

Course Name: 'Introduction to Pāṇinian Grammar'
Professor Name: Prof. Malhar Arvind Kulkarni
Department Name: Humanities and Social Sciences (HSS)
Institute Name: IIT Bombay
Week:11
Lecture:53

Welcome. I welcome you all to this lecture in the course Introduction to Pāṇinian grammar. In this lecture, we shall study some other technical terms in the Pāṇinian grammar. We have already studied some technical terms starting with vākya, pada, dhātu, prātipadika, kṛt, taddhita etcetera, in the beginning we also studied the technical term it as well as savarṇa.

Now, in this lecture we shall study some other important technical terms in the Pāṇinian grammar and we shall see how they get applied. We do not claim to have covered all the technical terms used by Pāṇini in his grammar, but the ones that we have studied, we hope we will give you a good enough overall picture of the overall system of Pāṇini's grammar. So, these are some other technical terms that we shall study in the course of this lecture, saṁhitā, avasāna, sārvaadhātuka, ārdhadhātuka, parasmaipada, ātmanepada, niṣṭhā on one hand and nadī, ghi, ṭi, upadhā sarvanāma and avyaya on the other hand.

We continue to have the derivation of the sentence in the background. So, meaning data set is this. We have already studied this. We form the constituents of the meaning and then we link these constituents with the verbal constituents in this particular fashion. And, then we start the derivation of the Sanskrit sentence in this particular format, in which the verbal action takes the prominence to which is added the suffix tiṅ

and then sup is added to fill in the remaining slots and then the prakṛtis are added to fill in the slots of the prakṛti in the other words and then when all the prakṛtis and pratyayas are stated in the sentence, the derivation of the entire sentence begins. And, then we arrive at these derived stages and finally, gacchati Rāmo grāmam is the sentence that is derived. On the backdrop of this entire derivation process, let us now study the technical terms that were mentioned in the outline of this lecture.

We derive this particular dataset from the artha we derive these śabdās and then they are expressed in the audible speech. Let us see what is saṁhitā, saṁhitā is extremely important, because this term helps Pāṇini also give sūtras to account for the Vedic forms in his grammar. Now, 'gacchati Rāmo grāmam' with some minimum space in between this is called saṁhitā and the definition of saṁhitā is given in Pāṇini's grammar by the sūtra 1.4.109 which reads 'paraḥ saṁnikarṣaḥ saṁhitā', 'paraḥ saṁnikarṣaḥ', saṁnikarṣaḥ is proximity, paraḥ saṁnikarṣaḥ is extreme proximity. The extreme proximity of sounds is termed as saṁhitā.

What is the measurement of this extreme proximity? What is extreme proximity? It is defined as not having a gap more than the one required for distinct audible perception of two sounds. When two sounds do not have a gap more than the one required for distinct audible perception of sounds, two sounds, then such a situation is called saṁhitā. So, what it assumes is that in order to have a distinct audible perception of two sounds, some biological gap is necessary; so, to have only that much gap is what is extreme proximity. If you have more than that as a gap then that is not called saṁhitā, that could be called as apahitā or vyavahitā as in the case of these words gacchati and then you take a pause, more gap than what is required for the distinct audible perception of the sounds. Then you utter Rāmaḥ and then there is still some more gap, then you utter grāmam and when you do this, the form the shape of the sounds also changes. For example: here you have Rāmo, but here we will have Rāmaḥ. The euphonic combination has its effects which are missing over here.

When this word Rāmaḥ goes into this form where it is saṁhitā; that means, you are uttering the word grāmam with close proximity without having additional gaps then this shape Rāmaḥ turns into Rāmo, that is the effect of saṁhitā. So, saṁhitāyām is the word used in Ashtadhyayi in three places as an adhikāra stating thereby the environment in which the rules apply. These are the three sections from 6.1.72 up to 157, 6.3.114 up to 139 and 8.2.108 up to 8.4.68. What this means is that the rules stated in these three sections, they have saṁhitā as an environment. So, the operations stated in these sūtras they get operated in the environment of saṁhitā. If the speaker does not want to do saṁhitā then these rules will not apply.

