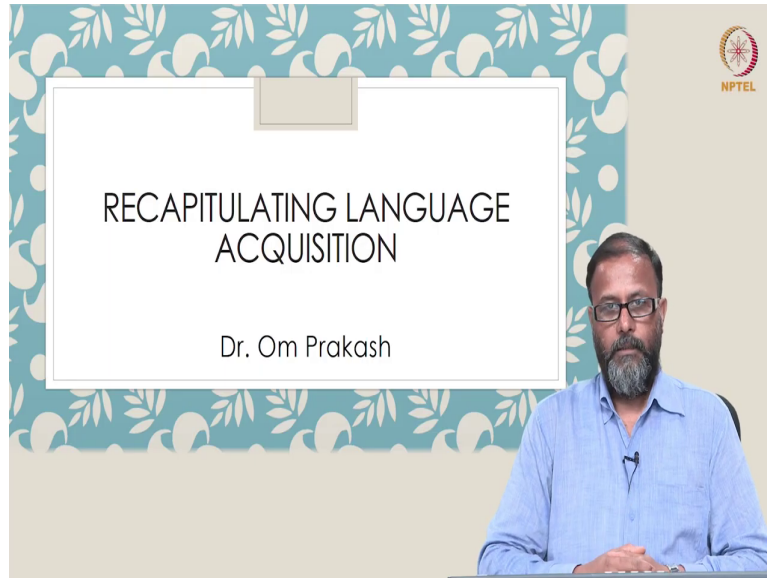


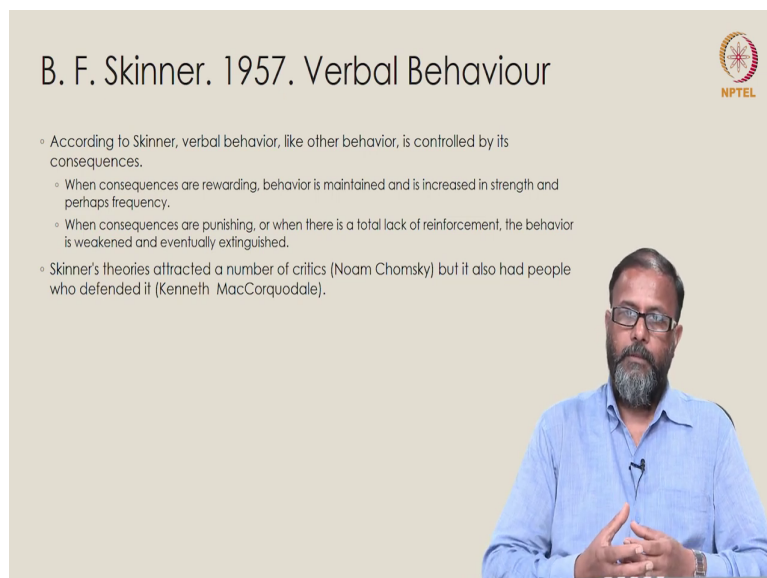
Fundamental Concepts in Sociolinguistics
Professor Doctor Om Prakash
School of Humanities and Social Sciences
Gautam Buddha University, Greater Noida, UP-201312
Recapitulating Language Acquisition

(Refer Slide Time: 0:13)



Welcome to class, today we are going to recapitulate the ideas and the theoretical frameworks that we learned in detail in previous weeks. And this talk is about putting all these ideas together and understanding language acquisition. So, we will recapitulate the ideas that we have already done in detail, but here we will put them together and revise and review what we have learned.

(Refer Slide Time: 00:48)



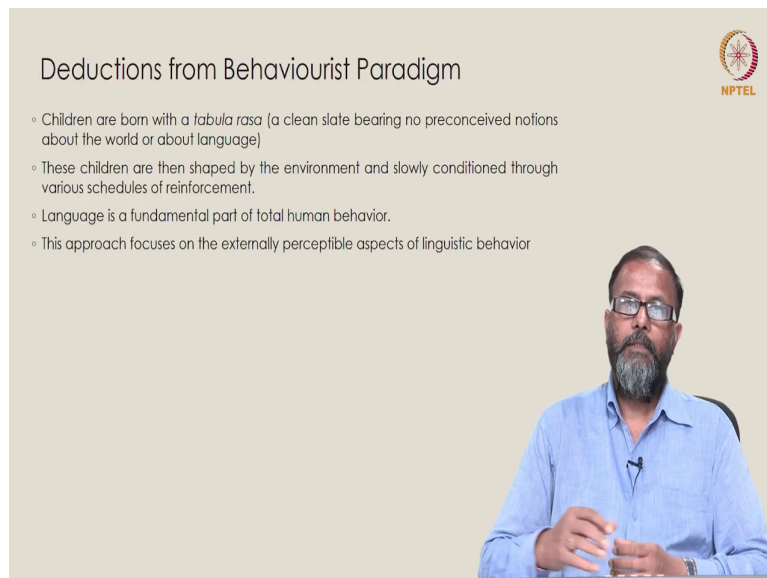
If you recall, we talked about two important theoretical positions as far as explanations of language acquisition is concerned. During this entire course, we have been talking about development of linguistics, specifically modern linguistics, post Saussure and structuralism.

