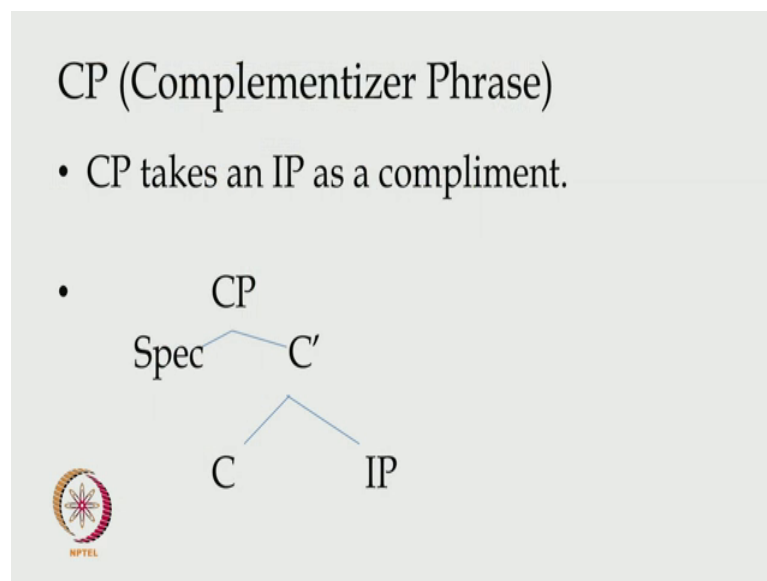


Principles and Parameters in Natural Language
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Lecture – 32
Questions and Movement

We will continue looking at instances of movement. Yesterday and the day before we have looked at movement in natural language and its motivation, we started looking at the role of a complementizer phrase that is a CP and then now we want to see while evaluating some of the instances of movement we are going to look at questions in English in particular and what we know as WH movement. WH refers to question words, that is WH words.

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This is how complementizer phrase looks like and important thing to keep in mind about a complementizer phrase is that the head of complementizer phrase which is a complementizer itself C takes the whole IP as its complement and we have seen examples where a whole CP could be part of a IP as a subject, whole CP could be part of VP as a complement of V.

Now, we want to see wait a minute, we have also seen the role of CP in helping us in helping us deal with exceptional case markings where when a CP comes in a subject position of an IP VC there is a complementizer exceptionally assigns case to the speck of

IP which is the complement of C right. The next thing is we want to see how CP helps us understand how CP helps us understand question movements and understand question sentences. To see that we want to look at some of these sentences we started looking at these sentences and then we saw that in there are primarily two types of question sentences, two types of questions in natural language one is WH question that is content question when we ask a question and we need an answer with a content that is called a content question.

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Questions in English

- I bought a phone.
- What did you buy ----- ?
- Did you buy a phone?




For example, what did you buy we need to answer with a content a pen, a phone, a shirt, a pencil therefore, such type of questions are called content questions and some questions like did you buy a phone requires an answer in yes or no which is called a yes no question.

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Types of questions


- Content Questions
- Yes-No Questions
- Echo Questions
- Rhetorical Questions



There could be more types of questions like echo questions, rhetorical questions and tag questions, tag question is not listed here, but you can see lot of lot of different types of questions. We will skip the typology of questions in natural language for the time being that is not relevant for our discussion here, but we will continue looking at what makes a question sentence and how is formation of a question sentence in natural language theoretically interesting and how does the existing apparatus that is \bar{x} helps us understand questions that is that is the prime concern here which we want to look at.

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- Similarities and difference between two types of questions
 - Fronting of Tense
 - Wh-words for content questions and no wh-word for yes-no questions




So, in doing so we saw yesterday two things that came up from the two sentences that we were looking at and the two sentences that we were looking at such as what did you buy and did you buy a phone in both the sentences we see.

There is an evidence of fronting of tense and then in one type of question that is a that is content question you see WH words, the use of WH words whereas, no WH words is used for yes no type of questions that clear to everybody. This much we have we have seen. Now, what is the meaning of fronting of tense in a theoretical sense?

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- What did you buy ----- ?
- Did you buy a phone?
Bought = buy + **past**
- If fronting of tense takes place, in questions, where does it go to in X' scheme?



