Subject name: Language and Society Professor name: Prof. Rajesh Kumar

Department: Department of Humanities and Social Sciences

Institute name: IIT Madras Lecture number: Module -06

Lecture title: Languages – How do children learn language?

We are trying to understand the relationship between language and society and how language works in society. We have taken some of the components and discussed in some several details at this stage. We want to understand how children learn language? A clear understanding and a clear thetorical position on how child understands language, how children learn language is going to be very significant in understanding relations between language and society.

We have been trying to emphasise the role of human mind and the rules of grammar that are part of the rules in society as well. And certain rules of language that children learn from the society, at the same time. We have seen rather briefly mentioned that the roles of society, role of immediate environment is vital and crucially significant for learning of language and also for learning the roles of the use of language in the society. So how this works both ways this is very important for us to understand. And therefore little bit more details understanding of learning language is going to be crucial.

Refer Slide Time 1:46

Patterns in Mind

- Jackendoff's (Stages in Learning Language)
 - Cooing
 - Babbling
 - One word stage
 - Two words stage
 - Grammar



I will try to put this in the background of Plato's platform. The Plato's problem, in simple words, means how it happens, that given so little we understand so much. This has been foundation in learning about language and learning about how we learn a language. There are lots of different types of questions about language and language learning. Some of them are stereo-typical; some of them are founded in scientific investigation.

Today we are going to be looking at the idea of language learning and how it works, particularly, in the light of Plato's problem. And will keep coming in back and forth in a book on "Patterns in mind" Jackendoff talks about some of the stages in learning language. A terminological bifurcation first in two terms learning and language as long as we were talking about first languages acquisition, we just talking about children learning language can be interchangeably used. So the two terms mean different things only when we talk about learning of language by grown up people in that sense learning becomes strikingly different from acquistion. At this stage we will be using the two terms learning and language interchangeably, the difference between the two.

Jackendoff out in a chapter, in the book "Patterns in mind", the heading of the chapter is "How the children learn language?". And in that chapter, it talks about different stages of language learning. These stages are crucial for us to understand the processing to understand and how children become linguistically adult at the age of four. Let us go through these stages in little bit details.

The first stage of Jackendoff magazine is Cooing. It is too early and that I have not given corresponding age to reach these stages. But the simple reason is that these numbers in terms of ageing are could change depending upon the child. They do not change strikingly though. So we will be talking about those numbers corresponding to various stages. So Cooing is prior to Babbling and all of these things probably happen between zero to six months of the timing for a child to process language learning.

Jackendoff has mentioned these two as different stages of language learning for a simple reason. To the best of my understanding, when a child becomes linguistically adult, in the sense that the child produces grammatical sentences at the age of 4, four and a half. Some learning of language happens that fast, must begin better learning as well. And then also probably the idea is to see whether whatever socialization babies go through at this stage, to those types of socialization for infants for any meaning for learning of language or not.

In the chapter Jackendoff has gone through experiment and important for us to talk about the experiment here for understanding the point. Jackendoff took an experiment which is the following. There are three Mothers' and three babies rather three infants, Mothers' are on the one side and the babies are on the other side. Mothers' do not know the order of the babies and they dont see the babaies. When the babies make some sounds of Cooing or Babbling, depending upon what the stage was, the Mothers' are asked to identify their babies. All the three Mothers' where first one is American English speaker, the other is Spanish Speaker and the third is Arabic Speaker. All three Mothers' without any difficulty could identify their babies. This helps Jackendoff establish, this helps research, the panel of experiment establish that there is some corresponding sound in Cooing and Babbling which helped Mothers' identify their babies.

However, any one of the three could not identify rest of the two. So an American English speaking mother could not identify which one is the baby of the Spanish speaking mother and which one of the two is the baby of Arabic speaking mother. This was not clear to American English speaking mother and this worked for all three of them the same way. So this tabulations is even further that there are some corresponding sounds without knowing the details of that, there are some sounds which the babies are making at this stage of Cooing and Babbling, Mothers could identify.

Therefore that learning of language begins from that stage soon after these two stages of Cooing and Babbling. Children reach one word stage between the age of 7 months to 10 months. At this stage, babies can handle simpler words like papa, mama, baba or in the process of moving beyond like tables, chairs, birds, water, ball, doll etc., When they reach one word stage it is important for us to keep in mind that they have figured out the underlying pattern in the formation of work.

That is they have figured out that for the formation of the word we need a consonant and a vowel. And a word is not possible without a vowel sound. Therefore at this stage of one word, no child comes out with a word that which does not have a vowel sound. Such a crucial and abstract generalization has taken place at one word stage. In fact without the knowledge of formation of the word, a word is not possible. This is a crucial thing to understand in one word stage.

