

**Psychology Of Bilingualism And Multilingualism**  
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**Week - 01**  
**Lecture – 02**

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 and in this course I am going to talk to you about various aspects of being a bilingual or a multilingual and basically what does it entail to sort of learn, acquire, use a more than one language. We will talk about the neural consequences, the cognitive consequences, the sociological consequences for example, of what it means to be a bilingualism and we will study this phenomena from various disciplinary perspectives. In the previous lecture I talked to you a little bit about some of the conceptual issues of bilingualism, some of the distributions of the landscape of bilingualism and in this particular lecture I will continue that discussion into what does it mean to be a bilingual all right and what are the different aspects in understanding who is a bilingual and who is not. Now, one of the very important factors when we talk about bilingualism is this variable or is this aspect called proficiency.

You may ask what is proficiency? Proficiency typically is how well is or let us say what is the relative ability of an individual to speak in a given language. Are you let us say on a scale of 1 to 10 are you comfortable in speaking English at the scale of 1 to 10 at the level of 9 or 10 maybe 8, 8.5 or let us say you know are you very good in writing something, are you very good in understanding something, can we rate proficiency differently for different skills. So, for example, can we say that when it comes to English I am very good in understanding let us say at the level of 9 or 10, but I am not very good in writing.

If you ask me to write an essay I will probably write to the best of around 4 or 5 on a scale of 1 to 10. So, is it possible that people have different levels of proficiency for different skills related to each language and if that is the case can we call these people or can we call ourselves proper bilinguals and again proper is a term that I am using not to you know in some sense not to say that the others are not proper bilinguals or some people are better bilinguals than others, but then these are disciplinary considerations that come into place when you start to study these people. When you bring them to your lab and you want to do a particular experiment in bilingualism you would want to know that how proficient is this person in this second language that we are going to test and this has been something that has plagued researchers of bilingualism a lot people who work with bilinguals in the labs people who conduct different kinds of experiments with

bilinguals need to know exactly how proficient an individual is in the second language that they are being tested in and that is something very very important. And if you ask people say for example, something that I have also personally struggled with because I do some research in bilingualism when you talk about you know when you call people to a lab and you say oh are you a bilingual are you not and if this is a single question everybody is a bilingual everybody says that I know more than one language that is perfectly all right, but if you ask them how proficient are you in English all right because I live in Kanpur and this is the the part of the country although I am you know living and studying and and teaching in IIT Kanpur it is a fairly cosmopolitan population that people know several languages, but for example, sake if my research focuses on Hindi English bilinguals. So, when I call people to my lab and I ask them that oh how proficient are you in English and typically invariably everybody would say oh I am very very good I am let us say on a scale of 1 to 10 you can rate me a 9 you can rate me a 10 and what I have understood over time about these people when we do experiments with them when we analyze their data in the second language when we sort of give them tests of language proficiency of a language that they have said that oh I am super good in in that language is that people very significantly overestimate their proficiencies in in a given language people do not a lot of times understand what does it formally mean to know that language say for example, everybody would say that I understand English very well, but if I give you a bunch of sentences in slightly incorrect English grammar and I ask you to correct them I am sure a bunch of you would be scratching your heads and you will say oh I am good, but this is probably not something that I can do.

So, people generally overestimate their proficiency in a given skill or you know for most of the linguistic prowess when it comes to languages that they have been around with. For example, I was telling in the last lecture that I understand a little bit of Urdu I do listen to ghazals I do listen to Urdu poetry, but if you really you know put me to test and if you start asking you know proper meanings of Urdu words although I would probably have a sense that I understood that word, but if somebody turns around and ask me that oh can you tell me what is the meaning of this particular word in this ghazal and I will as I said be scratching my head and say oh I think it means this, but I am not very confident. And this is something very interesting because as I mentioned in research studies when we want a more definitive understanding of somebody's proficiency it becomes a bit of a problem because people typically overestimate their proficiency in a given language. And when you start testing them with more formal measures with tests of more formal kind whether be it a test in reading, whether be it a test in writing, whether be it a test in even listening and understanding and answering questions after listening to a particular passage there is a difference that we see. People do as I said overestimate initially when you ask them when you test them sometimes you will find that there is a difference of maybe 20 percent maybe 30 percent in a lot of cases.

