

Principles and Parameters in Natural Language
Prof. Rajesh Kumar
Department of Humanities and Social Sciences
Indian Institute of Technology, Madras

Lecture – 31
Motivations for Movement

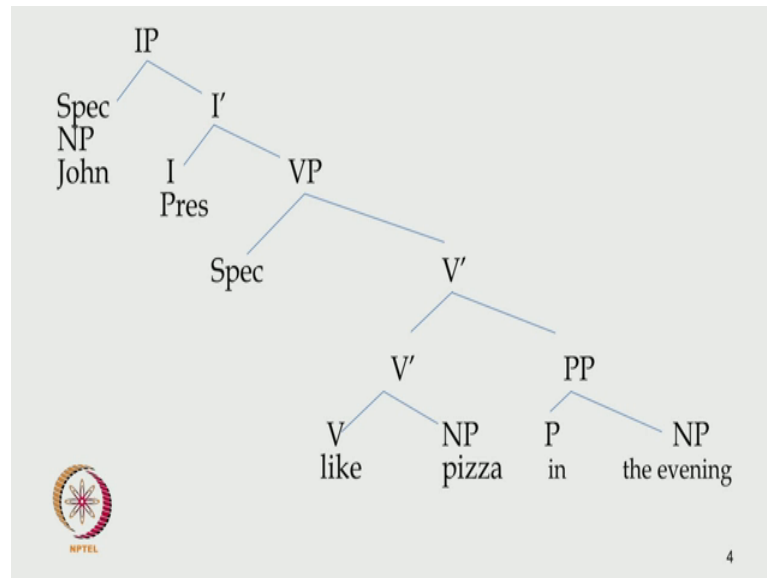
So, last time we are looking at reasons for displacement right and we looked at 2 to 3 particular instances, particular issues which tells us the there definitely appears to be some sort of displacement of certain elements from one place to the other. So, far the reasons that we have seen for example, we saw that the first reason was there looking at x bar schema there appears to be a clear distinction between functional layer and lexical layer and if we go ahead with a subject NP in the specifier position of IP or with the expansion of the head I which breaks into agreement tense and aspect and maybe few more the spec position of Agrp seems to have, seems to host subject NP.

So, if we go ahead with that that idea then we are running into difficulty that how come a lexical item originates in functional layer there appears to be no motivation for that. So, the point is it originates in the lexical layer, but we cannot let it be in the lexical layer because that is the NP which has to take care of agreement features with the agreement features on the verb which is part of the predicate. So, there looking at the scheme so far there appears to be a contradiction that subject NP cannot be in the functional layer it must originate within spec VP.

Once it originates in the spec VP it cannot stay the spec VP it must be in the functional layer to take care of the agreement. So, to resolve that issue we need to look at we need to allow some sort of displacement, in other words such an such an example shows us there is definitely some sort of displacement that is one very strong motivation for displacement all right. So, we saw some of the things and in particular evidence for motivation and then we are continuing with the motivation and instances further instances of movement and we are going to see that with example of with example from CP and what we call WH movement.

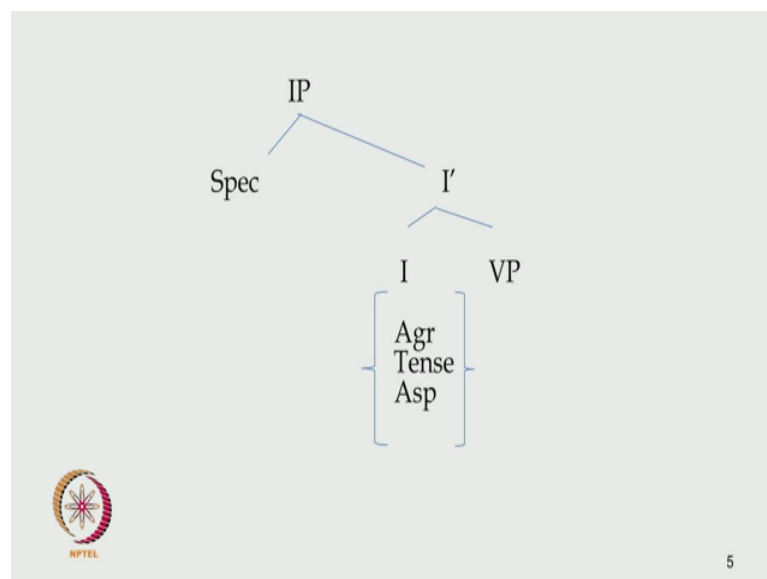
So, we saw that the element appears to dislocate from its original position to the other there is a compelling reason for us to believe for such an operation.

