Language, Culture and Cognition: An Introduction

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Module - 05
Part - 02
Lecture - 12
Language acquisition contd

Welcome back. We are in the module 5. In part 1 of module 5, we have looked at various issues with regard to Language acquisition. Primarily, first language acquisition and various factors that are integral part of language acquisition at that particular stage. So, we talked about critical period hypothesis, we talked about how the stages of language development are, and then what are the theoretical standpoints and so on.

We have also introduced the idea of the Theory of Mind, what is a theory of mind? And we have seen that Theory of Mind basically is a precursor to a properly developed social cognition in children. Social cognition is the understanding of faiths and belief system, and intention and you know, predicting the behavior of others and so on and so forth.

Understanding oneself within a larger domain of constantly interacting individuals, constantly interacting organisms, and with respect to certain kinds of rules and regulations and so on and so forth. So, being aware of your circumstances, surroundings and so on is what basically refers to social cognition. So, we have seen that Theory of Mind is the primary building block of that particular aspect of cognitive mechanism in human children. And also that theory of mind is developed pretty early in life.

So, now, we will take on we will move on with the same discussion and look at certain other aspects of Theory of Mind. So, we have talked about what is theory of mind. Theory of mind is about understanding that oneself, one's own our mind has its own ideas, belief system, behavioral pattern and so on and so forth. Similarly identifying that others also have a set of belief, understanding and so on and so forth.

And, most crucially that these two can be different. So, my idea of a particular thing, my belief about a particular thing can be different, my schema of understanding a particular notion, particular event, people name it you name it anything else can be different from the other person this is a very fundamental understanding with respect to human cognition.

So, we have talked about the presence of this particular aspect in human children, but how do we really check, how do we really find out whether a child is capable of exercising his Theory of Mind. That the child is having a theory of mind of its of his own and how do we really go about it in terms of research.

So, whether a child is developing normally can be ascertained from various factors; we all know when we see children developing through stages of, you know linguistic development, whether it is social development and so on and so forth. It is not very difficult to tell that a particular child is typically growing and we can also differentiate between a typically growing child and a non-typically growing child.

So, what are those factors that we immediately ascertain? Even if you are not a researcher we all are capable of kind of pointing out the factors. So, what are those factors? Most importantly one of the most important pointers for differentiation between typical and atypical children will be language development.

So, language development we have seen that by the age of two, children are beginning to speak in words and very fast, very quickly of after two years of age they will go on to the sentence stages. So, language is one important aspect here, and another is social behavior and there are of course, multitude of other factors as well.,

Now, we have already seen theory of mind as a precursor to social cognition. So, because theory of mind precedes a fully developed social cognition as a result of which theory of mind also gives us a very important indicator as to whether the child is growing normally or not. Now Theory of Mind is an abstract notion it is a mechanism of the mind that makes us do things, that makes us create self belief as well as understand others' believe and so on and so forth.

So, theory of mind per se cannot be checked. So, there are tasks that are designed around that idea to check whether the child has developed his Theory of Mind or not; that is why theory of mind is important even in this aspect. So, one of the most important test of theory of mind for children is what is called the 'false belief task'.

False belief task, typically, is designed to check if the child is and the child can show his or her understanding of false belief, as in what is the belief system that he has can be

different and the other person can be attributed a false belief, even when the child knows it not to be true.

So, this false belief tasks are various, basically various versions of the initial false belief task which was the Sally and Ann story. So, what is a Sally and Ann story? This is a depiction of Sally and Ann story.

The child is shown these the this the picture cards and a series of events that takes place. So, what happens is that there are two characters; there can be two dolls initially there were two dolls, but now it can be also animated. So, there is a person called Sally and there is a person called Anne.

As you can see that Sally puts her doll puts her red ball in the basket. So, there is a basket and there is a box. So, Sally puts her red ball in the basket and then leaves the room, Ann sees it happening, and once Sally goes out of the room and takes the ball and places it into the box.

So, replaces the ball from the basket to the box. Basically what is happening here is, in absence of Sally, Anne has moved to the location of the ball ,of the referent here which is the ball. Now Sally comes back. Till here the child is shown the pictures and the event series of event that is happening and then the question that will be put to the child is 'where do you think Sally will look for her ball?' This is the question.