Between one words and two words stage, probably children have the vocabulary of under twenty five. But they reach two words stage probably the vocabulary is somewhere between sixty to seventy five. And at the two word stage, children know the order of the words either if the two words are nouns and verbs or adjectives and the nouns then children know where to put adjustments whether adjectives comes before the verb or the verb precedes the nouns or follows the noun.

These generalization are particular towards to child learning at two words stage. Once again in understanding the language learning and the process underlying language learning, the importance of these stages is very significant. They give us stage wise development of what has happened or children have gone through. Keep in mind at the two words stage, children have almost no grammar.

And I mean it verbatim. They do have some grammar so that they have are mullioned, they have derived generalisation of the order of words. And they have also derived generalization of order between nouns and adjectives, nouns and verbs. However, they do not have a fully developed grammar. And when they move from the two word stage, they reach the stage where they can come up with grammatical sentence somewhere between three and a half and four and a half years. And by the 5 years, they are considered linguistically grown up Adult and matured.

So if one word stage is somewhere between 7 to 10 months of the age in the 2 word stage is between a year to 18 months and between 18 months to 36 months is the time when jackendoff find children figuring out intricate rules of grammar complex patterns of grammar for them to be able to form grammatical sentences. This is what happens for a child in language learning.

On the basis of this let's talk about couple of more crucial points. What is the meaning of a grammatical sentence? Let's take for example a child could say a sentence like I am hungry or I want a ball. These sentences are perfectly grammatical sentences from english speaking babies who grew up with those english around them in the environment where they are socialized with english speaking people and these sentences are frequent sentences from children and fully grammatical and they can speak any sentence of this type.

Knowing very well that a child may not sustain a meaningful conversation on a complex topic but a 5 year old child could pedogogigly and meaningfully sustain a conversation of simple sentences. We are not making a distinction between simple sentences and complex sentences. At this stage keeping in mind that a simple sentence the grammaticality involved in simple sentence is pretty complex for a child to come up with and that is the grammaticality we are talking about and that grammaticality a child is considered linguistically adult at that stage.

A 5 year old child may handle way make more complex sentences we have mentioned but we will stick to these 2 sentences a 5 year old child can also come up with a sentence like please sit down and sit down for english speaking child. The difference between these two sentences as please sit down and sit down is immense is very important now. What makes the distinction between these two sentences we want to count that as part of the grammar as part of the knowledge of language.

The child has figured out in its socialization in the real world that is also part of the grammar that is also part of the learning and that is also what helps us say that this learning that has happened at the stage of 4 and a half to 5 years is effortless and without instructions. It is that stage it is these types of learning which help us say without instruction please see the distinction between what we mean by without instruction when we say learning takes place without instruction.

In the socialization in the real world children do come across words where people tell them look at the bird and then the child looks at, try to establish the connection between what is been pointed to and the real object bird. At this stage the child really doesn't know about the types of birds and whether all birds really fly or not. However the child could have established the

connection between the bird and what is the real entity referring to that that word it works for lots of lot of words.

However this could be a part of teaching. This could be part of instruction if we may say. So however this is not what we say when we meant instruction. What we mean is the capability of child to find out whether the 2 sentences are distinct or not? The 2 sentences like sit down and please sit down. The sentences like I want water sentences, like give me a ball, the sentences like, I am hungry the functional parts that are underlined and not so visible in the formation of sentences in the computation between lexical category and a functional category is what is referred to as language learning.

What happens is what takes place without instruction. Note this nobody will disagree with the point that a child can come up with sentence in present tense, past tense without probably even hearing the word tense imagine for a moment. If they have come across about the word tense in one place or the other before the age of 30 months to 36 months the child definitely does not know what the tense means and what present tense and past tense or future tense would probably mean in making a sentence.

Nonetheless the sentences are perfectly grammatical with regard to uses of tenses. This happens without instructions. We can interact with the child and we can find children being instructed by saying say please, say thank you but actual uses of the word please. Did you see the difference between the sentence with the one and without the one and also the difference between sentences like give me a glass of water and what the society plays a role in it. What the context plays a role in it whether a child should say thank you in particular context or not all these things have figured out by a child in learning the language much before they could have even instructed them about all of them.

