Course Name: 'Introduction to Pāṇinian Grammar'
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Lecture14

Welcome. I welcome you all to this lecture in the course 'Introduction to Pāṇinian grammar'. We are studying the features of the meta-language and we have noted 3 additional differences: The first one is the meaning of a word, the second one is the meaning of the cases, and the third one namely the technique of 'pratyāhāra', as to how to form the 'pratyāhāra' and we have seen examples when 'pratyāhāra' get formed, we have also seen how they are formed. So, we studied how the pratyāhāra 'ac' gets formed, the pratyāhāra 'hal' gets formed and the pratyāhāra 'al' gets formed.

We also studied what these pratyāhāras mean and we stated that it is all the sounds that come in between the first letter, first sound and the marker sound all the letters in between, they are part of the set which is denoted by the pratyāhāra. Of course, the markers that come in between they are not part of the pratyāhāra meaning and also in terms of the consonants, the vowel which is inherently pronounced or written together with the consonants for the sake of clear comprehension is also not part of the said pratyāhāra. This is what we have studied so far.

And, we also looked at some examples in which such pratyāhāras would be used by Pāṇini in the sūtras in his own grammar. We also noted that depending on the environment, be it the left hand side or the right hand side or be it the substituent, the case will be added to this pratyāhāra. We studied the case of 'ac' to which the 5th case as well as the 6th case is added, also the 7th case is added. Similarly we studied the same with reference to 'hal' and also 'al'.

So, when we looked 'ac' and when 'ac' is used in the 5th case, we said that there is a particular grammatical operation that is happening where 'ac' is acting as the left hand side environment which needs to be described. So, Pāṇini form the pratyāhāra 'ac' first and then to indicate the environment which is left hand side added the case, 5th case that is pañcamī. So, you get the word 'acaḥ'.

When any vowel or all the vowels are becoming the substituents in a particular grammatical operation which needs to be described, Pāṇini formed the pratyāhāra 'ac' first and then added the case 6th which indicates the substituent after the pratyāhāra 'ac'. Then we also noted that when any vowel is becoming the right hand side environment Pāṇini formed the pratyāhāra 'ac' first and then added the 7th case indicating the right hand side environment after the pratyāhāra 'ac' and derived

the forms 'acaḥ' for 5th case, 'acaḥ' for 6th case, and 'aci' for the 7th case. We also then studied the detailed meaning of 'iko yaṇ aci' which we had cited as an example earlier.

We also looked at how the pratyāhāra 'ik', 'yaṇ' and 'ac' get formed, we also looked at what they denote, we also looked at how it is used and we also presented to you an expanded meaning of this sūtra saying that when 'i', 'u', 'ṛ', 'ḷ' are followed by any vowel, they get substituted by 'y', 'v', 'r', 'l' consonants and then we looked at the expanded meaning. Now in this lecture we shall study some more important pratyāhāras.

The examples that we are taking here, studying here, they are already taken in the previous lecture. So, it is important for us to revisit those sūtras that were mentioned earlier for a limited purpose and get their meaning clarified.

When we, when we make the meaning of the pratyāhāra clear, the meaning of that sūtra would also become more clear. So, here are some of the more important pratyāhāras that we have already studied for some limited purpose earlier in the earlier lectures. For example, 'ac', we have already studied here is 'ec', standing for 'e', 'o', 'ai' and 'au', sūtra number 3 and 4, 'e o ṅ' and 'ai auc', then we have the pratyāhāra 'jhal', 'jha', 'bha', 'gha', 'ḍha', 'dha', 'ja', 'ba', 'ga', 'ḍa', 'da', 'kha', 'pha', 'cha', 'ṭha', 'tha', 'ca', 'ṭa', 'ta', 'ka', 'pa', 'śa', 'ṣa', 'sa' and 'ha', these are all part of the set which are denoted by the pratyāhāra 'jhal'.

