1213)
<u>ṅai</u> : 1212123	<u>vau</u> : 12132 (NVL: 1232)
<u>ṅo</u> : 1212123 ¹¹¹¹ ₂₃₄₅	<u>vam</u> : 121323
<u>ṅau</u> : 12121 ¹¹¹¹ ₂₃₄₅	<u>vah</u> : 1213 ¹¹¹¹ ₂₃₄₅
* <u>ṅam</u> : 1212121	<u>kva</u> : 1212132 (NVL: 121232)
* <u>ṅah</u> : 1212121	<u>kvā</u> : 12121323
<u>la</u> : 12121212	<u>kvi</u> : 121213 ¹¹¹¹ ₂₃₄₅
<u>lā</u> : 121212123	<u>kṽī</u> : 12121213 ¹¹¹¹ ₂₃₄₅
<u>li</u> : 1212121 ¹¹¹¹ ₂₃₄₅	<u>kvu</u> : 1212121212121213 ¹¹¹¹ ₂₃₄₅
<u>lī</u> : 121212121	<u>kvū</u> : 12343235
<u>lu</u> : 1212121212	<u>kve</u> : 1212313 ¹¹¹¹ ₂₃₄₅
<u>lū</u> : 12121212123 ¹¹¹¹ ₂₃₄₅	<u>kvai</u> : 121212121212123 ¹¹¹¹ ₂₃₄₅
<u>le</u> : 12121212121	
<u>lai</u> : 121212121212	<u>Ca-Varga</u>
<u>lo</u> : 1212121212123 ¹¹¹¹ ₂₃₄₅	<u>ca</u> : 2
<u>lau</u> : 12121212121212	<u>cā</u> : 23
<u>lam</u> : 1212121212121	<u>ci</u> : 234
<u>lah</u> : 12121212121212121 ¹¹¹¹ ₂₃₄₅	<u>cī</u> : 2345
<u>va</u> : 1212121212121212121	<u>cu</u> : 234565
<u>vā</u> : 12121212121212121212	<u>cū</u> : 2345656
	<u>ce</u> : 232

<u>cai</u> : 2343	<u>jau</u> : 212123 ¹¹¹¹ ₂₃₄₅
<u>co</u> : 212	(NVL: 2121232345)
<u>cau</u> : 2123	<u>jam</u> : 2121212
<u>cam</u> : 21234	<u>jah</u> : 21212123
<u>cah</u> : 212343	<u>jha</u> : 212121 ¹¹¹¹ ₂₃₄₅
* <u>cha</u> : 212345	<u>jhā</u> : 21212123 ¹¹¹¹ ₂₃₄₅
* <u>chā</u> : 212345	<u>jhi</u> : 212312
<u>chi</u> : 2123456	<u>jhī</u> : 2123123
<u>chī</u> : 212345656	<u>jhu</u> : 21231234
<u>chu</u> : 21212	<u>jhū</u> : 21231 ¹¹¹¹ ₂₃₄₅
<u>chū</u> : 212123	<u>jhe</u> : 23212
<u>che</u> : 217234	<u>jhai</u> : 232123
<u>chai</u> : 21212345	<u>jho</u> : 2321234 (NVL: 23212)
<u>cho</u> : 2312	<u>jhau</u> : 72
<u>chau</u> : 23123	<u>jham</u> : 723
<u>cham</u> : 231232	<u>jhah</u> : 7232
<u>chah</u> : 231234	<u>ña</u> : 723234
<u>ja</u> : 2312345	* <u>ñā</u> : 213 (SC: 72323)
<u>jā</u> : 21232	<u>ñi</u> : 7234
<u>ji</u> : 212323	<u>ñī</u> : 72343
<u>jī</u> : 2123234	<u>ñu</u> : 7232345
<u>ju</u> : 21232343	<u>ñū</u> : 7232345656
<u>jū</u> : 2123 ¹¹¹¹ ₂₃₄₅	<u>ñe</u> : 72123
<u>je</u> : 21232345	<u>ñai</u> : 7231
(5 on <u>au</u> <u>ho</u> <u>vā</u>)	* <u>ño</u> : 213
* <u>jai</u> : 2121232	<u>ñau</u> : 21213 (NVL: 2123)
<u>jo</u> : 2172323	<u>ñam</u> : 2132

