

Course Name: 'Introduction to Pāṇinian Grammar'
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Welcome; I welcome you all to this lecture in the course Introduction to Pāṇinian grammar. In this course right now we are studying the process of speech production as described in the Pāṇinian grammar which is very fundamental. Before that we studied the Meta language of Pāṇinis grammar and its important features.

Now, when we are studying the process of speech production as described in the Pāṇinian grammar we have already studied the cognitive aspect of it and then the physical aspect. Then we have studied the features of the sounds that are thus produced. Now, we are looking at the description of the individual sounds and the features of those individual sounds.

We have already studied the features of vowels, we took each vowel individually, independently, separately and studied its features and this separate individual study does have quite a lot of significance as shall be clear in the subsequent lectures. We also studied the other sets of consonants namely the semi vowels.

The sibilants and also the categories called ayogavāha we looked at the features of sounds and the first and the foremost feature we studied was the length of the sounds and thus we classified the sounds straight away into two categories consonants and vowels. And so, we first we studied features of vowels, then we studied features of some consonants, sibilants and ayogavāha and before that the semi vowels or antastha. Now, remain the class consonants which we need to study.

So, we studied the process of speech production by studying the source called Pāṇinīyaśikṣā and the verses mentioned on the slide "ātmā buddhyā sametyārthān mano yuṅkte vivakṣayā manaḥ kāyāgnim āhanti sa prerayati mārutaṁ mārutastūrasī caran mandraṁ janayati svaram sodīrṇo mūrdhnyabhīhato vaktramāpadya mārutaḥ varṇān janayate".

We noted down 8 stages 'ātmā buddhyā sametyārthān' and 'mano yuṅkte vivakṣayā' the first two, and we said that these are the cognitive stages of the process of speech production and the rest of them they are the physical or the biological processes. Then the next ones are 'manaḥ kāyāgnim āhanti' the 3rd, sa prerayati marutam the 4th 'mārutastūrasī caran mandraṁ janayati svaram the 5th 'sodīrṇo mūrdhnyabhīhato' 6th vaktramāpadya mārutaḥ 7th and 'varṇān janayat final and the 8th one, after which the audible speech is produced.

And now we are studying the features of this audible speech. And we have already started studying the features of what is known as consonant which is produced with half a mātrā time. Amongst them we have already studied antastha semi vowels, we have already studied sibilants uṣma, we have already studied ayogavāha. Now, what remains is the class consonants also known as hal. Let us study each of these this class in detail now, the important point to note here is that while pronouncing these consonants the tongue either actually touches the place of articulation in the oral cavity or the tongue is directed towards that particular place of articulation.

Shaping the air stream thus in a particular direction with a particular focus so that the air stream hits that particular place and then gets thrown out and then is perceived to be the delivery of a particular sound k c t p etcetera. These are called class consonants because they are arranged in a group or class of 5, each thus representing a commonality of the place of articulation each group is referred to in a technical metalinguistic way by adding a vowel u after the first sound of that class.

This is stated by a A 1.1.69 which we shall study in the course of time. So, for example, u attached to k and you get the term ku, ku stands for 5 consonants beginning with the consonant k appearing in the same row k kh g gh and ṅ. cu stands for c ch j jh ṅ. tu stands for ṭ ṭh ḍ ḍh ṇ. tu stands for t th d dh n and pu stands for p ph b bh m.

Let us now study each of these consonants and note down their features. First let us take the k class which appears also as first of the consonants k, the sthāna or the place of articulation of k is kaṅṭha or velum. The ābhyantaraprayatna of k is spr̥ṣṭa or contact that is touch of the tongue with the place of articulation.

So, it is spr̥ṣṭa, then the bāhyaprayatna of k is śvāsa that is breath, aghoṣa voiceless, vivāra openness, and also alpaprāṇa that is less amount of breath than the other letter this is ah called non aspirate this is how k gets described an important sound. Then comes k whose place of articulation is kaṅṭha or velum, whose ābhyantaraprayatna is spr̥ṣṭa that is contact or touch of the tongue with the place of articulation the bāhyaprayatna is śvāsa aghoṣa and vivāra same as k, the only difference is this is mahāprāṇa.

k was alpaprāṇa this is mahāprāṇa it requires more breath it is called an aspirate sound kh k and kh. Next, we have g the place of articulation is kaṅṭha ābhyantaraprayatna is spr̥ṣṭa contact that is touch of the tongue with the place of articulation and the bāhyaprayatna is different now, it is nāda ghoṣa saṁvāra and also alpaprāṇa.

If we keep a finger on our throat like this while pronouncing g, we can sense a vibration as against the pronunciation of k that is what gets reflected in these bāhyaprayatna nāda ghoṣa. Similarly, the next consonant in the k class is gh, the sthāna is kaṅṭha, ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation.

The bāhyaprayatna is same as g except mahāprāṇa. So, the bāhyaprayatna is nāda ghoṣa and saṁvāra resonance, voice and closure. gh however, differs from g in terms of being a mahāprāṇa requires more breath is called an aspirate sound g g and gh. The last sound in this class is called ṅ, the place of articulation is kaṅṭha plus nāsikā this is an additional place of articulation of this sound, kaṅṭha plus nāsikā.

