Principles and Parameters in Natural Language
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Lecture - 22
Complements and Adjuncts

We have been look at x bar theory, in order to see how a sentence is structurally represented. To see how a sentence is structurally represented we have looked at a structure of an of a phrase; that is, internal structure of a phrase, what it consists of and then how they combine it with another one. If you see little bit beyond the structure of a phrase or with the help of a structure of a phrase about it is, about the process of combination of other combination of a phrase with the other phrase; there are 2 things that come up very significantly, and they are the relationship between head and a compliment, and the relationship between a compliment and an adjunct, that defines to a great extent how the structure is going to look like.

But before we come to this this distinction, and how to represent a compliment and an adjunct I will again go back and talk to you a little bit about how a sentence is called an inflectional phrase, and then what are the components that are called inflection, and how they are represented in the structure.

So, these are the 2 things that we hope to have done today. Let us see how we go through this thing.
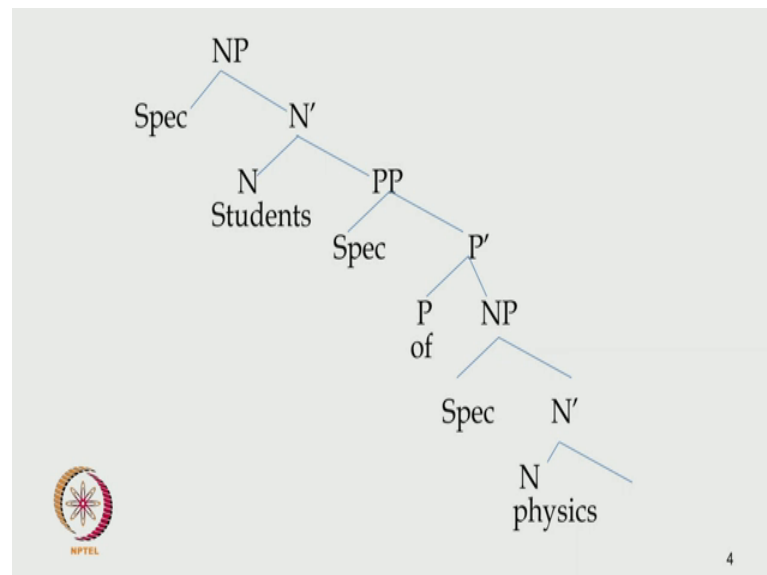
So, to take you through these things again no questions here, we understand the phrase structures; that is, in in this representation we are trying to put categories to we are we are trying to indicate phrases in the sentence, and it is relationship with another phrase. This is how we looked at a noun phrase which is students of physics right.

We are still working with the same sentence for the purpose of simplicity, and the for the purpose that we understand the sentence and the structure properly. So, this is how a sentence is how a how a noun phrase is represented; where the important part that I want
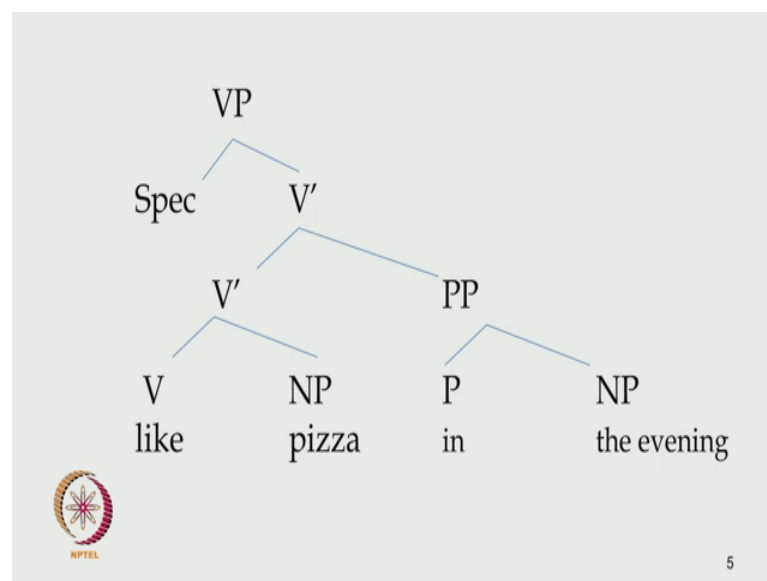
you to look at is the head of the first NP has PP has it is complement, and then in that PP the head is P which is off, and another NP is the complement of that P.

