Lecture 06

Do children talk... And How?

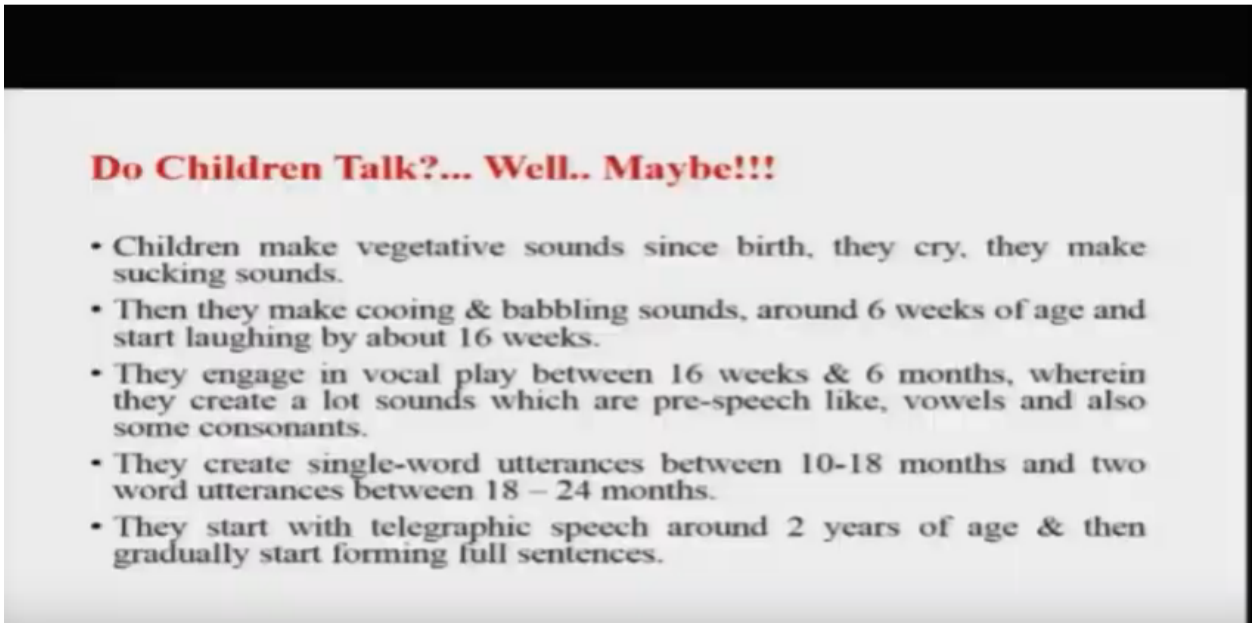
Hello and welcome to the course, introduction to the psychology of language. I am Dr. Eric Parma from IIT, Kanpur. This is the second week, of the course. And in this week, we will start talking about, development of language, in the last week as you would remember, we talked about some of the introductory concepts in language. What is language? How does language evolve we also talked about the

relationship, between language and thought and some of the other issues that were kind of focused and establishing a very basic understanding, of what language is in this week all of these lectures, will basically be focused on understanding one problem. The problem of acquiring language, we will look at the language and we look at some of the basic skills that children require to acquire language, we look at some of the characteristics that are very important in, order to understand, how language really functions. We'll also look at different ways in which, you know young children, young infants kind of surmount some of these challenges in, order to learn language from the day they are born till they can actually speak fluently in their native language. Okay? So, let us move on

Refer slide time :(01:22)

And let us move you know begin, today's lecture with asking this question, do you think children talk and if you think that they talk. How are they able to do so, what is it that they talk about? Is whatever they do equivalent to language or is it something else. Let us look at some of the basic output of what you know children, do as far as language is concerned, children make vegetative sounds since birth, you know they, they make all kinds of sound, whatever all those kind of sounds they cry, they laugh, they also makes sucking sound, they are creating some kind of the output, as far as sound is concerned, as soon as they are born and that kind of continues further

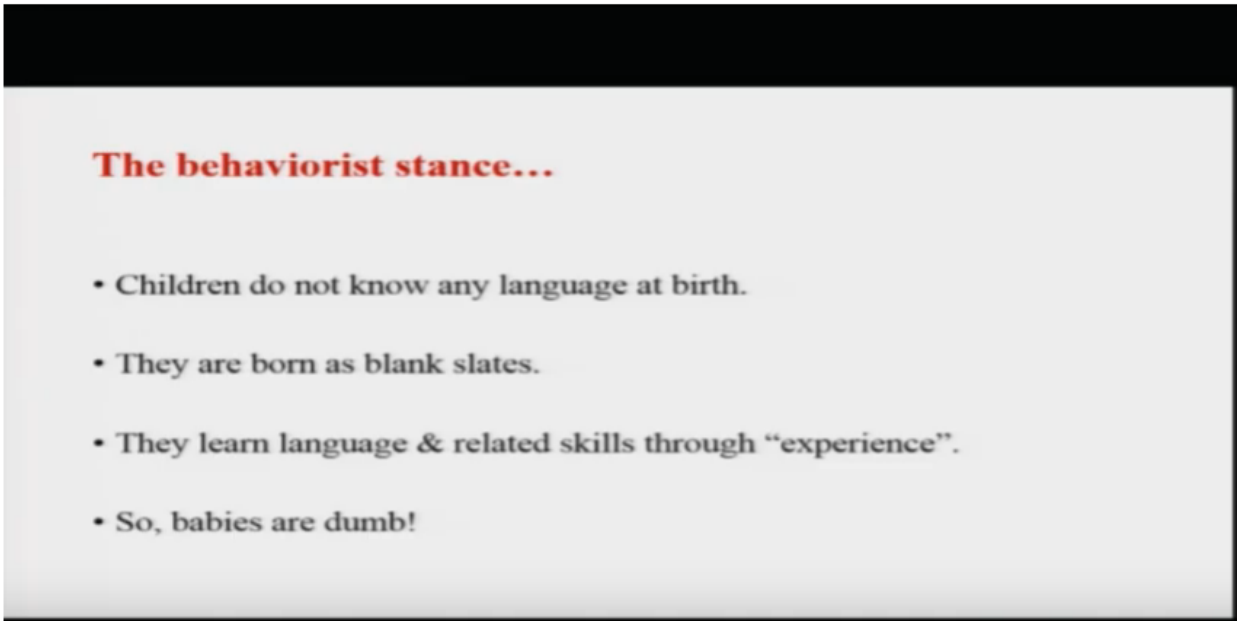
Refer slide time :(02:09)



by the time they are around sixteen weeks, they start making cooing and babbling sound, you're not going in if you if you observe a baby they will be creating a lot of basic sounds, which probably wouldn't carry a lot of meaning. But they use those sounds in order to express themselves, express sometimes the emotional state whether they are very you know happy or they are you know very cranky or they are about to cry or they are hungry so on and so, forth. So, there is some kind of output there, but is that output equivalent to communication remember, we had a basic discussion about how animal communication functions. And we kind of said at that point in time, that whatever sounds these animals are making are still sometimes they are sufficient for having meaningful communication, can are these sounds that children make sufficient for communication. So, that is something that we have to worry about. Okay? Also children engage in what is referred to as vocal play between 16 weeks and 6months of their age, we're in the kind of use these sounds, for you know all sorts of purposes for calling you for you know, asking to be lifted, up or for asking for food etc. Okay? After six months, there is a time when children start making single world, a transition between 10 to 18months most children are kind of you know creating, single word utterances they say their first words and moving on from there, in another six months they can actually come up with two or more words or trances. They start with what is properly known as telegraphic speech, which say for example could have a few words, which will be able to communicate, something which will express some sort of a meaning, but will not necessarily have a lot of syntactical arrangement to it. Okay? So, this is referred to as telegraphic speech and children express this telegraphic speech from around 2years of age and further, after that children finally starts speaking in full sentences, which are more or less syntactically correct as well. So, this is just say for example a glossary view, at what kind of you know sound output what kind of speech output so, to speak, children are able to achieve at this very early age. So, what do we say? How do we answer this question as to whether children talk? We are not very sure, maybe, because some of their vocalizations you know are able to

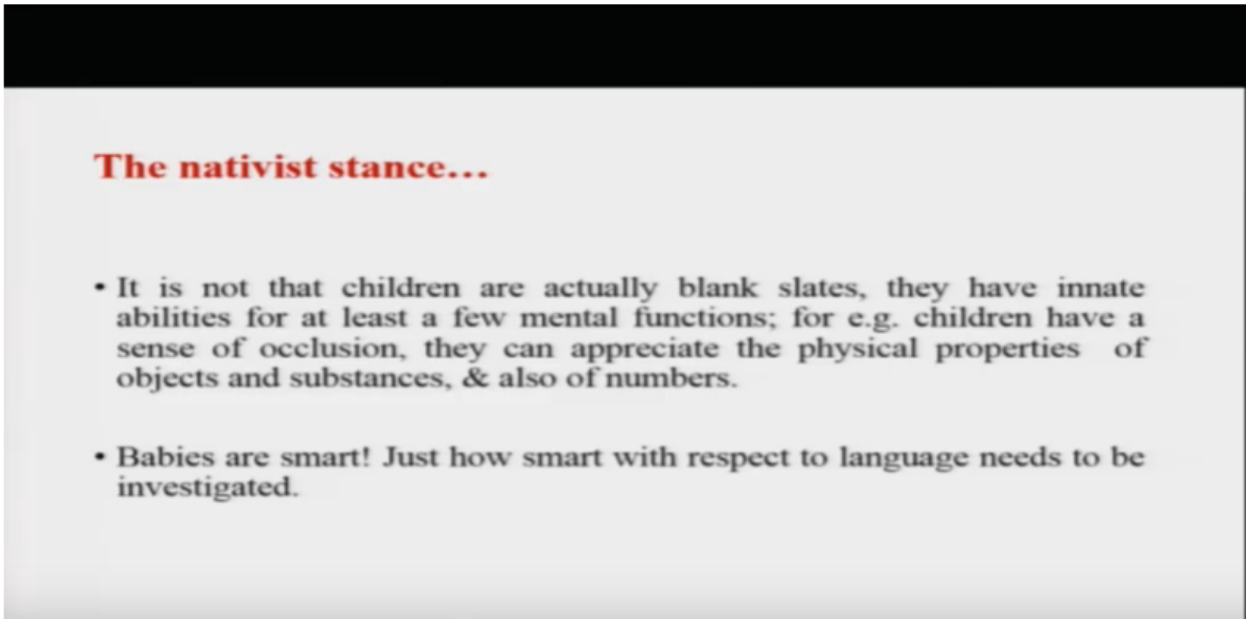
express some kind of intentions and they are able to you know get some kinds of jobs done, maybe they communicate let us look at, this a little bit more closely. So, one of the ways of looking at this more closely is you know looking at some of the theories, that exist about language acquisition you have, two positions about this one, of them is the nativist position and the other is called the,' Behaviorist Position'. So, remember these names

Refer slide time :(05:04)



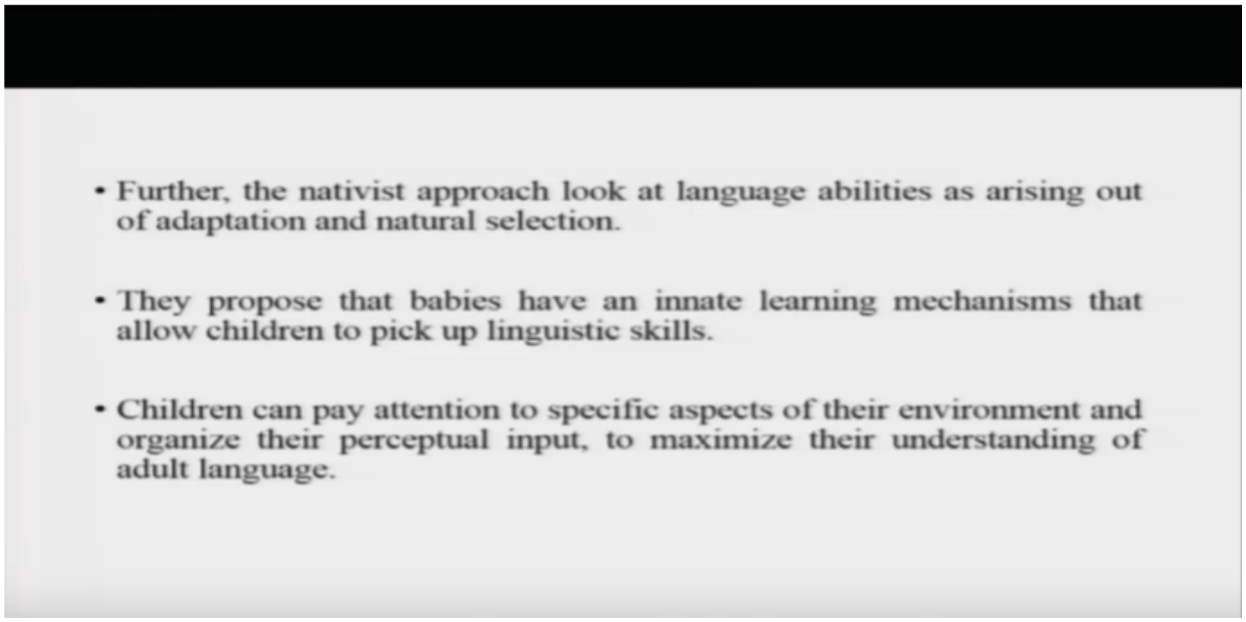
And let us just, try and look at what these positions say. So, the behaviorist position, that is the position also taken by the learning, theorist behaviors or rationalist as some people call them, they basically say that children do not know any language yet but nothing, of the vocalizations that children are making, can actually be classified as human language. And so, you have to believe that children are born as blank slates, they have no idea of language or any of the linguistic skills, at the time of birth however they say the children are fast learners, they pickup information very quickly, from the time they are born and from the time they are exposed to human language, by way of interacting with their mothers, with their other parent, with the immediate caregivers and people around them, by the time they are born, they start picking up aspects of human language and they are very good at picking this up they are very fast at grasping this knowledge and that is what basically amounts to their success, in being able to speak fluently in a little less than you know around two, two and aha lf years of age. So, in some sense you could say, that the behavioral science is telling us that babies are dumb, you know they don't know anything and it's a funny way of saying also this is how tracks live puts it in this book is that babies are dumb they don't know anything about language, if you're just talking about language. But it has been known and it has been documented in, other fields of study, especially within

