

**Language and Mind**  
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**Module - 06**  
**Lecture - 27**  
**Sentence**  
**Restrictions**

We will continue with our discussions on sentences. Throughout the course we have been looking at structures of sounds, words and sentences. In a more precise way, we are looking at underlying patterns of sounds, words and sentences; and to be even more precise, the relationship between these things with human mind. With such a goal in mind, we will continue looking at sentences; and today we will look at sentences in terms of restrictions.

So far we have looked at parts of sentences; we have looked at components of sentences that make sentence - lexical categories, functional categories, phrases, there is structure, and how such a structure helps us understand the relationship between different categories, both visible and not so visible. That is, the phrasal structure helps us understand relationship between lexical categories and functional categories - both. And this is what we mean when we say or when we ask a question every time - What is it that makes a sentence? What actually makes a sentence is the connection between the two - that is lexical category and functional category. And again this is what it means when we say sentences are not random collection of words.

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## Extended Projection Principle (EPP)

- It rained
- It snowed
- It hailed
- It is likely that Bob left
  
- The underlined elements are called *Expletives* or *Pleonastics*. They are without Theta Roles
  
- Two types of *it* and *there*.

Now, let us understand some of the restrictions in the sense of... some of the restrictions that are imposed on sentences, and they also become part of the underlying pattern. First thing that we see, and we can look at these things in terms of theoretical constructions and we can look at construction of theory around these things; but without getting into the theoretical details about these things, we are trying to look at these things in terms of restrictions which in turn helps us understand the underlying patterns of sentences.

Now remember, we have talked about two parts of a sentence - subjects and predicates. And in a descriptive way, we have tried to understand and we have tried to analyze that a sentence is not possible without a subject. Even when we do not find a subject in a sentence, it is dormant and underlyingly present. Take an example of a sentence like – ‘Get out of here’, or a nice kind of advice – ‘Sleep well’; these sentences have subjects which are underlying. So, looking at the structure of the sentence, looking at the mental representation of this sentence in terms of its structure, we can only say, the subject of the sentence is not overtly present and not spoken, not produced. So, that underlines the requirement of a sentence; that underlines...such a thing underlines requirement of a subject in a sentence.

We want to show you some examples to understand this requirement in a more precise way where we take some examples from English. Look at some of the sentences from...on the screen. Sentences like ‘It rained’ or ‘It snowed’; ‘It hailed’, ‘It is likely that

Bob left'. Now in all these sentences we find an element which is underlined – It. Grammatically this serves the function of a sentence. This grammatically serves the function of a subject; semantically these elements are vacuous, these elements are null. In other words, these elements do not carry any meaning in this sentence.

Try to find out the meaning of 'It' in this sentence. You know the meaning of 'It'. There are two types of 'it' in English; one where it works as a pronoun. When it comes at a different position in a sentence such as: 'I liked it', in that sentence, it replaces something and then it has got a meaning. However, when it occurs in the subject position in English sentences, it does not have meaning. So, what is the function of this meaningless element in the sentence?

While trying to understand the function of meaningless elements in the subject position in English, we are also trying to understand the principle of economy that operates in languages. Principle of economy tells us that sentences do not want to use too many words. So the same word... Languages do not want to use too many words, sentences do not want to use too many words; therefore it is as far as possible, to whatever extent possible, various different functions can be taken care of by existing elements in the language.

So, this is why we mentioned there are two types of 'it'; in other words, there are two functions of it; one as the pronounial function where it gets its meaning; the other, where it is made semantically vacuous, semantically null, where it does not contain any meaning and then it fulfills the function of a subject. In such a situation, it is only used to fulfill the requirement of the sentence, that a sentence must have a subject. This kind of requirement is called, has been named as extended projection principle. Now, I have mentioned it that I do not want you to look at or to carry these theoretical terms in mind, but I definitely want you to understand that this idea of extended projection principle, the idea which we also said that a sentence is not possible without a subject.

This is a principle which applies to sentences of all languages, sentences of all types. To great extent English does not allow dropping of subjects; whereas, in other languages, sentences allow dropping of subjects. Therefore we do not need this type of an arrangement where we need to strip an element with its meaning and use it for just

grammatical purpose of fulfilling this base for a subject. Such a thing is also called an expletive or a pleonastic subject. These elements only fulfill the requirement of a subject.

Now, let us take it from here that this tells us that a sentence cannot go without a subject. In some languages like English, it has to be lexically filled; therefore – ‘it’. This is one of the restrictions which tells us about the construction of a sentence and the underlying principles of sentences. Now we want... while understanding some of these restrictions further, we would want to look at some more in terms of selectional restrictions. And even before that, we want to look at something which is called categorial selections.

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## Categorial Selection

- C-selection (categorial selection): certain heads impose particular demands on the category of the XP they combine with. These demands are referred to as **c-selection**.
- This is also referred to as Subcategorization.

And now, we are moving to predicates and some of the requirements, some of the restrictions that predicates follow, in order to construct a predicate. So, certain heads impose particular demand on the category of on XP they combine with. It simply means... look at a verb phrase, look at the verb head. If we have a transitive verb, it is going to need an object - that is the meaning of this thing; and with the requirement of the object, it follows so that, that much is the requirement of the object with the verb in cases of transitive verbs or ditransitive verbs is one type of restriction that is taken care of by the grammar, by the rules of the...by the rules of grammar. However, such a restriction is further constrained in the sense that it requires...certain times verbs require particular type of objects.

