I am going to talk about syntax from today some if some of the things are repetitive to some of you please hold your breath we will be coming to the newer things shortly so far you have you have seen and in the remaining of 27 26 lectures.

(Refer Slide Time:00:42)

That linguistics is about systematic study of language that is the definition probably you have been given linguistics is about study of language and it is a systematic study whatever you have seen so far are examples of what it means to be systematic it is also called the language is called the domain of knowledge the simple point in that death in that definition is any branch of knowledge that we discuss or we can talk about happens through language gets mediated.

Through language several philosophers like Bernstein linguists like Halley day and anthropologists like Heath have confirmed this idea that this is a domain of knowledge and discussing about any kind of knowledge is not probably possible without language one way to extend this to this kind of a study is in order to understand any domain of knowledge it is important to understand language itself as a domain of knowledge.

That is what we do in this whole area of linguistics some others like Agni hotri and there are there are many names in this series have talked about language as a medium of construction of knowledge no knowledge is constructed without this medium we cannot talk about anything without language in simple words that is about linguistics this encyclopedia defines language as an impressive and fascinating human capacity and it is a very striking and powerful system.

As well again I will stop by saying so far what you have seen in the remaining twenty seven twenty six classes is a example of how powerful and complex the system of language itself is I am to talk to you about syntax besides these with this encyclopedia definition of language there is another shorter way to define language which is it is a pairing of lexicon and syntax in simplest term it is a pairing of lexicon and syntax anybody any idea.

What lexicon is vocabulary words say fancy term for words and syntax is what we are going to see syntax is signs of language does it mean anything does it is it clear but when we say signs of language in a better way of saying will be it is the science of sentences and the primary object of inquiry to studies syntax is a sentence I want to draw your attention to another fact about language in one of the writings Charles Darwin writes but man has intrinsic tendency.

To speak as we can see in the babbles of our children while no children has an intrinsic tendency to bake blue and right children do not begin writing early children do not want or know anything about baking or breathing but if you pay attention to babbles of children what you find is they are always trying to speak something they are always trying to say something that is what makes language more interesting in the sense that it is intrinsic human capacity in me in other words.
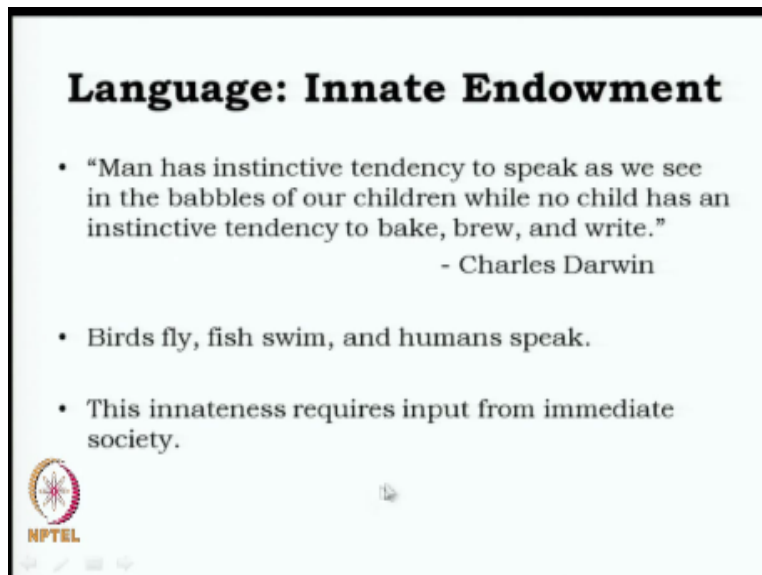
It happens to us on its own I am not sure how clear this is at this point but I will talk about talk about this little bit more similar kinds of things emerge when we hear things like birds fly fishes swim do fishes learn to swim are they are they taught to say swim anybody any idea do you

know about it even when I do not know what is called what we call small fish at the time of birth is fish baby here is something where are they born in the hospital no the water inside.