We started looking at this and then we say whether a sentence has present tense or a past tense, whether the tenses visible in a sentence are not visible. Do you do you understand these things whether it is visible or not visible for example, in this type of sentence where we have a we where we have a verb like bought.

We know that bought is past tense, but do we see any past and marker on that it looks like a word right, and we know that this word contains past tense marker, we know its past tense only when we separate the tense out of it then we are left with the original form of the verb buy. And then the tense gets forwarded in the beginning with the support of a word like do and do plus past again becomes did and then we get a sentence like did you buy a phone. Suppose we have a present tense sentence, we have a sentence I play a football right, how do I make a question out of this?

Student: What do you play?

Either we can have what do you play or.

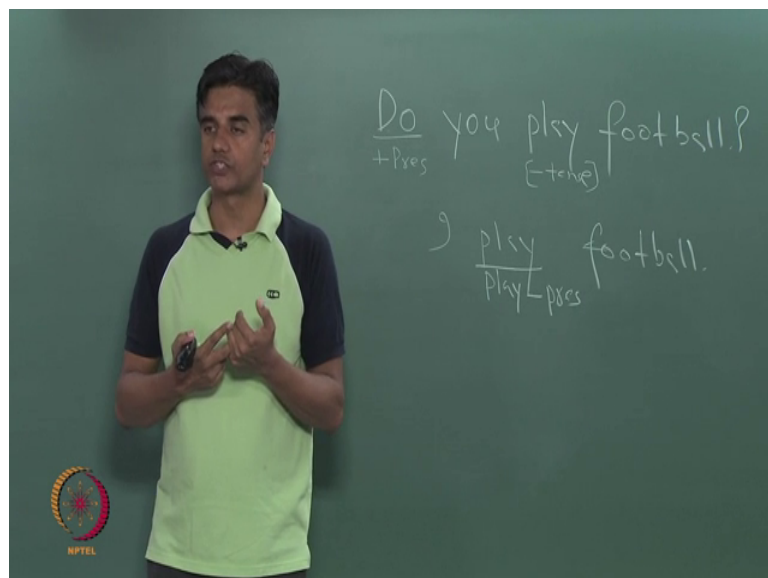
Student: Do you play.

Do you play football, what do you see here?

Student: (Refer Time: 07:12).

The fronting is of present tense and the word is do. The word present tense is not even let me let me show you this thing, there is a word called do, I started talking about it a little bit yesterday did not talk much about this.

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This is a word which is like a verb right we have you seen this word have you been told about this verb this word has a verb right this means in Hindi anybody something like [FL] right. But in such cases when we are talking about question words this word has got no meaning, when we say do you play football, did you buy a phone the words like do and did have no literal meanings they are only in the sentence to help tenses. In a sentence like do you play football what we are saying actually is if this is the sentence that we have, if this is the sentence that we have then here is our present tense and this verb does not have right now it does not have tense, are you with me, right now it does

not have tense because the same tense has come here and therefore, this word only has the meaning of tense not the actual meaning of do.

And in this case its more abstract than the past tense in the past tense sentence at least we had a past tense verb did you sorry the sentences I bought a phone right, then we removed past tense brought it forward and left the verb. In a present tense sentence I play football right I have a simple sentence I play football what is the marker of tense here nothing right. We have an evidence that this is a present tense, but there is no marker as such still we can separate play and present still we can separate them and when we separates them this is how we get. This is what we get, see this thing.

Now, I also want to draw your attention to the abstraction involved in this kind of a study. It is not just that we are trying to understand how a question word how a question sentence works in a language like English, but we are also trying to see that a grammatical entity called tense which is very abstract by itself can also be touched we can play with tense as well and see it clearly, no matter how abstract it is and that kind of that kind of play we see with sentences when we look at them carefully in questions number 1.

Number 2 we are we are also looking at with evidence that several words in a language like English or for that matter any language which is part of language being a principled phenomena that every moment every time a lexical item that is a word receives some sort of functional categorization the word loses its literal meaning, the word does not have any literal meaning and then you see things like this. We have seen several examples of such things like demonstrative pronoun such as that when it becomes a complementizer it has got no meaning exploitive pronoun like it when they become a functional word to fulfil the sent subject position of a sentence it receives it has got no meaning.