In order to understand language acquisition, we need to understand the behaviourist position first. And as we discussed in our earlier videos, behaviourism was the dominant paradigm before the arrival of Chomsky in this scenario and monumental work by B.F. Skinner was published in 1957 titled *Verbal Behaviour* and this work by Skinner was a kind of summary of the entire behaviourist paradigm and understanding where Skinner considered linguistic behaviour, and mind you behaviour, you call it language behaviour, linguistic behaviour. So, it was considered as behaviour. So, languages behaviour is part of total human behaviour. Now, when we say languages behaviour, we need to understand the founding pillars of this paradigm, these are two - three things we have to keep in mind. Number one, behaviourist believe that language is acquired by human child the way other behaviours are required or that skills are required, acquired. So, language is also a skill acquired like any other behaviour and this was the baseline and they believe that human child is born with *tabula rasa*, a blank slate and the child gets input from the immediate environment which they call stimulus and then the child responds to that. So, they believed in a stimulus response chain and every stimulus will have a consequent response and every response will have corresponding stimulus, so this is stimulus response gene and the idea of *tabula rasa*.

Then, Skinner came up with operant conditioning. So, a child is conditioned for a particular stimulus to give you a particular response, and then we have talked about reinforcement, positive reinforcement, negative reinforcement. So, how these responses are consolidated, they are consolidated in terms of positive reinforcement. So, when the child gives you the correct response, you appreciate it out loud and encourage positive reinforcement. When the child makes an error, you make corrections; make a child repeat again and again. And you discourage the child from giving such responses. So, negative reinforcement. So, according to Skinner, *Verbal Behaviour* like other behaviour is controlled by its consequences. So, when consequences are rewarding, you are talking about positive reinforcement, behaviour is maintained and increased in strength and perhaps fluency when the consequences are punishing or when there is a total lack of reinforcement, the behaviour is weakened and eventually extinguished.

So, negative and positive responses when you give positive reinforcement, it is consolidated and strengthened and become frequent. When you discourage, make the child repeat corrections and when you do not give any appreciation, that works as negative reinforcement and it helps the child completely extinguish such negative responses. And this is what and this is how behaviourist believed a language is acquired by a human child.

(Refer Slide Time: 6:15)



The slide is titled "Deductions from Behaviourist Paradigm" and features the NPTEL logo in the top right corner. It contains a bulleted list of four points. In the bottom right corner, there is a video inset showing a man with a beard and glasses, wearing a blue shirt, speaking.

- Children are born with a *tabula rasa* (a clean slate bearing no preconceived notions about the world or about language)
- These children are then shaped by the environment and slowly conditioned through various schedules of reinforcement.
- Language is a fundamental part of total human behavior.
- This approach focuses on the externally perceptible aspects of linguistic behavior

So, if you look at the broader deductions that we can make out of the behaviourist paradigm, they are like children are born with a *tabula rasa* roughly translates as blank slate wearing no preconceived notion about the world and about the language. So, it is completely blank and the child gets input from the environment, the children are shaped by the environment and slowly conditioned through various schedules of reinforcement positive or negative. Then, language is a fundamental part of total human behaviour that is what behaviourist believed and this understanding of language acquisition primarily believes in externally perceptible aspects of linguistic behaviour. So, he is talking about performance, he is talking about language in use. So, based on the observations, externally perceptible observations.

Behaviourism explains the process of language acquisition by a human child. With a primary belief that a child is born with a *tabula rasa*, then they assign a huge role to stimulus for desired responses, and then schedule of reinforcement and operant conditioning, what Skinner refers to. So, a schedule of reinforcement means positive reinforcement when you encourage the child after a response, and the child gets appreciation and the child is encouraged to consolidate these responses and it becomes strong and fluent. As opposed to

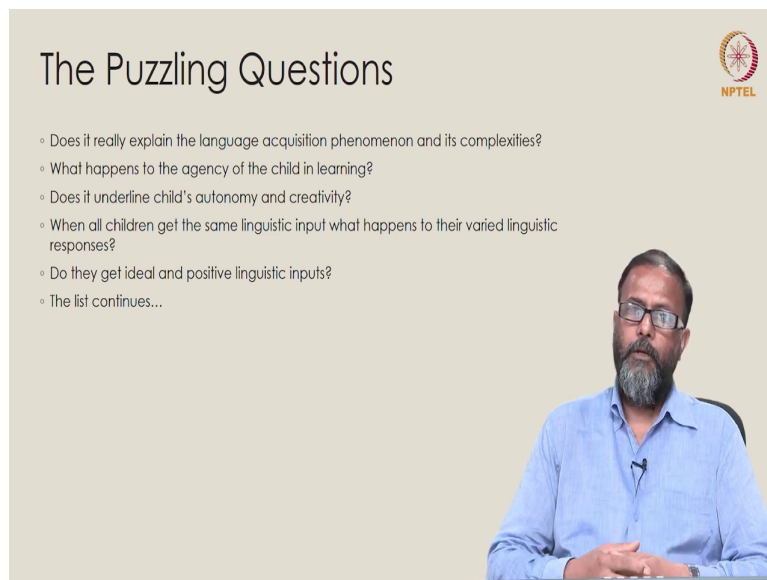
positive responses, when the child commits an error, then we discourage such responses and such discouragement and such repeated repetition, such practice weakens the responses which are not desired, negative responses, and that becomes part of conditioning. And Skinner calls it operant conditioning. So, we are all conditioned and now, you can recall your own school days when your teacher gave you dictations to improve your grammar to improve your spelling, and you recall that after every mistake, suppose you have made five six mistakes in terms of spelling of the word or sometimes sentences, the teacher would make you repeat those words write those words ten times for that matter. So, this is pattern drill practice, pattern drill practice.

