Okay so we will continue with the phrase structure and complement and urgent distinction.

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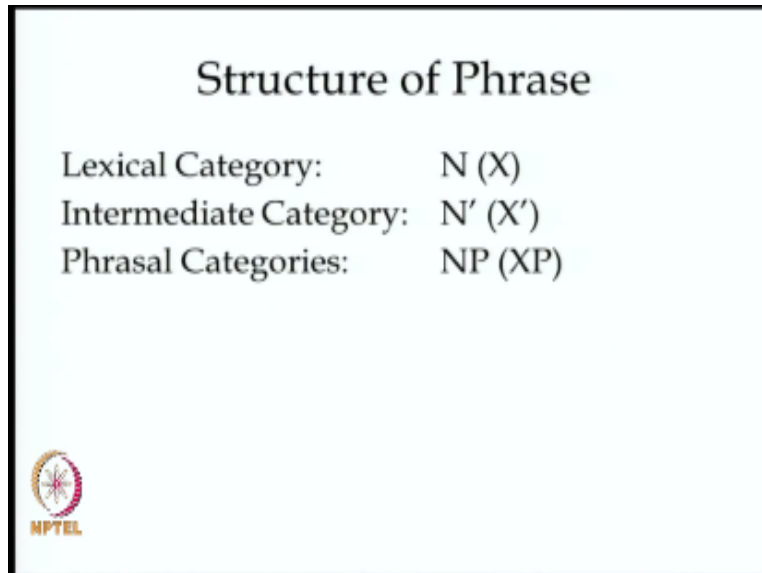
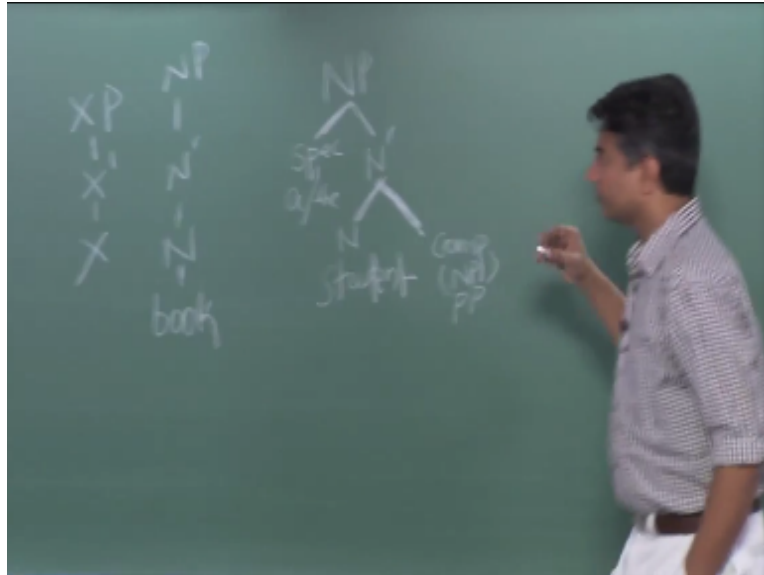Quickly reviewing from yesterday we have looked at these three aspects of a category there are three layers of a category one is the lexical layer intermediate layer and then phrasal layer all of them are going to be.

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In all the phrases are going to have these layers and each one of the category noun verb adjective and preposition will follow this follow this system where the words are always at this category the reason why we need phrases and is because we need to accommodate more stuff that are related to heads in a phrase we have in a noun phrase we have a noun as a head and then we get it.

Potentially we can have a specifies of a noun which can be a determiner and a compliment which can be an NP itself or a PP and then there are specific relationships between these elements that become crucial for how sentences work this is what we have been trying to look at and we are looking at this the relationship between these elements and categories with respect to the distinction between complements and adjuncts how do we find whether a particular phrase is a compliment or adjunct is what we are going to focus on today.

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- Relationship between elements and nodes.

  There are three elements in a phrase.

  Specifier
  Head
  Compliments

  Intermediate category (X') makes relationship between specifier and compliment hierarchical.

So like I said every phrase will have these three things specifies head and a compliment not necessarily their each position is filled they may be empty but they will have a space for the for the three things that crucial thing between a compliment and a head is they are non recursive and I am going to talk about it I am going to talk about what it means to be non recursive and what it means to be recursive as well but the relationship between the head and a compliment is non recursive.