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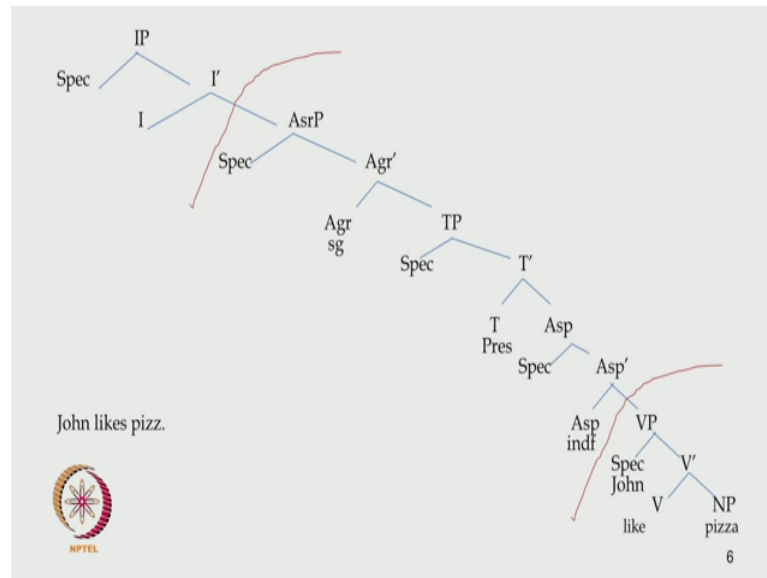
This is how a sentence looks like in a normal situation right for which the idea was we can, we should not there does not seem to be a compelling reason for us to allow agreement tense and aspect under one bundle.

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So, the split was allowed in this particular way where IP was not we got read of IP and then the story that I have told you there appears to be two categorical layers of functional layer and lexical layer and these are the things that we have seen.

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So, this is how a sentence looks like in a canonical order right then which is whether we look at IP or Agr P this is how a sentence looks like. While looking at another module which was case theory we looked at several other aspects for example, in particular we looked at relationship between abstract relationship between heads and their complements that is a head V or a head P appears to assign cases to their complements in a particular configuration that they seem to govern their complements and thus assign cases to them. So, then we introduced the notion of government and NC command.

With the assignment of case two we saw a difficulty and the difficulty was there does not seem to be a clear theoretical straight line answering the question of case assignment that is whether it is a assignment of accusative cases assignment of nominative cases there does not seem to be a straight answer to that. We have different patches to take care of accusative case assignment and nominative case assignment, on the top of that even couple of patches do not seem to solve all the problems. The problem is when we run into complement clauses which is when we have a whole sentence a whole clause as the complement of some head then we see some difficulty with the assignment of case.

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Motivations for Movement

- A lexical NP (Spec, IP) appears to be in the functional layer.
- Features in I (infl = inflection) is a bundle
- Every single thing must be fully projected
- There appears to be a problem in explaining Nom case assignment and it involves adding patches to the existing theoretical apparatus.
- Sometimes Spec of IP (where IP is a complement) appears to receive Acc case) and has to be handled separately.

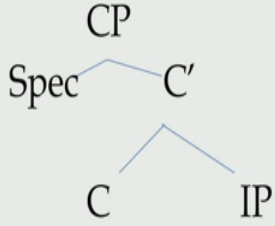


So, assignment of cases is also one particular motivation motivating factor for split of functional layers and then the idea is the case assignment must work in a different way in a more systematic and unified fashion, the earlier a some earlier theoretical apparatus does not seem to take care of case assignment properly. Since we have we have not looked at the interactions of case assignment and then the split of functional head where I am going to drop that further time being and go ahead with the examples of movement in particular.

However difficulties in taking care of assignment of cases in the theoretical apparatus that we have been discussing so far is definitely one of the factors for such kind of abstract displacement.

