Psychology Of Bilingualism And Multilingualism
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Hello and welcome to the course introduction to the psychology of bilingualism and multilingualism. I am Dr. Ark Verma from the Department Of Cognitive Sciences at IIT Kanpur. As you know in this course I am going to talk to you about various aspects of bilingualism basically how an individual learns or acquires two languages and uses them, what are the different aspects of the languages, how does and how do these languages interact with each other, how does an individual control the two languages and how does he sort of he or she sort of ensure a certain degree of communicative efficiency basically knowing two or more languages at the same time. Now as I have been talking about conceptual issues one of the things that sort of I mentioned in one of the previous lectures also is that bilingualism is a phenomena that has more become a norm than an exception these days. Almost everybody if you look around speaks more than one language.

If people go to a lot of people go to English medium schools. So for example even if you have a native language such as Tamil or Turgu or Malayalam or Hindi for the north of India a lot of us go to English medium schools. So typically we learn a second language as well at school. Also in a lot of cases you might be able to learn a second or third language from your environment.

Say for example you might be able to learn Hindi and Bangla in English, you might be able to learn Tamil and Kannada in English and so on and so forth depends upon the family that you are being brought up in, depends upon the environment that you are being brought up in and there are so many of these factors that govern how and why individuals pick up these several languages. Now this is a very very interesting phenomena for researchers and not only researchers of psychology like myself but also researchers from different fields such as linguistics or neuroscience or sociology for that matter. Different disciplines have different ways of looking and investigating at a particular phenomena. Now bilingualism is a phenomena that has drawn interest from several of these fields and there are different questions that each of these fields seek to ask from you know the perspective of bilingualism. Say for example if I am a linguist I might be interested in the structural changes that come when two language systems are interacting with each other.

In the previous lecture I was talking about how the two languages of an individual may interact with each other, how the two languages may be similar to each other or different from each other. So we talked about linguistic diversity, we talked about the language universal approach and it is very interesting that while Chomsky says that you know there is this whole universal grammar and all the languages work within broadly the same framework, it is interesting for linguists to trace how the contact between the two languages that an individual speak change or modify each other or influence each other or for that matter you know bring about new word forms, new syntactical conventions and so on. If I am a psychologist or let us say a psycholinguist I might be more interested in the individual rather than the two languages. I am more interested in the mental processes that underlie the learning and use of two different languages, three different languages. What does it do to my memory? How does my memory handle words of different language systems? How do I control system? Say for example how do I manage that while I am speaking in English as in this lecture Hindi does not continue intruding or does it intrude or am I translating from Hindi to English? So, these are some of the questions that psycholinguists are interested in.

Also neuroscientists are interested in the brain processes. They are interested in what really happens in the brain, what are the areas of the brain that are governing this interaction between the two language systems. As I said in a previous lecture do we store these two languages separately, do we store them together? When I am saying storage is it specific neurons that store different aspects of a language or is it in some sense a distributed storage of different aspects of language sounds and meanings and words and orthographic patterns when I am talking about reading. What is really happening in the brain is basically the major concern of neuroscientists. Also as I said and we were talking about in previous lectures language or bilingualism or multilingualism is not merely an individual level phenomena.

It is a phenomena that operates at the level of societies. Entire societies are in lot of cases bilingual or multilingual. How do societies view bilingualism and multilingualism? How does bilingualism and multilingualism emerge between societies? What does it do to the identity of people? In one of the previous lectures I talked about that any given language system intertwines deeply the cultural practices, the traditional practices of a given society. Say for example, if I have learned English have I inherited some of the cultures and traditions of the English speaking people? If I am learning you know Urdu for that matter have I sort of inherited some of the traditions and practices of the Urdu speaking people predominantly or is there a different kind of people that speak a different language or you know there are some of these questions that are very very interesting if you think about them and these questions basically become the subject of sociolinguistics or you know people who want to study the sociology of bilingualism and

multilingualism. We will talk you know in this lecture we will talk briefly about some of these issues about some of these disciplinary lenses that have been used to investigate the   phenomena   of   bilingualism.

