

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:52

Welcome. I welcome you to this lecture in the course Introduction to Pāṇinian grammar. In this lecture we shall be studying three very important technical terms aṅga, bha and pada, internal pada. These three technical terms are defined in the saṁjñāsūtras in the text of Aṣṭādhyāyī. We study these three concepts after we have studied the technical terms which are core as far as the sentence construction is concerned in Sanskrit namely the kāraka and the vibhakti.

We have also studied some more saṁjñāa in various other contexts, throughout this course. Today we shall focus on these three terms aṅga, bha and pada, the internal pada. So, if we start the derivation process of the sentence generation, here is the artha that first of all is part of the cognitive apparatus of the speaker, there are six sentence meaning Ram goes to a village, Ram goes to a school and so on.

When this data set of meanings is analyzed we find the following constituents. That there is an action of going Ram and Mohan are the performers, village and school these are the destinations. And then the second scenario is that there is an the action of seeing described in which Ram and Mohan are the performers and a village and a school they are the objects, they are being seen.

Once these meaning constituents are available to us we then go select the words which express these meaning relations as well as the meanings the action of going is expressed by the word gam, performer is expressed by aḥ, visarga also known as su in combination with ti. Ram and Mohan are the meanings which are expressed by Rāma and Mohana in Sanskrit.

Destination is expressed by m or am. A village and the school is expressed by grāma and śālā. This is about the first scenario, the second scenario is about the action of seeing in order to express this meaning we have ḍṣ performer is aḥ, visarga technically su in Pāṇinian grammar, in combination with ti. Rama and Mohana get expressed by Rāma and Mohana object is expressed by m - am, village and the school is expressed by grāma and śālā.

And then we start the derivation process of this entire sentence. First we start with the verbal root gam and then there are these vacant generic slots which then get filled by the respective suffixes

after the verbal root gam, we add ti. It is very important process the verbal root is gam to which is added the suffix ti and then we add su in other brackets. And then we add the prakṛti left hand side part in those other brackets like here. After we finish with gam ti we add su and then this slot is filled in by Rama later on and same thing we do with the rest.

So, then we have gam plus ti plus Rāma plus su plus grāma plus am. Then we proceed further by applying certain other rules we get gam plus 'a' plus ti plus Rāma plus 's' plus grāma plus am. Now this 'a' is the cause which causes this gam to be replaced by gacch. So, we have gacch plus 'a' plus ti plus Rāma plus 's' plus grāma plus am. Then certain other rules apply and then we get 'gacchati Rāmaḥ grāmam' and finally, we apply the rules of sandhi at the sentence level, so we get the sentence 'gacchati Rāmo grāmam'.

This is how the sentence gets derived. It is important to note this derivation process, because the three terms that we are going to study; they play an important role in this derivation. So, after having done this process we get the following śabdās in order to express the artha with which we started the process. So, Ram goes to a village is expressed by 'grāmaṁ gacchati Rāmaḥ' or 'gacchati Rāmo grāmam' as we saw earlier and so on. And then we have these 6 śabdās sentences ready as far as the śabdākāśa is concerned in extension of the arthākāśa.

And then this causes the entire derivation process and ends in the auditory sounds being produced through the oral cavity. Now, in this particular dataset which comprised of the sentences we observe the following sups, 21 sups divided into 7 rows and 3 columns 'su au jas am au as' etcetera, 21 such suffixes these are called sups.

And these are the words which are part of the dataset that is described earlier Rāmaḥ Rāmau Rāmāḥ, these are called subantas because there is a sup coming at the end. So, Rāmaḥ has Rāma which is the prātipadika and ḥ, the sup coming at the end. Rāmaḥ has got Rāma a prātipadika and am coming at the end, so all these are subantas. These are part of the data set that we saw earlier.