It is a very simple story very simple thing that is happening here, but the remarkable finding in this kind of story in this false belief task is that children at age of 3 cannot pass this task whereas, children at 4, can. So, basically what is happening here what do we mean by passing the test? The test the child will pass the test, when he says he or she says that the place where Sally will look for her ball is the basket.

Because Sally does not know the ball has moved, but children who are very small like 3 around 3 years or before 3 years of age they will say that the that she will look for the ball in the box, because the child sees the box as the container of the ball right now. And he she cannot ascribe the false belief in on to Sally.

So, taking off the belief system from one's own self and imposing it on others is still there and. So, this is a point where the child has not been able to differentiate between the mental

states of the observer from the mental state of the other person, in this case Sally. So, Sally has a different mental state as opposed to the child. Child has seen the ball moving, Sally has not.

Very simple thing, very simple task; however, the remarkable finding is that irrespective of language, cultural background or any other criteria children aged 4 can perform this task correctly and flawlessly; however, children at around 3 years of age cannot, which tells us that the understanding, the Theory of Mind basically takes place in children around the age of 4. So, if a child cannot perform the false belief task correctly at age 4 then there is something to be probed, that is the point here.

So, white why is there a particular age which is almost universal, that is at around age 4 children tend to develop the theory of mind. So, why is it like that? What is it about so, what is it so special about age 4, that makes children grow up um makes children develop theory of mind at that particular stage.

So, there are two primary theoretical assumption,s as to why it happens one has to do with the language development. One school of thought, one particular theoretical aspect of it is that children, this change from 3 year to 4 year in terms of acquisition of theory of mind, is dependent on the child's language development.

Because this is the age when the child starts mastering grammatical rules. In fact, complex grammatical rules, that includes embedding in a sentence, embedding in tense, complement clauses and so on and so forth. So, that is the complex grammatical structure that the child masters as a result of which, it also has a an impact on the understanding of belief. So, 'I said to Ram that he was not capable of passing this exam because….' and like this; this kind of a complex embedded sentence. So, that each embedded clause has its own subject object and a verb and so on and so forth and there is also a matrix clause.

So, by the time the child has mastered these grammatical rules of understanding the matrix clause along with the embedded clauses and they are you know finer nuances it means that is when the child is able to negotiate complex relationship between various agents and their actions. And this is understood to be a reason why children develop theory of mind also at the same time.

This was the theory. However, we also have some counter to this theoretical standpoint; there are some recent findings do not support this link between understanding sentence complements and theory of mind. In fact, there have been studies that checked on young children, who are very well, who do very well on syntax and semantic tasks are still not able to pass the false belief task if they are around 3 years of age.

Because some children have faster language development as opposed to others. So, even when children have mastered the complex grammatical rules of, you know, embedding and difficult complex clauses, even then they are not able to pass the theory of mind task I mean the false belief task at that age. So, this has to be something else. This is probably not dependent on the language development, stages of language development.

So, the second theory is that; theory of mind develops at a time which is in conjunction with other cognitive developments. So, this is the what are the other cognitive developments? this is typically has to do with the inhibitory processes and pragmatic skills of general purpose cognitive mechanism.

So, basically when the child, as we have seen by the theories of Jean Piaget that children go through various stages of cognitive development. So, at this age, they are developing the their inhibitory skills their executive function mechanism and other pragmatic skills. So, that is when it goes, it is it goes without saying that this also has a result in developing their theory of mind.

And there are of course, there are many final nuances in each of these theories, but this is roughly the two assumptions with respect to why children develop theory of mind at a particular age.

Now whatever the theoretical account is, it seems that the child's performance on story based theory of mind reasoning, depends on the child's exposure to language exposure to verbal communication verbal and non verbal communication systems that teaches them that people have beliefs that are different from their own.

Now, this is a very big claim to make; what we are trying to say here is that irrespective of whatever theory you go by, it is the it is certain that children do develop Theory of Mind-based reasoning skills at a particular age. However, one interesting twist to is that, language does have an impact even if it is not the grammatical aspect of language, but the

exposure to conversations in the environment, its seems to be a very important pointer towards developing of this kind of a reasoning system.

