

Phonetics, Śikṣā

In the human vocal apparatus there are five positions or levels at which sounds can be articulated (sthāna): velar, palatal, cerebral, dental, labial (kanṭhya, tālavya, mūrdhanya, dantya, oṣṭhya). In the Indian tradition the various sounds articulated on each of these levels are grouped in vargas; so there are five groups: ka-varga, ca-varga, ṭa-varga, ta-varga and pa-varga, respectively:

Levels of articulation	vowels	consonants voiceless	consonants aspirated	consonants voiced	consonants voiced, aspirated	nasals	semivowels	fricatives
<i>gutturals</i>	a	ka	kha	ga	gha	ṅa	(ha)	ḥ
<i>palatals</i>	i	ca	cha	ja	jha	ña	ya	śa
<i>cerebrals</i>	ṛ	ṭa	ṭha	ḍa	ḍha	ṇa	ra	ṣa
<i>dentals</i>	ḷ	ta	tha	da	dha	na	la	sa
<i>labials</i>	u	pa	pha	ba	bha	ma	va	h (f)

So each varga has a correspondence with the basic vowel, and together they cover all the possibilities of the human vocal apparatus to articulate any sound distinctly. A thorough scrutiny of the structure of this system and the roots of the language leads us to an interesting conclusion: that there is a transparent and intelligible system of articulation, which corresponds with a system of simple roots and meanings which change systematically. This systematic series of changes is what needs to be thoroughly studied.

The set of vowels and their changes – guṇa and vṛddhi, and the nature of semivowels:

simple vowels	i	u	ṛ	ḷ	
guṇa:	a	e	o	ar	al
vṛddhi:	ā	āi	āu	ār	āl

Thus, a+i= e; a+u= o; a+ṛ=ar; a+ḷ=al; but changing the order gives semivowels: i+a= ya; u+a= va; ṛ+a= ra; ḷ+a= la; and breath+a= (ha).

Some derivations:

Kār+a, kār+aṇam, kar+tā, kar+ma, kṛ; dharma, dhṛ, dhārā, dhāraṇa,

Bhāra, bharaṇam, bhāryā, bhartā, bhṛ

Bhāvanā, bhāva, bhav-ati, bhū, bhū, bho+ati= bha-u+ati= bha-v-ati

Nāy-ana, ne-tra, nī, ne-ati = na-i-ati = nayati

Jaya, jetā, ji, je-ati=ja-i-ati= jayati

The NOUN and the VERB

a) sUP-tiÑ-antaṃ padam, 'the word is of two kinds: ending with sUP and tiÑ' (Pāṇi), the words which have endings of the Noun and of the Verb.

Yāska (600 BC) nāma-ākhyāta (Name and 'explanatory name');
Pāṇini (500 BC): nāma-kriyā; (Name and verb).

b) subantasya ṣaṭ kārakāḥ santi:

1) kartā	'actor',	Nominative	who ?
2) karma	'act',	Accusative	whom, what?
3) karaṇam	'acting',	Instrumental	how, with who?
4) saṃpradānam	'giving forward',	Dative	for who, what for
5) apādānam	'taking back';	Ablative	from who, why
6) <i>sambandhaḥ</i>	'relating to',	Genitive	whose
7) adhikaraṇam	'locating', 'placing',	Locative	where

Sutras by Pāṇini:

Nominative: १.४.५४ स्वतन्त्रः कर्ता ;

Accusative: १.४.४९ कर्तुरीप्सिततमं कर्म

Instrumental: 1.4.42 साधकतमं करणम्

Dative: १.४.३२ कर्मणा यमभिप्रैति स सम्प्रदानम्

Ablative: १.४.२४ ध्रुवमपायेऽपादानम् ; १.४.३० जनिकर्तुः प्रकृतिः।

Locative: १.४.४५ आधारोऽधिकरणम्

SUP paradigm:

	eka-vacanam	dvi-vacanam	bahu-vacanam
prathamā vibhakti	sU	au	Jas
dvitīyā vibhakti	am	auṬ	Śas
tr̥tīyā vibhakti	Ṭā	bhyām	bhis
caturthī vibhakti	Ñe	bhyām	bhyas
pañcamī vibhakti	ÑasI	bhyām	bhyas
ṣaṣṭhī vibhakti	Ñas	os	ām
saptamī vibhakti	Ñi	os	suP

yathā marut-śabdaḥ:

marut[s]	marutau	marutaḥ
marutam	marutau	marutaḥ
marutā	marudbhyām	marudbhiḥ
marute	marudbhyām	marudbhyaḥ
marutaḥ	marudbhyām	marudbhyaḥ
marutaḥ	marutoḥ	marutām
maruti	marutoḥ	marutsu

c) tiÑ-anta-pada paradigm:

