

Language and Mind
Prof. Rajesh Kumar
Department of Humanities and Social Sciences
Indian Institute of Technology, Madras

Module - 07
Lecture - 31
Sentence C P and Displacement

We are looking at sentences. We are looking at sentences for us to see underlying patterns, and we are also looking at sentences to see the underlying patterns at a larger scale that we started with. In order to understand relationship between language and mind, we are looking at underlying patterns at the level of sounds, words and sentences.

We have been spending considerable amount of time in understanding underlying patterns at the level of sentence. Having understood the contents of a sentence, having gone through different parts of a sentence, and having looked at what makes a sentence, that is, the required and visible and not so visible parts in elements of a sentence, we want to look at certain aspects of a sentence which can demonstrate these patterns in a clearer fashion, that these underlying patterns happen at a certain underlying level of mental representations.

We have looked at movement and some examples of movement where we try to argue that there are cases of displacement in natural language. We got examples from English to see that in certain cases, and we took examples from W H questions, that it appears that certain parts of a sentence has moved from one place to the other. In the case of W H movement, what we saw was, a part of IP has moved out of IP, and we needed to account for that. We needed to account for that in the sense that if we do not, then the whole discussion of the structure fails. So, we needed to account for that displacement in within existing structure representation which we claim and which we are trying to show as an evidence for underlying patterns of mental representation. So, we looked at that.

We want to put little bit more emphasis on the relationship between CP and displacement; that is, a complementizer phrase and movement, for us to see these patterns further in terms of its motivations.

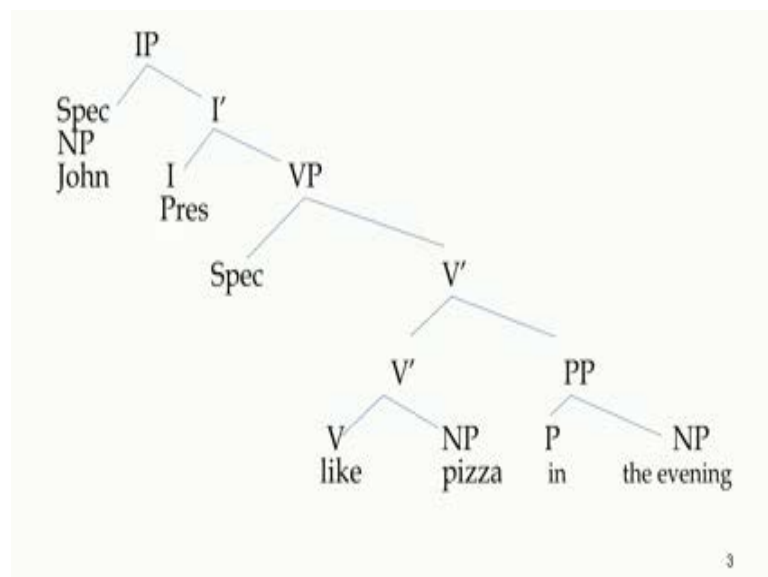
(Refer Slide Time: 03:19)

Movement/Displacement

- An element in one place moves to another
- A logical evidence for such a situation is required.

So, we have said that an element in one position, when it goes to some other, that is called movement. And there has to be a physical evidence of such a movement, there has to be a relationship between the two elements to establish that the same element from one position has gone to the other one and then there has to be logical evidence for such a situation.

(Refer Slide Time: 03:44)