So, this Rāmaḥ will not change to Rāmo if the speaker does not want to do saṁhitā. If the speaker wants to speak at leisure having more gap than what is needed actually biologically, then we need not have to do these operations; gacchati Rāmaḥ and grāmam uttered separately are not saṁhitā. This is an extremely important technical term defined by Pāṇini which can also have repercussions in the study of speech forms using modern technology.

There is one more term in this context that is also defined by Pāṇini which is very very crucial namely 'avasāna' and which is defined as virāmaḥ avasānam, viramo'vasānam 1.4.110. The absence of any sound is termed as avasānam absence. So, even the absence is given some technical stature and nomenclature. So, this absence indicates the end of a unit; say for example, a sentence or even a word. The application of this term is done by Pāṇini in the sūtra vāvasane 8.4.56 which says that immediately before an avasāna substitute optionally jhal by car.

So, when there is an absence of any sound coming after immediately after then a jhal is substituted optionally by a car. So, for example, you have Rāmād and after that if there is no sound coming; that means, there is avasāna there is absence of any sound over here. Then this d is optionally

substituted by t; that means, you get two forms Rāmāt and Rāmād, but this is how the term avasāna is cleverly used as an environment by Pāṇini.

After this let us go to the other important terms 'sārvadhātuka' and 'ārdhadhātuka' which are required for the derivation of the pada forms, notably the verbal forms. Let us see what is sārvadhātuka. So, the definition of sārvadhātuka is given in 3.4.113 and the sūtra reads tiñ-śit sārvadhātukam. What it means is tiñ suffixes and any suffix added to a verbal root with the marker ś is termed sārvadhātuka. I repeat tiñ suffixes and any suffix added to a verbal root apart from the tiñ of course, with the marker ś is term sārvadhātuka. For example, if you have gam plus ti here gam plus ti. ti is a sārvadhātuka suffix as it is part of tiñ. If we want to derive the verbal form gacchati, this is the first stage we have gam plus ti. ti is part of tiñ and therefore, it is a sārvadhātuka. And, on the basis of ti being a sārvadhātuka then applies 3.1.68 and the suffix śap gets added and then we get gam plus śap plus ti.

Now, we know that in śap p is a marker and ś is a marker, p is a marker as defined by halantyam 1.3.3 and ś is a marker as defined by laśakavataddhite which is 1.3.8. And so, tasya lopaḥ both these markers are deleted. So, we get gam plus a plus ti. Now, this śap is śit, it is also added after a verbal root therefore, it is a sārvadhātuka. So, this a is a sārvadhātuka suffix because it is added to a verbal root and also has ś as a marker.

Now, on account of the fact that this is a sārvadhātuka suffix and also śit suffix 7.3.77 applies and then gam gets replaced by gaccha and so, we get by doing some more operations, we get gaccha plus a plus ti and gacchati. So, here we have two suffixes: one is a tiñ, one is a śit other than tiñ added after a verbal root. So, both of them they get the term sārvadhātuka, both these suffixes are sārvadhātuka suffixes.

Then comes the technical term ārdhadhātuka stated in the ārdhadhātukam śeṣaḥ 3.4.114 śeṣa is an important device used by Pāṇini for defining certain technical terms. So, ārdhadhātukam śeṣaḥ remaining suffixes that are added to a verbal root are termed ārdhadhātuka, remaining means the suffixes which are; obviously, not tiñ and also not with the marker ś they are all called ārdhadhātuka. And, then there are some other sūtras which also term some tiñ indicating some particular tense as ārdhadhātuka as an exception.

So, here are some suffixes which are non tiñ primarily which are termed ārdhadhātuka. So, if you have patha as the verbal root to which is added the suffix ta or tavya or tum or tva in various senses. Since, these four suffixes are added to a verbal root and are not part of tiñ or śit either these are termed ārdhadhātuka suffixes and then 7.2.35 applies and we get paṭh plus i t, i tavya, i tum, and i tvā and then we get the forms paṭhita paṭhitavya paṭhitum and paṭhitvā.

So, this is how the forms are derived by the technical term ārdhadhātuka being used by Pāṇini. So, the function of the technical term ārdhadhātuka is stated on this slide namely addition of the augment i to the suffix. This is primarily an important function of the ārdhadhātuka suffix. Similarly, the technical term parasmaipada is also equally important. This is again in the environment of the suffixes which are added to a verbal root.