Similarly we also have the subantas of this kind and I will read this in detail because this we are going to study in this today's lecture rājā rājānu rājānaḥ prathamā, rājānam rājānu rājānaḥ dvitīyā, rājānaḥ rājābhyām rājābhiḥ tṛtīyā, rājāne rājābhyām rājābhyaḥ caturthī, rājānaḥ rājābhyām rājābhyaḥ pañcamī, rājānaḥ rājānoḥ rājānām ṣaṣṭhī, rājāni rājāni rājānoḥ rājasu saptamī. If you carefully study these forms there are three patterns that emerge as far as the formal similarity is concerned. And it is precisely in order to explain these three patterns that Pāṇini had to use the technical terms bha as well as internal pada which are part of the explanation of what is called an aṅga.

So, let us look at what is an aṅga, but before that here are some other forms here are some suffixes these are called tiṅs, they are also part of the dataset described earlier. So, we have already seen this 'tip tas jhi' etcetera 18 suffixes. And they generate these 18 forms nayati nayataḥ nayanti etcetera. This example is taken primarily because the verbal root nī is generally normally decline in all 18 forms gacch will have only 9 primarily gacchati gacchataḥ, that is why nayati is taken as an example to illustrate the tiṅanta forms.

So, let us study what is an aṅga? a very important technical term used by Pāṇini. It is defined at 1.4.13, 1st adhyāya 4th pāda 13th sūtra, 1st chapter, 4th subchapter and 13th sūtra. And the sūtra is 'yasmāt pratyayavidhis tadādi pratyaye aṅgam', aṅgam is the technical term the rest is the definition of aṅga, what is called an aṅgam. The most important word here primarily is pratyayavidhi, pratyayavidhiḥ means a prescription of a pratyaya, of a suffix. Yasmāt indicates the word from which this pratyaya is prescribed.

The next important word is tadādi, the pronoun tad, here refers to this 'yat' the element to which a pratyaya is added. So tadādi, an element beginning with this element is called aṅga when the pratyaya follows. So, this definition of aṅga has got several important words, we did not pay attention to the word pratyaye. Now let us pay attention to this word pratyaye, this pratyaye is in seven month indicating immediately before.

What this also indicates is that pratyaya is a very important condition, in fact it is an essential condition for a particular verbal element to be termed aṅga. In fact, you can also say that a verbal element is termed aṅga only with reference to a pratyaya. No verbal element can be absolutely called an aṅga, a verbal element is called aṅga or termed aṅga, if and only if in relation with a pratyaya. So, immediately before a pratyaya that element; obviously, immediately before a pratyaya in the derivation process, but you are supposed to have is a prakṛti.

So, this yasmāt refers to that prakṛti, prakṛti word and then this pratyaya should have been prescribed after immediately after this prakṛti element. So, pratyayavidhiḥ and then you start with this prakṛti element and then count the verbal element that begins with this prakṛti element and goes on up to this pratyaya and that verbal element then is called an aṅga.

So, we can translate this in the following manner that verbal element X at the beginning of which comes Y, so tadādi, prakṛti to which is added the suffix by prescription, pratyayavidhis. So, immediately before that suffix that verbal element is called aṅga. I repeat that verbal element X at the beginning of which comes Y that is a prakṛti to which is added that suffix by prescription and not just placing side by side, it needs to be prescribed immediately before that suffix that verbal element X is called an aṅga.

So, if we have the case where you take Y as the initial stage of derivation and to which a particular sūtra prescribes the addition of a pratyaya, so a pratyaya is added over here. Now, you will ask a question what is an aṅga and then obviously, the next sub question that needs to be asked is with reference to which pratyaya. So, if somebody says with reference to this pratyaya then you can say that well this pratyaya is added after this prakṛti Y, so beginning with this Y and immediately before this pratyaya whatever comes in between is called an aṅga. So, Y is the only part that comes from Y up to this pratyaya over here therefore, Y is called an aṅga.

So, in this case Y is X, Y is aṅga. Now if we look at the next example when this particular stage is expanded as is the case with the Pāṇinian derivational system. So, this pratyaya is added after Y, now in the environment of this pratyaya and this prakṛti, another pratyaya is added which is this, this pratyaya is added, added to a verbal root Y for example. So, this pratyaya is also added to Y.

