

Course Name: 'Introduction to Pāṇinian Grammar'
Professor Name: Prof. Malhar Arvind Kulkarni
Department Name: Humanities and Social Sciences (HSS)
Institute Name: IIT Bombay
Week:05
Lecture:24

Welcome. I welcome you all to this lecture in the course Introduction to Pāṇinian grammar. We are studying the Process of Speech Production as described in the Pāṇinian grammatical tradition. Let us continue dealing with it. In the previous lectures we have studied the source that is used to describe the process of speech production namely the Pāṇinīyaśikṣā. And we analyzed the śikṣā text and we said that there are these eight stages available to us from this particular source.

So, this śikṣā text says "ātmā buddhyā sametyārthān mano yunkte vivakṣayā manaḥ kāyāgnim āhanti sa prerayati mārutaṁ mārutastūrasī caran mandraṁ janayati svaram sodīrṇo mūrdhnyabhihato vaktramāpadya mārutaḥ varṇān janayate" and the eight stages mentioned in these verses are "ātmā buddhyā sametyārthān that is the 1st stage. mano yunkte vivakṣayā is the 2nd. manaḥ kāyāgnim āhanti is the 3rd. sa prerayati mārutaṁ is the 4th. 5th is mārutastūrasī caran mandraṁ janayati svaram. 6th is sodīrṇo mūrdhnyabhihato. 7th is vaktramāpadya mārutaḥ and 8th and the final stage is varṇān janayate. The speech is actually produced this is an audible speech. Amongst them we have been studying this 1st stage so far and we have been trying to understand what this stage entails what do these words mean.

And so, we first of all try to understand the role that is played by ātma and buddhi and arthas and now we are studying what is the meaning of sametya. After having collected the meanings through the intellect that is the meaning of this line. What is the meaning of having collected sametya? That is what we have been studying. And then we said that let us study in some more detail what is meant by this collection of meanings namely simple, derivate, super derivates etcetera.

Let us also study briefly, what is the concept of congruity and also the concept of mutual expectancy. And so, in the previous lecture we also studied the overall cognitive process involved in the cognitive apparatus of the human being. And on that basis using that as an example we shall study now the first point on this slide namely the collection of meanings simple, derivate and super derivates. All these they are stored in a hierarchical order in the intellect and it is these meanings or parts of meanings from these that are collected by the ātma in order to respond to a particular situation which demands communication. Let us now look at the 1st stage little more deeply.

To recap these are the domains and these are the sense organs. śrotra ear and śabda is the domain sound. Tvak is the sense organ skin and sparśa is the domain that is touch. cakṣus that is eyes is the sense organ and rūpa is the domain that is form. jihvā is the sense organ and taste is the domain and rasa ghrāṇa or nose is the sense organ and gandha or odour is the domain in which ghrāṇa operates. So, this this is the correlation between the sense organs and the domains and we have seen the rules that the sense organs operate within their own domains they never have a cross link.

Now, let us look at each one of the sense organs and the domains. And when we say collection of meanings what do we mean, what are the examples?

And for each of the sense organ and domain pair we shall study the three developments namely simple, derivate and super derivate. Let us first look at the śrotra indriya ear and śabda that is sound the domain. So, what is the simple arthākāśa? It involves let us say action of hearing and words related to it and other meanings also related to it action of hearing. Then, action of hearing is more specific, in general action of knowing that is what happens through ears and so, that is also part of the arthākāśa that can be considered as simple.

Parts of the organ they are also considered to be the part of the arthākāśa which is termed as simple related to the ear. Then, let us say the ornaments of the organ and the functions of the organ all these fall under simple arthākāśa related to the śrotra ears. Similarly, related to the domain śabda we can list down following articles which can be considered to be part of the arthākāśa related to śabda namely action of hearing, action of speaking this is also related to śabda sound. Sound is also used in relation with the action of expressing, then there are other meanings which are part of the oral apparatus in the description. Movements of those parts that is also part of this arthākāśa. These are only few sample examples and there are many more, but these can be termed as simple because they are directly related with the sense organ and with the domain.

