

**Indian Institute of Technology Madras
Presents**

**NPTEL
NATIONAL PROGRAMME ON TECHNOLOGY LEARNING**

Introduction to Modern Linguistics

Lecture – 35

**Syntax: Structure of an IP and
Thematic Relations Cont..**

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We will continue with this with crazy structure and then we will look at how those nodes are related to one another and what else we need we understand through phrase structure how that whole understanding of this internal structure of language becomes helpful in understanding further relationship between several components what have we seen so far with the help of phrase structure anybody if we if we look at if we look at the distinction between subject and a predicate.


With respect to phrase structure what do we get what do we see what is the distinction between a subject and a predicate with respect to phrase structure so we understand the constraints or requirements of proximity or distance between components of a sentence right phrase structure clearly tells us that subject is completely outside and the whole notion of subject becomes clearer looking at register crazy structure okay.

So far we can say our subject is the noun that app occurs in the that occurs in the specifies position of an IP okay but that does not that does not define subject properly the question still remains what is the NP what is the noun that goes in the specifies of this of the subject position how do we know about it the current discussion on structural relations and their cases.

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HS 4070: Modern Linguistics

Session - 34
Syntax: Structural Relations and
Case Theory




Is going to help us understand the notion of subject and the components of predicates in a better way.

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Agreement Patterns

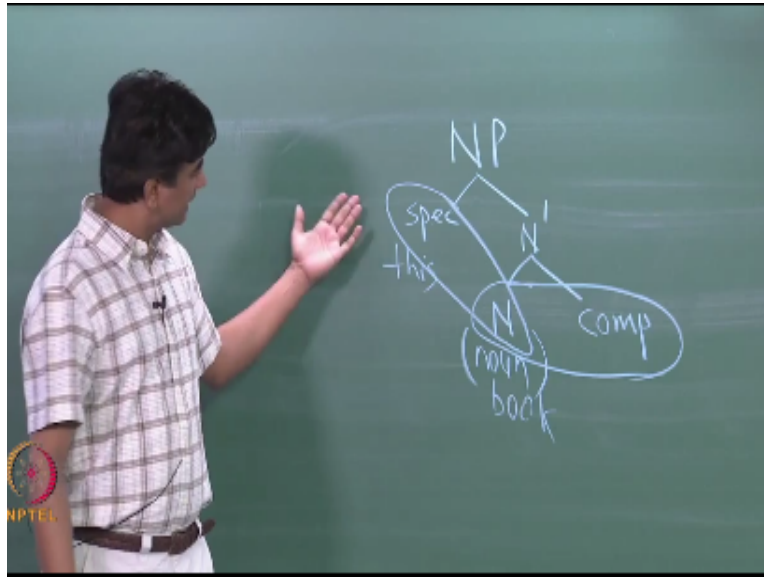
- There are two patterns of agreement.
 - Spec - Head
 - This book about linguistics
 - These books about physics
 - Head - Comp

• choTii _{FS}	gaaRii _{FS}	'small car'
• bare _{MP}	kamare _{MP}	'big rooms'



Before that I want you to understand agreement patterns there are two types of agreement patterns and both the types become help the our understanding of relationship between ahead and it is a specified and the relationship between ahead and it is complement they help us understand the understand to different types of agreement patterns so let me show you what I mean with what I mean by that .

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See here is a here is the structure of a phrase by now we have seen that this is the head position right this is not a specifies position and this is a compliment position depending upon the nature of a phrase different kinds of element go in the specifies position or in the compliment value set however what remains in the head position is the head lexical category of this phrase in this case right there is a specific relationship between these two this is called spec head relation that is what you see on the screen.

It describes one type of agreement patterns and then the second one is called head complement relations one is hierarchical that is respect head is hierarchical where a spec is higher than the head and head and comp is parallel at equal level right so these are with this differences they capture certain kind of agreement patterns for example look at the look at the first one in the as a noun phrase and I do not think it is important to draw or please let me know if you think it is important to draw this and show it to you.

When we say this book right we see that the demonstrative pronoun this is here and then we have a head book clip there is a relationship between these two when we need to say these books we do not say these book or we do not say this books yeah now that the two elements the this and these they occur in their specifies position and then they control the relationship

between the lessons they have a special relationship with its head that is they are governed there they are totally in accordance with its head.