Now, once again we ask a question what is an aṅga, the sub question to this is with reference to which pratyaya and we say with reference to this pratyaya, right most pratyaya. And then we have to now think about the term aṅga, the sūtra comes to our help and it tells us that first of all think about the prakṛti to which this pratyaya was added and that prakṛti is this Y. Now begin from Y and come up to this pratyaya immediately before this pratyaya, whichever verbal element comes in between and this Y all that element is to be termed aṅga.

So, Y is the prakṛti to which this pratyaya is added. So, we start with Y and come up to this pratyaya, so Y plus pratyaya. So, this entire part will be called an aṅga, in this case Y plus pratyaya is that X is that aṅga. We are going to take a few examples to illustrate this point and this particular explanation of the term aṅga. But before we go there let me reiterate the most important aspect in the term aṅga namely, that it is relative it is not absolute.

An element can be called aṅga, only with respect to a pratyaya, only with reference to a particular pratyaya, you have to specify. That pratyaya with reference to, which an element is being termed an aṅga.

Let us look at the example let us take the same derivation process which we saw earlier and here we have gam plus ti plus Rāma plus su plus grāma plus am as one step of derivation. If we study this closely we will see that gam is a Y a prakṛti to which is added a suffix pratyaya. And immediately before this ti the verbal element that begins with Y is gam. Obviously, and therefore gam is an aṅga with reference to ti.

Similarly, if you look at the second word Rāma is a Y pratyaya to which is added a suffix su. So, immediately before this su the verbal element that begins with Y is Rāma. And therefore, Rāma is an aṅga with reference to su. Similarly in grāma plus am, grāma is a Y prakṛti to which is added a suffix am. So, immediately before this am the verbal element that begins with Y is grāma and therefore, grāma is an aṅga with reference to am. This is how we can explain aṅga in all these three words. The prakṛti is primarily in this case become an aṅga and they are all shown in green.

Now let us take this second example and here we take the next step in the derivation process of this sentence that we saw earlier. Now here we have an additional suffix added after a verbal root, this is that additional suffix 'a'. Remember this ti is added after gam, this 'a' is also added after gam as far as the sūtra prescription is concerned.

Now, what happens in this case is gam is a Y prakṛti to which is added a suffix ti as was before. Now immediately before this ti, the verbal element that begins with Y is gam plus 'a'. And therefore, gam plus 'a' is an aṅga with reference to ti, this is the difference now.

So, this entire gam plus 'a' which is shown in green becomes an aṅga with reference to ti. What happens to this 'a' suffix what is the aṅga with reference to this 'a'? Here is the answer gam is prakṛti Y to which is added a suffix 'a', immediately before this 'a' the verbal element that begins with Y or prakṛti is gam. And therefore, gam is an aṅga with reference to 'a', only gam will become green in that case indicating that this is an aṅga with reference to 'a'. But with reference to ti, gam plus 'a' is an aṅga.

So, what comes out of this is that aṅga is the technical term which is given to a verbal element always with reference to a pratyaya, you cannot talk about an aṅga in absolute terms, it has to be with reference to a pratyaya. So, if I ask you describe an aṅga to me in this particular context, you should look for the pratyaya that I am referring to the next question should come with reference to which pratyaya.

So, X is an aṅga with reference to what? with reference to which pratyaya? that pratyaya needs to be specified. If that pratyaya is mentioned as ti then gam plus 'a' becomes an aṅga, if that pratyaya is 'a', then only gam becomes the aṅga. What is the function of the term aṅga what happens after a verbal element is called aṅga. So, rules stated in 5 subchapters namely 6.4 and 7.1 to 4. That means, the entire 7th chapter all these 5 subchapters have rules or sūtras which operate on the aṅga.

Thus at the stage gam plus 'a' plus ti 7.3.77 applies to the aṅga and replaces gam by gacch. So, we get gacch plus 'a' plus ti as the next step in the derivation after gam plus 'a' plus ti. So, after getting gacch plus 'a' plus ti, we join them together and get the form gacchati.

In case of gacch plus 'a' plus mi with reference to mi, this 'gacch and a', this entire unit is called aṅga. Then 7.3.101 applies to the aṅga and lengthens the final vowel of this aṅga which is this 'a' and so we get gacch plus ā plus mi and finally, we get the form gacchāmi. So, in this particular form the verbal root and the suffix gets lengthened, in this case it does not, in this case only the root gets substituted. So, root substitution and lengthening seem to be the two immediate functions of the term aṅga.