Water right do they learn to sit probably they have to face what kind of water we do not know but at that day the first day right who teaches birds to fly like we do not we do not find evidence of birds learning to fly or being taught to fly like we do not find evidence for fishes to swim humans learn to speak on their own that is human children learned language.

On their own you may have heard about these things I hope I am not saying anything contradictory to what you have heard so far this is called innate is the capacity that we have and that something that happens to us on its own that is called innate less.

(Refer Slide Time:07:33)

And however it does require input from immediate society otherwise we will be speaking all the languages of the world the reason why we are speaking only a few languages is because we need we learn we develop our languages growing us on the basis of input only from immediate society that we receive in and therefore we do not speak languages like French Spanish or German because we do not have input of such languages.

(Refer Slide Time: 08:11)

Linguistic Theory

- Key questions that linguistic theory addresses are:
    - How do we acquire this KoL?
        - Acquisition
    - What constitutes Knowledge of Language (KoL)?
        - Competence (I – Language)
    - How is this KoL put to use?
        - Performance (E – Language)

 I come back to syntax again in a moment syntax is a major part of what we know as linguistic theory and the key questions that have been asked in linguistic theory are what you see on your screen they are how do we acquire language and I have put it here KOL this is a short form for what knowledge of language is a specified thing I will briefly tell you about that before going to sentence more interesting question that has been asked.

I n linguistic theory is what constitutes knowledge of language and then finally it also a part of linguistic theory also deals with how is this knowledge of language put to use that is how do we use language in the real world in real society at this point I want you to pay attention to this knowledge of language or everything inside it is also called linguistic competence in other words I language which means internal language and performance that is how we put language entry in use is called a E-language or linguistic performance.

(Refer Slide Time:09:56)

Domains of Theoretical Study

- Phonetics/Phonology (Sounds)
- Morphology (Words)
- Syntax (Sentences)
- Semantics (Meaning)

  - Applied Domains:
    - Speech Therapy
    - Language Teaching
    - Computer Science and Technology

The domains of study in theoretical linguistics are fanatics which deals with sounds phonology that deals with how sounds are structured in other words features of sounds morphology how sounds are combined to make a word and syntax how words are combined to make a sentence that is and this is the part that we are going to discuss in detail which is syntax that is about sentences there is one more part which is major part of linguistic theory.

Which is semantics it deals with meaning these branches that you see are parts of the major domain of theoretical study in the scientific study of language that is systematic study of language when findings of these things are put to different uses such as speech therapy language teaching and to discuss ideas in computer science and technology such uses of these theoretical ideas is called applied linguistics.

So I am trying to give you a broad categorization of what is the difference between theoretical linguistics and applied linguistics within so we drop this part of applied linguistics right now and we go back to these areas and come to syntax which studies sentences now in a formal way but even but hold on give me a few more minutes before I come to that so this is how we define syntax what was the definition that I gave you a few minutes ago of syntax science of language in short right let us talk about that definition little bit more detail it is it is in syntax we studied nature in a structure of human language I dropped this part nature or I come back to this thing later but this is the important point a structure of human language.

(Refer Slide Time:12:19)

Syntax

- Study of nature and structure of human language.
- Study of language where the object/unit of study is a sentence.
- The way words and clauses are arranged to form a sentence.
- Syntax is a paring of lexicons (words) and abstract agreement features.

I draw this part nature I will come back with this thing later but this is the important part the structure of human languages what we do in syntax the study of language the object of a study in syntax is a sentence and the way words and clauses are arranged to form a sentence you have I found last time that you were discussing words have you talked about phrases so far ok we will talk about those phrases as well now I to give you an example or as an interface you see.

When we talk about words we also talk about there is something in between sounds and words something which is larger than sounds and a smaller than word anybody syllable a syllable is larger than a word a syllable can also constitute out of a sound but usually a syllable is larger than sound but it is part of a word it is a smaller than a word sometimes a word is mono syllabic just one syllable in a word besides that what we have to keep in mind.