Parasmaipadam

	<i>ekavacanam</i>	<i>dvivacanam</i>	<i>bahuvacanam</i>
<i>prathamah puruṣaḥ</i>	-tiP	-tas	-Jhi
<i>madhyamah puruṣaḥ</i>	-siP	-thas	-tha
<i>uttamah puruṣaḥ</i>	-miP	-vas	-mas

Ātmanepadam

	<i>ekavacanam</i>	<i>dvivacanam</i>	<i>bahuvacanam</i>
<i>prathamah puruṣaḥ</i>	-ta	-ātām	-Jha
<i>madhyamah puruṣaḥ</i>	-thās	-āthām	-dhvam
<i>uttamah puruṣaḥ</i>	-iT	-vahi	-mahiÑ

Examples

laṭ (Present Tense) *parasmaipadam* (Active):

	<i>ekavacanam</i>	<i>Dvivacanam</i>	<i>bahuvacanam</i>
<i>prathamah puruṣaḥ</i>	vada-ti	vada-taḥ	vada-anti
<i>madhyamah puruṣaḥ</i>	vada-si	vada-thaḥ	vada-tha
<i>uttamah puruṣaḥ</i>	vadā-mi	vadā-vaḥ	vadā-maḥ

lañ (Imperfect) *ātmanepadam* (Middle):

	<i>ekavacanam</i>	<i>Dvivacanam</i>	<i>bahuvacanam</i>
<i>prathamah puruṣaḥ</i>	a-kuru-ta	a-kurv-ātām	a-kurv-ata
<i>madhyamah puruṣaḥ</i>	a-kuru-thāḥ	a-kurv-āthām	a-kuru-dhvam
<i>uttamah puruṣaḥ</i>	a-kurv-i	a-kur-vahi	a-kur-mahi

d) There are two types of the verbs: *sārvadhātukāḥ* and *ārdhadhātukāḥ*.

sārvadhātukāḥ: *laṭ*, *lañ*, *loṭ*, *vidhi-liñ*: Present Indicative, Past Imperfect, Imperative and Optative, respectively.

ārdhadhātukāḥ: *luñ*, *liṭ*, *luṭ*, *ḷṭ*, *ḷñ*, *āśirliñ*, *leṭ*: Aorist (Past Tense), Perfect (Past); Future 1, Future 2, Conditional Mood, Benedictive, Conjunctive (in the Veda).

Sārvadhātukāḥ

	Active (<i>parasmaipadam</i>) <i>tiP-</i>	Middle (<i>ātmanepadam</i>) <i>ta-</i>
<i>Laṭ</i> , Present:	bhavati,	bhavate,
<i>Lañ</i> , Not present:	abhavat,	abhavata,
<i>Loṭ</i> , Imperative:	bhavatu,	bhavatām,
<i>Liñ</i> , Optative, Potential:	bhavet,	bhaveta

Sarvanāma paradigm:

sah, sā, tad (he, she, that)
eṣah, eṣā, etad, (he, she, this)
kaḥ, kā, kim, (who? m., who? f., what? n.,)
yaḥ, yā, yat, (who m., who f., what n.,)
ekaḥ, ekā, ekaṃ, (one)
sarvaḥ, sarvā, sarvaṃ, (everyone, m.,f.; everything)
anyaḥ, anyā, anyat, (another) etc.;

tad-śabdaḥ pulliṅgaḥ

	<i>eka-</i>	<i>dvi-</i>	<i>bahuvacanam</i>
Prathamā	sah	tau	te
Dvitiyā	tam	tau	tān
ṛtīyā	tena	tābhyām	taiḥ (Ved. tebhiḥ)
Caturthī	tasmai	tābhyām	tebhyaḥ
Pañcamī	tasmāt	tābhyām	tebhyaḥ
ṣaṣṭhī	tasya	tayoḥ	teṣām
Saptamī	tasmin	tayoḥ	teṣu

(similarly other words in masculine gender: eṣah etau ete; kaḥ kau ke; yaḥ yau ye; ekaḥ ekau eke; sarvaḥ sarvau sarve; anyaḥ anyau anye, etc. etc.)

tad-śabdaḥ strīliṅgaḥ

prathamā	sā	te	tāḥ
dvitiyā	tām	te	tāḥ
ṛtīyā	tayā	tābhyām	tābhiḥ
caturthī	tasyai	tābhyām	tābhyaḥ
pañcamī	tasyāḥ	tābhyām	tābhyaḥ
ṣaṣṭhī	tasyāḥ	tayoḥ	tāsām
saptamī	tasyām	tayoḥ	tāsu

(similarly all other words in feminine gender: eṣā ete etāḥ; kā ke kāḥ; yā ye yāḥ; ekā eke ekāḥ; sarvā sarve sarvāḥ; anyā anye, anyāḥ etc. etc.)

