

Course Name: 'Introduction to Pāṇinian Grammar'
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Welcome, I welcome you all to this lecture in the course Introduction to Pāṇinian grammar. In this lecture, we shall study the principle of compositionality which underlies the overall grammatical system of the Pāṇinian grammar.

We have so far seen the process of speech production. We studied several aspects of it in detail. The internal cognitive aspects and then, the physical or the biological aspects which then produce the speech which is audible, and the speech thus produced looks like the one that is presented on this slide.

So, we have 6 meaning-meanings stated on the left-hand side over here and then, 6 śabdās also stated on the same slide and then, it is these śabdās which get converted into the audible speech. So, if we read the meanings Ram goes to a village and it has a correlation with grāmaṁ gacchati Rāmaḥ. Ram goes to a school; this is the meaning which has got the correspondence to śālāṁ gacchati Rāmaḥ. Mohan goes to a village has correspondence to the grāmaṁ gacchati Mohanaḥ. Mohan goes to a school has correspondence with śālāṁ gacchati Mohanaḥ. Ram sees a school has correspondence with śālāṁ pashyati Rāmaḥ and finally, Mohan sees a village has correspondence with grāmaṁ pashyati Mohanaḥ.

So, the śabda that is stated in terms of these six sentences is what gets converted into the audible speech symbols. The artha that is presented on this slide is actually of a different kind in a different form. For the sake of convenience, we have taken it into English. We shall study the technical sentence meaning in the later part of the course and the details of it in the advanced level course. But for easier understanding, we have given the meanings in a different language for the sake of convenience of all, we noted them down in English.

Another important fact to be noticed from these six sentences presented to you and the six sentence meanings presented to you and now, I am using the word sentence meaning and sentence, this on the left-hand side is sentence meaning, this is the sentence, all these six sentences and these six sentence meanings.

So, they are all put in one square bracket, each sentence meaning is put in one square bracket and the corresponding sentence is also put in one square bracket. This has some significance. The significance is such that the meaning in this case, the sentence meaning is one unit and the śabda or the sentence is also one unit. One unit of sentence meaning gets expressed into one unit of a sentence that is the idea.

We have also seen that in the process of speech production described in the Pāṇinian grammar, 'ātmā buddhyā sametyārthān' comes in at the first stage and so the meaning gets collected and then comes the śabda. This meaning is not unrelated to śabda, we have already studied the concepts of arthākāśa as well as the concept of śabdākāśa. The location for both these is the intellect of the speaker what is called as buddhi, both are buddhistha, but are interrelated. So, both these arthākāśa and śabdākāśa they are explained by the sentence 'ātmā buddhyā sametyārthān'.

So, in this case also, the meanings which are mentioned on the left-hand side in a bracket they and the sentences which are mentioned on the right-hand side in the brackets, they both which are interrelated it is the meaning which is the conveyed and it is the sentence which is the conveyor, they both are decided at the level of 'ātmā buddhyā sametyārthān' and then, the śabda get the expression in the form of the speech which is audible. This is the intention of putting a square bracket after the sentence meaning and the respective sentence.

Let me repeat following the process of speech production described by Pāṇinian grammar, it is the meaning which acts as the cause and the śabda which acts as the effect in the process of speech production and so arthas are shown on the left-hand side as the cause and the śabdās which express them remember these two are still part of the intellect, part of the buddhi, but still there is this cause and effect relationship and then, this śabda gets the audible form through the maneuvering of the breath, propelling it up, sending it to the oral cavity and putting some pressure on it and tongue shaping it in a particular manner and then getting thrown out.

This audible speech is an expression of the śabda which exists in the intellect as a result of the artha that is collected. So, one meaning unit gets one sentence unit, second meaning unit is associated with or is expressed by the second sentence unit, it is a one-to-one correspondence. One unit conveyed, one unit the conveyor that is all. The significance of this statement will be clear in a while.

Just as the śabda is collected at the stage of 'ātmā buddhyā sametyārthān', we also observed from the rules of Pāṇini that the speech thus produced also consists of the svaras. Now, here are the same examples that we have already studied, when we studied the meaning artha as well as the

śabda and we took 12 sentences and we divided them into two datasets and here is the first dataset with the accent marks shown that is why this is called dataset 1.1.

And so, we have 6 sentences and now, you see there are some accent marks over here for example, we have the 1st sentence grāmaṁ gacchati Rāmaḥ so, here ma which shown with the vertical bar on top of it and rā is shown as having a horizontal bar beneath it and gacchati is shown without any accent mark.

So, now, let us look at the concrete examples by looking at the sentences. So, earlier when we studied the compositionality in the meaning as well as the words artha and śabda, we studied 12 sentences as examples, and we also classified them under two groups, and we called them dataset one and data set two. In the first data set, we had the first 6 sentences which are reproduced in this slide and the second data set consisted of the sentences number 7 to 12 which will be part of the second data set of course, which will be part of the upcoming slides.

Now, we have also shown the same sentences with the accent marks. So, if we look at the 1st sentence which is grāmaṁ gacchati Rāmaḥ, here there is a vertical bar on top of this letter ma and then, there is a horizontal bar which is below this letter a or rā, the word gacchati there is no symbol and so on and so forth, you will see similar marks existing in all sentences.