Here are some other examples and these examples are taken from the tiṅanta forms cited earlier. So, thus at this stage nī plus 'a' plus ti where we are focusing on 'a' as the suffix with reference to this nī becomes an aṅga. So, it is shown in green. Now, in this case the 7.3.84 applies to the aṅga and replaces nī by ne, ne by nay.

So, we get nay plus 'a' plus ti, as the next step in derivation, we join this together and we get the form nayati. So, 7.3.84 applies to the aṅga and replaces nī by ne, then by the application of some other rules ne becomes nay. So, we get the next step nay plus 'a' plus ti and when we join these together we get the verbal form nayati.

In case of nay plus 'a' plus mi, we focus on mi and with reference to mi, nay plus 'a' is termed as aṅga. So, 7.3.101 applies to the aṅga and lengthens the final vowel 'a' over here and so we get nay plus ā plus mi, the final form is nayāmi.

Here are some other examples explaining what happens to the aṅga. So, if you have ram plus ghañ. So, we take a verbal root ram to which we add the suffix ghañ and we get the form Rāma. Now, with reference to the suffix ghañ, Rāma is an aṅga.

When we derive the verbal form kartavya we take the verbal root kṛ, add the suffix tavya to it. With reference to tavya verbal root kṛ becomes an aṅga by application of the definition of aṅga.

Similarly when we have kṛ plus ti, ti is a suffix added after the verbal root kṛ. So, with reference to ti, kṛ becomes an aṅga in this case. Now when we have kṛ plus ti, we have 'u' as an another suffix added after verbal root kṛ. Now, with reference to 'a', kṛ is an aṅga. So, with reference to ti

Y which is this prakṛti kṛ beginning with it up to this ti namely kṛ plus 'u' this entire unit becomes an aṅga.

Now after these words are derived, so for example, ram plus ghañ gives us Rāma. Now we add the suffix su to it to make it a pada. So, Rāma plus su is the next step in the derivation process in which su is the suffix added after the prakṛti Rāma, so now Rāma becomes an aṅga.

Similarly, kartavya was derived after kṛ plus tavya to which we add su this is a suffix this is a prakṛti. So, with reference to su, this entire unit kartavya becomes an aṅga. Similarly kṛ plus ti and we get the form kṛti and so we add the suffix su to it, with reference to su, the entire kṛti is called an aṅga. When we look at the verbal derivation kṛ plus u plus ti and we get the verbal form karoti, remember karoti is not an aṅga as it cannot be a prakṛti to which is added a suffix. karoti in fact is a pada, with only one minor exception which we need not study over here. But in general karoti can never become an aṅga, because it cannot become a prakṛti, it is a pada.

The next technical term that we study today is bha. So, what is a bha? bha is in fact an aṅga of a special kind, prātipadika plus pratyaya, in this format, if the prātipadika is of a masculine or feminine gender, then omit the first 5 pratyayas stated in 4.1.2. Now, from the remaining ones from 4.1.2 up to 5.4.160 a vowel beginning amongst the consonants y beginning pratyaya follows, then this prātipadika is called bha. This is the process followed to term a prātipadika bha. Let us redo it.

So, if we have a situation where prātipadika plus pratyaya is seen, in this case if the prātipadika is of masculine or feminine gender, then we omit the first five pratyayas stated in 4.1.2. Look at the remaining pratyayas from 4.1.2 up to 5.4.160 amongst them, if a pratyaya over here in this slot is a vowel beginning pratyaya and amongst the consonants if this pratyaya is 'a' beginning, then this prātipadika is called bha.

This is the sūtra which defines bha, yaci bham 1.4.18 and the meaning I have already stated to you a prātipadika is termed bh, when it is immediately followed by vowel beginning suffixes as well as suffixes that begin with y. Amongst all the suffixes stated in the section 4.1.2 to 5.4.160 minus the first five after a masculine and feminine root and 1 slash 3 and 2 slash 3 after a neuter root.