  Towards the end of this lecture I will make a case for an interdisciplinary inquiry and interdisciplinary study of bilingualism that would probably equip us to answer all of these questions in a more holistic in a more overall sort of a manner. Now let us begin with psycholinguistic approach because that is what we are here for this is a course in psycholinguistics and basically as I said psycholinguistic you know psycholinguists are actually interested in the mental processes in the mental functions that are involved in an individual learning acquiring a second or a third language in using a second or a third language and in managing the interference or interaction between these two languages. Psycholinguists ask question about the individual that is imbibing or embodying the two languages the individual system brain you know person that speaks these two languages. We are interested in say for example studying who becomes a bilingual why do they become a bilingual what types of bilingual there are. For example in one of the previous lectures I was talking about categories of bilingualism on basis of people's proficiency you know people have different proficiencies you know depending upon whether they speak a particular language whether they can write a particular language whether they can read or understand a particular language and a lot of times people are not equally skilled   in   all   four   of   these   modalities.

  Some of them might be able to speak and understand but not read and write some of them might be able to read and write but say for example obviously read and write and speak and understand they would be able to do but their proficiency would probably be slightly different as far as all four of these skills are concerned. And there are therefore these several conceptions of who is a bilingual what kinds of bilingual bilinguals exist that have sort of been existed in the discipline for so long. One of the earliest classifications of bilinguals was put forward by Weinreich as cited in the Teshwadia's Handbook of Bilingualism is the classification of bilinguals into three types of bilinguals, coordinated bilinguals, compound bilinguals and subordinated bilinguals. Now what are these? In a coordinated bilingual basically and let us show the figure for so that you understand in a coordinated bilingual what we are basically doing is you can see that the different concepts are referred to by different roots of these different words. Say for example you know the concept of a book is separate and is accessed separately using the word book but say for example the concept of the same concept called niga in a different   language   is   accessed   by   that   different   word.

  This is a coordinated bilingual who is basically using different you know words to access the   same concept and these two are sort of coexisting but separate from each

other. On the other hand there is something there is a classification called compound bilingual where the individual will access the same concept but through two different routes. Look here say for example the understanding is that these two are the same concepts and they are probably housed in the same place but they are being accessed by two different routes. Say for example the concept of an apple is accessed by the word apple as well as the word same for a Hindi-English bilingual. Similarly we might be talking about the third idea which is of a subordinated bilingual.

Now a subordinated bilingual is somebody for example who is just beginning to learn a second language and when you are just beginning to learn a second language what typically happens is that you access the concept maybe if you have to do it through a second language word you will basically translate that word into a first language word and then the access of that concept is happening. Say for example for a lot of us when you are talking in English a lot of times we basically translate that English word into Hindi and then make sense of oh this is what is being meant it also happens a lot of times during speaking what we are doing is we are translating our thoughts which are happening in Hindi to English and then speaking in English. This is typically what happens with a subordinated bilingual. Moving further Weinrich's typology of classifying bilinguals has also been interpreted as a manifestation of different levels of proficiency. As I said these are not exclusive stages these are not serial stages or classifications of bilinguals these are rather stages of bilinguals that are sort of reflecting different stages of the journey of a bilingual.

Maybe chronologically you know overlapping with each other as well that at a given level of proficiency somebody may be a subordinated bilingual but once they become you know better and more proficient at both of their languages they may become let us say a compound bilingual. And people have sort of you know researchers have looked at these classifications they have worked with different types of bilingual subjects and they have basically found that these categories are not exclusive of each other as well. They might be the same you know individual who might behave as a subordinated bilingual for some concepts but a compound bilingual for some others which they have learned very well. So, again you have to be mindful of the fact that these are not watertight compartments or exclusive classifications of how different bilinguals are but probably the different stages in which or let us say the different chronological phases you know that a bilingual traverses during their journey to becoming a bilingual. Another very important classification of a bilingual within the framework of psycholinguistics has been put forward by Potter and colleagues in 1984.

They proposed a theory of how bilingual lexical knowledge now when I am talking about lexical knowledge I am basically talking about how do bilinguals access the

concepts in their mental space. Say for example semantic memory how do they access the concepts that are stored in their semantic memory. Now remember or pay attention to the fact that concepts are sort of a moodily stored in what we call semantic memory we know about what is a chair, what is a table, what is a glass or milk or this and that, fruits, animals and so on. We have all of these concepts in our conceptual you know that is part of our conceptual knowledge in our semantic memory. We use words to access these knowledge, we use words to sort of you know act as keys to these you know troves of knowledge to these troves of facts about certain things in the world.