So, 'jhal' can be said to cover sūtras 8 to 14, all the sounds that are part of 8 to 14, remember when we say 'jhal' stands for all the sounds that are stated in sūtras 8 to 14, we know that all the markers at the end of let us say sūtras 8 to 14, they are not part of this subset. The second point is 'jha' is part of this subset, the third point is all the vowels that are mentioned along with the consonants mentioned in this subset, they are not part of this subset.

The vowels which are mentioned after the consonants they are only there for the distinct comprehension of these consonants. Now if we compare the pratyāhāra 'jhal' with the sound inventory that we studied earlier, we can say that the pratyāhāra 'jhal' stands for the columns 4, 3, 2 and 1 of the sound inventory presented earlier, plus 'śa', 'ṣa', 'sa' and 'ha', the fricative sounds. So, column four is in fact, represented here by 'jha', 'bha', 'gha', 'ḍha' 'dha', sūtra 8 and 9. Column 3 is represented by 'ja', 'ba', 'ga', 'ḍa', 'da', sūtra 10; column 2 and 1 is represented by these two sūtras, 'kha', 'pha', 'cha', 'ṭha', 'tha', 'ca', 'ṭa', 'ta' and 'ka', 'pa' that is sūtra number 11 and 12.

And finally, sibilants or fricatives in sūtras 13 and 14, similarly there was a pratyāhāra that was used namely 'jhaś', this stands for 'jha', 'bha', 'gha', 'ḍha', 'dha', 'ja', 'ba', 'ga', 'ḍa', 'da' that is sūtras 8

and 9 which correspond to columns 4 and 3 in the traditional sound inventory presented earlier. Similarly pratyāhāra 'jaś' was also used earlier. This stands for 'ja', 'ba', 'ga', 'ḍa', 'da' that is sūtra 9, this pratyāhāra denotes consonants mentioned in column 3 in the traditional sound inventory mentioned earlier. So, what we do here is now the pratyāhāras that are used we try to first of all obtain the meaning by using the technique of joining the pratyāhāras.

Once we get the set of sounds that are meant by the pratyāhāra, we then correspond them correlate them with the columns and the rows that are present in the traditional sound inventory and compare them, because the traditional sound inventory is part of the curriculum of schools even today; it was there at the time of Pāṇini and it is there even today, so it is very well known and that is why we compare the set of sounds that are available to us through these pratyāhāras with the columns and the rows present in the traditional sound inventory. We also practice forming the pratyāhāra, for example, 'jhal' is formed by taking by picking 'l' from the 14th sūtra and 'jha' from the 8th sūtra and we join them together and form this 'pratyāhāra' and so on and so forth.

Let us look at the meanings of these sūtras. First, let us take 'eco ayavāyāvaḥ' 6.1.78. In this 'eco' is 6 slash 1 of 'ec' and 'ayavāyāvaḥ' is 1 slash 3 of 'ayavāyāv'. There is the word 'aci' that continues from the previous sūtra 6.1.77 and 'aci' is 7 slash 1 of 'ac' indicating the right hand side environment. So, the meaning of this sūtra is immediately before any vowel 'aci', 'e', 'o', 'ai' 'au' which are the meaning of the pratyāhāra 'ec', 'e', 'o', 'ai' 'au', they are substituted by 'ay', 'av', 'āy' and the 'āv' respectively.

So, there are 4 substituents and 4 substitutes and there is a principle of correspondence that is applied over here which is also stated by 1.3.10 'yathāsaṅkhyam anudeśas samānām' and so, the first substituent 'e' will be related with the substitute 'ay', 'o' with 'av', 'ai' with 'āy' and 'au' with 'āv'. So, 'e' will be substituted by 'ay', 'o' will be substituted by 'av', 'ai' will be substituted by 'āy' and 'au' will be substituted by 'āv', this is what is the meaning of this sūtra 'eco ayavāyāvaḥ'.