Refer slide time :(06:37)



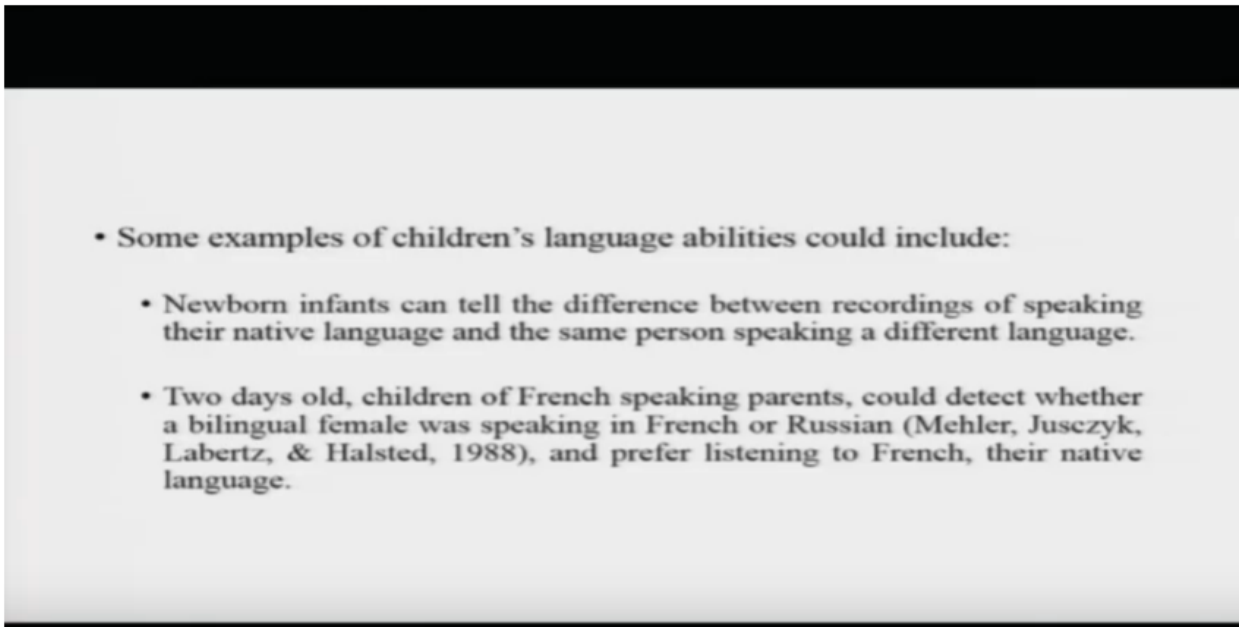
Psychology that children are not entirely dumb, they have some of those capabilities, of with respect to other mental functions that are there from birth that they probably, have from the first day on the planet. So, examples could be so, they have a sense of, if you hide some objects they'll probably look for them they have a sense of appreciating the physical properties, of object they can recognize particular objects, they also have a sense of quantity, they will can probably distinguish between something that is very few in quantity, versus something that's too much in quantity. So, some of these things they do have. Okay? But whether they do have a lot, with respect to language, is something that we have to see. Okay? So, the needle stance begins with saying that babies are smart ,you know they are born with some basic innate skills, they are born with some basic innate knowledge and that this knowledge might be helpful for them in acquiring language. Okay? So, these are the two stances let us kind of move further and look at this in a bit more detail.

Refer slide time :(07:39)



Now the nativist approach at language ability is kind of looking at it as that arrives out of adaptation and natural selection as, something that the species has learned over millions and millions of years, might all seem to be a bit of a waste, if nothing is kind of innate sense transferred, to the coming generations. Okay? So, that's probably some of the you know very basic feeling behind the active stands as far as acquisition of language is concerned, now the nativists proposed ,that babies have what are called innate learning mechanisms that allow them to pick up linguistic skills .Okay? So, Steven Pinker I remember also Traxlerpara sites him you know proposes what is referred to as a language, you know a special you know language learning device or Chomsky also talks about language, acquisition device that there is some innate ability to acquire language that is manifested in the children. So, you know they are born with these basic skills, which we allow them, to pick up language very quickly and very fast and you know and very easily, over the time that they spend dollars. Okay? So, some of the examples of, you know some of this kind of ability, could be say for example, that they that it has been reported that children pay attention to specific, aspects of the environment and they organize their perceptual input to maximize their understanding of language, suppose say for example if you observe, you know a very young infants if you observe children, what they do more most intently is they listen up, you know they are spending time, they are listening to whatever is being said or spoken around them, they are kind of you know they are looking at you they are listening to what you're speaking, they're looking at your eyes and where your eyes are there's a child in front of me now and the child is looking at me and I'm you know lifting this thing up and I'm saying pen. So, you'll see that the child is attending to this, completely. Okay? if I do this consistently and a fair amount of times, what the child will eventually be able to tell me is if I ask him that if this is if I ask him or her at the that you know where is the pen, the child will probably point towards this or at least move their head towards it. Okay? So, that could tell us that. Okay? Children are kind of you know learning, something about language, by way of paying attention to their environment, you know they're paying attention not only to my you know I use in my expressions and my voice and they're also looking at what I am holding what I'm saying pen. Okay? So, some of these abilities, could in some sense it has been said, help children in picking up bits and pieces of the linguistic skills, that they eventually master, by the time they are in to two and a half three years of age.

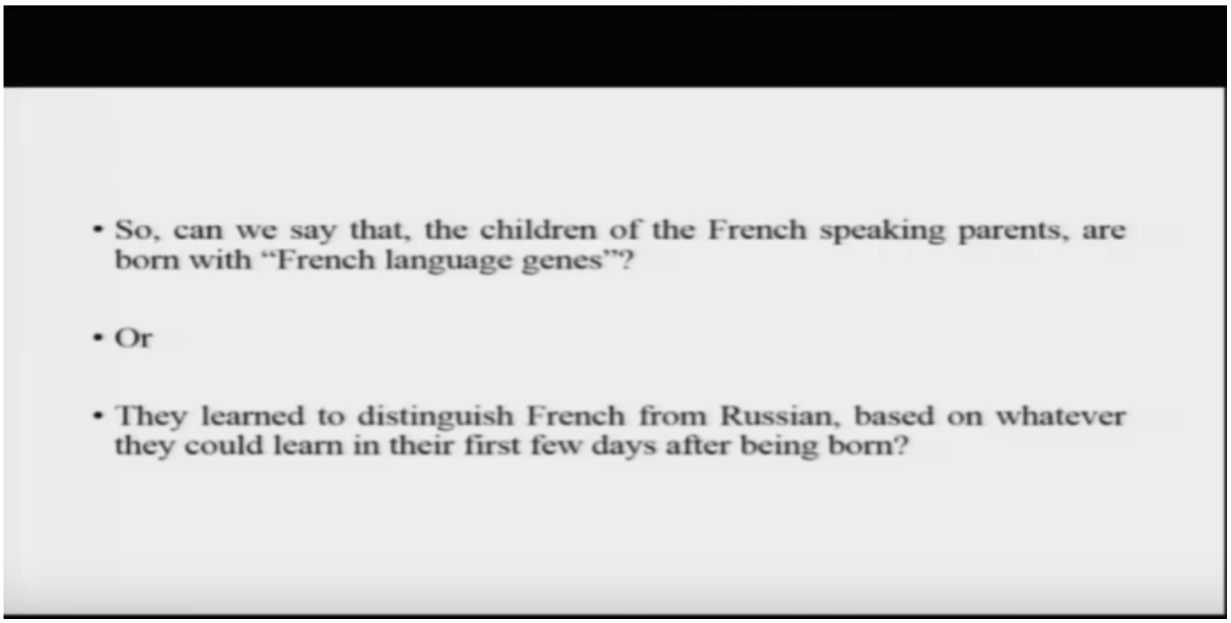
Refer slide time :(10:30)



Now there is surveys some of these abilities that have been documented, research has shown that newborn infants can tell the difference, between recordings of speaking their native language and the same person speaking a different language. So, if you make Chile listen to recordings awful a known person, a mother or a parent or a sibling or anybody else, who's speaking their own language, their own languages the language they are born into the language, that the mother and the father speak, more often than not this becomes, you know the language of the mother, because the mother is the one who interacts with the child most, however it is just mostly statistical in nature, when I say in their own language I'm probably talking about the language that have, that they have had the most exposure to. Okay? So, that needs to be remembered, now coming back to this example, newborn infants can tell the difference, between speakers speaking their own language, versus the same speaker, speaking a different language. So, this is at least, a point where children have now started to you know, distinguish between their own language versus, another language and this is I'm talking about newborn infants, infants, as young as you know 24 hours or 48 are talking about 48 hour old, two days old children of French-speaking parents, have been shown to detect whether a bilingual female, was speaking French or Russian. And they have also, kind of expressed their preference to listen to French /Russian by the same speaker. So, this was something, which was shown by Mahler and colleagues in 1988 and it kind of tells us that yes children are attending to language, they are paying very, very detailed attention to what language means said. And so much so, that they can distinguish between the same person speaking French and speaking Russian. Okay? What should this tell US. Okay? Should this tell us that say for example, the French-speaking children are born with genes that allow them to French it could be something else, another option could be say for example, if

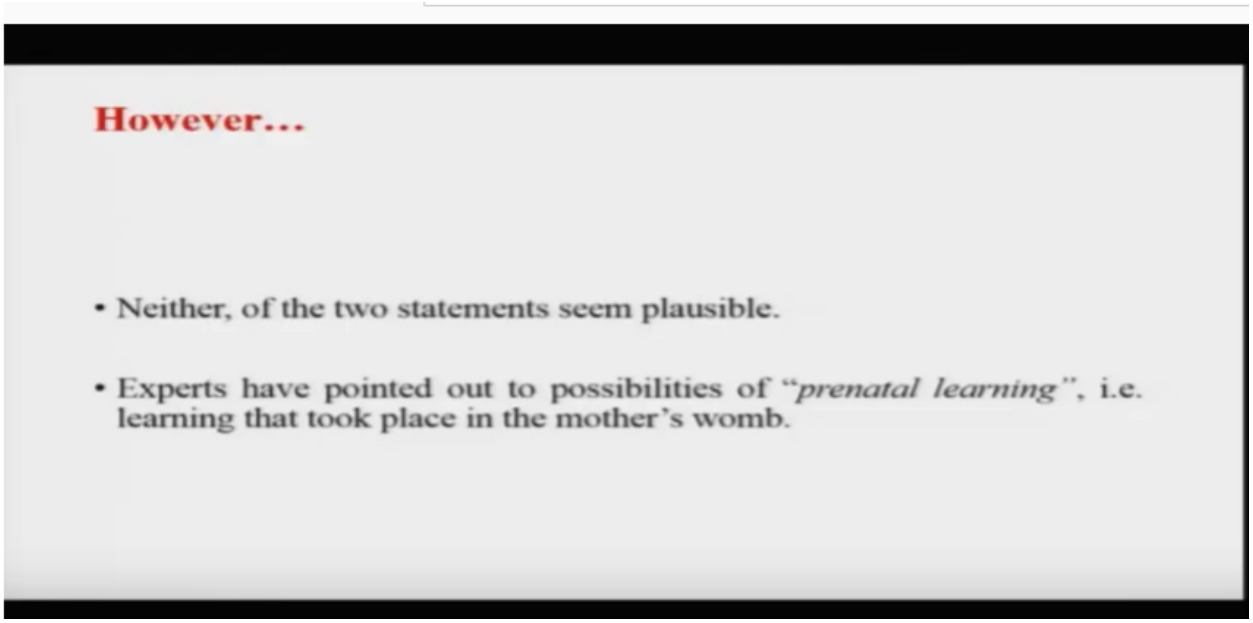
you are a behaviorist if your radiation as you might say that no, no, no they were not born with anything to do with French, however as soon as they were born they were exposed to French, you know the first hours of birth they're still exposed to French, because their parents probably are speaking French around them and the other agents in the environment are speaking French around them. So, what the children have done is that they have acquired, that much of French very quickly, they've kind of you know picked up on that much of French very quickly and it is on the basis of

Refer slide time :(13:11)