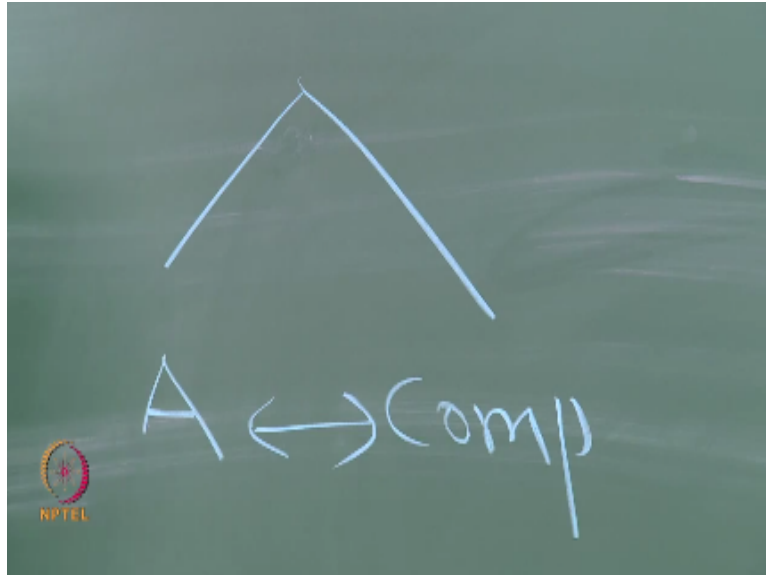
This kind of relationship can only be captured through some sort of understanding between spec and its head and then we need to figure out so one way is to describe I this is what we see in understanding linguistic a structure description is something that we see explanation is something that we do not see which in this case it would mean that this is visible we see that but are there constraints on this how do we capture those constraints.

What are the underlying principles governing such constraints is what I am going to discuss with you then you see another type of agreement pattern in languages which is about comp and head so if we have a phrase like in this case we have a choti gadi right it is a Hindi word which means a chovcar what type of a phrase is this adjective phrase right and what is in there what is it what will be in the head position of that objective phrase sorry Choti the adjective in this phrase is choti or in the other phrase is Bada or something right.

We I hope everybody understands this much of Hindi and you can you can see the point that I am trying to make the adjectives choti agrees with the now with bitter now okay and then likewise their adjectives buddy agrees with the now as well what is the how do they agree what is what do we mean here when we say they agree with each other this suit is feminine sure the car is also feminine original so they should be in agreement so the OT and car agree you cannot shoot a car okay.

So they agree with one another in terms of gender and then the second one number and gender both right so this kind of agreement if you see we have a head position .

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And a composition okay this agreement is called head in complement relationship right because both are at different levels one is hierarchical learning the other is not there has to be something going on in the in how these agreements are maintained okay also one of the differences that I want to draw your attention to is when we say this book about linguistics that is when a specifies a specifies is in agreement with its head right it is in agreement with the head.

But then at the same time a specifies is related to the entire phrase that is the interest of the phrase is in domain of that a specifies however with a compliment head relationship only head make sure that the compliment and the relationship that that is agreement between the comp is taken care of and then it does not spill over other kinds of elements okay so this is one this is one these are the two patterns that I wanted you to keep in mind before we discuss more things.

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Relations

- Dominance

- Node A dominates node B, iff

- A is higher up in the tree than B and
- If there is a line tracing A to B going downward

- Precedence

- Node A precedes node B iff:

- A is to the left of B, and
- A does not dominate B and B does not dominate A



Now here are a couple of terms that I want you to know before we talk about more terms the first is dominance okay what do you see here the definition of dominance can somebody read this loudly if there is a line raising you to be going downward okay so you are you understand this definition note a dominates not B if and only if these two conditions meet right now given that definition what are the nodes which are dominating nodes in this phrase a small one specifies dominates what known and compliment booth no.

He does not he is hired up and trade is higher right look at this look at look at the definition in the structure carefully I understand that the word dominance is not a difficult thing to understand but still I am putting up this definition and structure both for you to see there is a reason behind this noun phrase this note dominates this one does it terminate this one how about these ones does this one dominate this line joining there is a line joining them so NP being the highest note dominates everything.

