

Course Name: 'Introduction to Pāṇinian Grammar'
Professor Name: Prof. Malhar Arvind Kulkarni
Department Name: Humanities and Social Sciences (HSS)
Institute Name: IIT Bombay
Week:08
Lecture:39

Welcome. I welcome you all to this lecture in the course Introduction to Pāṇinian Grammar. We are studying the process of Speech Production and the Concept of Compositionality related to it. In today's lecture, we continue to study the Compositionality, but in this lecture we shall study the compositionality related to śabda.

In the previous lecture, we studied the compositionality related to the artha which corresponds to the very initial stage of the process of speech production as described by the Pāṇinian grammar namely by the verse ātmā buddhyā sametyārthān. We also introduced the concepts of arthākāśa as well as śabdākāśa and said that this collection of meanings involves both these arthākāśa and śabdākāśa.

We have already studied some other concepts called yogyatā and ākāṅkṣā which are also part of arthākāśa as well as śabdākāśa. Now, such an artha which is collected in the intellect which is linked to the śabda still in the intellect, then gives rise to or gets expressed through the speech which is audible externally expressed speech form. And, just as this meaning as well as the śabda in the śabdākāśa both are indivisible, so, is this speech indivisible. We experienced this in the process of communication.

For a grammarian though, by using the principle of anvaya and vyatireka which we studied together with the in the light of the source called the vyākaraṇamahābhāṣya. This one indivisible unit of sentence meaning can be further divided into its components called word meanings. Correspondingly, the sentences can be divided into its units called pada. Then once again applying the same principle of anvaya and vyatireka the word meanings can be further said to be composed of the components called as prakṛtyartha and pratyayārtha; the meaning of the root and the meaning of the suffix.

Correspondingly, you can say that the pada is composed of the prakṛti and the pratyaya. We also studied what exclusively can be called vākyārtha as well as padārtha. Now, we shall study in this lecture the compositionality related to śabda we have also studied that the meanings the artha which is compositional can be said to be of two kinds one is relational and the other one which is available to us from the verbal elements. It is this relational meaning which primarily acts as the meaning of the whole and the meanings of the components are the meanings of the constituents or the components themselves.

Let us now study the compositionality in this slide, the compositionality of the śabda. The basic principle remains the same that a sentence is made up of word a plus word b plus word c and so on. This is a very generic kind of template further little less generic would be S 1 is composed of W 1.1 plus W 1.2 plus W 1.3 plus 2 is composed of W 2.1 plus W 2.2 plus W 2.3 and this continues S n is composed of W n.1 plus W n.2 plus W n.3.

This happens primarily because we do not know how many sentences we have spoken in our entire life. Now, this S is equal to W a plus W b plus W c is a very generic template of sentence the specific is shown below grāmaṃ gacchati Rāmaḥ. This is the sentence which is made up of grāmaṃ shown in separate square brackets plus gacchati shown in separate square brackets and Rāmaḥ showed in separate square brackets. These are the components of the sentence grāmaṃ gacchati Rāmaḥ.

We can study the same even in the predict sentences for your benefit this is a worse from viśvāni deva savitar duriṭāni parā suva. This is made up of several units. So, the sentence that is written on the left hand side is called in fact, saṃhitā or a sentence in which as you see there are only two vertical bars at the end of each sentence viśvāni deva savitar duriṭāni parā suva. This is that vertical bar. Yad bhadraṃ tanna ā suva. This is the other vertical bar. This indicates that this is one unit, this is another unit. So, there are two sentences available to us.

Now, the sentences are made up of certain components which are shown in the padapāṭha independently separate by showing a vertical bar after each and every such component. So, for example, here you have viśvāni this vertical bar is called daṇḍa in Sanskrit, viśvāni daṇḍa deva daṇḍa savitar daṇḍa duriṭāni daṇḍa parā daṇḍa and suva daṇḍa. Each and every word each and every component can be shown separately in this particular fashion.

If you look at the second line yad bhadraṃ tanna ā suva this is peculiar and this is what we will explain? The concept of the combinatorial effects and nature of the sentence. So, bhadraṃ tanna ā suva is written in a peculiar style. dra has a dot on top of it which is called anusvāra in Sanskrit, then there is tanna a conjunct consonant with two nakāras being the constituents and then ā. So, this is a sentence in which the word boundaries are ambiguous bhadraṃ tanna ā suva. There are some combinations that is why this is a sentence.

If you separate these components and write them as independent separate padas constituents of this sentence you will find them written in this fashion. This yad is written as yad as it is with daṇḍa after it. Now, see the bhadraṃ the word bhadraṃ is written in this peculiar fashion m at the

end as a consonant then daṇḍa. Now, this tanna is broken into two tat and naḥ this naḥ is broken into once again naḥ and ā. So, these are the independent individual constituents and they are extracted from this saṁhitā or this sentence.