See, compliments belong to heads. When we say in the first NP, we have PP is the complement of N, that is, complement of head. The relationship whatever it denotes, whatever we mean by compliment; compliments are of heads. Making sense? Compliments are of heads, not to the phrase; however, a compliment is part of a phrase. A compliment is part of a phrase, but it belongs to heads, all right.

We are going to look at as I promised you the relationship between a compliment and adjunct, and the differences and similarity between them. And once we are done with representation of this structural representation of a sentence and phrase, we are also going to look at some configurational relationships, that that comes up little later. So, let me not talk about them. And then again in the last NP, which is the complement of P you see we have N, which is the compliment is an NP which is a in turn is an N which is physics. And in this one you see; there is no spec and no compliment any further and then need to stops them.

However, the spaces are available, which means again this physics this N physics can potentially take another compliment, but it does not have a in this case, all right. This is the structure clear now? This structure clear to everybody now?
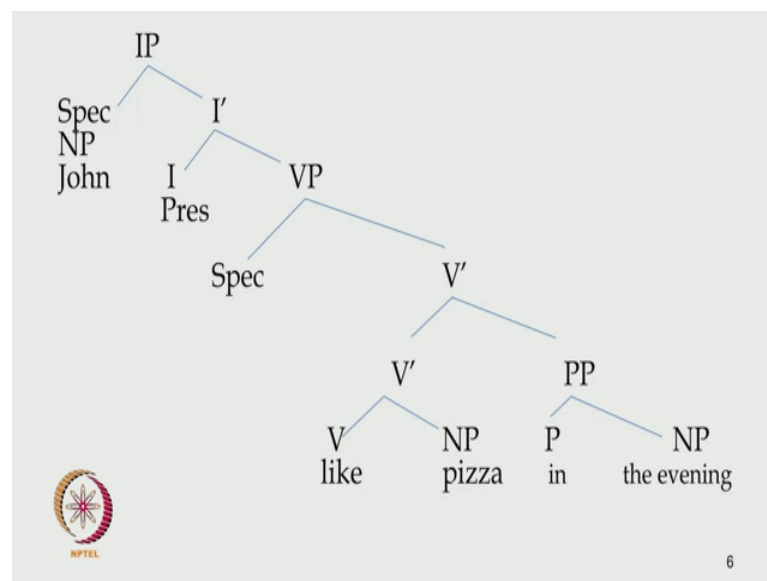
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We look at the structure of VP yesterday. We did not have questions so far, right? Was good we here again have 2 things to keep in mind, the NP pizza is the complement of the verb like and PP; that is, in the evening is an adjunct to the whole V bar. That is, adjunct of the verb. And therefore, it is simply adjoint by a manipulative fashion; which where space comes through V bar. The idea of this intermediate category is to provide us a space to represent several categories and through that we see that PP gets rejected far apart from it is complement, in it is a coincidence or it is a structural point that it stays higher than the in, higher than the compliment NP which is pizza, but you can see it is too far apart structurally from the compliment.

Do you see that it is too far apart from the compliment? Everybody, do you see that it is too far apart from the compliment? And then again within that PP which is adjunct PP, you have the NP which is the complement of P. We have we have seen these things. I am only repeating these things for you to see the structure categorically once again.

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Now, we have looking at this thing; where we have stopped yesterday. And then we saw that when we when we project the whole sentence, we project it as IP, do you see a systematic, do you see a system underlying this structure that every structure has same system? Which is specifier head and complement, specifier above head and compliment and NA among head and complement, there is a sister relationship. Do you see this structure in every structure of every phrase, right?

So, the whole sentence is projected as IP, where the head of this IP is I which means inflection. As I have, as I discussed with you yesterday and we have discussed these things earlier, there are 2 parts in a sentence. One part is called, one part consist of functional categories, and the other part consist of lexical categories.