Now, from these there would be some more meanings that could be derived, those we shall call as derivates. So, what are the derivates in the arthākāśa related to the śrotra and śabda? The components of speech for example, then sentence, words, roots, suffixes, sounds etcetera all these can be the derivate meanings as part of the arthākāśa related to the indriya ear. Similarly, actions related to the ornaments of the organ ear, shades of action of hearing, listening, eavesdropping etcetera. Also music and different varieties of music and so on and the details those could be the derivates as far as the śrotra arthākāśa is concerned. Similarly, if we study the derivate arthākāśa as far as śabda is concerned or sound is concerned we can talk about the process of breathing, components of speech as was there with śabda as well. Shades of expressing, uttering, muttering, speaking, singing, crying, shouting, ordering etcetera and also music and concepts related to music they will be all the derivate arthākāśa as far as śabda the sound is concerned.

Something that is derived out of these derivatives can be referred to as super derivate. And so, the super derivate part of the arthākāśa is related to that is related to the śrotra or ear is extension of hearing; that is lending an ear for example, all ears another example. Similarly, figurative use of the organ ear. Hearing what cannot be heard if that is to be said then; obviously, you are not actually performing the action of hearing by involving the ear, but then you are still using the word hearing.

Knowledge in general that could be the super derivate and also refinement of arts refinement of arts music and so on. Similarly, if we talk about the super derivate arthākāśa as far as śabda or sound is concerned we can say that the written symbols considered as a speech is an extension and that could be the super derivate of śabda or sound. Action of amplifying, action of compounding sound proof etcetera such words and such meanings they could be considered as super derivatives.

And of course, creative acts and refinements they could be considered as the super derivate arthākāśa with reference to śabda. This is how the collection of meanings with reference to śrotra and śabda can be mapped, can be noted down and once again these are just a few examples and there could be many more depending on the situations as well. Here we are only looking at the cognitive process of a human being which is core and which is universal. So, these are universal concepts that we are dealing with.

Let us proceed further and study each one of the pairs of sense organ and the domain and see what collection of meanings does mean in their case. What arthākāśa can be represented by in those cases. Let us now go to the next pair of sense organ and domain namely tvak and sparśa skin and touch. So, the action of touching and the action of knowing that is part of the simple arthākāśa and collection. Sense of temperature, sense of gradation, action of removal of skin, action of cutting the skin and so on they would be part of the simple arthākāśa as far as the tvak is concerned. If we look at sparśa touch we can say that the action of touching as well as the objects with space which can have touch, temperature in general, opposite pairs of temperature śita, uṣṇa and so on and various shades of them all of them can be part of the simple arthākāśa that is related to the domains sparśa.

If we proceed further to the derivate arthākāśa then we will see that they are derived out of some of these or most of these. So, for example, skin protection apparatus that would be part of the arthākāśa related to tvak. Skin related medical issues, skins of trees and fruits etcetera that can also be the derivate arthākāśa related to tvak as an indriya. Then if we look at sparśa and the derivate arthākāśa related to it we can note down some examples say namely shades of touches; gentle touch, rough touch or whatever. Body parts related to touch and finally, emotions that are related to touch they all can come under the derivate aspect of touch as on arthākāśa.

Then if we go to super derivate as far as the tvak is concerned we can say that figurative use of skin in sentences and so on that gives us a clue that this this must be an arthākāśa where skin as a meaning is used in in the figurative sense. And then equipment of means for skin protection and so on things related to them they can also come under super derivate part of the arthākāśa. Similarly, for sparśa also we can say that figurative use of touch for example, touch of imagination and so on that can come under super derivate. Similarly, measurements of touch something like that can also come under the super derivate part of the arthākāśa related to tvak.

Now, let us look at the arthākāśa which is simple related to the pair of cakṣus and rūpa and most probably this pair predominates every other pair.

