

Basic of Language Science
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Lecture-38
Constraints on Displacement of Constitution

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Questions?

- What are the constraints on Movement?
- Are movements of elements from one position to the other constraint by some restrictions?

- Elements of cultural significance in the structure of language.



We have looked at movement, what does movement mean? Physical displacement of some elements from one place to the other in the conceptual framework at a certain conceptual level. I am sure by now you are able to see the underlying abstraction in that conceptual framework, when we say movement and when we say evidence for movement then you are able to see abstraction at the level of conceptual framework, hardly a microscope can really reveal that kind of abstraction. So, I hope you are able to see that abstraction and appreciate that.

So, now we are going to look at having seen evidence and motivation for movement, I want to show you some of the places where there are restrictions on movement that certain things are not allowed in the whole operation of movement and I just want to give you four quick examples, I had a plan to talk about some of the elements of cultural significance in the structure of language you know, that we are talking about structure of language a lot and when we have also said and established that the study of the structure of language meaning a study of the structure of sentence is the primary goal of syntax and therefore, a sentence is the basic unit for the study and then we have devoted large chunk of our theoretical discussions on I-language and therefore, we were able to go all the way back to the levels of abstractions that you have seen.

However, while studying theoretically motivated conceptual framework for the study of language, there are some of the elements of cultural significance and the moment we say elements of cultural significance you can immediately relate them to E-language, they are not going to be related to I-language, so such elements can find space in the structure of language and I wanted to show you a couple of examples of that, but we will have to push it for some other day, so let us go through the restrictions, which are called constraints and movement.

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Constraints

- Constraints are put together in form of islands.
- Some parts do not allow movements out of them, hence are called islands.
- An **island** is any constituent that you cannot move a Wh-phrase out of.
 - Wh-Constraint
 - Complex NP Constraint
 - Coordinated NP Constraint
 - Subject NP Constraint
 - Adjunct NP Constraint



So, here are some of the things that I want you to say constraints are put together in the form of Islands. So, the moment we are talking about constraints we have an island in mind and Island, what we mean by Island, Island is a place which is not connected with the rest of the land, so that forms a small territory by itself and some parts do not allow movement out of them, that is whatever we define as Islands from that Island movement of elements are not allowed.

So, in other verbs, we are making the islands also or we are conceptualising the islands on the basis of what is not allowed out of that, so it is working both ways and in short, an island is any constituent that you cannot move a Wh-phrase out of. So, mostly we will be talking about Wh-phrases, we do not have a structures here today, but I invite you to keep the structure in mind how we get IP, CP or CP, IP, and VP structure if there is any need of that I will draw it on the board, but we will see where if we need it or not.

So, these are the 5 things I have planned for to show you, they are called Wh-constraint, Complex NP constraint, Coordinator NP constraint, Subject NP constraint and Adjunct NP constraint, have you ever heard these names, Wh-phrase, Subject or Adjunct, you have heard these names, what you have not heard so far? Is the term complex NP and I will show you, then you will figure out that it is not very difficult and then Coordinated NP that is two NPs put together and then I will show you that too and you will see that, these are just terms.

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Wh-constraint

- A Wh-phrase cannot be extracted out of a clause that begins with a Wh-phrase itself.

1. I wonder why Rahman composed the song?

2. *[Which song do I wonder [_{CP} why Rahman composed t_a]]?



So, let us first look at Wh-constraints, what is it that we are saying? A Wh-phrase cannot be extracted out of a clause that begins with a Wh-phrase itself, here is what we mean let me show you the expansion of that, do you remember when we were talking about some of the lexical properties of verbs. We talked about the verb wonder one of the features of the verb wonder was this verb takes a Wh-clause as a complement as an interrogative sentence as a complement, so in this sentence number one, why Rahman composed the song, is the complement of the verb wonder, I wonder why Rahman composed the song, see this thing.