So, all blue mark suffixes in the next slide cause the prātipadika to be termed bha. All rules stated in the section 6.4.129 up to the end of 6.4 that is 175 apply to bha they are governed by the adhikāra bhasya.

Here are the sup suffixes with the markings for bha. So, these are the first five suffixes, omit them, begin with the sixth one and note down the vowel beginning suffixes. So, 'as' is the vowel beginning, 'ā e as as os ām i os' these are the vowel beginning suffixes. So, when they follow the previous prātipadika will be termed bha, but in case of bhyām bhis bhyām bhyas bhyām bhyam and sup which are consonant beginning suffixes and amongst the consonant beginning they do not begin with y they begin with bh and 's' therefore, when they follow the previous prātipadika will not be called bha. Therefore, these suffixes are shown in red they do not cause the term bha to apply to the previous prātipadika.

Similarly, these suffixes which are shown in black they also do not cause the previous prātipadika to be called bha. So, here are the examples.

So, if we take marut and add the suffix 'as' to it which is 2 slash 3, now this suffix 'as' is a vowel beginning suffix and 6th suffix stated in 4.1.2. So, applying the definition marut is called bha. So, we get the form marutaḥ as it is.

Similarly, if you have rājan plus 'as' at this stage rājan is termed bha and hence 6.4.134 applies which deletes 'a' in rājan. rājan is called bha because this 'as' is 2 slash 3 and this is the vowel beginning suffix and therefore, rājan becomes bha. And then 6.4.134 applies and deletes this 'a' over here, so we get rājñ plus 'as' by the application of 6.4.134 then these two join together give us rājñas and then finally, rājñāḥ which is 2 slash 3 onwards, rājñāḥ rājñā rājñe rājñāḥ rājñi rājñoḥ rājñām, you see this 'a' gets deleted in all these forms.

So, here are all the forms with bha marking. So, we have rājā rājānau rājānaḥ rājānam rājānau , first five forms different look at the sixth form rājñāḥ, then 3 slash 1, 4 slash 1, 5 slash 1 the entire 6th case 7 slash 1 and 7 slash 2 'a' is deleted. So, these suffixes in these slots they cause the prātipadika rājan to be termed as bha whereas in the suffix in the forms which are marked with red colour the prātipadika is not termed as bha because the suffixes are concerned beginning and even then they are not beginning with y.

Now what happens to these red marked padas, in order to explain these forms Pāṇini has defined internal pada, once again let us see how a prātipadika is termed as pada, also to be known as internal pada. So, we have the same situation as we had for the term bha where a prātipadika is a prakṛti to which is added a pratyaya.

In this case if the prātipadika is of masculine or feminine gender omit the first five pratyayas stated in 4.1.2. Now from the remaining ones from 4.1.2 up to 5.4.160 a consonant beginning pratyaya follows, consonant beginning minus y pratyaya follows, then the prātipadika is called pada, we call this internal pada. So, any consonant beginning pratyaya minus y beginning and then that pratyaya causes the prātipadika to be called a pada.

This is the sūtra svādiṣu asarvanāmasathāne 1.4.17 and what this means is a prātipadika is termed pada when it is immediately followed by any suffix which begins with a consonant of course, minus y, stated in the section 4.1.2 to 5.4.160 minus the first five after a masculine and feminine root and 1 slash 3 and 3 slash 3 after a neuter root. So, all red mark suffixes cause the prātipadika to be termed pada in the following slide.

So, the first five which are marked in black ink they are to be omitted. Now within the remaining suffixes over here the ones which are shown in blue they cause the bha term to be applied to the prātipadika. Now these are the consonant beginning suffixes, bhyām bhis bhyām bhyas bhyām bhyam and sup, 7 suffixes they begin with the consonant and that consonant is not y. Therefore now these suffixes will cause the prātipadika to which they are added to be termed pada.

For example, we have marut plus bhyām, bhyām is 3 slash 2 or 4 slash 2 or 5 slash 2 bhyām is a consonant beginning suffix 8th once stated in 4.1.2. So, now marut is not called bha, it is called pada and so 8.2.39 which has pada mentioned as a necessary condition applies and we get 't' substituted by 'd'. And so we get marud plus bhyām finally, we get the form marudbhyām.

