

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

Lecture - 25
Thematic Relations

Last time we started looking at thematic relations among constituents of a sentence and then we were looking at what are those constituents which have got thematic relations among one another. In order to look at thematic relations, we started talking about categorial selections and semantic selections. Remember categorial selections and semantic selections. The idea of categorial selections the idea behind that discussion was there are two types of things in a sentence at rather there are two types of two aspects through which we can look at a sentence.

So, far we have been looking at a sentence from the perspective of grammatical relations, such as subjects and objects right subjects and objects are grammatical relations no NP is inherently a subject or no NP is inherently an object. Depending upon a sentence an NP could be in a subject position or it could be in a object position and then we know about rest of the constituents of a sentence. So, like subjects and objects are thematic relations in a sentence, we started looking at like subjects and objects are grammatical relations in a sentence, we started looking at thematic relationships.

And then today I will talk to you about the whole ha how to summarize the whole thing and way and the way we look at thematic relationship in a sentence is called theta t theta theory. There are several no not several at least some of the things which are needed to connect both structural relations and thematic relations grammatical relations and thematic relations give it couple of days and you will see the connection between the two. And also shortly we are going to look at; in a way you understand this, but as a practical demonstration.

I will let see how a sentence in fact, we looked at it little bit how a sentence is bigger than an IP. Remember, when we are talking about when we started talking about a CP how a sentence is bigger than an IP and also how the subject position of a sentence can be what have you seen so far in the subject position of a sentence mostly an NP right. You will see how in a subject position of a sentence, we can have things which is which

are bigger than an NP or that is sometimes an IP and may be bigger elements as well and all these things put together give us a recursive give us recursiveness for which languages are famous. So, we come to that and then these things will make little bit more sense.

(Refer Slide Time: 04:13)

Questions

- What is a theta role?
- How does theta role assignment work?



So, let us look at first the relationship between first two perspectives and then the unified statement about a theta theory.

(Refer Slide Time: 04:21)

Endocentricity:

- X can be a head of XP and not YP.
- The head of YP will be Y.
- Everything related to a phrase/every part of a phrase XP is contained within the XP.



We have we have looked at endocentricity I am only going through these things just to

refresh your memory then we started looking at categorial selections.

(Refer Slide Time: 04:46)

- (1) *know* can take NPs, indicatives S's, and interrogative S's.
 - a. John knows [NP the time].
 - b. John knows [S that the world is full of noises].
 - c. John knows [S what the time is].
- (2) *ask* can take NPs and interrogative S's, but not indicative S's.
 - a. John asked me [NP the time].
 - b. *John asked me [S that the world was full of noises].
 - c. John asked me [S what the time was].
- (3) *wonder* can only take interrogative S's, not NPs or indicative S's.
 - a. *Paul wonders [NP the time].
 - b. *Paul wonders [S that the world is full of noises].
 - c. Paul wonders [S what the time is].



And we were we simply meant to put the point forth, that certain elements certain categories take specific take a specific objects or a sub categorizes for specific elements and this is called categorial selection for example, nouns like no ask and wonder, how these sorry verbs like no ask and wonder, how these verbs can have only certain things as it is object. In and such a restriction is called categorial relation categorial selection and we call that with this noun this verbs no some categorizes for an NP, it can sub categorise for a CP and it can also sub categorize for a question sentence this is what we meant.

And again I want to underline when we are talking about no ask and wonder we are not talking about all the verbs we are only talking about these verbs this is what is important about categorial selections.

(Refer Slide Time: 06:03)

(4) a. A: adjectives require PP complements.

– PP: *fond of the tall student*, NP: **fond the tall student*, N': **fond tall student*, AP: **fond tall*

• b. N: nouns require PP complements.

– PP: *queen of the blue isle*, NP: **queen the blue isle*, N': **queen blue isle*, AP: **queen blue*

• c. P: prepositions typically require NP complements.