Things that belong to lexical categories are nouns, pronouns, adjectives, verbs, prepositions and so on. Stuff that belong to belong to functional categories are things like tense, aspect, agreement and their components like, number, person, gender, etcetera right. So, the point here is all such functional things, functional stuff are part of I. All of them are bundled in the head called I, and we in short or the name of this thing is inflection.

So, all those functional elements are part of functional, inflectional layer in the sentence. The idea that sentence must be projected as an IP captures the notion that such elements that are; that is, functional elements in a sentence are significant aspect of sentence. They are all they are the thing they are the chunk which make a sentence, which is significant part of a sentence. It is not that it reduces significance of it is lexical categories, but the point is functional elements bind lexical categories to make a sentence. Are we good so far? Yes, no, difficulties? Can I take your take this thing as yes and move ahead?

We had a couple of questions here. And I think we have answered those questions and they should be clear to you. Is there any aspect of this functional thing which is still not clear? Or making any difficulty for you, this would be the time for you to let me know. No not that you cannot let me know later, but this would the, right. Time to talk about this. Is there any anything else any further confusion problems?

Student: Adjunct like, exactly how will you define it?

How do you define an adjunct, right? That which you are not sure about that right I am coming to that in a moment. Give me a moment. Did you see the representation of an of an adjunct? This this is the reason why I am carrying one adjunct all alone, without talking much about them and without giving you a definition for it, all alone I am I am carrying an adjunct in the sentence at least. Just because it should be in front of you at least do you do you see the adjunct. I am I am going to define that in a moment do you see the adjunct here in this phrase.

Student: In the evening.

In the evening.

What I see that you are not sure why it is an adjunct, but when I tell you in the evening is adjunct and pizza is the compliment, do you see the difference between the 2? Forget about their definitions. Do you see the difference between the 2 in terms of their structural representation? Yes or no? Everybody.

Student: (Refer Time: 12:29).

You see that, right? You do not see that? What do you see about the difference between the 2?

Student: We accommodate the adjunct an extra layer was added to V dash.

To accommodate adjunct, extra layer is added. That is by notion, in this whole structure the place of an adjunct is an additional place. The place of an adjunct is not part of the phrase, the adjunct does not have a space in the original structure of a phrase. Do you see this thing at least? Do you understand the original structure of original structure of a original place in a structure? Quick, quick, tell me. If you if there is a problem tell me, that I do not understand the original structure of a of a phrase. Then then only I can move on and talk to you about what original structure of a phrase means.

Do you understand when I say original structure of a phrase?

Student: Sir.

No, no, no, no hold on. Answer my question. Then I will answer your question.

Student: The original structure of the phrase is you have a.

Specifier.

Student: X double (Refer Time: 13:58) bar.

Yeah sure go ahead.

Student: Then you have specifier.

Specifier.

Student: Marker (Refer Time: 14:04).

Then you have a x bar.

Student: X bar.

Then it has a.

Student: X.

X

Student: And then a complement.

Then a complement right

That is a this is a original structure of a phrase

Here x bar is just a mechanism to go further down, right? Done. We are left with 3 things. Specifier, head and a complement. Do you see any space for an adjunct here? There is no. That is what I mean by blueprint of a phrase; that is, the structure of a phrase. So, in the structure of a phrase there is no place for adjunct. The place for compliment; however, is located we do have a space for compliment. So, when I am asking that do you see the difference between the 2? At least the initial difference which you can see clearly on this screen is pizza an NP is the complement of the head which is v, right? At least this much is totally clear?

The same status the PP in the evening does not have the same status. Do you see this this point that does not have the same status? What is this status that it has? That is, how is it represented? Is my question clear? Is the question making sense to you? How is it represented?

Student: It is (Refer Time: 15:39) it is not following the structure of a phrase.

It is not following the blueprint of a phrase.

Student: Blueprint of a phrase.