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CP (Complementizer Phrase)

- CP takes an IP as a complement.
- 

We bring in a notion of CP which is a complementizer phrase and we have looked at the composition of CP that is what does a CP what is the CP, what does the CP look like. And then we see the sometimes head C takes the whole IP as its complement and then the recursiveness of language also allows sometimes CP appearing in the subject position or in the object positions.

So, how does a CP look like when it appears in a subject position and how does the CP look like when it appears in an object position is what we want to look at. And this will also give us one more chance to look at assignment of cases particularly the assignment of accept assignment of cases in exceptional way that is we have to allow a new patch. Remember exceptional case marking, so this is going to show us one more example of exceptional case marking.

So, is the sentence for her to laugh is difficult is that sentence good. Now the whole sentence is in the bigger sentence for her to laugh does it appear like a subject to you, this sentence it just like - John is running right or John is tall. Do you do you understand when I say this sentence is just like John is tall. What I am saying is in place of the chunk in the read that you see on the screen which appears to be a clause we can also replace the whole clause with a simple NP and we can say John is tall and the sentence is sentence the two sentences are similar in their composition. The point is we find a CP in place of specifier position of an NP of an.

Student: IP.

IP, do we see that does everyone see that. What you might be wondering about why is that CP why not an IP right for her to laugh could also be an IP right, is that the question which is bothering you or there is something else.

Student: It is non finite.


It is non finite IP for sure whether it is a CP or an IP it is definitely non finite right. So, because there is no there does not appear to be any tense in that right. So, let us go ahead and look at that, I am coming to that sentence in a minute.

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- CP may occur in Object positions of a sentence.

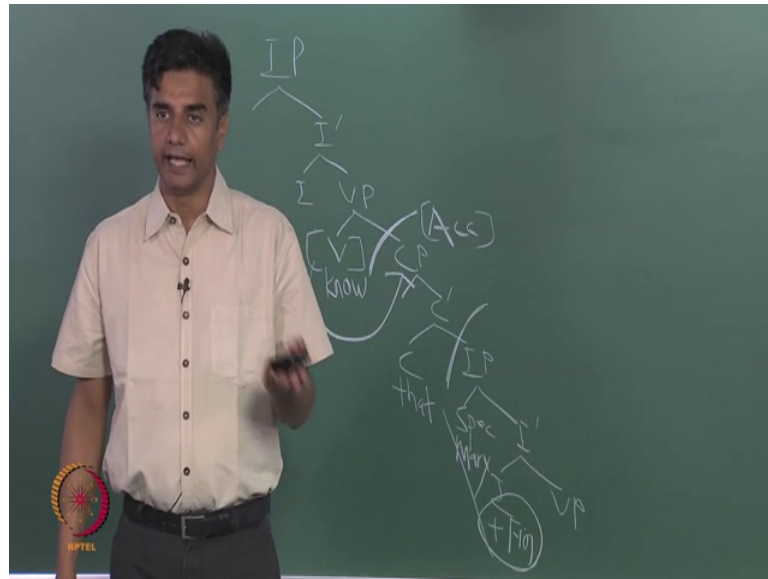
[_{IP} John knew [_{CP} that Mary did not drink]]

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graph TD
    IP1[IP] --- NP1[NP]
    IP1 --- I_prime[I']
    NP1 --- John[John]
    I_prime --- I[I]
    I_prime --- VP[VP]
    VP --- V[V]
    V --- knew[knew]
    VP --- CP[CP]
    CP --- C[C]
    C --- that[that]
    CP --- IP2[IP]
    IP2 --- Mary[Mary]
    IP2 --- did[did]
    IP2 --- not[not]
    IP2 --- drink[drink]
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Let me first show you a CP in the object position I think we had we had talked about that, but let us refresh this thing John knew that Mary did not drink. The verb know in the main clause has a complement which is a CP; the whole thing that Mary did not drink is a full CP, this clear right. And in this CP, in this CP in the read that you see is the head that and then the complement is the whole IP Mary did not drink. Mary in that little IP which is the head of which is the complement of C, let me show you little bit to make my point clearer what I am trying to trying to show here to you is we have an IP I am going I am going to put it in short we have a V and a CP here all right.