Similarly we have Rājan plus bhyām and bhyām is a consonant beginning suffix 8th one stated in 4.1.2. So, Rājan is now not called bha, it is called pada. So, 8.2.7 which as pada mentioned as a necessary condition applies and we get rāja plus bhyām where 'n' is deleted by 8.2.7 and finally, we get the form rājabhyām.

So, once again let us take a relook at all these subanta pada forms of Rājan. So, here are the first five, rājā rājānau rājānaḥ rājānam rājānau, we omit these five. And now look at the next forms amongst which the ones that are marked in blue they are derived with the help of the term bha assigned to the prātipadika. Because the suffixes over here they are vowel beginning.

If we look at the forms that are marked with red ink rājabhyām rājabhiḥ rājabhyām rājabhyaḥ rājabhyām rājabhyaḥ and rājasu, we have the suffixes beginning with consonants bhyām bhiḥ bhyām bhyaḥ bhyām bhyaḥ and su, so they cause the prātipadika rājan to be termed as pada as a result 8.2.7 applies and deletes this 'n' over here, so we get these forms rājabhyām etcetera.

What is clear from all these forms is that there are three patterns clearly visible. The first one, rājā rājānau rājānaḥ rājānam rājānau where rājā as a form is commonly available in all the five. Then amongst the rest rājña is the common form available in the blue and rāja as a common form is available in the red ones.

These are the three commonly available patterns as far as the prātipadika is concerned in order to account for these three patterns Pāṇini had to devise these technical terms namely bha and pada.

Let us look at the contrastive examples. So, when we have marut plus 'as' 2 slash 3 'as' is a vowel beginning suffix and 6th suffix stated in 4.1.2. So, marut is called bha and we get the form marutaḥ. But when it comes to marut plus bhyām 3 slash 2 bhyām is a consonant beginning suffix 8th one stated in 4.1.2. So, marut is now not called bha, marut is rather called pada, marut plus bhyām that is the output and so we get the form marudbhyām as was shown earlier.

Similarly, rājan plus 'as', 'as' is a vowel beginning suffix. So, rājan is called bha which triggers 6.4.134 to apply, which deletes 'a' we get to form 'rājn as', rājns, rājñaḥ. And in contrast we have rājan plus bhyām 3 slash 2 and rājan gets termed pada because of which 8.2.7 applies which deletes 'n'. So, we get the form rāja plus bhyām and finally, rājabhyām. This is how the terms aṅga, pada and bha apply.

To summarize the the three technical terms aṅga, bha and pada are unique creations on the part of the Pāṇinian grammar. The term internal pada also shows some common features of finished pada, they help formulate a rule based system to account for pattern variation visible in the forms. These three terms form the core of the treatment of morphology as it is called in the modern linguistics in Pāṇinian grammar.

Before we closed here is the maṅgalācaraṇa of today taken from Bṛhatparibhāṣāvṛtti of Śīradeva. Maṅgalācaraṇa is "sphuradabhinavarāgā bhāskarābhā pragalbhā prasabhaśamitadoṣā sphītasallokacakrā, vihītahitavicārā jāḍyajātopaśāntyai prabhavatu paribhāṣāvṛttirāsevitaṣā". I repeat, "sphuradabhinavarāgā bhāskarābhā pragalbhā prasabhaśamitadoṣā sphītasallokacakrā, vihītahitavicārā jāḍyajātopaśāntyai prabhavatu paribhāṣāvṛttirāsevitaṣā".

And the five sūtras of today taken from 7.2, sici vṛddhiḥ parasmaipadeṣu, ato lrāntasya, vadavrajahalantasyācaḥ, neṭi, hmyantakṣaṇaśvasajāgrṇiśvyeditām. I repeat, sici vṛddhiḥ parasmaipadeṣu, ato lrāntasya, vadavrajahalantasyācaḥ, neṭi, hmyantakṣaṇaśvasajāgrṇiśvyeditām.

Thank you for your attention.