The term parasmaipada is defined by Pāṇini in the 'laḥ parasmaipadam' 1.4.99. What this means is all substitutes in place of the suffix la are termed parasmaipada. So, tiñ is stated as a substitute of la by 3.4.78, la is an abstract suffix that is stated by Pāṇini which comes in the initial stages of the derivation of the verbal form. Now, the tiñ suffixes which are stated as a substitute of la stated by 3.4.78, they are termed as parasmaipada. Similarly, the suffixes śatṛ and śānac are stated as substitutes of la by 3. 2.124; they are also termed as parasmaipada generally by this sūtra and why I am saying by this sūtra will be clear in a while.

Now, the thing to be noted as far as parasmaipada suffixes are concerned is that the meaning of parasmaipada suffix is always kartā as stated in 1.3.78 śeṣāt kartari parasmaipadam. So, generally when a suffix term parasmaipada is used in the sentence the voice is always active or you can say that it is always karṭṛvācyā. The suffix the tiñ suffix after the verbal root denotes kartā. This is an active voice or karṭṛvācyā, this is how kartā is used.

The related technical term is ātmanepada and this is defined as 'tañānāv ātmanepadam' 1.4.100. What this means is that amongst the tiñ which are generally termed as parasmaipada tañ and āna are term ātmanepada. So, tañ and āna are given one specific term ātmanepada which cancels the general term parasmaipada. So, now, tañ and āna are called ātmanepada. Apart from kartā the meaning of ātmanepada is karma and bhāva as stated by 1.3.13 and 14.

In addition to these two meanings, we can also say that for verbal roots which take both set of sets of suffixes ātmanepada as well as parasmaipada ātmanepada suffix denote in addition that the result of the action locates in the kartā of the action, this is stated by 1.3.72. I repeat for verbal roots which take both sets of suffixes namely ātmanepada and parasmaipada, the ātmanepada denotes in addition to karma and kartā and it denotes that the result of the action performed and indicated by the verbal root locates in the kartā of that action and this is stated by 1.3.72.

These are the functions of ātmanepada. So, let us take a look at parasmaipada and ātmanepada in this table. These are the 18 suffixes which we have already studied right from the technical term itsamjñā onwards, but we did not introduce the terms parasmaipada and ātmanepada explicitly

which we are doing now. So, these are the tiñ suffixes which make a pada, these are added to a verbal root and the resultant output is a pada.

Now, these 18 suffixes they are divided into two groups. The green ones they are finally, called parasmaipada and the purple ones they are to be termed ātmanepada. The meaning of the parasmaipada is invariably kartā amongst the kāraka it denotes kartā and invariably the meaning of these purple ones, the ātmanepada are kartā as well as karma as well as bhāva.

But, these 9 suffixes they always denote kartā. So, whenever these suffixes are used, 9 suffixes you can be sure that this is a kartṛvācyā or an active voice construction. But, when the ātmanepada is used you cannot be so sure, because it could be either kartṛvācyā or karmavācyā or bhāvavācyā. So, you have to look at the suffix that comes in between the verbal root and these suffixes, that will give you an indication about the voice. So, this is the difference between the parasmaipada and the ātmanepada, remember what we said is these nine suffixes are termed parasmaipada. So, when the term parasmaipada is used, this term denotes these nine suffixes and ātmanepada is a term that denotes these other 9 suffixes. These 9 suffixes are called ātmanepada primarily apart from śānac etcetera.

So, these forms nayati nayataḥ nayanti nayasi nayathaḥ and nayāmi nayāvaḥ nayāmaḥ these are to be called as parasmaipada and nayate nayete nayante nayase nayethe nayadhve naye nayāvahe nayāmahe these are to be called as ātmanepada forms of the verbal root. And, we said that in this case when the ātmanepada is used, it denotes an additional meaning namely the result of the action locates in the kartā of the action by 1. 3.72.