So, the thing is which of these languages the words of which language are we using? Are we using predominantly the words of the first language that we learn? Are we using predominantly the words of the second language that we are you know speaking more and if you look back at this idea you will find that okay maybe there are things that happen similarly to Weinrichs typological classification where he said oh a compound bilingual maybe accessing the same concept through different roots or say for example a subordinative bilingual is first translating the you know the L2 or the English word to Hindi and then accessing the same concept. A slightly different take on this accessing the concept is being offered by Potter and colleagues and they give two versions of a model which is called a concept mediation model and a word association model. Now in the concept mediation model basically the idea is that the words of both languages one and language two and remember I mentioned L1 is the native language, L2 is the second language, L2 is the L3 is the third language which the individual may learn. So, the concept mediation model basically says that words of the two languages L1 and L2 are linked to an underlying a model conceptual system.

Look at this here. So, this is on the left side a is the concept mediation model basically what they are saying is L1 words and L2 words both access the same conceptual store and they both have you can see unrestricted direct access to this conceptual store. So, either I am using a Hindi word or an English word I am drawing from the same conceptual knowledge bank and I must be able to do that without you know a lot of delay and probably at the same time because I am now proficient in both the languages. The other way of looking at this is the word association model which might also be seen that is something of a chronological stage for people who are just beginning to become bilingual learning a second language and so on and in those cases similar to the subordinative bilingual classification offered by Weinrich what is happening is that the words of L2 are first translated to L1 or they are connected to the words of L1 and L1 is what is connected to the conceptual store. So, basically remember that what is the language that an individual learns first and individual first pickups their first language is not it at the age of 2 and a half and 3 if they were exposed to only the one only one language that is where they have sort of established all of their conceptual knowledge.

So, what is happening in this model look at side b which is called the word association model what is happening is that you are accessing the conceptual store if you have to do that through L1 it is a more direct route and will be faster without any intermediate stages, but if you are doing it through you know words of L2 and which a lot of early bilinguals do they would first translate or connect the word of the L2 to the words of L1 and through words of L1 be able to access the conceptual store.

You can see here if you were to run an experiment in part a you will predict that bilingual speakers will be equally fast at accessing words accessing concepts from words of both languages whereas in as far as the model b or the word association model is concerned people would be slower in accessing concepts using L2 words, but faster using you know accessing concepts using L1 words. Again this is also you know can be interpreted as different stages of the you know the chronology of how somebody becomes a bilingual. So, it must be noted as a caveat that the relationship between the lexical representations of L1 and L2 and as I was saying may be mediated by proficiency levels of the individuals and also the stage of bilingualism that they are in. You may start with being a subordinative bilingual as Weinwieck says or through the word association route that Potter suggests, but eventually when you are becoming more and more familiar with the second language you might establish direct connections for L2 words with the conceptual store and things start becoming as fast for you as they are in the first language. Later studies have scrutinized this model the you know both Potter's model and Weinwieck's model and have presented evidence either in favor or against these models.

Some of these have led to different iterations of similar models as well for example Judith Kroll and Stewart presented what was called the revised hierarchical model and I am presenting that to you here. Now look at this, this is pretty much very similar to the word association model that Potter gave, but you can see that there are some interesting caveats here. You can see that there is still a connection between L2 words and the conceptual store although that connection is being reflected by a broken line which says that this connection is weaker when the bilingualism when the bilingual starts to learn the second language. Also there is a connection between L2 words and L1 words which is stronger obviously because it going through the word association route, but there is a backward connection between L1 words and L2 words also which is again a slightly weaker connection. So the revised hierarchical model presents the same knowledge in a slightly more advanced way in a slightly more nuanced way I must say based on the experimental data that they collected through several experiments with bilingual individuals.

So as mentioned earlier the choice of language that multilingual speakers make depends

upon a variety of situations. For instance let us say the setting of the conversation you know if I am in a room where everybody speaks English I am bound to speak only in English although I know Hindi and that is my first language I will basically understand this environment, understand the situation and make a choice that I will predominantly or probably exclusively only speak in English because people around only understand English. However if I am in a room where some people understand both English and Hindi and others understand only Hindi maybe I will see that okay the majority of people understand Hindi here and I may you know decide to use Hindi or maybe a mix of both Hindi and English which a lot of people of our generation do. Also it is interesting that sometimes there are certain topics in which you would prefer to use a particular language. Say for example for topics related to my research I prefer using English whereas topics related to say for example familial issues, more informal conversations and so on I prefer talking in Hindi or let us say if I am talking to close friends or family I prefer talking to them in Hindi whereas colleagues and more formal relations I would prefer switching to English and staying in English.

