

Language and Mind
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Module - 01
Lecture - 07
Language in Mind

So far, we have looked at relationship between language and mind in very brief. We started with understanding what language is and we have also looked at the relationship between language and mind. We have also very briefly looked at how language is learnt, and in fact last time we have seen how children learn language. In the context of that brief discussion, we want to discuss today about language learning and language and mind, this is why we call this session Language in Mind.

To understand this, let us understand some of the terms that we may have seen so far or they may appear for the first time for you. But, there are some other terms which are important which will help us understand the discussion on language in mind.

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Some terms ...

- Competence
- I - Language
- Form
- Critical period hypothesis
- Mother tongue/First language

The terms are, for example, competence - in the study of language this term is used mostly to understand language in mind; when people talk about linguistic competence they mean language in mind. At the same time, when we use the term I-language, we mean linguistic competence; this term means internal language and it means language in

mind. We understand these things more in the context of form, which basically means the structure of language.

The structure of language helps us understand linguistic competence and I-language. The structure of language, through the study of structure of language, we understand linguistic competence and internal language in a better way. We will look at an example or two today to understand that. There are two more terms: critical period hypothesis and mother tongue or first language, which will be helpful in understanding language in mind.

Critical period refers to age limit until 13 years; it is not a boundary line, usually it is not considered hard and fast thing, but to give a number we have used the number 13. To understand the critical period hypothesis in a simpler way, we can understand that the ability to acquire language starts decreasing after a certain period and once it starts decreasing, that is, that point is called critical period.

Now, the beginning of difficulty in learning language does not mean a child cannot learn a language after that; which means, a 13 year old child will not learn any language after that, is not the meaning of critical period. However, the meaning is, there is going to be a difference between the learning, acquisition before 13 years and after a particular period; such a period is called critical period. This happens, because the access to universal grammar starts fading and therefore, acquisition slows down, and then we do not acquire the language the way we do as long as we have access to universal grammar.

I hope this is clear and this will help you understand the terms like mother tongue or first language. We will have little elaborated discussion on mother tongue and first language little later. However, at this stage, we would like to understand these two terms in the context of I-language and critical period in the sense that languages that we will learn before critical period, languages that we acquire before the critical period, until the time we have access to universal grammar is called first language, mother tongue and the learning that takes place after critical period in the absence of or in the lack of access to universal grammar would be second language.

So, that helps us understand the concept of mother tongue. Now see, we have had a discussion on how children learn language. How a child comes up with a sudden outburst of vocabulary from a few to few thousands in a matter of couple of years?

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When did human language begin?

(Ray Jackendoff)

- Amazing capacity! We can talk about --
 - Past and Future
 - Mathematic and Philosophy
 - Gossips to Techniques
- Human language has vocabulary of thousands of words out of a few dozen of sounds.
- This would not have been a planned phenomenon.
- We do not have sufficient evidence for the evolution of language.

We have also had a discussion on how humans began to speak. Both these discussions we have had in the context of insights from Ray Jackendoff. In response to the question when did human language begin, that is when humans began speaking, Jackendoff turns our attention to a different question that when actually humans became capable of using language.

In other words, the history of evolution of human language is probably not as significant as understanding how humans acquired this capacity; and therefore, the significance to I-language and therefore, the relevance to our understanding of relationship between language and mind, in particular language in mind. So, we have seen these discussions so far. We have had, we understand that... to summarize this discussion in a few words, we understand that this must not have happened by planning, that is, few people would not sit down and design a language; there is plenty of evidence available to understand this part.

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- FOXP₂ “Language Gene”
- Achieved present shape around 100000 to 200000 years ago.
- Rational
 - A mutation in this gene leads to language deficit and problems in the control of face and mouth.
- Critique
 - Does this really lead to language impairment or only creates speaking difficulties.

The evolution of a FOXP 2 genes, we have had a discussion on that too; when such a thing came up, it was a big revolution and the idea was that this has happened, the evidence shows that it would have happened around 100 to 200,000 years ago and people started calling such a thing as, language gene. The rationale behind that was a mutation in this gene would easily lead to language deficit and language problems, also in the control of face and mouth.

But, then there was a suspicion that before we really call it a language gene and gene responsible for language acquisition, language learning and the capacity of language, we need to make sure that this mutation is really causing language impairment or is this creating simply difficulty in speaking. With such a critique, we have not had much of development so far to understand this any further. But as such, it was a very revolutionary idea and it continues to be so.

So, we need to understand these things in order to understand relevance of the discussion on language in mind. So, what do we understand with what we have discussed so far?

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Language in Mind

1. Children understand much more than they can imitate showing that they have constructed grammar.
2. Children come up with novel patterns implying that they have mental grammar.
3. Patterns come from the menu of Universal Grammar.

There are three things that come up with; two things that we have discussed from Ray Jackendoff. First, how humans got the capacity of language and how children really learn language. With these discussions what we know is, children understand much more than they can imitate and this shows that they have constructed grammar. Children usually come up with novel patterns, which implies that they have mental grammar. Every time we use the term grammar it refers to mental grammar; that is, language in mind.