However it is not violating also this structure of a phrase. Do you do you see this this this this smart play here. Do you see this this is what we call manipulation? This this smart play is we do not want to violate a structure. That is, what will be violation of a structure? If we let us say if we bring a specifier down and we take compliment up that will be a total blatant violation of structure, and probably we will not be able to capture anything with that right. We are not also violating their it is binary structure right. Which is we are not saying that; we are not saying that we have an XP here and we have specifier, and we have x bar, and here is our head, right.

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Here is our compliment and now we have an adjunct. So, let us put here.

That is not what we are saying, because this is again a violation of what we started with, right.

Out not because it does not look good or anything. Out because this does not tell us anything. If we say what is the problem here? If we say this is the space for our adjunct, right. What is the problem? What is the conceptual ambiguity and mess up here.

Student: Structure is not binary and it is not capturing

That is a structure is not binary, and what is it not capturing it? It also tells you, that there is no distinction between a compliment and an adjunct in terms of it is structural representation here, there is no distinction between a compliment. And adjunct that that

is one; which in turn means, that the fact that a head it could be let us say a head like which is a verb, right. And we are saying that is transitive, plus transitive, right. Which means by definition it is going to take one NP compliment, understand this? We are saying because verb as a head, if it transitive it is going to take an N complement. In that notion we are not saying anything about adjunct.
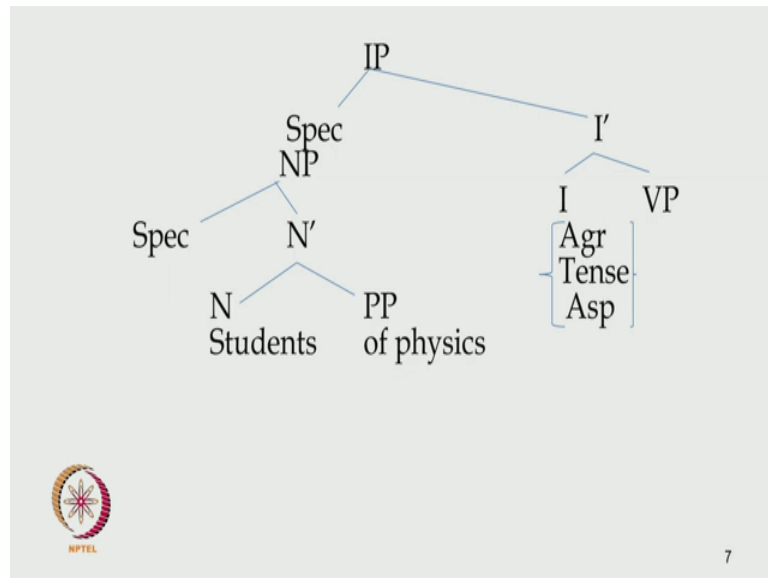
We are not saying whether the transitive verb will take an adjunct also. Whether it will take 2 adjunct, whether it is not going to take any adjunct. Such things are not guaranteed by the nature of the verb. And if that does not follow from the nature of the verb, then then what we end up saying here is we do not care about an about a complement and adjunct. All of them have same status.

See this thing? Which is taken care of in this structure that you see on the screen. That is, not violating the fundamental structure of a phrase. What it is doing it just adjoining another creating one more layer, right. Reduplicating the same thing which is V bar, right. With that it is keeping the adjacency requirement between the head and the complement intact. It is keeping the spec position high up. It is only taking reduplicating this thing and taking another space for a PP. Or anything that comes here at adjunct to tell us that look there is a difference between these 2.