Now, this clause begins with a Wh-element itself. See this thing therefore, an extraction of another element out of this clause is not allowed and here specifically, we are talking about English, these constraints are derived by looking at English data alone, so, please keep that in mind. However, the claim is that these constraints to a great extent all universals which means we need to verify these things with the data from other languages, however what has happened so far is the research on these constraints have made these constraints parametric.

Therefore, they did not remain universals to great extent it works, people have found examples, empirical evidence from different languages, where some of these constraints are universal and some of these constraints retain their universal nature, however some of them become parametric that making sense to you that claim, that the argument was these constraints are universal, but that argument was simply based on some languages that are of English type and English in particular since, we are only talking about the introduction to these constraints, therefore I am giving you only English examples.

Now is this first sentence clear? So, sentence two is ungrammatical, because we end up extracting something from that Wh-clause, so which song do I wonder why Rahman composed is not a good sentence. Now, I invite your attention again to some of the points that I made way too early. When I told you, you give this sentence to a native speaker of English and ask them if this sentence is good in your English?

Anybody will tell you, any native speaker of English will tell you this is not the right sentence now, it is not the second question that may come in your mind, why is this not good and further question will be, what is wrong with this sentence, that these two questions are not for native speakers you cannot expect a native speaker to tell you an answer, why is this sentence wrong, what is wrong with these sentence, get the point?

Because native speaker's intuitive judgement is only responsible for grammaticality or ungrammatical. Any speaker will tell you within no time that sentence two is not good, why is it not? The valid question for native speakers, we do remember these things still, great and that part is universal, native intuition is the strongest tool for eliciting linguistic data, checking data.

But explanation of the data is the job of the people who are looking at this structure. We cannot expect this answer from speakers of the language, so we can say why this sentence is not good. The reason this sentence is not good is there seems to be certain elements appear to be working like islands in languages and when we try to extract anything out of that island the sentences result in ungrammaticality and in this case we are trying to extract it from an island which is called Wh-Island, we can call that Wh-Island therefore, any extract some out of this clause why Rahman compose the song is not good, get the point.


If you just had a sentence why Rahman compose the song that is the question by itself that is a different story but in the context of the sentence, I wonder why Rahman composed the song in that bigger sentence, why Rahman composed the song is a complement clause and that acts as an island, this is what is stated in the first statement. A Wh-phrase cannot be and Wh-element cannot be extracted out of a clause that begins with a Wh-phrase itself. Clear? The second one should be simple. Is it? Can we move, making sense?

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Complex NP Constraint

- You cannot move a Wh-phrase from such a clause to a position outside the Noun Phrase.

1. He likes [_{NP} the idea [_{CP} that space travelers will reach Mars]]
2. *[Which planet]_a does he like [_{NP} the idea [_{CP} that space travelers will reach *t*_a]]?



Now, look at the complex NP, so we will look at example in one is giving you a complex NP and the idea here is also we cannot move a Wh-phrase from a clause to a position outside the noun phrase that is from the complex NP there is an error in presenting the constraint itself, so here is a complex NP, he likes the idea that space travellers will reach Mars, what is the verb in this sentence in the main sentence, like transitive verb and the complement of transitive verb is?

Student: (12:20).

Professor: The whole thing after that is the complement, the idea that a space travellers will reach Mars, that is the whole thing as a complement now, what is it, what is the status of this thing that is an NP but, it is not an ordinary type of NP it is an NP and it has a clause following it, which is in a generic term, this kind of

clause is called a relative clause. The purpose of that clause is to modify the NP and all the relative clauses are technically like adjectives, because what do adjectives do in a language in a sentence, what do the adjectives do?

Student: Qualify

Professor: Adjective qualifies, what?

Student: (())(13:18).

Professor: nouns and what do we mean by qualified?

Student: Describe.


Professor: Describe, that is adjectives give us some additional information about noun, when we say a tall boy, we are putting some qualification on the noun boy, meaning we are talking about the height, in that sense, a relative clause is like an adjective, because the whole clause modifies the noun, so this NP the idea with the clause is called complex NP. That is the meaning of complex NP and the idea is extraction out of this complex NP is not going to be possible, so if you say.