The theory of structuralism and various structures was prominent and how it was, how the subject was, is known. The learner was subjected to make repeated practices. You might recall Bloom fields many manuals created for language learning and language practices. So, patterns and practices, reinforcement and such conditioning are part of the behaviourist paradigm and this is how they understood how a human child acquires a language. So, they looked at language as part of total human behaviour and four five things are important to remember number one, stimulus response chain. In fact, you can put number one, the idea of tabula rasa blank slate then number two, stimulus response chain number three, schedule of reinforcement, number four operant conditioning and finally, pattern drill practices and this is how a child is conditioned and it becomes habit. So, a series of activities lead to habit formation and it becomes part of the total human behaviour. This is how behaviourist explained the process of language acquisition. But, is it really the case because the first question is that the behaviourist paradigm is based on the externally perceptible behaviour of the language user.

So, the entire theory relies on the externally perceptible responses and the idea that a child has no preconceived notion of any knowledge about the world or about the language. A child is born with a blank slate called tabula rasa that is the overall understanding and framework of behaviourism. Then, if this is the case then all children in a particular environment get the same kind of stimuli, but why responses are so different. Does the child have any agency in learning? Does something happen in the mind of the child? So, what happens between stimulus and response? The responses you get at the same time, is it the case that the responses that you get guarantee corresponding stimuli. Is it the case that all sentences and words children use in the early period of learning or the life they all have got stimuli for that?

They may use sentences; they may use words and leave the people around, parents around amused; where have you learned this from. So, what happens to the agency of a child in acquisition? What happens to the creativity of child acquisition? Can we equate the amount of stimulus to the amount of response? Can they be equated? Is it the case that children have more responses than they get stimuli in the environment? So, all these questions can be raised about the behaviourist paradigm.

(Refer Slide Time: 13:47)



The Puzzling Questions

- Does it really explain the language acquisition phenomenon and its complexities?
- What happens to the agency of the child in learning?
- Does it underline child's autonomy and creativity?
- When all children get the same linguistic input what happens to their varied linguistic responses?
- Do they get ideal and positive linguistic inputs?
- The list continues...

NPTEL

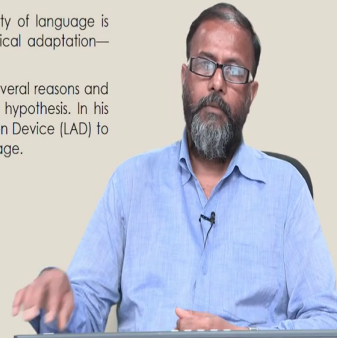
And if you look at Chomskyan criticism, Chomskyan criticism is based on these lines. So the first question is; does it really explain the language acquisition phenomena and its complexities? What happens to the agency of the child in learning? Does it undermine a child's autonomy and creativity? When all children get the similar linguistic input, what happens to their varied linguistic responses? Another question can be raised: do they get ideal input for appropriate and correct responses. And the list continues. Chomsky criticizes Skinner's work on various grounds.

(Refer Slide Time: 14:48)

Linguistic Nativism



- Language is native to human.
- Linguistic nativism is the theory that humans are born with some knowledge of language: they acquire a language not entirely through learning.
- Despite the complexity of language, children are able to accurately acquire a language within a short period of time.
- This highlights the possibility of humans having an innate language-acquisition ability.
- Steven Pinker affirms Chomsky's view that the human faculty of language is innate. Pinker argued that language in humans is a biological adaptation—language is hard-wired into human minds by evolution.
- The innateness hypothesis supports language nativism and several reasons and concepts have been proposed to support and explain this hypothesis. In his work, Chomsky introduced the idea of a Language Acquisition Device (LAD) to account for the competence of humans in acquiring a language.



And post criticism he comes up with the hypothesis and theory known as Genetic Theory. And the hypothesis is known as Linguistic Nativism and Innateness Hypothesis. And why this is important to talk about the Chomskyan idea or genetic theory as opposed to behaviourist theory. It is important because both the theoretical positions stand face to face 100 degree apart with little similarity; they both are two distinct positions. Rest of the explanations that we get for example, in the functionalist approach, they are mediated positions. But these two positions, behaviourist and generative position, behaviourism and generative linguistics they have two distinct positions and that is why in this course, we talked about these two positions in such detail.

