Course Name: 'Introduction to Pāṇinian Grammar'
Professor Name: Prof. Malhar Arvind Kulkarni
Department Name: Humanities and Social Sciences (HSS)
Institute Name: IIT Bombay
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Welcome, I welcome you all to this lecture in the course Introduction to Pāṇinian Grammar. So, far we have studied the features of the Meta language of Pāṇinian grammar which is extremely fundamental and important to understand first of all the text of Pāṇini's grammar namely the Aṣṭādhyāyī and also the system that it operates.

So, we also studied the technique of pratyāhara and then also the detailed study that we carried out to understand what is an ‘it’ or what is a marker that is an essential part of the META language of Pāṇinian grammar. Now we are studying the functions of these markers or 'it' sounds.

This is a very excellent use of the meta-linguistic device to explain the linguistic usage in the object language. So in this lecture we will study general theme is markers in the meta-language of Pāṇinian grammar 'it' sounds, and their functions that is what we shall study now.

To recap here are the sūtras all the sūtras which term itsaṁjñā which assigned the term 'it' to various sounds, the first one to vowels and the other ones remaining ones to the consonants. 1.3.3 and 1.3.4 to the final consonants and the remaining to the initial consonants at the beginning of pratyaya verbal lists and so on excluding some specific kinds of suffixes or pratyayas.

Then we looked at and we noted down various functions of these 'it' sounds or markers and out of them we shall study these ones. We have already studied the first two prescription of addition of suffixes and specification of the position of an element that is added.

Now, we shall study the specification of the position of a substitute modification in the element to which a suffix is added and negation of certain modifications of an element in this lecture. And we shall keep accent and meaning change etcetera for the next lecture.

So, let us begin specification of position of the substitute. We have already seen that substitution is the major device used by Pāṇini in his grammar. This substitution operation functions with reference to environments, left left hand side environment, right hand side environment.

And we have seen that these environments are specified by the cases Pāṇini uses the cases to specify these environments. The 5th case specifies the left hand side environment the 7th case specifies the right hand side environment and also the meaning.

So, for example, if we say that X plus Y plus Z is substituted by X plus A plus Z which means A in effect A is replacing Y or A is substituting Y this can be described as in the environment of X on the left hand side and Z on the right hand side Y is substituted by A. This is how you can describe the substitution in Pāṇinian grammar.

Now, given this if we focus on the size of Y and A we will note the following facts. For example, if the shape or the size of Y and a is the same then by default A will substitute Y, but if there is difference of size or shape of Y and A there is ambiguity about the exact location of the substitution, what will A substitute?

So, Pāṇinian grammar removes this ambiguity by stating that in general any substitute replaces the final element of the substituend. I repeat in general any substitute replaces the final element of the substituend and we shall see what this is. So, this is stated by a sūtra 1.1.52 alo'ntyasya.

So, if Y is made up of three sounds a b and c and if A is made up of let us say one sound p. Obviously, there is difference of size of Y and A. Now there is a problem as to where will a replace Y, that means, where will p be placed? What will it substitute.

There could be multiple options either it substitutes a or b or c or a b or b c or a c or the entire a b c, we do not know what will it substitute. Now the Pāṇinian grammar specifies that in general this p replaces only the c element that is the final element over here of Y.

And the output returned is Y is equal to a b and p a plus b plus p p substitutes c. Now there are two it sounds which further contribute in removing this kind of ambiguity, by specifying the position of the substitute. Let us study them one by one.

Let us look at the it sound ś and so when ś is attached to an element that element will be called śit, the substitute notably that we are studying here. So, now, if the substitute is śit, then what happens? If the substituend consists of more than one sound and the substitute consists of only one sound, what we have seen earlier.

But the marker that is it ś is added to it then this substitute replaces the entire substituend and not the final part of the substituend. So, to put it in the equation form if Y consists of let us say a plus b plus c and A which is a substitute stated with reference to Y and A consists of p with a marker ś.

Then this A in the form of p with the marker ś will substitute this entire a plus b plus c and. So, the output return would be just p, Y is p that would be the output. So, this marker ś triggers this substitution in place of the entire substituend in this specific condition mentioned here in the second bullet. Now this is stated by the sūtra anekālśitsarvasya 1.1.55 which is an important function assigned to the marker ś.

So, let us take a concrete example over here which is shown on the right hand side of the slide this part. So, in the environment which is left hand side environment X and the right hand side environment Z substitute Y by A. So, what it means is X plus Y plus Z is substituted by X plus a plus Z if this is the format of the sūtra. And if Y is equal to a plus b plus c this can be rewritten as X plus a plus b plus c plus Z then this a can be rewritten as just b following what we saw just now the explanation.