So, do you see structure difference between an adjunct and a and a and a complement. Now I am not yet giving the definition of this thing in literal terms, but I am bringing you to a point where you can define adjunct by yourself, right. And adjuncts are adjoining the elements in their structure, if we are if we are trying to define an adjunct structurally. We can say they are adjoined elements in a structure. They are always going to represent themselves with this adjunction. That is, creating another space. Because they do not have space inherently within the phrase clear.
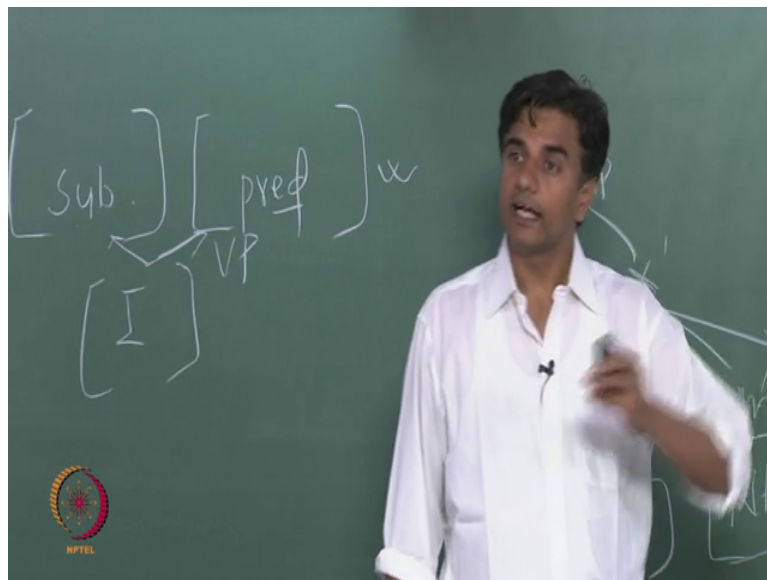
I am coming to adjunct and compliment and adjunct again, it to see to see little bit more about them.

Now let us look at the inflection part separately in bringing certain things in focus. You have seen this structure of a VP. And I want you to keep in mind the first point from here is the VP is complement of I.

With the way with VP what we were saying is what we have seen so far, that there are 2 parts of a sentence.

In our earlier discussions, I have told you there are 2 parts of a sentence. One is subject the other is predicate, remember? And when we said everything else in a sentence by

everything else we meant everything other than the subject is predicate, right which we essentially mean VP. Everything else in the VP, because you see even when we are talking about adjuncts and we are we are making a distinction between an adjuncts and a compliment. It is a still part of VP. Understand this thing? It is a still part of VP. Why is it part of a VP?

We are not doing any charity by saying that the adjuncts are part of VP. These poor things do not have any place anywhere. So, let us accommodate them in VP. That is what we are doing. We are putting it in the proper place, that in the evening is talking about the action done action captured by VP by V. What is happening in the evening?

Student: (Refer Time: 22:48).

What happen? What happens in the evening? Liking of pizza takes place in the evening, right. Therefore, we are keeping it in the VP. It is part of VP by it is, right. It is just that it does not have the same status as the compliment. Is this conceptually clear to you? Any doubt? Anything that comes to your mind, please feel free to ask, yeah.

Student: Adjunct is it like a (Refer Time: 23:21) adverb or?

Exactly everything that that is not part not subcategorized by verb. By subcategorized I mean, everything that is not required desired and guaranteed by the verb is adjunct. What you are see being guaranteed by the verb is it is complement. That is, what do you mean by guaranteed and adjunct? What we means the reason the fact that this verb is a transitive verb it needs an object. Which is it is complement. That is what we mean this compliment is subcategorized required by the verb, desired by the verb.

Now, this thing is not desired by the verb. That is, this thing verb does not need essentially. We need we want to we want to say more things about that, right. He like is fine students like pizza. As far as formation of the sentence is concerned, that is essential elements of a sentence is concerned, we adopt remember? Let us not lose focus that we are talking about required elements of a sentence. We are not at information that comes through adjunct is an additional information. Therefore, we have to keep it where it belongs, and it belongs to VP. It talks about the verb, that that liking in the evening.

Student: But is it compulsory that it should sort of explain the verb or it is explained the add more to the noun phrase.

Well it can add it, can say something to the noun phrase also. In that case it will be contained within noun phrase. It that is just like a compliment belongs to head. In a subcategorized way in a required way, an adjunct also belongs to the phrase not in a subcategorized way, but as long as the adjunct is or adverb is talking about the head it will be projected in the same head. Since this adjunct is project is talking about the verb it is being projected inside the verb. How it is a projected inside a noun phrase? I am going to show you that in a in a moment.