Let us now study one more technical term niṣṭhā. This is defined by Pāṇini in 1. 1. 26 'ktaktavatū niṣṭhā'. What this says is that the suffixes kta and ktavat are termed niṣṭhā kta and ktavat are termed niṣṭhā. And, then we have the sūtra 3.2.102, the sūtra is niṣṭhā. This sūtra prescribes addition of niṣṭhāsuffixes after any verbal root in the sense of past tense as well as kartā ktavat and karma and bhāva kta.

So, for example, if you take the verbal root paṭha and add the suffix kta or ktavat to it you add the augment i before both the suffixes kta or ktavat. So, you have i kta or i ktavat as before because these two will be also called ārdhadhātuka, because they are added after a verbal root and they are neither tiñ nor śit. And so, here you will get the form paṭhita and paṭhitavat, paṭhita means something that was read. So, kta indicates karma or the action of reading where kta indicates bhāva. In paṭhitavat the meaning is someone who did read; that means, ktavat indicates kartā as the meaning. This is also an important technical term associated with the suffixes that are added after a verbal root.

Let us now study some technical terms which come in the context of the derivation of the subanta forms. The first term is nadī, a very very crucial peculiar kind of term defined by Pāṇini in 1.4.3 'yū sṛyākhyau nadī' what this means is that words expressing feminine gender and ending in long ī and long ū they are termed nadī.

For example gaurī, nadī, camū, vadhū etcetera, these are all called nadī technically. So, the application of the term nadī is found in the generation of peculiar subanta forms 4/1, 5/1, 6/1 and 6/3 and 7/1 etcetera. Incidentally, also by 1.4.6, the sūtra 'ñiti hrasvaśca' the term nadī is also applied to the words expressing feminine gender and ending in short i and u optionally when before the ñit suffixes.

What this sūtra means is words expressing feminine gender and ending in short i and u are optionally termed nadī immediately before the ñit suffixes. We shall see the examples of this as well. So, to sum up the technical term nadī, we can say that gaṅgā and yamunā are not nadī in the Pāṇinian grammar, because they do not end in long ī or long ū, sthalī however, which means a land which ends in long ī is termed nadī.

So, there is a famous saying which sums up this situation saying that "pāṇiner na nadī gaṅgā, yamunā na nadī sthalī". neither gaṅgā nor yamunā is nadī according to Pāṇini. sthalī is however a nadī according to Pāṇini, this is a strange behaviour of the term. So, now if these are the sups 21 sups, these are the 21 forms of the word Gaurī, Gaurī, gauryau gauryāḥ gaurīm gauryau gaurīḥ gauryā gaurībhyām gaurībhiḥ etcetera. The ones marked in blue, they show the forms in the derivation of which the term nadī is used by Pāṇini.

Similarly, if you look at the subanta forms of mati here you have the prātipadika ending in short i so, also feminine. So, there is optional nadīsamjñā in ñit suffixes which is these four. So, you have optional forms matyai. The blue ones they indicate the nadīsamjñā the technical term nadī applied and the purple ones indicate another technical term ghi which we shall study next. But, the point is that these are the forms that are derived because this is called nadī optional. So, in order to account for such variations, the terms nadī as well as ghi are necessary for Pāṇini.

So, what is ghi? ghi is defined by 1.4.7 as 'śeṣho ghi asakhi', once again the technique of śeṣa comes in handy. Remaining words, excluding of course sakhi are termed as ghi. Now, what is remaining? What are the remaining words? i. words expressing masculine and neuter gender, they are all remaining, two, words expressing feminine gender and ending in short i and u immediately before ñit suffixes, they are also remaining. So, they will be also called ghi optionally of course, and some other exceptions stated in 1.4.4 and 1.4.5 they are to be termed as ghi wherever the sūtra says.

So, examples of the term ghi are hari and kavi and mati. Hari and kavi these are masculine genders words ending in short i. And, then there could be bhānu ending in short u that could be the example of ghi as well. Also mati and dhenu these are the words ending in short i and u indicating feminine gender and they will also be called termed nadī optionally when nit suffixes follow.

And so, these are the forms in which the purple forms shown they help and they are the ones the derivation of which is done by Pāṇini using the term ghi. These are the forms of the word Hari in masculine and then of course, we have seen the derivation of the form of forms of mati which is in feminine.