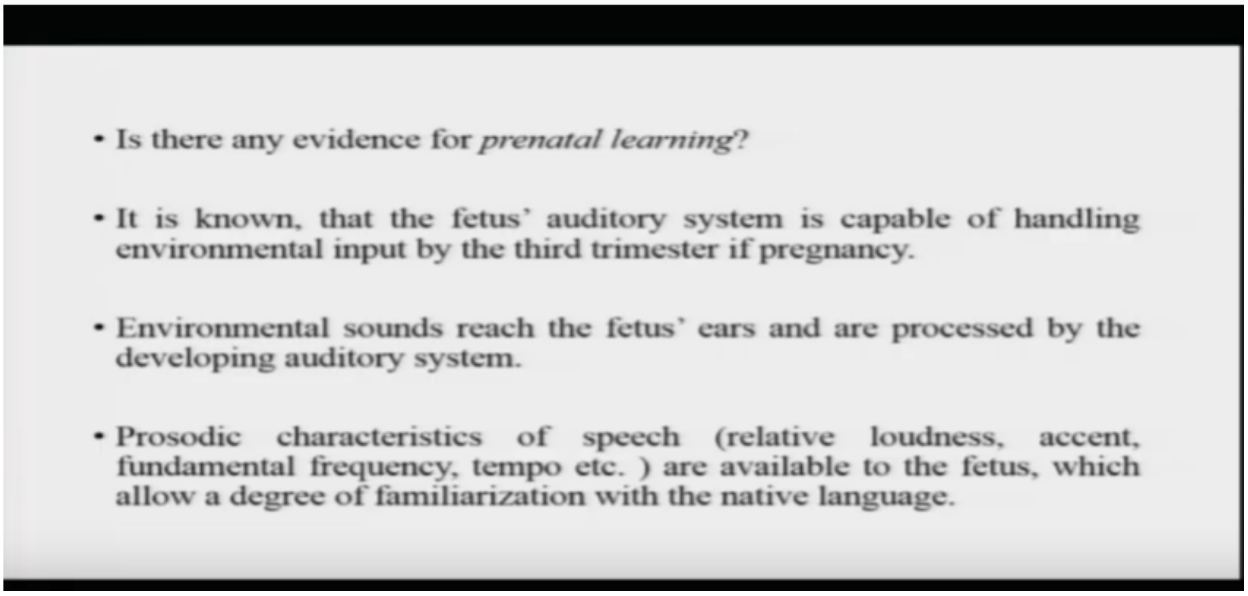
that acquisition in 24 to 48 hours after birth, that they can now distinguish French from Russian. Okay? So, these are the two hypo this is I don't know for you would think of them, might take step back you know pause the lecture, for a bit and think of which of the two is more plausible. Okay? Once you've done that and you come back, I could tell you that none of the two seem very plausible to me. Okay? Super fast learning within 24hours by you know all within 40 hours let us say, 48 hours let us say, maybe 72hours even the first few hours the baby mostly is sleeping. Okay? So, you know the first few hours after birth if you know the days of 24 hours, you can safely assume that the child probably would be sleeping anywhere between 18 to 22 hours

Refer slide time :(14:00)



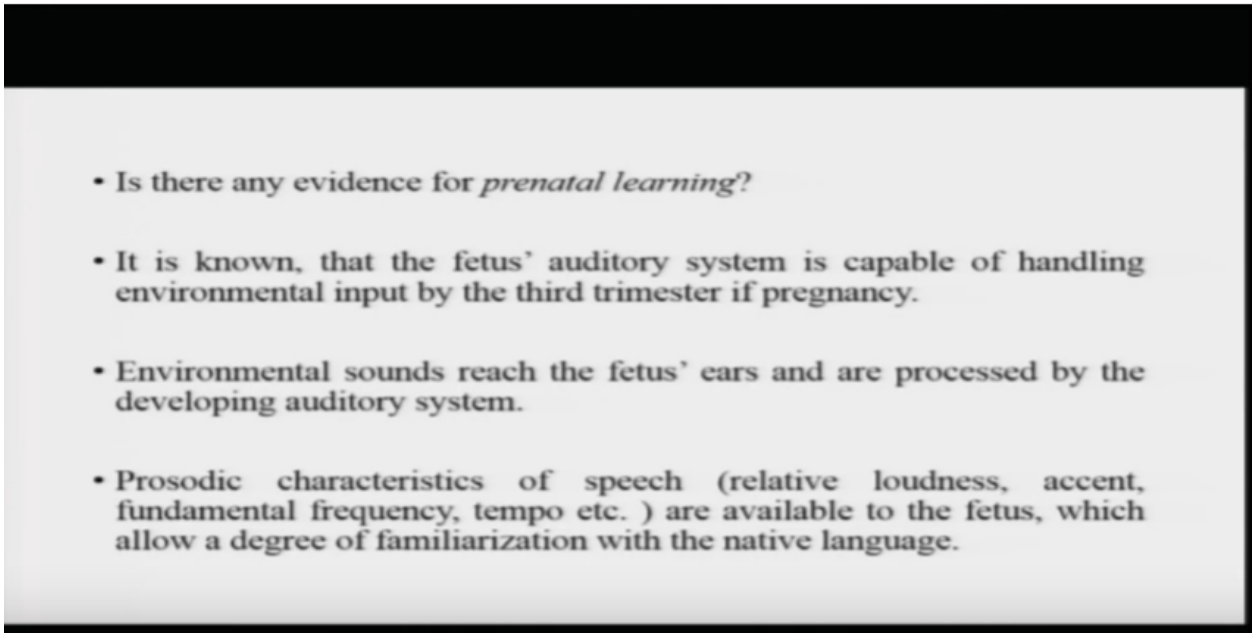
How is the child going to pick up any language at that point in time so, I'm not really very convinced with the superfast learning idea Singlish French from English there's the French Jeanne seem more plausible but suppose for example, you know a child born to French-speaking parents, was adopted by a non French-speaking, family will the child be only able to speak French or will the child be able to learn, you know language of the adoptive parents, it has been seen that children are very quick a cloning in any language that they are a so, then the French train speaking gene example also, does not really seem to be very correct to me. So, what is the solution where do we go from here, there is third possibility that people have you know pointed out and that possibility is that of prenatal learning, what is prenatal learning? Prenatal learning is learning that has started to happen even before the child is born, inside the mother's womb**.** So, children it seems are picking up some skills or are picking up some, some information, even before they are born, even while they are still in their mothers bellies. Okay?

Refer slide time :(15:13)



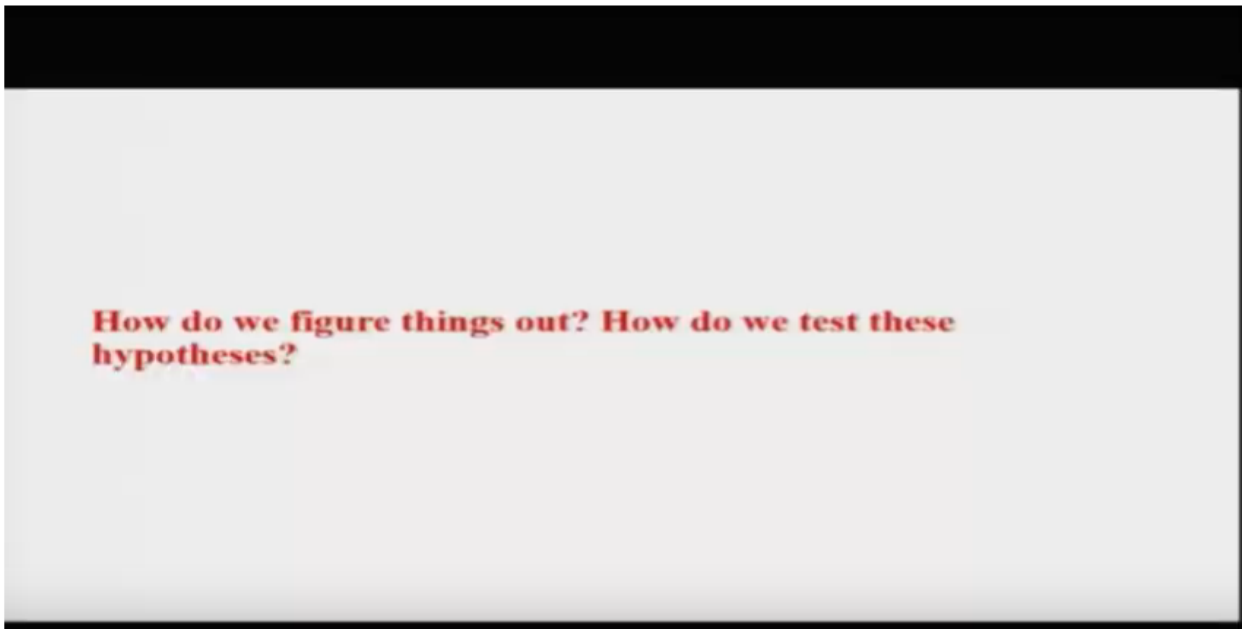
So, let us look at what is there any evidence for prenatal learning? How do we say that any prenatal learning really happens? So, it has been known for some time, that the fetuses auditory system starts functioning and is capable of handling auditory input by the time they are around you know, six month in the mother's Valley so, by the time the third trimester arrives. Okay? By the third trimester Children's hears fetus hears are able to process auditory input and they're also able to respond, to auditory input. Okay? We have quite a few myths around this and there are other stories that go around it about whether children can learn some information while they're in the mother's womb you might know of that we can discuss that in a different section some time. Now these environmental sounds, what is it of the environmental sounds that kind of reaches the babies, the ears you would know that you know your children are in the mother's womb, I'm suspended in the fetus, they're suspended in this you know sack and the sack is full filled with what is referred to as the amniotic liquid. So, the amniotic fluid basically probably is filtering out a lot of other things about the speech input, but what probably reaches the child is at least information about the pitch, frequency, the pauses and some of the more cosmetic or super segmental features of speech these features put together are referred to as prosodic features. Okay? So, these prosodic characteristic of speech, you know which I'll say for example relative loudness the accent the fundamental frequency, pitch, tempo

Refer slide time :(16:54)



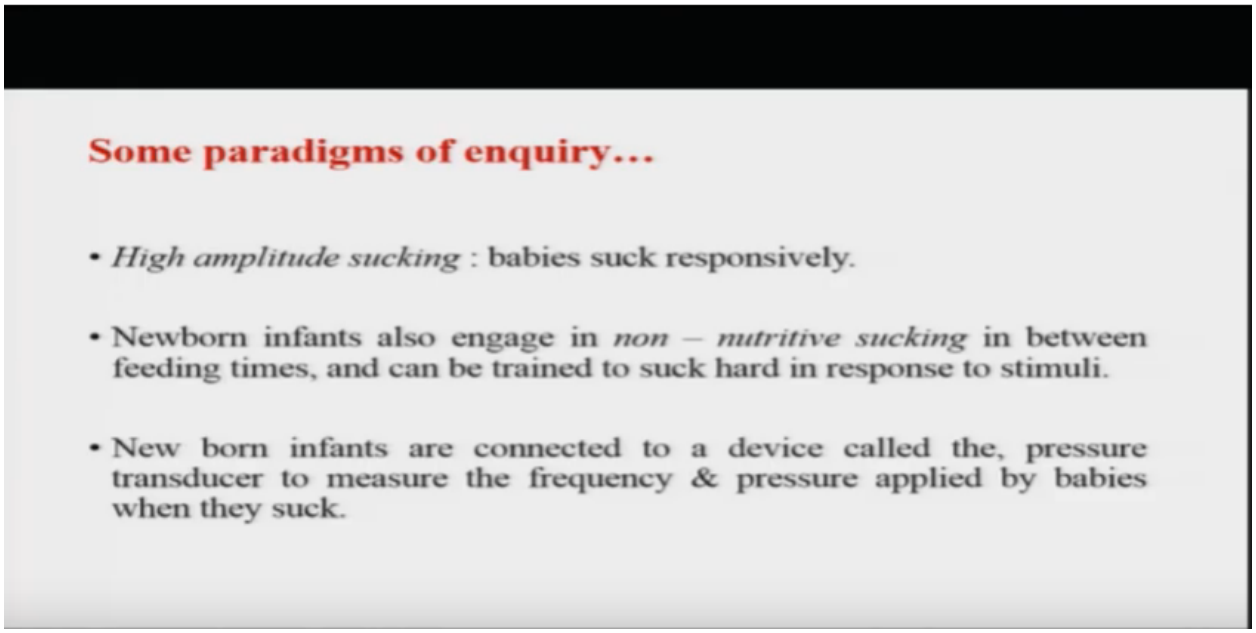
all of those kind of things are available to the fetus as early as the third trimester of pregnancy, which might allow a degree of familiarization, with the native language, also this could kind of contribute to the mother's language already becoming native language because, it's the mother's voice the child is most closest, to and that's the voice that the child has most access to so to speak.