And then the usual question is, where does this pattern come from? How do children come up with this pattern and the answer is from the menu of universal grammar. So, and we know what universal grammar means, we know what it refers to and... So, to understand these things in details, we would need to look at what constitutes universal grammar and how the study of the structure of language helps us understand these patterns.

Let us take an example to understand how the study of structure will make us understand, how the study of a structure makes us understand language in mind, and it is relationship with active human mind.

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- Examples of learning of patterns:
 - English Past Tense
 - Most verbs take -ed
 - 180 irregular verbs like:
 - *put, fit* (unchanged)
 - *held, rang, wrote* (changing vowels)
 - *caught, brought, went* (totally irregular)

It also serves as an example for the patterns that we have just discussed and universal grammar helps children reaching such a pattern. Take an example of English past tense. English past tense: in order to construct English past tense, most verbs take a morpheme *e d*, at the end of it. For example, we have a verb like *walk*, we get past tense form *walked*, at the end of the *walk*, we have the form *e d*; the word *play*, we have *e d* at the end of it and we get the past tense pattern *played*; most of the verbs use this pattern.

Therefore, we call it an unmarked pattern of past tense formation. However, it has been noted and Ray Jackendoff mentions in one of his studies that approximately 180 English verbs are irregular in their nature. It is very interesting to look at these irregular patterns; some of them do not change their forms in the past tense. For example, verbs like *put* and *fit*, they remain unchanged in the past tense forms. Some of the irregular verbs would change a vowel and get the past tense form like *held, rang, wrote*, from their past tense forms like *hold, ring* and *write*.

So, we see the change in the vowel and we get the past tense forms; and some are more irregular, totally irregular like *caught* and *bought* from the verbs like *catch* and *buy*; and the most common one *went*, which is the past tense form of the verb *go*. Now, learning of English past tense pattern shows us the following. When children learn English, and we are talking about children learning English as first language here in particular, we mean, this is what happens. The children do not at very early stage, children do not really

understand the distinction between two words walk and walked. They first notice this and it takes a while for them to figure out that walked is actually walk plus past tense. And once they figure this out, they know that this is a pattern for the formation of past tense in the language, then they apply this pattern and it works.

But, soon they find examples like put, held and went; at that stage, they carefully notice it and initially what happens is, they try to apply the e d pattern uniformly and get things like holded, goed or catched; that is to be, the term goed g o with e d as the past tense form, catch with e d catched instead of caught with a past tense form and hold with e d holded, instead of held.

So this is, they achieved these forms or they use these forms by the application of the regular pattern. Again they realize that such an application does not work; there seems to be some irregular pattern involved in the formation of past tense and then they learn these irregular patterns separately. And once this is learnt, they do not make this mistake while learning the first language.

So, there are different stages involved in that; first, learning the pattern, then application of the pattern and then unlearning the pattern. Therefore, sometimes very interestingly, it is also said that language learning is essentially unlearning. Now, this is just one example of one particular pattern that children figure out; trust me, they keep figuring out so many patterns all the time that it is almost impossible to keep a track of such a change; such a capacity, I am honestly speaking, we are giving you just one example of the pattern that they find out to show vividly that first finding out patterns, then application of the pattern and then unlearning the pattern. Therefore, it is also called language learning is essentially unlearning, because figuring out pattern is a normal phenomena in the process of learning. What actually happens or becomes noticeable is unlearning and therefore, learning also involves unlearning.

Now, this would not happen without active role of human mind in the language; these things would not happen with copy these things would not work. These are quite obvious, but they require time to go through and to understand. To wind it up, I will use one more example and this will help us understand. You will be reading things from Ray Jackendoff pretty soon and then you will find these examples in those readings as well.

The use of child language gives us one more example. We often hear children using a particular type of language which is also called child language. So, and that happens because at a particular stage, children have certain difficulty in getting accurate sounds. So, one example that comes to my mind from the study done by Ray Jackendoff is the use of the term, use of the word duck. When some children wanted to say duck, they end up sounding guk, guk and this sounds like child language.

We know that they wanted to say duck and we hear carefully that they end up saying guk and therefore, we have this difference. But, when we try to speak to children this way, in this fashion, they get really irritated, because, what causes irritation here, let us pause for a moment and think. When children want to say duck, they end up saying guk, but if you tell them back guk, they get irritated. Why would that happen; what would cause irritation among children? What causes actual irritation in children is very simple, that they never meant to say guk, they said duck and they feel they have said duck.

But, when you say guk, they feel what is it, why are you speaking like this; and therefore, that causes irritation in children. Now, see the application or the role of human mind in such a phenomena; what actually gets produced is not really there in the mind and that again shows, how human mind plays a role in it. We had a discussion on this thing to underline significance of human mind and to really put it forward that the role of human mind in learning language is not really questionable,; it is acceptable and understandable.

We need to see more examples to understand the extent to which human mind plays a role in learning language overall. So far we have used examples from I-language; we will need to use some examples from E-language, which is called External language, to understand, to develop an understanding of the concept of language and the role of human mind in learning it in totality.

Thank you.