When we have a verb like do it is and such a word in a language like English is used to support hence it has got no meaning and there is a huge list of these things the important thing is not the list the important thing is the phenomena that a lexical item may lose it is meaning and then become a functional element. It is not surprising at the same time it is an evidence for the fact that whatever abstraction involved human mind works with absolute clarity with no redundancies no overlap and it still maintains a clear distinction

between the terms. Same term used for two different functions still retains total clarity see them see the point. Just to give you one more example before I come to a structure of a question sentence, this part clear ok.

Now, I give you an example yesterday where all the question words in Hindi started with which sound.

Student: [FL].

[FL] sound right now look at one more thing and then we returned to English question words. You have seen two types of questions sentences in English that one is yes no question and the other is content question and WH word is used only for content question. This much is true for a language like Hindi too I am sure it is true for Tamil, Telugu, Malayalam and all other languages. The question content question words in a language like Hindi is [FL] right, am I right, [FL] are the question words in Hindi. I want an answer from you for particularly from those who understand the language how do we make yes no question words in Hindi. For example, if I have to ask this question in Hindi how do we ask this question do you play football.

Student: (Refer Time: 15:25).

Student: (Refer Time: 15:26).

So, the sentence is football [FL] right that is what is the question word in this, what is making it a question you are right, that could be a question what making it a question.

Student: Verb.

Which verb?

Student: (Refer Time: 15:47), incorporate that question will (Refer Time: 15:58).

If I say I mean what which part of the verb do you see making question?

Student: It is (Refer Time: 16:09).

I do not see anything making it a question.

Student: (Refer Time: 16:13).

You may be right, but you need to show me which part of it is question and I am asking you after an hour and half discussion on this thing I am trying to show I have shown you English questions right and I hope you are convinced the tense is fronted in English right. So, my point is in English if I am asked what makes us make a question sentence. We can convincingly say that however, a sentence may look like whether it is a content question or a yes no question the question process works with fronting of tense am I write, is this clear to you and that is their answer for English I am asking you a sentence from Hindi and how do we make a yes no question in Hindi. I am not asking you about content question because content questions are clear. For example, if someone asks you what is your name how do we say the sentence in Hindi.

Student: [FL].

[FL] and the question word [FL] in that sentence is a question marker right. Please also notice that if we have the same sentence in a language like English the WH word has to be fronted. So, fronting is the key in language like English. Not only tense become tense gets fronted, but WH word also gets fronted. You were asking me some somebody was asking me about this blank a space in the question number one on your screen right that is the place for an object right by is in a verb is a transitive verb or intransitive transitive verb.

Student: (Refer Time: 18:28) transitive.

Transitive verb it must have an object right and you do not see an object here right. Rather what we actually see is that object has been questioned right what we are questioning is the object what did you buy and whatever is the answer to this question is going to be the object of that verb am I right. Do you understand the, do you understand this. So, we can say that the object has been questioned. And when the object is questioned with WH word which is what along with tense or after the tense even that gets fronted, it cannot stay in the same position, are you with me. For example, we cannot say a English sentence or can we you tell me did you buy what, can you say that this type of sentence no did we did you buy what is not a good English sentence the good English sentence is what did you buy.

The point again is not only a tense gets fronted but if you have a question word that also gets fronted. And I am coming to the question that you see on their screen if fronting of

tense takes place or at the same time I can add if the fronting of question word takes place that is if the fronting of both these elements are taking place in a question where do they go to right, understand. Way by fronting we mean technically we have a sentence as an IP right and if we say it gets out of IP then where does it go to, there is no place outside IP you see the problem see the question. So, we are coming to that in a moment and that is what I am trying to show you. At the same time to for you to see the whole question as a principle phenomena with whatever parameters that are associated with individual languages there is an underlying principle of question that is working right. So, a parametric variation between Hindi and English is such that in English WH word needs to be funded, in Hindi it does not need to be funded. The question is what is your name we can leave the question word in the middle of the sentence and the sentence is.

Student: [FL].

[FL] understand this thing do you see that I am sure leaving the question word in the middle of the sentence is possible in all south Asian languages. Now it becomes a subject of a study of a different kind why do all south Asian languages behave in a particular way and why is English so different. You see the question that is it, that is a separate question to answer. But given the facts given the empirical evidence that you can see the question right now is English has one kind of pattern, Hindi and other south Asian languages have the other kind of pattern and that is called parametric variation. Moving ahead of parametric variation what I want you to see that there is still a principle of question operating in all the languages and at that level of principle despite the differences at parametric level there is a principled phenomena of question operating in all the languages. So, we can say question words in Hindi is stays in the same place and question word in English gets fronted.