Now so, everything here is part of VP, right. And then we have a subject. Now so, in this in the in the scheme of a subject and predicate, what is not visible is the elements represented by I; which essentially binds these 2 things. Please bare with me, and help me understand that you follow this. Do you see what I am trying to show you? That in this scheme of subject and predicate what is not clearly visible is I.

The elements that bind the 2 things together namely, look at what is being projected in I. And these are not the things that we are hearing for the first time, am I right? Do we do we understand I think I do not want to move little faster, but by looking at you sometimes I get lost. And then I do not get a clear, idea that whether these things are making sense or not whether I am whether I can go a little with a normal speed or not or I need to go with a speed breakers and reduce the speed. So, if you can help me little bit then I will then I will understand I do not know face reading.

These do you see what is coming in the I, right. All of them are part of I, which is not clear here. So, this is the another advantage of x bar theory. That things that were not possible to project with the phrase structure rules are being projected in the x bar theory. And it has a space for projecting all such things, clear? I in in totally contains all agreement tense aspects, it may contain more a more a stuff. Whatever is whatever you think is invisible in a sentence they all belong to I. And therefore, I is the head of the sentence and IP is the projection of a sentence.

VP is the complement of this I, and therefore, it has direct relationship with the functional elements. By it I mean, VP has direct relationship with functional elements in a sentence. It is directly combined or bind bound with the functional elements. Now

talking about the subject, it is projected in the specifier position of the IP; which captures the notion where we started with that the subject is outside the predicate. Subject is outside the predicate. It gets projected in the specifier position of the IP.

Now, before I think you have already seen the structure of this NP; which is in their specifier position of the VP. So, not every time we need to put a specifier. We know that that is an specifier position we simply put an NP there, right. We know this position is for a specifier, and in this specifier what have we seen in the specifier position of an NP, what have we seen? In the specifier position of an NP, what have we seen so far?

Student: Articles.

Articles, determiners and things like that.

Student: In this specifier position of a sentence what we see is.

Subject.

An NP.

Now, this NP is going to represent sentence. Sorry, this NP is going to represent subject. Now depending upon what is subject is in a sentence, we will come in this place. And you have already seen this structure of this NP. Is it a structure of the NP students of physics, right? Now before I go and talk to you about other stuff, there is one more thing that I want to tell you, right. Here you see which is which we will not discuss at length, right. Now because that comes much later, and if I if at all we get time in this class I will talk to you.

Look at this. Do you see anything in the spec position of VP? Like every other phrase VP is also going to have a specifier, right. It has a spec position. There are 2 positions about subjects. There are 2 things that have been argued about subject. In one notion, people have tried to put subject as a spec of NP IP maintaining this notion that the subject is outside the predicate. In the other position some people have argued that subject actually originates inside VP; which is the spec position of VP. And then later on it gets projected outside.

Now, it will it is it is not going to make much sense, right. Now or maybe I am I underestimating you underestimating you, but I am only trying to say that there are 2 positions for the representation of subject. None of them no at a discussion into that is not relevant at this point. With those are just 2 theoretical positions and both positions have their own arguments. Why inside VP? Outside VP? They have their own arguments.

At one level, both can be combined together and one can see the see how they are actually represented. But that is not relevant right now. You may ask a question if it is not relevant why are you, why are you talking about it with? The reason why I am talking about it is when I did I did I talk to you about the notion of deep structure and surface structure, not yet. Whatever I am discussing so far either with this phrase structure rules and or with the structure, these are representation of sentence projection of lexical and functional categories both at deep structure.

We have talked about I language and e language, remember? I language and E language, is that distinction clear to you, within I language, now forget e language for the time being, within I my language there could be 2 layers. One is deeper structure which is called d structure, and the other is called surface structure which is written as s structure both are parts of I language. Now what happens is; we are still talking about deep structure, right. We are still talking about deep structure, when the sentence gets completely, when the sentence gets a complete projection, that stage is called s structure.

When the when you see this complete projection; that is, projection of every single element in a sentence is done, then we call that s structure. So, the argument the reason why I talked inside VP and outside VP is the people who argue it is inside VP, for them it originates inside VP at d structure, and then it gets projected at s structure outside VP. Now then then do not pay much attention to this thing, right. Now I just wanted to talk about deep structure and s structure. I just wanted to bring in these notions. I am going to show you more to connect this thing, and then probably it will make little bit more sense. So, let us go step wise.

