

NOC: Language and Mind
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Lecture - 2
How do we learn Language?

Today, we are going to be looking at how we learn language. In the introductory part, where we introduced this course, we talked about language. We talked about language in the sense that it is a system. And we underlined that there is an obvious relationship between language and human mind. Throughout the course, we are going to make an attempt to make that relationship between the two; that is language and human mind; that is, natural language and human mind, obvious, more obvious. We are going to make an effort to underline that relationship. So, in order to do that, we are going to begin with an introduction on how human children learn language.

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LANGUAGE

- A tool of communication (half truth!)
- Language is a rule-governed system.
- Linguistics makes such rules explicit with scientific investigation.
- Language is the most sophisticated product of Human Mind.



As you have seen that language is not merely a tool of communication, but it is a rule governed system and it is the job of the linguists to make that underlying rules, what makes languages a system and what we call that...what we mean when we call that a system, rule governed, for a pattern governed system, obviously through scientific investigations. We will take examples of each of this part, that is, to show how and what we mean by a rule governed system and what we

mean by scientific investigations. We bring in the term linguistics – it is a discipline that studies language in a systematic way. And it is a systematic way, which is called scientific way in literature.

So, linguists try to put an effort in making underlying rules, obvious through investigation, for us to understand language as a pattern governed system. And it adds to our understanding that it is not merely a tool of communication. We do definitely use language to communicate with others. But as part of the system, it is much more than that, and it is much complex than merely saying it is a tool of communication. In fact, it is a product of human mind, and to my understanding, it is the most sophisticated product of human mind. I have mentioned this phrase earlier; I am going to be repeating this phrase several times and I want to draw your attention to this phrase in variety of ways. Primarily, please look at the following.

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LANGUAGE

- A tool of communication (half truth!)
- Language is a rule-governed system.
- Linguistics makes such rules explicit with scientific investigation.
- Language is the most sophisticated product of Human Mind.



When we say one of the most sophisticated products of human mind, we recognize that human minds have several functions to attempt. Human mind is a very complex thing by itself. But a way to look at human mind through language is going to help us understand the systematic pattern and simplicity that governs human mind as well.

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LANGUAGE

- Language is one of the strongest marker of society, culture, and identity.
- The nature of language is that of a system. It is mathematical. It is one of the things that we learn without putting much efforts to it as a child.
- Therefore, it has also been said -
 - **Language is child's play!**
 - In learning of the first language children perform better than adults.
 - Why so?.



Language is definitely one of the most sophisticated products of human mind. Language is definitely a rule governed system and it has underlying patterns in it; but that is one part of language; that is, it is part of the language that is called Form of Language. It is part of the language which has been called i-Language in generative study of language. And then, there is another part of the language which is called e-Language, in other words external language. The e-Language refers to function of language and by function of language we mean, the way language works in the real society; that is, the use of language in the real world.

When we look at language with that perspective, in its functional domain, we see that language is one of the strongest markers of identity, society and culture. To add to this, lot of times it becomes more obvious and much stronger a marker of identity than religion and many other aspects of society. However, we will limit our discussions mostly to i-Language. We will definitely take examples from e-Language, that is, the function of language, to substantiate our points. To begin with, we will take few examples and establish how e-Language is relevant for understanding i-Language as well. So, with all these things we find that the underlying system of language is largely mathematical.

It is one of the things that children acquire without putting any efforts in it. And therefore when we begin talking about language acquisition or language learning, it will become much easier if we look at this phrase that language learning is really a child's play. I mean, most of you must have heard people saying this is not child's play. In other words, people mean, what they refer to as not being something easy. But I begin with by telling you, language learning is really child's play. That is to say, we learn language as a child effortlessly. Without putting conscious effort in the process of learning, we end up speaking.

Such development of human capacity, such a development of our inbuilt capacity is called innate ability and it is that innate ability which is responsible for learning of language; and that learning makes us confidently underline that language is child's play. In learning of the first language, children perform much better than adults. Grownup counterpart of children, when they put in their efforts in learning language, it is no way comparable with that of children. The efforts that grownup people put in learning language is going to be visible, the outcome is going to be visible. With the same amount of effort, children learn with more accuracy, more comfort, compared to adults.

The question is why would it work that way? Why so? Why do children learn so effortlessly, but it is so difficult to learn a language even by putting a lot of efforts, when we want to learn it as a grownup person. This is a very important question and an answer to this question has been very critical. In fact, the answers to this question have brought in paradigm shift in scientific investigations in the domain of Linguistics and Cognitive Science and subsequently to some more associated fields.

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Language Acquisition

- Input = Output, No, output is much larger than input.
- Language Learning is **NOT** a matter of habit formation or practice.
- Poverty of stimulus [Innateness Hypothesis]
 - **Imperfect** stimulus, but perfect learning.



The term language acquisition - as we have seen so far, we can use this term interchangeably with language learning, as far as we keep in mind that we are talking about children; we are talking about early learning or early acquisition. So, such a thing has brought attention from scholars from all kinds of fields. Language itself has attracted attention from scholars from philosophy to Sociology to Mathematics to Biology, Psychology and what not. Most of these scholars had to say something about language acquisition but few psychologists, particularly behaviourist psychologists - when they talked about language acquisition, they talked about acquisition from the perspective of output. And they looked at language acquisition and missed an important part, which we would like to underline here, in order to understand the relationship between language and human mind.