Else because there is a line joining everything even this one is dominated by NP of course there are other elements dominating them so the way we describe this is MP is going to be dominating aspect and N bar and it is also going to be dominating in and its complement however N bar is if we are talking about nodes dominating in are you with me notes dominating N what are the notes that are dominating M N bar and NP so is it is fair only that we say MP dominates in however N bar immediately dominates yes.

That is the one of the things we want to capture through this definition of dominance clear spec does not dominate N bar or in and it is more than obvious that n does not dominate aspect at all that even intuitive but so being higher up in this structure or a structural hierarchy means that the node that is lower is not going to be dominating the other and there is a meaning of there is a meaning associated with this dominance when an OD dominates the other one the generic or intuitive meaning is that everything else is in the scope of that node okay.

Everything else is under influence of that node I am using generic terminology before I reach to the technical ones okay however they don't work the other way around okay if we are looking at a flat structure of a sentence and if I just write to you this book of this book of linguistics it is hard to explain how this and book are in hierarchical relationships how this takes both book and linguistics book and off linguistics in its in its scope okay.

So hierarchical structure this describing relationship between different nodes and different components help us understand these things now precedence should be simple again is it clear intuitive please tell me which one which one precedes does this spec proceed anything this precedes a N bar can we say expect proceed same to given this definition it does clearly if we are talking about the Speck they say A and B this is B right A is to the left of B and a does not terminate B & B does not dominate A at all therefore a precedes B okay.

And it a clear canonical example of precedence is this one none of the two A and B dominate each other and A is on the other side on the left side of B any difficulty come aspect proceeds come can we say that tell me no yes aspect except MP yes which is the relationship between aspect of the phrase and the phrase itself cannot be of precedence it has to be defined only with dominance where if the relationship is not dummy of dominance then it has to be described in terms of precedence yes now the whole the terms of dominance and precedence how are they going to be relevant in capturing further details let us look at some of them.

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Morphological Case and Abstract Case

- John is from Germany.
- His coat is big.
- Mary is his friend.
- He likes her.

- John killed the tiger.



But before that I guess I have something else to tell you which is now we are getting into an understanding of case okay it is an abstract term it is an abstract entity case not it we do not understand much if we just mentioned case we understand case or essence it better when we describe these things in their structural configurations and we also see the significance of why we need to understand case relationship among nouns only when we look at a structure okay see to give you there

Could be two types of cases in natural languages one could be morphological and the other abstract does this make sense morphological case and abstract case if they do not hold up look let us look at the examples and they will make sense there are simple terms and I have tried to put the relevant term relevant parts in color when we say John is from Germany does this word show you any case do you realize there is any case on that do you see anything on this no right when we say his coat is big okay this word is different his okay.

Mary is his friend write this word Mary then you do not see anything happening to Mary but use you see something happening to his when I am saying something happening to his what I mean is it is not he anymore okay he likes her if can we say marry is he friend no why not why do we need to say Mary as his friend what something goes wrong right when we say Mary is he friendly right can we say instead of he likes her can you say he likes she know something wrong.

With that with that sentence of course that wrong is the sentence becomes ungrammatical but we need to know when we say he likes she what causes that ungrammaticality she is a good word in English right he is a good word in English otherwise but when they appear in a particular position in a sentence they are they are forcing this and forcing ungrammaticality on sentences right so for this for now the point that I am trying to tell you here is words like Mary John he she the Indies in these words you do not see any change in the word.

Even though they carry certain cases they are they are examples of abstract cases and when you see an obvious change in the word then they are because of some kind of prefix suffix US or something when it change becomes visible we call that morphological change therefore if you see a change in the word because of case that is because that is an example of realization of a morphological case and when we do not see then it is an example of abstract case where there morphological or abstract.

And noun once used in a sentence must have a case the better way to put it will be a noun phrase once used in a sentence must have a case a noun phrase which does not receive a case feels and grammaticality and case is relevant to noun phrases this is relevant to the place to the position in the sentence when we put certain nouns which do not conform to that position then the sentence become under medical in this light like I gave you the example we cannot say he likes she because that is the position in which you get a different case and she has a different case.