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- (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].

So, for example, let us look at three examples on the screen that you have. The verb 'know', the verb 'ask', and the verb 'wonder', these are put in these examples in italics. They are examples for us to see these things that a verb like 'know' can take three types of objects. It can take a simple NP as an object; it can also take an indicative sentence as an object and then it can take an interrogative sentence as well. John knows the time – 'the time' as an object of the verb 'know' is a simple object, simple NP. John knows that the world is full of noises – 'that the world is full of noises' is an example of an indicative sentence and the whole sentence serves the purpose of an object, the whole sentence is the object for the verb 'know'.

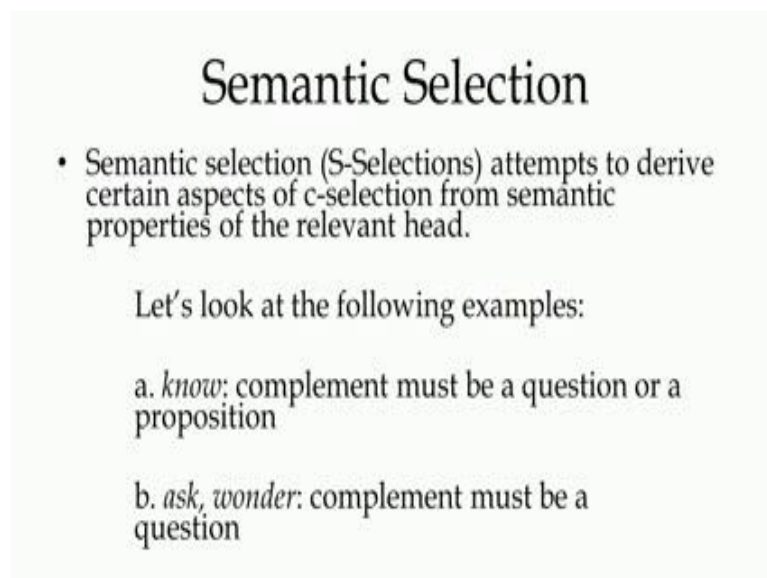
Therefore this verb is a different type of verb and what we are trying to say that not all the verbs require such objects and a verb like 'know' can also take an interrogative sentence as its object. In the third example that - John knows what time, what the time is, John knows what the time is. A simple NP, an indicative sentence and an interrogative sentence - all these three types of things could be the object of a verb 'know'.

Similarly, the verb 'ask' can take a simple NP, an interrogative sentence, but it does not take an indicative sentence as its object. So we can say - John asked me the time; we can also say - John asked me what the time was. So, a simple NP and an interrogative sentence, both are ok. But the example – b, John asked me that the world was full of noises is not a grammatical sentence because the verb 'ask' does not take an indicative

sentence as its object. In this case as we have seen before, an indicative sentence is - that the world was full of noises - is an example of an indicative sentence.

When we look at the third example of a verb like 'wonder', we see this verb can only take an interrogative sentence as its object; not a simple NP, not an indicative sentence. So, we cannot say Paul wonders the time, Paul wonders that the world was full of noises, Paul wonders what time. Paul wonders what the time is? - is the only possible sentence, which indicates that a verb like 'wonder' can only take an interrogative sentence as its object. Now see, the first restriction is that a transitive verb will need an object. Now we see that certain categories require special kind of restrictions and all these things are figured out, all these things are stored as rules in some sort of inventory of human mind.

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**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

We will want to look at one more type of example where we want to see...which is known as semantic restriction, semantic selection. If we want to describe the restrictions that we have done in grammatical way, what we want to...and if we want to look at the same thing with semantic perspective, we would say things like 'know', for the verb 'know', a complement must be a question or a preposition. For a verb like 'ask' and 'wonder', complement must be a question. This is a description with respect of semantic selection; this can be described as semantic restriction. We will come back and we will look at some of the properties of semantic restriction little later as well.

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## Selectional Restrictions

- Selectional Restrictions limit the semantic properties of arguments
  - # My dog loves to read newspapers.
  - # This chair is sweet.
  - # Buildings walk slowly.

One more restriction that sentences follow is called selectional restriction where, again in a different way, words or verbs or various different categories of words would have their own selection and such a thing is called selectional restriction. So, look at the sentence like - My dog loves to read newspapers. Grammatically speaking, this sentence is perfectly alright. We have used such sentences for us to see the autonomy of syntax, the autonomy of a structure, and then at that time we tried to argue that sentence structure is different from how meaning is constructed. The construction of a sentence, that is, the underlying patterns which help us construct a grammatical sentence in languages is different from the rules for, rules that help us get the meaning out of the sentence. At this point, we would only like to say that we want to understand two things separately.

Now, looking at the sentence, we simply want to say that this sentence is grammatical, but not acceptable because of the mismatch of the types of selectional restriction. For example, the object 'newspaper' is good for a verb like 'to read', but the subject is not good. In the second sentence - This chair is sweet, the adjective, the noun - there is a mismatch between the adjective and the noun. That is, they do not fulfill selectional restriction. They do not fulfill selectional requirements and because of the violation of such a requirement, this sentence is unacceptable. Buildings walk slowly - again there is a mismatch which follows from selectional restriction. So, these restrictions help us understand in a more precise way some of the underlying patterns of sentences which again helps us understand sentences properly. Thank you.