NP: *on the brown table*, N': **on brown table*, AP: **on brown*, PP: **on below the brown table*

Similarly, we looked at some adjectives nouns and prepositions how they require certain types of compliments. In other words how they sub categorize for only certain types of elements.

(Refer Slide Time: 06:36)

Semantic Selection

- Semantic selection (S-Selections) attempts to derive certain aspects of c-selection from semantic properties of the relevant head.

Let's look at the following examples:

a. *know*: complement must be a question or a proposition



b. *ask, wonder*: complement must be a question


When we started looking at semantic selection that is s selection, and we were talking about differences between categorial selection and semantic selection, that is c selection and s selection we looked at different ways of saying things so that things will be clearer. In a the same thing that a verb no sub categorizes for an NP or an IP or a CP or a

question sentence, we say with respect to semantic selection a verb no for verb no complement must be a question or a preposition, that is it is just that we do not use grammatical terminology for these thing.

(Refer Slide Time: 07:21)

Lexical Selection

- Sometimes particular heads select for particular lexical items, not just particular categories. This is called **L(exical)-selection**.
- Verbs:
 - i. *depend, rely* - on
 - ii. *hope* - for
 - iii. *toy* - with



Keep in mind at the short discussion that we have gone through about autonomy of syntax, we have discussed that there is evidence available in natural language, which shows us which with the help of that we can argue that syntaxes independent of semantics, that is meaning of a sentence has very little to do with grammatical composition of a sentence. A sentence can be totally meaningless and a still be grammatical that is the base line argument for in autonomy of syntax or independence of syntax.

However, that is not enough there are way we do have evidence in natural language which also suggest that not necessarily it is independent all the time all right fine it is it looks independent to great extent, but not all the way and that this is what selectional restriction tells us that for a sentence to be more meaningful not in the semantic terms, for a sentence sentences the point is sentences do care about semantic relations as well otherwise we do not really get a get a grammatical sentence. And lot of times grammaticality of sentence may depend on semantic selections as well that is how is the point.

There is something called lexical selection and at in this category you will see that verbs

or different elements select for a particular lexical item, why how we do not know much about that, but I just want to show you a list of some of the things for example, if we are talking about a verb like rely or depend, it can only allow a post position on, it does not allow other post positions. We never say rely for or rely in or depend in stuff like that. Remember we are not talking about categorial selection at this time the difference between lexical selection and a categorial selection is the following. For a categorial selection we were talking about the full phrase and a how a verb is selecting an NP or CP or IP, in semantic selection we were talking about how a verb selects a question sentence or a preposition or a sentence itself. In lexicon selection we were talking about pure lexical elements like preposition name namely preposition that you see on the screen.

Are we are you with me so far are these things making sense if there is doubt, please let me know we are only talking about the terms so far and then I want to go to thematic relations in a moment. Making sense and then you see further more verbs like hope and toy and the list goes on, the point here is an the reason why I have given only three examples is very simple.

We never say any other post position with a with a with a verb hope it sounds to a strongest statement just check it listen to people or try to make a sentence with anything else and this forces someone to look at it in terms of lexical selection. We do not know I mean this is not an explanation that I am giving, you a I am categorically telling you we do not know why, but it is in the statement of fact that it does not seem to be taking any other element what is the relationship between hope and for rely an on we do not know I like. I have been telling you and can trying to connect once one point that we had made way too early in the class and it will be a contribution of this class if you can take or if you can really internalize only a few points even if you points at the end of it.

The if not a huge success that will be a partial success of the things, that we have been discussing with a again remember knowledge of language, where we know that we know lot of things about language, we do a lot of things about language is just that we do not know how to explain. The some of the things we know, some of the things people have studied and then things are become clearer and still there are lots of things that we just do not know. Invariably irrespective of the electrical variations or language variation speakers of English will only say only take on with rely.