The ābhyantaraprayatna is spr̥ṣṭa touch of the tongue with the place of articulation, the bāhyaprayatna is nāda ghoṣa saṁvāra and also alpaprāṇa that is less breath or this sound is called non aspirate remember this sound is to be pronounced as ṅ as you pronounced pronounce it in aṅga, this is the pronunciation of this written symbol ṅ.

Let us go to the next class which begins with c, even though in some other modern Indian languages the same written symbol is used to convey some other sound as well namely c, but that is not what is available in Sanskrit as a meaning bearing unit, it is only c which in Sanskrit has got that value.

The description of c is done in the Pāṇinian grammatical tradition in the following manner, the place of articulation is tālu or palate, the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation and the bāhyaprayatna is śvāsa aghoṣa and vivāra. Also, it is alpaprāṇa, it requires less breath than say ch. So, c is called non-aspirate sound.

The next sound is ch, the place of articulation of this sound is tālu, ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation and the bāhyaprayatna is śvāsa breath, aghoṣa voiceless, and vivāra openness with mahāprāṇa as the feature. It requires more breath, it is called an aspirate sound, ch compare c with ch.

Next, we have j, once again in some modern Indian languages we have a sound j which gets represented by the similar written symbol that is not present in Sanskrit it is only j which is present which is what is described in the following manner, in the Pāṇinian grammatical tradition. The place of articulation or sthāna is tālu, the ābhyantaraprayatna is spr̥ṣṭa that is contact or touch of

the tongue with the place of articulation and the bāhyaprayatna of j is nāda ghoṣa and saṁvāra resonance, voice, and closure.

Let us now look at j, once again we must note that in modern Indian languages there is another sound j which gets represented by the same written symbol that sound does not exist in Sanskrit sound inventory. The sound that exists in the Sanskrit sound inventory is j and it has got following features as per the description in the Pāṇinian grammatical tradition.

The place of articulation is tālu, the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation, the bāhyaprayatna is nāda ghoṣa and saṁvāra resonance, voice as well as closure. And this is alpaprāṇa requires less breath than say jh, it is a non aspirate sound j. The next sound is jh, once again in the modern Indian languages another sound jh also gets represented by this written symbol which is not the case with Sanskrit.

In Sanskrit we have jh whose description is given below as far as the Pāṇinian grammatical tradition is concerned. The place of articulation is tālu, the ābhyantaraprayatna is spr̥ṣṭa and the bāhyaprayatna is nāda ghoṣa and saṁvāra resonance, voice, and closure this jh is mahāprāṇa requires more breath and this is also an aspirate.

Finally, in the c class we have the sound ñ, it is pronounced as ñ. The place of articulation of this sound is tālu plus nāsikā the nose. ābhyantaraprayatna is spr̥ṣṭa and the bāhyaprayatna is nāda ghoṣa and saṁvāra resonance voice and closure. This sound is also an alpaprāṇa which requires less amount of breath than say jh, it is called non-aspirate.

Let us look at the next class, ṭ class the first letter is ṭ the place of articulation for this is mūrdhan or the roof of the oral cavity, the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation. So, in pronouncing this sound the tongue that rises above and touches the roof of the oral cavity for a fraction of millisecond and because of that the sound t is produced and each and every sound thus produced is distinct from the rest, this is also the purpose of this description.

To know each sound distinctly from one another. Now, the bāhyaprayatna of ṭ is śvāsa that is breath, aghoṣa that is voiceless and vivāra openness and ṭ is alpaprāṇa, less breath or nonaspirate. Then comes ṭh the place of articulation is mūrdhan or roof of the oral cavity, its ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation and the bāhyaprayatna is śvāsa , aghoṣa and vivāra and also mahāprāṇa or more breath that is the sound is called aspirate, compare ṭ with ṭh ṭ with ṭh.

Then comes the sound ḍ the place of articulation is mūrdhan, the roof of the oral cavity, the ābhyantaraprayatna is spr̥ṣṭa or contact or touch of the tongue with the place of articulation and the bāhyaprayatna is nāda ghoṣa and saṁvāra, resonance, voice and closure. This is also alpaprāṇa requires less breath and it is nonaspirate.

The next sound is ḍh the place of articulation is mūrdhan or roof of the oral cavity the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation. The bāhyaprayatna is nāda resonance, ghoṣa voice and saṁvāra that is closure. This ḍh is also mahāprāṇa it requires more breath it is an aspirate sound.

And finally, in this class we have the consonant ṇ whose sthāna is mūrdhan roof of the oral cavity plus nāsikā or nose ābhyantaraprayatna is spr̥ṣṭa contact or and the bāhyaprayatna is nāda ghoṣa and saṁvāra resonance, voice, and closure. This is alpaprāṇa requires less breath and is called non-aspirate.