So, cakṣus eyes can be related to the action of seeing and action of knowing of course, then there are parts of eyes biological limbs, then there are movement of eye that is opening, closing etcetera etcetera they all will come under the simple arthākāśa related to cakṣus. If we look at the rūpa as the domain of cakṣus, we can note that size or shape, length, colour, direction, written symbol all of this would constitute the rūpa and would come under the simple arthākāśa related to rūpa.

Then if we go to the derivate part of the arthākāśa related to the pair cakṣus and rūpa we can note the following. The medical aspect of eyes can be the derivate part of the arthākāśa related to the cakṣus or the eyes. Shades of action of seeing, what blocks the eyes, what blocks the perception through eyes that can also come under eyes the blocker and technological aspects of seeing for example, using a microscope and so on. New equipment that helps improve the action of seeing that can also come as the arthākāśa related to cakṣus and this arthākāśa will be called the derivate arthākāśa.

Now, the arthākāśa related to rūpa would be of this kind say for example, in pairs gross versus subtle. So, these and related concepts can be part of the arthākāśa related to rūpa or form. Similarly, when form as form becomes an important feature of a personality then also we can say that; that form has become the derivate part of the arthākāśa related to rūpa. Form of language is another example and the material that expresses the form that can also be called as the derivate of the arthākāśa related to rūpa.

Then we go to super derivate related to cakṣus and rūpa. So, figurative use of eyes is part of this super derivate arthākāśa. Seeing equated with philosophizing as is the case in the Indian philosophy where the philosophical systems are called darśana primarily an action of seeing seeing something. So, then that would be a super derivate arthākāśa related to the action of. Extension of action of seeing to inanimate such as machines, computer vision for example could be a concept that can be related to the cakṣus as part of the super derivate arthākāśa and also extension of action

of seeing to virtual entities like state. So, there is a famous statement by Kauṭilya Cāṇakya in his work where he says cara cakṣuṣo rājanaḥ the kings have the spies as their eyes. Here we are imposing the organ cakṣus on an entity which is virtual entity namely the state and saying that spies are the eyes for the king. So, this is a super derivate part of the arthākāśa related to cakṣus.

Now, the super derivate part related to rūpa or form as a domain would be mixed form with all features put together for example, color, size etcetera. There are some colors which are distinct from one another, but there are some colors which are mixed which are the result of the mixture of two or more colors all of them that can come under the super derivate aspect of the rūpa. Form becoming a template in intellect, as in logic this is an extension of the form. This can also be considered as the super derivate part of the arthākāśa related to the rūpa.

Next we go to the simple arthākāśa jihvā related to rasa or tongue and rasa namely the taste. So, here the action of tasting, the action of knowing they are part of the simple arthākāśa that is related to the sense organ tongue. Parts of tongue and movements of tongue they will also be primarily primarily part of the simple arthākāśa related to the organ tongue. And then the domain taste will have following as part of its domain namely its domain namely action of taste, types of taste, then the contrasts that exist between the tastes all of that can come under the simple arthākāśa related to rasa or taste. Then objects generating different tastes they will also come under the simple arthākāśa. If we look at the derivate part of this arthākāśa related to jihvā and rasa we shall say that the medical aspects related to tongue they can be considered to be the derivate part of tongue of arthākāśa related to tongue. Tongue used as an instrument for speech can also come under that classification and then types of tongue that can also come under the derivate part.

Similarly, rasa or taste if this is to be studied and the derivate aspect of arthākāśa related to it needs to be studied then we can say that mixed taste of different objects that can come under the derivate aspect of arthākāśa related to rasa. Basic crops generating objects of different tastes they can also come under the derivate part of the arthākāśa related to rasa. Types of food for instance, ingredients, recipe and related material that can come under derivate part of the arthākāśa that is related to rasa. Correlation of tastes with emotions and culture they can also come under the derivate part of the arthākāśa related to rasa. Then if we look at the super derivate aspect of jihvā and rasa we will note the following; the figurative use of tongue in the language this will come as the super derivate part of the arthākāśa related to jihvā. Figurative use of action of tongue that can also come under the arthākāśa which is super derivate related to the tongue. And now, if you look at rasa or the taste and the super derivate arthākāśa related to it we will note that generalization to refer to aesthetic experience in general as rasa that would come under the super derivate aspect of arthākāśa related to rasa and then of course, figurative use of taste that will be also a part of this arthākāśa.

