Introduction to Cognitive Psychology
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Lecture – 21
Basic Issues in Language

Hello, friends. Welcome to the section on language. So, at the very brief outside of this section, let me ask the question what is language or rather another question what is it that we are doing right now. Now, when this lecture is progressing as I am talking to you what we are doing is we are exchanging ideas and knowledge between them. So, I am I am imparting some knowledge and imparting some ideas which you are grabbing and so, the medium through which these ideas that I am imparting or it emanates from me and it is received by you is through language.

So, language basically is a medium of communication it is that medium or it is that thing which helps two people talk to each other or two people to communicate with each other now look at the title of this like as you can see the first part of it is in English and the second part of it is in German. And so, what Germans German part says is [FL] English which basically means excuse me can you speak English among much famous thing or a much famous word that I used to use when I was research associate in Berlin in what this means is that I used to often go around talking people talking to people and asking them whether they could speak English and so, why I would do that? I would do that because there was some problems in communication. I was not able to put forward my idea and so, this is a form or this is basically way in German to ask if the next person that you meet knows English or not without ever disregarding them in some way.

So, basically what language is it is a medium or it is a channel of passing information from the sender to a receiver and that is very important in cognitive psychology because anything in cognitive psychology any cognitive processes any cognitive function has to have a language from through which things can be communicated.

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"Waiter, this soup is fly."

And, to start the lecture I have a slide here as you can see that the person; obviously, in the restaurant he sees a fly in his soup, but then the way he is communicating is he has a mixed up the language and so, he says there is a soup in the fly, which makes no meaning and so, communication or languages although they are a medium of communication, but have to follow certain rules and if you do not follow these rules what really happens is that the whole meaning of the sentence is lost. So, let us then start with the meaning of language.

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Language

What is language and how is it different from communication?

Although language is often used as a communication system, there are other communication systems that do not form a true language like (Honey bee dance, smoke from mountains & bird song)

So, what is language and how is it different from communication? So, basically is language the only medium of communication. Is the language the only medium of transferring information between two objects one a sender the other is a receiver or maybe others are receiver and if they are then how is language different from communication.

Now, there are several communication systems out there in the world for example, microwave communication it does not have a fixed language or the smoke dance that you see or the honey bee dance that honey bees do when they find honey across certain flowers or certain sign languages out there and these mediums are a medium of communication, but they are not language. Why they are not language, because the other language has certain fixed rules or certain fixed characteristics which most communication medium do not. For example, one rule is that in communication only brief number of ideas can be transferred and fix number of ideas can be transferred and so, new ideas cannot be generated. For example, if the smoke signal says that intruder is coming or that is what it could do.

But, language on the other hand can be used can be reused to form new signs or new information that can be transferred and so, the fly is in the soup is in the fly or fly is in the soup may mean two different things. The soup is in the fly which basically means the fly has drunken the soup where as the fly is in the soup means that the soup has a fly and so, two different things the fly can have the soup and so, it will be in somewhere in the stomach assuming that the fly has a stomach. Then the other case the soup being the fly being in the soup has a different connotation all together if is basically means that this is non eatable something which is contaminated and cannot be eaten.

So, basically then language is often used as a communication system, but as I explained to you there are other communication systems also there which are not true languages and we will see why language is different from the communication system. And so, some of the communication systems out there are like honey bee dances, smoke from mountain, bird songs and so many other things.

A natural language has two necessary characteristics:

a) it is _regular_ (governed by a system of rules called grammar)

b) It is _productive_ (infinite combination of things can be expressed)

c) _arbitrariness_ (lack of a necessary resemblances between a word or sentence and what it refers to)

d) _discreteness_ (the system can be sub-divided into recognizable parts e.g., sentences into words, words into sounds)

Now, what is the difference between a communication system and a language? A natural language has to have four properties. First of all it a natural language is regular which basically mean that it is governed by certain rules which are called grammar. So, certain rules tells the language what should be interpreted what should not be interpreted and so, what are the normal is and how their normal is occurred and how it can be correct also a natural language is productive which means that it natural language can produce infinite combinations a number of communication, a number of idea.

So, change something into a language change some part of a language a new language, a new idea is generated, also it is to be a natural languages arbitrary. What does it mean? lack of necessary resemblance between the word in a sentence which means basically means what a word tells and what a sentence tells or what is the meaning of a word what is the meaning of a sentence are completely different. So, any word in a sentence could mean differently as against what a word would mean. So, a bank would mean a bank, but I was standing on the riverbank mean something else.

So, here the meaning of the bank changes whereas, bank could mean anything in terms of financial institution or a river bank, but when I put the same bank in two sentence like can I bank on you, in this case the highly of a financial institution is not what is talked about and so, arbitrariness is basically means that words. The meaning of words and the meaning of sentences are totally arbitrium there is no one to one relationship between

them also a natural language should be discrete the which basically means that I can take up a sentence and I can divide it into certain meaningful parts so that I can study the sentence.

So, discreteness is a system or it is a basically a property where the sentences can be divided or the meaningful sentences can be divided into recognisable parts, so that I can understand what is the role of a part in a whole sentence and that is what language or any characteristics of a language should be and this is how it differs from a communication.

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The structure of language

Language comprises of a number of system working together. Evaluating the structure of a language requires the study of a conversation

Conversation demands that we listen to & perceive the sounds of the speaker. Different language have different sounds (*called phonemes*). The study of the way in which *phonemes can be combined* in any given language constitutes the study of *phonology.*

Now, what is the difference between a communication system and a language. Now, what is the structure of a language any language what is the structure of it now languages have a number of system which works together and evaluating the language requires the study of conversations it is basically exchange of ideas between two people. So, when two people talk, if we study we will be able to understand what a language is.

So, basically conversations are or they are revolve they revolve around listening and perceiving the sounds of the speaker. So, it is not just listening the sound of a speaker what somebody saying conversations also imply an idea of you should be able to understand what the speaker is saying. So, this is difference between listening and understanding now different languages had different sounds called the phoneme. Phoneme is basically a speech sound. So, each language has a different kind of a sound

and this basic sound that each language has for example, ba, da and sa are called the phonemes.

Now, the study in which the phonemes these basic sounds of a language example in Hindi it could be [FL] kind of a thing which are the vowels in Hindi the [FL] as we call them or [FL] as a [FL] we call them or in English it is a, e, i, o, u which is the vowel or a, b, c, d, e, f which is a, c, d, e, f kind of a consonant in English. So, they produce a sound for example, the a sound has two phonemes into it or two phonemes in it the a and the e when we say a it has a and e into it and so, these are the phonemes basic speech sound. So, the study in which the phonemes these speech sounds are combined in any given language is called the phonology.