Now, we understood when we got the meaning of the pratyāhāra clear to us. So, the expanded meaning is of this kind, if 'e' is followed by any vowel, 'e' will be substituted by 'ay' and the output would be 'ay' plus any vowel. If you have 'o' plus any vowel, 'o' will be substituted by 'av' and the output would be 'av' plus any vowel. If you have 'ai' plus any vowel, 'ai' will be substituted by 'āy' and the output would be 'āy' plus any vowel. If you have the situation 'au' plus any vowel, 'au' is substituted by 'āv' and the output would be 'āv' plus any vowel, this would be the expanded meaning of this sūtra.

And here are the examples. When you have 'nai' followed by 'aka' and I have skipped some earlier stages of derivation. I am focusing only on the application of 'eco ayavāyāvaḥ' over here. So, we

start and we shall study this derivation later on in detail, right now let us focus on this stage of derivation 'nai' followed by 'aka'.

So, here you have in a nutshell 'ai' followed by a vowel 'a' that is any vowel. Now we apply 6.1.78 and substitute 'āy' in place of 'ai'. So, you get the output 'āy' followed by any vowel and so 'nai' will become 'nāy' followed by any vowel and so the form that will be derived is 'nāyaka', one who leads or a leader. Similarly in the example 'pau' plus 'aka' we once again omit all earlier stages of derivation which we shall study later on.

Right now we focus only on 'eco ayavāyāvaḥ' and so we have 'pau' plus 'aka' that is 'au' followed by any vowel, here it is 'a'. So, 'au' will be substituted by 'āv' and the output would be 'āv' plus any vowel. Therefore, we will have 'pau' plus 'aka' substituted by 'pāv' plus 'aka' that is the output and so, we will get the word 'pāvaka' one who purifies the fire.

Let us now look at the meaning of 'jhalāṁ jaś jhaśi'. You have already seen how these pratyāhāras are formed, now let us come down to the meaning. 'Jhalāṁ is 6/3 of 'jhal'. 'Jaś' is 1/1 of jaś. 'Jhaśi' is 7/1 of 'jhaś'. This sūtra is 8.4.53. What the meaning of this sūtra is immediately before, before 'jhaś' that is 'jha', 'bha', 'gha', 'ḍha', 'dha' and 'ja', 'ba', 'ga', 'ḍa', 'da', substitute 'jha', 'bha', 'gha', 'ḍha', 'dha', 'ja', 'ba', 'ga', 'ḍa', 'da', 'kha', 'pha', 'cha', 'ṭha', 'tha', 'ca', 'ṭa', 'ta' 'ka', 'pa', 'śa', 'ṣa', 'sa', 'ha' by 'ja', 'ba', 'ga', 'ḍa', 'da'. So, if you want to convert this into the column information in the traditional sound inventory, we will rewrite this meaning in the following manner, we will say immediately before consonant 4 and 3 substitute consonants in column 4, 3, 2, and 1 plus 'śa', 'ṣa', 'sa' by consonants in column 3.

I repeat, immediately before consonants in column 4 and 3, substitute consonants in column 4, 3, 2, 1 plus 'śa', 'ṣa', 'sa' and 'ha' by consonants in column 3. In the form of an equation, we can write the same thing in this fashion namely, C 4, 3, 2, 1 plus 'śa', 'ṣa', 'sa' 'ha' plus C 4, 3, 4 and 3 in this situation C 4, 3, 2, 1 plus 'śa', 'ṣa', 'sa' 'ha' will be substituted by C 3 and the output would be C 3 plus C 4 and 3. The example is here. We have 'budh' plus 'dhi', again we focus on the application of the current relevant sūtra, therefore we focus on this stage of derivation.