So there are all of these different factors that would affect that would govern the choice of you know language, the choice of topics that an bilingual sort of converses in. These choices therefore force a bilingual to simply somehow you know change from a monolingual mode to a bilingual mode and this has been very beautifully captured in Grosjean's model of language modes. You can see here Grosjean basically says that you know if there is a speaker X or there is a speaker Y they may oscillate between speaking you know language A or language B depending upon the situation. They might be entirely in a monolingual language mode where one of the languages is blocked whereas the other one is being dominantly used or they may be in a bilingual language mode where you can see that the top one is grey because it is also still permitted and the second one is what you are speaking in. So typically what Grosjean is trying to capture here is the speaker's position in these different sort of scenarios it is along a continuum.

They may in some sense be in some places only choose to be only monolinguals and in some places choose to be you know preferably bilingual where they are switching continuously between the two languages depending upon the situation or the scenario that the conversation is happening in. Another model that traces you know the steps of a bilingual child through you know their journey of becoming bilinguals was put forward by Volterra and Tarshner in 1978 where they say that kids are supposed to pass through at least three stages of acquisition of the second language. For example, initially the child's lexical system is composed of words from both the known languages. So initially they are sort of keeping them slightly separate from each other and there are two distinct systems that are emerging. Moving further what the child does is that the child can distinguish that ok who are the who are the listeners with whom I can speak in language

A, who are the listeners I can speak in language B and they basically the child cannot distinguish between the lexicons of the two languages although they will probably apply the same syntactical rules for both of the languages.

So here the child is basically using the words of both the languages but may be using the syntax from only one of the languages. Finally in the third stage the child knows basically is now being able to differentiate between the two language systems both in terms of the lexicon and the syntax. So the child now knows which words are going to be used with what syntax. Say for example when I am using Hindi words I will preferably use Hindi syntax, Hindi word order, the SOV kind of word order or when I am using English words I will use the SOV word order like it is canonical in English. And he is also aware of you know which listeners I would interact using what language.

So this is again something that you can see that bilingual children would evolve through.   Initially they would basically use words from both the languages interchangeably, later they will use words from both the languages but may be using syntax of the first language only and eventually they know that which words belong to what language and which grammatical rules will apply to what words. So there the two systems sort of become slightly differentiated with each other. Now these suggestions have given rise to a debate about whether there exists separate systems for the two languages or unified you know system, a unified linguistic ability where both these languages are accommodated and something that we will talk about in much more detail as we go further.   Now moving to the linguistic approach to study bilingualism.

As I said earlier linguists are interested typically on the structural changes in the languages that happen when they come in contact with each other. So the first interesting idea to study this was offered by Winford in 2003 who offers a taxonomy of different types of contact situations. For example language maintenance, in language maintenance basically what would happen is one would expect the lexical and structural borrowing from the two languages although broadly the structures sort of remain you know very independent of each other. In some sense say for example let us say in a lot of Dravidian languages you will see the influence of Sanskrit, you will see a lot of lexical borrowing but the two languages are sort of maintained and they still maintain their individual identities.   Another instance is another interesting phenomena is of language shift.

What happens here is that in language the base language sort of does not change or sort of slightly changes due to contact with the different language. For instance influence of on English by Irish speakers. When Irish speakers are speaking they do modify English in a particular way and you would basically be able to judge from their accent or the way they speak as to how they are sort of going about slightly modifying English in their own

specific way. In a third situation what really happens is when two languages have been in prolonged contact between each other they might also be you know a creation of a new different language. Say for example a new language was the outcome of interaction between Persian speakers and Hindi speakers which was called Urdu because these people   stayed   in   contact   for   hundreds   of   years   together.

  So a new language which is referred to as the you know the language of the court, so the language of the you know the Laskars of the Mughal emperors that is how Urdu sort of came about. So these are three different types of contact situations which are very interesting for linguists to study as to how these two languages that are coming in contact with each other by virtue of common speakers and how are they sort of changing each other. Besides these contact situations languages obviously influence each other in other ways as well when they come in contact through in individual speaker or groups of speakers. Some people propose that bilinguals may have two discrete grammatical systems, so they have a very separate grammatical system for Hindi that they will use exclusively for Hindi, they will have a separate grammatical system for English that they will use exclusively for English. But a lot of times and others have basically proposed that maybe this is not the case, maybe what happens is an eventual amalgamation of the two grammatical systems exist and basically what happens is that bilingual speakers who are proficient in both these languages start producing a sort of a code mixed system.