So proficiency something that is a very important factor when it comes to bilingualism research and my sense is it is a personally you know my experience and I am sure a lot of other researchers would share this is that people give a rather inflated sense of their proficiency in a given language when you test them using a lot of these scales. Say for example, if I ask you on a scale of 1 to 10 how proficient you are in English I am sure that maybe you will overestimate yourself by 10 percent and it is not saying that everybody does that, but a lot of us do that all right. Now consequently what happens is more recent research has slightly changed its strategy. In more recent times what people are looking at and say for example, researchers like myself are looking at using more objective measures of proficiency. What we are trying to do is we are trying to test people in their second language or in their third language depending upon whatever the research question is by relying more upon objective measures of language proficiency.

What are objective measures you might ask and objective measures would look something like that I will give you a list of words and I will basically ask you to tell me whether you know the meaning of these words or not. Maybe I might ask you to write a one line meaning of that word as well. Maybe I will give you a passage to translate from Hindi to English if I am testing you in English and translate it back from English to Hindi. Maybe I will give you a passage in English and I will ask you 5, 6, 10 questions related to that passage and on the basis of how good or accurate your answers are I will give you a particular score and understand that okay this is your exact and unadulterated non-inflated measure of proficiency in that language alright. So, proficiency is in some sense a very interesting factor that researchers of bilingualism grapple with day in and day out.

Now there are other interesting questions that can be asked about proficiency. For example, whether it is actually possible for an individual a bilingual or a multilingual individual that is to be equally proficient in both languages. If you ask me I would probably say that maybe I am equally proficient in Hindi and English having gone to an English medium school since my childhood to 2.53 years of age that is. So, I have had enough experience of speaking in English.

I have probably an equal experience of speaking Hindi and although Hindi is my native language I might be biased to say oh I know Hindi and English equally, but again if you test me using you know equally hard objective measures of proficiency I am not very sure how I will score in them. Actually I am not even sure how I will score in objective measures of Hindi proficiency even because a lot of times the proficiency of an individual in a given language depends upon how much and in what instances in what particular situations you have been using and interacting in that language. So, for

example, I do not interact in official Hindi in you know in a sense that say for example, a court proceedings would do or say for example, parliamentary Hindi or for example, official you know Hindi I speak in more what the Khadiboli sort of language is. So, is it actually possible that people can be equally proficient in both languages? Again is a question that I leave you to you know think about discuss amongst yourself and maybe come up with an answer. Also is it required that people be equally proficient for using a given language in all different modalities? Say for example, if I say that I am a bilingual is it necessary that I be equally good in you know listening to Hindi in reading or listening to English in reading English in writing English and speaking English.

So, there are these four modalities that we talk about it is perfectly necessary that I am equally proficient in all of these four skills for myself to be called a Hindi English bilingual. Again a question that you know is relevant not in the general sense of the word because people get by and it is typically not a problem, but it is a problem that psycholinguists do grapple with when they are designing experiments when they are working with people who they deem bilinguals, but then it turns out that oh this person cannot read and understand the language, but can speak it with a relative degree of proficiency and you know when you talk to them they can make conversational sense of the language. Again these are couple of questions which are intriguing and they become very very important when you talk about research in bilingualism. They are not very important in the general communicative efficiency sense of the word, but they become very very important when you talk about the research in bilingualism. Now for the longest time it was believed it was traditionally believed that learning and using two languages would actually be detrimental to the development of children's linguistic and cognitive performance.

So, lot of people and I remember reading it somewhere the lot of people in you know olden days used to discourage people to from becoming bilingualism and then you know common refrain would be that if you try and learn two languages or three languages all at once you will probably not be good in either of the three. I mean it is typically and you might have heard this that a bilingual is half of a L1 person and half of an L2 person, but neither a fully language 1 person neither a fully language 2 person. I should probably explain what L1 and L2 mean typically when you are talking about L1 you are talking about the native language the mother tongue of an individual and L2 can be the second language that they learn L3 can be the third language L4 and so on and so forth. So, it was believed that you know a bilingual is half of an L1 and half of an L2 person, but neither fully an L1 person nor fully an L2 person. Interestingly Peele and Lambert in 1962 first demonstrated that bilingual children had actually a bit of an advantage over monolingual children both in terms of verbal and nonverbal intelligence.