So, 'budh' plus 'dhi' which means 'dh' which is part of the 4th column, so, here you have C 4 followed by 'dhi' which begins with C 4. So, now you have C 4 followed by C 4 which is the environment for the application of this rule which says that substitute this C 4 by C 3. So, the output of this would be C 3 plus C 4. So, this 'dh' will be now replaced by 'd' which is C 3 over here. So, you have 'bud' and 'dhi' and when you have choices, so C 3 has 5 choices which one to be selected, there is some scientific principle involved which we shall see when we look at the process of speech production, right now C 3 is the substitute replacing C 4. So, you get 'd' in place

of 'dh' and so, you get the word 'buddhi'. This is the outcome of, output of the application of this sūtra. Let us take a look at some more pratyāhāras, some more important pratyāhāras.

'Aṇ' for example, 'aṇ' stands for 'a i u' always. This is the first sūtra and 'aṇ' stands for 'a i u' only. There is one instance that is 1.1.69 where 'ṇ' is taken from the 6th sūtra and then the pratyāhāra is formed and then 'aṇ' stands for all vowels plus semi vowels as well as 'ha'. Otherwise everywhere whenever 'aṇ' occurs it stands for 'a', 'i' and 'u'. 'aṭ' stands for all vowels plus semi vowels minus 'la' of course and 'ha'. So, 'aṭ' is from sūtra 1 to 5.

'Am', 'am' stands for all vowels plus semi vowels plus 'ha' plus consonants in column 5. 'Aś' stands for all vowels plus semi vowels plus 'ha' and consonants in column 5, 4 and 3. 'Ic', 'ic' stands for all vowels minus 'a'. 'Iṇ', remember compare 'aṇ' with 'iṇ', always is formed with the help of the marker 'ṇ' which appears always in the 6th sūtra.

So, 'iṇ' always stands for all vowels minus 'a' plus semi vowels and 'ha', 'iṇ' never stands for 'i' and 'u', never used in the Aṣṭādhyāyī that way, not explicitly stated by Pāṇini himself, but this has been established by the later commentatorial tradition, later Pāṇinian grammatical tradition.

Here are some more examples, 'haś' stands for semi vowels plus 'ha' plus consonants 5, 4 and 3. 'Haś' can also be described as 'aś' minus 'ac'. 'Yar' stands for all consonants minus 'ha'. 'Yay' stands for all consonants minus 'śa', 'ṣa', 'sa' and 'ha'.

'Yaṁ' stands for semi vowels plus consonants in column 5. 'Val' stands for all consonants minus 'ya'. 'Ral' stands for all consonants minus 'ya' and 'va'. 'Jhar' stands for consonants in column 4, 3, 2, 1 plus 'śa', 'ṣa', 'sa'. 'Jhay' stands for all consonants in columns 4, 3, 2, 1. 'Jhaṣ' stands for consonants in column 4. 'Khar' stands for consonants in column C 2, 1 plus 'śa', 'ṣa', 'sa'. 'Khay' stands for consonants in column 2 and 1. 'Car' stands for consonants in column 1 plus 'śa', 'ṣa', 'sa'. 'śar' stands for only 'śa', 'ṣa' and 'sa' and 'śal' stands for 'śa', 'ṣa', 'sa' and 'ha'.

There are some important points that need to be noted in this discussion. They are some questions. Why the sound 'h' comes twice, once in the 5th 'sūtra' and then again in the 14th 'sūtra'? Similarly why the marker 'ṇ' comes twice, in the first as well as in the 5th sūtra? What is the status of vowels stated along with the consonants? Is the vowel part of the pratyāhāra? We have already stated something about this, but let us revisit this.

And note the exception, then what is the purpose of the rearrangement of the traditional sound inventory. Let us look at each one of these points one by one. First of all. So, let us look at the question why the sound 'h' comes twice? The sound 'h' comes twice in these 14 sūtras mainly because it has to be a part of 2 pratyāhāras, namely 'aṭ' and 'śal'. These 2 pratyāhāras stand for 2 different set of sounds with which in the object language in the usage behavior of 'h' is noted. So, in order to describe this linguistic usage, we need 'h' to be a part of these sets and therefore, in order to account for the linguistic usage 'h' comes in the 2 pratyāhāras, namely the 5th and the 14th.