Therefore mismatch of cases results into an grammaticality it is making sense about morphological and abstract keys that is all we need to understand from here we need we are going to look at some of the things again let us look at this vegetable okay I think it is self explanatory however what I want to tell you is we do not see we do not see any kind of morphological markers on lexical NPS that is what words denoting names like John or Mary.

Or anything at least in terms of nominative and accusative cases I am going to be talking about in particular two cases nominative and accusative I have mentioned genitive because it is easy

to see and you will be able to understand genitive is not the case which I will be discussing when we look at structural configurations.

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	Nominative	Accusative	Genitive
• Lexical NPs:	John	John	John's
• Pronominal NPs:	I	me	my
	You	You	Your
	He	Him	His
	She	her	her
	It	it	its
	We	us	our
	You	you	your
	They	them	their



And I have also not put first person second person or anything when we look at Pronoun like this NPS then cases become visible and they are more of morphological type they change the shape of the NP morphological pieces change the shape of those entries so when the words like me him her them as these are loaded with cases and they appear in places where we have accusative cases places which are relevant for accusative cases and in the in such cases they cannot appear in their nominative forms very briefly.

Here if I talk about number and person I everybody knows that its first person you second person and he she third person I singular plural will be we you singular uploaded both okay and in the plural for me what you are saying by both is in the plural form also we do not see anything changing that is little bit tricky okay now hold on let me let me come to that in a moment we singular or plural we plural they plural okay.

Now very briefly about you if so say it again you is singular or plural both so when we say both then we are saying it could be singular as well give me an example of a sentence where you where we use this pronoun you with a singular verb so what is the word in this case everybody

paying attention to this what is the verb in this case okay what is indicating agreement are is that singular or plural so then how is it singular can we can we ever say you is my friend no meaning singular and when I say you are my friend how do I not how am I not referring to more than one person.

But there could be more than one person my friend if I say you are my friend how am I not referring to more than one person I only want you to see the complexity that is it you do not have to have an answer and this is not your fault or my fault this is how English is structured so can we say you is singular one single in example where this pronoun simple pronoun that we all know since long time kindergarten you can show me in agreement with anything else in terms of singular and I can show you grammar books after grammar books indicating you both as singular and plural.

I am doing the same thing here too just because I am copying it from some place to show you that I is singular and we is plural and you in one case a is singular and in the other case is plural okay however it is important to keep in mind that you is never ever singular what it does is the whole plural agreement is ambiguous in terms of its their numbers sometimes they do refer to one person only and that this is where cognitive computation of human mind comes into human the computation of human mind makes no mistakes you say you are my friend the listeners mind or the speaker's mind makes no mistake in interpretation.

Whether it is being referred to as singular or plural without us overtly knowing that you can never be singular clearly so that that is an issue for some other time with this picture what you see is demonstration of morphological cases becoming visible only when we are talking about pronominal MPS in lexical NPS the distinction between nominative case and accusative case is not morphological it is abstract okay.

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Nominative and Accusative

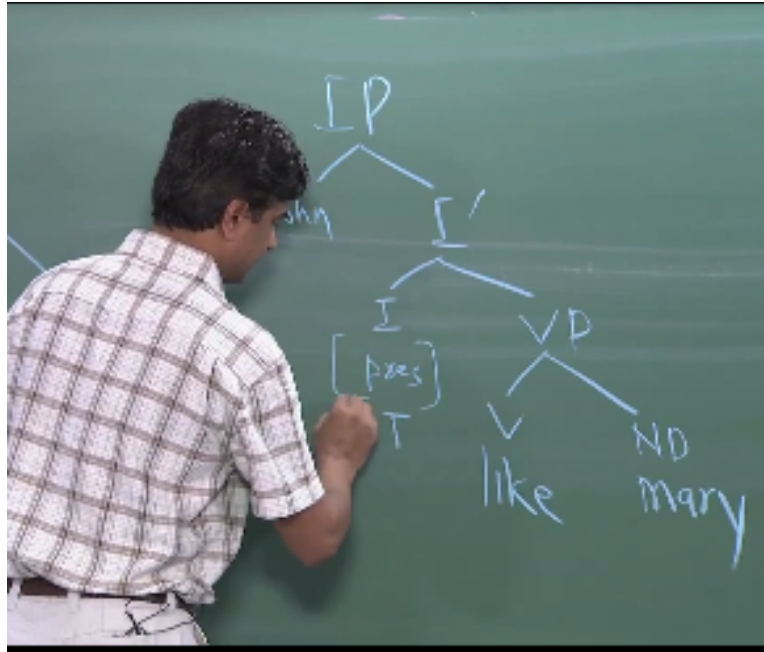
- Finite clause = I [+Tense]
 - John likes Mary.
 - John likes her.
 - * John likes she.
- Infiniteness I [-Tense]
 - [For him to go to Delhi] is not possible.
- Nominative case is for Subjects
- Accusative case is for objects of a transitive verb and objects of postpositions.