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This C this is the CP in the read that we are talking about that, so we have a C bar C and then an IP right here is we have are that and then we have is this, this is the structure that we are dealing with. This is what we have on the screen right. I am talking about in particular this CP this V as a head which is know takes the whole CP as a complement and it needs to assign its accusative case which it does through the notion of C command and it assigns accusative case to the CP it is done.

Now, or let us drop this thing the point is case assignment is satisfied there is no issue here. When we look at the bigger sentence which we are calling CP do we have enough reason to believe that that is not an IP that is more than an IP in a that is a CP right. So, the first point is a CP can be a complement of V that is clear. Now in the CP when we look at this complementizer phrase a complementizer takes the whole IP as a complement is that also clear and you see the recursiveness of sentences how one sentence is in built in another.

Now, let us look at this sentence, this IP it is a good kind of IP where we have Mary in this position right and this I is plus finite I clear this is a plus finite I. So, Mary gets a nominative case from here and this is taken care of it is a good sentence, seriously. Now why I wanted you to see these things that we need to we need to a make sure that in the grammaticality of this sentence the fact that case assignment is taken care of is an important issue.

Now, let us look at the sentence that we were looking at before a phrase where a CP is in the subject position, the our argument is a CP is in the subject position and when we expand that CP and we look at it carefully what do we see, what is there in the position of C?

Student: (Refer Time: 15:40).

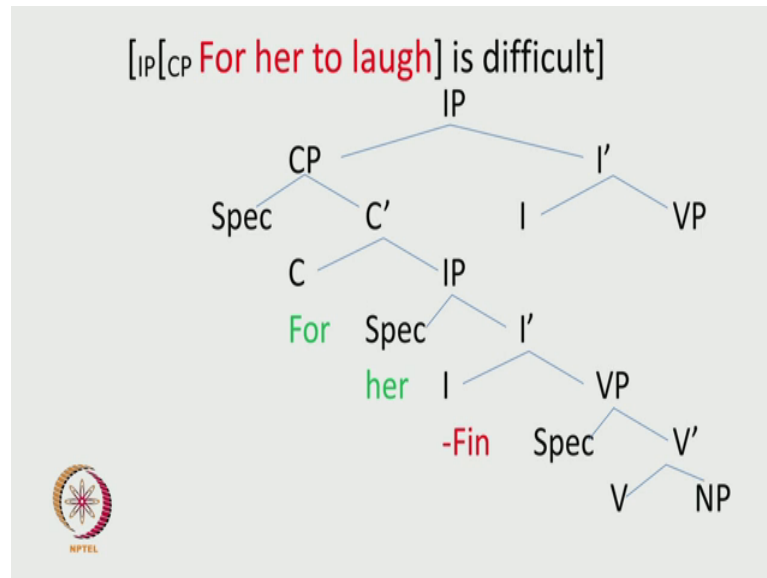
The post position for right the reason, Why we have now? You may have a question in your mind so far every time we have been talking about a preposition we are we are saying this is a PP right why are we saying here that a preposition can be in this, in the C position which is a complementizer we are essentially saying that this post preposition is a complementizer and which we are saying categorically because we are saying that this preposition is not a preposition. Is this a preposition? This is not a preposition it looks like a preposition, but it has a complementizer function that is the point number one therefore, it is not a PP it is in the position of C and there are couple of other aspects that we are going to look at hang on for a moment.

Then we see in the complement position of this C we see a sentence right and the sentence is her to laugh right and then her is in the spec position of that IP. We see that I want everybody's attention here on the screen her is in the spec position of that IP, what is the problem with that her?

Student: (Refer Time: 17:22) get (Refer Time: 17:22).

It gets an accusative case and our problem is how does it get an accusative case particularly when the I is non finite. See in this case I is a finite I right therefore, it assigns nominative case under whatever modifications and patches that we have discussed. So, this is ok, this configuration is no problem, but in this one we have her which is clearly an accusative case marked NP and the I below is a non finite I right.