Let us look at the next question why the marker 'ṇ' comes twice. To be very frank there is no real answer. There is no real answer. The marker 'ṇ' with 'a' always stands for sounds in sūtra 1. So, if you have 'aṇ', we have already stated this, if you use the pratyāhāra 'aṇ' always refers to 'a i u' except in 1.1.69 where it stands for all vowels plus semivowels plus 'ha'.

That means in 1.1.69 the pratyāhāra 'aṇ' is formed with the help of 'ṇ' which comes in the 5th sūtra and the marker 'ṇ' with 'i' is always denoting all the vowels minus 'a' plus semi vowels plus 'ha'. So, the pratyāhāra 'iṇ' is formed with the marker 'ṇ' which is part of sūtra 5, 5th sūtra. So, there is no real satisfactory answer to this question why the marker 'ṇ'. This is just an explanation provided by the tradition that we must remember.

What is the status of vowels stated along with the consonants? To put it differently, is the vowel part of a pratyāhāra? No! The answer is 'no'. They are not part of that pratyāhāra. The vowels are uttered along with the consonants for the sake of distinct comprehension of consonants. They are uttered for the convenience sake and as a convention, except of course, in one case. We have already seen this explanation, but this exception we need to pay attention too. The exception is this. The exception is this.

'A' in the 6th sūtra 'laṇ', this is however not there only for the sake of distinct comprehension, it is there for that, but there is an additional function of a marker assigned to it. So, this 'a' in the 6th sūtra which comes in between 'la' consonant and' ṇ' here, this serves the function of a marker as well and so if you take 'a' as a marker, then you can also form the pratyāhāra 'ra' in which the beginning sound is 'ra' in the 5th sūtra and it ends with the marker 'a' in this sūtra. What it stands there for for is the 2 sounds 'ra' and 'la'. Consonant 'ra' and consonant 'la', that is the only exception.

Then if we go to the next point, what is the purpose of rearrangement of the traditional sound inventory and the answer is the purpose is to account for the linguistic usage in as brief a manner as possible that is the only purpose of this rearrangement and in an exhaustive manner possible, that is the answer.

To summarize, what we have studied in this lecture, we can say that the pratyāhāra technique is a unique feature of the meta-language of Pāṇinian grammar, it allows Pāṇini to refer to a big set of sounds in a very brief manner possible. Pāṇini requires 41 pratyāhāras to describe the object language, theoretically n number of such pratyāhāras are possible to form to describe the linguistic phenomenon where if necessary.

So, there are certain questions that can be asked over here based on the discussion that we have had. How does one know which is the exact substitute of which substituent? How does the system decide one of the many substitutes? What are the criteria used? What is the meta rule which allows sequential application? And answer to all these questions will be found when we look at the process of speech production and when we study the properties of sounds.

This we shall take in the subsequent lectures. Now, before closing today's lecture let us follow our practice and look at the 'maṅgalācaraṇa' taken from 'Prakriyākaumudī'. This 'maṅgalācaraṇa' is and I will read it, "śrīmadviṭhṭhalmānamya pāṇinyādimunīn gurūn, prakriyākaumudīṁ kurve pāṇinīyānusāriṇīm". And 5 sūtras in today's lecture, they are from 2.3, they are 'anabhihite', 'karmaṇi dvitīyā', 'tṛtīyā ca hośchandasi', 'antarāntareṇa yukte', 'kālādhvanoratyantasaṁyoge'. I will repeat, 'anabhihite', 'karmaṇi dvitīyā', 'tṛtīyā ca hośchandasi', 'antarāntareṇa yukte', 'kālādhvanoratyantasaṁyoge'. We will take up the questions mentioned earlier later on and some more related topics in the coming lectures.

Thank you for your attention.