The reason being that conversations typically, more often than not humans talk about other humans. More often than not only sages and great intellectuals will talk about great things, but at a normal level, most people lesser mortals like us, we talk about other humans. So, while we talk about other humans, what we are basically doing is we are talking about different mental states as different from us or as similar to us.

So, we will talk about human agents as carrying different mental states, different belief system, different understanding, different knowledge base and so on and so forth. So, this is the important takeaway that children understand from those conversations and hence conversations around children is extremely important to develop their theory of mind.

Now this is not entirely a just a speculation there is ah there is a very strong support empirical support for this kind of a reason line of reasoning. This one of the strongest support comes from data on, data that is from the work on deaf children from different kinds of backgrounds. Deaf children from sign language environment versus deaf children from verbal language environment.

So, deaf children from sign language environment have been found to be doing better in theory of mind-based reasoning as opposed to deaf children from verbal language environment. The reason is that deaf children from sign language environment have early exposure to other's conversation about peoples belief and so on.

And that is the reason they are understood to be doing better. In contrast deaf children of hearing parents commonly do not are exposed to conversations early. The reason is that the parents who are you know who have who are not deaf and mute, will be using verbal language among themselves.

So, a lot of conversation that small children are exposed to are not directed at them. That is a large number of it is the conversations that are happening around them, without including the children. So, in case of deaf children with speaking parents, parents will be talking among themselves or with other members of the family or whoever is their environment; the deaf children being unable to take part or you know being included in

the in that conversation, misses out on those crucial input of how humans talk about one another and that is one reason.

So, that findings, finding has proven that this is the case. So, deaf children are doing considerably worse in signing in the environment of spoking speaking parents as opposed to deaf children in the sign language environment. Because sign language environment for the other case where they are not doing well is an environment that they get only when they go to school, special needs school for example. So, that is that delays the conversational input for those children.

So, this is a very important domain from where proof for conversational, the language environment in terms of conversation having a role in development of theory of mind has been shown. So, to connects theory of mind and language we can say that mental states cannot be observed directly, that is true for any kind of mental state. Whether it is theory of mind or any other kind of state. So, nor there is any simple correlation between mental states and observable behavior, there is no one-to-one mapping.

So, only valuable way to learn about this elusive content is to listen how people talk about the mind, what we what do we say about what are the workings of the mind. So, research in developmental psychology suggests the importance of verbal communication in developing a theory of mind that we have already seen. Of course, this the data had spans a all kinds of different domains of research. We have only given the example of deaf children, but there are various other domains.

So, language ability seems to predict success in false belief task, independent of age. So, there is this particular angle also; though in typical cases it is 4 years of age, but if you will; if you will take other variables into consideration, then language ability is a very crucial predictor of the theory of mind in irrespective of age also.

So, if a child who has not developed language as at par with his or her other children of the same age, may also lack the development of theory of mind appropriate for his or her age. So, it is not just the conversational input, but also language, the resultant language developmental stages of the child that predicts the theory of mind relation theory of mind development. So, this is how the relationship has been seen. And a similar correlation was also found in both healthy children and children with autism and other developmental disorder.

So, language, there are two things here; one on the one hand, the environment in which conversational input is a constant thing for the child, growing child that is one input which results in development of language and which is a important predictor of the theory of mind, of the development of theory of mind in children. And this is consistent in findings across normal as well as atypical children. Atypical children as in children who have certain kind of developmental disorder.

So, this is about Theory of Mind.

Let us now move on to yet another extremely important um aspect of language development, in both children and adults. But we are mostly focusing on children here that that is of joint attention. What is joint attention? It is very simple thing; joint attention refers to the eye movement in which two people use their gaze or gestures to show an object or event in the space, for the purpose of interaction.

So, basically when the there are two people or more than two people, they are talking about the same thing they have to talk about the same thing. So, one person refers to it and the other person's attention is also drawn towards it. How do we know that the attention is drawn? Primarily because of the eye movements.

So, if both the participants in a conversation is are looking at the same object and then they engage in a conversation on that object, this is what is basically showing us that they are jointly attending to that particular referent. So, it is not only about eye movement, there is also there is also other ways to achieve joint attention, such as gesture, pointing, verbal and as well as non-verbal means, all those non-linguistic means when we talk about a particular object.