There is a role of intermediate category in us understanding the distinction between head and compliment and a compliment and a specifies that also will be highlighted.

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NP (Noun Phrase)

- The king of England

- A student of physics

- A student with long hair

- A student of physics with long hair

So we were looking at some of these examples I want to stick to the example so that we understand now I want to draw some of their structures of these phrases probably that will help us understand these things better the first one help me draw this thing and please look at look at it how did how the structure develops.
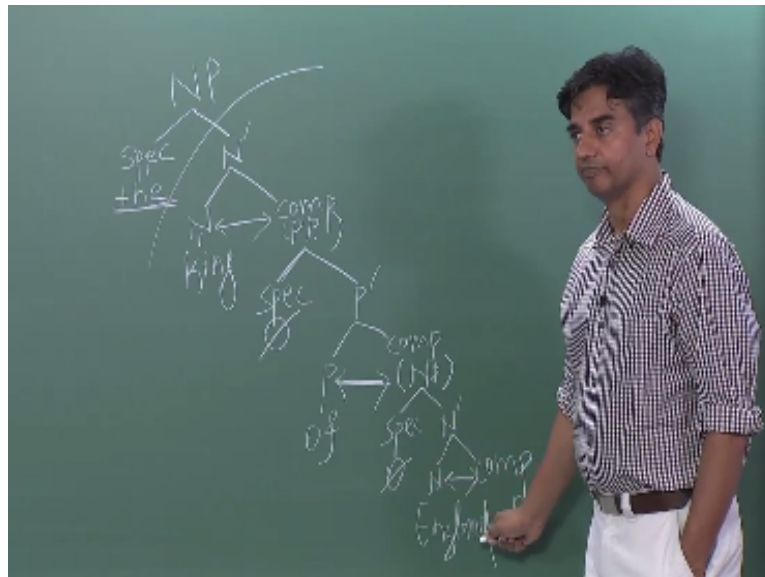
So we have the first phrase the king of England so in this phrase the head of this noun is king which is a noun and this is okay the specifies of this noun is the determiner and the complement of this phrase is an NP sorry is a prepositional phrase a PP which is of England so look at it look at this phrase now how it works again this will have any specifies P bar head P and its complement which is going to be an NP and in that case this NP since we are doing it to understand the structure let me elaborate the structure to see how it really works.

Again this is this will have a specifies ahead now and a complement and then the preposition is off and then here is we have now England this is the full representation of this now trace the King of England now I want to draw your attention to several specifics of this displays you see this determiner is way too high in this structure there is right now I am mentioning about high and low and the hierarchical relationship in non configurational terms there are transfer terms for these things which I want to introduce to you at a particular stage.

But the reason why I am only saying it is high is everything else in this phrase look at this everything else is in the scope of this determiner this has specified this is why it is it is too high and this provides a specificity being a depth being a definite article to the entire phrase okay then when we start looking at the smaller segments of this phrase we see that here is the head and then there is a sister relationship between head and its complement which happens to be a PP in this case which is a prepositional phrase.

Again when we look at the structure of this PP it is consistent with the phrase structure that we have been trying to understand where every phrase will have a similar pattern similar structure which is specified head and a complementary now look at this PP this whole thing is the complement of this now and this it has an a specifies head and again a complement of its own which is the complement of this head which is a preposition there is no specifies for this phrase.

Therefore this place is empty there is then when you look at this specifies when we when you look at the complement of this P with preposition off then you see it happens to be an NP a noun phrase which is England and in this case there is no specifies and no complements both however it retains consistency in the structure of phrases and what it also retains is the relationship between one another look at look at this how compliments are related to their heads in each configure it in each configuration at each stage the relationship between the head and a compliment is of equal you see.

You see that where the head noun of the entire phrase King takes its complement its ancestor reverses it everything that is dominated by this PP is in the scope of this noun and everything else is the complement of this now which is this PP then when we further go and see this PP is headed by a preposition which has its own complement another NP and when we elaborate that NP again we see that in the head position of this NP a of this light of this NP we have a noun which does not have it compliment okay.