So, back in 1962 I think this was done on a bunch of immigrant children if I remember the experiment correctly and what the what was done was these children were tested in their second language. I think these were Korean English immigrants and you know I may stand corrected if I am recalling this incorrectly, but these children were tested in the second language and given that these children spoke two languages relatively better and they were compared to only monolingual speakers of a given language maybe it be monolingual Korean speakers or monolingual English speakers. It was found that these bilingual children actually outperformed the monolingual children in verbal tasks as well as nonverbal tasks in tasks that require language and it also tasks that require and that do not require language in general intelligence so to speak and that started a huge you know it is been 60 years almost and there has been a large body of research there has been a very large body of research that has dedicated itself to investigating and understanding the advantages linked to bilingualism. And there is a sense that bilingualism or you know having the knowledge of more than one language is advantages not only in the communicative sense of the word it is not make you only better in communicating with different kinds of people, but it does make you more intelligent in some ways it does make you better in handling multiple tasks at once it probably you know and there was some research that suggested that it makes you you know it makes for a delay in setting of Alzheimer's and dementia and this and that and there is a lot of literature will come back to that at some point in time. So and different kinds of researchers have sort of variously qualified the discussion about you know who are bilinguals and you know what is it what is it that is the ideal definition of bilingualism who should be kept in this box that we are calling bilingualism and who should be kept out of it and there are some examples for example, Bloomfield says and defines bilingualism as native like control of two languages.

Now again what is native like is probably subjective what is native like is probably saying that oh it must be something like you were born to let us say English speaking parents if you are talking about English bilingualism, Hindi English bilingualism or Tamil speaking parents and so on and so forth. Hogan for example, suggests that the expansion of the linguistic repertoire of a bilingual individual expands through the ability to produce complete and meaningful utterances in the second language. Now while this sounds a little bit more complicated than Bloomfield's idea it is probably a slightly watered down version. In some sense we are basically saying as long as this individual in question can produce meaningful utterances in the second language say for example, if I can produce 5-6 sentences in English I qualify to be called a bilingual. Now you will understand that this is a relatively lower bar or a relatively easy classification because if you take the second one almost everybody can be classified as a bilingual and why not all right.

Now again as I said as researchers when we sort of look at this we understand that the matters of proficiency are more complex it needs a more fine grained understanding and they are more complex and they basically need to assess abilities across the four modalities that we discuss. Say for example, it may be people need to be tested differently for their listening skills for their speaking skills, writing skills and reading skills in a given language and also the quality of the language that they have. Say for example, if you see any test of let us say for example, some of you students might be giving the IELTS or the TOEFLs and so on you would see that people would want to test you on the quality of the language that you have as well. People would want to test you say for example, on your vocabulary of a second or a third language they would want to test you how grammatically correct you are when you create these utterances that Hogan talks about and also in some cases pronunciation in schools, convent schools more specifically and most English speaking schools if I may say so. Also you know place a particular emphasis on correct pronunciation you know you should not be merely knowing how to sort of speak you may also be knowing you know to speak them correctly and it is sometimes taken as a matter of pride that you know in elocution competitions for example, in poetry recital competitions for example, you know that oh the pronunciation was superb it was more like you know an Englishman speaking it.

So, that is also something you know very interesting and probably needs to be considered when we are talking about proficiency and again remember that when we are talking about proficiency it can be for different purposes. We can be talking about proficiency just for communicative efficiency sake and then probably everything goes, but when you are talking about proficiency in more of a research setting in classifying somebody as a bilingual and then you know asking them to do a bunch of cognitive tasks then the measures that you will use and the qualification criteria that you will use for you know deeming somebody as a bilingual will be very different. Now as I said earlier different types of tests have been used to measure proficiency of individuals in their you know across their known languages and across these different modalities. For instance rating scales have been most commonly used rating scales and tests of fluency, flexibility, whether English is your dominant language, Hindi is your dominant language and the most common measure across these different kinds of tests of proficiencies that typically have been used have been these rating scales. And as I began this you know lecture with typically what we have been doing and what a lot of researchers has been doing although now people are shifting away from the strategy.

When I was a student typically what you would do is you would basically give your participants language background questionnaire or a self-rated proficiency questionnaire where there will be questions like that on a scale of 1 to 5 how proficient are you in speaking Hindi or speaking English for that matter where 1 is least proficient and 5 is

most proficient. And basically you would do this for different skills you would do this for say for example, speaking you will do this for reading you will do this for writing and you will do this for comprehension and you will ask these people who will come to the lab and you will say ok on a scale of 1 to 5 given these skills how proficient do you consider yourself to be. You know are you at the level of 5, are you at the level of 1, are you somewhere in the middle of 3 and then people have sort of used different variations of these scales. So, these are called Likert scales people of social sciences would know this and these Likert scales could have different resolutions you can have a 5 point reading scale, you could have a 7 point reading scale, you could have a 11 point reading scale, but all of this basically depends upon a particular assumption and it is interesting that this assumption is the governing assumption, but a lot of times it could be something that you know you are not very sure of. So, for example, it depends upon the assumption that people are going to honestly respond to this, people are going to tell you exactly that oh I am proficient in English let us say on a 10 point scale up to the level of 6 or up to the level of 7 and so that they can maybe they can be adequately categorized into groups you know concerning your particular research question.