Refer slide time :(17:17)



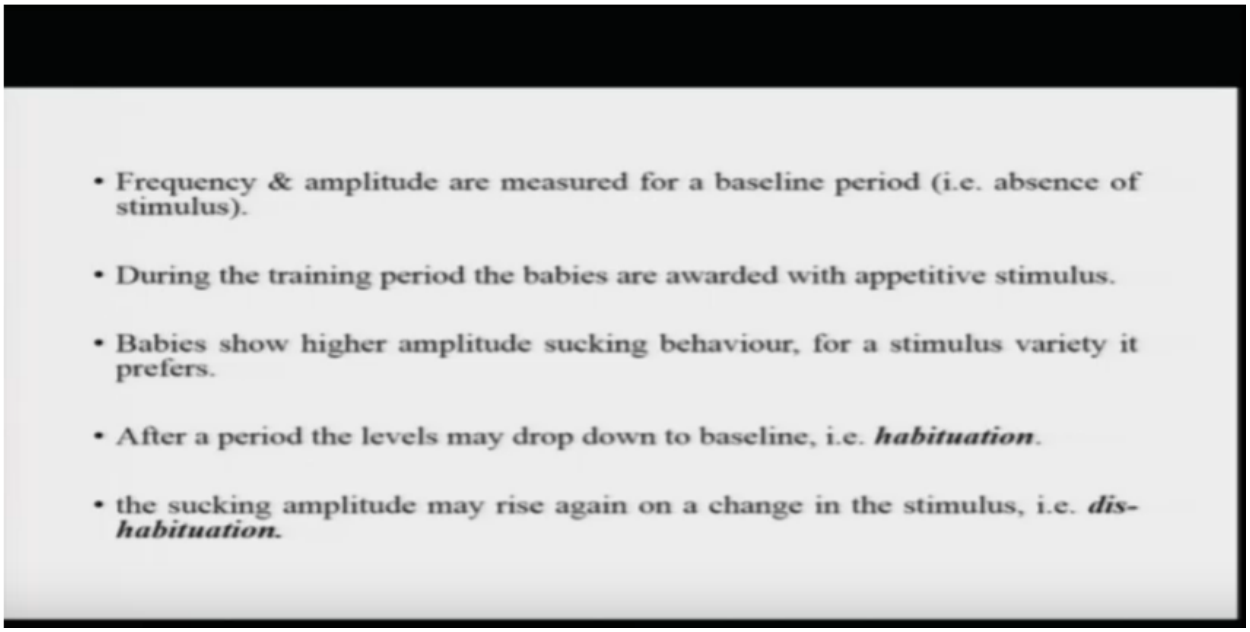
Now there are these three possibilities, how does one really test for them, how do we separate whether it is the French-speaking gene or how do you separate whether it is say for example you know super fast post birth learning or whether it is even pre-birth learning of prenatal learning. Okay? There are ways in which we kind of you know can do this so, there are you know when you work with when you need to work with children in psychology especially we always work with the human participants with older people or older children or younger adults or you know even older adults it is easy because we can design questionnaires and surveys and interviews and we can ask them to do it or as it's done is in Experimental Psychology, cognitive psychology, from where I come we create experiments, experiments are very simple, there are some visuals and there's some button press or some joystick pushing, some kind of response has to be taken and we kind of you know engage, in this methodology with the younger children and the older adults and so, on. How do we do it with young children?

Refer slide time :(18:23)



How do we do it with children as young as 24 hours old or 48hours old if we have to do it? So, there are obviously some very intelligent and genuine scientists, there have been and have devised methods to do this. So, one of the methods that we will hear a lot about in this chapter, high amplitude sucking procedure is one that taps intone of the most natural instincts of the bond baby. What is the most natural instinct of the baby was born, its sucking you know Chileans suck for food they suck nutritively they are for the most time, you know looking for food and nutrition and they do it you know, as soon as they are born nobody really teaches the child to suck. Okay? So, that is one, it is also mean by the way discovered that children also engage in what is referred to as non-nutritive sucking when they're not having food when they are not hungry or anything but they're still kind of doing the sucking response they are still doing the certain behavior, in between feeding time. So, in some sense that could also be taken as an index, of whether they're interested in something, whether it is their state of mind so, to speak mothers are very good at judging this. So, they developed this procedure, in which newborn infants are connected to what is referred to as pressure transducer it's, it's again it's basically like a sucking device , nipple maybe, however you can measure the amount of pressure, that a child is going to apply on this. Okay? You can measure, how many times the child is sucking on this. Okay? So, this pressure transducer is connected to the baby's mouth and the frequency of sucking and the pressure that the child applies while sucking can both be measured. Okay? So, these are the two dependent variables, basically and when you what basically the pressure transmission gives, is it gives you measurements in terms of amplitude and the amplitude is basically the indicator of how much pressure that the baby is applying while sucking at it. Okay? And that pressure, can also change when so for example when children are being exposed to a new stimulus or a new appetitive similar. So, to speak suppose the child is kind of you know just there and you put the pressure transducer as a child listen if there's a new sound the child becomes very curious and starts you know sometimes looking at it.

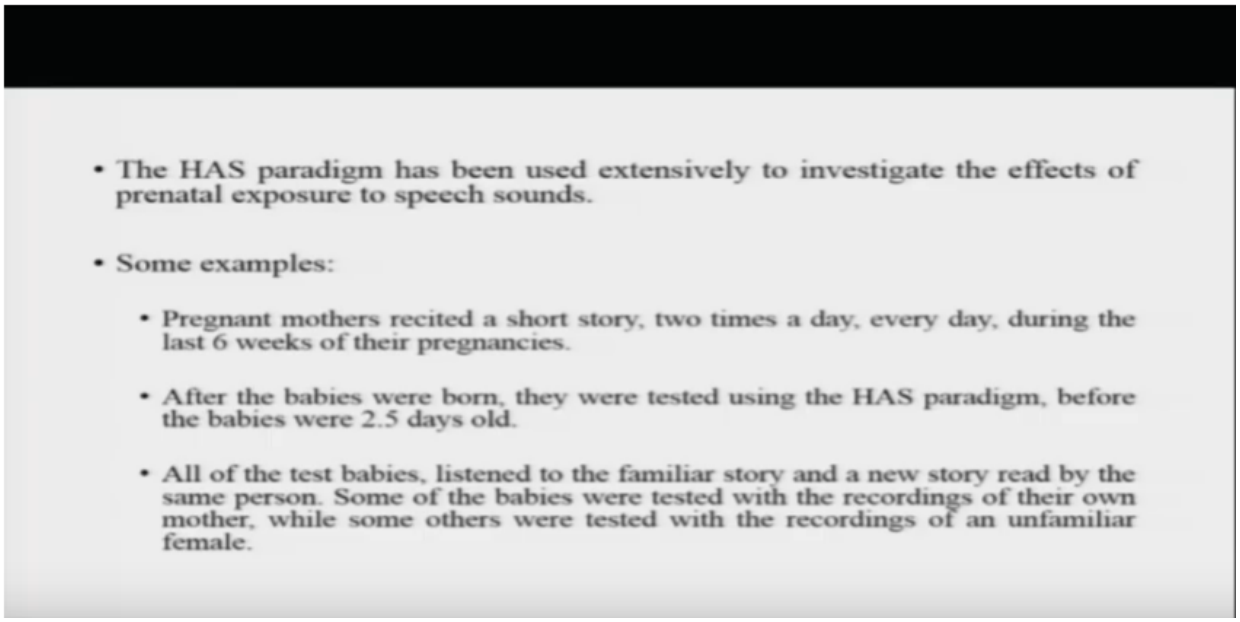
Refer slide time :(20:33)



If you're talking about very young children, they do not have control of the neck muscles. So, they don't really they are not in a position to look at it by turning their head, but they kind of show that interest by sucking very hard on the nipples. So, in this suck very hard at the nipples you get some kind of an amplitude, rising and then what happens is when the child kind of gets used to that sound, that you know amplitude goes back to what is referred to as the baseline levels. Okay? That is what is referred to as the habituation and the child is now habituated, to this sound and the sound, is not really very normal or interesting to child anymore. Another way is once you again, in you know introduce the child to a novel stimulus then what happens is that the sucking rate against goes up ,that is referred to as dis habituation. Now during the cycle of habituation and dis habituation it is very easy, in some sense or you know to detect, whether the child can detect differences between two kind of simile sample you can present, the child with one kind of pattern bah, bah, bah, bah and suddenly you Deuter you know if you're doing bah, bah, bah, bah for sufficiently long time, initially initial bars may have excited the child so, the sucking rate would have gone up but then if you keep doing just bah, bah Beaver the second unit will come down and rest at the baseline level and then you suddenly Deuter and then you'll see that our amp dude kind of Rises and that basically tells you that the child can now distinguish between bah and that is the crux of how this paradigm basically is you so, I will talk about the HAS procedure many times in this chapter and if you don't really you know get it at that point you can come back to this and try and understand what the

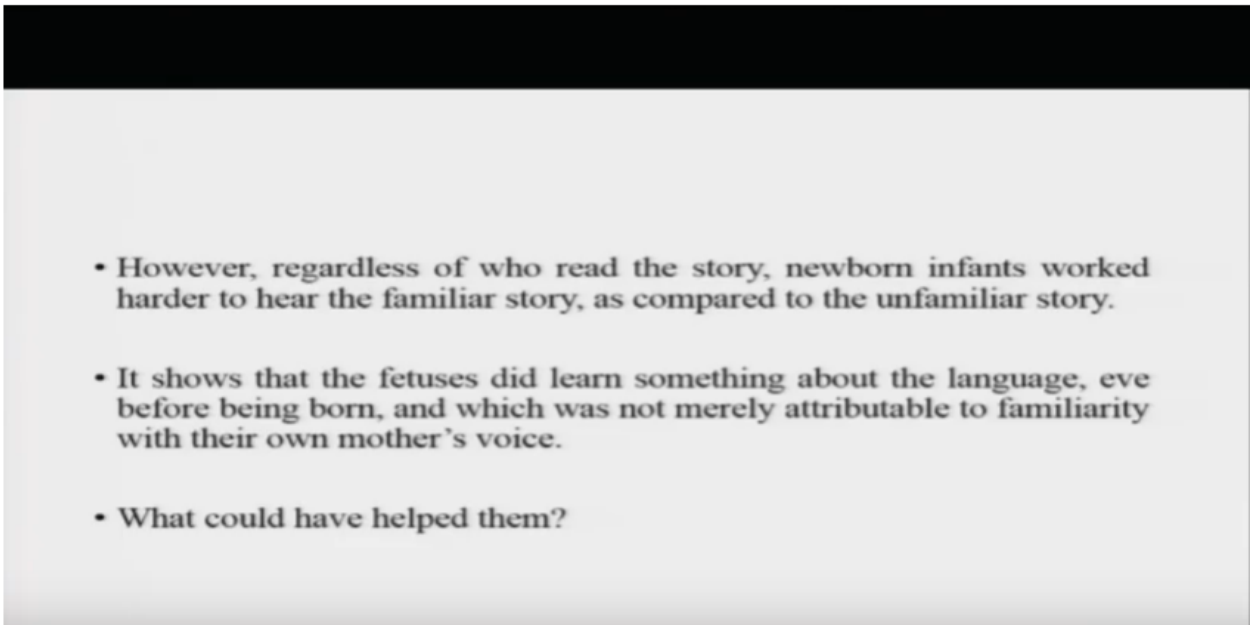
HAS procedure actually means. Now a HS paradigm has been used extensively to investigate the effects of prenatal exposure to sweet sounds. So, you know if children are being exposed to certain sounds, you know even before birth there are ways to test that and the HAS procedure is one that has,

Refer slide time :(22:34)



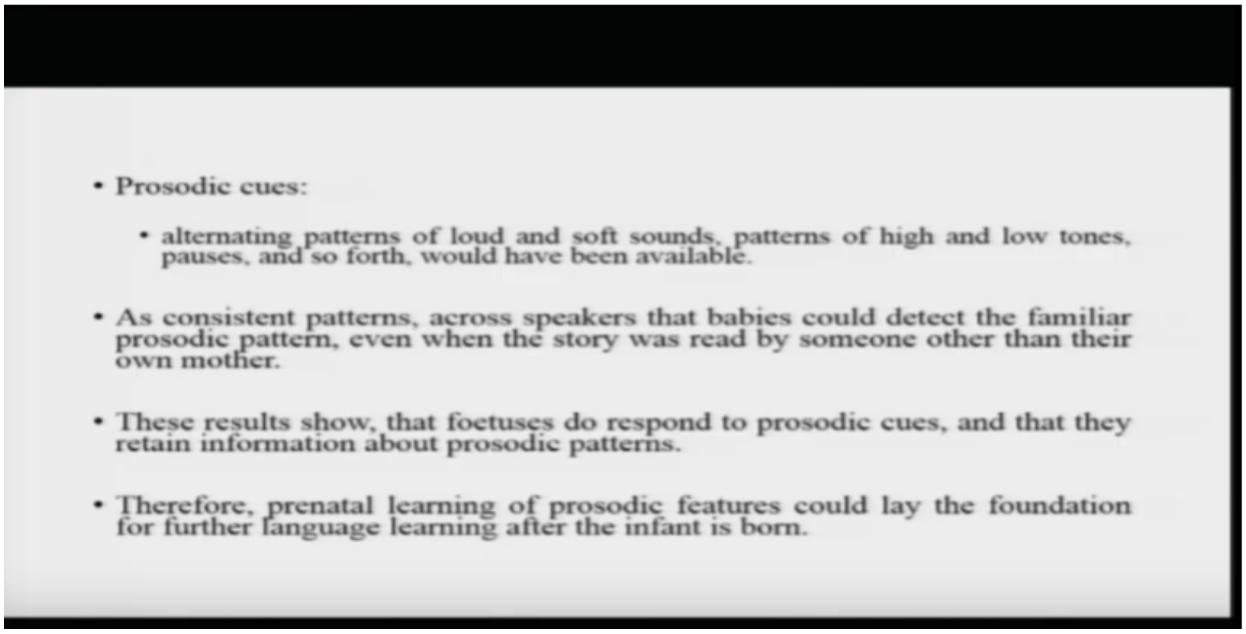
Helped people test that let us look at some examples, in one of the studies it happened that pregnant mothers are recited a short story, two times a day every day during the last six weeks of their pregnancies. Okay? So, these mothers would take up a particular story, suppose for example the Cat in the Hat on anything and they will read that story, again and again when the baby is in sort of a quiet questioned state when the baby is not very perturbed. So, the baby kind of also gets to listen to this and they do this you know two-times a day and they do this every day for six weeks, what happens then after the babies are born, they were tested using the HAS paradigm, before the babies were 2.5 days also Ruffy before the babies were like 60 hours old or so. Okay? All of the test babies, they were tested for this same story, all of the test babies listen to the familiar story and a new story read by the same person soothe same person kind of read the same that one story that they were habituate it with and the other story.