Now similarly you can work on the structure of a student of physics it is going to work exactly this way where the differences begins is when we want to look at adjuncts in the example of a

student with long hair and   again bear with me for a minute I am   only saying compliments adjuncts   and I am   going to show you how do we find out   that one pp becomes a compliment and the   other becomes an adjunct in a moment to   you.

Now let us work on the third one   student with long hair how does that   work   within this in this whole   structure so that we know that this is   not a compliment this is an urgent okay   let me work on that.

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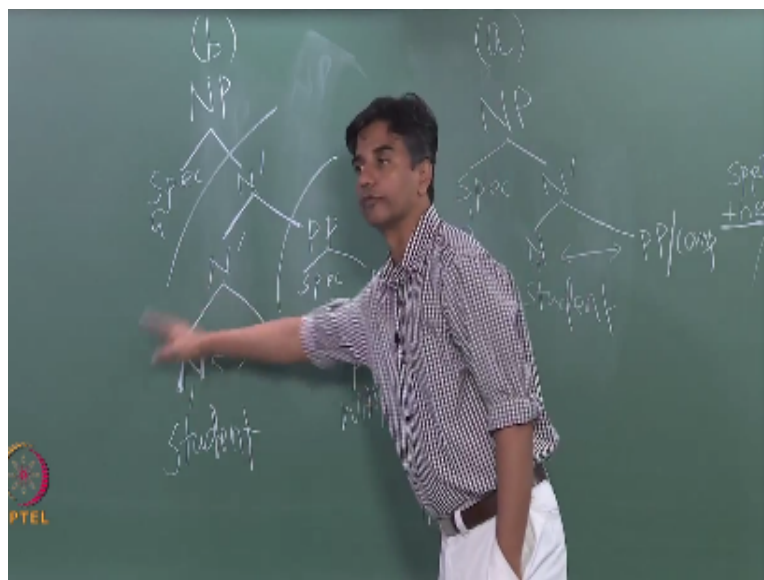
Again we have this whole thing is   nominal in nature therefore it is an NP   it has an specifies and then head   which is a now what is their specifies in   this sentence a which is a determiner A   and the head of this place is student   okay now we are saying that this is it   this is not a compliment of sorry   student with long hair is not a   compliment   which clearly means that this PP is not going to be here because this is not the   position for it for an urgent this is a   position for what a compliment   if this VP was a compliment then this is   where we get it.

Then the question is   where do we how do we represent this   thing structurally so that we can denote   the distinction between the two the way   it works is this so I am going to quickly   do this thing for you   do you understand this structure what is   the difference between this structure   and this structure there is this let me   let me call it A and call this one B   what is the difference

between A and B so far that you see with the other ranges compliment I thought it will be much simpler than that.

The difference is we have two of the intermediate categories here you see that two of the intermediate categories the role of the intermediate category is to provide recursiveness to the structure that is if you need more space add one more okay however once you are decided that we have reached the terminal node this cannot be expanded further once we know that we have reached the head noun and then whatever is going to come here is going to be the complement this does not branch any further so this configuration is non recursive and this configuration is recursive okay.

That is the relationship between the head noun and it is complement is non recursive that is that non recursive Ness is brought into this thing to capture the idea that we cannot have more complements however once we have however we custom this does exactly the opposite it provides a space for more and more elements in the fridge okay so now this the determiner he is specifies here is the determiner A and the head noun is student and here comes the adjunct PT it does not come in the complement position and then it goes again to the specifies.

So what do we have here in the pp what comes here in the head position of this place we are working on the third one from the screen with there is usually there is no specifies in the prepositional phrases sometimes you will see that that place is also not listed but we are listing it for simplicity and for us to understand that it should be that every phrase follows a consistent structure and the complement of this preposition is an NP again which is oh we have little bit more than that here long hair student with long hair.

So what do we have that sure long is an adjective so this is an adjectival phrase okay at this point I do not want to take you into that discussion but long is long hair is also called also argued as a noun phrase where long is just the modifier of the of hair but that discussion is a completely different thing right now for us it is not relevant we can call it adjective phrase or a noun phrase now if it is an exact I will phrase what will be in the head position of this phrase.