Student: Sir.

Yeah.

Student: In the previous slide, since we see that VP is not following the blueprint of phrase structure.

Ok.

Student: If we want to be pedantic, we can we can actually reduce the V bar and the specifier and then V prime.

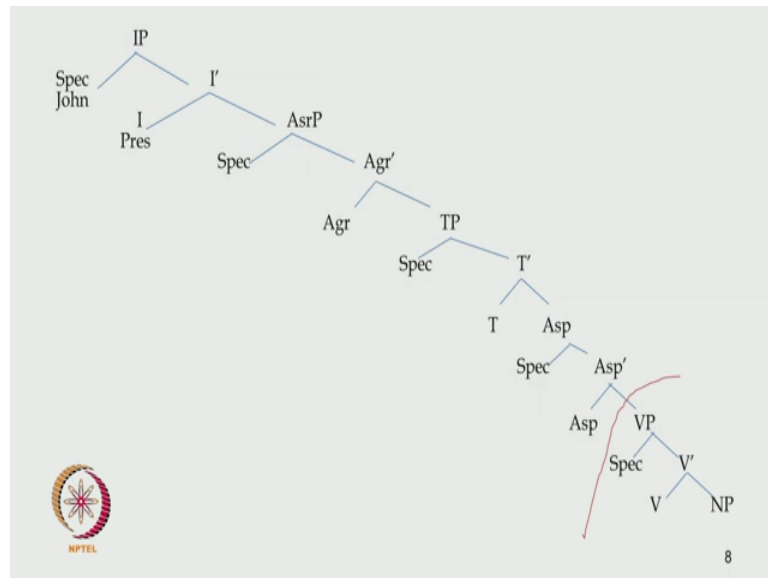Student: Let us say with P and NP.

Yes.

Student: (Refer Time: 35:26) not be correct.

Yeah.

No, no, no, no; that is definitely correct. And that is correct not because it is not following the phrase structure. The moment we say PP is the adjunct, that phrase is going to follow exactly that the original phrase structure rules. What we are saying it is not, it does not belong to VP. That is how we are saying. To accommodate in accommodate it in VP we need some extra layer. That is how we are saying, when we say it does not belong. Once it is a PP, it is going to take it is going to be projected like PP you see here and again, because I have shown you this thing. So, I have put that in in short, that is shortcut clear sure.

This thing clear?

(Refer Slide Time: 36:27)

Now, I want you to look at this thing little carefully. Do not be scared of this thing. It is exactly what you have seen so far. I give you 20 seconds to look at it. And if there is anything that is not making sense let me know. I my apologies to you for it for the smaller fonts, I did not put smaller fonts, it is you know you know how it becomes small; when you try to project too many things it is small. Now tell me if you see anything so far, anything here that you haven't heard so far.

Student: Asr, AsrP

As.

Student: RP.

Where is AsrP?

Student: It is AgrP, it should be AgrP.

Oh, I am sorry, I am sorry. Yeah, that should be AgrP.

Student: Agreement phrase.

Agreement phrase yes that is not Asr, that is Agr sorry. That you see below Agr bar and Agr, right. That is that is the small type of good.

Then you see. So, we start with IP, right. Then we go to AgrP, then we go to TP, and then we go to AspS.

Student: (Refer Time: 37:57).

And then we go to VP. You see this thing? Now even by making it small; that is, smaller fonts, I am trying to trying to connect them in phrasal fashion. When they are actually represented, you know, you are going to see that only head positions of these things are important. So, when people actually draw them, they do not draw spec positions for these things, but for you to see I have tried to draw spec positions just. So, that you see and how they are combined.

Now, remember again when I say they are not drawn, I am not saying they are not there, we just do not draw that as that that that space. That is a spec. If we want to draw nobody wants to stop it is just going to be longer. And if you are with that that is then it is fine now. So, we go we start with IP, we have this spec position of IP, we start with head I and then AgrP, we have again a spec position of that and head of that, right. In the compliment position of AgrP what do you see? In the compliment position of AgrP.