What kind of restriction operates in human mind, this definitely seems to be part of knowledge of language more so because we do not know why and has not been explained so far.

(Refer Slide Time: 13:36)

- Nouns:
 - i. *love* - *for, of*
 - ii. *desire* - *for, *of*
- Adjectives:
 - i. *proud, ashamed* - *of*
 - ii. *similar* - *to*
 - iii. *different* - *from*
 - iv. *consistent* - *with*



And then the list goes on and on nouns like a love and desire. Remember these two words are not verbs here, they when they are used as nouns then they take these things to the noun desire does not seem to take of and it takes for. I am only I knowing very well I am only showing you the list without giving you an explanation for this thing and I am not giving you explanation because we do not know the reason for that.

So, again and these three sentences make the point that I have a just a minute ago discussed with you, that we do need to look at semantic selection or selectional restrictions like categorial selection, semantic selections and lexical selection in order to make sentences grammatical I am and these sentences are not preceded by star mark because they are not on the grammatical sentences we have only put a hash mark, because they are not they are they are semantically not I do not know how to say semantically not appropriate sentences it does not mean much that is all we can say about these sentences am I right. The I and I do not know do not mean to go get into the arguments like in a certain context buildings walks slowly might be true might be I mean I am not talking about true and false values of these sentences.

What I am saying maybe contextually allowed if you are looking at a computer game,

then this sentence maybe perfectly all right in a given context, but you know what I mean and I am only talking about selection and restrictions and in the largest context these sentences are grammatical, but does not seem to be working quite well. So, with these things we have only tried to make a single point, which is keeping autonomy of syntax in mind we do feel or we do happen to need to look at selectional restrictions as well for sentences to make sense, which in turn me eventually means to say we cannot really we cannot really say fully all the way that syntax is independent and this is where we stop.

(Refer Slide Time: 16:44)

Thematic Relations

- Every argument must have one and only one thematic roles assigned in a sentence.
- X' theory generates sentences and theta theory is a checking condition.
- **Agent:** initiator of the action, capable of volition



Brad hit Andrew

Now, look at these statements do are we are we clear about sub categorized elements now sub categorized sub categorized elements in a sentence, the sentences that are the elements that are required in a sentence ok.

So, this is the story about those sub categorized elements, that just like grammatically they are going to be either noun or an object I am sorry either a subject or an object semantically speaking, they also get names semantic names. So, thematic relations talks about semantic rows semantic relations this is, this making sense let me repeat this thing again we are talking at two different levels we were we are talking about grammatical level and we are talking about semantic level at a grammatical level we have seen relationship between elements sub categorize elements in a sentence, in terms of subjects objects right among objects. We have seen some of the things are direct objects, some of the things could be indirect objects right semantically speaking that is looking at the

same sentence from semantic perspectives, we find that they also seem to have some sort of semantic roles which are partly governed by syntactic roles. Keep this in mind which are partly governed by syntactic roles this is why I wanted to make the point first that syntax does not seem to be independent of semantics all the way, that is there is no complete autonomy between syntax and semantics.

To a great extent semantics syntax do look independent, but not all the way because they are seems to be some overlap between them and therefore, I want you to see a description of semantic roles and how those sub categorized elements are described semantically in a sentence is this and then what we are going to discuss is going to make going to make sense make sense is the is the distinction between syntactic level and semantic level clear to everybody, are we with the syntactic relations to be understand what we mean by syntacting relations. Then we can look at semantic relations among those elements from the semantic perspective and then we can see how grammatical relations kind of force I do not want to use the word governed, because that is comings coming soon is a technical term technical term, how grammatical relations kind of force semantic relations ok.

And we start with this statement that every argument that is every sub categorized argument must have one and only one thematic role assigned in a sentence. So, for example, if you have a sentence like this brad hit Andrew, how many sub categorizer, how many arguments do you see here? 1 or 2 and this at this point we will need to make this thing clear. Grammatically speaking subjects are out of predicate everybody with me subjects are out of predicate right.