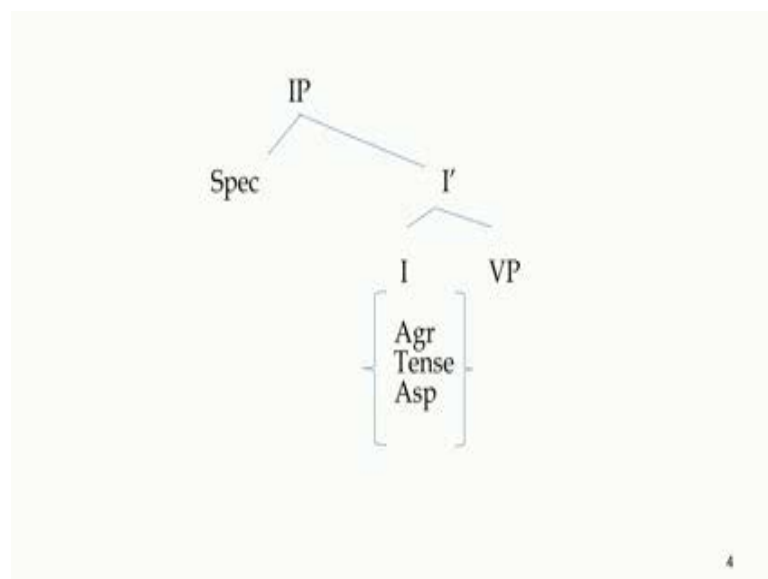


What did we see last time from the examples that you see on the screen? This is a canonical example of a structure of sentence. If any element out of this moves from one

place or from its place, then we need to account for its displacement. If it has moved, it will go to some place and then we need to account for its displacement from its place to where. And that gives... that helps us understand underlying motivation for it. So from the canonical position, it moves to some other positions. And we have seen an example of a W H element moving from the object position of a sentence, going beyond CP, going beyond I P, and then we accounted for that within the conceptual frame work of a CP, where CP becomes a super structure and IP becomes part of that CP; so that was accounted for.

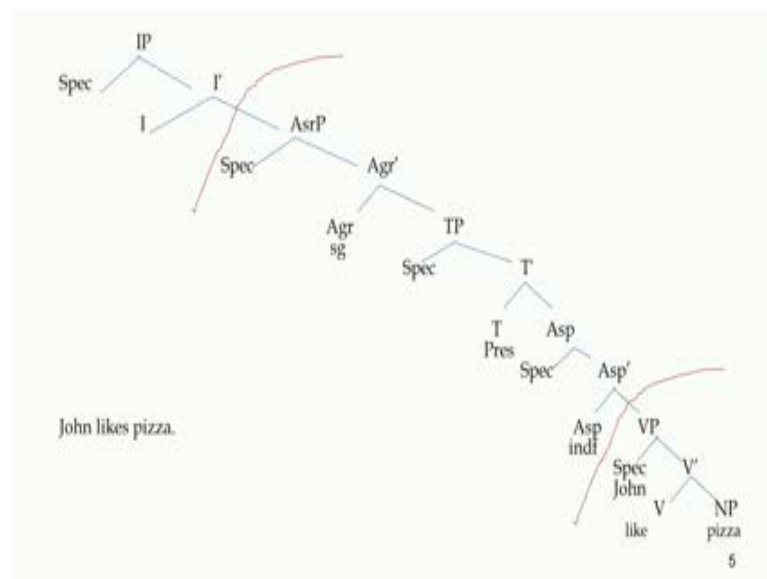
When we want to look at further motivations, further evidence for such a movement, we need to locate those evidence and the instances that we have seen within the conceptualist structure to argue that these are really certain processes taking place in the underlying pattern. And only an understanding of an underlying pattern can help us recognize these processes at different level of a structure. So, how do we find such a motivation? Remember, at one point while discussing the phrasal structure, while discussing why a sentence is called an IP, why a sentence is a phrasal category, we argued that 'I' appears to be bundle of features. At that level, some argued that how is it possible that one node and one category can combine or can host a series of elements in one place?

(Refer Slide Time: 06:10)



This was a compelling reason for dismantling these features and arguing that these features are independent categories in natural languages, and thus they are going to be projected independently with their own phrases, where these features will have their own phrase and they are going to be in the head of those phrases. Now, this is relevant in the context of displacement and I will connect the two in a moment; but for a moment, for the time being, please look at 'I' hosting a bundle of elements together.