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Complex NP Constraint

- You cannot move a Wh-phrase from such a clause to a position outside the Noun Phrase.

1. He likes [_{NP} the idea [_{CP} that space travelers will reach Mars]]
2. *[Which planet]_a does he like [_{NP} the idea [_{CP} that space travelers will reach *t*_a]]?



Look at the the second sentence and why the second sentence is not good, it is because we are trying extraction out of complex NP, can you see that, do you agree that second sentence is not good, what planet does he like the idea that a space traveller will reach, does not look like a good type of sentence, it maybe a little bit difficult for us to process, because we are not native speakers of English but with a little bit of difficulty.

Once we start looking at it carefully, we reach the conclusion very fast that there seems to be some problem with the sentence even out of the context. If I gave you this sentence in a minute or less than a minute you will be able to say the sentence that is not really very good, that agreeable thing.

So, if we are told to explain this sentence, why is this sentence not good, then we can say the sentence is not good, because we are trying to extract from the complex NP, the idea that the space traveller will reach Mars, from that we are trying to question the climate, so we are saying which planet does he like the idea that a space travellers will reach, get it, can you see the point with the bracketing, is that clear you can see the same thing in this structure 2, but I hope you have the structure in mind and then you can see the extraction is not working out clearly, clear, any issue, questions?


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Coordinate Structure Constraint

- You cannot move a Wh-phrase out of one **coordinated** clause while not moving anything out of the other.

1. John gave a flower to Mary and Bill a chocolate to Nancy.
2. * [What]_a did [[_{IP} John give *t*_a to Mary] and [_{IP} Bill a chocolate to Nancy]]?

However, **across-the-board movement** is possible.
 Movement out of both coordinated clauses at once is allowed.

 [What]_a did [[_{IP} John give *t*_a to Mary] and [_{IP} Peter *t*_a to Nancy]]?

Let us look at the second one, next one, this is coordinated constraint, that is, we cannot move out of a coordinated clause, so what do we mean by coordinated clause, let us look at this first example, in one, John gave a flower to Mary and Bill a chocolate to Nancy, what is the coordinating clause in the sentence, what is the verb in this sentence?

Student: Gave.

Professor: Gave, and then what is the coordinated clause: a flower to marry and a chocolate to Nancy. basically it is like it has two sentences coordinated with N the sentence is John gave a flower to Mary and Bill gave a chocolate to Nancy, these are the two sentences when we coordinate the two because the verb is the same in both the sentences, so we take the verb and put the coordinated sentences without the verb, so the sentence becomes John gave is the verb this far we have the verb, a flower to Marry and Bill a chocolate to Nancy. So, we do not need to repeat the verb give in the second sentence and the sentence is, there is another name for this in earlier versus of phrase structure grammar and things like that, but that is not important for us to discuss, so you understand the coordinated structure?

Now, the point is we cannot question, we cannot extract a Wh-phrase out of it. Meaning, we cannot question another element in this coordinated structure which is, if we try to question what did john give to Mary and Bill a chocolate to Nancy the sentence does not look good, because we are extracting out of coordinated structure, therefore the generalisation says extraction out of coordinated structure is not possible and therefore we say coordinated structures are like islands, get the point?

I just put the point below for generic reference, we are done with our point, but we can say and this is called across the movement, that movement out of both coordinated clauses at once is allowed, so we can say something like, what did John give to Mary and Peter to Nancy, this sentence is all right, that is the extraction is out of the two at a time, just like we extracted verb and left the two coordinated clause we can question from both at a time and that will be fine, but cannot question one and leave the other, that results in ungrammaticality. We use these kinds of sentences and day to day life is just that somebody has looked at it more carefully. We use these kinds of sentences all the time, can I move?

Professor: Yeah,

Student: What is that John gave ta?