So, basically conversation is listening to and perceiving what other people say and that can be done by identifying the basic speech sounds the basic phones that each language has and these phones are the primary phones or the primary sounds which the language has and as I explained to you in the English language for example, the word a has the a plus e sound right.

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And, so, these are the two sounds the sound and the e sounds, so, a as I say. So, the various phonemes are these basic sounds of a and e are combined together to use to yell a meaningful unit of a language which is called a morphology.

So, the a and e then combined together to form a which then combines with some other sounds for example, a t e which is ate or a p p l e which is apple and this is called morphology. So, phonemes are combined together to yield meaning full words which are basically called the morphemes. So, these morphemes are generally not word, but part of a word, right. So, for example, morphemes are things like word endings example making plural. So, if I a p p l e and if I add s this s which is add to apple to make it a plural is called a morpheme.

Similarly prefixes tenses markers for example, tense markers like for present continuous tense I use markers like i n g or for past continuous I use tense markers like ed he walked he is walking he will be walking kind of a thing or he walked. So, when I say the e e e d to walk it gets convert into a past tense and so, basically these are the morphemes. Now, some of the morphemes the smallest meaningful units of a language are words need to be identified in order to study the role behind each words in a sentence.

So, basically then think of it in this way each conversation a language starts with identifying the basic speech sound which is called the phonemes and these phonemes basic phones as I said a has 2 phonemes a and e these phones combine together to form a meaningful unit for example, a morpheme a morpheme is basically combination of a phones which has some meaning for example, e d in terms of the word ending or ing in terms of word ending or things like a prefixes for example, any prefix. So, fulfil unfulfilled kind of things. So, unhere or inhere kind of prefixes which turns the change the meaning of a sentence these are called morphemes and these morphemes are then governed by certain or are governed by certain structure which is called as syntax.

So, basically the structure of a language is in terms of the basic speech sound which is called the phonemes at another level with the phonemes combined together is another level which is called the morpheme which is a collection of one volumes, but which has some meanings or which has some meaningful unit of a sentence. Now, these morphemes could be anything in terms of word endings in terms of the centre markers it terms of critical parts of the sentence and so on so forth and these morphemes are then guided by certain structure which is called the syntax.

So, syntax is basically the structure of a sentence now syntactically correct sentence does not itself is always good conversation. So, basically saying that all the objects or all the

morphemes all the correct phonemes or if it has a sentence. If a sentence has the right structure or the right syntax it may make meaning it may not make meaning. For example, look at the first sentence that we saw the soup is in the fly. Now, probably or not probably basically this sentence has the right syntax is everything correct in terms of the cannot be in the fly, in terms of the contacts all the soup in the fly basically means that the fly has drunken the soup, but looking at the rest of the scenario where you see a person taking a soup and then there is a bowl in the bowl there is a fly which is on to it. Somethings basically proves wrong.

So, looking at the context the sentence is wrong and that is what I am trying to tell here that every syntactically correct correct sentence may not be right now the sentence must mean something to the listener and in this in the first case the syntax was not meaning anything and so, this meaning which is generated by a sentence of syntactically or of grammatically I am sorry not grammatically in terms of structurally correct sentence is called a semantics. So, semantics is the study of meaning of a sentence when you. So, basically then in a sentence you have the phones which are the basic speech sounds take these phones combine together, you will found the morphemes which are small critical units of a sentence for example, it could be word ending it could be tense markers, it could be anything and these morphemes when combined together in a certain specific form to form the level of the word and these words are then governed by certain rules which is called the syntax.

Now, syntax is how should you write a sentence, but then the syntactically correct sentence in terms of rules if a sentence is correct it may have a meaning or it may not have a meaning and so, this idea whether the sentence has a meaning or not meaning is called the study of semantics.
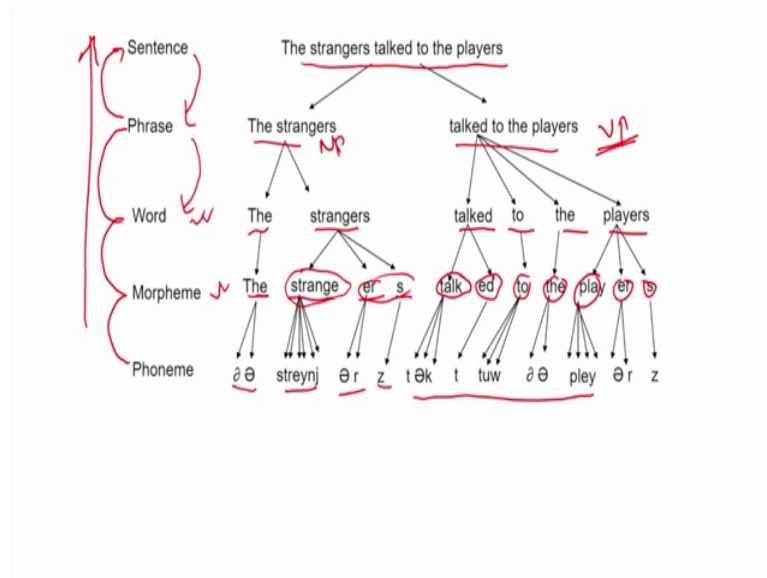
So, look at this here there is a sentence that I have used and I will show you the basic parts of it. So, the sentence is stranger talk to the players and. So, let us break the sentence into it is parts. So, the first level from the sentence down is the phrase level in the phrase level you can see there are two phrases into it we have the noun phrase and verb phrase. Verb phrase is the phrase, what is the phrase? A phrase is a collection of words in a sentence which makes complete meaning, right.

For example, if I say the strangers it has some meaning into it and so, it does not need anything beside it also I say talk to the players. So, although there is a question who talk to the players, but just by itself talk to the players has certain meaning as a phrases of parts of a sentence or combination of sentence which has complete meaning and so, that the level of the the phrase I have a non phrase and a verb phrase at the level of the word then again breaking this sentence I have two words the and strangers and then at the level of the word on this side on the noun phrase I have talked to the players four words to look at.

Similarly, at the level of the morpheme I have the strange n e r s because strange is the word root word and e r s makes a number of words. So, strangers and similarly here talk is the word which is the core word and ed is the marker sentence marker talked it is past past tense and similarly in to the play e r and s players which means the plural of it and

then coming to the level of the phonemes. So, this is the level of the phonemes how the is stranger is spelled e r and s is spelled and so on and so forth.