Now, this is interesting and again I am not saying that people are not honest, people may be honest in some cases and I have had this experience when I was studying in the University of Allahabad and this is a personal anecdote to share here that when we wanted to conduct experiments in Hindi English bilinguals with Hindi English bilinguals and I would call people to the lab and I will ask them oh how proficient are you in English and they would say oh I am you know on a scale of 1 to 10 I am an 8 or I am a 9 and when we would run a different test and we would tell them that ok maybe you are not really 9 or 8 you are probably more like a 4 or more like a 5 and that people would get offended and say oh how dare you classify me as a low proficient bilingual I am studying in an English medium course and I am you know good and this and that and so on. So, what it sort of led us to discover is sometimes even though they are trying to be well meaning and honest and this is what I started the discussion with people do not have the best idea of their proficiency in a given language. People do overestimate themselves or their proficiency in a given language and that sort of becomes a limiting factor when you are using mainly these scales for testing and classifying and categorizing bilinguals into different categories. That is why people have researchers have actually turned to more objective measures of proficiency which again also are far from perfect. See for example somebody who works in an office that uses both Hindi and English and I give them a translation test I am sure they would do very well at it, but are they as good in English for example, because that is what I am testing are they as good in English speaker that can write a poem in English and original piece in English that can write a flawless prose in English.

Now again these are objective these are subjective you know judgments that you would make, but you sort of convert those subjective decisions to scoring sheets and it becomes objective. So, what I am trying to say here is self-reading measures are far from perfect given because a sometimes people have the tendency to not be honest because they do not want to be categorized in the lower strata of proficiency of a given language, but a lot of times and that happens much more that they are not really aware they overestimate their proficiency in a given language. So, objective measures testing scales etcetera may not be the best way to classify or categorize somebody as a bilingual, but the objective measures available and my lab is sort of working and a lot of labs around India and the world are working in creating some of these measures creating objective measures of proficiency of language. It is very very important that we have a good idea of who we categorize as a bilingual and in what context and for that again it is a circular discussion because then we need to also go back to more basic questions as to who do you want to categorize as a bilingual. Do you want to categorize somebody as a bilingual even if they do not write in that language or read in that language what can speak and understand very well.

So, these are some of the questions that again are food for thought and they will keep coming up because I plan to discuss a lot of experiments when we go ahead. I plan to discuss a lot of experiments when we study various aspects of bilingualism and you will see most of those experiments what people have done is that they have relied on some measure of proficiency before calling individuals bilingual that is something that we will study again in a lot of detail as we go ahead. Now, another associated problem of trying to understand the different types of bilinguals is the categories you would divide them to. How would you put people into different categories? What kind of labels would you give them? And again and this is typical of scientists that there is little agreement among researchers there is a little unanimous sense of you know who to classify as a bilingual, what are the classifications that you would put bilinguals into and as I said you know you continuously keep revisiting the basic definitions of bilingualism, you continuously keep revisiting the basic sets of proficiency and that is a debate that goes on and on and on alright. So, there is there is a lot of variation there is a lot of you know non homogeneousness in how and you know what kind of labels we categorize our bilinguals into.

Now the and also if you look at bilinguals if you look at the variables attached to the bilinguals there are simply many many variables. Say for example, you can talk about bilinguals from the perspective of age, the age at which somebody acquired a second or a third language and biologically also make sense. Say for example, people who have picked up a second or a third language at a much earlier age turns out to be more proficient in that language if they have continued using that by the way than somebody



who has learned a particular language at a very later age. Say for example, somebody migrated to the United States of America at the age of 45 and has picked up some English and you are testing them at the age of 55 and so on they still have to have 10 years of experience with English, but are they going to be as good in English as somebody who was born and brought up in America for that matter. Gender intelligence memory attitudes towards the language as I said that in certain parts of the country it is considered a matter of prestige, it is considered a matter of self-esteem to be very good in English.