What will be in the head position of the face long and then where does the noun go compliment as the compliment of that head which will be adjective and then again it will have its own phrase and then the hair will go to the head position of that entity you say how it how the how the structure works right similar issues again in this kind of a phrase the specifies has the whole thing in its scope this head this is the head of the main phrase where this PP serves as a as an adjunct .

Now once we have now let us look at the fourth one student of physics with long hair should be pretty simple for you to do we are all physics comes in this place of a compliment and with long hair remains away from this configuration alright so we then we still maintain the distinction between a compliment and an adjunct get it.

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On purpose I want to introduce word phrase as well just to show you that the way we have been looking at noun phrases and its complements energons the distinction of a compliment an urgent works within the word phrase the same way okay there is absolutely no distinction in terms of its struck in terms of their structural representation that is structural representation of the compliment and adjunct in the world phrase look at the word phrase here I you know as a matter of fact I do not want to just take it for granted I want to show you at least one of them.

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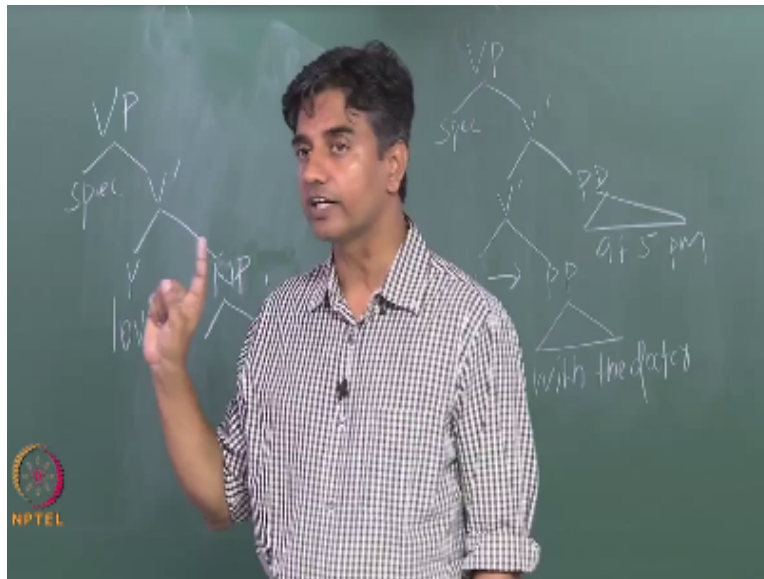
The if I say if we work on the structure of every word phrase the way it works is again we have an ax specifies and a B and here is the head work what comes we are working on the first one john loves Mary what comes in the head position what is the verb here lo loves so right now we are going to put both but you know that there is a distinction between love and loves what is the distinction between the two there is some other element associated with the world when we say loves what is that element associated with this number or tense or something else.

Please keep in mind that when we say tell me now note that right now I am going to put it here when we say terminal load that is a lexical category that category does not take anything else other than itself so anyway this category here we should not have this that is whatever that element is number or tense that goes somewhere else and hopefully if not today in the next class I will show you where that goes to how we separate these elements from the lexical categories and how they combine together to make a sentence.

Remember we are working on a word phrase right now that is and I told you in one of the beginning classes that work is the center of a sentence it hosts everything and that is how it becomes a powerhouse so for the time being let me put love's ok and then we have a

complement which is what so the more we work on these phrases we stop writing complements we know that this space is for complement so we only put what is the complement of this world Mary which is what a noun phrase.

See in the complement position we cannot have a terminal category as the as the complement that is here we cannot say that we have just a noun as the complement complements must be a phrasal category therefore we have an NP and then again it works the same way where terminal node as noun and then it becomes okay yes I see in the second one Mary will meet with her doctor at five pm the word phrases will meet with her doctor at 5:00 p.m. right so okay.

At least this one again I want to show you how it works okay so we have a VP there is there is no alteration in the elements in a phrase that is we will have a specifies this kept intermediate category and then this form okay we see that with a compliment we have something else here what do we have the complement is with her daughter and then there is another okay so first of all tell me what is the category of this complement with her doctor.

What is the complement of this what is the category of this complement what is the phrasal category of this complement PP and we have another PP at 5:00 p.m. right and that PP is not a compliment because we can have just one complement in this case so this is this is how it is going to work the way we have seen the earlier noun phrase we are sorry we will have a V here terminal thing meet and I am dropping right now the 10 spot will that that I will show you some other time when we are working on the full sentence meet the complement is going to be the PP and without elaborating this complement.