So, we can say as for as verbs are concerned it has only one object it is it helps you decide only one NP that is within the predicate, and it has no control over subject. In other words we mean to we end up saying this subjects are always there any way right with the without a subject we do not have a sentence at all therefore, we do not talk about subjects with relations with relation to verbs. Semantically speaking this is going to have two different arguments one is brad and the other is Andrew and for a moment please do not look at it in terms of subjects and objects.

It has two arguments brad and Andrew; these two arguments have two different roles in a sentence two different roles in a sentence and at this point I want to take you back all the

way back; when I asked you a question for the first time about the subject, what is a subject and several of you or at least some of you talked about subject is someone who does something right who the and when I was talking about verbs, I do remember some people talking about something that the action is acted upon. So, some of the description of those types, at this point I want to bring that in that such descriptions are semantic descriptions where what we actually mean to say that.

We are not defining subjects we are defining agents. When we say subject does something we are talking about agents. So, in this sentence the one of the arguments that is brad is the agent of what agent of the action carried up carried on and is this and this should be with the smallest sentence, it should be pretty clear to you that only brad is carrying this act carrying out this action right we are not using the verb fight. If we had the verb fight then the story would have been different because in the in the in a fight several other people could be agents, but when we are talking about hitting only one could hit the other. The person who is getting hit may have no role at all in being hit see this see.

So, look at the semantics of this verb or semantic description of it is argument that one is the agent and then we will see what the other is. So, there are two arguments what the first statement simply means is one and only one role has to be assigned to arguments in a sentence. If there are two arguments both of them will have one and only one role both of them will not have the same role.

That is brad and Andrew both cannot be agents, brad can be assigned one role and Andrew can be assigned one role. Confusions problems they are coming up, but at this stage any confusions any problems no all right. The second statement it is what theory generates sentences and theta theory is a checking condition is this making sense to you and if the second part does not just take it as a value take it for the value of the first part that X-bar theory helps us generate sentences that is X-bar theory helps us describe, how sentences are generated and then we will talk about the second part later how thematic relations how the way to look at thematic relations which is called theta theory is a checking condition on that in. In fact, is not too difficult in theta theory here simply means about selectional restriction and then selectional restriction becomes a checking condition for grammaticality of a sentence.

Student: Generates.

No, were I qualified that, how it gene what we mean by how it generates sentences is it helps us describe understand a sentence.

Student: Parts a sentence, but how do we generate like how does how does it explain generation?

No, I that is not what it means I am telling you, what it means is no not just how to parts a sentence. It helps us understand how a how different elements in a sentence are related and how human mind, how sentence works in human mind that is all it does it is not really a physical tool right it is not really a candy machine, in which you put something and it gets you candy the this making sense it is a tool artificial tool hypothetical tool for us to understand if we are a speaking the sentence, how does the how did that happen that several elements are connected and then what makes a sentence grammatical for us to understand underlying patterns X-bar theory it just a tool to understand that. It is not a like I give you the example it is not a machine, you put raw elements in it and it gives you candy candies.

(Refer Slide Time: 27:47)

- **Experiencer:** the argument that experiences or perceives the event

- Bob saw the car.
- Syntax frightens Jim.
- Susan loves cookies.



A falling rock hit Terry.

So, they in the in that sentence it does not generate sentences all right there are these are these are just the names and which describes elements in a sentence. Now look at the there is a whole list of names of thematic relations, given in the in one of the chapters in

your in your book. I have only taken few of them for us to go through I do suggest you to look at that chapter that part of the chapter carefully to understand these things, and here I want you to understand very simple point.

When we say sentences like bob saw the car bob saw the car or just let us look at the first sentence bob saw the car. Do you see that with respect to two verbs that you have seen so far hit and see right. With respect to two verbs hit and see; do you see the difference between the kinds of role brad and bob are playing in these two sentences? Yes or no you see what is the difference? With respect to hit and see when we say brad hit Andrew and bob saw the car what is the difference.