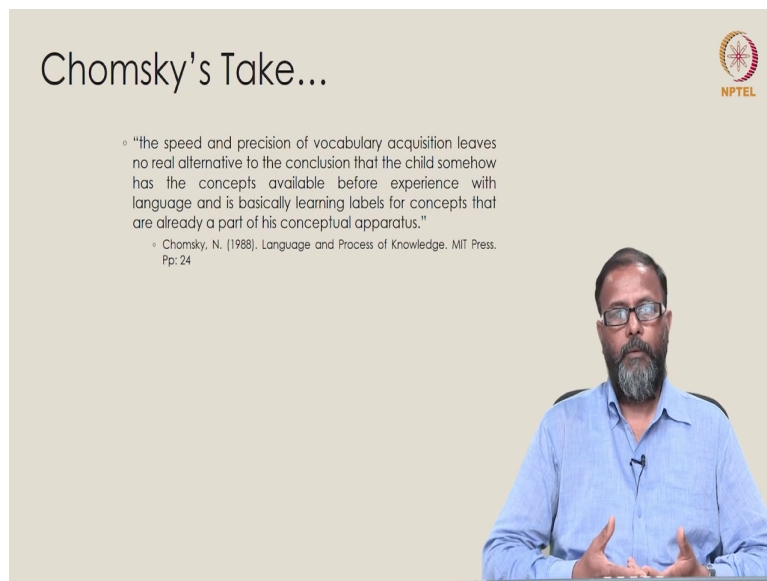
Now, Chomsky comes up with the linguistic nativism and innateness hypothesis. And, what does it mean? As opposed to the idea of tabula rasa. Chomsky claims that human children are born with innate capacity to learn a language with knowledge of language. So, he postulates ideas phenomenon or you can say a language acquisition apparatus called Language Acquisition Device or mechanism called Language Acquisition Device, ideas of universal grammar. He talks about the non ideal idiosyncratic environment and input; he calls it the poverty of stimulus. Then he gets endorsed by ideas like the critical period hypothesis. So, a combination of all these things in the Chomskyan enterprise, we have linguistic nativism languages native to humans, and the idea of language acquisition device. So, unlike tabula rasa, which believe that we are born with no preconceived notions and knowledge about world and the language, Chomsky says that human children are born with knowledge of language. And that is ensured by the innate abilities called language acquisition device. So, as opposed to tabula rasa, here we have innate mechanism.

And every human child is endowed with this innate capability to acquire language. It is not that we are born with a tabula rasa blank slate and we have no idea about language and rules and we learn it every, we learn everything from the environment. In fact, Chomsky talks about hypothesis testing, he says that, this preconceived notions and knowledge about language is tested in the environment and the child is doing nothing but verifying and labeling the terms, labeling the concepts, it is all about labeling the concepts. So, that is why this theory becomes important to understand. So, what does it say? language is native to humans. So, we are born with this innate capability.

So, linguistic nativism is a theory that human children are born with some knowledge of language, they acquire a language not entirely through learning. Despite the complexity, the human language is so complex and you might have seen that we never give systematic structured instructions and stimuli to children around us. They pick up language in the environment and adults around them do not speak in ideal form. They are casual, normal and they speak in a regular register. But how such a complex phenomenon is acquired by a child without structured instructions. In fact, if you recall your childhood days, you might see that you started learning grammar after reaching school. But before he reached school, you were talking perfectly fine. So, you are able to understand everything around you and you are talking. So, if you are a Hindi speaker, you had command of Hindi before you went to school. If a Tamil speaker you had command of Tamil before you go to school, you start learning grammar in school. But before going to school, you are a fluent speaker of Tamil, fluent speaker of Hindi. And in fact, by learning grammar, we are more confused, is not it?

But anyway, leaving this lighter note, coming back to the complexity of human language, it is so complex. But how come a human child acquires such a complex phenomenon like a child's play. Chomsky tries to explain it, and Chomskyan enterprise is all about explaining this process of language acquisition in terms of two important fundamental postulates: linguistic nativism and innateness hypothesis. And this highlights the possibility of humans having an innate knowledge acquisition, language acquisition ability. And if you look at Steven Pinker's remark, he says that we are hardwired, it is a biological adaptation, and the human mind is hardwired to acquire language. The innateness hypothesis supports language nativism and several reasons, and concepts have been proposed to support and explain this. In his work, Chomsky postulates two important things, two important ideas, LAD, Language Acquisition Device and universal grammar. What is it?

(Refer Slide Time: 21:52)



Chomsky's Take...

◦ "the speed and precision of vocabulary acquisition leaves no real alternative to the conclusion that the child somehow has the concepts available before experience with language and is basically learning labels for concepts that are already a part of his conceptual apparatus."


◦ Chomsky, N. (1988). Language and Process of Knowledge. MIT Press. Pp: 24

The slide features a video of a man with a beard and glasses, wearing a blue shirt, speaking. The NPTEL logo is visible in the top right corner.