So, basic basic structure of any language is start with phoneme goes to morpheme which is combination of phonemes, then it goes to the level of word where morphemes combined together to form words which are meaningful units and these words are then converted into are mixed up using syntax using language rules to make phrases and these phrases then form the sentence and the sentence then is looked for or is thought of in terms of meaning which is called the semantics.

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For **_conversations to work there must be some flow_**. **_Listeners must pay attention_** and make certain assumptions, and **_speakers must craft their contribution_** in ways that will make the listeners job feasible. **_This aspect of language is called pragmatics_**

Grammar is the **_set of rules_** for a language. Grammar has nothing to do with the 'rules' of a 'good language'.

Now, for conversations to work there must be some flow. So, any conversation with which happens between two people for any conversation to happen that should be a flow between the movement of the sentence. So, listeners must not only. So, listeners of a language or listeners of a particular conversation should not only pay attention and make certain assumption the speaker must also craft their contribution in what they ways in which the listeners which makes the job of the listeners feasible.

For example, think of the sentence. So, somebody says I want a red watch and the other person says, yes yes the NASA is sending a rocket. Now, in this way what is happening is two people are talking together and so, one person has two meaning, it is not making any meaning although two people are making sentences conversations, but these conversations are not being interpreted and so, for conversation to work listeners must

pay attention not only pay attention to what is being said, but the speaker of a sentence should make sure that whatever he is saying should be crafted or should be made in such a way that the listener understands it.

If you say incomprehensible sentence the stranger may not understand the listener may not understand it and so, conversation is a two part game that there is a speaker and when there is a listener so the speaker should pay attention the listeners should pay attention the speaker should make sentences in a way which is comprehensible and that show conversation flows in other aspect of a language this aspect of language which basically decides what a speaker should say and how a listener should look into it is called a pragmatics.

So, although meaningful sentences all the semantics is the meaning of a sentence, but just having meaning a sentences does not itself make a conversation. So, for a conversation to flow you should have something called pragmatics into it which basically is that how conversations or how things are shared between people, what is it how is a listener listening to something and what is being transmitted by the centre. So, pragmatics is the flow of conversation the kind of flow of conversation between a speaker and a listener the idea of how conversation should happen, how a good conversation should happen is what is called the pragmatics.

Beside that there is something called grammar which are sets of rules for a language now grammar has nothing to do with with the rules of a good grammar good language. For example, if I say the word no I aint coming now, if I say I aint coming aint is not a very good word to look at and the word should be actually I am not coming, but then grammar only points out legal sentences it only looks for legal sentences and it is it is a rule of the game rule of the conversation, but it never looks at or it never tells you whether a sentence is good English or good Hindi or a good language, right. So, grammar will tell you whether a sentence is following a certain rule or not or does it is it correct in terms of rules, in terms of the sentence construction whether the sentence construction rules are following in a comprehension or in a conversation.

But, will not tell tell you whether this is the correct way to speak. So, grammar does not do that and that is what grammars are all about. Now, psychologist and psycho language they distinguish between something called the explicit and implicit knowledge of

linguistic rule the idea is how do people know rules of grammar, how do people what is the way in which people know the rules of grammar or how do they grab these rules is it explicit or we do we know when we look at a sentence that we are following certain rule, what is the grammar of it.

So, grammatical rules how do they work are the explicit or implicit in nature. So, although most of us cannot state with accuracy rules of English syntax, but we can basically find out ambiguity in the sentences. If there is a violation of grammar we can find into it.

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For example, look at the sentence, ran the dog street down cat after yellow the very the. What does it really mean? It does not mean anything and so if you give them give somebody who has studied the English language will find out that this is a problem, there is a problem with something in the sentence and then if you ask them to correct this is probably what they are going to write back.

So, people although they do not know the explicit rules if you ask somebody who knows English or studied little bit of language they will immediately say that this sentence is wrong is somehow wrong. It is not grammatically correct ask them the grammar rule they are not able to do it, but ask them to transform this and this is a transformation that most people are going to do. They say that the dog ran down the street after the very yellow cat and this is the exact interpretation, right. So, grammatically this is incorrect,

but most people are able to correct it. Although they do not know how this really comes in. And so, peoples knowledge about grammar is mostly implicit.

So, our knowledge of rules of grammar is therefore, not explicit. We often use something called prescriptive rules example what people say should follow. So, when we are using our when we talk or when we use language we generally you something called prescriptive rules which tells us how we should talk or write. There are certain prescriptive rules there are certain rules which goes around the world which people share between us and saying how you should talk and how you should not for example, if you are saying I aint, I am whatcha doing, this kind of sentences are not permitted or not entertained and so, this is the prescriptive rule.

Now, in contrast the articulation of prescriptive rule characteristics of a sentences are very hard. So, what people think to do is they know prescriptive rules of using grammar. When they when they are conversing they know what is wrong and what is right, but they do not know what is it in the grammatical way what is wrong or what is right and. So, as I said as a showed to you that if these two sentences are shown to people; people will be immediately able to tell you that the first sentence is something somewhere wrong and the second sentence is right this is right format of it, but they would not be able to tell you where the problem is or what the grammatical problem is. And, so, looking at in terms of grammatical is called a descriptive and prescriptive how they can do it or they are able to tell there is a problem is because they use something called prescriptive rules of how a language should be studied or how a language should follow.

So, basically then this is how the structure of a language is. It starts at something called phonemes goes up to something called morphemes, then there is the level of the word then there is from the word there is something called the syntax which is the meaning of a language which is the structure of a language from the syntax there is a meaning generated which is study through something called semantics and semantics is basically the meaning of a language, but even if a language or even if a sentence has meaning it may not be the best way to communicate and so, ways of communication is called pragmatics and from this pragmatics the certain grammar follow this is how the language is looked or made into.

Phonology

The sound of German is different from English. Part of what distinguishes language are their **_idiosyncratic sounds_**.

Phonetics the **_study of speech sound_** and **_how they are produced_** and **_Phonology_** the study of the **_systematic ways_** in which **_speech sounds are combined & altered_** in language help us in studying the sounds of language

Now, let us look at one by one these structures the first structure that we discussed is called the phones are the phonology now if you look at German and if you look at French and if you look at English you will see that most of them are different languages. Why German is a very hard language? For example, somebody is speaking German language [FL] something like very in a very [FL] which are very strong Germans are known to be very strong language. If you look at French which is more of a subtle language more of a likeable language people will be speaking in terms of some soft languages for example, [FL] or [FL] or some other some other way in which I do not know French, but it is a very soft language. Look at the English is more easier; so hello, hi kind of a thing.