Student: Brad sort of with the action himself and bob saw the car is not necessarily something that (Refer Time: 29:40).

Right, every everybody understand this it is a not as shuttle either right it is quite obvious; when we talk about hit it requires some physical activity action right and in with respect to that scene is less eventful see this thing therefore, the different there is a difference between the roles of brad and bob. In the first sentence brad clearly seems to be an agent of the action in this one bob is different and one can argue that it still is an agent of scene, which is and this is why I said it is going to things are going to get complicated little further, but it is still does not contradict what we said earlier that argument will have only one and only one theta role.

You can assign it agent depending on how you perceive it, if you see if you think seeing requires some action in that case it is agent for you. If you think there is a huge there is a difference not settles; what is difference between hit and see, then you can assign a different theta role to this all right. See this thing and larger point is the difference between brad hit Andrew and bob saw the car is not only captured through it is grammatical relations. Further difference between the two sentences and the nature of the two predicates looking at semantic relations is also important therefore, semantics does not seem to be completely independent I am sorry sentence syntax does not seem to be completely autonomous of semantic relations all right. We have more sentences we can go through that, but I am I want to leave them for you to look at when we say syntax frightens jim right is jim the subject of the sentence not grammatically speaking jim is not the subject of the sentence.

What is jim grammatically he is speaking.

Student: Object of the.

Object of the sentence right, but semantically speaking you can realize that gym becomes the experiencer, right an experiencer of what.


Student: Fear.

Fear right. So, when we say experiencer or NAC agent is getting a agency can categorical can very clearly we mapped on to subject right, but other theta roles cannot be directly mapped on to their grammatical counter parts like subjects and objects. This is also no not real not a contradiction, but not a direct overlap either understand this point.

There is the mapping between semantic roles and grammatical relations are not one to one. It is not that subjects are the only one see look at the next sentence Susan loves cookies right. Cookies are not the experiencer what who the argument which is experiencer of love is not cookies, but Susan and once the role is assigned it is done one and again here one can argue no I do not think it is really experiencer, it is an agent. The fight is not whether it is an agent or experiencer the point is once it is once you think it is it for by you.

When I say once you think what I mean is once a native a speaker this decides that for me for my English, it seems to me as experiencer done. For the other native speaker if it looks like an agent done, but for the same speaker it cannot be two both experiencer and agent that is the point there are there is one or two more that I want you to see.

(Refer Slide Time: 35:40)

- **Theme** (also patient and percept) the entity that undergo actions, are moved, experienced or perceived
 - Mary loves cookies.
 - A falling rock hit Terry.
 -  The syntactician bought a phonology textbook.

The next one is called theme and it has it is description you can read that, but more importantly look at the look at the examples Mary loves cookies right. Compare to both there both the thematic relations that you have seen so far agent and experiencer, do is cookies an agent here definitely not, right.

If at all we can classify this agency to something that is going to be Mary right. If at all and if we do not want to call Mary an agent in that case we can call it experiencer, but Mary is definitely not theme. Theme is you see you see the description and the argument cookies seem to be qualifying for this role of being theme. Any difficulty problems no all right and likewise we have few more like goal recipient.

(Refer Slide Time: 37:10)

- **Location:** Place where action occurs
 - Andrew is in the room
 - We're all at school.
- **Instrument:** The entity with which action occurs.
 - Patrick hacked the computer apart with an axe
 - This key will open the door to the Douglass building.



Source, location, instrument and there is there is a huge list of huge list of these things I once again I do ask you to look at it in the chapter carefully.

(Refer Slide Time: 37:14)

- **Benefactive:** The entity for whom the action occurs.
 - Bill bought these flowers for Mary.
 - Mary cooked Bill dinner.
- There are many other thematic relations, but these will do for our purposes.