So, when a typical example would be in a classroom, the teacher will be showing the slides and you know point with a pointer the we will be pointing towards certain aspects of the slides and basically trying to draw the attention of the students to the same thing. So, where the same the teacher and the students are jointly attending to the same object because we have to interact on that particular topic.

So, this is just this is the notion of joint attention. It has been said that the ability to share a common point of reference develops the in the first year of life. In fact, there is a lot of

interesting research happening in that, we have already talked about it before while talking about developmental stages.

The children develop, the attentional mechanism in children develops remarkably early in life. In fact, by 6 months, 9 months and so on. So, joint attention behaviour basically falls into two categories, there are two kinds there are two aspects of joint attention; one is responding to joint attention, another is initiating joint attention.

So, while other conversation partners are talking about a particular object, the third participant also responds to the joint attention or in some cases it can the participant can initiate a joint attention. So, both are crucial in any conversation set up or any you know getting for any goal detected behaviour.

So, RJA refers to the ability of infants to follow the gaze or gestures of others in order to attain the common point of reference. So, the mother will be showing to some showing some toy or something to the child and then the child responds by looking at the same object a very simple example of RJA among infants.

Similarly, IJA refers to the infants' behaviour in which they themselves initiate the post gestures or the gaze to direct others attention towards that object or event. This is something this is this has been a very interesting area of research on infants of late. So, how do what are the mechanisms children put in place, infants put in place in order to engage others attention.

So, that is what the initiating joint attention refers to. So, this looks somewhat like this. So, it is identified at the early stage of language learning. Any kind of learning, any kind of engagement of a participant in a scenario automatically presupposes joint attention. So, if you are learning language, it is also dependent on joint attention. So, this is one of the earliest stages of language learning. In order to learn a novel word; novel word, as the new word infants follow the gaze of their parents to know about the reference.

So, this is kind of a setup where you have the infant and the child sitting you know for looking at each other and the parent is trying to teach him or her the name of a particular object and then this the parent will be pointing towards the object in this case, let us say it is a; it is a ball. So, this is the referent and child also follows the gaze of the parent and therefore, both of them are, you know they are engaging their joint attention on the referent

of the word, the ball or the bat or the flower or whatever. This is at the very core of learning, in this case language learning.

So, until and unless the child is shown what it means to what is the referent of an of an of a word, the child will not be able to learn the what it means, the meaning of it. So, several studies directly relate joint attention to language acquisition; that is frequency with which children engage in joint attention, shows the ability, their ability to of language acquisition, that is understood because if the child does not engage their attention.

So, basically the finer nuances of engaging and disengaging and re-engaging their attentional mechanism, with respect to the caregiver is what is at the core of learning mechanism, which is also true for language learning mechanism. So, if the child is not capable of directing attention, it will automatically hamper his or her learning trajectory. It is also related to mental and behavioral process and facilitate learning ability and development as has been pointed out by these researchers.

And it is also said to be an outcome of integration of posterior attentional mechanism and anterior attentional mechanism. These are just some details, posterior attentional mechanism and anterior attentional system, which and each of them are related to either RJA or to the to IJA.

So, Posner's work in this area has been very influential. This is what in a graphic way this will look at. So, this is what is cognition, the attention is one part of cognition and then there are these two kinds of systems that are coming together to create joint attention in these two domains.

And ultimately it this whole process that is taking place in your in the mind of the child, gradually will lead to a social behavior, social cognition resulting in behavior as in whether it is linguistic behavior or non-linguistic social behavior and so on. So, basically engaging the whole thing ultimately comes down to engaging with other agents in the same environment.

Engaging in a way, the you know that is geared towards a goal directed behavior, whether in whether the goal directed behavior is with respect to learning language or you know in engaging in a conversation or some kind of an interaction and cooperation, it can be anything any of these things, but basically it is a social sort of an interaction. And so,

basically if your attentional mechanism is geared towards these processes, then it will gradually give rise to what we call social cognition and social behavior.

So, that brings us to another important part. These are not different from one another, they are intertwined with each other. So, theory of mind is the precursor to social cognition on the one hand, and we have already seen the attentional mechanism in terms of joint attention is also at the core of creating social cognition. So, these are smaller parts of the larger picture of what is called social cognition.