Refer slide time :(23:40)



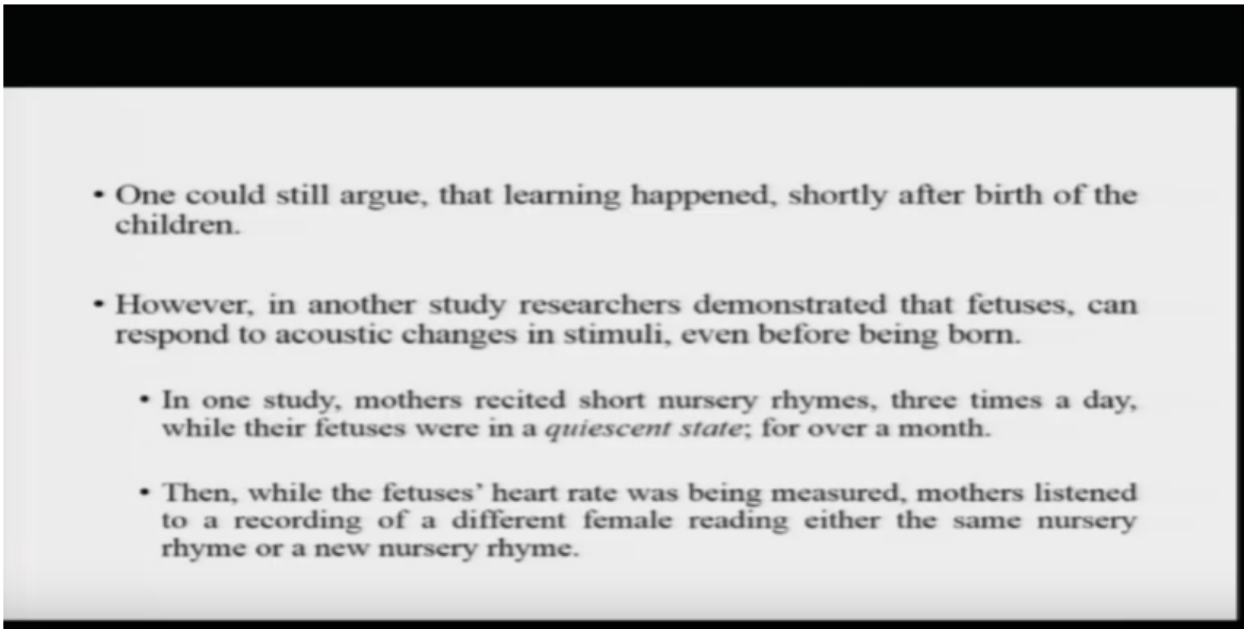
They worked harder to listen to the familiar story and didn't really prefer listening. So, much to the new story, what does this finding test says it tells us that fetuses did actually pick up something while they were in their mother's womb in the last six months they did pick up aspects of the story whether it is the tempo, weathers the pitch, where is the relative loudness accent, whatever prosthetic features they picked up, it did pick up something, from that story, obviously they probably did not pick up a lot of meaning or what the story mentor something. But they at least picked up some of the, cosmetic features of language that there are so, what could have helped them how did they really achieve that? So, there are as we said again there is there is this answer of Rosati cues you know alternating patterns of soft and loud sounds.

Refer slide time :(24:27)



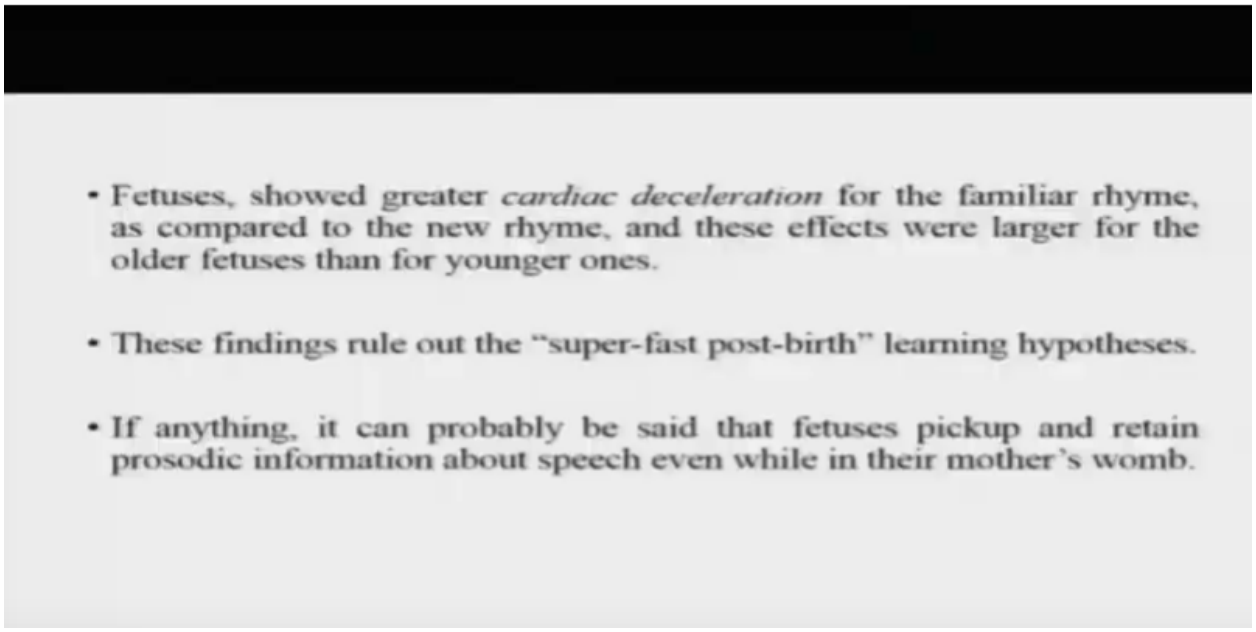
Patterns of high and low tones pauses so, forth would obviously have been available even in the mother's womb. Okay? As these patterns are consistent across speakers, these are very easy for the babies to detect these familiar patterns and even when the story was read by somebody else. So, this was not only familiarity with their mother's voice, the story while being tested was read by a different person, even though mother's had decided the story and they would have gotten familiar with the story in the mother's voice, they could distinguish between this story and another story both of them being read by a third person. Okay? So, it's not familiarity with the mother's voice that is playing a part here you have to remember, it is the patterns of that particular story, also I mean there are consistencies across say for example, if I am reading twinkle, twinkle little star versus somebody else's leading tingling little star. Okay? Some of the patterns, of that both there citations will be similar analysts we are doing it in a very different manner. So, maybe the children are picking up these patterns, of those you know language snippets that they are being exposed. This is something which kind of tells us that some kind of prenatal learning is happening Okay? And this prenatal earning is heavily based on the prosodic features of language, which you could say are sort of now laying the foundation stone for whatever the children will learn further from here. Right?

Refer slide time :(25:52)



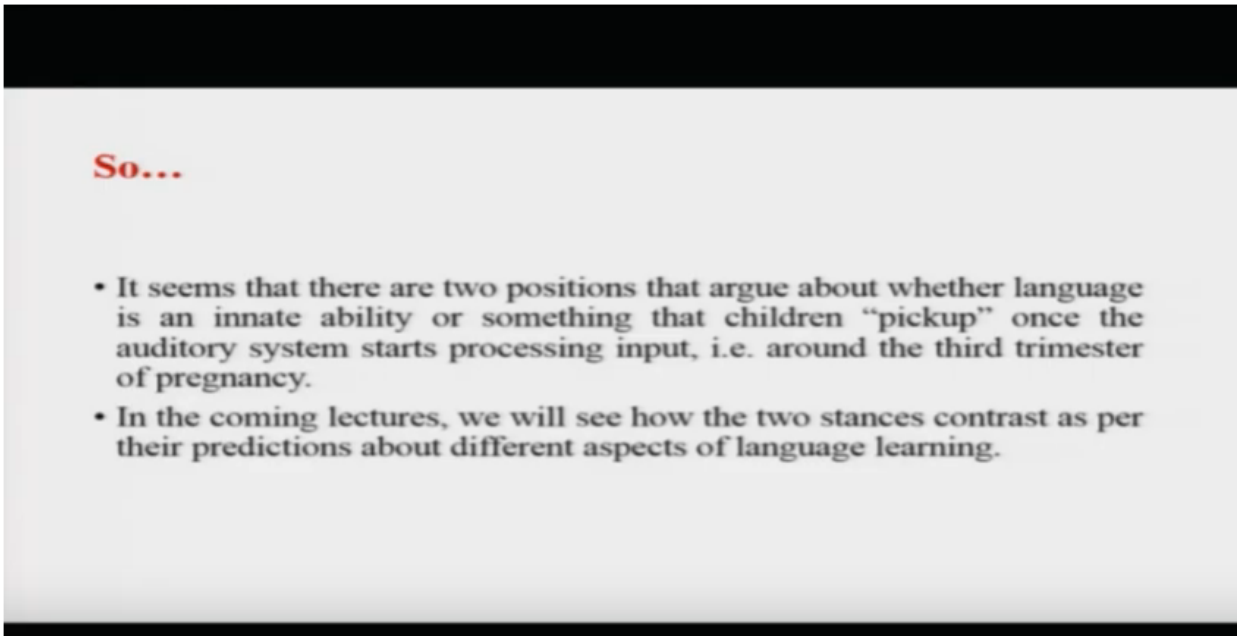
So, one could still argue at the learning theorists they could still argue that learning happens shortly after the birth, of the child you know and still say that even the story think that the children probably would have picked up after they were born in 24hours or so, and resource be so, what they did was they wanted to solve this out so, they said. Okay? Let's do another study and they did another study and in this study basically mothers recited the short nursery rhyme simply linking little star above lecture whatever some, short Nursery Rhymes they did this three times a day while their fetuses were in again acquiescence state for over a month it is again in while the fetuses are in about this form then while the fetus's heart rate was being measured mother's listen, to are cording of a different female reading either the same nursery rhyme or a new nursery rhyme again the babies are not born, this is still in the fetus. Okay? And the earlier study the babies were born talking about around 60 our old children here we are talking about fetuses still in the mother's womb and they are being tested

Refer slide time :(26:53)



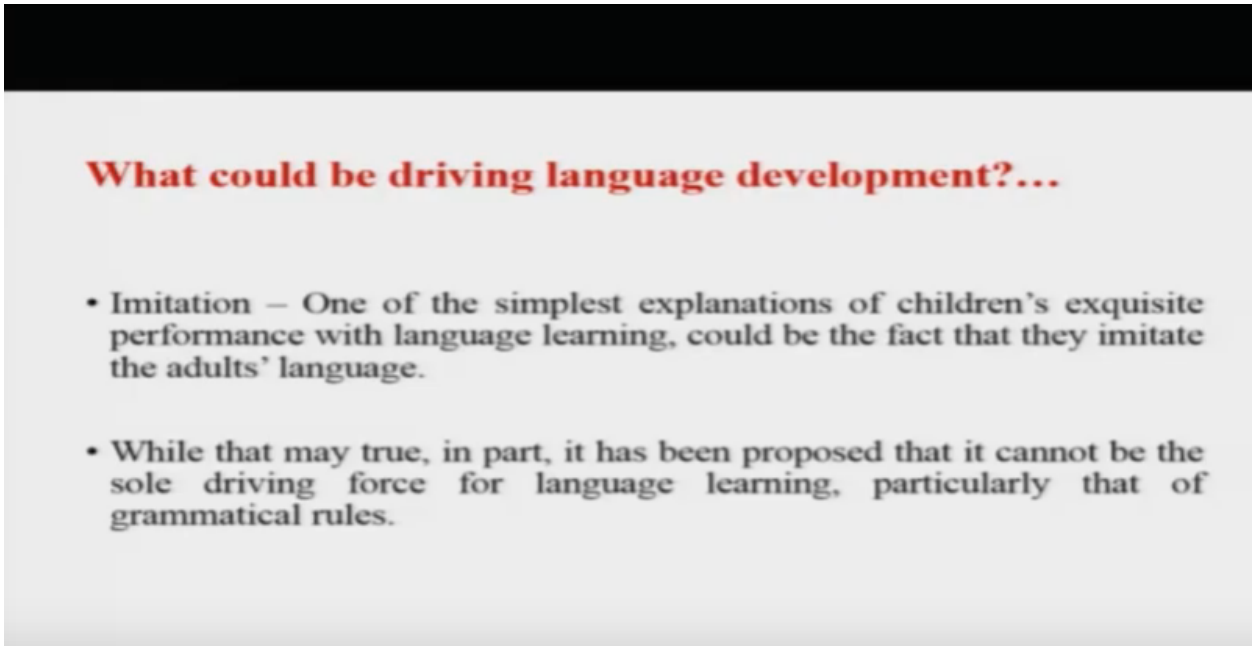
of with the sameness reimburses different nursery day. So, let us see what happens now there is this phenomena called,' Cardiac Deceleration', cardiac distillation basically happens when the baby's heart rate settles down or slows down in response to particular stimuli, which kind of is indicative of the fact that the child is used to again in innocence habituated or inhabited with that particular sound, in this test while the children are still in the mother's fetus, fetus showed greater cardiac deceleration for the more familiar time as compared to the new rhyme. And these effects were larger for older fetuses versus newer fetuses. So, you see that there is a developmental progression happening here, as well and this is happening pre birth. So, that super fast you know a post birth learning thing kind of goes out of the window. So, with this set of results, we can kind of safely assume that fetuses do pick up and retain prosodic information about language even before they are born and this could be some of the foundational features of acquisition of language as we will also see later. Okay?