So, the letters in the red on this slide they indicate the changes that they undergo when they are in pada and when they are in saṁhitā. So, even though this r which is marked here in red it is shown as the r as a consonant in the padapāṭha in the saṁhitāpāṭha it is actually written with a mark on top of this du. For our convenience sake, I have given it separately and placed it as r this should not actually be done it should be shown in this fashion.

Now, the point that I wanted to draw your attention to is that a saṁhitā or a sentence is of this kind which contains some combinatorial effects that is the nature of the sentence. This is over and above these constituents tat naḥ and ā these are the constituents bhadrā is the is a constituent. But, when they are brought together as part of the sentence, then this combination makes some changes like this m becomes an anusvara, this t becomes n this visarga is deleted, these are all the effects which are generated because of the combinations because of the words coming together and that that is why this is a sentence.

So, if you ask exclusively what is a sentence, it can be pointed out to these effects otherwise yad is available to you by pada it is a pada bhadrā is also a pada, but this m becoming this anusvāra this is nothing, but the sentential effect. So, we can say that saṁhitāpāṭha and padapāṭha which are available as far as the Vedic literature is concerned show as an evidence about the indivisibility as well as the divisibility both.

Now, when we accept the components of the Veda we also need to study a concept called vikṛti which was developed by the Vedic reciters in order to transmit the Vedic lore committed to memory as it is to the next generation. So, saṁhitā is a text where word boundaries are faint, but pada is such that word boundaries become prominent, words are separated from sentential contexts.

So, these are dissolved and once you know the pada then you also employ these devices namely krama jaṭā śikhā Rekhā dhvaja ratha daṇḍa and ghan - these eight devices are use technical devices and then the same words the padas which are extracted as constituents of this sentence they are then uttered in different contextual situations. This helps a Vedic reciter remember the context and also reduce the probability of unpredictability.

So, if these padas are to be rearranged and also numbered they will be done in this fashion. From the sentence *viśvāni deva savitar duritāni parā suva*, we would have the following words *viśvāni* numbered as 1, *deva* 2, *savitar* 3, *duritāni* 4, *parā* 5 and *suva* 6. The same words are also numbered in a different style altogether. These numbers are shown below the words. We are and we start with the last word in the sentence *suva*, this is called N, *parā* is called N minus 1, *duritāni* is called N minus 2, *savitār* is called N minus 3, *deva* is called N minus 4 and *viśvāni* is called N minus 5.

So, now these two numbers do help in generating all these eight *vikṛti*. Now, this numbering of the words and peculiar rearrangement of the words show us a strong evidence about the divisibility of the sentence into its components. So, sentence or *vākya* is indivisible. So, when you say *viśvāni deva savitar duritāni parā suva* this as a sentence is indivisible. Just as the sentence meaning of or *vākyārtha* is collected in the initial stage of the process of speech production so, also is collected at the same time the linked sentence or *vākya* in the same stage. They both are one indivisible units *vākyārtha* as well as *vākya* in communication as part of communication process. The speaker collects one sentence meaning and collects one sentence correspond corresponding to it which gets expressed by one indivisible unit of audible speech.

And, then this one unit of audible speech is heard by the hearer and this audible speech generates one indivisible unit of the sentence in the intellect of the hearer which then conveys one individual unit of the sentence meaning to that hearer. Given these facts; that means, if these facts if this process successfully is complete, then it is said that the communication has happened not otherwise.

So, the one unit individual unit is part of the communication. But, for a grammarian the *vākya* or the sentence is also divisible, applying the same principles of *anvaya* and *vyatireka avāpa* and *udvāpa* stated in the *Mahābhāṣya* where each and every independent pada or word gives rise to a cognition which is a very generic cognition, a template.

So, if *Devadatta* is uttered then it tells us that *Devadatta* is the meaning which is acting as *kartā*, but when it is *kartā* we do not know what specific action it is the *kartā* of, but some general action and this general action is supposed to have a *karma* which is generic in nature. And, this *karma* can have a quality which is also generically understood over here.

So, this template is understood and this happens with each and every pada, but now when a speaker utters a sentence together with all the pada there appears to be the case of elimination each and every uttered pada eliminates the rest from this generic slot which can be potentially filled by any by N number of meanings.

So, there is elimination that happens as described by Patañjali. Sāmānye vartamānānām viśeṣe avasthānaṁ vākyārthaḥ this is how Patañjali described the sentence meaning which we studied earlier. Now, a grammarian figures out similarities and dissimilarities also in the sentences just as he finds it out in the sentence meaning correspondingly he also finds out similarities and dissimilarities in the sentences. And, then the grammarian carves out the words Pāṇini carved out the words demarcating them by word boundaries just as the padapāṭha demarcates each and every word independently and separately as was shown before. Then what is the sentence? A sentence is made up of words; it is rather a combination of words. Plus sign is what can be said as a sentence exclusively vākya. Its constituents are called pada. But, the plus sign is what is actually the sentence just as the plus sign was the sentence meaning as far as meaning level is concerned. So, also the plus sign is what can be said to be a sentence exclusively.