So, these languages why is German a hard language or a very strong language and French very soft language or [FL] for example, is a word in French which basically means that good bye so, or [FL] for people for men and women. So, it is soft in nature and English is just gentle. So, how does this differences arise? The differences arise because the speech sound the idiosyncratic speech sounds in these languages are different the basic sounds are very different.

And, so, phonetics is basically the study of speech sounds and how they are produced and phonology is the status is systematic ways of integrating these speech sounds and how altering this speech sounds for converting the language. So, basically phonology is the study of speech sounds of different languages and these speech sounds of how they

are combined together, how they are altered, how they are spoken, basically defines how a language is treated whether is a soft language, hard language and so on and so forth.

Now, for the English language there are 40 phonetic segments. There are 40 phonetic segments which are there and then these phonetic segments are called the phonemes. So, what are phonemes? These phonemes are the speech sound as we discussed in the beginning of this chapter the idea of phonetic languages is in terms of phoneme systems of the phones which is the basic speech sound. So, phones are the basic smallest unit of a sound that make a meaningful difference. For example, [FL] these are sounds which are phones now in a given language.

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The English language has **_40 phonetic segments_** (phones). Phoneme refers to the **_smallest unit of sound_** that makes a **_meaningful difference_** in a given language. If one phoneme of a word is exchanged for another, the word itself gets changed.

thus if \d\ is replaced with \t\ then **_duck_** becomes **_tuck_**

Now, in one phone phoneme of a word is exchanged for another and so, I will show you that how important they are because if I replace one phoneme with the other phoneme in a sentence, then it could it would mean differently. So, here is an example if I replace the d phoneme d phoneme with the t phoneme in a language then that leads to the duck becoming the tuck right and so, you see the difference. So, if I replace one phoneme, one speech sound or one basic sound in English language the d is replaced by a t the duck becomes a tuck and. So, duck has a meaning tuck does not has a meaning although tuck has a meaning in some way, but then it is not the same thing. So, these differences can arise and d and t are more or less nearby they create something called semantic or they

create something called acoustic confusion. We have seen acoustic confusion has one reason of encoding in semantic memory and so, this is what happens.

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vowels			consonants		
IPA	**examples**		**IPA**	**examples**	
ʌ	cup, luck		b	bad, lab	
aː	arm, father		d	did, lady	
æ	cat, black		f	find, if	
ə	away, cinema		g	give, flag	
e	met, bed		h	how, hello	
ɜː	turn, learn		j	yes, yellow	
ɪ	hit, sitting		k	cat, back	
iː	see, heat		l	leg, little	
ɒ	hot, rock		m	man, lemon	
ɔː	call, four		n	no, ten	
ʊ	put, could		ŋ	sing, finger	
uː	blue, food		p	pet, map	
aɪ	five, eye		r	red, try	
aʊ	now, out		s	sun, miss	
əʊ	go, home		ʃ	she, crash	
eə	where, air		t	tea, getting	
eɪ	say, eight		tʃ	check, church	
ɪə	near, here		θ	think, both	
ɔɪ	boy, join		ð	this, mother	
ʊə	pure, tourist		v	voice, five	
			w	wet, window	
			z	zoo, lazy	
			ʒ	pleasure, vision	
			dʒ	just, large	

So, this is a list of IPA list of different phonemes and so, you can go through these or these are the number of vowels which are there and these number of consonants which are there and these are the phonemes for it. So, if you look into the vowels these are the phonemes for it is this is the number consonants and these are the phonemes for it this is how the example is for example, the a as in cat, the a as in arm, the a in away and so on and so forth.

Psycholinguists distinguish between consonants and vowels.

Vowels work without obstructing the airflow, simply depending on the   shape and position of the tongue and lips (a, e, o) [Halle, 1990]

Consonants are phonemes made by ***closing or at least almost closing   part of the mouth***. They differ in

a) place of articulation – where the obstruction of airflow occurs

Now, the psychologist or psycholinguists they distinguish between a consonant and a vowel what is the difference between a consonant and a vowel. Now, the English language in terms of the phonemes they have something called a consonant and they have something called a vowel. Now, what is the difference a consonant and a vowel? Now, vowels generally they work without obstructing the airflow. So, when you produce a vowel the airflow is not obstructed in anyway and simply depending on the shape of the position the tongue a vowel is produced. So, there is no obstruction of the airflow. For example, when you say a, e, i, o, u it is the change on the mouth, the change on the lips which is basically producing the sound and there is no obstruction of the airflow.

Whereas, in a consonants; consonants are phonemes which are made by closing at least one part of the mouth that differ in. So, basically consonance require obstruction of airflow and vowels does not require obstruction of airflow. For example, when we say the word b, c, k, t all of them require that the air which is falling for the diaphragm up the air which is coming from the diaphragm up it is blocked in some way in the mouth and this is what is the consonant is.

Now, the way a consonant is looked at the kind of obstruction of the airflow which is generated for producing a consonant can happen at four places now or depends on four factors. First place of articulation where is the obstruction. So, where is the obstruction of the airflow occurring. For example, b, p sounds appears by closing the lips try saying

b with open lips it is not possible, so, v that happens. When we say b or p it happens by obstructing th air flow by closing the lips.

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\s\ & \z\ sounds made by placing the tongue against the hard pallet of the roof of the mouth just behind the ridge of the gums

b) manner of articulation – mechanism of how the airflow is obstructed

　\m\ sound closing the mouth while opening the nasal cavity

　\f\　sound obstruction of the airflow producing a hissing sound

c) voicing – vibration of vocal cords

　\s\ in "sa" does not require vocal cord to vibrate

　\z\ in "za" requires vocal cord to vibrate

Similarly, that s and z sound made by placing the tongue against the hard pallet. So, say s without pushing the your tongue towards the upper part of the hard pallet towards this part of the mouth, this part of the mouth say s say s without putting the tongue here not happening not happening and. So, this is what it is and. So, putting the tongue or putting your tongue at the roof of the mouth, of the hard pallet is how the s and z sounds are produced.

The other way or the other factor is the manner of articulation. What is the mechanism for obstructing the airflow? For example, the word m sounds by closing the mouth while opening the nasal cavity. So, say m and do not close the mouth say m not happening or try not using the nasal cavity not happening. So, that is the problem here. Similarly, the sound obstruction of the airflow producing hissing sound; so, for example, f f is produced f is produced by this hissing sound or this mechanism of our flow air flow or the mechanism of the hissing the after sound which is there it produces the f.

The third factor which differentiates a consonants or which happened which makes it possible for a consonant to occur is called the voicing. So, what is voicing? Voicing is vibration off the vocal cord. How does the vibration of the vocal cord happens? Now, for example, the word s does not require the vocal cord to touch your vocal cord and then

look into it if I say f there is no vibration, but if I say z there is a vibration out there and so, these vibration of the vocal cord are also the ways of reducing a particular vowel.