Let us move to the next class that is t class, the first consonant is t, the place of articulation for t is danta tooth or teeth, its ābhyantaraprayatna is spr̥ṣṭa contact touch of the tongue with the place of articulation where we see clearly we experience that the tongue touches the lower part of the teeth or a tooth while pronouncing sounds of this class. The bāhyaprayatna is nāda ghoṣa and saṁvāra breath, voicelessness and openness and this is alpaprāṇa requires less breath and is called non-aspirate.

The next sound is tha, the place of articulation is danta tooth or teeth ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation, the bāhyaprayatna is nāda ghoṣa and saṁvāra breath, voiceless, and openness this is also mahāprāṇa requires more breath. So, it is called an aspirate sound.

The next sound is d. the place of articulation is danta, the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation namely the tooth or teeth. The bāhyaprayatna is nāda resonance, ghoṣa voice, and saṁvāra that is closure, this is also alpaprāṇa requires less breath and is called non-aspirate.

The next sound is dh the place of articulation is danta tooth or teeth, ābhyantaraprayatna is spr̥ṣṭa contact a touch of the tongue with the place of articulation, bāhyaprayatna is nāda resonance, ghoṣa voice, and saṁvāra closure. This is also mahāprāṇa requires more breath and is called an aspirate.

And the last sound in this class is n whose place of articulation is danta tooth or teeth plus nāsikā the nose, ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation, the bāhyaprayatna is nāda resonance, ghoṣa voice, and samvāra closure. This n is also alpaprāṇa requires less breath and is called non-aspirate sound.

Now, we go to the last amongst these classes, p class: which begins with the sound p, the place of articulation for p is lips or oṣṭhau both the lips, the ābhyantaraprayatna is spr̥ṣṭa contact, touch of the tongue with the place of articulation namely the lips, the bāhyaprayatna is śvāsa breath, aghoṣa voiceless, and vivāra openness. p is alpaprāṇa, requires less breath and is called non-aspirate sound.

The next one is ph whose place of articulation is lips oṣṭhau, the ābhyantaraprayatna is spr̥ṣṭa contact, touch of the tongue with the place of articulation, namely the lips. The bāhyaprayatna for ph is same as p except mahāprāṇa. So, the bāhyaprayatna for ph is śvāsa breath, aghoṣa voiceless, and vivāra openness ph is mahāprāṇa and requires more breath. It is called an aspirate sound.

The next consonant in this class is b the place of articulation is oṣṭhau lips, the ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation the lips. The bāhyaprayatna is nāda resonance, ghoṣa voice and samvāra closure. b is alpaprāṇa, it requires less breath and it is called non-aspirate sound b.

The next is bh the place of articulation is lips oṣṭhau. The ābhyantaraprayatna is spr̥ṣṭa contact or touch of the tongue with the place of articulation, the bāhyaprayatna is nāda ghoṣa and samvāra resonance, voice, and closure. This bh is the mahāprāṇa, it requires more breath, it is an aspirate sound bh. The last amongst these class consonants is m, the place of articulation is lips oṣṭhau and nāsikā nose. The ābhyantaraprayatna is spr̥ṣṭa contact, touch of the tongue with the place of articulation. The bāhyaprayatna is nāda ghoṣa and samvāra resonance, voice, and closure. bh is also alpaprāṇa, it requires less breath it is called non-aspirate sound, these features we have studied pertaining to each and every sound mentioned in the traditional sound inventory and also the pratyāhārasūtra that we have studied earlier.

So, to summarise what we have seen, the question arises is what is the function of these features? So, they act as parameters. Parameters in selecting a substitute from amongst many in place of a substituend as stated by the sūtra sthāne'ntaratamaḥ 1.1.50. So, the other feature of the other function of these features is the distinct comprehension of each sound. So, if we read these sounds one by one p and ph they are different sounds, b and bh they are different sounds, even though they are produced using the same place of articulation these sounds are different. If you know these

features you will be able to tell each sound distinctly from the other. They say this is an extremely important function of these features.

So, we shall study these functions in the next lecture, but before we close let us follow the practice we have been following. Let us study let us read the maṅgalācaraṇa from a celebrated text in the Pāṇinian grammatical tradition this is taken from Bālamonoramā a commentary on the vaiyākaraṇasiddhāntakaumudī and the verse reads like this. "Sa jayati divyanteśo nṛtyati yo'sau cidambarasabhāyām pāṇinyādyā munayo yasya ca dayayā manorathānabhajan". I will read again, "Sa jayati divyanteśo nṛtyati yo'sau cidambarasabhāyām pāṇinyādyā munayo yasya ca dayayā manorathānabhajan".

And then the 5 sūtras of today taken from the 4.1, the 4th chapter, 4th pāda 4th chapter 4th sub chapter, 4th adhyāya 4th pāda. Here are the sūtras and I will read, prāgvahateṣṭhak, tena dīvyati khanati jayati jitam, saṁskṛtam, kulatthakopadhāḍaṇ, tarati. I repeat prāgvahateṣṭhak, tena dīvyati khanati jayati jitam, saṁskṛtam, kulatthakopadhāḍaṇ, tarati.

Thank you for your attention.