So, if we go back to those forms of mati, we can see that here are the purple forms which are derived using the term ghi and here are the blue forms which are derived using the technical term nadī. These variations Gaurī on the one hand, Hari on the other hand and mati in between this is done in an easier manner, when Pāṇini uses these technical terms; nadī and optional nadī and optional ghi.

Now, let us come to some other types of definitions, some other technical terms. These are formal elements notably ṭi is the first technical term or saṃjñā that we shall study now. This is defined by Pāṇini an 1.1.64, the sūtra is 'aco'ntyādi ṭi'. What this means is the verbal element beginning with the final vowel of a bigger verbal element is termed ṭi.

Here are examples for you. So, if we have an element in which there occurs a string which has v, v stands for a vowel, then consonant, then consonant, then a vowel, then a consonant and that is it, that is the end of the unit. Then you look for the last vowel amongst all the vowel which is this v and start with it, come up to the end of the word that string namely v c here is termed ṭi. So, the verbal element beginning with the final vowel v c is here termed ṭi.

In the second case where you have v c c v, where v comes at the end you so pick the final vowel that is this v and this is the end. So, by definition this v will be termed as ṭi. So, here are some examples marut which consists of two vowels a and u, the final vowel is u.

So, beginning with this u the verbal element ut will be termed as ṭi. sarva has got the final vowel a that will be termed as ṭi kumuda has this final vowel a this will be termed the ṭi, in ātām you have ām there are two vowels, ā and ā. The final vowel is ā beginning with that you have an element ām, this will be marked as will be termed as ṭi and then the rules will apply 3.4.79 which will substitute this ām by e and you will get the form āte.

Same thing is true about āthām where ām is ṭi. Now, the functions of ṭi are substitution of ṭi this is done by let us say deletion by 6.4.143 substitution of ṭi by another verbal element done by 3.4.79 as in the case of ātām and āthām or the augment edition done by 5.3.71.

These are some functions for assigned to the technical term ṭi. What we can say is that this is a formal element also a dynamic element and universal application of the definition is ensure. However, not all sūtra will take advantage of this universality of the application of this technical term ṭi, clearly this is an artificial technical term created by Pāṇini.

So, if you look at this chart of tiñ suffixes, we noticed that there are these suffixes which have ātām and āthām and mahiñ etcetera. So, in ātām we have this ām as ṭi, ām as ṭi once again in dhvam there is am acting as ṭi and in vahi and mahiñ there is this i and in which acts as ṭi.

And so, here are the forms which have this e substitution taking place, almost all the forms where ṭi is replaced by te.

The next technical term which is also formal is upadhā defined by Pāṇini in 1.1.65, the sūtra is 'alo'ntyāt purva upadhā'. What this means is the earlier sound before the final one; that means, the penultimate sound is termed upadhā. So, if we have this structure where we have a vowel followed by a consonant followed by a vowel followed by a consonant followed by a vowel then this penultimate, penultimate sound c, a consonant is termed as upadhā. And, in another structure where we have vowel followed by a consonant followed by a vowel followed by a consonant at the end, this vowel which comes in the penultimate position will be termed upadhā.

So, if you have the word pācikā this word has k consonant in the position of upadhā and if we take the verbal root paṭh, the vowel a is termed as upadhā because it is occurring in the penultimate position. Now, why leveraging this fact Pāṇini is prescribing let us say 6.3.37 which is 'na kopadhāyāḥ', certain operation is negated to the word which has k as its upadhā and this paṭh has a in its upadhā. So, 7.2.116 states that this a becomes ā.

So, this is how the technical term upadhā is used by Pāṇini to state certain grammatical operations. Once again we can say that this technical term is indicating a formal element of the grammar, a dynamic element and the universal application of the definition provided by Pāṇini. Once again we note that not all sūtras take leverage of this particular universal application of this definition.

After having looked at these formal definitions, let us now try to study some other definitions which take into consideration some categories of words. One of the prominent ones is sarvanāma.

This is defined as 'sarvādīni sarvanāmāni' 1.1.27, this is an enumerative definition. What this means is that a list of words beginning with sarva is termed sarvanām and there are 35 words, the two amongst them are tat and tvam mentioned in the sentence, very famous sentence from upaniṣad 'tat tvam asi', a Mahāvākya.