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So, the problem is this spec IP should not have had any case and that will also be a problem right we cannot say for she to laugh is difficult the sentence is ungrammatical. So, this there is no assignor of case that is accusative case to this NP at the same time if it does not get a case the sentence is not allowed, do we see the paradox. Therefore, what we are going to say again as a new example of exceptional case marking is the C for assigns accusative case to thus to that NP under the notion of government that we have seen the modified government for exceptional case marking which is we, are allowing this C to C command the NP her. With clarity that maximal projection IP could be a barrier right, but because this IP is a non finite IP we can allow that non finite IPs are probably not barriers.

Therefore we have this kind of sentence which is allowed and this is the reason why we must have a complementizer for in this sentence. Other if we do not have the for in this kind of a sentence then the sentence is not good can we say her to go her to laugh is difficult, we can say this kind of sentence because and now I hope you can see the point with clarity that the reason why we are not we are unable to say her to laugh is difficult or she to laugh is difficult these sentences are not allowed because there is no case assigner. And these kinds of sentences are difficult for the theoretical apparatus and they need to be taken care of within CP, with the barrier within non finite IP and these are the critical terms.

When you saw the last just last point about this issue, when you saw the last example of exceptional case marking how do what was the case assigner in that case in that example. When we were looking at the last example of exceptional case marking which head assigned accusative case to the spec of IP which is non finite.

Student: Verb.

Verb.

Student: Verb, verb.

What was the sentence?

Student: (Refer Time: 21:31) I want (Refer Time: 21:31).

I want him.

Student: Him to go.

To go right. So, in that case we do not need anything like a CP or a for because we already have a case assigner which is the verb and it can assign case crossing the barrier which is which we are saying is not a barrier because it is a non finite IP and assign accusative case to their spec position of non finite IP. Now when we have a non finite sentences as the in the subject position of a sentence then there is no V for this to assign a case right.

So, we need a case assigner therefore, a complementizer is allowed in that that place and without a complementizer the sentence is not good. So, to wrap it up again the reason why I wanted to bring in the notion of exceptional case marking there where two reasons for that one I briefly wanted to go through case marking particularly exceptional case marking again, then I also wanted you to see then the idea of exceptional case marking is important it is not just one particular instance that we need to take care of we can see sometimes non finite clauses in the subject position which needs to be taken care of. And then the existence of CP that the whole notion of CP is not just a just a small modification which we have which theoreticians have just brought in it is an important device which helps us take care of exceptional case marking also. It is definitely taking care of complement positions where sometimes we do see that the complement of a V is

more than an IP then we say it is a CP we run into difficulties when we have a CP in the subject position or a bigger clause in the subject position we do not know how to take care of that then a CP comes in for rescue, all right clear.

So, let us keep the idea of CP active and then see how does this CP work for displacement from where we started, how does it help us take care of displacement and this is where I want you to.

(Refer Slide Time: 24:24)

Questions in English

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

- Did you buy a phone?



Student: Sir, can you go to (Refer Time: 24:28).

I want your attention, hold on. What did you want?

Student: Previous one,

This one, yeah.

Student: Yeah, after VP spec and V bar (Refer Time: 24:40) example I want him to go V wrap it up at VP right VP is to go.

Yeah. So, here also VP is to go.

Student: To laugh.

To sorry to laugh yes because I had a space I expanded that VP right you see that you have spec head and a complement. And what is that in the head position comes to laugh, so there is nothing in the spec position of VP and nothing in the complement position from VP. I just wanted you to see the whole expanded structure of CP and an IP within it.

Student: So, NP is also possible in the.

Sorry.

Student: CP, as in a noun phrase is also possible (Refer Time: 25:30).

Which noun phrase?

Student: The noun phrase that we that is at the last.

Anything is possible, see the only problem is we do not have any NP because the verb is non finite. So, the question of that verb being transitive or intransitive does not arise.

Student: There is a transitive verb (Refer Time: 25:53).

Definitely then there will be a complement to the term transitive verb there and that that complement could be anything and this is what I am trying to show you, that the complement of a V could be an mp could be a IP or could be a CP too. Similarly in the subject position we can have an NP we can have we can have an IP and we can have a CP too. So, there is the paradox that I want you to see that which one is heavier, IP is heavier or CP is a heavier.

Student: CP.

