Basic of Language Science
Professor. Rajesh Kumar
Humanities and Social Sciences
Indian Institute of Technology Chennai
Lecture 4
Language and Linguistics

(Refer Slide Time: 00:15)

In this discipline, we studied language in a systematic way, like you study about machines in a systematic way and I hope at this stage you understand what we mean by systematic way and that is called, systematic ways in an organised way in a scientific way and what we look at within language primarily and what we are going to be looking at primarily in this class are sounds, words and sentences.

And we will try to understand the structure of language at the level of sounds, words and sentences. There are, and I am going to talk to you about what we mean by language and how we learn a language.

See, when we talk about, let me introduce you to a couple of more names that you will hear in this discipline. Some of the things like we study about sounds and that area of a study is called phonetics and phonology. Does it make sense the word it comes from the word phone and phone refers to sounds.

So, when we study sounds, that discipline is called phonetics or phonology, to be more precise, the articulatory system of humans is part of phonetics and when we have a final outcome, what we know as sounds, the study of that is called phonology. Do we understand the articulatory system, the vocal apparatus, the way we speak language and I will talk about that as well shortly.

We study about words in the discipline called morphology, I am going to come to these things in not too much detail, but in short, very soon and then when we move to the level of sentences, that particular discipline is called syntax and this course is particularly located in that.

So, we will be talking about sounds and words little bit for us to reach the level from where we can discuss sentences, from where we can understand how we come up with sentences and then will spend a little bit time on understanding how sentences work in natural languages and then language is not just about sounds, words and sentences, it is about meaning.

What is it, sometimes we say certain sentences and sometimes we mean, in mean with those sentences in a literal way and sometimes sentences have more meaning than they are literal

total? Do you understand this part, which is to say a lot of times sentences do not mean only the total of the meaning of words involved in it?

And all of that and more than that, everything related to meaning of a sentence and meaning of what we are saying is studied in this discipline called semantics and then as you know, languages are hugely related to society, it is used in society, we learn language in society, we need language for society.

So, all kinds of intersections between language and society are studied in this discipline called sociolinguistics, these are some of the core areas of studies in the study of language core aspects of a study, in the study of language and these are the names of some of the disciplines in which we study about language.

And as you know, when we put things under category when we look at words, sounds, sentences, meanings, social interactions, such categorizations itself is called a systematic classification is a systematic way. So, when we said in the beginning it is about systematic study that systematic study does not mean too much.

It simply means in a categorised way, one by one and in every possible detail. Then there comes a part of language study which is also studied in linguistics and I am going to give you these names, just so that you are familiar with these things. When we learn about language with those things like sounds, words, sentences, its meanings, how they mean, how words mean something or sentences mean something. We apply such things to understand certain other things as well. In that case, that type of study is called applied study and it happens with the study of language as well.

- Application of the study of language in understanding other areas is Applied Linguistics.
  - Computational Linguistics
  - Neurolinguistics
  - Psycholinguistics
  - Biolinguistics

So, when we want to study the application of language in understanding or designing machines, or intelligent or not intelligent machines, an interaction of language and computers, such things are studied in computational linguistics. What is the relationship between language and the human mind and particularly, it is the functioning of mind in a greater detail is what people study in this area called neurolinguistics.

And likewise, interactions between human psychology and language and its relationship of language with psychology is studied in psycholinguistics and very lately, not really. It is what I mean it is not a recent phenomenon, but the attention has gone in that direction lately. Therefore, I said lately, people have started studying overlap between human genes and language.

We have a fundamental question, is language located in human genes? Because the way we speak only humans speak that way. Which is to say, other species with life do not speak, the way we do? Is language something specific to human genes and a couple of more questions related to this area is what people study in this discipline called bio-linguistics.

It is not a fashionable term simply, it is a very serious, some very serious studies are going on in this area. However, not much is available to establish the connection between human genes and language. So, these areas are called applied areas of linguistics, where we apply what we know what we call theoretical knowledge or fundamental aspects of languages study in a variety of ways to study different things is what we know is applied linguistics.