Therefore it it is not too difficult to establish the learning takes place without instruction and particularly after 2 words stage is what jackendoff is talking about now we will come back to this stage. When we look at little bit more in terms of language learning so what we want to look at is

the role of human mind in learning of language imagine. The discussion on language learning (Refer Slide Time: 20:25)

Language Acquisition/Learning

- Behaviorism
 - Stimulus Response
 - Input = Output
 - Language Learning is a matter of habit formation
- Innateness Hypothesis
 - Poverty of stimulus
 - Imperfect stimulus, but perfect learning
 - Language computation is part of Generative Mechanism



From here now we want to analyse what Jackendoff's stages in language learning for a child indicates to us it categorically establishes the supremacy of human mind in learning the language. In learning the fundamentals of language. What we see without instruction we will come back to this again and and what is the meaning of supremacy of human is what we want to describe.

Until 1950 late 50's the learning of language was argued to have gone through the notions of behaviorism. What was possible what was called stimulus and response.

So the way to describe language learning is a part of behaviorism prior to late 50's let us look at the two terms in language learning two terms are behaviorism and mentalisim behaviorism is much bigger part. Where language is one of the component and it was argued that language is behavior language is human behavior and the way we learn a language is on the basis of a stimulus response there is some sort of a stimulus and then we have response to the stimulus and the practice between the two gives us language.

(Refer Slide Time: 21:27)

Language Acquisition/Learning

- Behaviorism
 - Stimulus Response
 - Input = Output
 - Language Learning is a matter of habit formation
- Innateness Hypothesis
 - Poverty of stimulus
 - Imperfect stimulus, but perfect learning
 - Language computation is part of Generative Mechanism



The part of behaviorism that we need is stimulus forms somebody in the sense that we learn a language by looking at others by listening to others it is still relevant in the domain of mentalism. However what mentalism reflects is the notion of the stimulus and response as far as the learning of language is concerned and when we try to look at both together.

What we see that stimulus is equivalent to input and response is equivalent to output and what behaviorism actually missed out in particularly and what mentalism has brought into the discussion in understanding of language learning is the role of human mind so the the picture is pretty clear that between input and output we have human mind and when we examine the nature of input and we examine nature of output the role of human mind becomes clearer and one can only emphasise the role of human mind in understanding language.

Not necessary but it is important for us to underline that there was no change in the process of language learning in late 50's the only difference that took place in 50's was the way we understood language learning and the way we describe learning of language for children changed and their came an emphasis on the role of human mind in learning of language. Which was pretty apparent when if we examine the nature of input and output we will look at it in some details.

When we look at the nature of input for the purpose of learning language there are some of the words that have been used on this and we will need to understand those words in their exact meaning the words are input the nature of input is totally fuzzy. That means the purpose of input

is not directed towards learning language people in the society simply interact with the child and based on whatever interactions the child receives interprets that and derives figures out rules underlying those inputs and in figuring out those rules their comes the role of human mind in it. And thus the output is grammatical because with the role of human mind what the processing has taken place the output becomes grammatical so the nature of input is fuzzy is also limited and then it is insufficient for the purpose of learning whereas after the processing after whatever happens in human mind the if we examine the nature of output. What we find is the output is grammatical systematic and infinite rule governed.

Given the completely contrary nature of both that is input and output the only thing that is in between the 2 is human mind therefore postulating the role of human mind was the only option and was the reason why it was called mentalist theory it was also called innateness hypothesis where the capacity which human mind enables us for the grammatical meaningful rule governed output is the idea that the language is innate to humans.

This is another point which we want to understand in order to understand what happens in human but the role of human mind was emphasised and was brought into picture by looking at nature of input and output and thus the part of stimulus and response part of behaviorism was rejected. What was brought in was emphasis on human mind therefore the idea which was prevalent in behaviorism that language learning is a matter of avid information was rejected and what was emphasised was the role of human mind.

What happens in human mind was not clear as it is as now it is that we will look into it so the innateness hypothesis begins with the idea that language is an innate capacity of humans and in learning of language that in developing that innate capacity. We have the role of what is called as poverty in stimulus. That is insufficient fuzzy input is what is referred to as we we mention the term poverty of stimulus this is imperfect not designed for learning at all.

However the computation which is developed in human mind for deriving for figuring out rules underlying with imperfect stimulus for perfect learning is also called is also referred to as generiative mechanism and this is the generiative mechanism is known as development of

language. On the basis of the hypothesis that the language is a innate human capacity thus we can say that the whole idea of language learning changes.

And we have to look at stages in learning we can only say that in such a short period of 6 months to 36 months the vocabulary of above 10000 and development of a system which is responsible for perfect sentence or grammatical sentence indicates perfect learning and is something which requires attention this is what happens in language learning. Thank you.