tad-śabdaḥ napuṃsakaliṅgaḥ

prathamā	tad	te	tāni
dvitiyā	tad	te	tāni
ṛtīyā	tena	tābhyām	taiḥ (Ved. tebhiḥ)
caturthī	tasmai	tābhyām	tebhyaḥ
pañcamī	tasmāt	tābhyām	tebhyaḥ
ṣaṣṭhī	tasya	tayoḥ	teṣām
saptamī	tasmin	tayoḥ	teṣu

(similarly all other words in neuter: etat ete etāni; kim ke kāni; yat ye yāni; ekam eke ekāni; sarvam sarve sarvāni; anyat anye anyāni etc. etc.)

अव्ययम्

	Substantive /ah/ā/	Space /tra	Cause /taḥ	Time /dā	Manner /thā/tham	Quantity /ti	Likeness /drś
question ka/	कः का किं	कुत्र	कुतः	कदा	कथा कथं	कति	कीदृश्
Relative Ya/	यः या यत्	यत्र	यतः	यदा	यथा	यति	यादृश्
Far sa/ ta	सः सा तत्	तत्र	ततः	तदा तदान	तथा	तति	तादृश्
near i/ e/ a	एषः एषा एतत्	अत्र	अतः इतः	इदा इदानीं	इत्थं		ईदृश् एतादृश्
One एक	एकः एका एकं	एकत्र	एकतः	एकदा	एकथा		एकदृश्
other अन्य	अन्यः अन्या अन्यत्	अन्यत्र	अन्यतः	अन्यदा	अन्यथा		अन्यादृश्
All सर्व	सर्वः सर्वा सर्वं	सर्वत्र	सर्वतः	सर्वदा	सर्वथा		सर्वदृश्
Many बहु	बहु	बहुत्र	बहुतः		बहुथा		बहुदृश्
God देव	देव	देवत्रा	देवतः				देवदृश्

Primary suffixes for adverbs, pronouns and adjectives:

meaning	Substantive (Nominative)	space (Acc., Loc.)	cause (Ablative)	time		manner (Instrumental)		aim (Dative)	number	quality		abstract name
	What/who	Where	where from	when		How		why, what for?	how many	how much, how great	what kind	-ness/-ship
	word / suffix	-tra/trā	-taḥ	-dā	-rhi	-thā/tham	- dhā	-artham	-ti	-yat/-vat	-dṛś	-tvam/-tā
question	kim kaḥ/kā	kutra	kutaḥ	kadā	karhi	katham		kimartham	kati	kiyat/kiyān/kiyatī	kīdṛś	kimtā
relative	yat yaḥ/yā	yatra	yataḥ	yadā	yarhi	yathā		yadartham	yati	yāvat/yāvān/yāvātī	yāḍṛś	-
pointing far	tat/ saḥ/ sā adaḥ/amu-/	tatra amutra	tataḥ amutaḥ	tadā	tarhi amurhi	tathā amuthā		tadartham	tati	tāvat/tāvān/tāvātī amuvat	tāḍṛś amudṛś	tattvam
pointing near	etat/eṣaḥ/eṣā idam/ima-/	atra, iha	ataḥ, itaḥ	adhunā idā/ idānim	etarhi	athā/atha ittham imathā	adhā	etadartham idamartham		etāvat/... iyat/...	etāḍṛś īḍṛś	etattvam
“every” “one” “with” “other” other “many” “before” “latter” “friend” “tree” “house” “god” “human”	sarva- eka- sa- anya- itara- bahu- pūrva- para- mitra- vṛkṣaḥ gr̥ham devaḥ manuṣyaḥ	sarvatra ekatra satra anyatra itaratra bahutra pūrvatra paratra - - - - devatrā -	sarvataḥ ekataḥ sataḥ anyataḥ itarataḥ bahutaḥ pūrvataḥ parataḥ mitrataḥ vṛkṣataḥ gr̥hataḥ devataḥ manuṣyataḥ	sarvadā ekadā sadā anyadā - - - - - - - -		sarvathā ekathā sadha/saha anyathā bahuthā pūrvathā - - - - - -	ekadhā - - bahudhā mitradhā	sarvārtham ekārtham anyadartham bahvartham pūrvārtham parārtham mitrārtham vṛkṣārtham gr̥hārtham devārtham manuṣyārtham	- - - - - - - - - - - -	sarvavat ekavat anyavat bahuvat pūrvavat paravat mitravat vṛkṣavat gr̥havat devavat manuṣyavat	- - sāḍṛś - - - - - - - - -	sarvatvam ekatvam anyattvam bahutvam pūrvatvam paratvam mitratvam vṛkṣatvam gr̥hatvam devatvam manushyatvam