Now, finally the fifth pair of sense organs and domain is ghrāṇa that is nose and gandha that is odour. So, the simple arthākāśa related to these two is something like this as far as ghrāṇa is concerned the action of smelling and the action of knowing, also the action of breathing that is part of this arthākāśa. Parts of this nose the biology that will also be part of the simple arthākāśa related to ghrāṇa the nose. And then the simple arthākāśa related to the domain gandha or odour is the following action of smelling of course, different kinds of odour, objects which generate different kinds of odour they will also be a part of this arthākāśa. And then there would be somebody someone who would be the carrier of this odour even that can come under the simple arthākāśa related to gandha. Similarly, as far as the derivate arthākāśa is concerned we will note the following. As far as ghrāṇa or nose is concerned shades of action of smelling, association of mental acts to the action of smelling, medical aspects related to nose, ornaments related to nose all these would be considered as the derivate aspect of the arthākāśa related to ghrāṇa or nose. Similarly, the derivate aspect of the arthākāśa related to gandha would be shades of odours, contrast in the types of odours, association of mental acts to the odour, animals working on odour all of that can come under the arthākāśa related to gandha and this would be the derivate arthākāśa. And if we go to the super derivate arthākāśa related to this pair we can say the following. The figurative use of nose for example, poking your nose and so on that could be that could come under the super derivate arthākāśa related to ghrāṇa or nose. Similarly, the objects that cover the nose that are not actually related to it, but are temporarily related to it they can also come under this super derivate aspect of arthākāśa related to nose. Similarly, the objects that decorate the nose ornaments they can also come under this category under the super derivate aspect of arthākāśa related to nose. Similarly, figurative use of odour can also come as a super derivate aspect of arthākāśa related to gandha. Also odour as a parameter in scientific tests can also come as super derivate aspect of the arthākāśa related to arthākāśa.

So, to summarize what we have said we can say that the material that we have studied so far shows the mapping of arthākāśa in a limited manner namely related to the human cognitive apparatus and it is possible to construct a hierarchical structure of different other types of arthākāśa based on this limited structure. It is from this arthākāśa that the ātman collects meanings that are to be expressed as a response of a particular situation. These meanings for most part are interrelated to affect and effective communication. These meanings also have the feature of congruity and mutual expectancy which we shall study in the coming lecture.

Now, as is our practice before closing this lecture let us recite the maṅgalācaraṇa. This maṅgalācaraṇa is taken from another text written by śrī Bhaṭṭojī Dikṣita called Prauḍhamanoramā and the maṅgalācaraṇa of this text reads as following and I read it, dhyāyaṃ dhyāyaṃ paraṃ brahma smāraṃ smāraṃ gurorgiraḥ/ siddhāntakaumudīvyākhyāṃ kurve prauḍhamanoramām//. And I repeat it, dhyāyaṃ dhyāyaṃ paraṃ brahma smāraṃ smāraṃ gurorgiraḥ/ siddhāntakaumudīvyākhyāṃ kurve prauḍhamanoramām//

And now let us also read the five sūtras of today they are taken from 3.4, here are they, dhātusambandhe pratyayāḥ/ kriyāsamabhihāre loṭ loṭo hisvau vā ca tdhvamoḥ/ samuccaye'nyatarasyām/ ythāvidhyanuprayogaḥ pūrvasmin/ samuccaye sāmānyavacanasya/. I repeat, dhātusambandhe pratyayāḥ/ kriyāsamabhihāre loṭ loṭo hisvau vā ca tdhvamoḥ/ samuccaye'nyatarasyām/ ythāvidhyanuprayogaḥ pūrvasmin/ samuccaye sāmānyavacanasya/. Thank you for your attention.