Now the two more terms that I am going to be using one is finiteness and the other is in finiteness or non finiteness okay they simply refer to tenses when we say finite sentence or a finite clause we mean a sentence with which has got tense and when we say non finite we mean where in the tense when there is no tense and where does the tense occur in the structure where does the tense occur in the structure of a sentence difficult.

If we are talking about a sentence and the structure of a whole sentence where the tense does occur in that where do we put tense compliment okay hold on I want to talk about a very simple sentence again.

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Where do we put the tense in this structure I so here what is the tense in this sentence John likes Mary present the name is present but it is plus tense so in that is what makes this whole sentence finite and there are going to be sentences where we do not have tenses okay I will discuss that with you in a moment now if you look at these two sentences first two sentences John likes Mary and John likes her in both the sentences John is the subject of the sentence it comes from it comes from the understanding of a structure of a sentence that subject is going to occur in their specifies position of a sentence.

However the other important point describing or explaining subject is it must have nominative case all the time and NP in a nominative case can only be the subject of a sentence when we are talking about two cases nominative and accusative cases and NP in anything other than nominative case cannot be the subject okay and therefore in nominative NP occurs only in a finite sentences okay however accusative cases are for objects of works and for the objects of prepositions.

That I am going to show you is the distinction between finite clause and non finite clause to you people from this side okay now I want to talk about one example of non finite clause you see the example that I have given you given you here for him to go to Delhi is not possible is the whole sentence is not non finite the whole sentence is a finite thing that is finite cause a

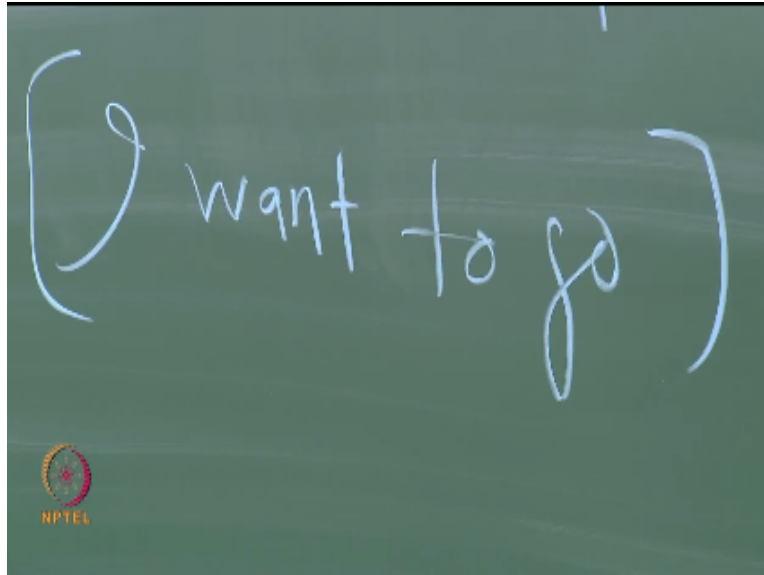
finite sentence what is the tense in that sentence for him to go to Delhi is not possible what is the tense of this sentence present tense.

How do we know that is now for him to go to Delhi what is that what is that whole chunk of this sentence what is the role of that whole chunk in this sentence these are simple sentences we speak these kinds of sentences every day every day we write these sentences every day do you see this now before you tell me anything about that this whole chunk by itself looks like a sentence does it have a verb in it does it have a verb there is no now.