Secondary suffixes for changing the primary adverbs into adjectives:

<i>Substantive</i>	<i>Space</i>	<i>cause</i>	<i>time</i>	<i>manner</i>	<i>aim</i>	<i>number (adverbial use)</i>	
<i>What/who</i>	<i>where</i>	<i>where from</i>	<i>when</i>	<i>how</i>	<i>why</i>	<i>how many</i>	
<i>primary suffix</i>	<i>-tra/trā</i>	<i>-taḥ</i>	<i>-dā</i>	<i>-thā/tham</i>	<i>-artham</i>	<i>-ti</i>	
<i>secondary suffix</i>	<i>+ -tya-</i>	<i>+ -tya-</i>	<i>+ -tana-</i>	<i>+ -vidha-</i>	<i>+ -ka-</i>	<i>+ - dhā- (adverbial use)</i>	
<i>meaning samples</i>	<i>of what place?</i>	<i>from what place ?</i>	<i>of what time?</i>	<i>of what manner?</i>	<i>of what purpose?</i>	<i>in how many ways?</i>	
<i>question far plane near plane "other"</i>	kutratya- tatratya- atratya- anyatratya	kutastya- tatastya- atastya- anyatastya-	kadātana- tadātana- idānīmtana- anyadātana-	Kathamvidha- tathāvidha- itthamvidha- anyathāvidha-	kimarthaka- tadarthaka- etadarthaka- anyārthaka-	<i>katidhā (adverbial use)</i> <i>tatidhā (adverbial use)</i> - -	
"town" "village"	nagaratyah grāmatyah	nagara-tas-tyah grāma-tas-tyah	nagaratana- grāmatana-	nagaravidha- grāmaavidha-	nagarārthaka- grāmārthaka-		

Mantras

Om sarveṣāṃ svastir bhavatu
sarveṣāṃ śāntir bhavatu
sarveṣāṃ pūrṇaṃ bhavatu
sarveṣāṃ maṅgalaṃ bhavatu
om śāntiḥ śāntiḥ śāntiḥ

sarveṣāṃ, of everyone (gen., pl.); sarva-, every;
svasti-, m., wellbeing; goodness;
śānti-, f., peace;
pūrṇa, n., fullness,
perfection; maṅgala-, n.,
happiness;
bhavatu, 3d person, Imperative, from the root Bhu, to be.

om saha nāvavatu/ saha nau bhunaktu/
saha vīryam karavāvahai/
tejasvi nāvadhītamastu mā vidviṣāvahai/
om śāntiḥ śāntiḥ śāntiḥ//

saha, together;
nau, us two, of us two; encl.pronoun;
avatu, that should protect!, Imperative, 3d pers., Sing., from av, to protect, to
nourish;
bhunaktu, that should enjoy! Imper., 3d pers., Sing., from bhuj, to
enjoy; vīrya-, n., power, a seed;
tejasvin, n., bright, clear, shining;
adhīta-, ppp learnt, studied; from adhi-i, to study;
astu, let it be!, Imper., 3d pers., Plur., from as, to be;
mā, don't, particle of negation with Imperative;
mā vi-dviṣāvahai, we two should not hate each other, be in
disharmony; dviṣ, to hate; with prefix vi-, meaning to separate;

asato mā sadgamaya
tamaso mā jyotirgamaya
mṛtyormāmṛtam gamaya

asataḥ, from non-being, Ablative Case of asat, n., non-being;
sat, to being, Accusative Case of sat, n., being;
mā, me, incl. personal pronoun of the first person, Acc.;

gamaya, lead!, Imper., 2d Person, Sing., from causative of root gam, to go;
 tamaṣaḥ, Abl., from darkness, tamaṣ, n., darkness;
 jyotiḥ, n., Acc., to light;
 mṛtyoḥ, Abl., from death; mṛtyuḥ, m.,
 death; mā-amṛtam, me to the Immortality;

sarve bhavantu sukhinaḥ
 sarve santu nirāmayāḥ
 sarve bhadraṇi paśyantu
 mā kaścīd duḥkha-bhāg bhavet
 om śāntiḥ śāntiḥ śāntiḥ//

sarve, all, Plur.;;
 bhavantu, should be; Imper., 3d Pers., Plur.;;
 sukhinaḥ, happy, Nom., Plur., of sukhin, happy;
 santu, should be; Imper., 3d Pers., Plur.;;
 nir-āmayāḥ, sinless; Plur.,Nom.;;
 bhadraṇi, beautiful things;
 paśyantu, should see; Imper., 3d Pers., Plur.;; of root dṛś, to
 see; mā kaścīd, no one;
 duḥkha-bhāg, suffering;
 bhavet, should be; Potential, 3d Pers., Sing., from bhū.