So, the example is idama iś 5.3.3 what it means is immediately before suffixes stated in 5.3.1-27 substitute idam by iś.

So, note here that idam is a nominal root to which is added 'ha' which is part of the this set of suffixes idamohaḥ that is part of this set. So, 'ha' is part of this set this is the right hand side environment, so that this condition is fulfilled. Now this idam is to be replaced by iś, idam consists of sounds i d a m four sounds and iś consists of only one sound i with a marker ś.

But now because of this marker ś, this one sound substitute i will substitute the entire substituend which consists of four sounds. And so we get the output i plus ha and then the word returned is iha means here. So, we noted that in this case the marker ś assigned or attached to i triggers this operation and specifies the position of the substitute what is that position in place of the entire substituend.

The by default rule would I have stated the substitution in place of the final element, but if there is a marker ś attached to the substitute and if substitute consists of only one sound. Then this substitute substitutes the entire substituend that is this substituend which consists of four sound. So, i replaces all these four sounds and so we get the form iha.

Let us look at the other it sound which specifies the position of the substitute. So, an element to which ṅ is added as it sound will be called ṅit. Now if the substituend consists of more than one sound as we saw earlier. And the substitute also consists of more than one sound and the marker ṅ in it then this substitute replaces only the final sound of the substituend and not the entire substituend which is stated by 1.1.55.

I repeat, if the substituend consists of more than one sound and the substitute also consists of more than one sound and also the marker 'it' in it and that marker is ṅ, then this substitute replaces only the final sound of the substituend and not the entire substituend as we saw earlier in the previous example. where the entire substituend was replaced, so that does not happen in this case. And that is taken care of by the marker ṅ.

So, if Y consists of a b c, a plus b plus c and A is the substitute Y is the substituend and A consists of p plus q there is more than one sounds with the marker ṅ attached to it. Then instead of getting the output in the format of p plus q, now we will get the substitute now we will get the output returned in this form a plus b plus p plus q, only c is substituted. Because there is a marker ṅ attached to the substitute, so only final sound c will get substituted.

So, for example, if we put this once again in the form of an equation we see that if the rule says that X plus Y plus Z is substituted by X plus A plus Z and if Y is equal to a plus b plus c and a is equal to p plus q. Then this equation can be rewritten as X plus a plus b plus c plus Z gets substituted by X plus a plus b plus b plus q c plus Z. So, only c gets substituted by p plus q and not the entire a b c.

And let us look at the concrete example from the Aṣṭādhyāyī the Pāṇinis grammar the sūtra is asthidadhisakthyakṣṇāmanaṅudāttaḥ. I will repeat asthidadhisakthyakṣṇāmanaṅudāttaḥ 7.1.75. If without going into the details of the meaning of the sūtra let me state the meaning to you. It means immediately before the vowel beginning vibhakti that begins with the third vibhakti substitute anaṅ that is an with a marker ṅ in place of asthi dadhi Sakthi and akṣi.

Now, here there is another a over here after n, but this is only for the sake of pronunciation for convenience. The actual substitute stated here is an , a and n two sounds with the marker ṅ and a in between for the sake of pronunciation that is not to be counted here.

There is no explicit rule stated in the grammar of Pāṇini to this effect, but the later Pāṇinian grammatical tradition does specify this fact. So, now let us look at the examples here we are we

have the word dadhi to which the suffix a is added. This is the instrumental singular, the third case singular number.

Similarly akṣi plus a the third case singular a suffix is added to akṣi as well dadhi means curds akṣi means an eye. So, now, here is the environment a vowel beginning vibhakti which begins with the third vibhakti immediately before this. So, this is the right hand side environment that is fulfilled, similarly over here this is the right hand side environment.

Now immediately before this when dadhi comes or akṣi comes then substitute this, akṣi or this dadhi by an that is what 7.1.75 states. So, where would you substitute this an in place of what? So, the marker ṅ specifies the position of the substitute in the substituend this is the substituend.

And now marker ṅ specifies that this an substitute comes in place of the final element namely i over here. So, now, you get dadh an ā, an comes in place of i, dadh an plus ā and then this a gets deleted by 6.4.134. So, you get dadh n ā and you join this together and you will get the form dadhnā which means with the curds.

So, in order to derive the dadhnā we go through this grammatical procedure and here are the rules which bring about these stages. So, to derive the word dadhnā Pāṇinian grammar substitute this i by an and this is triggered by the marker ṅ.

Let us look at this example akṣi plus ā. So, if you have to say with the eye you will take the nominal root akṣi and add the instrumental singular case ā which is what we have done in the first step of derivation. Then 7.1.75 says when the right hand side environment is a vowel beginning vibhakti beginning with the third case which is what this is this is a vowel, vowel beginning vibhakti also and part of the third case that is the instrumental case.