Then, we also observe another set of meanings and another set of sentences corresponding to the set of meanings these are the villages being reached by Ram which is corresponded with Rāmeṇa grāmo gamyate. The school is being reached reached by Ram, this has correspondence with Rāmeṇa śālā gamyate. The village is being reached by Mohan has correspondence with Mohanena grāmo gamyate. The school is being reached by Mohan has correspondence with Mohanena śālā gamyate. The school is being seen by Ram has correspondence with Rāmeṇa śālā dr̥śyate and the village is being seen by Mohan has correspondence with Mohanena grāmaḥ dr̥śyate.

Now, once again there are these 7 sentence meanings, six once again there are the six sentence meanings from 7 to 12 and six sentences from 7 to 12. Once again there is a one-to-one correspondence, one unit giving rise to one another unit. One sentence meaning unit causing the one sentence unit to get expressed in the form of the audible speech and expressed this meaning as well. We observe that there is some similarity as far as the meaning is concerned and also the wording is concerned with the previous set of sentence meanings and sentences.

We shall study this in a while in the same lecture but let us also observe that in this second set of sentence meanings and sentences 7 to 12, we also have the accent included. In the Rāmeṇa grāmo gamyate sentence, we have accent marked on the middle in the word Rāmeṇa and so rā has anudātta marker, ṇa has a svarita marker, in grāmo mo has udātta and grā has anudātta and gamyate is anudātta throughout the anudātta in ga which comes immediately after an udātta vowel in mo is marked with svarita and the rest which are having no sign, they are to be considered as pracaya.

So, Rāmeṇa grāmo gamyate, similarly Rāmeṇa śālā gamyate, then Mohanena grāmo gamyate, then Mohanena śālā gamyate and Rāmeṇa śālā dṛśyate, Mohanena grāmo dṛśyate they have more or less the similar pattern of accent. So, this accent also as we said earlier is part of the śabdākāśa related to these seven sentences related to these six sentences from 7 to 12 and also, this śabdākāśa is related to the arthākāśa which was mentioned in the previous slide.

Now, we can say that sentence meaning 1 is giving rise to sentence 1 together with the sentential accent 1. This is the speech in communication from the point of view of speaker. So, in the intellect of the speaker, the sentence meaning 1 appears first as far as 'ātmā buddhyā sametyārthān' is concerned link to this SM1 which is part of the arthākāśa is S1 which is part of the śabdākāśa which is qualified by its accent so, accent is not entirely different than śabda, but an additional important feature.

So, when we show the layers of the speech production in Pāṇinian grammar, we can show three layers meaning artha śabda and then svara accent. But we must note that accent is in fact, a part of the śabda and so that is why it is written within the parentheses inside the square brackets delimiting the sentences.

The point we want to highlight here is that the sentence meaning 1 acts as the cause for the sentence 1 to be produced together with the sentential accent 1. Sentence meaning 2 which is the cause of the sentence 2 together with the sentential accent 2, these are still part of the buddhi which then gets converted into the audible speech.

Sentence meaning 3 is the cause for the production of sentence 3 together with the sentential accent 3, remember this is still part of intellect which can which then gets converted into the audible speech. Sentence meaning 4 is the cause of sentence 4 and sentential accent 4. Sentence meaning 5 is the cause of sentence 5 and sentential accent 5. Sentence meaning 6 is the cause of sentence 6 together with the sentential accent 6.

Also sentence meaning 1 to 6, they are all one unit giving rise to sentence 1 to 6 which are also individual one unit, these are one units that is the most important part and this will be clear in a while. So, when we go to the next set once again from the point of view of the speaker, we see that sentence meaning 7 is the cause for sentence 7 qualified by sentential accent 7. Sentence meaning 8 causes sentence 8 qualified by sentential accent 8. Sentence meaning 9 causes sentence 9 together with sentential accent 9. Sentence meaning 10 causes sentence 10 together with the sentential accent 10. Sentence meaning 11 causes the sentence 11 together with the sentential accent 11 and sentence meaning 12 causes the sentence 12 together with the accent sentential accent 12. This is the description of this speech in communication in terms of the cause and effect from the point of view of the speaker. So, it is the speaker which collects meaning first and then produces the sentences and then, this entire buddhi gets converted into the audible speech, this is from the point of view of the speaker.

Let us now see what happens as far as the hearer is concerned in the process of communication. So, the hearer comes into contact with the sentence first which is clearly audible, and this sentence is qualified by sentential accent 1 now, this audible speech gives rise to what is shown on the slide, the sentential accent qualifying sentence sentence 1 qualified by sentential accent 1 which is part of the śabdākāśa in the intellect of the hearer and this sentence 1 in the śabdākāśa of the hearer gives rise to or causes the sentence meaning to get generated in the arthākāśa which is part of the buddhi of the hearer.