And if there are questions based on that please let me know and with each one of them the reason why I am not going through each one of them with you, is because it is just a list.

(Refer Slide Time: 37:46)

Theta Criterion

- A sentence meets the theta criterion iff:
 - Every argument must have one and only one theta role AND
 - Every theta role must be assigned (indexed to) to one and only one an argument.
- There is a one to one correspondence between the number of theta roles and the number & type of arguments.



Important thing to keep in mind is what I what we saw as the first sentence and what I have been telling you and let me repeat this thing before we look at theta criterion once again. At one level there seems to be total disconnect between syntax and semantics which is called autonomy of syntax. You have seen one example researchers with lots of a mode examples vigorously argue for that sometimes. For us this is not a religion we are only trying to understand how people have looked at language.

So, we need to look at several perspectives, we are not going to commit ourselves to one view or the other. So, my job here is not to show you only one point of the story that no syntax is independent of semantics understands this. Their appears to be evidence in natural language which shows that syntax may not totally be independent of semantics and lot of semantic components have to play some role or the other if not everything.

Some role or the other on constraining syntax; for that we looked at c selection that is categorial selection s selection semantic selection and lexical selection. Putting all these things together we call them there we call them some sort of semantic criteria as semantic selection. In terms of the fact that sentences do care about these things too otherwise they may be in a given context, but does not seem to be appropriate right away.

Then we have looked at with the help of that we are able to see two different levels that is a grammatical level in a sentence and a semantic level in a sentence. Grammatically

speaking the different terms subject and object are grammatical relations; similarly several elements that are arguments in a sentence have different roles to play and these are the names of those roles. These names are not mapped one to one with grammatical relations and what happens though is ones to a great extent it seems like agents are all the time subjects or subjects are getting agent theta role to a great extent. However, other examples show that not necessarily there is one to one mapping between grammatical relations and thematic relations.

However what we observe categorically is once a an argument is assigned a theta thematic role, it keeps that thematic role and one argument cannot be assigned more than one thematic roles in a sentence at a time. Just like any NP can potentially be the subject in one sentence and the same NP can be object in other sentence similarly outside the sentence the NPs will change their semantic role, but in a sentence one NP one argument must be assigned one and only one thematic roles and this is called thematic criteria or theta criteria.

And therefore, with the list I have only suggested that you take a look at that take a look at that list on your own, with the thing in mind that the whether you call something an experiencer or a an agent is depending upon native a speakers intuition; however, for people studying language, people looking at natural language in these terms and particularly when we are not the native speaker of let say language like English, we can only say that whether a verb whether in as an argument is agent or patient or experiencer can only depend on the nature of the verb.

For example for a verb like hit, the agent the argument which is in the subject position cannot be experiencer, cannot be patient, it has to be an agent only when we look at other verbs like love in a in a sentence like John loves Mary, how do I say that John is an agent. It could be an experiencer then the complication begins my point is for a non native speaker to look at these things we need to look at the nature of the verb and the answer is located there that is in the verb. For a native speaker these things are categorically clear in our languages too we have these things clarified and again.

I have already given you one example of knowledge of language this will be another one that all these restrictions that you have seen and both the levels of semantic level or grammatical level whether they are independent or not they are all here. We all know

these things rather, in other words we do not need to know these things obviously when we are speaking in the language, which helps us understand that these things are part of knowledge of language and on the basis of these things the term knowledge of language is a technical term clear about theta criteria. It just nice play of the words that you put it in a particular way to restrict or present it in the way that I have been describing to you.

(Refer Slide Time: 44:34)

- Adjuncts are NOT included in theta grids.

- (With verbs) *Adjuncts are optional, complements & subjects are obligatory:*

– John put the book on the table on Friday

– John put the book on the table

– *John put the book on Friday



Again I do not want you to look at the examples carefully in the book, adjuncts are not included in thematic grid that is in thematic grid. So, only sub categorized arguments are part of thematic relations not adjuncts. Remember the distinction between adjuncts and compliments.