But if we move one more step looking at Hindi how do we make the question word in how do we make a yes no question in Hindi. About content question we said we leave the question word right there how do we make a yes no question in Hindi. Someone said for this kind of sentence which can say.

Student: Actually we say.

I first of all hold on hold on, first of all let me let me ask you question in a systematic way, I play football how do we say that in Hindi if you understand this.

Student: [FL] football [FL].

[FL] football.

Student: [FL].

[FL] very nice. You play football, how do we say that?

Student: [FL] football [FL].

[FL] football [FL].

If I have to ask the question do you play football?

Student: [FL] football [FL] football [FL].

All right very nice. So, he is saying [FL] football [FL] and you are saying.

Student: [FL] football [FL].

[FL] football [FL] right are there other ways of saying the same thing.

Student: [FL] football [FL] [FL].

Do you understand this question?

Student: [FL].

One can also say and let me also say [FL] football [FL], it is a question.

Student: Yes.

If I tell you the sentence [FL] football [FL] that is the question to you, how do we know this is a question?

Student: (Refer Time: 24:27).

How do hold on hold on, how do we when I say when as I ask you how do you know we all answered that this is a question by how is the question for human mind [FL] football [FL]. Let me say the two sentences to you and then you be the judge of these two

sentences, [FL] football [FL] is a normal declarative sentence, [FL] football [FL] is a question. What is the difference between the two sentences?

Student: (Refer Time: 24:58).

Technically if you write them on the board there is no difference. So, what is making that sentence a question, any idea?

Student: Stress on the different (Refer Time: 25:16) words.

Stress on different word that is technically called intonation that is all right the word is not that important. What we want to say in a spoken language like Hindi, if we put rising intonation on the verb converts the sentence into a question. Rising intonation on the verb converts the sentence into question. If you remember from the very beginning we have been talking about and we have made an assumption that the object of investigation in the whole field of natural language is a spoken language and these are the things that becomes clearer when we are looking at a spoken language. [FL] football [FL], if you are putting the rising intonation in the verb [FL] that is what makes it sound like a question which type of question.

Student: Yes no.

Yes no question only. So, rising intonation does not make it both types of question see then see the clear pattern and the way it works in human mind even the writing intonation is making it just one type of question right. Now, there was another sentence which your friend said [FL] football [FL] right, the sentence is [FL] football [FL] which type of question is this.

Student: Yes no.

Yes no question, right. This is a yes no question. Do you see anything uncomfortable in this sentence? Yes or no.

Student: Yes.

Yes, what is uncomfortable?

Student: Its (Refer Time: 27:12).

It has a question word [FL], [FL] is a word which is a content question word, but still it works as a yes no question marker. In the interest of time if I had more time to show you I can take you down through inventory of sentences in Hindi which I invite you to look at by yourself. The question, one question word [FL] right from the whole inventory of question words which are Hindi, what are Hindi question words again can you give me some.

Student: [FL].

[FL].

Student: [FL].

[FL].

Student: [FL].

[FL] all kinds of question words from the whole inventory of question words take one out which is [FL].

Student: [FL].

[FL] and that question word has got two functions, one is the content question right when it comes in a sentence like what is your name, I am sorry the Hindi sentence is.

Student: [FL].

[FL] all right, then it is a content question word. When it occurs in front of the question in front of the sentence every time [FL] football, [FL] every time you put it in the beginning of the sentence it converts the sentence into yes no question marker, yes no question sentence. That is one question word [FL] taken out of the whole inventory functions as yes no question marker in Hindi. See this thing and when it comes in the beginning of the sentence you would agree with me that in such a situation this is not a content question word. Take the same sentence [FL] football [FL], does the word [FL] in this Hindi sentence has the meaning of what. Does it have a meaning of what, it does not. This is how languages work with their own patterns. So, what are the now we see two patterns of yes no question markers in Hindi what are the two patterns.

Student: Either rising intonation on (Refer Time: 29:47).

Rising intonation on the verb.