So, this right hand side environment is fulfilled. Now, substitute this akṣi by an, where would you put this substitute? What is the exact location? And that exact location is stated by the marker ṅ which says that substitute this an in place of final i. So, we get akṣ an and ā.

Then following 6.4.134 this a gets deleted and you have akṣṇā, then following 8.4.1 this n becomes ṇ and so you get the form akṣṇā. This is how markers ś and ṅ specify the position of the substitute in the Pāṇinian grammar.

Let us now look at the next function of the markers namely modification in the element to which a suffix is added. Here are the four cases that are presented to you. First of all the 'it' sounds ṇ and ñ which are attached to a suffix they cause the vṛddhi substitution that is e ai and au substitution in place of the initial sound of the root to which they are added, this is stated by 7.2.115.

Then we come to the sound ḍ which is attached to a suffix then it causes the deletion of certain portion of the root stated by 6.4.142. Then we will look at the it sound kh attached to a suffix which causes the addition of sound m immediately after the final vowel of the root stated by 6.3.67. Then the it sound gh which is attached to a suffix and it causes the substitution of c and j by k and g respectively by 7.3.52.

Let us study these cases one by one. So, first of all let us look at these two examples, one on the left hand side is the example of the use of it sound ṇ and this on the right hand side is the example of the use of it sound ñ. So, we have this derivation process on the left hand side. Let us study it in detail. So, if the speaker wants to say a descendant of śiva he will take the nominal root śiva and by 4.1.112 add the suffix aṇ to it aṇ which has the marker ṇ. Now this marker this sound ṇ will be termed as it by 1.3.3 and will be deleted by 1.3.9. So, we get this step of derivation śiva plus a.

Then because of this ṇ, now this initial i of this nominal root śiva will get the vṛddhi substitution namely ai. And why ai in place of i this will be clear when we look at the process of speech production which will state the affinity between i and ai. So, śiva plus a then we apply 4.6.148 śiva plus a and then you get the form śaiva a descendant of śiva. So, this vṛddhi is caused by this marker ṇ over here.

Similarly if we have to derive the word bhāva meaning the state. We take the verbal root bhū and add the suffix ghañ to it by 3.1.18 then of course, in this ghañ the initial gh is termed it by 1.3.8 n is termed it by 1.3.3 and then both of them are deleted by 1.3.9.

So, now we get the suffix a over here bhū plus a. Now because there is this marker ñ this ū will get the vṛdhi substitution and this will become bhau. So, u becomes au, so au substitutes u. And why once again we shall study this when we study the process of speech production where the phonetic properties of u and au they will be studied and they show close affinity. So, by 7.2.115 we substitute bhau in place of bhū then by 6.1.78 au gets replaced by āv and so you get the form bhāva. So, here the vṛddhi substitution is caused by the marker ñ.

Let us look at these two examples where the marker ḍ is playing a prominent role. For example, when you have to say 20th you take the nominal root viṁśati and add the suffix ḍat to it ḍat by 5.2.42. And then this ḍat consists of ḍ as it by 1.3.72 cuṭū, ṭ as it by 1.3.3 halantyam they both get deleted by 1.3.9 tasya lopaḥ and so we get a, viṁśati plus a. Now 6.4.142 comes in and says that delete this ti if this suffix is ḍit . It is ḍit. So, therefore, we delete this ti and we get the form viṁśa.

Similarly in case of a verbal root here we have bhavitās and the suffix is ḍā and once again applying 1.3.7 and 9 this ḍ will be deleted and so now, we have bhavitās plus ā. Now this ā is ḍit and because this is ḍit this ās portion in bhavitas will be deleted and we will get the substitute bhavit and ā join together we will get bhavitā that is he she or it will become tomorrow. There is no specific explicit rule which states this operation with respect to verbal roots, but the later Pāṇinian grammatical tradition fills in this gap and have, in fact written down the statement to this effect.

Now, let us take another example which explains modification in the element to which a suffix is added . And this modification is brought about by an it sound which is part of that precise suffix. Here we are dealing with the it sound kh which is added to a suffix and then this kh sound brings about some modification in the word to which it is added. So, here we are deriving a compound which is janamejaya which means one who makes people tremble janamejaya one who makes people tremble.

Here we have jana plus am plus eji, then we add a suffix khaś to this verbal root eji in the environment of jana plus am. Now in khaś we know that kha is 'it' because of the application of 1.3.7 laśakvataddhite and ś is 'it' because of halantyam 1.3.3. And so they both get deleted and we have 'a'.