It depends on what we what we are looking at. Sometimes the CP could be heavy because a CP takes an IP as a complement right. So, clearly I hope and not only I hope I believe that the point should be clear to you that we are not talking about circularity we are talking about example of recursiveness. And this, these are the things which make people conclude that sentences could be infinitely long. It is not just a slogan, it is not just a nice idea this is what tells you that a sentence could be infinitely long all right . Can we look at these sentences now? I do want to retain this thing and then we will come to another structure in a moment, but for the time being I want you to look at the sentences this, these sentences very carefully. First of all do you agree that these are

pretty simple English sentences we use these sentences several times a day right, but if I ask you if I ask you couple of questions then along with me you will be able to see the complexity of these sentences.

So, let me put the theoretical apparatus side for a moment and let us look at some empirical facts of English very briefly and then we need to come back to this point. What are the empirical facts of English by empirical facts we mean things that we can see in a sentence. The theoretical device could be abstract for which we need to understand x bar or case assignment and all kinds of things, but empirically and let me give you one example and then I will ask you other things.

So, if I am to, if someone asks me what is say in what is a question word in English, what would be my answer, what is a question word in English.

Student: There two types.

There no, you are saying how you are answering the question how many types of questions are there in English and then the answer could be two which is not a correct answer I will tell you why it is not a correct answer and what is a correct answer also. But right now I my question is what is a question word in English. Can you give.

Student: What why (Refer Time: 29:35).

Some examples of question words in English.

Student: What, why, how, when.

What, why, how.

Student: Where.

Where.

Student: When.

When right.

Student: Will, how.

Who.

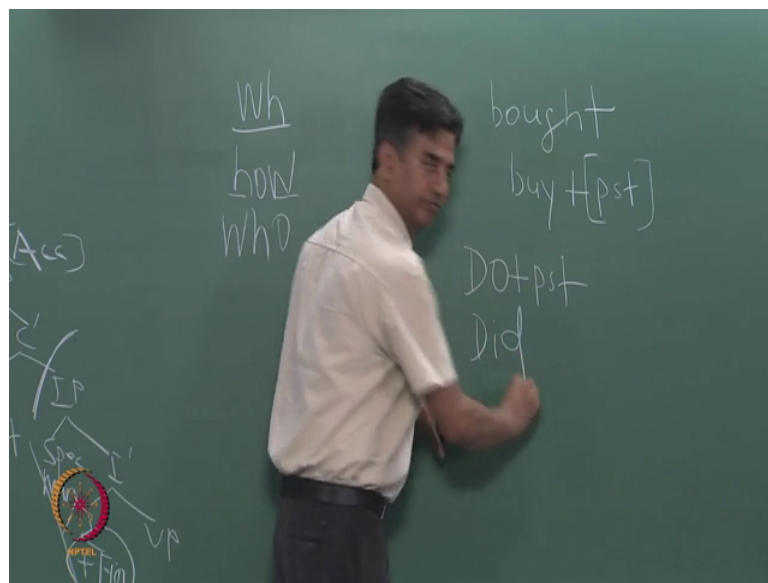
Student: How, will.

What is the common among all these words?

Student: (Refer Time: 29:49).

What is common among all these words?

(Refer Slide Time: 29:56)



Can we say that all of them begin with WH.

Student: How.

Well, see you are right. There is a problem with this you see there is the WH in how also, it is just in a scrambled order. Now that jokes apart, with the exception of how which is not in the right order question words of English are called WH words question words of English are called WH word because most of them begin with WH. And if we are to argue in a little bit funny way we can say this also has WH, but it is just a problematic we can go ahead and argue this is not a serious technical argument we can also say the reason why this is a scrambled because the moment we try to put it in right order it becomes something else. That is not a serious thing. The serious point is question words of English are called WH words if I am asking you to look at your own question words in your own language what is the question word in Hindi.

Student: [FL].

[FL] right. If we call them WH words then what do we what are we, what do we have to call Hindi question words.

Student: (Refer Time: 31:31) [FL] words.

[FL] words right.

Student: (Refer Time: 31:33).

You will be surprised that most of the languages of Indo Aryan family have questioned words beginning with [FL] Hindi, Kashmiri, Gujarati, Marathi, Punjabi, Oriya almost all of them likewise if you look at Dravidian languages.