(Refer Slide Time: 07:09)



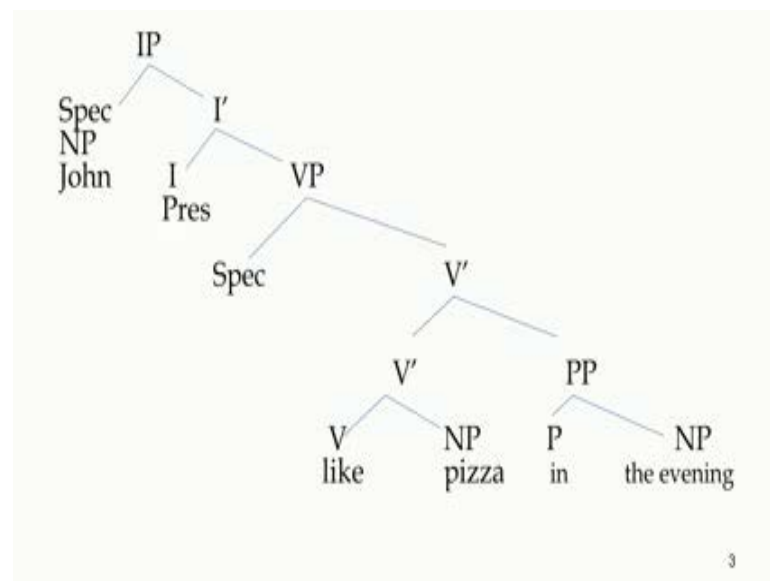
When it got separated... this is an important story for us to understand the conceptual link and an understanding of phrasal structure in terms of sentences. So, we started with the idea of 'I' as the head of the sentence; that is, head of an IP. And that was a beautiful point; that was a beautiful explanation at one point in time in the history of the study of language, which unified all the structures of phrases and describes a sentence also as a phrase by identifying the head of a sentence as the crucial aspect in formation of sentence. Remember, we do not need to go too far behind to see this argument; we saw that two parts of a sentence like subjects and objects and verbs, where verbs and objects belong to another part which we call predicate, and then there is another part which is subject.

Remember these two parts of a sentence are not merely juxtaposed, mixed to another; they are connected with certain visible or invisible elements. Those elements are primarily responsible for giving those strings a sentence-hood. And those are the

elements which were traditionally described as functional elements, and under the notion of X bar, when we described, when we explained a sentence as an IP, we bundled those features as 'I', and such features became the head of a sentence. Thus far was very nice.

Then, the next level of discussion was if 'I' hosts a lot of things at a time in one place, how is it going to be possible? And then it was proposed that each of them is probably going to be projected as phrases with them as the head of those phrases. What you see on the screen is the expanded structure of the same sentence - John likes pizza, where ideally you would see the subject in the specifier position of the IP, and the predicate under VP; that notion has to be captured. And then under the two red lines, you see all the elements being expanded which was being hosted by 'I'; that is, agreement, tense and aspect, to begin with.

(Refer Slide Time: 10:54)



So, what is going on here is 'I' is just being expanded; it is not complicated. Please pay careful attention to the sentence in this. I will take you back to the original structure from where we started. This is a structure. This is where we are saying 'I' has present, but we are anyway discarding rest of the features and we are not putting them in under 'I'. Then we realized... So this is the structure; this the canonical structure of an IP. Then we realized that 'I' has got several other things as well. Then in the next structure, we have merely expanded the bundle of features under 'I', and then we get this thing.

There is another worth noticing point here which was an important part, which was part of an important argument, important discussion at this time; and this will help you understand the underlying pattern and the notion of displacement, and many other things that are interrelated in a very nice way; and here is what you see. Please see that the Spec position of IP is empty, which is a position for subject. The reason why it is empty is the argument that something with... It is subject; it is out of predicate for sure; but how does it happen that a lexical element which is going to be part of lexical domain at a conceptual level is part of functional domain? How does it happen that a lexical element gets projected in functional domain of IP?