Professor: ta, I should have talked about that it is not a very complicated thing see, first of all these are two different things, a, is working like index what we used yesterday with I so that is the index t is trace, so t is showing you that from here something has been extracted, so once we extract something then we leave the trace, so earlier I have been showing you this trace with a dot dot dot or the blank space this time I just put the t as t putting it as trace.

Now, what I want, so this thing was available in the other slides too, so in other places also t means trace and then what the reason why we are using index is we are trying to say for example, look at sentence number three, John gave t an index we are trying to show that this is the trace from here something has moved out and therefore, the question word what, is co-indexed with this trace and question word what is also co-indexed with the trace in the other sentence is what we are trying to show with this trace and index, I should have talked about that notation another point Subject NP constraint.

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Subject NP Constraint

- We cannot move a Wh-phrase out of a subject.
1. [_{Subject} Reading science fictions] irritates me.
 2. *[What kind of books]_a does [_{IP} [reading t_a] [_{VP} irritate you]]?



(Movement out of a subject is bad.)

We cannot move out of a Subject NP, so if we have something like reading science fiction irritates me, is this not a real sentence, reading science fiction irritates me, what is the Subject of the sentence?

Student: Reading science fictions.

Professor: Reading science fictions, that is a Subject NP if we have just an NP at John or Mary, then that is one single little lexical item, so there is no question of extracting anything out of that, so when we say extracting out of Subject NP we mean, only when the subject NP is bigger, so for to test that we have to make the subject NP bigger and here is the Subject NP reading science fiction.

So, if I try to question anything out of that, what kind of books does reading irritate you or irritate me, the sentence is not good what kind of books, I am trying to question science fiction I am not reading, so I'm saying what kind of books does reading irritate you, is not giving us a good sentence, because we cannot question part of the NP that is part of the Subject NP therefore, the sentence is not good. You can question the whole thing, what irritates you is reading science fiction irritates me.

So, if you question the whole thing fine, but cannot question this and if you want to use this tool to show it to someone that reading science fiction is one NP, we can use this diagnostic tool of Wh-question also to show that this whole thing is one NP you can say, look you can question the whole NP with what, get the point, so in a variety of ways these tools are designed and used in natural languages to talk about different points. So, the generalisation that movement out of a subject is bad results in ungrammaticality, just one more point before we stop.


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Adjunct NP Constraint

You cannot move a Wh-phrase out of an adjunct.

1. I laugh [while reading science fiction Adjunct].
2. *[What kind of books]_a do [_{IP} you [_{VP} laugh [_{PP} while reading *t_a*]]]?

(Movement out of an adjunct is bad.)



Adjunct NP constraint again, moving out of Adjunct NP is not allowed we can question just like we have seen Subject NP, we can question the entire Adjunct, but we cannot question this part of Adjunct, so we have a sentence I laugh while reading science fiction, while reading science fiction is an Adjunct, why is an Adjunct, how do we know it is an Adjunct. Because the verb is intransitive

Student: () (24:27)

Professor: Very nice the verb laugh is intransitive and anything that comes after this is going to be Adjunct, so I laugh while reading science fiction, now if I want to question science fiction again out of this NP then this is going to result in ungrammaticality, what kind of books do you laugh while reading, is not good.

However, we can question the whole phrase again, why do you laugh or when do you laugh, I can say I laugh while reading science fiction there could be many reasons for me laughing, but we can say I laugh while reading science fiction, so movement out of an Adjunct is bad, is this clear?

So, there are these 4 5 types of constraints that people working on English observed when they were looking at these types of NPs and movements together and therefore, these are called you can use these names at the Adjunct NP, Subject NP or Wh-Island or a Complex NP or as a whole together sometimes these are called Island constraints. Point is very simple: from certain kinds of elements extraction is not allowed, extraction meaning the extraction is used only when we have Wh-phrases, so this is not the story of NP movement, this is the story of Wh-movement, we stop here. Thank you.