Student: (Refer Time: 32:00).

Tami, Telugu, Kannada, Malayalam and few more what is the question word in Malayalam.

Student: (Refer Time: 32:07).

What does it begin with?

Student: (Refer Time: 32:10).

[FL] or [FL].

Student: [FL].

[FL] right. How about Tamil?

Student: (Refer Time: 32:18).

[FL].

Student: (Refer Time: 32:20).

They there are going to be some discrepancies like we have seen WH, but they do have the sound a in common and that is that common thing is available in Telugu, Tamil, Kannada and Malayalam. See with the help of this point I want to emphasize and I want

you to understand these reason these languages are called Dravidian family of languages, they are put in one group and that is not for no reason. There are underlying reasons behind that and this is just one example. The goal of our discussion was something else and continues to be something else, so we did not go into the classification similarities and differences of specific languages like different language families and so on therefore, we have not looked at such aspects.

But if you are taking example of question words you can see the classification of languages categorically. With that example moving ahead we can say question words in English are called WH words.

Student: How about the last sentence did you by a (Refer Time: 33:40).

I am coming to that I am coming to that. So, now, we say there are two types of questions at least two types of question. Do you see that the first one and the last one are two different types of questions? First one needs a different kind of answer and the last one needs a different kind of answer. So, what could be a possible answer to the last one?

Student: Yes or no, yes or no.

Can only be yes or no right. I mean you can say something beyond that, but you must say either yes or no first say if someone asks you did you buy a phone, you can say yes I did or you can say no I did not. But you must have you must say yes or no therefore, that kind of a question is called yes no type of question right. What is the answer of the first question?

Student: (Refer Time: 34:32).

What did you buy? You must answer with a content right. In the answer to the first question we cannot use yes or no can we use yes or no, no. So, that is a different kind of a question you must answer that question with a content. Someone ask you what is your name we cannot say yes right, we cannot say no in other words that type of question is a content question, that type of question is called content question because you must answer such questions with a content, content full word.

Now, there are two types of questions in response to one of the questions I just said English or for that matter any other language will have more than two types of questions.

So, such questions are called these say rhetorical questions, sometimes they are called eco questions, sometimes there are questions like question tags, when we say you bought a phone did not you I did not you buy a phone did you buy a phone, no you did not buy a phone did you right.

So, such small questions that you see at the end of say end of a sentence is called question tags which is to confirm something. They are not really a question they are called question tags. My point is I do not mean to go into the whole inventory and typology of questions available in natural languages, these are the two prominent types of questions available in any language. Yes no question and content questions. I do not think we will have time to look at other languages for the purpose of understanding theoretical apparatus which works under principles and parameters.

So, let me focus on English and if we have time we will take up some questions from Hindi are or some other languages. What kind of similarity do you see in the two questions of English, two types of questions of English? Do you see any similarity or what kind of differences do you observe between two sentences.

Student: Verb is (Refer Time: 37:16)

Loudly.

Student: Verb is (Refer Time: 37:22).

For.

Student: Verb is same by.

Verb is same all right.

Student: (Refer Time: 37:26).

Well that is not really the same, but go ahead what else do you see?

Student: (Refer Time: 37:29) did you buy.

Sorry.

Student: Did you buy article sorry.

Article is what?

Student: (Refer Time: 37:36).

What is article?

Student: a (Refer Time: 37:40).

Where do you where do you see the article in that? Did you buy a phone that article is with the NP right. So, the point is if you have an NP in the sentence that is a different story if you do not have an NP then the a is out. Tell me about the question part what is the similarity in both the questions and what are the differences that you see.

Student: Sir, why are the dashes there what is the (Refer Time: 38:13).

Well, let us let us forget that for the time being. The dashes mean there was something there which is not there anymore ok.

Student: Because that is the perfectly fine question (Refer Time: 38:26).

Yeah, that is a perfectly fine question without the dash also. So, forget the dash for the time being I will come back to that; that means, that I need to talk about that. So, I come back to that later. So, that is perfectly fine question.