It is almost taken as you know a mark of coming from a higher socio-economic strata that I know that I know and speak English very well, but I do not know and speak my native language as well. All right, inter linguistic distances say for example, people who learned variations of some of the South Indian languages or variations of some of the European languages because those languages are slightly closer to each other than say for example, our Hindi and English those are also factors that you need to consider. The context of testing, the context of learning are also very very important when you try and you know test for aspects of bilingualism when you try and categorize bilinguals into these different you know boxes that you know we are referring to. Several kinds of labels however, have still emerged you know people do need to sort of operationalize and move ahead and therefore, several types of labels have emerged wherein you will see in different journal articles if you want to read some bilingualism research that oh our participants were balanced bilinguals or our participants were ambilinguals or they were equilinguals in other terms and then you will scratch your head and say that ok is a balanced bilingual the same as an equilingual or is a balanced bilingual is the same as an ambilingual and again if you really start digging deeper into this you will realize that these this landscape is far from perfect the definitions are far from exclusive from each other. So, all of that sort of really you know is not very very clear.

Also people have used terms like receptive bilingual or a productive bilingual oh I can understand the second language or I can just speak the second language. I cannot speak say for example, lot of people around you if you see they will say oh I can understand some English when I am spoken to in English, but I cannot produce a proper sentence in English. Are they bilinguals or are they not whether you would want to classify them as bilinguals or not again and this is also an important criteria that needs to be considered when specially when you are talking about research. Also there is this very interesting aspect of additive or subtractive tendency say for example, when I learned English did it add to my overall linguistic repertoire or did it take away some of the knowledge of Hindi that I would have grabbed and fill that empty space with whatever of English that I could learn. Is it a additive tendency, is it a subtractive tendency, does it is it better for both the languages, it is it worse for both the languages.

Again our questions which are open for discussion and researchers sort of bang their heads with these questions every day now and then and you will see journal articles on both sides of the debate you know rather frequently. Now how do individuals learn you know multiple languages and again this is something that we can talk about in a lot of detail. Individuals around the world have at least some level of linguistic competence. Be it individuals from Europe or Africa's or closer to home say for example, regions in the south of India, southeast of India where people typically have a slightly broader linguistic repertoire. So how do people do that? There are also things like you know specific modes of learning language you know specific modes of second language acquisition.

Did you learn it naturally at home, did you learn using school based instruction mediums, how did you pick up a language eventually and you can sort of go back and wonder about yourselves as well in this whole debate. Now interestingly researchers have highlighted the importance of factors such as adequate motivation. When you are talking about older age people picking up a language, people have talked about adequate motivation. Aptitude, aptitude is a very important variable. Do you have the aptitude to learn language? I see a lot of people around me who can very easily speak in 4, 5, 6 languages, who can very easily learn languages if you expose them to it.

I once met a driver you know a taxi driver in Shillong who said that I speak 13 languages. So the aptitude for picking up language, some people cannot pick up a second or a third language even though they keep trying for it and they sincerely put some effort into it. Also opportunity, how many different languages are you exposed to on a daily basis? You know can you pick up those languages nonchalantly? Are you exposed to them on a regular basis that you can pick up these languages? Do you have the opportunity of learning, do you have say for example is it going to get a raise in your job profile and so on? Now again one of the things that you know we can talk about is that when somebody picks up a second language, is it only the language that they are learning? Is it say for example when I learned English, did I only learn the vocabulary of English or the syntax of English and basically what I eventually had was this ability to put together English words into English sentences or did I learn something more? And P. Len Lambert if you remember that experiment that I was describing demonstrated that us learning a second language has consequences, may have consequences for that matter more than just expansion of the linguistic repertoire. It can have consequences for my general intelligence, it can have consequences for my ability to do two or three tasks at the same time, it can have consequences for my personality and this and that as well.

So people have suggested that you know individuals learn much more than just the

second language or the third language that they learn and this 1960s P. Len Lambert's experiment where they compared you know 10 year old middle class French and English bilinguals, I have said Korean English bilinguals in a previous class so please correct that. Middle class French and English bilinguals and monolingual children and they actually found that the bilingual children perform their monolingual peers in both verbal and nonverbal intelligence. So bilingualism or being bilingual may have consequences for a person's general intelligence as well. But the relationship between you know bilingualism and multilingualism and their intellectual development is slightly more complex than that.

Say for example, P. Len Lambert study participants were called balanced bilinguals. Now how balanced bilinguals does that generalize to all kinds of bilingual does that not is a question that we can sort of you know talk about. Now in more recent research and you know Ellen Bialystok from you know Canada has been working in this area for more than three decades now has proposed that bilingualism may be associated with improved cognitive functioning. It may be improved for example bilingualism as I was saying may become more adept at handling complex stimuli, doing multiple tasks at once and so on. And there is a lot of literature if you look at it there is a lot of literature that says that bilingualism has these and these advantages.