Similarly for the hearer, sentence 2 which is clearly audible and qualified by sentential accent 2 gives rise to the sentence 2 together with the sentential accent 2 in the śabdākāśa of the intellect which then gives rise to the sentence meaning 2 which is part of the arthākāśa in the intellect of the hearer.

Similarly, sentence 3 together with the accent 3 in the śabdākāśa which is generated by the actual audible speech of this form sentence 3 qualified by sentential accent 3, this śabdākāśa gives rise to the sentential meaning 3 which is part of the arthākāśa of the intellect of this hearer. Same is the case with sentence 4 together with the sentential accent 4 which is a clearly audible speech giving rise to the sentence 4 together with the sentential accent 4 in the śabdākāśa which causes the sentence meaning 4 to get generated in the arthākāśa in the buddhi of the hearer.

Similarly, sentence 5 together with the sentential accent 5 which is the clearly audible speech which gives rise to the sentence 5 and the sentential accent 5 as part of the śabdākāśa which causes the sentence meaning 5 to get generated in the arthākāśa of the intellect of the hearer. Similarly sentence 6 together with sentential accent 6 which is clearly audible gives rise to sentence 6 together with the sentential accent 6 as part of the śabdākāśa which causes the sentential meaning 6 which is part of the arthākāśa.

If we look at the second set of meanings and sentences from the point of view of hearer, we can continue saying that it is the sentence 7 qualified by the sentential accent 7 which is the clearly audible speech which gives rise to the sentence 7 qualified by the sentential accent 7 in the śabdākāśa the intellect which gives rise to the arthākāśa in the form of a sentence meaning 7 of the intellect of the hearer. It is the sentence 8 together with the sentential accent 8 which is clearly audible which gives rise to sentence 8 qualified by sentential accent 8 which is part of the śabdākāśa, the sentence meaning 8 which is part of the arthākāśa as far as the hearer is concerned. Then, the sentence 9 together with the sentential accent 9 which is the audible speech which gives rise to the sentence 9 together with the sentential accent 9 in the śabdākāśa of the hearer which gives rise to the sentential meaning nine which is part of the arthākāśa in the intellect of the hearer. Sentence 10 together with the accent 10 which is clearly audible gives rise to the sentence 10 together with the sentential accent 10 which is part of the śabdākāśa in the intellect of the hearer which gives rise to the sentence meaning 10 which is part of the arthākāśa in the intellect of the hearer. Sentence 11 which is qualified by the sentential accent 11 which is part of the audible speech which then generates the sentence 11 qualified by sentential accent 11 which is part of the śabdākāśa in the intellect of the hearer which then generates sentential meaning 11 which is part of the arthākāśa in the intellect of the hearer. And finally, sentence 12 together with the sentential accent 12 which is audible speech which gives rise to the sentence 12 qualified by the sentential accent 12 which is part of the śabdākāśa which gives rise to the sentence meaning 12 which is part of the arthākāśa in the intellect or buddhi of the hearer.

So, in case of the hearer, it is the sentence together with the accent, it is the sentence qualified by the sentential accent which acts as the cause of the sentence meaning both generated in the intellect buddhi of the hearer. As far as the speaker is concerned, it was the sentence meaning aspect which was acting as the cause producing the effect in the form of the sentence qualified by the sentential accent. This difference needs to be noted and this has to be understood very clearly and that is why this cause and effect relationship is highlighted upon by us in this lecture in an individual fashion.

So, in brief we can sum up this explanation by saying that sentence meaning is part of the arthākāśa. Sentence meaning represents the internal or the initial stage of the process of speech production. Sentence meaning represents the causal stage of the process of speech production as far as the speaker is concerned. One sentence meaning as one undivided unit in the intellect of the speaker is the cause of the speech thus produced. There are 12 sentence meanings which act as a cause of 12 sentences with sentential accents.

Sentence is part of śabdākāśa. Sentence also represents the internal or initial stage of the process of speech production and also it represents the external most that is audible speech; audible stage

of the speech. This audible stage as well as the internal stage, they both are referred to by the same word sentence, but that distinction needs to be understood.

The audible stage of speech which is the external most stage is the expression of this internal or initial stage of sentence which is part of the śabdākāśa. This distinction needs to be clearly understood and grasped by the student; this is extremely fundamental as far as the Pāṇinian grammatical tradition is concerned. So, this sentence represents the causal stage of the process of speech production and the sentence also represents the external most or the audible stage of the speech production. One sentence as one undivided unit in the intellect of the speaker is the cause of the speech produced which is one undivided unit. There are 12 sentences in the śabdākāśa which act as a cause of 12 audible sentences with sentence accents.

We also noticed that as far as the hearer is concerned, the position of the cause-and-effect changes in terms of the śabdākāśa and arthākāśa, as far as the hearing is concerned, the audible speech acts as a cause giving rise to the śabdākāśa which in its turn gives rise to the arthākāśa and then, we say that the process of communication has happened it can successfully, if it does not happen successfully, then there is a possibility that the hearer may ask for a repeated occurrence and so on and so forth. This is how the process of speech production as part of the communication in general can be expressed using śabdākāśa as well as arthākāśa in which compositionality plays a crucial role about which we shall speak more in the coming lecture.