I have just mentioned four or five names, there are more, a lot more. For example, when we want to establish historical development of language or how over a period of time language evolved. Take an example of English all of you, when you were studying English or you have studied something about English, you must have heard names of Shakespeare, I am using this famous name, just to make sure that everybody knows this, if you read English of Shakespeare's writings in English is not what how we speak.

And for that matter, in the same way, the way we speak, you speak Telugu or Tamil or Hindi is not what the way these languages were 200 years ago or for that matter 50 years ago. So, what causes any kind of motivated or unmotivated change in language, such things are studied in what we know as historical linguistics and then there are overlaps of these things as well. Society, history, and something else psychology, so that I do not know what that will be called.

So, these names can be coined, depending upon what people want to study and what they mean by that name. So, these names are not that important. What we need to understand is that there are two broad aspects of the study of language. In one, we study some fundamental basics about language and we learn those aspects in a systematic way, we refer to them as theoretical linguistics or fundamentals, fundamentals of linguistics.

And then we apply such knowledge to study more and understand more, we call them applied linguistics and this is, this is what we, what people do in this area of study, which is what we call linguistics. Let us talk a little bit about language, which I said is the object of inquiry in this study of this.

In the last class, I had asked you this question and I think we started talking about this, what is it? What is language? And remember, I had asked each one of you about your language, what do you speak. Did I ask this question? So, we came up with the names of many languages and if I remember correctly, everybody mentioned at least two to three languages. Is that still correct? Or has there been any change in that? Still correct? How many, what else do you speak other than Telugu?

Student: Telugu, Tamil, English, Hindi.

Professor: See that? I think that is going to be true for most of the people. Then we went to the question. Difference between what we call language and languages? Remember this

language and languages, it is an important distinction for us to make. A lot of time people use these two terms interchangeably.

There is absolutely no problem using them interchangeably, as long as we understand what we mean by these two terms and what was the distinction that we established? I think we had talked about that a little bit, what was the distinction that we had established? Anybody?

Student: It is an abstract concept of what the language means and languages, ((???)) (12:33).

Professor: Good, can we describe that in a little bit? A little bit more obvious term. We talked about one example also. Now I remember, we talked about an example?

Student: What is a car?

Professor: What is a car? When we say car, we do not mean, name of a car, what does the term car refer to?

Student: ((???)) (13:08)

Professor: When somebody tells you? Do you have a car? Or asks you, do you have a car? Do they mean, do you have a Mercedes? What do they mean?

Student: Transport vehicle.

Professor: Transport vehicle or it could be more precise. Something that looks like a car. But they are not interested in, which one? That is the distinction between language and languages and the reason why I am giving you this example or for this distinction, for this point is very, very specific.

The reason is, it is easy for us to understand not just because you are mechanical engineers or electrical engineers or others. It is very normal for anyone to understand that there are lots of similarities in all the cars that we see. Even if you do not go into the specifics of them, if you just take a look at them by looks, there are similarities, you can put all cars that you know about in one category, the moment you find something called a, let say bus.

So, what we are talking about is, there are lots of superficial similarities and then there are lots of similarities which are deep-rooted. When we say a car that there are similarities among all types of cars and then again, there may not be a lot of deep-rooted differences among all of them, but they are going to be a lot of, not so visible differences among all of them.

There is no point going into the details of their differences. I am just taking it as an assumption that you understand what I mean by them, similar things are applicable to the similarities and differences of languages. So, I begin with this by saying that languages are, now I am using the term languages, the names that you are referring to are instances of language and then the moment we hear more names, we call them languages.

So, languages have a lot of similarities among one another, at the same time and they may be though such similarities may be superficial similarities as well as similarities that are difficult for us to see and likewise, they have a lot of differences among one another, obvious differences and systematic differences among one another.