In a sentence, at least one of the words has to correspond to the action meaning this word is considered as the head amongst the components of the sentence this pada is considered as the head the rest of the pada can be such that they correspond to the non action meaning parts non action padartha. Generally, it is important to note here that the words in a sentence are not ordered in any particular manner in Sanskrit. This is very important and crucial and we shall see why and how later. So, now, given these six meanings ram goes to a village etcetera, the six sentences are produced grāmaṁ gacchati Rāmaḥ etcetera. We have studied twelve such sentences before and six of them are the ones which are presented on this slide.

So, we call this as speech data set 1 where there are six meanings which are to be expressed by six śabdās, six sentences and they are shown in square brackets. The meanings as well as the śabdās indicating that they are one unit and it is these two which get expressed by the audible speech of the kind of śabda and so on and so forth.

Now, what is this dataset composed of? So, by applying the principle stated in the Vyākaraṇamahābhāṣya we can see that following are the components – Rāmaḥ grāmaṁ gacchati śālāṁ Mohanaḥ and Paśyati, and these are the components which are carved out of these sentences and we have noticed them and noted them down as they were found in the sentence.

So, we have not yet reduced the sentential context. So, we are retaining grāmaṁ together with an anusvāra and śālāṁ together with an anusvāra. So, this data set can be said to be composed of these six units.

Further we can ask the question what are these padas composed of and here is another answer and we apply the same principle of anvaya and vyatireka. Grāma Mohana śālā gaccha and paśya on the left hand side on one hand and ḥ or visarga or called as su by Pāṇini m or am and ti by Pāṇini, these are the constituents of these sentences, quite simple. So, these six sentences are composed of these five elements on the left hand side and the three elements on the right hand side. So, these are the constitutions of these six sentences through the words or the pada.

We also looked at another dataset sentences 7 to 12 let us call them as speech dataset 2 and we noticed that the meanings the village is being reached by Ram is linked to Rāmeṇa grāmo gamyate in the śabdākāśa and then this gets expressed by the external audible speech Rāmeṇa grāmo gamyate and Rāmeṇa śālā gamyate, Mohanena grāmo gamyate, Mohanena śālā gamyate, Rāmeṇa śālā dṛśyate, Mohanena grāmo dṛśyate. These are the sentences which are part of this speech dataset 2.

Now, what is this 2nd data set composed of? We by applying the same principles of anvaya and vyatireka, we say that it is composed of these elements Rāmeṇa grāmo gamyate and Mohanena śālā dṛśyate. Remember, in finding them out we have resorted to the similarities and dissimilarities between the meanings and the words and the similar and dissimilar aspect of the sentence meaning is assigned to the similar and dissimilar aspect of the sentence. That is why these six elements are found to be the components of these six sentences.

Now, what are these composed of? So, we know that Rāme which is audible or which is what is visible is one such component which can be reduced further by further exercise to Rāma. Mohane is what is actually visible and which is what is actually audible, but Pāṇinian will reduce it to Mohana by further applying the same principle. Then grāmo is grāma, śālā is śālā, gamyate is reduced further to gam by application of the same principle and dṛśya is further reduced to dṛś. Similarly, on the right hand side we have ṇa na and te as the other elements. In Pāṇinian grammar they are postulated as ṇa as ṭa, ṇa as ṭa and te as l and ta. So, we have these components which are parts of the sentences 7 to 12.

So, now we can say something about the composition of words over here. So, now, let us look at the composition of words or pada what are the constituents which make the pada. Along with the components of the word meanings getting extracted from the word meanings. Components of words are simultaneously extracted from the words. Please note this carefully along with the components of the word meanings getting extracted from the word meanings. Components of words are simultaneously extracted from the words. They are called prakṛti or root which always appears on the left hand side, so, it is mentioned as the left hand side element which is generally bigger in size and the next one is pratyaya suffix which generally appears on the right hand side

element which is generally smaller in size. Generally, the pratyaya is considered as head in the unit of pada. Prakṛti and pratyaya are called the linguistic atoms at the śabda level.

To summarize what we have said, like the sentence meaning the sentence is also compositional. From the sentence meaning, word meanings are extracted, correspondingly from the sentence, the words are extracted. From the word meanings, root and suffix meanings are extracted, correspondingly, from the words the roots and suffixes are extracted. The size and shape of these atoms is fixed by the grammarians using various methods and 'its', the markers are used to assign several functions related to them the prakṛti and the pratyaya. We shall study these the components namely the prakṛti and pratyaya in some detail in the next lecture.

Thank you for your attention.