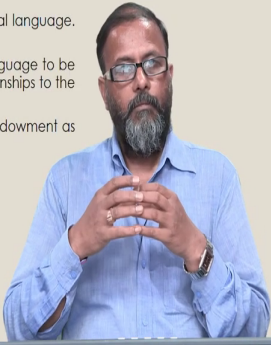
Let us quickly know about it, but before that, what Chomsky believes, what Chomsky says. So, let us have Chomskyan take on this acquisition, I quote from Chomsky's writing 1988 language and process of knowledge MIT Press, page 24, I quote, "the speed and precision of vocabulary acquisition leaves no real alternative to the conclusion that child somehow has the concepts available before experience with language and is basically learning labels for the concepts that are already part of his conceptual apparatus." And this is exactly what he means conceptual apparatus, a language acquisition device, a child is born with, the child is programmed, naturally programmed, until and unless there is some serious physiological neurological constraints, any human child who is normal is programmed to acquire language, this is what Steven Pinker's calls a biological adaptation, where he talks about language acquisition.

(Refer Slide Time: 23:08)

The Language Acquisition Device (LAD)



- According to Chomsky, humans are born with a set of language-learning tools referred to as the LAD (language acquisition device). The LAD is an abstract part of the human mind which houses the ability for humans to acquire and produce language.
- It is argued to contain all and only the principles which are universal to all human languages.
- For the LAD to work, the child needs access only to samples of a natural language. These language samples serve as a trigger to activate the device.
- Once it is activated, the child is able to discover the structure of the language to be learned by matching the innate knowledge of basic grammatical relationships to the structures of the particular language in the environment.
- Chomsky no longer uses the term LAD, but refers to the child's innate endowment as Universal Grammar (UG)



So, referring to language acquisition device, by the way, we should not be carried away with this word device, it is not something physical. So, when we say we are born with a language acquisition device, that does not mean there is a chip inside our brain. This is a conceptual apparatus, or mechanism, an endowment that allows us to learn to acquire a language. So, it is argued that this device contains all and only the principles which are universal to all human languages. So again, here he gives another idea that human languages have universal principles common to all languages of the world. So, he is talking about underlying principles.

To understand this idea, you can take an example of human anatomy. So, we all look different. As a human being, we all look different, of different sizes, of different colors, of different appearance, face, texture for skin. But these are all outer things. These variations are parametric. I may be fair complexion, I may be dark complexion, I may be tall, I may be short, I may have curly hair, I may have straight hair or maybe I am bald, no hair at all. These are all, these appearances are superficial but we all know that human anatomy operates on underlined universal biological functions. So, heart, kidney, the neurological system. So, it does not matter whether you are Asian, you are an Asian, you are African, you are American, Australian, Indian, your nationality, your caste, your class nothing, nothing matters. We are human beings and we all have underlined pins, anatomical principles on which our body operates. But we all are different because of certain parametric variations like color, like size, like built, appearance, even two siblings are not the same. They do not look the same unless they are twins. So, these differences are superficial outward, so it talks about underlying

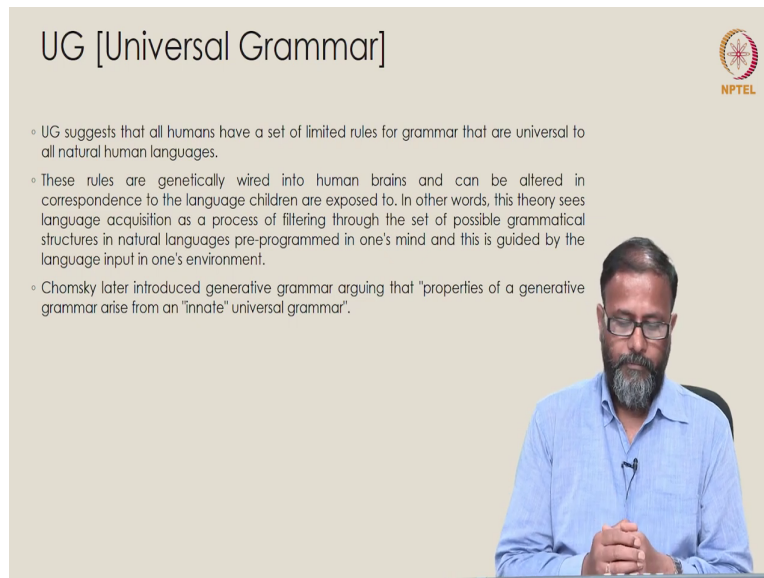
principles of language, he calls it universal grammar. So underlined principles on which human languages operate. So, for example, if I say, subject, object, verb, now all languages in the world will have subject object, verb, subject, verb agreement, object verb agreement, placing maybe different. So, word order in a sentence, maybe variant, maybe a variation, what order maybe variation, but the constituents and the relationship is common to all languages, so we have underlined principles and we have parametric expressions of those principles.

Chomsky talks about this LAD or this conceptual apparatus, a mechanism available to human children that contains all linguistic principles and underlined rules. So, for the LAD to work, but it does not work on its own, it requires a trigger, it has to be activated and how is it activated, we will go back to the behaviourist idea of stimulus. So, it requires primary linguistic data in a particular language. So, suppose a human child is born with a Tamil speaking family. So, the child is capable of acquiring any language of the world, but because the child is raised in a Tamil speaking environment, Tamil becomes, the data from Tamil becomes primary linguistic data for the child to trigger this LAD to operate and child starts consolidating rules of Tamil language Tamil grammar, similarly, Hindi grammar similarly, Gujarati grammar similarly, French English whatever is all about the immediate environment and the primary linguistic data that comes from a particular language. So, this is what it says that for LAD to work, the child needs access only to samples of a natural language. These language samples serve as a trigger to activate the device. And again, I repeat, do not be carried away by the word device, it is not a physical thing, but a conceptual apparatus available with the human child, a capability innate capability, which refers to innate capability; it is not a physical device. Once this LAD is activated, it is able to discover the structure of language to be learned by matching the innate knowledge of the basic principles and grammatical relationship to the structures of a particular language in the environment. This is what he said that when this LAD is triggered, then the child is able to discover the available rules. So, the child forms its own rules, matches it with the principles and acquires it.