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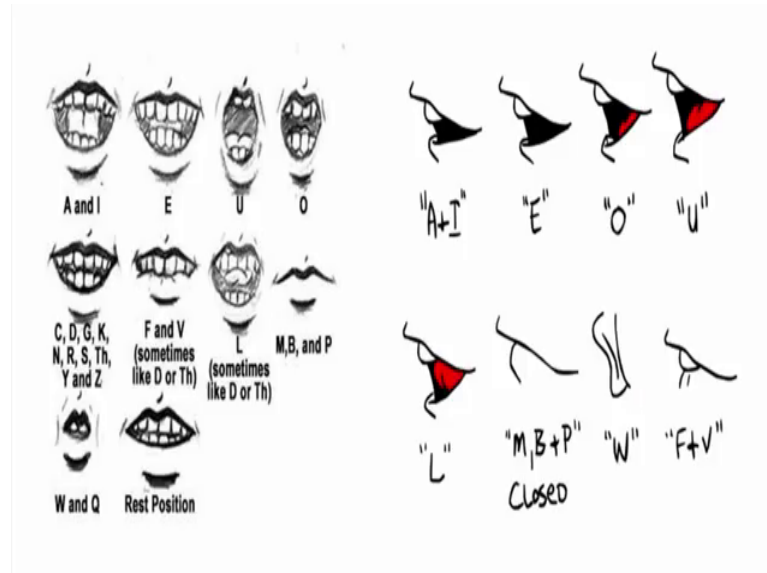
And, so, these are the ways in which a vowel or consonant is produced and I said the basic difference is in vowels there is no obstruction of air flow whereas, in a consonant there is obstruction of airflow whether it is level of the mechanism airflow or the type of mouth movement which makes the airflow or the kind of vibration of the vocal cord and if you see this is basically the mouth positions for producing the vowel and the consonant and I think.

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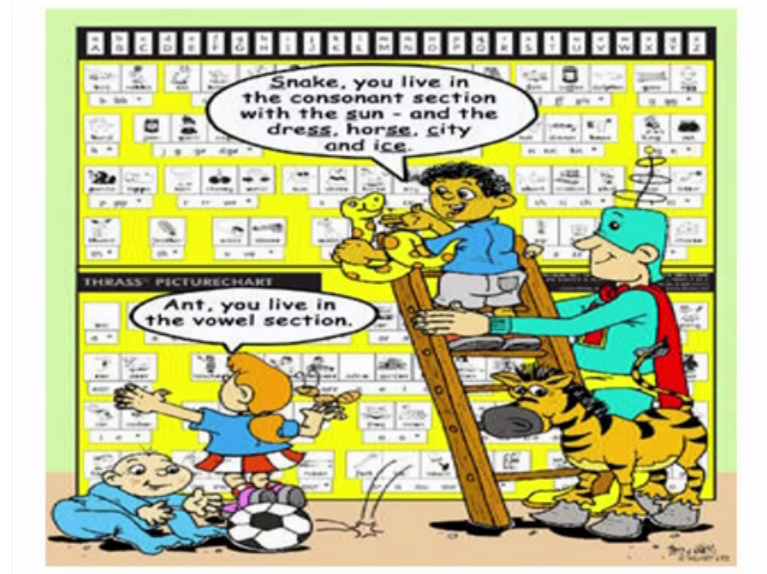
It is a funny thing here, so, to show how vowels and consonants are different.

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Features of phonemes are involved in certain *phonological rules* that govern the *ways in which phonemes can be combined*

a) if *two true consonants* are at the *beginning of an English word* then the *first must be an \s\.* This rule prevents words such as *dtop and mkeech* from being legal words.

b) how to *pronounce the plurals* for an English word

Now, features of phonemes are involved in certain phonological rules are govern the ways in which phonemes are combined and so, this ways in which this phonemes are combined they give rise to certain phonological rules. Now, there are two there are some rules which are followed in English language. For example, if two true consonants are in the beginning of an English language, if a English language or if a word in English language starts with two true consonants then the first must b an s and this is one rule

which is out there and this rule makes the dtop or mkeech not possible, right and so, if we have two consonants b and k in terms of the start of sentence or start of a word in English language the first the rules says that two true consonants first has to be an s and that is how it is and that is why you do not make the dtop, but you make stop or mkeech or skeech as being the legal words.

Now, this combinations of phonological rules of how phones are there it gives to certain rules and one of the rule is the use of the two consonant rule and the other is this is how to plurals or pronounce plural happen in English also. So, basically these phones, this phonetic rules also tell you how pronunciation of plurals happens in English language.

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If word ends with	Plural ending of word	example
\s z c j s z\	\z\	Places, porches
\p t k f\	\s\	Lips, lists, telegraphs
Anything else	\z\	Clubs, herd

Why do different languages sound different?

a) they contain **_different sounds_** (phonemes)

b) they have **_different rules for combining these sounds_** (phonology)

For example, if a word ends with the z the s the z the c or s or j or z then the plural always in the in the terms of a z for example, place the plural is places porch, it is porches right, but if the word ending is in terms of p, t, k, n, f the plural is always in terms of an s and so, this is a certain rules which have been given, it is a certain rules which are out there which says how these phones that we talked about or how this verbs verb is in consonant that we talked about, how they are allowed to mix together and follow a or a makeup a morpheme or makeup a word, right.

So, if we have this p t k the ending is always z in terms of s for example, lip will not have lipz it will have lips as an ending because it is ending in a p or if it is in terms of telegraph it is ending in a t the plural is always in terms of a telegraphs. But, if anything

else beside these number, which I have shown here the plural will always be in terms of z. So, basically these are the special ones which are there so that will be give to an s ending other than that you would have the z ending for example, club it will be clubs herd herds kind of a thing.

So, why are different language sounds different? Why are different languages they sound different to us? First they contain different sounds or different phonemes as a German has different phoneme for example, in German you have [FL] or a b c d e f [FL] kind of a thing or you have things like we and the fatter, fee and w is what is looked into in. So, different sounds are there. Similarly, you have French, Spanish and the each one of them has a different sound and so, they appear differently. They have different rules for combining this sounds; for examples, fatter and water; water and fatter in German. So, we is pronounced as v in this case and so, this is pronounced as s f. So, when we say father, they put fatter into how it is or sweshter in this says for sister.