So, adjuncts are not part of thematic grid. So, we are. So, verbs are not responsible for giving thematic roles to agents this is another example for us to understand that agents are really not required part of sentences from both syntactic perspectives and semantic perspectives. They are optionals and all kinds of things that that you have seen. John put the book on the table on Friday on the table is the sub categorized element if that is missing the sentence is going to be ungrammatical, we cannot say John put the book on Friday. So, that tells you however John put to book on the table is perfectly grammatical sentence even if we do not say on Friday, it does not have any bearing on grammaticality of the sentence. Therefore, in this sentence on the table we will have a thematic relation we will have a thematic role and when you look at the list carefully you will see that this


has a thematic role location.

But on Friday we will not have a thematic role because that is an adjunct, that is another way another distinction between complement and adjuncts that complements get thematic roles adjuncts do not get thematic roles. When we were discussing the distinction between complement and adjuncts we had not discussed thematic relations. Therefore, we did not talk about this distinction clear give me another two minutes and I will wind it up.

(Refer Slide Time: 46:39)

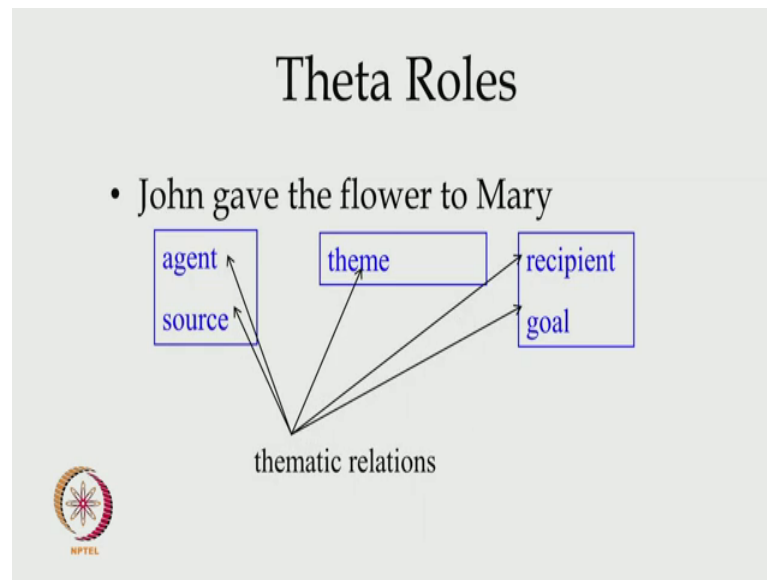
Theta Roles

- Theta role (θ -role) is a bundle of thematic relations associated with a particular argument.
- Thematic relation \neq theta role.
- An argument can have many thematic relations, but only one theta role.



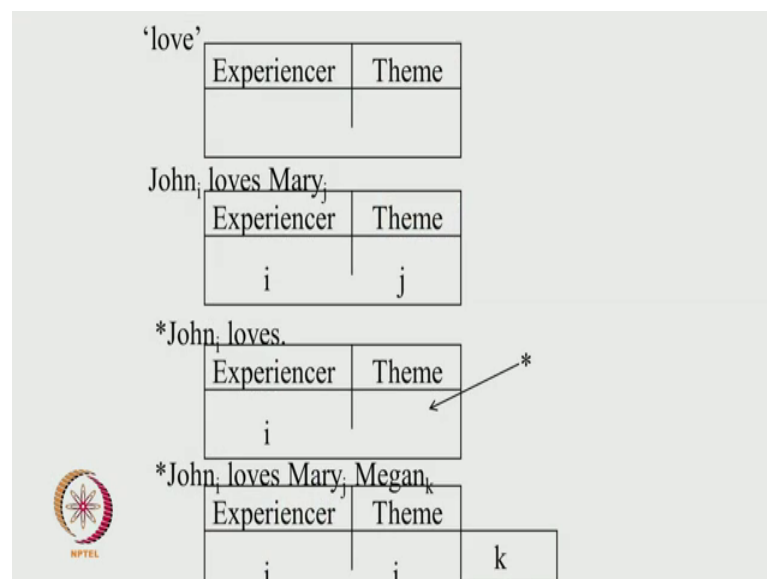
So, this is the grid that I want you to see carefully just two grids.