Similarities of all the languages is what we refer to as principles of language and such differences that exist, we refer to them as parametric differences. So, we can say languages are similar to one another in a systematic way, in a principled way. Not that they are different, not in a principled way, they are different in a principled way as well, but languages vary from one another around certain parameters.

(Refer Slide Time: 17:03)

I want to give you one quick example of such similarities and differences or rather let me ask you, you know more than one language, let us talk about Tamil and English or Telugu and English. If someone asks you, is there any similarity between Tamil and English? What will be the answer? Any similarity between these two languages? Yes.

And then the next question, the obvious question will be what could be one such example of such similarities? How will you answer that question? Pretty simple thing, this only requires

you to think a little harder, what would be such a similarity between two languages namely English and Tamil, which are substantially very different from one another. Can you give me one example of that?

Student: Both have a grammar system.

Professor: That will be similarity between all the languages, all of them have a grammar system and we will look at that as well. In other words, we can say no language exists without a grammar system, that is not, by grammar system we simply mean a system. It is just a notational thing that the system underlying languages or language is called grammar.

System underlying language, the distinction that we have made between language and languages, system underlying language is called grammar or principle, they are the same they mean the same thing we can call it system we can call it grammar we can call it principles they mean the same thing.

And therefore, there could be no language without a system that is, there is no language which is unsystematic, so true there both of them have systems underlying them. But, if we probe a little harder and when we are looking for an example, we look for more concrete examples. Right now, I am talking about that system of language.

Student: They have similar sentence structure.

Professor: Similar sentence structure, and what would that refer to?

Student: In English as we say, My name is Rishab and Tamil it is very similar ((???)) (20:04), Rishab is Rishab.

Professor: So, what you are saying is, the way we construct a sentence is very similar in two languages. So, when we have a sentence, in a sentence, there are certain elements of language you must have. Otherwise, there is no sentence, there is no language and then the differences between the two are pretty obvious. Can you give me an example of differences between the two as well?

Student: Phonetics.

Professor: Of course, phonetics and a lot of such differences exist. But since you gave an example about sentences for similarities, can you give us an example, from sentences for the differences as well?

Student: Subject object and verb. The relative positions like in Japanese and in English, they are opposite.

Professor: Really.

Student: Yeah.

Professor: So, understand what he is talking about. Then, he is talking about three particular elements in any language, which is subject, object and verb. Have you heard these terms before subject, object and verb? Again, I promise you, we will look at the details of these things later, but all he means is and if I am right, when I understand him.

He means, in every sentence, for example in Tamil, there is a particular position of verb and in every sentence of English, there is a particular position of verb that is in English, verbs are always going to be in the middle of the sentence. That is, more precisely, verbs are never going to be the final element in a language like English.

However, in Tamil, Telugu, Hindi, or any other languages that you may know-how of, verbs are always going to be the final element. That could be one major striking difference between, am I right? Is this what you wanted to say? That is one of the major striking differences between these two languages.

So, with the help of these two examples, I wanted these examples from you and we can talk about hundreds of such similarities and differences. But we will talk about those things later. So, all I want to show you right now is languages are similar to one another in a principled way, they vary from one another in a parametric way.

So, when we say there is an underlying system of language, that in that sense, we are talking about principle and when we are saying that English is a verb medial language, where verbs come in the middle of the sentence and Tamil is a verb final language, where verb is the final element in normal speech, verb is the final element in a sentence, it comes right before the full stop. That is called a parameter that is the position of a verb, is a parameter to see the differences between languages.

And there are not, the parameters are also systematic in such a way that there are only going to be three positions and no further permutation or combinations are allowed. That is, if we are talking about the position of a verb in a sentence, a verb can only be either in the

beginning of a sentence, it can be either in the middle of a sentence or at the end of the sentence, all the languages of the world will follow one of the three parameters.

So, what we are, what we mean by a parameter is the position of a verb in a sentence is a parameter. However, these parameters are also systematic in a way that there are not going to be hundreds of parameters along which languages are going to vary. So, think about any language that you know, they will definitely fall in between these three. Get it? So, this is what is called a parameter.