Refer slide time :(28:06)



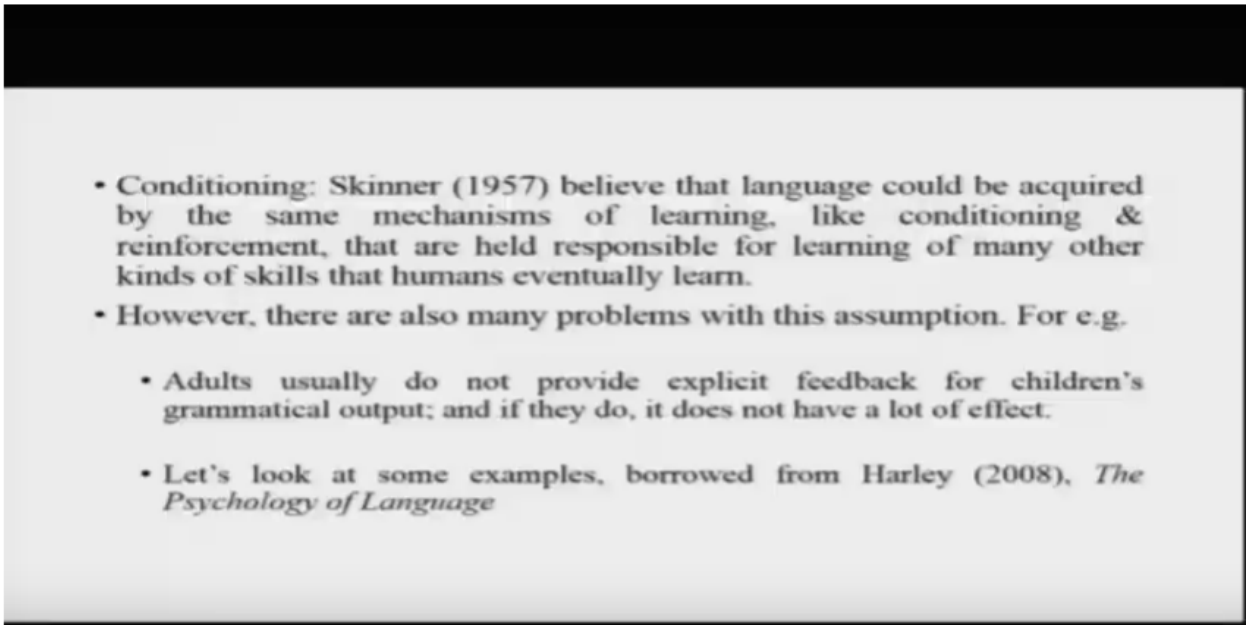
So, let's try and sum this part up a little bit it seems that there are two positions that argue about whether language is an innate ability or something that you know children pick up, once the auditory system starts processing input which is around the third trimester, in the coming lectures we see how the two stances contrast, as well the predictions are concerned about learning different aspects of language earning. Now let us move to the next part let's ask some other questions, about you know language development.

Refer slide time :(28:41)



So, we've talked about some of these free basic things but there is a lot of there's a bit of a theoretical idea, that I also wanted to discuss, in this class, which is about what could be the driving forces of language acquisition or language development, there have been some of the candidates that have been offered one of the candidates is referred to as imitation. So, a lot of people would say that you know one of the simplest explanations, of children's exquisite performance with language learning, has to do with imitation, children are merely imitating, their adults and by way of imitation, they are figuring out how adult language works, that is how they are kind of moving, while that may be true, in part it has-been proposed that it imitation cannot be the sole driving, force for learning of language especially as far as grammatical rules are concerned we are not always checking what grammatical rules, children are following or what kind of language that. So, I mean they are speaking that children make a lot of mistakes, that adults do not so, if it were if their language output were basically entirely based on just imitation, it's that slightly hard to explain the kind of errors they make, you know they make a lot of flat adults do not and that cannot happen that cannot be explained through, you know just by imitation of adult speech so, that is one thing.

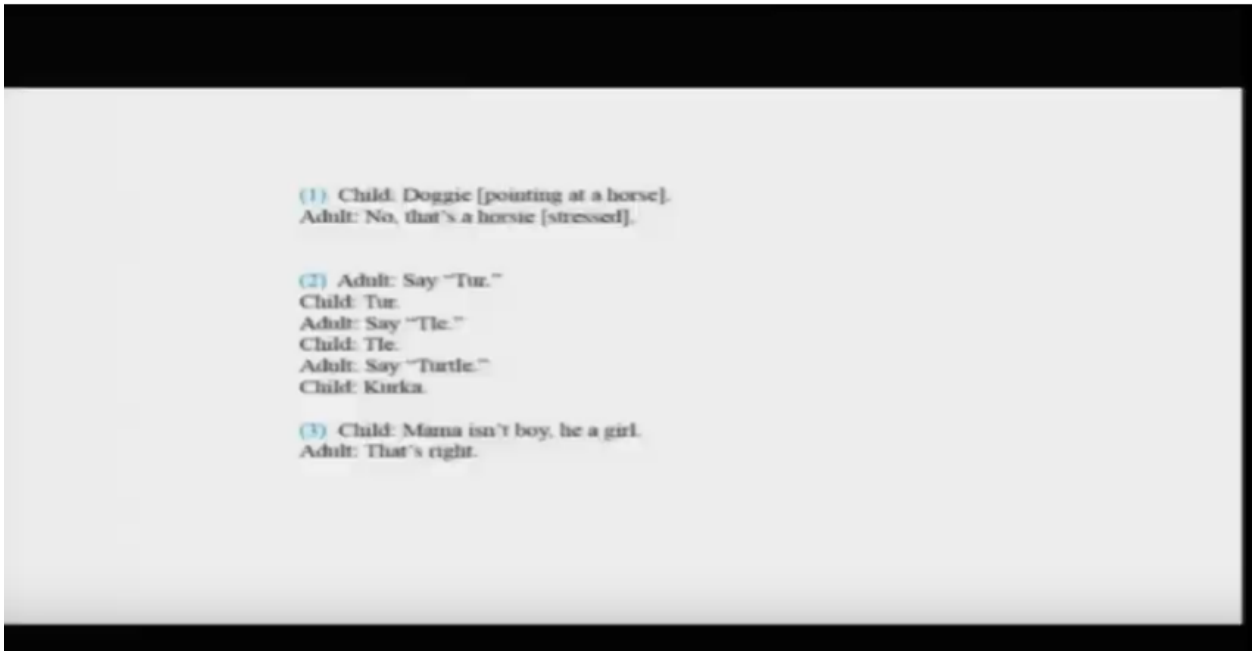
Refer slide time :(29:51)



The other candidate is refer to as conditioning, if you have done some elementary psychology or if you kind of looked at some of the other courses that I've taught you know that conditioning, is one of the basic mechanisms you know as to how learning happens you know BF Skinner John Watson there are some of they were the pioneers, of learning theories and Skinner believed in, in their sense that language,

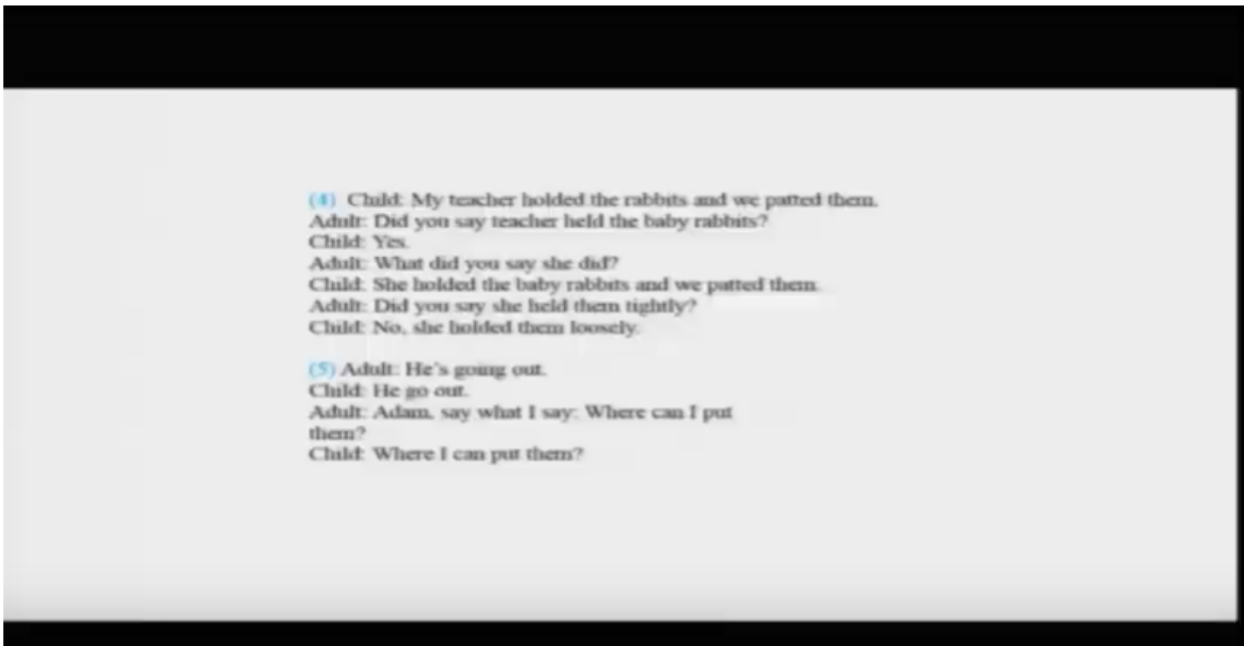
is also acquired, in much the same way that adults acquire most skills and they believed at that point in time, that most learning or acquisition of skills happens through what is referred to as conditioning, conditioning is mainly just associating stimuli .Okay? Say for example you know they're the famous example is Paolo's ,example dependent there was this dog, the dog was fed regularly, but at some point in time you know the person who used to provide food, you know somehow he used to ring, ring a bell you know you used to open the door come into the case shed, but that sound of the Bell got associated with the timing of the food and eventually it was seen that the dog, started salivating to not only the food, which always used to happen but the dog also started salivating to the you know sound of the Bell. This connection being made between the Bell and the food and then the response that you get to food is also, now you're not getting to the bill is referred to as conditioning, coming back Skinner he believed that learning happens, in much the same way and learning of language acquisition of language also happens in much the same, way he wrote a book called, 'Verbal Behavior', where any kind of you know elaborates upon these theories however people have raised problems with that. Okay? There are say for example there people like Noam Chomsky use kind of you know pointed specific problems so, that will kind of go to that but let us look at some of the problems that have been raised one of the first things, is that learning sometimes also requires a lot of feedback and adults do not usually give explicit feedback to children, for their grammatical output. So, we do not really all the time keep correcting children, we do not really all the time, tell them locate this construction that you're making is grammatically correct, this construction that you're making is dramatically incorrect, you should correct this to move to a grammatically more correct version, you're not doing that with our children all the time, how is it then that from the time that they start speaking you know 18 months, two years to a little bit more than two point five to three years, we start from you know making a lot of grammatical errors ,to really reaching a point where they're speaking flawless, native language you know Hindi English Bengali Tamil whatever that might be. Okay? So, let us look at some of the examples.

Refer slide time :(32:43)



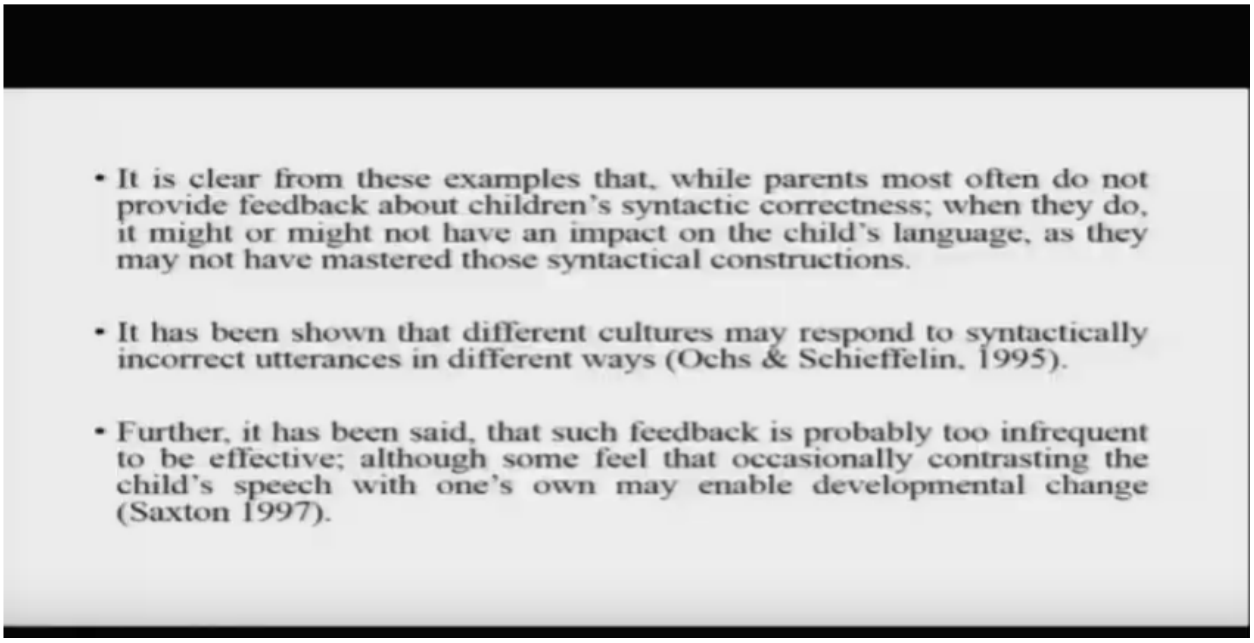
You know let's look at whether children actually listen to the feedback. So, you'll see some of the snippets that have borrowed from Trevor Hartley's book, the psychology of language, look at this conversation. So, it's in one of the conversations, child says doggy, pointing at a horse and the mother kind of corrects this he says no, it's that's not a dog that's a horse that's a horsey. Okay? In a different thing that adult is trying to teach the child to speak Turtles. So, the child I will say stir the child, sister and I'll say still ant sister and basically other says say turtle and then the child kind of fails to combine this. Okay? Similarly the child says mama isn't the boy here girl and the other says that's. Right? You see syntactically, that is not. Right? But meaning wise that is correct. Okay? So, in some sense you can say the adults or the parents are mostly about correcting, whether the statement that the child is making is factually correct or incorrect, they're not really very worried about, the syntax of what the child is saying.