Even though it is at the specifier position of IP, how does it happen? In short, the idea was, nothing gets projected in the functional domain at the surface of structure. So, it has to originate at some other place. Then the argument was given that, probably the subject also originates within the verb phrase at a conceptual level, where we see a different level underlying the underlying pattern in human mind. This is an important argument for us to see the relationship between language and mind, to see the structure of language to understand what underlyingly happens in human mind related to language. So we see that the subject originates within the VP. Look at the screen once again and you will see under the second red line that the subject originates at the specifier position of the VP. So, this is how it is going to look like.

(Refer Slide Time: 14:12)



So, I am simply going to draw a VP for you to see. Remember this is going to have a specifier, and then you have V and NP, where V is 'like' and the predicate and the object of this head is 'pizza'. We have looked at the relationship between these two and how several other kinds of things are taken care of at this level. Whereas at this point, what I am trying for you to see is, in the conceptual structure, there are things that are beyond this. So at this level, look at this... The argument is that 'John', NP 'John', which happens to be the subject of this sentence originates at this level, because if it is allowed to originate at some other level as you see in the screen, then it ends up in a functional domain, and the argument is that, that cannot be conceptually happening.

Now, how does this work then? The argument here is... See how the argument is building for displacement. We have IP. We did not want one node to host too many features; we expanded them. That brought to our notice that in the inflectional domain where we have a lot of stuff like agreement, tense, number, person, gender, aspects, negation and lot of others; in that domain with those many features, it is not conceptually viable to have a subject originated in the Spec position of any one of them; therefore the proposal of subject being originated in the specifier position of the VP. That was one argument. Then, it conflicts with the other one, which is, if it originates in the VP, within the VP, then it becomes a part of predicate; whereas, subject has to stay out of VP.

So at one conceptual level, which was given several names - logical form, deep structure etcetera, etcetera... So, we are saying we are not interested in those things, those names. All I want you to see the argument that to protect these things, we are saying it does originate at the specifier position of VP, but having originated from that place, it needs to displace to get a sentence where subject is away from the predicate at a surface level. Therefore, I am trying to say that such an understanding helps us understand two things: one, the underlying structure within the patterns of sentences in human mind - number one. Number two, it helps us understand the processes that are taking place under those, at those levels, at the conceptual level, which is not really visible. Thus the fact that this needs to displace from this position, is a very strong motivation, is a very strong reason, for displacement.

So, here is what I have tried to summarize. A lexical NP which is in the specifier position of an IP appears to be in the functional layer. The head 'I' is a bundle of features; and when every single feature gets fully projected, the problem is that ... the problem is that

subject ends up in the functional domain which gives birth to the argument that subject has to be originating in the VP. And then if it originates... if it is allowed to originate in VP at some conceptual level, then at surface level it has to go outside the VP which happens to be as one of the strongest motivation for movement; and thus we see one of the motivations for movement coming up.

(Refer Slide Time: 19:55)

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.

There is a problem related to the case assignment. What we have seen last time that the subject NP can, subject NP needs a case assigner to have nominative case assigned to subject. You see the position of this thing NP; subject NP here in this spec of VP; this cannot be allowed to stay here for one more reason. That one reason is, it has to be outside the predicate. The other reason is it will not have a case assigner here, because this head assigns case to its complement. It will need one more head to assign a complement, and therefore for the requirement of a nominative case assigned to the subject NP, it needs to go to a different place.

The subject NP needs to go to a different place for the assignment of case, where a functional head is available to assign a nominative case to it. Whether the functional head operationally assigns a nominative case or it ends up checking its nominative case with that functional head, is a matter of theoretical discussion; is a matter of theoretical steps. The empirical fact is it needs, or it requires checking of its nominative case at

some level of functional element; therefore, it needs to stay outside the move... outside the VP as well.

So you see, there are more reasons than one why displacement must take place. Last time when we saw, we looked at instances of elements moving outside IP. Today we are looking at reasons why certain NPs must move from where it originates.

Thank you.