So, just look at sentence number 1 and sentence number 3, I have put sentence number 2 in between just for reference that sentence number 2 could be an answer to sentence number 1 right and sentence number 3 could be a question made out of sentence number 2. I bought a phone someone can ask me a question what did you buy right, someone could ask me a question did you buy a phone right. So, both the question could originate from sentence number 2 therefore I have put that for reference. And I am not discussing sentence number two because that kind of sentence we have already discussed clear, declarative nice looking sentence everything is fine a transitive or a complement case assignment is done everything is clear in that type of a sentence good. So, you are not telling me anything about one and three the differences and similarity between two types of questions.

Student: Work is there is object in other (Refer Time: 39:59).

Which is?

Student: Phone and.

Phone in the second case did you buy a phone you see the object and in the first case you do not see the object very nice. That is an important thing, but let us talk about more basic stuff, more basic.

Student: Can the first sentence you have a explicit word what.

Right.

Student: To make it a question.

Very nice.

Student: While in the second sentence you have the tense marker did.

So, we do not have what first thing is we do not have what.

Student: Have what.

Very nice. Do you see that very clearly that in a content question we need a question word an in a yes no question you do not need a question what that clear very nice.

Student: Sir.

Yeah.

Student: One observation is that what is just replaced by phone and it moves to the end of the sentence, but the phrase did you buy remains same.

Yeah.

Student: So, what is like a placeholder for the unknown object?

You are right all of you are saying things that are making sense my job is only to expand what you are saying in such a way that the same thing makes sense for everybody, you are I think you are getting there and also the point is probably I am looking for more basic things and you are talking about advanced stuff. What as a content question word is

only for content type of question and it is not there for the second type, that is the difference between the two types of question. The similarity between two types of questions is did you see that. If I tell you in a sum Mary that English listen to this carefully, English questions are made by fronting tenses the role of tense is very prominent in making a question in English it is making sense, I want you to see that carefully on the screen, on the board that is not on the screen. Look at this, look at the question number, look at the sentence number 2, everybody the sentence is bought a phone what is the tense on that sentence?

Student: Past (Refer Time: 42:40).

Past right. So, everybody agrees that when we say a word like bought right this, this is buy plus past agrees right. Now, if you remember earlier discussions where I have also told you that sometimes tenses are visible and sometimes tenses are not visible right and we left our discussions right there. In this case we have tense and the verb buy, in it with the with the question sentences we can see that the past tense which was mixed completely with the verb it is like the this verb is like the dough, I know we need to stop in a couple of minutes, but you understand what I mean when I said dough, have you seen the dough made for making [FL] right. The water and flour are mixed with proper proportion in such a way that it is its going to be almost impossible to remove water from that dough you can throw them throw everything apart, but you cannot really extract water and leave the flour exactly the way it was before.

If you look at the word buy bought the tense and the verb is mixed in such a way like water and dough. But in a language, in a language it is possible to extract tense and leave the verb apart that is what happens in a question sentences when we say did you buy a phone. The verb is never going to have any send any tense on it after that therefore, we leave the verb as buy we can never say did you bought a phone. So, the point is the did in the beginning of the sentence that you see is actually removing tense from the verb and extracting that to the front. The tense is an invisible category it cannot stand on its own, so it needs support of a lexical word.

So, when we put do, do is a word which comes in support of verb in support of tense now do means what if I ask you the question do what does the word do mean in Hindi how will you translate that in Hindi.

Student: [FL].

[FL] right and Tamil.

Student: [FL].

Sorry.

Student: [FL].

No, how do we say, how do you say, how do you say do work.

Student: (Refer Time: 45:47) can realize.

I will give you more example, I think there is another word for that in Tamil I will come back to that we are we are not we are not finishing up this discussion today will come back with this tomorrow and then I will bring the other word for that. But hold on before I wind it up do you see. So, in English the word is do and this do is not the verb this again is a functional word now it does not remain a lexical word.

So, do plus past becomes did and when there is no when there is no past tense there is just present tense then it remains just do. So, in a way what we are saying is this word is carrying tense. So, the common thing between both types of question words in English is fronting of tense all right.

So, let me stop here and I want you to think more about the question words and then we come to question words and movement tomorrow all right. Think about equivalent of do in Tamil, more words for that in Tamil all right let me stop here and will continue this (Refer Time: 47:16).