So, now I hope this definition of language makes more sense to you. Does it? It is just written with few words. Everything about it I have already told you is a fascinating human capacity. That is the language that we are talking about is about human language and that is what we refer to as natural language.

Therefore, I have discussed this thing in the last class, that there are differences between artificial language, body language, sign language. But object of inquiry for us, the language that we are going to be talking about is what is called natural language that is the languages that we speak language that humans speak.

Therefore, this definition is a fascinating human capacity and at the same time, such a capacity is very powerful and a very complex system. Complex or not, it is a system, it is not a random thing, it is not an arbitrary thing and therefore, we learn these things also in a systematic way. It is just that we do not know how it happened.

Have you heard the name Plato? Must have heard. This was his question, which was not really meant for languages, but this has been used in understanding how we learn language. He had a, philosophers have lots of questions of very different types. So, he had a question: how do we know so much, given so little.

And then people studying language namely linguists have used this thing what is known as Plato's problem in understanding how we learn languages and then I will expand that to you later and this is also referred to as logical problem of language acquisition that is how does it happen that we ended up speaking a language and this is what I was asking you and I want you to think about that.

How did it happen that you started speaking Telugu or Tamil or somebody is more comfortable with Telugu or more comfortable with Tamil? Why did it not happen that you

were speaking French and if there are similarities in all the languages, why do we know to speak all the languages?

Student: Because we are surrounded by the people who were speaking the same language.

Professor: Absolutely true, we speak Telugu because you are surrounded by Telugu speaking people and if the reverse of that is also equally powerfully true that if you are not among Telugu speakers, then you will never learn Telugu that is in the way you speak.

And here when I am saying learning I am talking about children acquiring language, we are not talking about second language learning that is language learning or teaching in a classroom at a much later stage. We are talking about first language learning and we are talking about children acquiring language.

So, if children learn Telugu or Tamil, they end up speaking Telugu or Tamil because they are surrounded by Tamil or Telugu speakers and same thing applies for all the languages I hope you understand I do not need to repeat this thing every time and equally true that if you are not surrounded by Telugu speakers then you will not speak Telugu, even if you are born from Telugu speaking parents.

So, just the fact that you are born in a Telugu family does not make you speak Telugu. That is also one of the questions for serious examination by bio-linguists, but that it, this has been falsified several times that Tamil child or a Telugu child, if raised somewhere else in French society or English society or any other Hindi society, you will be speaking Hindi more comfortably, then Telugu or Tamil.

How does that happen? What are the factors responsible for that? We will be discussing those things as well and I am raising these questions for you, only to think about it. So, when we are talking about these things, I would definitely want to hear your inputs and I do not mean to prove you right or wrong. It will be just interesting to see or to discuss and at least for me to see whether you have thought about these things. These things or not. So, we will come to language acquisition in a moment.

This is one more thing related to Plato's problem that I wanted to discuss with you. You know this is what Charles Darwin wrote once, all of us know Charles Darwin, all of us know what he is famous for? And he has huge implications for how we learn language.

And this also refers to why, what is more interesting or which part of language study is more interesting and why the object of inquiry in a scientific research of language is only spoken language, so read this thing carefully. Man has an intrinsic, instinctive tendency to speak, as we see in the babbles of our children. While no child has an instinctive tendency to bake, brew or write.

Understand this, all the three things that he is referring to bake, brew and write are activities that we do not do instinctively. However, speaking a language is very instinctive and it is very common to find people who do not know how to write or may not know how to write, but they speak language.

Therefore, writing, learning to write is never a prerequisite for learning a language and in a more precise way, learning a language does not even refer to learning to write. Get this thing, however I am not saying that you should, one should not learn how to write. That is not the point I am trying to make. I am trying to see how learning languages is instinctive.

If we are talking about and when we say instinctive tendency of children and babbling of children, of course, we are talking about normal human child, there may be some children, some babies with some disabilities, we are not talking about that part of disabilities, normal

human children have this instinctive tendency to speak. They start babbling and about babbles, I will talk to you more.