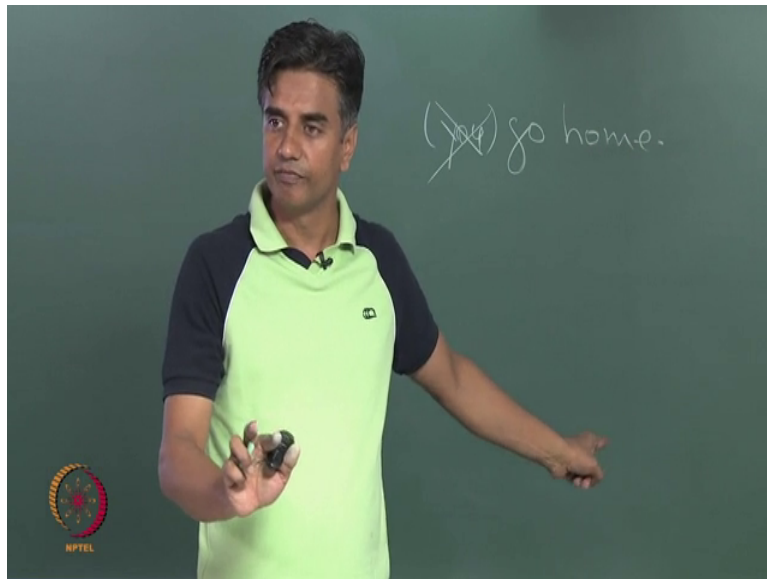
Student: Or the sentence missing (Refer Time: 29:52).

Or the sentence.

Student: Start with [FL].

Starts with [FL] right. And look at one more point which takes you towards principle of economy, I want to remind you about something here is a sentence go home right, what is the subject here? You; we have seen that the subject of all sentences of this type is you, therefore, as a very strong marker of principle of economy languages do not allow surfacing of that kind of a word.

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See this thing because in all Hindi question word in all Hindi yes no questions the question word [FL] comes only in the beginning. So, for a native speaker of Hindi that is redundant therefore, it is allowed in the language to drop the question word [FL]. When we I am trying to show you the similarity between two patterns of yes no questions in Hindi one pattern is use of the word [FL] the other is rising intonation there is the similarity between the two they are not really two distinct patterns.

The pattern is because the question word [FL] only one question word [FL] and always comes in the beginning of the sentence. So, it is possible to drop it. Principle of economy in natural language forces us to drop that see how it was works how even contradictions are reserved in human mind. There is a principle of economy working in language in a very strong way which tells you if there is a pattern then why do you need that understand the point drop it, when we drop it what is the problem.

The problem is then the sentence is sentence is looking like a declarative sentence. I have a question [FL] football [FL] and I am forced to drop the word [FL], then I am left with the sentence [FL] football [FL]. Now it is not clear whether it is a declarative sentence or a question sentence. So, we need to make a distinction between declarative and question. To make such a distinction rising intonation helps and resolves the problem.

Rising intonation is a supra segmental feature which is less less expensive over not following principle of economy understand this and that is how it operates in human mind. I hope you this is making sense to you, I think this is clear to you right or the Hindi questions only what I have discussed clear to you, there is a set of content question words in Hindi to all of them begin with [FL]. The difference between Hindi and English content questions is in English all the content questions words also get fronted in Hindi content question words can stay in the same place.

When we look at two types of questions in Hindi and English yes no question in Hindi works with a question word [FL] and in such a situation the question word [FL]-becomes a functional word it does not have any content in, it does not have any meaning in it. Once it becomes the content question word I am sorry once it becomes a functional word and it always comes in the beginning of the sentence to make a yes no question following the principle of economy it can be dropped. And then to make the distinction between a declarative sentence and a question sentence the rising intonation helps. This is how two types of questions work in Hindi.

Now, I do not want to go for further in details of Hindi to show you how fronting of question works in Hindi. Remember what we are saying about question words in English question sentences in English what are we saying, that for English both types of questions fronting of tenses important, fronting of tenses is important in all languages it

is just that someone needs to show you how fronting of tense operates in Hindi that will be a little bit too much for me right now.

So, let me show you what we started with and I hope this the description of Hindi helps you understand what is what we understand by parametric variation and then what is called underlying principle of question that is operates in all the languages and besides we keep seeing underlying principles operating is like principle of economy and then no redundancies and all kinds of things all right.