Student: (Refer Time: 39:08) TP.

TP, right it has again it is on head and a specifier. And what is in the compliment position of TP?

Student: Aspect (Refer Time: 39:14)

Aspect, and then again it has own it has it is own spec, and head and in the compliment position of a TP. What do we see?

Student: (Refer Time: 39:25)

In the compliment position of asp, what do you see?

Student: VP.

VP.

Now, this so far where you see the red line, right. So far is just an expansion of this IP this I do you see. This thing what you in the next slide before the red line is simply

expansion of this I. Am I making sense? Are these things making sense to you? If you wanted to you want me to take a pause, I can wait and talk to you.

Student: Sir in this presentation (Refer Time: 40:10) a regular tense and aspect comes in head position of I.

Exactly.

Student: While during the other (Refer Time: 40:16) does not come with the head position whereas, it comes.

Exactly it is just a being expanded. So, here we are saying whatever is the agreement. Let us take the sentence again the same sentence, students of physics like pizza in the evening, right. What do you see in the I position here?

Student: Present tense

We are just putting present tense. We are putting one thing I can put again here present tense indefinite aspect, right and singular agreement. That is all. All 3 of them I can put in the I position, and I am still saying the same thing. To expand this, I that is to put more things I have tried to tell you, that all 3 of them are here, right. In the next one the all I am saying is in the I again sorry, in the I position where you see present tense that is not going to be there I am I am sorry that is another error do you do you understand, what I am saying in the I position here. The present you see that that is not going to be here.

Student: (Refer Time: 41:30).

It is going to be here. It is going to be here. So, you are going to have singular agreement here present tense here and indefinite aspect here. Get this thing? Now there are a still a couple of anomalies in this structure. Once you try to follow this thing. Someone can ask you then what is the need of I you are already projecting everything. Do you understand my question? If I am already projecting everything separately that is AgrT and aspect, then what is the need of this I?

Understand me, understand this thing. So, people say look just get rid of this thing there is no need of it you can start with AgrP, because I eventually is the bundle of all these things. So, we can either put I or these things. There is no need to put everything. And

when we bundle together, we put I when we do not bundle them together we expand them, we do not need to put I. Am I drawing your attention to the anomaly in this structure? You see that? And please ignore that present tense in the in I. It while making thing I just left it there. Now there are more questions, which are again not relevant at this level? Questions are how do you know that the agreement precedes tense, or if we say, you do not agree with this, you think tense precedes agreement let us put tense first. Then the question is how do you decide that? You cannot be arbitrarily residing these things.

In in any scientific projection, one cannot be arbitrarily deciding these thing; that which one precedes what, understand this thing? Now I am just raising this question and leaving this question here; however, there is an answer to this question. There is a way in this syntactic investigation of a sentence or a syntactic investigation of language people have identified which inflectional category precedes first. And then which one comes later, and which one comes later this has been done, but at this stage for our understanding the question exists. Do you understand the question? All right. So, leaving these questions aside, what I want you to see that all that you see above this red line, do you see something above the red line? All of them are called functional layer, functional layer of a sentence. Functional layer of a sentence and beyond this below the red line where you see VP is starting, when you see VP is starting, that is called lexical layer of sentence.

So, all along what we have been talking about functional categories and lexical categories, that is the distinction. And if you if you can see this distinction between functional layer and lexical layer, do you see this thing? Then probably you will be able to appreciate, then probably you will be able to appreciate why someone would be tempted to put the hypothesis 4th that subject originates inside the VP. Let me see it again.

If you see the distinction between functional layer and lexical layer, then probably you can appreciate why someone will put forth the hypothesis that the subject originates inside VP. Because subject eventually is an NP it is a lexical category; how does it belong to functional layer? Understand this thing? So, that is the genesis of someones precision on why it should originate inside a VP. Number 1, then the question is if it does not originate inside VP, if it originates inside VP, how does it go up? These questions are

answered phrase by phrase later. But I want you to see the relevance of these questions with the help of this understanding.