Social cognition focuses on the mental and behavioral process of people about other people and circumstances. So, basically an a social awareness sort of thing. So, the awareness of oneself and one's belief system activities and behavioral output and so on and understanding the others the same things in others in a particular given circumstance, that is the that is what is called social cognition. So, it includes the role of cognitive processes in social interaction, that is what we just saw.

So, if this entire gamut of things, which is actually not very simple as we have just seen it includes it requires for the child to develop social awareness at the very early age in terms of TOM, as well as you know gearing that attentional mechanism, all these processes start at a very early age of they have been already found in children around 9 months of age infants. It starts to develop even earlier the latest research shows that it probably develops even earlier, but 9 to 12 months by 9 to 12 months definitely it is in place.

So, both joint attention is in place and theory of mind gradually develops by the age of 4 and so on. Social cognition model argues that as an infant monitor and represent their own goal related intentional activities, they also monitor and represent the goal related activity of others, this is what if you bring it down to the particulars.

So, not only their activities and their goal related behavior, but also the same in others. Like infants understand their own feeling, they also become able to comprehend the mental state of others. This is fundamental; until and unless the child is aware of its own goal that she wants the attention of the mother. What does we think children are crying for no reason, small children they have only one output, right? that is whether they are hungry, they are thirsty, they want attention, they want to play, they want whatever that the output is the same children crying.

But what is happening here is that the child is utilizing the only system that it has at its disposal, for its goal for whatever the goal at that particular moment is. So, by crying or certain kinds of hands and legs movement or cooing, depending on what stage of life it is in, they will try and attract the attention of the primary caregiver.

So, which means the moment you are trying to attract attention of others; that means, the child's brain is already aware that it has a, you know it has its own goals, it has its own intentions and there are behavioral outputs that might affect those mechanisms in the other human being, until and unless the child is aware, the brain of the child is aware of these activities they will not engage in this kind of in this kind of activities. So, they are capable of understanding these fundamental things at a very very early age in the in infancy.

So, joint attention and social cognition then we will talk about it in case of typical and atypical children. So, social coordination is the outcome of joint processing of information, as we have just seen about the attention of self and others. Social cognition is necessary for the development of functional joint attention in infants. Thus it has equal it has importance in both categories of joint system, which as we have also seen.

So, there are two kinds of attentional mechanism both has to be in place for a proper development of social cognition in children. It has been characterized in clinical research that impairment in initiated joint attention, that is IJA, leads to diseases such as autism in children. So, the one of the reasons, one of the let us say precursor to what is ultimately called autism, basically can be traced back to the true and into to an impairment in IJA, they are not capable of initiating joint attention.

So, such children, it means that the child is not capable of initiating attention, such children are referred to as atypical children. Atypical as in children who are not developing typically in a normal circumstances. So, there is a lack of the social cognition, but which we understand as the result of not being able to initiate IJA.

So, atypical child then refers to the children who are different from the same age children in terms of behavior, development and so on. So, development leads to the differential behavioural pattern. So, whereas, typical child exhibits the normal generic behaviour generic behaviour and development compares to the peers of the same age.

So, we will see that all children start you know engaging in pretend play around the same time. Then language development happens on the same trajectory more or less, roughly there is a pattern. But a child who is not part of that general generic pattern is typically called the atypical child.

So, autism is one of the most common disorder of neural development, primary cognitive deficit in social cognition defines all features of autism. So, if you notice an autistic child the most tell-tale sign is the lack of social cognition and that is of course, connected to what we have just seen as IJA.

So, these are some of the pointers some of the symptoms that atypical children will be exhibiting in early childhood. Severe difficulty in social interaction difficulty, in verbal and nonverbal communication, lacks in initiating attention and so on. So, because of joint lack of joint attention they will also lack the ability to share common point of reference and they will also not have you know there is a limited eye contact and so on.

So, all these basically take us back to the theory of my development of theory of mind and the joint attentional mechanism. So, this is what and both of which are connected to language at different levels. So, even typical growth of a child and that atypical population, also has a link to language in this way. Now since we have focused mostly on first language acquisition.

We will quickly go over language acquisition in the in second language, L2 here refers to second language acquisition. So, second language acquisition is second language acquisition, refers to the language that we learn after the first language. So, this is different from first language in many many ways, it is not the same the processes are not same, the trajectories are not same; however, as we will see some of the important pointers are still similar.