So, basically different sounds are there and so, this is different sounds and combination of different sounds of the two reasons why a German sounds different from the English language, right. So, different phones and different ways of combining or any language for example, it could be French, it could be Spanish, it could be Chinese, Mandarin any language you look into. There are certain rules of combining these, there are certain first of all there are certain speed sound and the certain ways or rules of combining the speed sound which make them which makes two languages different.

The next interesting thing to look into or the next part of a sentence or a next part of a language is syntax. So, what is syntax? It is an arrangement of words within a sentence, how words are arranged into a particular sentence or the structure of a sentence. Now, what does syntax do? It tells you the way in which different words or larger phrase can be combined to form legal sentences in a language. For example, what syntax does it tells you how word should be arranged in a sentence and what is the arrangement of words and then it tells you what is legal and what is not? What arrangement produces legal sentences, what arrangement does not produce legal arrangement.

And for example, the s v o subject object verb kind of a thing subject verb object I am sorry s v o format or the subject verb object time format which basically tells you what should come before that. So, subject should be also followed a verb in English and then in object right and. So, in English Ram is going to the village is ok, but in Hindi [FL] or [FL] is also correct. So, I can make this transposition I can make this movement, but then this is this allowance of movements. In terms of German also this allowance of movements is there, for certain parts of the sentence can be moved, but in terms of village goes to Ram is not correct. Why? Because this movement is not allowed and so, this movement or this kind of changes is what syntax is. Syntax are rules which says what in which way the words could be combined to form meaningful sentences.
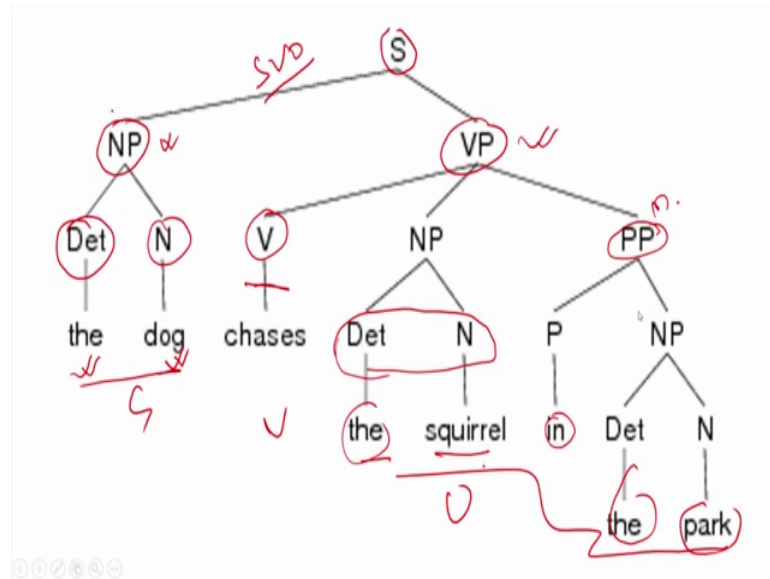
Now, to explain what are the structure of a sentence mean consider the following. For example, look at this sentence, the dog chase the squirrel in the park. Now, if I look into it is in the correct sentence and it has meanings. Now, if I break this sentence this is the level of the sentence and the level of the sentence if I break it has two different parts. Now, referred to the first figure which I showed you it has something called a noun phrase and a verb phrase and within the noun phrase then you have certain other structures which are there. There is something called determinant and there is something called the first noun and is called a determinant which is determining the noun which is the dog.

So, the dog, which dog? That particular dog, if I just say dog then it is not referring to it the determinant is there and so, dog could be anything, but then I say the dog chase the squirrel then I am referring to a particular dog. Similarly, in the verb phrase I have then different arrangement all together I have the verb which connects. So, which is s v o format as you look into it, this is the subject, this is the verb and this is the object which is then. So, object has certain determiners to it will come to that in a minute.

Then this is my subject, this is my verb. So, what does the dog do? The what dog chases it is chasing down that is the action that this particular verb is doing and then I have another thing which is called the object here. So, the squirrel now why determinant here? The determinant is because it is squirrel it is chasing a particular squirrel. Now, dog

chased the squirrel which means a dog chased can chase any squirrel, but if I am referring to particular dog referring to particular squirrel then I have the in built the determiner for it and so, the dog chases the squirrel.

This could be a sentence, but this sentences more parts of it. It has something called this part which is the noun phrase here, the park, where does it chase the squirrel? It chases the squirrel in the park and so, this is a advance combination here or it is another part of the sentences. So, this is this particular thing of breaking a sentence into it is parts of the noun present verb phrase and within the noun phrase, how the verb and the noun act in into or how they are divided into is what is called the semantics, I am sorry the syntax.

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The diagram shows a ***labeled diagram tree*** and depicts what is called the ***categorical constituent structure of a sentence***. These changes explain why certain changes can be made in a sentence and others can't. For example ***preposing*** – *taking a certain part of sentence an moving it to the front usually for emphasis.*

My naughty dog, I'm mad at. *Naughty dog,* I'm mad at my

That inflated price, I will not pay. *Price,* I will not pay that inflated

Now, the diagram shows a labelled diagram tree and depicts what is called a categorical constituents of a sentence. So, syntax is basically what words are combined and how they are combined. So, this basically what we saw is how a syntax actually looks into. Now, this changes explain why certain changes are, so, this kind of categorical arrangement explains why certain movements of sentences are allowable and certain movements are not allowable.

And, this taking certain part of a sentence for example, and this part of the sentence for example I can very well take this and this and put it here and make this change from here to here. So, the squirrel chases the dog in the park is perfectly correct syntactical sentence. Although it has wrong semantics in terms of meaning it is wrong, but perfectly

ok. So, I can take a noun phrase and move it along this structure along this consonant structure and that is called preposing. So, that is what. So, this categorical arrangement the syntactical arrangement constituent arrangement basically helps you in preposing.

Taking certain parts of a sentence in moving it in front of the other and that it also tells why I can make the squirrel move from here or the path move from here, but I cannot take the chase and move it into the front of a sentence. So, what can be moved and what cannot be moved or how can changes. For example, I can very well say that the park chases the squirrel in the dog, right and that perfectly legal in terms of the syntax, but in semantics it has no meaning at all and so, this is what is allowed in this is not what is allowed because syntax looks at meaning and so, this constituent structure this tree structure then tells me what can be moved and what cannot be and this movement of part of a sentence toward the front or back of a sentence is called preposing.