So, it sounds like just like birds learn to fly or fish learn to swim, we learn to speak. It is just like how we grow up. It is so mathematical and I mean it in a serious sense, when I say so mathematical, a 5-year-old child, after 5 more years is going to be 10. There is no miracle in that. If you do not cut your hair or you do not get your haircut, it is going to grow.

Same things apply to nails and like I say, it applies to us, we keep growing in our height. Of course, it does not happen all the time, it does not keep happening all the time. It stops after a while. Similarly, learning a language stops after a while, it does not happen that you keep learning the language the way you acquire Telugu or Tamil, if I start living in Hyderabad or Visakhapatnam from today, will I learn Telugu?

Some bit of it definitely there is no denial of it, but I would not be able to learn the same language, the way as a smaller child learned by living in Visakhapatnam or Hyderabad or for that matter anywhere else in Andhra Pradesh or Tamil Nadu or wherever, get this point? This is why I want to stop by a few more questions and tell you this thing that you know a lot of times people refer to things like stop doing something that is not child's play.

Language is really a child's play. This is one such cognitive ability where children perform much better than grown up people. Rather grown up people cannot perform that way, they are grown up people and let me use a strong word here, I do not mean it in a serious way, they are biologically incapable of learning the way children learn language. Get this point, therefore in a serious sense, language learning is child's play, how we will look at that later.

So, we come to some, some more questions for you. Before we meet tomorrow to discuss some of them and some more questions. We have talked about it, how many languages do you speak? Everybody speaks two to three languages. How many languages do we have in this country? Any idea?

Student: ((???)) (35:39)

Professor: How many people do we have in this country?

Student: ((???)) (35:43)

Professor: We have over a billion and when we say over a billion that over is substantial over it is not just 100 here and there, the substantial over. It is not a bad thing, let us not be worried about that. That is also mathematical. That is also normal. But so how many languages do we speak any idea?

Student: 3000.

Professor: 3000, you are just saying something?

Student: We include dialects and tribal languages, it might be.

Professor: Do you hear this question? Do you hear this answer carefully, that is an important thing that he is mentioning. So, the moment you ask this question, how many languages do you speak? Or do we speak as the country or the state? It is important to address this question

of language and dialect? What is it that we call a language and what is it that we call a dialect?

And then another interesting thing he is referring to is trivial languages. What do we mean by these terms and I am trying to understand these terms only to improve our understanding, what do we mean by tribal languages?

Student: Languages spoken by tribes, they usually do not have a script, they are just spoken ready.

Professor: Do you see this answer? Does this tell you something? What does this answer tell you? That there is this some, there is this particular kind of prerequisite in our understanding that for something to be called a language, it must have its own script. However, what we refer to as tribal languages may not have scripts and very quickly, we are not winding up these questions, we are just opening them up, these questions do not fall directly within the preview of this course.

However, we will definitely address those questions before we move on to something else, because these are important questions for us to understand. So, one more thing from you. So, what do you think will be the difference between a language and a dialect? What is it that we call a dialect?

Student: A minor variation from the major language.

Professor: Minor variation from the major language that sounds good, is Telugu a dialect? Is Telugu a dialect?

Student: ((???)) (38:34)

Professor: And also, I want you to understand these terms language and dialect. Socially loaded. Are these terms and I have not discussed this thing with you so far. But I must mention it to you. Language is also a very important marker of human identity. We identify ourselves with languages, sometimes it is a stronger marker of identity than religion.

Therefore, these terms are socially loaded and it is important for anyone to understand these terms in proper perspective. So, I do want you to think about this, the differences between the two terms and what do we mean when we say a dialect? I think you have said something important that is some variation from the main language, then what is the main language?

And how do we know which one is the main language? Or who speaks the main language and who speaks variations? How do we know that we know these things? Or how important are these things, particularly with reference to what we know about language, so let us stop here. Thank you.