<u>ñah</u> : 21313 (NVL: 2123)	<u>sa</u> : 21212123 ¹¹¹¹ ₂₃₄₅
<u>śa</u> : 213234	<u>sā</u> : 212121 ¹¹¹¹ ₂₃₄₅
<u>śā</u> : 2132343	<u>si</u> : 212121212
<u>śi</u> : 213 ¹¹¹¹ ₂₃₄₅	<u>sī</u> : 2121212123
<u>śī</u> : 2323	<u>su</u> : 21212121 ¹¹¹¹ ₂₃₄₅
<u>śu</u> : 23234	<u>sū</u> : 21212121212121212
<u>śū</u> : 232343	<u>se</u> : 2121212121212121212
* <u>śe</u> : 232345	<u>sai</u> : 212121212121212121212
* <u>śai</u> : 232345	<u>so</u> : 2313 ¹¹¹¹ ₂₃₄₅
(5 on <u>au</u> <u>ho</u> <u>vā</u>)	<u>sau</u> : 2121323
<u>śo</u> : 2323456	<u>sam</u> : 21213 ¹¹¹¹ ₂₃₄₅
<u>śau</u> : 232345656 (NVL: 232345)	<u>sah</u> : 2121213 ¹¹¹¹ ₂₃₄₅
* <u>śam</u> : 23232	<u>śca</u> : 212121213 ¹¹¹¹ ₂₃₄₅
* <u>śah</u> : 23232	<u>ścā</u> : 212121212121213 ¹¹¹¹ ₂₃₄₅
<u>śa</u> : 2323234	*[<u>ści</u>]: 2121212121212121
<u>śā</u> : 234323	(absent in D and
<u>śi</u> : 23432345	NVL; see SC)
<u>śī</u> : 23432345656	<u>ścī</u> : 212321
<u>śu</u> : 231212	<u>ścu</u> : 212343235
<u>śū</u> : 231723	<u>ścū</u> : 21234545
<u>śe</u> : 2317232	<u>śce</u> : 212345454545
<u>śai</u> : 2317234	(absent in NVL; see
<u>śo</u> : 2317 ¹¹¹¹ ₂₃₄₅	SC)
<u>śau</u> : 2121212	*[<u>ścai</u>]: 2121232 (absent in
<u>śam</u> : 21212123	D and NVL; see SC)
<u>śah</u> : 21212123234	<u>ra</u> : 21

rā: 231
ri: 2321
rī: 23231
ru: 23121
rū: 21231
re: 2123123121

*rai: 2121

*ro: 2121

rau: 212121

ram: 21212121

rah: 2121212121

la: 212121212121

(NVL: 21212121212)

*lā: 2121212121212121

(SC: 21212121212121)

li: 2121212321

lī: 21212121

Ta-Varga

ta: 3

tā: 345

tī: 34565

tī: 323

tu: 3234 (NVL: 323234)

tū: 32345

te: 32345

(5 on au ho vā)

tai: 323456

to: 32345656

tau: 32123

tam: 321234

tah: 321¹¹¹¹₂₃₄₅

tha: 323123

thā: 3231234

thi: 312345

thī: 34345

thu: 3454

thū: 34545

the: 3434545

thai: 3434345

tho: 323234

thau: 3232345

tham: 323232345

thah: 32343

*da: 3234323

dā: 32343235

dī: 3234345

dī: 3231232345

du: 31323

dū: 345345

de: 3434343

dai: 343434345

do: 3213232343

(NVL: 32132343)

dau: 34345345

ya: 32
yā: 321
yi: 3231
yī: 32312
yu: 3212
yū: 323432
 *[ye]: 3234323 (absent
 in D and NVL; see
 SC)

yai: 3234321
yo: 312
yau: 3132
yam: 3232
yah: 321323232
 (NVL: 32323232)

Ta-Varga

ta: 4
tā: 45
ti: 4565
tī: 454
tu: 4545
tū: 45456
te: 45454
tai: 454545
to: 4545454
tau: 45454545
tam: 454545454

tah: 4545454545
tha: 4345
thā: 434545
thi: 434345
thī: 43434545
thu: 43434345
thū: 432345
the: 435
thai: 452
ha: 43
hā: 4323
hi: 43234

Pa-Varga

pa: 5
pā: 565
 *pi: 54
 *pī: 54
pu: 532
pū: 5323
pe: 5321
pai: 545
po: 5456
pau: 5432345
pam: 543234545
pah: 5234545
pha: 52345
phā: 5234565

phi: 5454phū: 5454545phī: 54545phe: 54545454phu: 545454phai: 545454545

This list presents only the bare number combinations without giving any idea of their internal dispositions. For example, ñu signals the progression 123212345, which may be arranged in several ways: $1_23^2_11_234_5$, $1_23^2_12_3^4_5$, $1_23^2_12_3^4_5$, $1_23^2_12_34_5$, and so on. These sub-combinations add interest and variety to what would otherwise be an austere, mechanistic duplication of musical material.