So, learning becomes autonomous but before learning becomes autonomous and a child's play, this LAD needs to be activated and this LAD is activated with a primary data available to the child in the environment. So, Chomsky does not rule out the role of his stimulus, but he restricts the role of stimulus, he says that a child requires a very small size of sample in any

natural language to trigger this LAD. So, the role of his stimulus is restricted to triggering of the LAD This is what we have to remember.

(Refer Slide Time: 30:42)



UG [Universal Grammar]

- UG suggests that all humans have a set of limited rules for grammar that are universal to all natural human languages.
- These rules are genetically wired into human brains and can be altered in correspondence to the language children are exposed to. In other words, this theory sees language acquisition as a process of filtering through the set of possible grammatical structures in natural languages pre-programmed in one's mind and this is guided by the language input in one's environment.
- Chomsky later introduced generative grammar arguing that "properties of a generative grammar arise from an "innate" universal grammar".

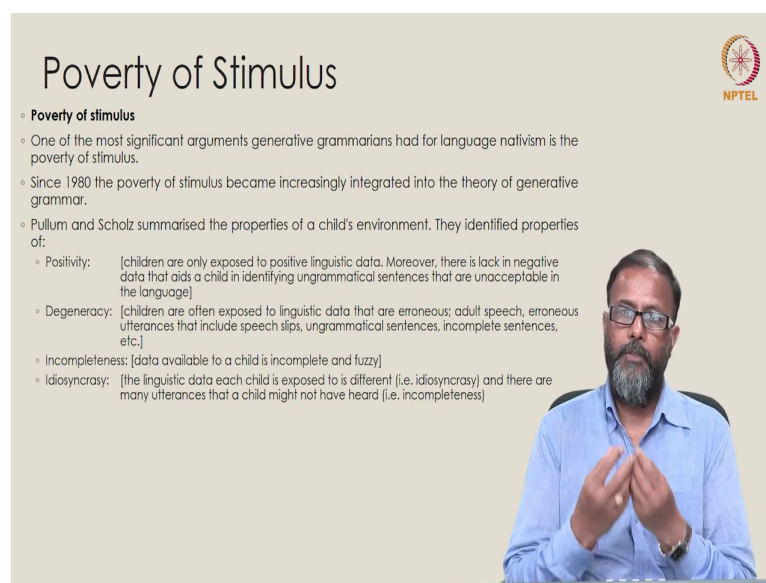
The slide also features an NPTEL logo in the top right corner and a video inset in the bottom right showing a man with a beard and glasses, wearing a blue shirt, speaking.

Now, he talks about universal grammar. So, as I told you, universal grammar is all about underlining the principles on which all human languages operate. So, to an extent at one label, you do not find Hindi, English or Latin, Tamil, Arab any language different, because they all operate on certain universal principles, Chomsky refers to those principles and they look different, they have different grammars, these variations are parametric, superficial. And he says that these rules are genetically wired, this is metaphorical, we should not interpret these words in a literal sense, but when I say generally genetically wired, it does not mean that we have a circuit somewhere or some device somewhere it refers to innate capability and the preconceived notion and knowledge about language. So, he says that these rules are genetically wired into human brains and can be altered in correspondence to the language children are exposed to. And, exactly this is what? Explains why there is a possibility that a child born out of Tamil parents raised by Punjabi speaking parents will pick up Punjabi as mother tongue. So, in that sense, then language is not genetically inherited. So, what is important, this innate capability underlined rules and the trigger which is available in the environment, so, environment becomes important, there is no doubt about it, Chomsky does not deny it.

So, here there is a little commonality between behaviourism and genetic paradigm, were both talk about the stimulus, but we need to understand the distinction where behaviourism pays a

lot of thrust on the role of stimulus. In the Chomskyan paradigm, in the genetic paradigm, the role of stimulus is restricted to primary linguistic data available in the environment just to trigger this language acquisition device. So, this is what we have to understand the distinction. And Chomsky later introduced generative grammar arguing that properties of generative grammar arise from the innate universal grammar, he talks about principles, he talks about parameters. So, parameter variations make languages look different, sound different, but governing universal principles make them all one and this is what we need to understand.