(Refer Slide Time: 46:56)



In the next two minutes. So, in this kind of a sentence these are the thematic relations and these are details. Now I want you to look at the grid see for a predicate verb like love it has two grids one is experiencer and the other is theme.

(Refer Slide Time: 47:34)



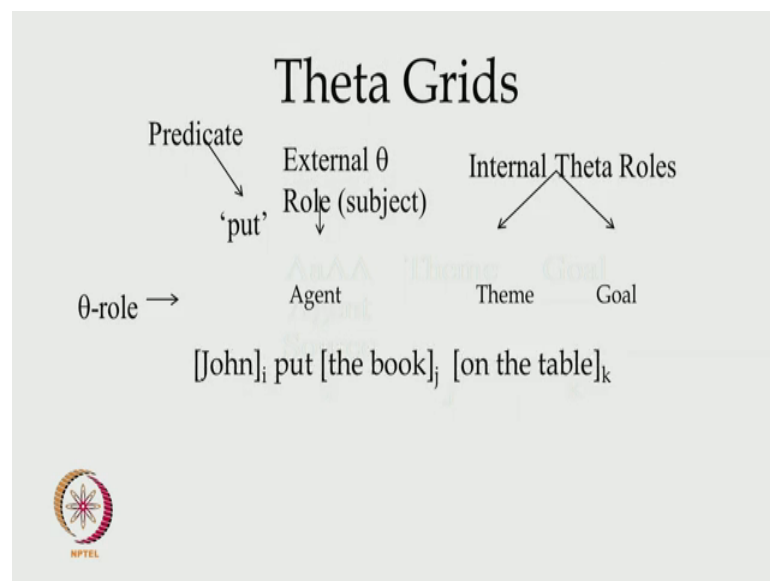
So, when we say John loves Mary at a semantic level, if both the grids are filled right that is both the arguments are present John and Mary this is co indices there for this verb then the sentence is grammatical semantically speaking sentence is ok.

However, the reason why we cannot say John loves and the sentence becomes not

acceptable or ungrammatical, because the other theta other element other argument in thematic grid is empty it is not filled therefore, this sentence is not acceptable. See this thing, now one more John loves Mary Megan here pay attention to the sentence, we are not saying John loves Mary Megan and do not get in to extra semantic meanings, I mean one person may love ten different people those are not the things we are talking about here, the moment we put John loves Mary and Megan, Mary and Megan becomes one element and they will fulfill the requirement of theme and therefore, the sentence is grammatical.

If we say John loves Mary Megan the problem here is Megan becomes an additional argument, for which there is no place in the thematic grid of the verb love therefore, the sentence is ungrammatical. See again with this these grids I am only trying to tell you that these relations and semantic level do have something to do with grammaticality of a sentence. Therefore, not complete autonomy all right anyway.

(Refer Slide Time: 49:51)



I mean these are the same things that I want that you can look at the book.

(Refer Slide Time: 49:59)

Elements without Theta Roles

- It rained
- It snowed
- It hailed
- It is likely that Bob left
- These are called *Expletives* or *Pleonastics*.



I did want to talk about one particular sentence, sentences like it rained and I am not going to discuss these things, we will discuss this tomorrow. Before we begin have you heard this kind of sentences it rains right can we say only rains, no we have to say it rains why we will discuss that tomorrow. Please look at this chapter this is not part of that chapter, the earlier part we have discussed please look at that and then we will talk more about it tomorrow.