The syllable is an intermediate category between sounds and words similarly between words and a sentence a   phrase is an intermediate category okay a phrase is larger than a word and smaller than sentence we will look at that as well syntax is pairing of lexical and abstract agreement features that is in order to make a sentence we not only need words we also need some abstract features some abstract rules and I will try to show you some examples of such abstract rules in work.

(Refer Slide Time:14:42)

Sentences and Autonomy of Syntax

- John loves Mary.
- Mary Loves John.
- * Loves Mary John.
- * Mary John Loves.

- Colorless green ideas sleep furiously.
- A dog is reading a newspaper.

Look at this sentences now the first one is a sentence is it good sentence by good sentence I only mean grammatical sentence okay all the sentences are good sentences okay that is all grammatical sentences are good sentences so second one a good sentence too third one no the star that you see in red is a linguistic convention to indicate ungrammaticality this is star simply means this is star means that this sentence is not grammatical that is not a warranted structure.

Native speaker of English will tell you that this is not a grammatical sentence the answer to this question why this is not a grammatical sentence is an answer or an example of knowledge of language which we are coming to momentarily fourth one this is a good sentence no again that is an ungrammatical mark the star so throughout next few days if you are going to find star marks not necessarily in red star alone means and grammaticality.

I have tried to put it in red just so that is visible now look at the sentence the two remaining sentences colorless green ideas sleep furiously this is a meaningless sentence this meaningless sentence has been used in linguistic studies millions of times why this a meaningless sentence all the components of this sentence are contradicting one another ideas did not ideas are not green there is no color to ideas and if at all there is a color how can it be colorless.

You see that colorless green ideas and if there are ideas they do not wake up or sleep we may wake up with ideas but ideas do not wake up or sleep and even if they sleep how can they be sleeping do you know anybody who sleeps seriously people sleep in I do not know how they do

but anyway but furious sleeping is not the not the right adverb right but is there anything wrong with the sentence this sentence good or bad.

This sentence is not like Mary John loves right so even though this does not colorless green ideas sleep furiously does not mean anything is a good sentence the next.
One a dog is reading a newspaper this is a good sentence at the same chance it is good does it mean anything unless you add the specific meanings to this does not mean anything else more than being meaningful we need something else for a sentence to be grammatically that is that correct so what why is the sentence number one grammatical and number three not grammatical so if I put order of the words correctly.

John Mary sorry John love Mary either correct now is that correct now John please listen to my words carefully John loved Mary that correct so what do we need to say the first one right and what this point is what this thing on this world s is telling us is some sort of abstract relationship between the world and some other components of the sentence making sense the relationship between work and other components of a sentence is what is known as somebody mentioned subject work agreement we that that is a still a bigger term I come back to that little later.

(Refer Slide Time:19:34)

Now that part is what we what we need to study for syntax and please trust me it is not just subject more of an agreement that that needs to be looked at in order to understand sentence I come back to that in a few minutes few minutes let me let me give you a little bit more as a

background to what we are going to discuss for the study of a sentence very briefly when we were discussing about linguistic theory.

And we talked that one of the goals of linguistic theory is to understand how we learn language when it grows in us how does it grow in us it is not about habit formation it is not that we keep repeating something and learn your language in short language learning is not about this mathematical algorithm which is output that is the learned language is not equivalent not equal to what we have heard what we speak is way more than what we have learnt.

The this the second point that I want you to know for most of you to know   is what we receive from immediate society is very imperfect is not good quality of input this is why sometimes it is called fuzzy input and therefore it is called imperfect so this imperfect input is responsible for what we know as language what we is responsible for what we speak.

And only on the basis of little fuzzy imperfect incomplete stimulus or input we come we come to learn perfect language and that's the that is what people refer to as generative capacity of human mind   that is that is where the role of human mind comes in language learning it is not equal amount of input equal amount of output if that if that were the case then there was probably no role of human mind in it.