I am just going to put it this way with you can you can expand this thing cannot you yes no yes and then we have another pp here at 5:00 p.m. which is going to be the adjunct of this face all right this structure or the recursiveness and non recursive nature of this structure guarantees us that we can have more than one adjunct in a sentence rather in number of adjuncts in a sentence or in a phrase but we cannot have unlimited number of compliments in a sentence that is the

most important takeaway point here from this structure it is clear then comes the point that how do we know.
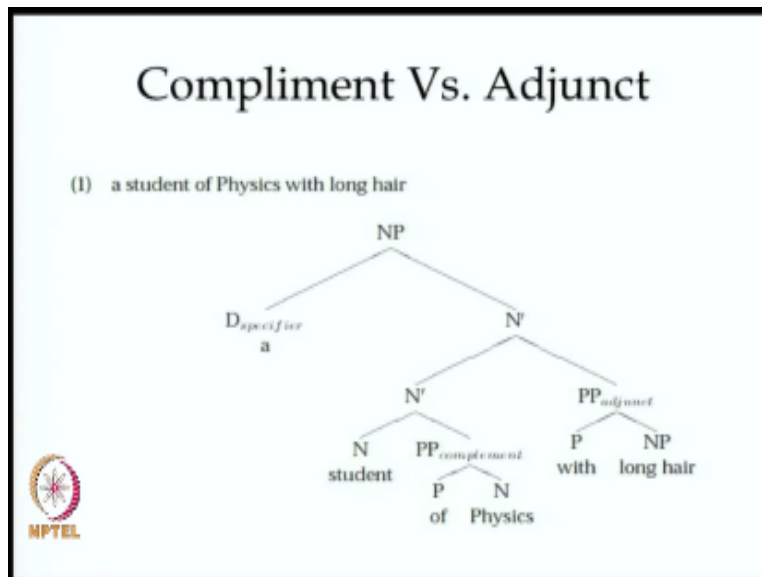
That ever really a particular phrase is a compliment or an urgent they are pretty simple and when I tell you about those things you are going to realize I already knew them this is the structure that we were working on yesterday do we understand this is structure in a better way today we have we have the whole head with the determiner as a specifies A and this is the distinction that I where I was asking you last night yesterday where you see this being recursive and this is the whole point of this intermediate category.

You can see that this is the this node is called NP it is a phrasal category because the in the head position of this whole category we have a terminal head which is a now but and so is true for everything else but there is nothing this intermediate category is not a terminal thing this intermediate category is only for providing us recursiveness in the structure I do want to mention this to you that I have I have not taken you through the historical development of how people worked on these structures.

When for the first time this whole thing came into existence this was not binary branching trees they had several branches and there were reasons for that is not in my understanding that is not

important for us to understand what how did it look historically and then however what is important for us to know is what are the advantages of binary branches probably the next week when we look at two more issues in syntax I am fairly aware of the introductory nature of this kind of a class so I am trying to keep it within the limits but when I introduce two more aspects of syntax then probably.

I will be able to tell you the relevance of binary branching in a little bit better way and this recursiveness here in this structure tells us that this PP is a compliment and the second PP is in urgent clear so this is this structure clearer today all right now let us go to C.

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Compliment

- a. John is a student.

- b. John is [NP a student [PP of Physics]].

- Transitive with an NP Compliment.