Refer slide time :(33:48)



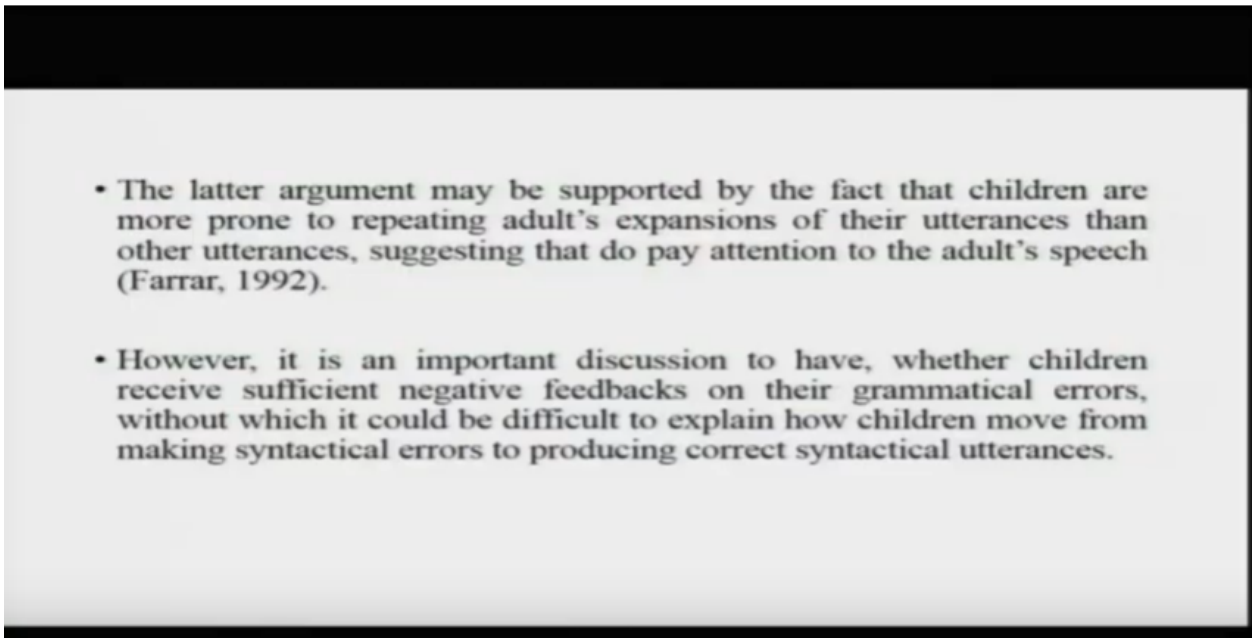
That is one let's move on to a different example, where parents are actually trying to do that. So, in this conversation the child says my teacher, holded the rabbits and we patted, them and they adult us and did you say, the teacher held the baby rabbits child says yes the adult said what did you say repeat again Joshi holded the rabbits and we patted them, the adult again kind of tries to remind did you say she held them tightly no the child says no she holded them loosely. So, you see the feedback, on syntax isn't clearly working. Okay? Also let's say another example, adult says he is going out, child says he go out Adam Arel says Adams say what I say where can I put them the child kind of repeats where I can put them. So, you see exact repetition is also not happening, both of these examples you see adults are trying to give some feedback, by the way of syntactical grammatical construction. But that is also not really rubbing off as well as it probably should. Okay? So, even if as adults we were about grammatical constructions to our children, they're not really listening in, in that sense they're not really being able to follow or even repeat because they probably have not mastered those rules of grammar themselves until eventually they do it by themselves they will not be able to follow these instructions anyways. So, this is interesting, this probably tells us that they're probably they're you know the learning, thing is not really fitting in well here, you know. So, it's clear from these examples,

Refer slide time :(34:18)



that by parents most often do not provide feedback about unison tardy connectedness, when they do it might or might not have an impact on the child's language, that is one it is also being shown, that different cultures they respond differently to syntactically incorrect utterances. So, again that's not something that happens universally, now some cultures might value syntactic correctness a lot, some just might not still children from both of these cultures end up learning language equally well. So, that also is something, further it has been said, that such feedback is probably too infrequent to be effective although some would feel that occasionally if you do this it might kind of facilitate the child's overall language development. Okay? So, both of these things are there the latter argument, you know and that you know occasionally contrasting our own in a language output me the children's output, might be useful. So, that kind of is still can be supported, by the fact

Refer slide time :(35:16)

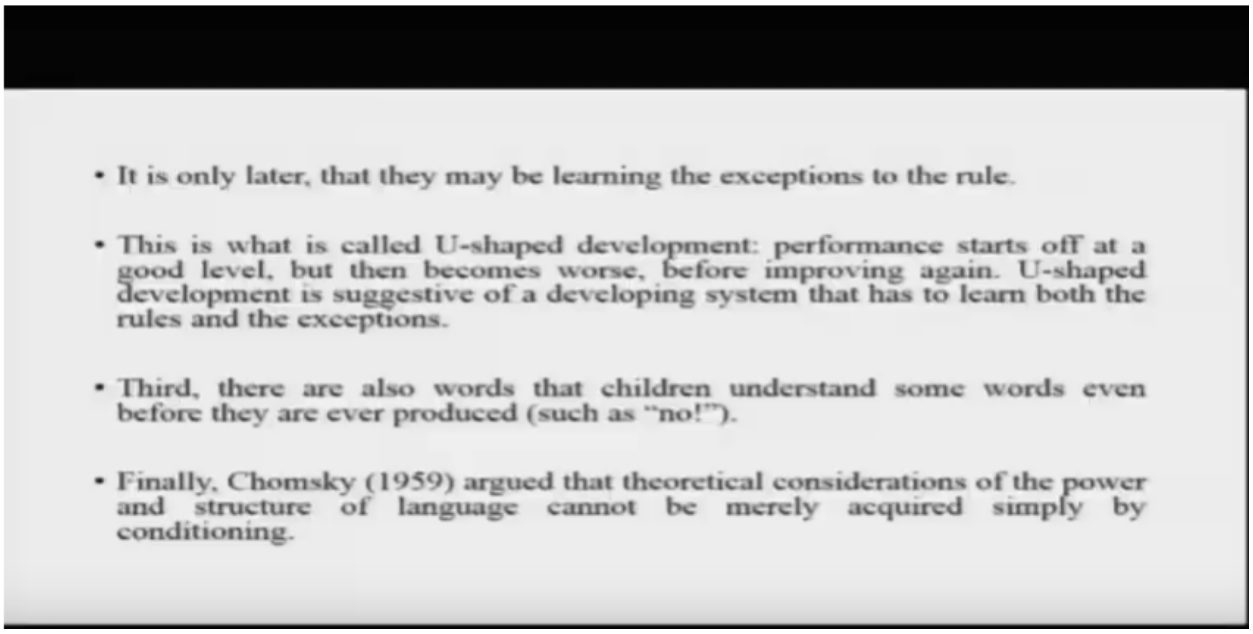


That children are more prone to repeating adult's expansions, of their utterances than other utterance suppose for example as an adult you are describing a sentence of the child. Okay? The child is more likely to repeat that and in that doing so, might be able to pick up some of the rules of the language there. So, that's just as one you know aspect, of that however it is an important discussion to have, you know whether children receive sufficient negative feedbacks, on the grammatical errors without which it could be difficult, to explain how to move from making. So, many grammatical errors to not making any errors, even in a very short span of time.

Refer slide time :(36:55)

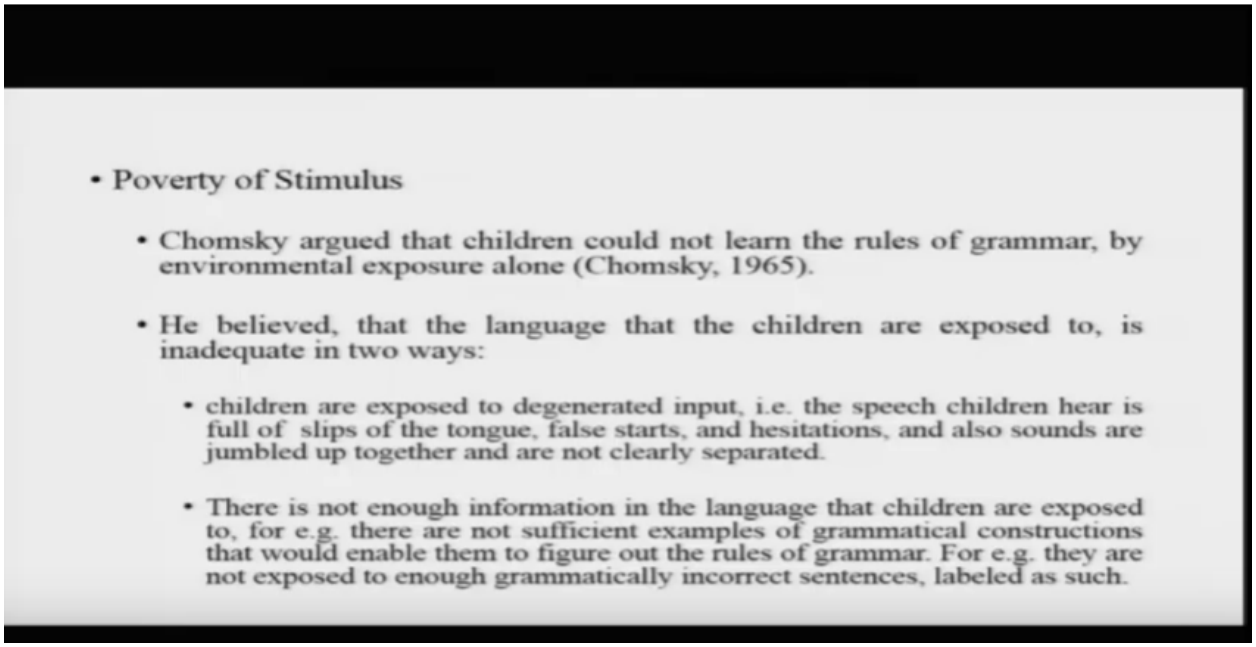
Let's move further another problem by the way to the learning approach to language acquisition, the one advocated by Skinner and others, is that the pattern of acquisition of irregular past tense verbs, it basically cannot be accounted for just by learning, say for example you see chill in all the time use, its regular past tense incorrectly say for example they would sometimes dived instead of gave, they would say drink, instead of drank, you know these kind of errors should make very commonly. Now an explanation, for this pattern is that probably, what the children are doing is the first mastering specific instances the first master specific past tense forms of you know specific of these specific verbs and then basically what they will do is eventually when they have so, many of these they will deduce a general rule the, general rule could be that if you add Edie to a verb form you can get a past tense of that so, for example if you had a D to play, you make plate so, that is that is probably something that is happening. Now only later that

Refer slide time :(37:55)