B. F. Skinner, to quote one at least, seriously believed in the output of language being directly proportionate with the input. That is, B. F. Skinner only looked at language as human behaviour. The relationship between input and output is critically significant for acquisition of language. However, what was missing from that investigation or that understanding was the role of human mind. When we bring in the role of human mind, it becomes very easy to understand that the input, the output is no way proportionate to input. That is, output is much larger than input and here we take a positive understanding, what we mean by input and output.

But the generative understanding of language acquisition brought in a completely contradictory conclusion that language learning is not a matter of habit formation or practice. Language learning is definitely not where output is proportionate to input; rather, output is not comparable with input. Input is very short, very small; output is immeasurably large; output is infinite. So, here was the contradiction which was responsible for bringing in paradigm shift in the field of language acquisition. The ideas that came into our understanding of language acquisition from behaviourist psychology were almost demolished.

However, it is very significant to understand that, to understand generative foundation of language acquisition, we need to understand behaviourist approach in language learning where one of the very critical parts of behaviourist approach of language learning was responsible and critical; that is, it was a critical component in understanding of language acquisition and that was the role of input. We are going to be looking at it shortly. The term poverty of a stimulus which was also related to innateness hypothesis became very popular at this point. And poverty of a stimulus simply meant that input is short, input is limited, and output is unlimited.

In fact, the term stimulus comes from behaviourist approach of language learning where the stimulus and response was argued to be proportionate. But stimulus was found not comparable with response; the response was immeasurable; however, the stimulus which is input was very limited. Therefore the term poverty of stimulus became very important in understanding language acquisition. We can also say that stimulus at that earlier stage in the process of acquisition of language remains totally imperfect. So the terms like imperfect, poverty, have to be understood with care; we need to understand these terms with care. To conclude this part, imperfect stimulus is responsible for perfect learning as far as language is concerned.

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- All normal human children are biologically hardwired to learn language (Chomsky 1965). This requires INPUT from immediate surroundings/society.
- Input is **fuzzy** and inadequate in both quality and quantity.
- Learning mechanism gets turned on.



And with that, in biologically grounded generative foundation of language and acquisition which began in 1957 with the emergence of Chomsky in the field of the study of language, there were some conclusions which are now almost epigrammatical. They are like...all known normal human children are biologically hard wired to learn language. However, such a process of learning language requires input from immediate society; that is immediate surroundings. And here, I would like to underline the role of input and overlap with e-Language. Please understand that for what is called automatic learning and what is being argued here is, the primary thing responsible for learning of language is biologically hard wired at the time of birth among human children, which is what makes this whole process innate, which is what make this whole process grounded innateness; which is what makes this whole process intrinsic.

But this does not happen without e-Language; this does not happen without interactions; this does not happen without the language in the real world. So, language from the real world, even though in a very small quantity, serves as input and that is what it means when we say, this requires input from immediate society. So, immediate society which is responsible for function of language and input which is language, which is from the language in the real world, is highly critical for making this biological capacity active for learning of language. We will expand this

further, but I invite you to look at this part from various materials that we upload, to develop a better and clearer understanding of this part.

Moving ahead, input is, the input that comes from immediate society is fuzzy and inadequate in both quality and quantity. It is this input which turns the mechanism on in human mind which activates this biological capacity, which becomes responsible for how we learn language.

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- Hardwired biological capacity is a combination of Language Acquisition Device (**LAD**) and Universal Grammar (**UG**). LAD and UG help a complex system and generative capacity miraculously develop.
- 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**)’.



This hard wired biological capacity is a combination of two things: one is known as Language Acquisition Device which is in short called LAD and the other is called Universal grammar. Language Acquisition Device is a hypothetical one and not a real device in human mind. It is the name of this biological capacity which has been argued as that, every normal human child will be born with this. Language, universal grammar on the other hand is a set of underlying rules which are both universal and parametric together. The universal rules, universal patterns of language are responsible for similarities between different languages and parameters are responsible for accounting differences between different languages.

So Language Acquisition Device and Universal grammar together help a complex system and generative capacity miraculously develop. That is, the generative capacity is a complex system and this is what is responsible for developing language in a miraculous way.

This process is so fast, so effortless that it requires no instructions, no effort from anyone else as facilitating factor; yet, it recognizes patterns, develops rules and generates a perfect system called Language. And this is the point where all the efforts have been put to decode the underlying patterns which children acquire effortlessly from the input; that is, when children and the human mind begins, when human mind begins processing language, it is focused. Such a processing is focused on finding and recognizing patterns. And after recognizing, the human mind internalizes such underlying patterns and eventually it yields in language acquisition. This results into a body of knowledge which is called Knowledge of Language.

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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).



In other words, Knowledge of Language is an implicit knowledge which we know, but we do not know that we know them. To repeat it once again, Knowledge of Language develops from, Knowledge of Language consists of rules of language that we know, but we do not know that we know them all. It is that underlying pattern which is responsible for learning of language.

So, here is the whole thing, presented schematically. That is, all normal human children are going to be hard wired to acquire language from immediate environment with the help of Language Acquisition Device and Universal Grammar.

So there is input which goes to human mind and then there is output. So input from the immediate society is fuzzy and limited; however output is grammatical and infinite. In the generative understanding of language acquisition, what was brought in was the focus on human mind and the hypothetical ideas of Language Acquisition Device and Universal Grammar. The role of Language Acquisition Device and Universal Grammar in human mind for developing generative capacity becomes explicit by looking at the structure of language and it is this schema which is where the whole focus of this course is put in; this schema, in understanding the relationship between language and human mind.

Thank you.