So, learning an L2 typically is done after you have learnt L1, that is first language. So, learning of L2 follows the learning of first language, as a result of which it is also learned at a later age. So, learning an L2 by children is, that is why qualitatively different from childhood bilingualism as well. Childhood bilingualism refers to those children who learn two languages simultaneously in the same environment.

So, for example, a child growing up in a multilingual household where parents speak different languages or maybe there are other caregivers, who speak another language. So, that is the; that is the scenario where the child can learn two languages simultaneously. That is again a different type of scenario.

So, first language and second language following one another versus two languages being learned together, there is a difference as in the case of L2 being learned after L1. So, there are three kinds of language acquisition we are talking about here. A majority of work in second language acquisition that is SLA, has focused on adult learners primarily, but also the same theories are now being utilized for children for child L2 learners and there are similarities, there are differences and there are also of course, a lot of agreements and disagreements on this.

But however, there is a new focus on children learn children SLA, childhood SLA as well. So, the main issues with adult SLA like childhood SLA centered around the two primary criteria of age and input.

Age; let us let this will take you back to the 'critical period hypothesis'. Age the refers to at what age the second language has been learnt by the learner. Adult learners as a result of which often fail to acquire native-;like competence in the second language this has always been a very important point of discussion in language acquisition research, second language acquisition research that adult learners, that is the learners who have who are adult, who started learning their L2 at an adult age, they failed to attain native like competence. So, native-like competence was considered the hallmark of your proficiency level. So, if are you a good enough speaker of second language with me will mean that your second language competence, fluency is as good as the native speaker of that language which of course, now has been discredited, that native like competence it cannot be the goal of a of a bilingual.

Because a bilingual is not two monolinguals, you know, somehow fused together. Bilingualism is a very completely different mental state altogether; the second language has a different status here, its not like native speakers of two language.

However, this the and that is why this has now been discredited. So, ultimately what we now call this is called 'ultimate attainment'. So, now, we now researchers are not talking

about native-like competence anymore it is called ultimate attainment, that is the best approximation of competence that the adult SLA learner can have in the second language.

However, there has been a lot of research in terms of why the second language learner, adult second language learner is not able to learn certain aspects of the second language; is it because of the age? Because by virtue of being an adult learner he has he or she has automatically crossed the critical period hypothesis.

So, as a result of which a lot of these research the different kinds of research will attribute those ah so called you know defects or failures in adult SLA learners to the age factor that is the critical period that which takes us back to the 'critical period hypothesis'. So, they put it like you know because they have crossed the critical period.

So, as a result of which the adult learners have incomplete access to the 'universal grammar'. Remember we talked about universal grammar of Chomsky. So, after the critical period the learners do not have adequate access to the universal grammar. And also because,, after that age less effective procedural learning takes place, as a result of which these two factors have been attributed.

On the other hand, quality and quantity of input have also been pointed out as a serious problem. Because the child learner has a larger span of time for language input to come in as opposed to an adult learner, simply because he has started learning the language much later. So, the amount of input that the adult learner receives, is significantly less.

So, this could be yet another reason as to why the adult learners will not probably learn the language to the ultimate extent. And yet another notion that has been put forward recently is the identification with the L2 community.

Because when you are learning the first language you are part of the community; that is why you are learning it as a first language. This is the language in which you are born into which you are born. So, this is your own community. In case of L2, it may not always be the case. So, once when you do not identify with the speech community, this might also be a reason as to why we are not able to attain that native like competence in second language.

However, there have been many recent studies which have refuted the claims that the L2 learners cannot do as well as native speakers on various grammatical tasks. So, there has been a plethora of studies, comparing native speakers of a language and with the L2 learners of the same language. So, let us say English speakers, who are native speakers of English versus then non-native speakers of English, like Indians.

So, we speak English as our second or the third language. So, comparing a British speaker of English with an Indian speaker of English and on various grammatical tasks and on under various conditions, by manipulating various kinds of paradigms, they have found that this may not be always the case.

There are differences sometimes found, but there are also sometimes there are also some very important research findings that point to the fact that the in there are in some grammatical aspects, in some grammatical cases, in case of certain kinds of tasks native speakers and non-native speakers do almost similarly. So, non-native speakers are able to match the native speakers in certain grammatical tasks.