(Refer Slide Time: 22:18)

- One of the most powerful theories of language learning/acquisition assumes that all normal human children are biologically hardwired to learn language (Chomsky 1965). This requires INPUT from immediate surroundings.

- Input is fuzzy and inadequate in both quality and quantity.

- This theory has imprints of Plato's Problem of how given so little we know so much (also known as Poverty of stimulus).
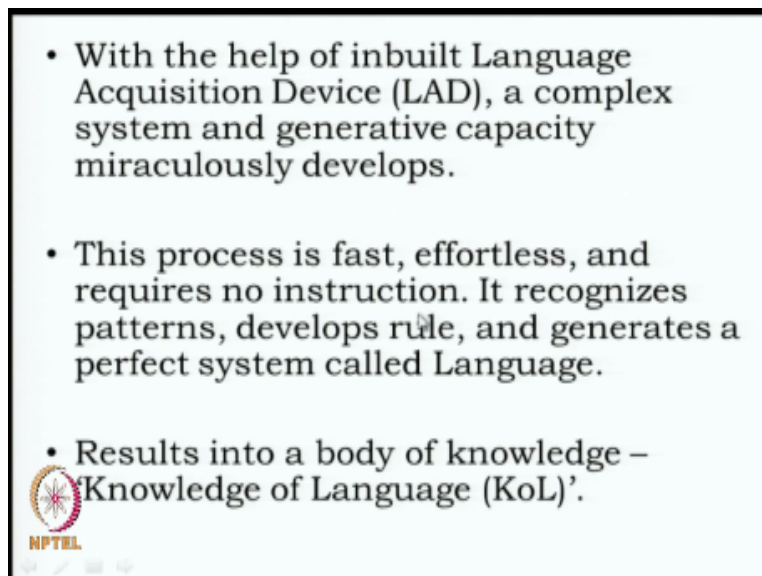
So what else is involved in language learning is this in between 1969, 1957 and 1965 Chomsky came up with this idea which happens to be one of the most powerful idea in language learning and which is also known as theory of language learning that all normal human children are equipped with ability to learn language what is referred to as Plata's problem is the following how does it happen that given so little we know so much okay.

He did not this idea or this problem of Plateau was not about language but Chomsky built upon this idea that we know very little we have very little input but we learn so much we know so much we have we have been given very little to understand what we know so much right I do not have it on slide here but opposite of that is what is called Orwell's problem have you heard this name or well his Orwell's problem a novels problem is completely opposite of that.

What will be the opposite of that how do we know so little given so much now we do not want to get into plateau and Orwell at this time but plateaus idea was formulated by Chomsky as poverty of the stimulus you see the thing poverty of stimulus that is fuzzy input that is inadequate input in learning language do we do we understand this word input yes no you must avoid these things earlier as well I am talking about these things to build the base for what I have to discuss again.

(Refer Slide Time: 24:29)

- With the help of inbuilt Language Acquisition Device (LAD), a complex system and generative capacity miraculously develops.

- This process is fast, effortless, and requires no instruction. It recognizes patterns, develops rule, and generates a perfect system called Language.

- Results into a body of knowledge – 'Knowledge of Language (KoL)'.