(Refer Slide Time: 33:41)



Poverty of Stimulus

- **Poverty of stimulus**
- One of the most significant arguments generative grammarians had for language nativism is the poverty of stimulus.
- Since 1980 the poverty of stimulus became increasingly integrated into the theory of generative grammar.
- Pullum and Scholz summarised the properties of a child's environment. They identified properties of:
 - **Positivity:** [children are only exposed to positive linguistic data. Moreover, there is lack in negative data that aids a child in identifying ungrammatical sentences that are unacceptable in the language]
 - **Degeneracy:** [children are often exposed to linguistic data that are erroneous; adult speech, erroneous utterances that include speech slips, ungrammatical sentences, incomplete sentences, etc.]
 - **Incompleteness:** [data available to a child is incomplete and fuzzy]
 - **Idiosyncrasy:** [the linguistic data each child is exposed to is different (i.e. idiosyncrasy) and there are many utterances that a child might not have heard (i.e. incompleteness)]

The slide also features an NPTEL logo in the top right corner and a video inset of a man with a beard and glasses, wearing a blue shirt, speaking with his hands clasped.

Now, I told you, Chomsky also talks about stimulus, role of stimulus. But he says, children have poverty of stimulus. And, as I told you earlier also, that we as an agent do not speak very consciously, in an ideal form with ideal structure, consciously selected words, we speak normal. So the data a child acquires is the data that a child gets from normal adult speech around it. And the nature of that data is very complex, incomplete and fuzzy.

For example, if I say we do not have complete sentences when we speak casually, in our drawing room, we do not make complete sentences, we make complete senses. So, the sense is complete, sentence may not be complete. There are certain assumptions we go by, there are certain referential expressions and information, which is not immediately uttered. But both speaker and hearer share that understanding. So, what I am trying to say is the data available to the child is incomplete, degenerate, fuzzy and not sufficient. But the interesting point is not quality of stimulus quality of data available to the child. The interesting fact is that it does not

stop a child from acquiring any particular language perfectly fine, they acquire it perfectly fine. So, such degeneracy incompleteness fuzziness do not create any impediment for a child to acquire a language and Chomsky says the quality of data, Chomsky talks about, he calls it poverty of stimulus, that stimulus available to the child is so poor, it is not ideal and not complete. So, Pullum and Scholz summarize the properties and characteristics of such stimulus or data available to a child in the environment in terms of four distinct characteristics. What is positivity? So, they say, children are only exposed to positive linguistic data. Moreover, there is lag in negative data that aids the child to identify ungrammatical sentences that are unacceptable in the language. Now, this is interesting. The child has normal adult speech around from where the child gets data and the child's language acquisition mechanism is triggered. But we do not specifically use ungrammatical sentences or negative data for a child to have contrast with grammatical and positive data. Then the question is how the child filter out what is possible, what is not possible, how did the child filter out what is grammatical, what is not grammatical. But we do not speak ungrammatical sentences, and you can do a test on your own.

Can you give me an ungrammatical sentence immediately? You have to think, you need to think, you need to make an effort to create an ungrammatical sentence if you know the rules, if you do not know the rules, no problem. But if you know the language, if you know the rules, you cannot create ungrammatical sentences so easily and effortlessly, you have to make an effort to form ungrammatical sentences because the human mind does not operate that way. For example, you go and ask any singer who sings well, anyone around you who sings well, to sing a song, out of tune is like that. If you know how to sing, you cannot sing out of tune. In order to sing out of tune, you need to make a lot of conscious effort, unlike people who do not know how to sing. So, Chomsky has claimed that child has innate knowledge of language and universal rules of language. That is what makes a child to filter out what is acceptable, what is not acceptable, what is grammatical, what is not grammatical, and he calls it, native speakers' intuition.

So, positivity refers to the fact that children are exposed to only positive data around, only grammatical sentences around, only possible sentences around. But they are able to filter out ungrammatical and impossible sentences in that particular language. In the second characteristic, they are talking about it degeneracy. And what does it mean? They say, children are often exposed to linguistic data that are erroneous, adult speech, erroneous utterances that include slips of tongue, ungrammatical sentences, sometimes incomplete

sentences, sometimes a lot of assumptions and gaps in our discussion. Why is the gap? Gap of information because the knowledge is shared and the information is already shared between speaker and listener. So, they are not uttered all the time, do not repeat it, you presume your background knowledge of the fact. So, it is a very degenerate kind of data children are exposed to. But degeneracy does not stop a child from learning the language perfectly fine. The third character that he talks about is incompleteness. And we all know that in our casual speech around the child in the house, nobody speaks complete sentences. It looks so artificial. So, you are casual, informal, in complete sentences, but this is what the child gets in the family, but child learns complete sentences, complete structure, child reconstructs it, that is the beauty of these underlying principles and universal grammar available to the child Chomsky is talking about.

And, then idiosyncrasy so the linguistic data each child is exposed to is different. And there are many utterances that a child might not have heard. But a child is able to produce. That means a child is creating, it refers to creativity. So, Chomskyan theory gives a lot of agency and autonomy to the human mind, which facilitates language acquisitions, so effectively. And a child is able to learn any language and acquire any language so effortlessly, because each child has universal grammar, and an active language acquisition device. And it is not restricted to one if the child has multiple data around. The child will be able to set rules of all those languages and acquire all those languages. You might remember we talked about compound bilingualism compound multilingualism a child can learn two three languages at a time, if at early-stage child is exposed to such data available in the environment, so it is not a linear thing that the child will learn first language and the second language and the third language not at all.