Which means it is not entirely true that L adult learners of L2 will not be competent competence speakers of the language. However, there are differences in certain cases and these differences are basically explained through the nuances of grammatical aspects and other factors related to the learners like motivation, like input, like interactional context and so on and so forth.

So, yes there are differences but there are also similarities between native and non-native speakers of the second language. So, the other variables of course, will be input, the kind of input. So, for example, if the L2 is learnt as a foreign language as opposed to a second language. So, English taught as a foreign language versus English taught as an second language: EFL versus EFL versus ESL learn teaching mechanisms also will be important in this case.

So, the input is very important and also because the when you talk about second language, it is more often than not, taught. It is taught in a formal surrounding, but also sometimes people do pick up second language in the social environment. So, that brings in another you know angle to it.

So, the interactional context in which the second language is learned, is it a formal context, is it an informal context,, what kind of input are given and then the motivation of the learner motivation is a very very important factor in second language acquisition research, that why should the person learn a second language. For example, the motivation to learn English in Indian context is very very important.

Because this is a language of opportunities, whether it is job, it is you know social security and so on and so forth economic betterment and so on. So, these are other variables it is not always the age which decides.

So, we see that in case of second language learning also there is a mixture of various kinds of pointers; on the one hand, you have social aspects on the other hand, you have the grammatical aspects on the on simultaneously age and other cognitive apparatus as well. Now, we move on to yet another important aspect of pragmatic competence in terms of language acquisition. So, pragmatics is the study of contextual meaning, rather than the lexical meaning.

So, a sentence may be meaningful in its own right as in lexical meaning might be perfect, but it is not contextualized properly. So, the meaning in context refers to pragmatics. So, pragmatic meaning can be different from lexical meaning often. So, this is the notion from where pragmatic competence comes in.

What we mean by pragmatic meaning versus lexical meaning is ah one good example would be that in grammar, in Hindi grammar; we are taught that, you know for children, small children you can say… there are there is these three-way pronoun system in Indian languages /tu/, /tum/ and aap/. So, /aap/ is for, /aap/ is reserved, it is an honorific term, /aap/ is reserved for people who are older to you or somehow more respectable to you by virtue of some kind of a social system, or you know respectable in whatever way, in many ways. So, if /aap/ is reserved for that kind of people. /tum/ is more like friendly kind of a gesture and /tu/ is reserved for smaller children, people who are younger to you very close friends and so on and so forth.

So, it will be perfect to say to a child /tum kha lo/ or /tu kha le/ and so whatever. But if you see so, it is grammatically fine, it is lexically fine to tell a child to eat /tum khana kha lo/, but in pragmatically speaking in certain parts of the country, it is not so common to

use /tum/, it is very common to use /aap/ with children, in many parts of Uttar Pradesh for example.

So, it is very common for mothers to use /aap/ with their children in the same circumstance. So, that is pragmatic competence. So, that brings us to what is pragmatically more relevant more and more context appropriate. So, the notion of pragmatic competence refers to the ability to use language appropriately in its socio- cultural context. This is something that we have been talking about from the beginning.

That language is a complex thing, language is not just a set of rules as Chomsky would have us believe, that it is just a set of rules that the native speakers know how to manipulate and that is all about language; it is not. Language is not spoken in a vacuum, language is spoken in a context in a socio-cultural context. We have to not only convey the meaning we are trying to convey, but also we have to convey it in an appropriate way, appropriate as in socio-culturally appropriate way.

So, that is where the pragmatic competence comes in. So, pragmatic competence is one of the effective way, most effective way of communicating. In fact, it is the only way of effective communication; that is why often we see that the comic relief used in Hindi Bollywood Hindi films that make fun of Bengali speakers of Hindi or Guajaratis or Punjabis; these are the communities were always targeted. So, and that the use is always language. So, the way they socio-culturally inappropriate way of using language or so and so on and so forth.

So, it is very in order for your communication to be effective, you need to be it needs to be socio culturally put, socio culturally appropriately boxed. So, in case of second language it has to be, it has to be very carefully the target language has to be understood very carefully in these contexts. Pragmatic competence is also useful notion in first language, it is not only in case of second language. Because language socialization is what we are looking at, language and the relationship of the society in which it is used.