The verb is the difference between a finite sentence and this one is there is a word but that verb is non finite that word in this small clause that you see in red on the screen does not have a tense in it okay does not have it tense in it therefore this clause is called Non finite clause okay now for this non-finite clause there is a there is a MP in this before go what is the MP which is the pro nominal MP which is him but that is not in the nominative case because nominative case mod in peace cannot be part of a non final clause that is the point.

I am trying to show you nominative case marked in peace cannot be part of a finite Clause and non finite clause another restriction or non finite clauses is non finite clauses are not independent clauses okay let me give you one more example of a non finite and a finite clause by now you must have developed a fairly good understanding that every sentence must have a subject okay every sentence must have a subject I am giving you a very simple sentence.

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I want to go it is a simple sentence right how many words are there in the sentence how many words are there in this sentence tell you when I look at you it feels to me like I am asking very complicated questions two hours they are want and go which word do you think is finite and which is non finite want is finite to go is non finite now the moment we are talking about a non finite Clause non finite Clause may not have it have tense this is what after all makes it non finite.

But the moment we talk about a clause it must have a subject okay what do you see any subject here in the sentence I want to go we have a sentence I want to go in this sentence we have a small non finite clause which is to go do you see any subject of that that Clause no I will be the subject of that clause they think just little bit harder there they are very simple sentences but actually they are not.

So if I if we are looking if we are talking about I being the subject of that non finite clause then how is that sentence supposed to sound nobody says it that way but tell me how is that sentence supposed to sound I want that is fine this is how we say but if I becomes the subject of the non-finite clause also then how is that sentence supposed to sound which nobody says but can you say that for me I want I to go honest get this I want I to go now what does the second I refer to same person therefore this is deleted now look at this therefore this is deleted.

And identical item in the sentence gets deleted because languages tend to follow principle of economy anything that becomes redundant language does not tolerate it which becomes the characteristics of human mind as well that human mind would not allow redundancies okay no however even though delete it this empty position remains active this empty position remains active because like these you can have different sentences.

You can have a different subject in that position right can I say I want you to go I can also say I want him to go hard to go them to go yet this thing that put is an objective however it gets deleted only in the cases when there is an identical subject of the main clause see this thing now I am not only trying to show you magic or some of the simple some of the facts about simple sentences that are not usually visible and we do not pay much attention to those.

When we are speaking the language or when we have learned the language the things that I want to draw your attention to is every sentence whether finite or non finite must have a subject when we say must have a subject this requirement may not show up may not force a noun phrase to occur overtly they can remain covert as well which means the position remains active now second part is non finite clauses do not occur independently which becomes a huge restriction on the sentence.


That when we want to have a sentence that sentence may have five other non finite clauses but must have at least one finite clumps and the moment we have one finite clause with that defines the whole sentence we may have more than one non finite clause we may have more than one finite clause also within a sentence but there must be at least one finite clause to define a sentence okay and then you we may have more than one nine non finite clauses as well finiteness or non finiteness irrespective of that there must be a subject and when we have subjects in different projects and objects in different positions.

They must have cases subjects are always going to have nominative cases and objects will be will have accusative case or some people call the same thing as accusative case or objective case it really does not change anything get it know any questions so far anything which is not clear from what I have said so far clear then let us move to the next thing.

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Case Assignment

- John [plays football in the playground.]
- Verbs and Prepositions assign accusative case to the NPs that they govern and command.
- Verbs and Prepositions are governors/heads.

 What assigns case to the Subject.

Now we are getting into the areas where we want to know how does how do these in peace get subjects yet get cases now let us look at this first this is the it is the object position in this sentence is this the object position this is a car this is an MP which is at the complement position but what is the relationship of this empty with the world this word this MP is the is of course the complement of this verb which is a transitive verb but this is also the object of this word.

In other words this is one argument of this word this position is accusative position that is objective position now in peace when they are independent of this sentence do not have any cases of their own please note this distinction in peace in independent world as a vocabulary list do not have cases of their own when we are talking about nominative and accusative we are talking about these two cases in a structural relationship they receive accusative case when they land in this position okay.

So Mary receives accusative case in this position and in this case because it is a lexical NP it is not visible and therefore it is an F it is an example of an abstract case however if you put a pronominal NP here then it is going to be visible which will be hard and we cannot put she

because she is an example of nominative case smart NP and that cannot appear in this position that much we have seen the way the way structure dominance precedence and other things that we have seen helps us understand when the case is related to a position.