- * John will imitate.
- * Mary will abandon.
- * Tim will reconstruct.
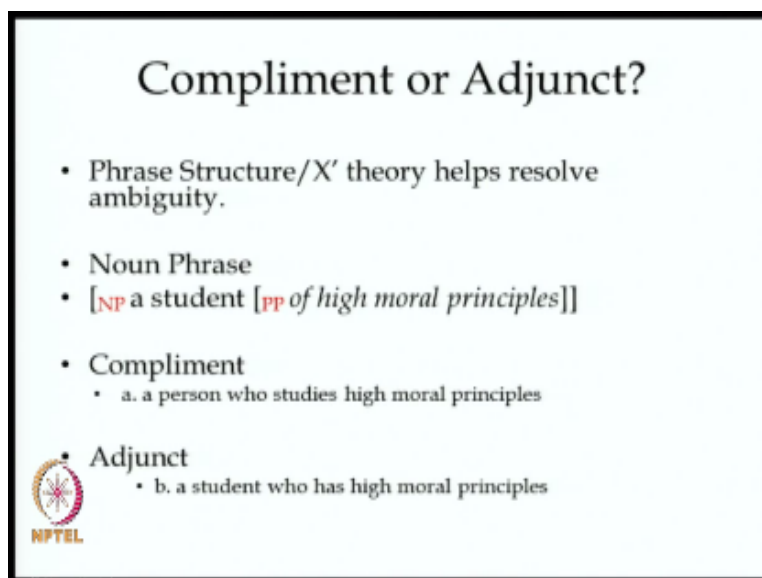
That is the distinction between complement an urgent I want your attention to the ungrammatical sentences which are with transitive verbs do they sound and grammatical to you when we when someone says John will imitate is that an incomplete does this sound incomplete Mary will abandon there is the sound incomplete Tim will reconstruct right what is missing in these verb phrases with the transitive verb what is missing the object in the traditional grammatical structure we could have simply done away with this object.

We do want to put this idea that these objects are actually complements what we know as objects are actually complements so the reason why these three sentences with transitive verbs

are ungrammatical is because the complements are missing and without a compliment we can have a sentence we can have a word phrase without a PP without an adjunct but if this is missing then the sentence leads to ungrammaticality and unacceptability.

So here we start how do we know the complement how do we know whether a phrase prepositional phrase is really a compliment or an urgent and also we want to learn how do we take care of ambiguity in sentences when you read this end then this phrase.

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A student of high moral principles this scent this phrase can be ambiguous okay this phrase can be ambiguous this has two meanings and these two meanings are represented in A and B you see that distinction it this phrase a student of high moral principles could mean student who studies high moral principles or a student who has high moral principles when it means someone who has high moral principles then it is really an adjunct and when we mean someone who studies high moral principles then it is a compliment.

So the advantage of understanding the distinction between a compliment and adjunct helps us understand ambiguity or at least describe ambiguity why ambiguities arise and how we take care of those ambiguities human mind does not make this mistake at all however I do not want to say that this is ambiguities or mistakes ambiguities are not mistakes but when we say

ambiguity we mean if we are looking at this phrase this is ambiguous when you are telling this to somebody and the way my human mind processes this whole thing is very clear to human mind.

It takes just one reading it may be physically ambiguous but it takes human mind takes just one reading when human mind takes the reading of a come of this NP as a complement which is a person who studies high moral principle then you know how complement configuration works when we have a different meaning of this whole phrase that is meaning B then the contrary configuration works like an adjunct the way human mind figures out this ambiguity with whatever speed required is precisely because of this distinction between complement an Adjunct.

Maybe it is little bit too much at this point to tell you and for you to see that really human mind will be working with these two terms complements and urgent but that is the argument for these kinds of ambiguity in this kind of research next is.

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Yes so now we start now we look at what works how we understand about compliments you see the way the first way to find out whether a PP is a complement or not the compliments should be close to the work and the ad gene does not have to be close to the world if you try to reverse

the order then that results in two and grammaticality so anytime you are in doubt you put another PP there and try to reverse it if it if the order is giving you an grammaticality reverse the order is giving you an grammaticality then you know.

That you are inserting another adjunct in the required air Jason C between the head and the complement are you with me at this point you have a noun you have a noun phrase a student of physics you want to know of physics is complement or not try inserting another people if that results in two and grammaticality then you know that you are disturbing the adjacency required adjacency between a head noun and a and its complement therefore ungrammaticality you with me and that is what then grammaticality of be on this phrase a student with long hair of physics tells you that is the first test of whether PP is a complement or not.

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The other test is located in recursiveness and that goes back to what a swing you are asking about an NP that some things an NP may not have a complement we have not take it take for example we have an M and we have an NP a student with long hair how do I know that this time this PP with long hair is an adjunct if it is an adjunct and we put another adjunct and another adjunct that that is another PP and another PP and still we are getting a grammatical string then they are all ejects.