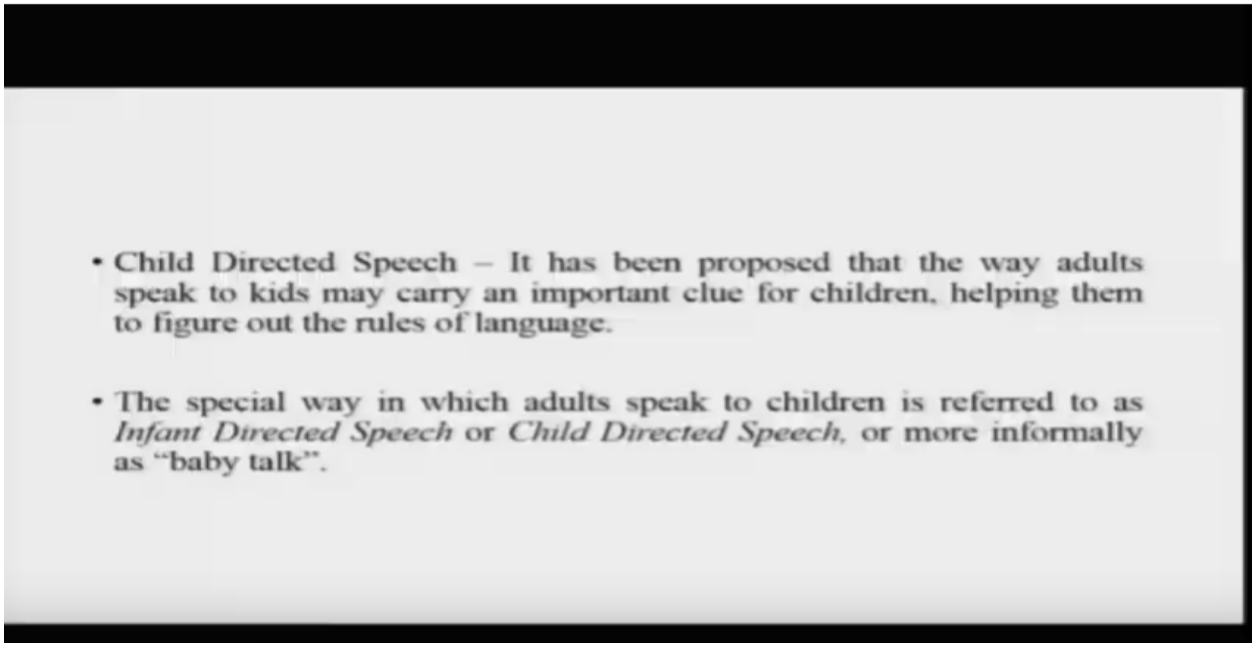
The children will be able to master the exceptions to this rule that drink, plus IDI does not really make the correct past tense form of drink, because the correct passage form of drink, is drank sin only for thought or simply forgiven which is gave. Okay? This pattern is referred to as the huge ape development, performance starts off at a good level, because, they are mastering specific instances then it kind of goes down, because they are kind of coming across so, many of these exceptions and then while they have mass started mastering these exceptions the performance again comes up this is the u-shaped development, for you know acquisition of irregular past tense verb forms. Okay? So, thirdly there are also say for example words that children you know understand, even before they are pretty you say for example you know they understand the meaning of know or meaning of years for example even before they can actually produce them. Okay? So, some learning is, is happening before even they are doing something, you know so again all three of these points in the irregular, person form the third the new words from and the third thing about feedback all of them together if you see, kind of you know or tells us that maybe children are not really learning language through you know conditioning or other kind of learning procedures, that have been you know specified, well the last things we could talk about in this lecture again we're kind of theoretically discussing every ,

Refer slide time :(39:21)



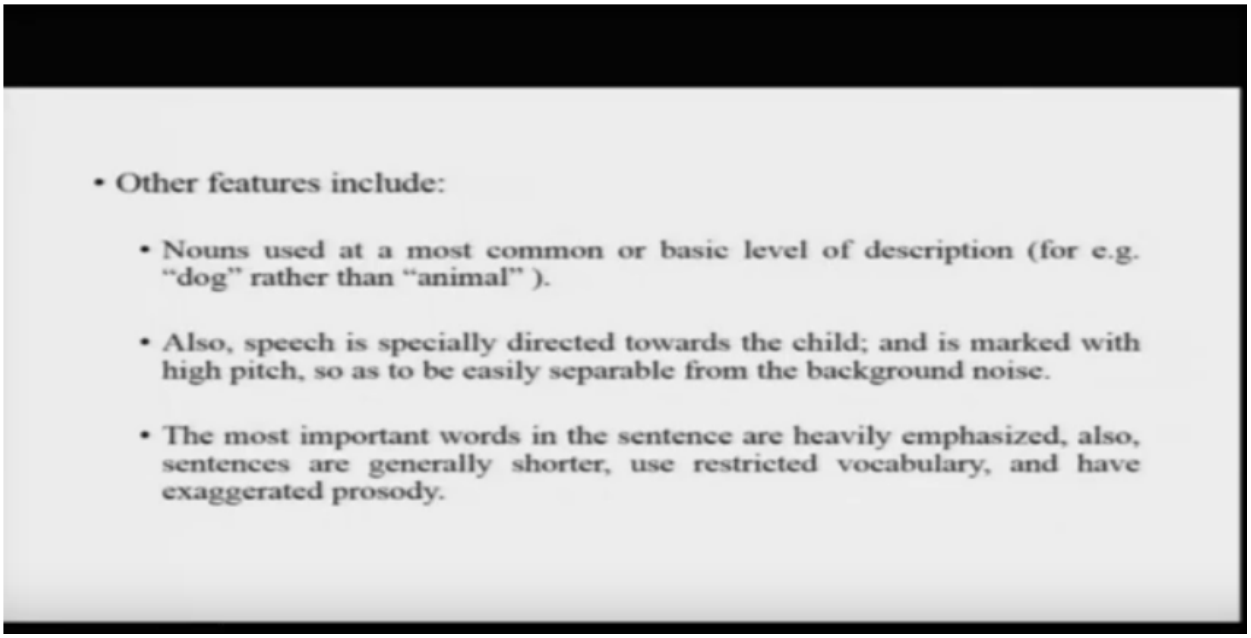
possible drivers of language development, is poverty of stimulus Chomsky, argued that children could not learn the rules of grammar by environmental exposure alone because, he believed that the environmental exposure is at the best inadequate, it is not carry enough information, for the child to be able to deduce a lot of language out of it. Okay? He believed that children are exposed, to what is referred to as degenerated input you know that feed their children here is full of slips of tongue it's full of false starts hesitations and also sounds are all jumbled up together it's a continuous, stream of speech now all of this kind of make it very difficult for the child to master anything out of the speech know that the child is exposed to all. So, he says that there's not enough information, in the language that the children are exposed they are not in a fake samples of grammatically incorrect things, being pointed as grammatically incorrect things. So, that the child can deduce a rule out, of it both of these things are there. Okay?

Refer slide time :(40:18)



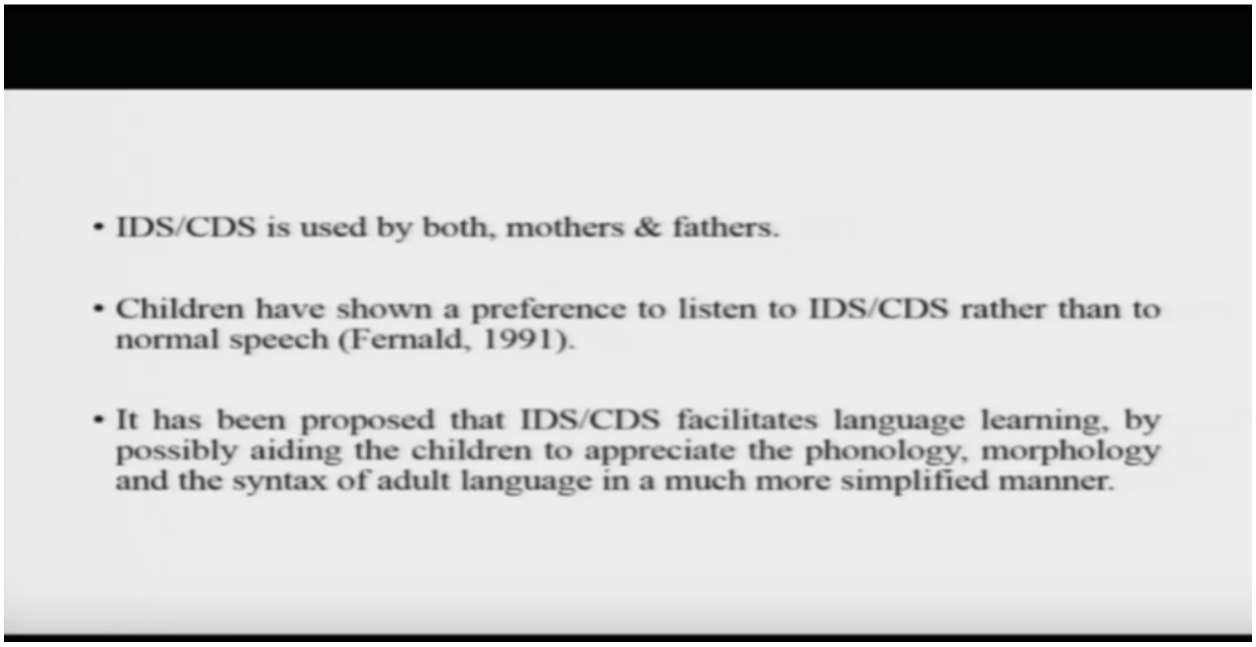
So, this is the idea of poverty of stimulus that there is not enough information, in this whole thing for children to be actually, you know picking up a lot of a lot out of it. Okay? Let us move to the final segment of today's talk, which is child directed speech, one of the major candidates which have been suspected to be you know driving language development, especially in very, very young infants that just bond still the slightly older infants, is this concept of child directed or infant directed speech, if you've noticed all of us especially parents and then even people around these young kids we speak to them in a very different way as compared to when we speak to, you know people of our same age, you know we speak to them in, in a way that is usually referred to as baby talk, but has certain characteristics you know it has exaggerated prosody it has. So, many pauses, it has high pitch, it has this thing song tone about it so that prosthetic features are exaggerated, therefore neurologically very simple words are used Bob those kind of things you know shorter, sentences are used simpler vocabulary, is used say for example also then you know the differences between successive words, is very highlighted. So, the child can pick up, what words are being used you know all of this put together kind ,of in some sense makes it very easy for the child to appreciate what language is being spoken, what is the content of whatever is being spoken. So, all of that is here.

Refer slide time :(41:54)



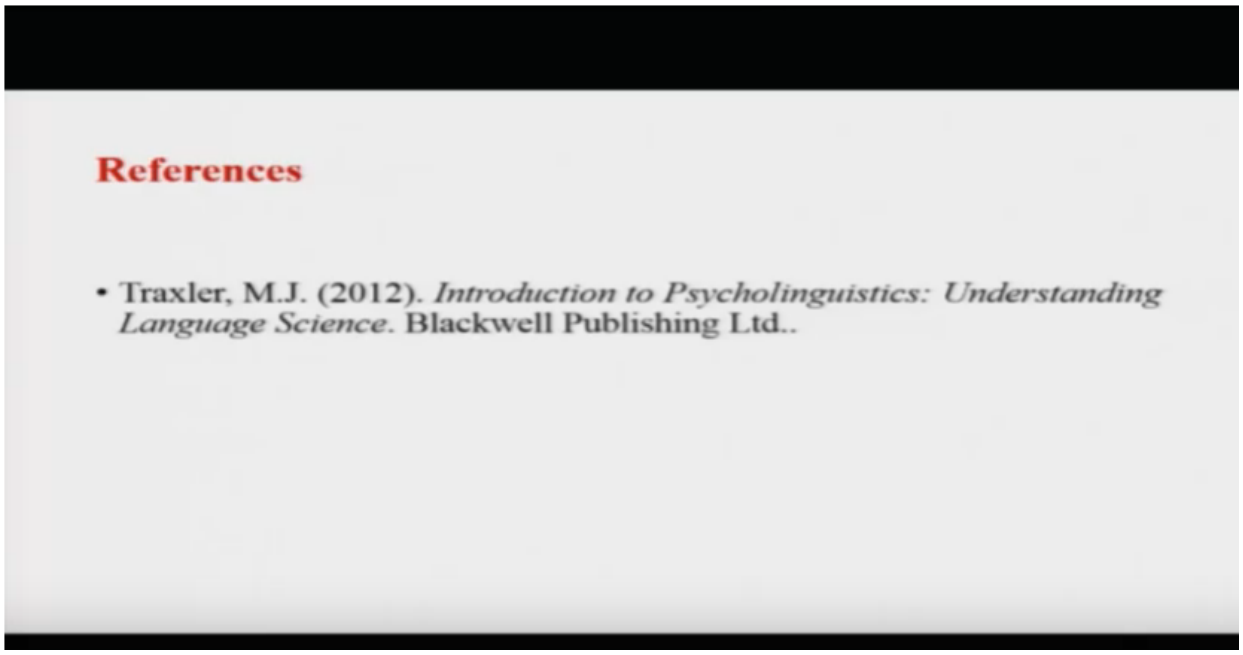
Now other features will include also that we when we talk to children about the world, we start you know tend to use every simple nouns very basic level. Now so, we will not talk to a child and say that this is a dog and the dog is a mammal, will not really say we will just talk about it as a dog it's basically, that at that level you know at the level that is most easy to understand. Okay? Also it has been pointed out there child directed speech or infinitive speech is directed towards, their child we are just talking when you are talking with the child they're just talking to the child alone, you know and we are kind of highlighting it in such a way that the speech stands out in face of all the background noise that maybe this child knows exactly, what you speak and the child is as I said earlier paying attention to what you're speaking. Okay? It is easy we're making it easy for the child to pick up word boundaries to you know make a sense of what I am saying I am saying pen. So, the child will know that I am looking at this object and putting at this as a pen, please pick up this pen something like that. Okay? I'm not very good at doing this though.

Refer slide time :(43:00)



So, it has been said that ideas hideous whatever you call it is used both by mothers and fathers and it is also being shown that children kind of prefer to listen to the ideas or Sirius infinite or childhood speech rather than to normal space so they're showing some preference for this as well. Okay? It has-been also proposed in that sense, that these ways of speaking, the facilitate language learning by possibly aiding the children to appreciate the phonology, morphology and the syntax of all At Language, in a much more simplified manner it's almost like we are giving them a lot of practice, in what is going to come next remember it's not all the time that we talk to children like this, but say for example whenever we talk to the children more often than not we're kind of using this language, which is in a sense giving them this practice with adult language. Okay?

Refer slide time :(43:52)



So, this is all for today I was trying to give you a basic initiation, into what are the topics, what are the problems, in acquiring language and in the coming lectures we kind of take up this you know topic a little bit further looking at what are the basic challenges, that the children need to say you know surmount in order, to say for example, you know, acquire language flawlessly, in what is a very short period of time. Thank you.