It is said that this is a head position remember this and hence in infrastructure heads infrastructures have cases to dispense with that is heads assign cases to their compliments in other words I mean we can say the same thing in different words for a compliment to be warranted with the head it must have a relationship that is this head assigns positive case to the same B what will be the condition for this assignment worse and post positions are clear heads I am not talking about nominative case right now we are running out of time.

We will talk about nominative case assignment tomorrow but I do want to conclude it with the accusative case assignment there are two things that you will see always works okay let me put it this way every phrase has a head right even MP has an head which is in but M is not a case a signer the case assigning heads in treasure structure are V and P that is works and prepositions only and they are called because their heads because they assign cases they are also called governors okay.

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C-Command and Government

- C-Command:
 - Node A C-Commands Node B iff:
 - A does not dominate B and B does not dominate A; and
 - The first branching node dominating A also dominates B.
- Government
 - A governs B iff
 - A is a governor; and
 - A c-command B and B c-commands A



It is said that this assignment of a curative case works under the notion of what we know as seek amount okay and which Reid says this is a simple definition of a C command can somebody read this for me so in this case right what is the if we are talking about a this if we are talking about A and B right so there is A dominate B does B dominate A know what is the first branching node dominating both VP okay.

This is a simplest simple definition of C command which means a we can say A C commands B can we say that AC commands B this definition has a problem you C comments no rate we can also say that that is the problem with this definition what we the problem that we get into is BC commands A to okay in and why will that be a problem for us because if we say A assigns case to be because AC commands B then we land into difficulty why would B not C command.


Why would B not assign anything to a because BC commands A to so this definition has to be a little bit more restrictive now if you look at the notion of government of course heads are governor but again we have the similar kind of a problem with this yet the give the problem I understand the problem that that is creating for us okay now a more restrictive definition of a seek amount will be what are we trying to do before we understand this.

When we say more restrictive definition of C command what are we trying to do that the governor can only C command B that is only a sub C command B not B should be in a position to C command A and that we need to restrict this please tell me if this restricts that look at this and see it see if they get restricted AC commands B if and only if a does not dominate B and every X that dominates a also dominates B X is where X is the first branching note get it now.

See there is one more thing about this that I need to tell you because we with this definition we need to define first branching note what do we mean by first branching note okay one more thing we want to restrict is we do not want to say according to the previous definition that I gave you this one C commands this to write the this one C commands this too but we do not want to say that this assigns case to this or does something to this NB.

So we need to define first branching node in terms of a maximal projection and the examples of maximal projections are NP VP PP right AP so when we say X is the first branching node we want to define X branch X as the maximal project where X is a maximal projection okay.

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- C-Command:
 - A C-Commands B iff:
 - A does not dominate B and every X that dominates A also dominates B;
 - X is the first branching node.
- M-Command:
 - A M-Commands B iff:
 - A does not dominate B and every X that dominates A also dominates B;
 - X is the maximal projection.

And then we will be able to restrict the fact that only a should be seen commanding B and then we can say AC commands be a governs be there for a assigns positive case to and B to the N P that is in its domain I see some now not clear so what is what is the problem part is replace a by B in this case and B by a so again there is no difference look at that look at the further one M command okay.

If it does not show you the difference let me tell you the idea at least okay this was the difference I will talk about this again let me show you that let me tell you the idea the main point is we wanted to devise a mechanism through which we can only we the system should only allow a to see come on B and not B to C command a think about this thing little bit you do you have an access to books now right the PDF copies of the books did you did you get a copy of that all these things are explained with good examples.

In great details please take a look at this and I will try to clarify this see come on in M command business little bit more when we are talking about assignment of nominative case is

to the N P holder can I can I get your attention for another 30 seconds we are saying in this case that V as a governor a science accusative case to its complement NP right what will be the governor do you know you know now where the subject NP occurs subject NP occurs in which position subject NP occurs in which position

At which aspect position of IP what will assign nominative case which what will be the head that will give nominative case to their spec MP a spec of IP okay is the question that we will discuss and then you will be able to see the relevance of C command M command in more details.

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