So, there are 35 words "sarva-viśva-ubha-ubhaya-ḍatara-ḍatama-anya-anyatara-itara-tvat-tva-nema-sama-sima, 'pūrvaparāvaradakṣiṇottarāparādharāṇi vyavasthāyām asajñāyām', 'svamajñatidhanākhyāyām', 'antaram bahiryogopasaṁvyānayoḥ', tyad-tad-yat-etat-idam-adas-eka-dvi-yuṣmad-asmad-bhavatu-kim". These are the 35 words which are termed sarvanāma. The function of this technical term is; obviously, replacement of a noun and then some specific subanta forms. These are the subanta forms shown in blue colour which are the features of the sarvanām technical term.

There are five forms 1/3 sarve different than Rāma, Rāmaḥ, here it is sarve then Rāmāya and now here we have sarvasmai and we have Rāmāt and we have sarvasmāt, Rāmānām we have sarveṣām, Rāme and we have sarvasmin. These are the five forms which are different which are derived by the technical term sarvanāma. There are some more functions, but we will go into the details of them when we do the advanced course.

Let us now study the technical term 'avyaya'. Another very important technical term defining a particular category of words and the definition is once again an enumerative definition. This is defined by the 'svarādinipātam avyayam' 1.1.37. If we look at the sarvanāmasaṁjñā there are a bunch of sūtras 1.1.27 onwards up to 1.1.36 which defines sarvanāma, a big section. Similarly, the technical term avyaya is also defined by a few sūtras, the first one amongst them is this 37, 1.1.37 up to 1.1.41. These sūtras define what is an avyaya.

So, the sūtra is 'svarādinipātam avyayam' and the meaning of this sūtra is the list beginning with the words svara and nipāta they are termed avyaya. The list beginning with the word svara consists of several words like antar prātar sāyam etcetera and nipāta is another technical term defined by 1.4.56 which states that all the words stated in between 56 and 98, they are termed as nipāta. An example of this would be upasarga like pra parā apa sam anu ava nis nir dus dur etcetera, all of them they are termed as nipāta.

Avyaya is a category of words with the absence of final suffixes, that is why this becomes very very important. In Pāṇinian grammar the suffixes are added after these avyaya and then they are deleted, thereby giving the status of pada to the avyaya and thereby making them eligible to be used in a sentence. This is the technical term avyaya.

There are some other technical terms in Pāṇinian grammar. Some of them we already studied like it 1.3.2 to 8, savarṇa 1.1.9 and 10, dhātu 1.3.1 and 3.1.32, prātipadika 1.2.45 and 46, kṛt 3.1.93, taddhita 4.1.76. We also studied the technical terms namely samāsa and then there are some other technical terms like 'vṛddhirādaic', where the technical term vṛddhi assigned to the sounds a and ai, 'adenguṇaḥ' 1.1.2 where the technical term guṇa is assigned to the sounds a and e o. Similarly, we have 'mukhanāsikāvacaṇo'nunāsikaḥ' the term anunāsika defined in this sūtra as a sound which is produced using mukha and nāsikā. The oral cavity as well as the nasal cavity, 'uccairudāttaḥ' the vowel that is pronounced with a high tone, high pitch is udātta. 'nīcairanudāttaḥ' low pitch is anudātta and 'samāhāraḥ svaritaḥ' a combination of both these is called svarita. These are some other technical terms also defined by Pāṇini and also defined to describe the linguistic data available to him.

To summarize various types of technical terms are used by Pāṇini in this grammar to systematically arrange the dataset, so that generation of the forms is smoother and rule based. These technical terms also give us feature descriptions as well as negation. Like for example, the term savarṇa it describes the features which contribute to the definition of savarṇa and also some other features which contribute to the negation of the term savarṇa applying to certain elements.

There is formal aspect of words which is given significance in some technical terms whereas in some technical terms enumerative definitions are used to describe certain broad categories. Phonetic descriptions are used to define properties of sounds. Artificial technical terms are used to help explain variations in the word forms. These technical terms feed into the rules which prescribe the operations. Now, in the next lecture we shall study some other types of sūtras notably the paribhāṣāsūtras.