No ambiguity and no redundancy are also do such principles that operate in language all the time which in turn depends on who you are talking to if you are talking to a linguist they will tell you, no I just want to stick two question two sentences. If you are talking to someone who looks at language from the perspective of looking at human mind they will tell you these are the evidence, these are the different pieces of evidence for you to tell how human mind works with no redundancy simplicity and in what kind of principled way all right.

Now, let us try answer this question how does this fronting really work. Before I answer this thing any question about Hindi question words or anything that we have discussed so far.

Student: Sir, in yes no questions fronting of tense will always (Refer Time: 36:46).

Are you talking about English or Hindi?

Student: English.

In both fronting of question will always be there.

Student: (Refer Time: 36:55).

This look at that.

Student: But sir if the question is are you going home. So, sir go has not lost it is (Refer Time: 37:04).

Go has not lost its?

Student: Tense.

Which is what?

Student: Present continuous.

No, the tense is just present continuous is what.

Student: Aspect.

Aspect.

Student: (Refer Time: 37:18).

So, we are not saying fronting of aspects we are saying fronting of tense and in that sentence what is the marker of tense, if I have a sentence you are going you are going home this is the present tense and it has a continuous aspect marker. What shows tense and what shows continuous aspect?

Student: (Refer Time: 37:46) ing.

Ing on the verb very nice, and tense?

Student: Are.

Now, you have a question sentence are you going home do you see it getting fronted. It is a robust principle it never let us you down and also it shows you clear dichotomy between tense and aspect. So, if someone tells you present continuous is a tense here is the evidence to show they are two different things. If present continuous word to be an example of tense then both of them will be moving outside it is not all right, only tense moves out and I am glad you talked about that sentence because so far I have been working with the sentences with do and did. You look at the sentences with was, were, am, are, is all these are markers of tense and they become abundantly clear in question sentences when they all get fronted.

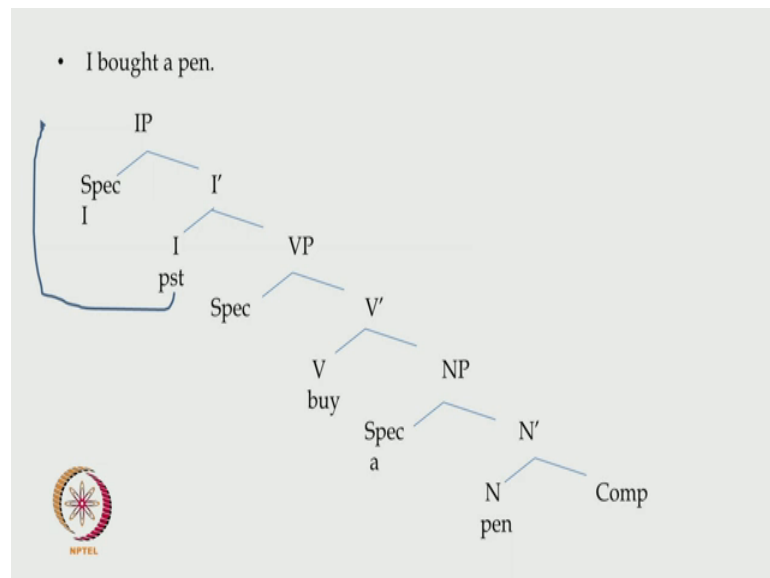
And when you have a sentence with is or, am, was, were in such cases you do not need do, you do not need this help of the word do because in such cases those markers of tenses are independently words by themselves. The only purpose of that kind of a word is to retain tense. So, again we you can see one more thing now that all the time we have been told these are auxiliary verbs, helping verbs and whatnot all kinds of names have

been given to such kind of a verb I do not want to change I do not want to wipe out everything that you may have learned and write something new the all I want to do is I want you to see things clearly, even if you call them auxiliary verb and I am sure you will agree with me that I am never stuck with names I am never asking you to change one name and put another name that is labelling that does not help too much. What helps is whether we call such kind of words or tense marker or auxiliary verb or helping verb or god knows what the other names are they still mean the same thing.

They are the tens markers and they and it becomes evident abundantly clear in these kinds of sentences. So, to understand several other things we need to look at question words and question words questions sentences and not only question sentences they are going to help us understand more clear. So, let us, let us anything else? No, in that case let us move.