And only when and when we do not use it in an appropriate fashion is when we have a comic some usually comic, but sometimes it can even go beyond that scenario. So, in second language acquisition, it is defined as the ability to produce and comprehend the language appropriately in the social context. It is, it may not be you know I mean if you say if you are new to UP and you just or as it is very often the case, Bengali speakers of

Hindi who often omit the honorific in while referring to the father or the husband and so on and so forth. Primarily because that does not exist in Bengali.

Bengali husbands will not use /tu/ for wife nor the wife will use /aap/ for the husband; this exists in some other languages, but not in Bangla. So, in Bangla it is /tum/ for, in both ways. Now the same thing if you transport to Hindi speaking scenario it will create a lot of problems, you will almost appear like you are not respecting your husband enough.

So, these are the situations. So, in target language, one has to be always careful about what is socially appropriate in that language, not just translate the L1 situation to the L2 situation. Thus in the case of both L1 and L2 learning and use, the knowledge of social norms and cultural schema are very very crucial. And underlining the social cognition and language relationship. So, that is yet another way of looking at the language and cognition relationship; in this case the social cognition.

So, we have looked at the cognition in terms of mental mechanisms like attention and so on and then social cognition. Some latest to in order to take care of, you know, the whole meta system here what is happening what happens in case of language learning, some recent developments have taken place which has taken a step ahead in terms of how to get the data, child language acquisition data.

So, what all our findings still now, one of them one aspect of them are referring to the recordings of the child's developmental stages by typically a linguist, who is also the parent of the child. So, they will take down they will note down you know they maintain a diary of the stages of development of their own child, now that is one. And on the other hand, there will be experimental studies.

So, in both cases what happens is that, these are observations and they are more like snapshots in time. So, you know, after a brief period of time, then again after a gap, then again after a gap. So, you do not see a sequence of events as it unfolds in real time. What we see is snapshots of different stages of the different developmental trajectories.

So, to take care of these, to take care of such a problem in the lack of naturalistic observational recording, naturalistic as in when the child is growing up in its own environment and how the all the other, you know surrounding aspects of his development

also has an impact on the language development of the child, it is very very difficult to record.

So, there is very less information in that domain, all we have is the observation from the other people. In order to take care of this there is now latest there is now a different take on this whole problem altogether. One of them is the well-known speechhome corpus from MIT media lab by Debroy. What this particular researcher who has done is that he had fitted his whole home with the with multitude many cameras and microphones and so on and so forth.

And recorded the data of his own child's development from 0 to 3 years of age, which has resulted in a huge amount of audio visual data, but this is natural data, as the child was moving you know growing from one, from infancy to 3 years of age and what are the linguistic developments, what all also happened around him, what are the conversational input he got, what are the other kinds of you know inputs and so on and so forth. So, studies like this, the 'speechhome corpus' one can look up just look up Debroy.

The data I am referring to here is a little old, by now he might have he would have definitely gone ahead with all the analysis done also. So, is this a way forward this is another important way to look at it. Is this so, the data till now whatever we have, is already you know its very fascinating it the findings are very interesting. But is this a move this is this kind of a move is a way forward? do we need more of this kind of recordings in order in natural setup, in natural setup that gives us good observational recording?

Because only then we will be able to find out the interactions between the child between the child as a growing organism and its surroundings and how the developmental trajectory in cognitive, neurocognitive as well as sociocognitive and linguistic terms interact in real time.

So, to summarize what we can say from this entire, segment in this module about language learning, in various scenario whether it is first language or second language learning what we can say is that language acquisition research proves the intertwined nature of language with other cognitive mechanisms as well as socio pragmatic concerns. This is where we started with.

So, neurocognitive mechanisms, like attention, attention in terms of joint attention. And then cognitive developmental stages and also how we interrelate these functions with socio-pragmatic concerns, the kind of input that we get and the way the eco the growing child interacts with the environment, in terms of either being a passive listener to conversations in the environment or engaging the attention of other people and thereby growing and so on and so forth.

So, these are, language learning like any other language function, cannot be understood in a vacuum it has to be understood, it has to be studied and in terms of its relationship with many other mechanisms like these.

So, this is about language acquisition. These are the references.

Thank you.