For example, look at the two sentences. So, my naughty dog and I am mad at is not legal, whereas naughty dog am mad mad at my is not legal. So, my naughty dog I am mad at is perfectly legal, but if I try to prepose something out of here or I want to take this and put it here then it is not legal at all. Similarly, that inflated price I will not pay is perfectly legal, but if I try to prepose something for example, you try to prepose price; price I will not pay that inflated is not legal. The inflated price I will not pay is perfectly legal and so, these kinds of constituent structure or tree structure tells you or tell someone using a language of what is possible and what is not possible.

How can we concisely summarize of <u>what can and what can't</u> <u>be legally proposed</u> structure of a sentence.?

1) Only constituents labeled as being **whole phrases** (NP/VP node) can undergo movement from one position in a sentence to another.

2) **Phrase structure rule** / rewrite rule – describes the ways in which certain symbols can be rewritten as other symbols (S==NP VP)

3) Transformational rule – <u>turn structure such as those</u> <u>depicted in tree diagrams into other structures.</u> (e.g., preposing)

Now, how do we concisely summarise what can and what cannot be legal prepose structure or what can be the way of making a legal sentence and so, one of the ways is that one of the rule is that only whole phrases can be moved you cannot move part of the sentences or part of a particular sentence from one position to another. Also, there is something called the phrase structure rule which says that or rewrite describes the way in which certain symbols can be rewritten. So, what happens here is that it says that certain symbols can be re written in a certain way and so, if it moved something with it or certain I can rewrite a particular symbol into some other symbol and that way I can make the preposition, I can make the movement.

Similarly, there is something called the transformation rule which says that structure such as those depicted in tree diagram on to other structure for example, preposing and so, this rule says that some structures can be moved and some structures cannot be and what can be transformed and what cannot be transformed. There are certain rules out there for example, one rule is this the only whole phrases can be moved and then the other is a phrase structure will be says that certain structure in a sentence can again be rewritten or broken down into other structures and that decides what can moved or not and there is a transformation rules which says that what can be moved and what cannot be moved and that says how sentence can make meaning or how can a legal sentence.

And so, you look into it Mr. Porky had a problem with a sentence and that can create problems for example, it says work for will work as food. Now, as food, which basically means that he will be eaten up, right and so, there is a problem he say he will work for food would be the right thing.

Now, the next part of what we look into is called the semantics. So, we looked at syntax the rule of it and semantics is making meaning. So, semantics is basically the study of

meaning and plays an important role in language in any language a meaning has to be there then meaning is not there then there is a problem.

So, although there is no complete theory meaning as of now and there are there is attempts to make a universal theory of meaning which captures everything, but then Bierwisch in 1970, he says that any theory of meaning should have or should be able to explain several things at a minimum. So, any theory of meaning any semantic rule should be able to explain certain kind of deviations or certain kind of factors which is there. First of all any theory of meaning should be able to point out anomaly any theory of meaning should be able to tell why and what kind of anomaly is prescribed in a certain language. For example, why can not one say coffee ice creams can take dictation why is this an anomaly the reason is any theory of meaning, any semantic rule should be able to point out why is this not a legal sentence coffee ice creams can dictation, right.

So, basically it does not make meaning because coffee, ice creams are not humans cannot take dictation and the very idea of dictation is that it is something which is moving which can hear a conversation and this cannot conversation so, this is an anomaly. Similarly, self contradiction any theory of meaning, any semantic rule should also be able to point out self contradiction in sentences. For example, when I say my dog is not an animal why it is self contradictory because it is an animal, right. When I say it is my dog is so and so people try to give them name this is basically self contradictory because most dogs are animal and so, you cannot create them or say that this is not an animal.

3) Ambiguity (why isn't it clear when where one intends to go in "I need to go to the bank")

4) Synonymy (why does "the rabbit is not old enough" mean the same as "the rabbit is too young")

5) Entailment (what does "Pat is my uncle" mean that Pat is a man)

When listeners figure out the meaning of a sentence, they need to pay attention to more than just the meaning of individual words. e.g.,

the professor failed the student

the student failed the professor

Also things like ambiguity why is not it clear when where one intends to go when I say I need to go to the bank. So, said theories of meaning should also be able to point out this kind of problem. This kind of ambiguity when I say I am going to the bank it is not very clear when I am going until unless a context is in before it or after it for example I am trying to tell you what situation or about my visit to some to some water body or some ocean or some nice place and then I am trying to say that I am going to the bank then it has some meaning. So, basically then any theory of meaning should be able to explain these kind of ambiguities.

Also, synonymities and any theory of meaning should also be able to explain why synonymity or how synonymity exist. For example, when I say the rabbit is not old enough how does it mean the same as rabbit is too young when I say not old enough how does it mean or what does it mean or what is how is it translated to the fact that it is too young. So, any theory of meaning should be able to also comprehend that or should also be able to explain how does this happen and the last is called the entailment which is when I say that Pat is my uncle, how does it automatically generate this fact that Pat is a male because uncle is a male and so Pat is a male that kind of a rules. So, any theory of meaning should be able to do that now when listeners they figure out meaning of a sentence they need to pay attention to more than just the meaning of individual word.

If you do not do that what will happen is the meaning would change. So, although the sentence what are the same semantics it will have the correct format, but meanings would change and so, if you look into these two sentences the professor failed the student and the student failed the professor they have entirely two different meaning into it. And so any theory of meaning should be able to explain why this happened, because when I say the professor failed the students it is basically failing in an exam, but when I say the student failed the professor is basically not failing the professor in an exam, but basically because that is not possible and that is the theory of meaning it says that this is not possible. The students do not take an exam and so, this is the how the world runs.

And so, when the students fail the exam it is basically failing him in terms of certain values, in terms of certain facts certain trust that the professor had. So, he failed the student failed the professor in terms of trust whereas, when the professor failed the student he failed in terms of an academic value or an academic exam.

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The study of semantics also involves the study of *truth conditions* of sentences and of the relationships between sentences. Truth conditions – are simply circumstances that make something true (e.g., The dog chased the cat).

Hence our understanding of the meaning of sentence requires

1) an understanding of the meaning of each word of the sentence

2) an understanding of the syntax of the sentence

3) an understanding of the truth condition of the sentence

Now, the study of semantics also involve the study of truth condition. So, for any sentence to be truth when I am doing a sentence when I am looking at a sentence the theory of or the study of the semantics or the study of semantic rules should also be able to point out whether a sentence is true or not because truth conditions often decide whether a sentence exist or what is the meaning of a sentence and the relationship between different sentences that it has. So, truth conditions are simply circumstances that

make something true. For examples, the dog chase the cat is a true sentence, but the cat chased the dog is not in terms of truth conditions is not valid because cats do not chase dog in normal meaning and so, any idea of meaning or any sentence semantics or any sentence which has sentences like the cat chased the dog is entirely wrong. Although this kind of meaning can generate in an animation movie, but normally saying the dog will only chase the cat and so, this is the truth condition.