With the help of the we learn language with the help of inbuilt language acquisition device yes you must avoid hurt before and with the help of this thing we come up with a complex system
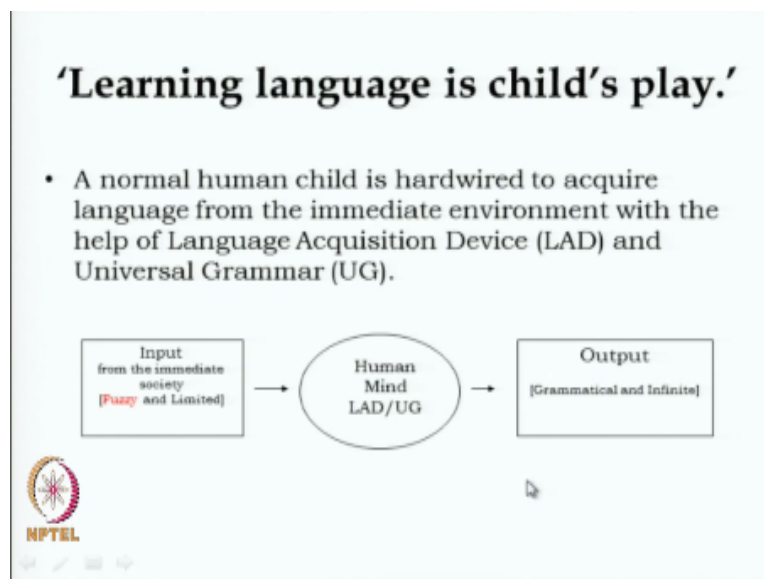
which is also known as generative capacity and it develops in us miraculously within no time that is it develops in a human child in a matter of three to four years this process is so fast so effortless that it requires no instruction you know so many languages all of you speaks.

So many different languages I have done this exercise with some people earlier but think about this what are you taught the these languages did you put conscious effort in learning to speak what you speak at home no that is why sometimes it is also called learning language is a child's play therefore language learning is so simple so effortless that is no matter how a faultless and simple that is what we learn is a very complex system.

And in this course and in all courses of linguistics people try to understand the complexity of that system which has been acquired by children effortlessly that is which we have acquired that system effortlessly without making any conscious effort that it is not contradictory to one another it is just the capacity of human mind that acquires language effortlessly and that language happens to be a complex system and the word complex.
Here is an art is not with negative connotation all that we learn about language automatically on our own results into what is known as the whole body of knowledge of language .
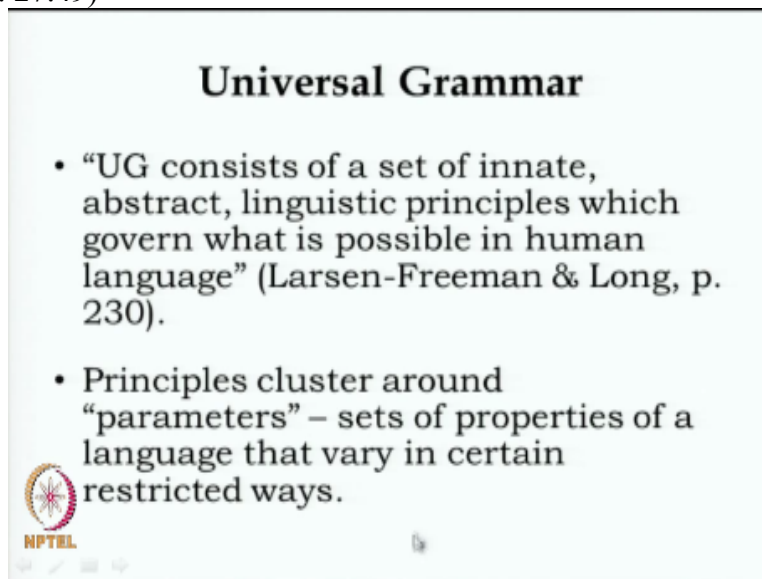
(Refer Slide Time: 26:38)

'Learning language is child's play.'

- A normal human child is hardwired to acquire language from the immediate environment with the help of Language Acquisition Device (LAD) and Universal Grammar (UG).

| Input from the immediate society [Fuzzy and Limited] | → | Human Mind LAD/UG | → | Output [Grammatical and Infinite] |

This is how it works this is human mind we receive input and then we are we have the ability to speak the input is again very fuzzy income incomplete limited in all quality and quantity but output that is our language is perfectly grammatical and infinite that is we do not have a

limitation on how much we should speak or how much we can speak how many how much do you think you can speak in a day do you think about that that we will speak only a few things today we do is we do think about content of what we speak right but we do not think about number of sentences number of words number of syllables subject verb agreement do we think about these things what we do not think about are parts of knowledge of language which means that automatically develops in us.