Here we have this with long hair with short arms in green coat all of them as all these three PP are agents okay now what are we trying to say suppose we had only this much student with long hair and we I want to find out this with long hair is a PP is this PP is an adjunct and not a compliment if I put here something which is of the sort of an complement this structure is going to be a mathematical if the following PP is still in urgent then it is going to be grammatical and thus we know that the previous PP is also an Adjunct.

And therefore it is allowing the think about this recursiveness the intermediate category because of that recursiveness it is allowing us to have more I have put only three but you understand that we can put three more here can be and that is what I mean when I say arbitrarily large number of times and that gives you remember in the one of the first few classes I had I was talking about a fairly long sentence remember about it how long it sentence could be how long do you think this place could be technically or theoretically how long could this place be what you cannot describe a person more than I mean theoretically.

It could be infinitely long I mean it do not make any sense I understand I mean I understand what you are saying you do not make any sense I probably will lose track of what we were talking about right if I am talking about the student and we can continue talking about that person I mean this is all these things do not mean anything with long hair and short arms and these things are probably not supposed to are not giving us the factual details of it so all we are saying is technically and theoretically this phrase could be infinitely long.

Therefore we have not even reached to a sentence I can tell you we can predict a sentence is also a phrase and therefore that phrase also could be infinitely long we will talk about that when we come to come to sentence some of you do not seem to be agreeing with this infinite thing do you do or you do not you can very well not agree that is but also perfectly okay but do you understand the theoretically there is a possibility of this being infinitely long.

When we are talking about a theoretical possibility the by the definition of this theoretical possibility it is not going to be actually in practice nobody speaks the phrase nobody uses a

phrase in a sentence which is infinitely long what will be the consequence of the use of a phrase that is infinitely long in a sentence you cannot have a sentence we you will never complete a sentence if we are going to have a phrase.

Which is infinitely long in a sentence are we going to ever complete that sentence therefore we you write that practically speaking we are never going to be using a phrase which is infinitely no but that is what we mean when we say theoretically speaking there it is a possibility that a phrase could be infinitely and that is captured through the recursiveness just one small little glitch it is one small little insertion in the whole fridge structure tells us or allows us to capture this infinity okay.

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Compliments are Non-recursive

- On the other hand, the complement rule is not recursive i.e. it can apply only once.

  – * a student [of Physics] [of Chemistry]

One more thing this kind of recursiveness is not allowed for compliments I guess that that should be pretty simple we cannot be saying a student of physics of chemistry of engineering of whatever this is not allowed that is because that the structure between the structural configuration between the head now and its complement does not allow for further branching or keeping this empirical facts in mind the structure has been designed in such a way that it does not take recur signal.

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Free Ordering of Adjuncts

- Further, unlike complements which have to precede adjuncts, adjuncts can be freely reordered with respect to each other.

  – a. a student [with long hair] [with short arms]

  – b. a student [with short arms] [with long hair]

The ordering of Adjuncts is pretty free we can change the order of engines in a phrase we student with long hair with short arms can be reversed however what we cannot what we cannot reverse is if we had instead of these two both of them both of them being complement both of them are adjuncts here like if we had one compliment and the other agent then we will not be able to reverse the order so that is another test any time you have to pee pees and you want to check whether both are compliment both are adjuncts or not you can reverse the order and see whether it results in two grammaticality or ungrammaticality.

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Coordination

- Compliments and adjuncts can be coordinated with similar categories

Compliments:
- A student [of physics] and [of chemistry]

Adjuncts:
- A student [with long hair] and [with short arms]

The last point is about coordination you understand ordination when we when we add two phrases together we can only add   an adjunct with an urgent and a complement with a complementary we cannot change the categories in coordination so we cannot say student we have to say student of physics and of chemistry we can we have to say a student with long hair and with short arms what is not allowed.

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- Compliment with Adjunct

- * A student [of physics] and [with long hair]

- Adjunct with a Compliment

- * A student [with long arms] and [of physics]

Is student of physics and with long hair that is a   complement and an adjunct cannot be coordinated together likewise an adze antenna complement cannot be coordinated as well so

there are three or four very short tests which can tell you how we make the distinction between a complement and adjunct and whether a particular phrase is a complement or a very urgent number two the this distinction can easily be captured configurationally which you have seen on the screen I guess I will respect your time limits and we will stop talk about cases next time we meet thank you.

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