Child will be able to set up as many grammatical rules, as many data rules, data for different languages are available and that is why, a normal human child, a normal Indian Child for that matter is at least bilingual. We are all bilingual or multilingual.

(Refer Slide Time: 43:13)

Linguistic Competence




- According to Chomsky, competence is the ideal language system that enables speakers to produce and understand an infinite number of sentences in their language, and to distinguish grammatical sentences from ungrammatical sentences.
- This is unaffected by "grammatically irrelevant conditions" such as speech errors.
- Competence can be studied independently of language use, which is "performance", through introspection and grammaticality judgments by native speakers.



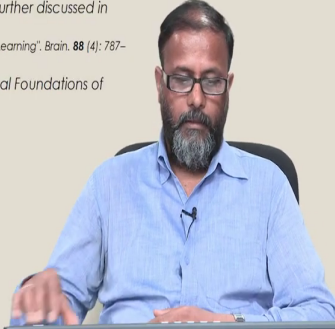
Now, Chomsky defines linguistic competence. We need to understand this ability. He says that an ideal language system that enables the speaker to produce and understand an infinite number of sentences in the language and distinguish grammatical sentences from ungrammatical sentences. This native speaker's intuition is the outcome of such idea that Chomsky postulates like innateness and nativism and other arguments like language acquisition device and universal grammar.

(Refer Slide Time: 43:56)



Critical Period Hypothesis

- It underlines the extent to which the ability to acquire language by a human child is biologically linked to age.
- The hypothesis claims that there is an ideal time window to acquire language in a linguistically rich environment, after which a language acquisition becomes difficult and requires a lot of efforts to do so.
- The critical period hypothesis was first proposed by neurologist Wilder Penfield and Lamar Roberts in their 1959 book *Speech and Brain Mechanisms* further discussed in another work.
 - Penfield, Wilder (1965). "Conditioning the Uncommitted Cortex for Language Learning", *Brain*, **88** (4): 787-798.
- The idea was popularized by Eric Lenneberg in 1967 with *Biological Foundations of Language*.
 - Lenneberg, E.H. (1967). *Biological Foundations of Language*. Wiley.



Now, the question is why an adult finds it so difficult to learn a language compared to a child? Now, at this age, can you pick up any other language the way you had picked up in childhood? Even if you get excessive stimulus? Is it possible for you to pick up language in your childhood, early childhood, you pick up in your adulthood when you are grown up. That means there is a biological window. So, the question is how come language acquisition becomes so easy for a child which becomes challenging for an adult? We have to make a lot of effort to learn a language at this age, but it is a child's play. So, this idea of a biological window is a critical period for language learning. And in general, critical period for any learning and this is called critical period hypothesis that you are able to pick up effortlessly a lot of things in early childhood, but as you grow, there is a biological window. After that, it becomes challenging for you. So, imagine if you say a child is born as a tabula rasa, like we ever disbelieved, then by now, you have a lot of knowledge.

Your slate is full. So, it must be easy for you to pick up a language at, let us say, the age of 20. But we know that it is not so easy. Picking up language, acquiring language in early childhood is a child's play. But which becomes challenging when we grow as an adult. Behaviour's theory does not explain it, but we have an explanation in the Chomskyan idea. So, the critical period underlines the extent to which the ability to acquire language by a human child is biologically restricted in terms of age to the threshold before that, it becomes so effortless and easy for you to pick up. After that, it becomes difficult and challenging and demanding and you have to make a lot of effort and you are required to have a lot of structured instruction.

What is the threshold? So, the hypothesis claims that there is an ideal time window to acquire language in a linguistically rich environment after which a language acquisition becomes difficult and requires a lot of effort to do so. The critical period hypothesis was first proposed by neurologist Wilder Penfield and Lamar Roberts in their 1959 book, his *Speech and Brain Mechanisms* further discussed in another work. And this idea was popularized by Eric Lenneberg in 1967 with the biological foundation of language. And for clarity, you can watch our older videos where we talked about critical period hypothesis in detail. And we talked about feral child for that matter. And a very popular case, which is often quoted that said, Jenny, the feral child, who was subjected to abuse in her early childhood, and was discovered almost at the age of puberty. And then it became very difficult for her to pick up language to acquire a language. She died at a very late age, let us say almost like over 50 but she could not become a fluent speaker. So, these cases are available freely online, you can go and search Jenny, the feral child for that matter. And we have talked about it in detail in our earlier video.

So, I wanted to recap these ideas once again in this talk, as a review of the language acquisition process by a human child. We need to remember two distinct positions: behaviourist paradigm and generative paradigm. Behaviourist paradigm believes in language as behaviour. So, language see Skinner calls it Verbal Behaviour, part of total human behaviour. Whereas, Chomsky postulates in native linguistic nativism and innateness hypothesis and says that we are born with an innate capability to acquire language say we are born with tabula rasa, a blank slate and environment becomes crucial for all kinds of stimuli we get to have desired responses. So, these are two theoretical positions we need to understand and I believe that you all now understand the language acquisition process. There are other theories, which are mediated and negotiated positions between these two extremes, functions theory and others. So, this is it for now. Thank you very much.