(Refer Slide Time: 27:49)

This is a unique term which I want you to know because I will be referring to this while discussing structure of sentence several times it this is called universal grammar it consists of innate and abstract principles there are two parts of this principle one is principle there are two parts of universal grammar one is set of principles and a set of parameters I am briefly talking about these things I will elaborate on these things again when we talk about sentences principles are those around.

Which languages are similar to one another if you were told there are   similarities between English and Hindi do you believe this thing what is the similarity between English and Hindi the two languages differ from one another around along the lines of parameters and I will talk about these parameters as well.

(Refer Slide Time: 28:58)

Now finally I want to let you know about this which I have already referred to several times the most important part is knowledge of language is a specific kind of knowledge that our underlying rules which we know but we do not know that we know them okay can you can you give me an example of a rule that you know but we do not know or is this too much to ask for at least one example of this rule how many how many words do we need to make a sentence.

Do you know how to make sentences in any language come on please don't tell me you know but how many were how no hold on I do not believe you all alone yeah I need to hear this from everybody else also do we know how to define a sentence in any language or what we call a sentence in any language yes okay how many words do we need to make a sentence one or more one or more but this is very different from these are very different answers.

So please give me an answer to one word sentence come write or sit this is a sentence by itself right and someone said we need only know we need more than one word we definitely need more than one word also but a sentence is complete by just one word right sometimes no matter how many words you put in the sentence is not yet complete can you give me an example of a very long sentence anybody . I look very long or a longer sentence or as long a sentence as you can come up with which one this one okay.

No but this is a very simple sentence these underlying rules help us help generative mechanism of a native speaker speak unheard-of sentences and enable them separate grammatical sentences from ungrammatical ones still a very simple one can you give a longer

sentence than that no okay let me give you give it to you and then see if it is an example of a long sentence and is still not complete I know that you know that everybody knows that cats which is an animal and a mammal is not part of part of human system.

This is a complete sentence no yes you're not saying anything did what was that a part was it a complete sentence yes that was not a complete sentence I should have written that sentence but I will give it to you give it to you again when we come to sentence it is simple sentence and longer sentence to discuss now in this context of knowledge of language what I what I am trying to tell you is we do not know we do not know how long a sentence.

Is a full sentence that is there is and there is an underlying rule for a sentence and that needs to be met in order for us to make that sentence to say that is a complete sentence and this rule we all know but we do not really know obviously a much simpler example of that is how many which language do you speak Telugu how many sentences of Telugu do you know the answer is I do not know but can you think little harder how many sentences of telugu do you think you know which language do you speak.

How many sentences of Tamil do you know you do not know then how do I believe that you speak Tamil how many words of Tamil do you know can I ask you a simpler question than that I do not think I can ask a simpler question than that what's the point in this question that huh we do not know the total number of sentences that you know that we know about our languages we do not know the total number of words that we know about our language.
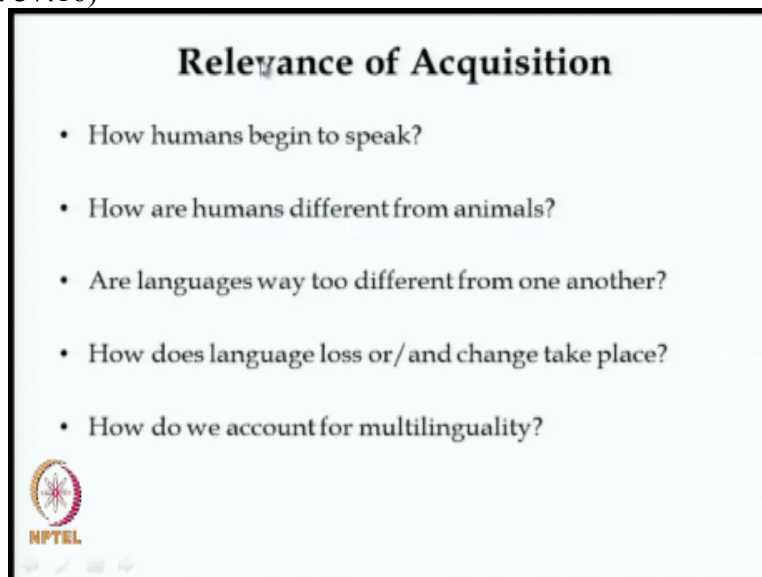
If I give you a word can you figure out whether that word belongs to telugu or not right for example table is it a Telugu word how much time did you take to figure that out we don't know the total number of words in Telugu we do not know you do not know the total number of words that you know right but still you know that a word does not belong to telugu and it doesn't take more than few seconds this capacity is part of knowledge of language.