Hence our understanding of meaning of a sentences requires some steps our ways or how we understand meaning for sentences they are bound by certain variables, certain factors an understanding of the meaning of each word or sentence. So, how you make meaning from a sentence or how you make meaning from a word or comprehension or text passage is basically by understanding the meaning of each word that it has. Remember the professor failed the student then the student failed the professor so, looking at the word looking at meaning from each word you can then say that professor failing the student is an exam in an exam, but student failing the professor is in terms of trust. So, there it is academic there it is trust. So, our understanding of meaning it relies on understanding the meaning of each word, understanding the syntax of the sentence so, whether the syntax is correct or not whether the grammatical rule is correct or not and understanding the truth conditions.

So, how do we generate meaning? We generate meaning by understanding each word from or understand the meaning of each word or sentence has. Next thing that we do is we look at the syntax and we understand the syntax. If the syntax is wrong then the meaning will not be generated out of it because the sentence will not be correct and the third thing is we also look at whether in terms of the world view whether the sentence is true or not. So, the dog chases the cat chases the dog each word has a meaning, the dog has a meaning, the cat has a meaning, the chase has a meaning. Also the syntax is correct because there is a subject verb and object, but in terms of truth conditions the fact that normally seeing the cats cannot chase dog or do not chase dogs that basically established the fact that it is in terms of truth conditions it is false.

Now, we looked at semantics features the meaning of a sentence. The next thing that we are going to look at his pragmatics which is basically the social rules of how language should be spoken or what are the etiquettes and conversations which are out there.

Pragmatics

pragmatics is the study concerning the social rules of language, which include certain etiquette conventions, such as not interrupting another speaker and beginning conversations with certain conventional greetings (Hi, How are you?)

Searle (1979) points that in listening to another person we must understand the kinds of utterances as they demand different responses from us

1) in *assertive* the speaker asserts his/her believes in some propositions

("It hot in here" or "I am a Gemini"")

So, basically in pragmatics we look at the sentences what is the way what is the social way of conversing what is the required etiquettes which have. So, basically for example, a good pragmatics is saying or conversation greetings like saying, hi, how are you somebody says you have to reply to them in a certain. So, somebody says hi how are you and you say something which is very rude that is not a good pragmatics. So, pragmatics are certain rules of language or certain rules of conversation. So, although your sentence would make meaning, but how they should be conversed how people should be conversing with the sentences that your making is what is the study of pragmatics.

So, Searle 1979 he points out then in listening to another person we must understand that the kinds of utterances that they demand in different responses to us. So, Searle says that there are certain sentences the sentences which are been uttered which are uttered by people and all these sentences have different kind of responses and we should as the listener not only be able to understand the kind of sentence that a person is speaking we should also be able to give a reply defeating the kind of sentence which have been asked. For example, one of the ways or one of the particular ways of communication is called the assertive sentence.

Now, assertive sentence the speaker his or her he asserts his belief. For example, was like it is hot in here I am a Gemini it does not require any kind of response. So, somebody is just asserting something or saying something. Now, there are directives which people go

ahead and speak and these directives are instruction and. So, you should be replying in similar to it, for example, the speaker saying to a listener saying close the door or do not trust him when I say close the door it requires an action from the listener and so, that is the kind of thing which is the answer and so, you do not need to speak anything when somebody says close the door you close the door and I say do not trust him you do not say anything to it you basically have to listened to it and act upon it.

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> 2) *Directives* are instructions from the speaker to the listener ("Close the door" or "Don't trust him")
>
> 3) *Commissives* are utterances that commit the speaker to some later action ("I promise to be good" or "I will be your wingman")
>
> 4) *Expressives* describe psychological state of the speaker ("I thank you for the favor you did for me" or "Thank for nothing")
>
> 5) *Declarations* are speech acts in which the utterances itself are the actions ("I now pronounce you husband and wife" or "You are so dead")

Then there is something called commissives these are utterances that commit the speaker to some later action. For example, I promise to be good. Now, it basically says that the speaker is promising or it is basically he is telling the listener that in future he is going to do something for example, being good or if somebody says I will be a wingman which means that this person is going to help the other person and so, this requires certain other kind of responses then the directives.

In an expressive describe psychological stage. For example in an expressive you do not really know what to do so, you have to read to it. For example, I say that I thank you for the favour you did to me. This is an expressive sentence, this is a expression of thanks. Now, I do not know what you could be doing with him, but this is an expressive for example, if I say thank you for nothing this is an psychological state of the speaker. And so, you should be responding in a similar way as against a directive or a commissive sentence and the last is declarations are speech at in which the utterances itself are the

actions now in this cases the sentence which are speak spoken are itself certain actions. For example, I now pronounce you husband and wife. This basically says that there are certain action into it the act itself, the fact itself that my pronouncing makes you husband wife is true or sentences like you are so dead are basically and utterance it is a declaration and the sentence itself declare a particular fact onto it and people should be hanging around to it.

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According to Searle's *speech act theory* part of our job as listeners' is to figure out which of the five types a particular utterance is and to respond appropriately.

Now, according to Searle speech act theory part of our job of a listener is to figure out which of the five particular utterances are there and to respond utterly. So, basically it is not only understanding the meaning the structure of a sentences so on and so forth. It is basically we go a level ahead of it and then we also look at how people talk to each other and how do they generate sentences.

For example, best example of pragmatic look at the two figures now in the first case Sherlock saw the man using binoculars which means that he used the binoculars for seeing the man and in the other case Sherlock saw the man using the binocular in the second case he saw the man who was using the binoculars and so, this is the difference between pragmatics or this is the difference between how sentences are. So, both are the same sentence, same legal constraint, same structure, same meaning, but the pragmatic software or that is not what I meant when I ask you to carve it. So, what is done is he has carved something out of it and so, the subject meaning; so basically the idea of how a sentence should be really constructed.

So, in this class in this particular lecture what I tried to do is I tried to show to you what is language, what is the meaning of language what are the different constituents of a language and basically then we went ahead and looked at each constituents one by one and how do they play their role into the language itself or the working of the language itself. Now, in the upcoming sessions will look into how speech is produced when a speech is how people utter languages and what are the confusions and problems in utterance of this languages.

So, in the first part we looked at parts of a language and how they are combined together to form the language itself. The second part so, it is in terms of rules and structures so on and so forth. In the last in the next part that we will talk, we will talk about errors in

production of speech or how speech is produced in itself and several factors related to that. So, let us meet in the next class and discuss this.

Thank you.