Bates for example has also suggested that you know learning a couple of languages, three languages for example expands not only the linguistic and intellectual competence but also has consequences such as delayed onset of dementia or Alzheimer's disease. So, this is again something that people have sort of proposed in the literature there is active research going on in this field and people have sort of talked about this every now and then. Now other than say for example the advantages of bilingualism that you know that are cognitive consequences there are obviously advantages with respect to their overall linguistic profile as well. Say for example being a bilingual we can smoothly a lot of times code switch, we can be talking in English but switch into Hindi, talking in Hindi but switch into English and we can do it you know effortlessly sometimes, but sometimes it becomes a problem in early say say for example when you are just picking up a second or third language. Then you would also experience something like cross language interference you will basically see that oh I wanted to speak this in English but somehow I cannot search for the English word of it and so I used Hindi there or I used Tamil there or Bangla there or any any of those languages.

So, there are also several kinds of transfer effects that exist between languages between two or more languages of the individual and this is also been documented and researched upon. Now another very interesting aspect that we do not really touch a lot upon and maybe we will try and do this during the during this course at some point is that

language is deeply intertwined with the culture and the traditions of the individuals speaking that language. Language is also a matter of identity I am a Hindi speaker I belong to the Hindi speaking belt of North India and I certainly have some pride associated to being a native Hindi speaker. Similarly a Bangla speaker will have certain pride and a certain self esteem in being recognized as a Bangla speakers. Similarly Tamil speakers Telugu speakers Kannada speakers or for example, you go to Europe French speakers are known to have a lot of pride in their language Italian speakers are known to have a lot of pride in speaking you know in their language.

And therefore, you sort of see that ok language is not merely just a tools of communication, but it also has consequences for an individual's identity and individuals sense of self that oh I belong to this group by knowing and using this language I share a certain degree of identity with the rest of the speakers of that language with the culture that that language has developed in with the traditions that that language imbibes and this is something which is which is been which is very important that people talked about it all right. So, languages with themselves bring a deep sense of belonging and identity. In fact, several states if you see within India across Europe are formed across linguistic identity they are formed along linguistic identity. Say for example, the idea is that you know France is a country of 10 speaking people, Spain is a country of Spanish speaking people in some sense there are linguistic differences those linguistic differences feed into identity different identity differences and then people have formed nation states across those linguistic lines across the lines of identity that were forged by the languages that they commonly spoke. So, it has been opined that to the degree of to the degree that bilinguals possess any given language they do in some sense in limited sense maybe draw from the culture and traditions that are embedded in that language.

That is a very interesting question that I pose to you is that given that I have I am a proficient speaker of English within quotes am I also like an Englishman do I also think like somebody who has been born and brought up in England and this is a very very interesting question this is this is something that I would leave you to ponder with do people when they learn a second language become party to that culture and their tradition. Again there is a lot of debate about western influence of English this and that is learning English making one part of that culture and making them more you know more prone to adopting the cultural practices of the speakers of that language that you are now learning again a debate an open question. Finally, scientific evidence of this fact seems slightly difficult to get how would you probe my you know my psyche to discover that there are two different types of identities in me if there are any by the way is there an English speaking or karma or is there in Hindi speaking or karma or are these two different people how do you design tests how do you design scientific you know validation to sort of test and establish these kind of things. These remain anecdotal at

best you know as far as I am concerned. Now Grosjean for example reported that sometimes bilinguals actually report that languages draw on that they are different languages draw out almost different personalities from them and again this is something again anecdotal at best, but sometimes you feel that oh when I am in my office when I am in my workspace when I am conversing to my students in English or my colleagues in English I am speaking a little bit differently maybe my jokes are even different maybe the mannerism that I you know display is a little bit different as compared to when I am at home and speaking to my child and my family in Hindi is that does that happen to you as well have you experienced something like that as well and is it again and this is again a very interesting question that one can ponder about.

Also group identities when I speak Hindi I identify myself with a group of Hindi speakers when I speak English I probably identify with myself with a group of English speakers does it sort of have a bearing on what do I see myself as what kind of you know identity or self sense of identity do I have. So, these are some of the questions that are very very interesting and we may you know at different points in time lean back on these questions to understand the bilinguals that we are going to be talking about all right. So, that is the end of this lecture I will see you in another one. Thank you. .