We have a nice looking sentence like I bought a pen, is this the structure for that sentence, clear everybody all right.

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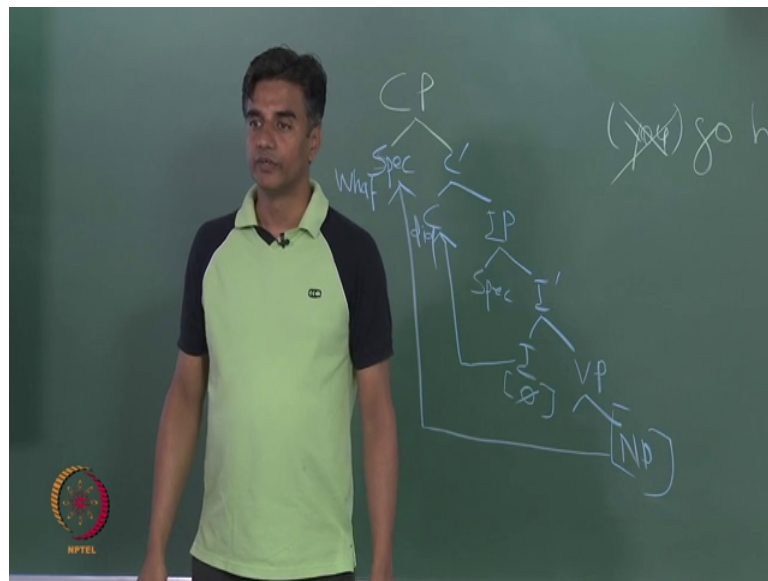


Now, if this is the structure of the pho the I have been telling you the tense gets out, tense gets tense moves, tense gets fronted, these are the words I have been using. If it gets fronted where does it go to you see that there is a problem that in and then we do not stop here we are saying sometimes the NP a pen which is the complement of the verb buy can also be questioned and the word is what did I buy.

See the point which is if I go back to the sentence what did you buy, the word what is appearing even beyond the tense, so we not only need to find a place for tense we also need to find a place for others other elements in a question word. So, apparently what becomes clear to us by looking at the question sentence and this structure that a question sentence cannot be contained within IP, an IP cannot IP is not sufficient for a question sentence then what is, what can help us help us understand this.

Student: (Refer Time: 42:35).

(Refer Slide Time: 42:44)



That that is where we go and we say the answer is answer lies in CP, the answer lies in CP where we have C and IP then I am not drawing the whole sentence this is just for you to see here is our I and here is our VP and here is our NP. So, when I moves the idea is it goes to the C position and can I ask you this question why would it go to C position. When it gets out of its own on place and it gets fronted the new thing I am adding explaining the question sentence is it gets to see why would that happen, anybody.

What that is my question is located in what is the similarity between I and C. I think I have reduced the question like anything now. I, is this head, is this head both are heads of their phrases. So, a when a head gets out it can only go to another head position and then when you question this kind of thing append in a sentence like what did you buy right we question this NP and this moves out and goes to the specifier position and then you have a sentence like what did you buy.

Remember this space is empty not deleted empty because something has moved out of here likewise this space is empty not deleted, something has moved out of here. At a surface level when we speak a sentence we do not speak with empty places right, but conceptually you can see that there is clear evidence that these places are empty. So, now you I am drawing your attention to two things not only I want you to see these things as evidence for movement at the same time I want you to see that when things move it leaves it traces behind when things move they leave their traces behind and this is why you have seen the empty space in a sentence when we were when we had what did you buy. Of course, we do not speak with empty spaces, but that is space is available in available when we are looking at the underlying structure of these sentences right clear.

So, with this we are looking at we finished the discussion on WH movement question words, question sentences we not only looked at underlying motivations for movement in natural language we saw examples of sentences which cannot be accounted for unless we bring in movement right. And movement helps us account for abundant data in natural language and simplify them in a principled way that whether we are talking about yes no question or a content question both of them has got similarity. Of course, they have differences but there is a similarity between the two and then this kind of apparatus of x bar scheme helps us understand the underlying structure of sentences like these which are question sentences. It helps us understand principle of economy it helps us understand how human mind operates and then how language can provide sufficient example for how these things operate in human mind.

We stop here and we will talk about rest of the things tomorrow.