  It typically probably would happen in some of the early stages or when people are just learning where they are producing or even maybe at later stages when they are producing a sort of a mixture of a syntax from both the languages. What they are doing is they are sometimes using Hindi words using English syntax, sometimes using English words using Hindi syntax and amalgamation is sort of being presented. Now coming to I mean so this is sort of summing up the different kinds of situations that happen you know or different kinds of questions that may be interesting to linguists when they are studying bilingualism and multilingualism as a phenomena. Finally coming to social linguistic approaches, as I said social linguistic approaches worry more about the phenomena of bilingualism or multilingualism in the settings of the society. The fundamental questions are slightly different say for example the questions of language choice is also understood as   a   question   of   language   identity.

  I may choose to speak a certain language because I wish to identify with a specific language group. I may choose to speak a certain language in certain settings because say for example when I am in a formal setting I want to probably exclusively speak in English because I want to identify with a bunch of people who are there may be considered higher in social status and so on and so forth. And when I am with family or when I am sort of talking to you know closer people I may choose to identify more with

them by speaking exclusively in Hindi or maybe modifying my Hindi to you know match there. Say for example when you go to villages there are different dialects of Hindi that are available and sometimes when you are meeting your grandparents or some relatives who have been living in the villages you would see that without an effort you would also be able to modify the Hindi that you speak in the you know urban settings to the Hindi that is typically spoken in the slightly rural setting.

Again variations of the same language. Now also individuals assert their identity by choosing to express themselves in a given language. Now you might be aware of a lot of you know tensions across identities that happens because of linguistic choices. People choose not to speak a given language because they choose to assert their identity of a particular language group. Say for example in France it is difficult to convince people to speak to you mainly in English although you know people are very hospitable and when they say when they say tourist they would inadvertently you know try and help you out in speaking English. But the natural mode of speaking would typically be French and in some cases where there is a contrast that needs to be asserted people would typically sort of speak only in French so that they can assert that contrast that oh we are French and we speak and take pride in speaking French as opposed to speaking you know a different language let us say English for that matter.

And again this is a matter of you know asserting not only their identity but their allegiance and their alignment to the you know to the culture and tradition and the long history that these languages have. Say for example French or Spanish or Hindi speakers or Tamil speakers for that matter take a lot of pride in the historical you know the historical pedigree of the language and they would love to assert that they would love to borrow from those traditions and they would take a certain pride and you know have a lot of self-esteem in speaking those languages more often than not. It has happened in the past as well that leaders from you know non-English speaking countries have gone on the world fora and chose to spoke chosen to speak in their own native language. I remember say for example a former Prime Minister Atal Bihari Bajpayee addressed international gathering in Hindi predominantly because he wanted to assert a particular kind of identity of the country. Although again as everybody knows Hindi is one of the languages that is spoken in the country and there are several other languages and leaders of several other languages you know are entitled to sort of assert their own identity in those specific languages.

So through language choice typically individuals you know define a boundary of the self and define a contrast with the other and that is pretty much you know very very interesting and common. And however there are different you know determinants of identity also that people have talked about. Say for example Labov has proposed that you

know speakers socioeconomic class, gender or age have more bearings on their identity than their language choice. People like Cameron and Johnson have talked about that you know identities are negotiated through social interaction how does an individual fall with related to others in a social setting and others like Tashvel etc have also talked about group sense of identity and so on.   Having talked to you about psycholinguistic approaches about linguistic approaches or about you know sociolinguistic approaches when we want to study the phenomena of bilingualism it might be interesting to look at it from multiple angles. It might be interesting when we are talking about the mental functions of bilingualism that we also talk about the neural basis of those functions. It might be interesting when we are talking about the mental functions of bilingualism we might also pay attention to the structure of the language and how the structure of language is changing. So a psycholinguist and a linguist may certainly you know work together to understand this phenomena more holistically. At the same time and this is again something that I have discovered in my personal research is that when you are talking you know working with bilingual participants when you are working with sort of you know doing experiments with bilingual participants the sociolinguistic aspects also come into play. As I had narrated an anecdote earlier that when I was studying in Allahabad University and working with bilingual participants some of them got offended when I told them that their English proficiency was not good enough and the social aspect a lot of people overestimate their proficiency in a given language because it is considered in high esteem if they are very proficient speakers of let us say English or in other cases say for example, in olden days people who knew Latin were you know sort of treated as you know royalty because Latin was a language that was you know more privileged as opposed to different forms of English that   were prevalent then.

  So the idea that I would want to propose is that to understand the phenomena more you know holistically and to have a overall view of the phenomena it might be very interesting that people from these different disciplines come together understand and study common questions that would sort of further our understanding about different aspects of the phenomena as well. That is all that I wanted to share in this lecture and thank you and I will see you in the next lecture.