I think you can speak unlimited number of sentences of Telugu you can make all kinds of sentences that you have spoken before or may not have a spoken before right you can figure out whether a Telugu sentence is grammatical or not without knowing the grammar of till all that is part of knowledge of language it is this making sense now the same thing I was trying to show you that there is an abstract rule.

To make a sentence no matter how is small that is one word sentence or how big that principle must be respected so the sentence that I gave you that I know that you know that everybody knows and so on it is not yet a complete sentence I know is a complete sentence but the moment we are moving ahead with that I know that is that a complete sentence now why is this not a complete sentence because I need to say something.

More I know when I say I know at what do we need to say which is I know that what do what do we need to say I know that is a complete sentence then you seriously need a serious course in sentence oh okay I am glad that you said that right I am very glad then it is a complete sentence you are right I know that is a different sentence from I know that I do not know or I know that I know are they two different are these two different sentences why these are different sentences what makes them different sentences depends on the nature of work no and that that I that I will discuss to you this is not important.

(Refer Slide Time: 37:16)

Relevance of Acquisition

- How humans begin to speak?

- How are humans different from animals?

- Are languages way too different from one another?

- How does language loss or/and change take place?

- How do we account for multilinguality?

So you can to conclude it for today what I want you to know that the reason why we need to know how we learn in language as a theoretical question in linguistic theory is how human is we need to understand how humans begin to speak how our human it is different from other species as far as language is concerned and how languages are our language is too different from one another our language is too similar to one another.

What is the similarities and what are the differences between languages we can figure it out once we know the components of language acquisition that is how we learn language what is input what is output what is the role of human mind and what is universal grammar and what consists of knowledge of language if we if we know about these things then we can figure out whether languages are too similar to one another or too.

Friend from one another how does language how does language loss or language change take place that that is a question which we do not need to address this time but that comes under the relevance of language acquisition now I do conclude it in another one minute I have only tried to introduce to you some of the terms today and I have tried to bring you to a point where we understand language and will we understand what we do in syntax when a sentence is an object of inquiry for syntax.

What constitutes a sentence and what is the difference between a two long sentence and a short sentence these are some of the some of the points that we have tried to look at in details that is what is a sentence and what makes a sentence is the question that we are going to address tomorrow with reference to various components of sentences if I can ask you the final question what would be the components of a sentence have you been prescribed any book for this thing yes now yes no okay well I will talk about I will give you some relevant materials as well to look at all right thank you.

Studio Assistants

Krishnakumar
Linuselvan

Saranraj

Animations

Anushree Santhosh
Pradeep Valan .S.L

NPTEL Web & Faculty Assistance Team

Allen Jacob Dinesh
Bharathi Balaji
Deepa Venkatraman

Dianis Bertin
Gayathri
Gurumoorthi
Jason Prasad
Jayanthi

Kamal Ramakrishanan
Lakshmi Priya
Malarvizhi
Manikandasivam
Mohana Sundari

Muthu Kumaran
Naveen Kumar

Palani
Salomi
Senthil
Sridharan
Suriyakumari

Administrative Assistant

Janakiraman .K.S

Video Producers

K.R Ravindranath

Kannan Krishnamurty

IIT Madras Production