Before that this am gets deleted by 2.4.71 supo'dhātuprātipadikayoḥ and we get jana plus eji plus khaś, then the itsaṁjñā applies and we have jana plus eji plus a. Now 6.3.67 applies at this stage because its conditions are fulfilled and 6.3.67 says that if the suffix has kh sound as it or marker, then the pada the purvapada over here which is jana gets m added to it at the end, in this particular position.

So, we have jana m and then eji and because this a is pratyaya is śit, so we add the śap pratyaya over here. So, we have jana m plus eji plus śap plus a and then we have jana m plus eje , eji becomes eje because of this śap by the application of 7.3.84 and so we have jana m followed by eje plus a plus a. Then this eje becomes ejay because of ecoyavāyāvaḥ 6.1.78 and so we have

jana m then ejay a a then pararūpasandhi takes place. And finally, we get the form janamejaya one who makes people tremble.

Now we saw that because of the marker kh, m was added to this purvapada. And because this is mum, so this m is added immediately after the final vowel in this word now the final vowel in this word is a after n. So, this is m is added over here this is how the kh sound brings about modification in the element to which the suffix is added.

Let us look at the last example in this particular function that is the it sound gh. So, here we have the verbal root bhañj meaning to break to which is added the suffix ghurac by 3.2.161 in which gh is termed it by 1.3.8 and c termed it by 1.3.3 and then both of them get deleted by 1.3.9. So, we get ura, so bhañj plus ura. So, here is the substituend j which is then changed to g. And because of this g this ñ is also changed to ṅ and we get the form bhaṅgura that is one whose nature it is to break down. So, this substitution is caused by the it sound gh.

Let us look at the next function of the it sounds negation of modifications of element. So, it sounds k g and ṅ are used to describe negation of guna substitute in place of ik that is I u ṛ and ḷ. Similarly same it sounds k g and ṅ are used to describe negation of vṛddhi substitution in place of ik that is I u ṛ ḷ. Let us take one example each.

So, the it sounds k which prescribes negation of guṇa a e o, here is an example. We have the verbal root ci to which is added the suffix kta by A 3.2.102. Now because this suffix is k is marked as it by 1.3.8. So, this gets deleted by 1.3.9. So, we get the suffix ta so, but this is now kit. So, this will negate the guṇa substitute that is ci becoming ce by 1.1.5 and so you will get the form cita something that is collected. So, guṇa is prohibited over here negated.

Similarly, if you have ci nu and tas, this is an example where ṅ sound causes the negation of guṇa ci nu and tas. Now this nu is considered as ṅit having ṇ as it because of this ṅit ci will not be substituted by ce. So, guṇa will be prohibited negated and so we will get the form cinutas cinutaḥ which means they two collect.

And now, let us look at the example where the markers prohibit the vṛddhi and there is one example here.

This is the verbal form mṛṣṭaḥ they two clean. This begins with mṛj followed by the suffix tas, this tas is marked with the it sound ṅ. And now this will cause the negation of the vṛddhi

substitute in place of this ṛ. This vṛddhi substitute is stated by in general by 7.2.114, but now because this is a ṅit suffix 1.1.5 will negate this vṛddhi.

So, it will not become mārj, it remains mṛj then j is substituted by ṣ is ṣ causes t to get substituted by ṭ and so finally, we get the form mṛṣṭaḥ . Here there is no vṛddhi that is negated by 1.1.5 because the suffix is ṅit marker has the marker ṅ into it.

To summarize three more functions of the markers it its sounds were studied in this lecture. These markers and these functions are specification of the position of a substitute, modification in the element to which a suffix is added, negation of certain modifications of an element.

The it sounds are used as metal linguistic devices effectively to describe various linguistic features through grammatical operations. These operations pertain to almost all components of a sentence.

Now, as is our practice let us end this lecture by reciting an important maṅgalācaraṇa. And this is taken from a text called vaiyākaraṇasiddhāntakaumudī and the maṅgalācaraṇa is munitrayam namaskṛtya taduktīḥ paribhāvya ca, vaiyākaraṇasiddhāntakaumudīyam viracyate. I repeat munitrayam namaskṛtya taduktīḥ paribhāvya ca, vaiyākaraṇasiddhāntakaumudīyam viracyate.

And today's five sūtras taken from 3.2 karmaṇyaṇ, hvāvāmaśca, āto'nupasarge kaḥ, supi sthaḥ, tundśokayoḥ parimṛjāpanudoḥ. I repeat karmaṇyaṇ, hvāvāmaśca, āto'nupasarge kaḥ, supi sthaḥ, tundśokayoḥ parimṛjāpanudoḥ. Now, we will take the remaining two functions in the next lecture.

Thank you for your attention.