

Fundamentals of language Acquisition

Prof. BIDISHA SOM

Dept. of HSS

IIT Guwahati

Week 08

Lecture 037

Lec 37: Childhood bilingualism

Welcome back. We are in Module 8 now. So today we will start with Lecture 2 of Module 8. In this lecture, we will cover childhood bilingualism. Now, there are two types of childhood bilingualism. So we will start with simultaneous bilingualism and then follow it up with successive bilingualism.

So when we discuss second language acquisition among children, another important factor that needs to be studied is the fact that there are two kinds of language acquisition with respect to SLA if we are looking at childhood. So, this is the scenario in which we have children who learn the second language alongside the first. So, there are two types. Children can learn their second language after their first language is in place, but that has to happen a little later in life.

But if they learn two languages from the very beginning, then we have a completely different scenario. So, that is what we will look at now. So, children may sometimes learn more than one language at a time in their early life. This brings us to the two kinds of bilingual children that we are now examining. So, childhood bilingualism can be divided into two types: simultaneous and successive.

Simultaneous bilingualism refers to a situation where the child starts learning both

languages almost at the same time; that is why we call it simultaneous. They might be exactly at the same time, they might be slightly following one after another, but roughly we can still call them simultaneous, so that is when we are talking about simultaneous bilingualism. Successive is when the second language is learned after the first. So, as the name suggests, one after another. So, these two types differ in many variables.

Technically speaking, when we are talking about SLA, second language acquisition among children, the first one is not actually a second language learning. But since it is another type and a rather important type, we will put them under bilingualism only; now we will see more detail as to how they are. So, these are some of the primary differences with respect to simultaneous and successive bilingualisms. Simultaneously, the two languages are learned together. Successive, as the name suggests, refers to one after another onset of language learning; that is, whatever we are calling a second language in this case, the other language, which is the second first language, has a name which we will see.

So, language onset is very early. But in the case of successive onset, the acquisition of a second language is a little late; that is why it is successive. And thirdly, the two languages are almost always learned in natural settings, like at home or in peer groups, and so on. But in successive second language learning, it will more often than not, although not always, occur in a tutored environment, which we mean as formally learned in school, whether the learner is a child in school or an adult later in life; in most cases, it is tutored. Of course, there is social bilingualism as well, which we will discuss separately, but when we are talking about children, this is how the differences are looked at.

Now, one important factor, or let us say the defining factor in deciding between what is simultaneous and what is successive, is of course the age factor. So, there is a cut-off age, so to speak, beyond which they will be called successive bilinguals and before which they are simultaneous bilinguals. So, what is that cutoff age? It is typically 3 years old. So after 3 years, if the child is learning another language after the age of 3, then we will call that child a successive bilingual. But if the other language has been learned before, it is called simultaneous bilingualism.

Now many researchers have found proof of these or provided support from various perspectives, primarily from two important perspectives. One is the learning strategy, and the other is the neurological perspective. Neurological perspective in terms of brain development. We have seen before, as well, when we discussed the critical period hypothesis that brain development happens through stages. Depending on what states the

language comes in, it will have different kinds of impact.

So, taking the same kind of logic into consideration, the age 3 cutoff has been mentioned. So, after age 3, any new language is represented differently in the brain than one that has already been studied. So, before 3 years of age, the languages are represented in a particular area; after 3, there are some differences that have been found. However, what has happened is that in the beginning, of course, the cutoff used to be considered quite strictly; it was like, you know, there is a very airtight sort of compartment: 3 years before and 3 years after, kind of a thing. But later studies pointed out that it is better to consider them as a continuum rather than a very strict sort of differentiation.

So, as of now, the findings indicate that it is better to consider them as a continuum, but around 3 years is the agreed-upon domain, though it might change depending on various other factors. So, in order to clear the confusion surrounding when simultaneous turns into successive and how you have a different nomenclature, how do you differentiate them and all that? So, there was a different name given to simultaneous bilingualism, which is bilingual first language acquisition, because even if you are learning two languages, both are actually learned de facto as first languages, as all the other variables are exactly the same as the first language; it is just that in place of one, you have two languages. Hence, it is not a good idea to call them successive or a second language, but both are first languages. Hence the name bilingual first language acquisition (BFLA). This name was given by De Houwer, Annick De Houwer.

So, she defined it as the development of language in young children who hear two languages spoken to them from birth. So, from the very beginning, if they have heard two languages being spoken to them, then they will be considered part of the BFLA category. Now this was later considered to be a rather strict definition, but on the whole, this is a good definition because it takes care of the starting age of the two language acquisitions, ensuring that there is no confusion that they must be exposed to and spoken to in two languages from the very beginning; so that is where it starts. Now, there is one problem that later researchers have pointed out, which is that there is something called a passive bilingual, right? Because she said the two languages should be spoken to them. Now, what happens if you hear two languages but do not produce both languages? So, this is where you are a passive bilingual.

You hear two, but you do not use two. So, to take care of that, a solution was provided because, from a research perspective, passive bilinguals are difficult to assess. In all the

discussions that we have had so far, we have seen that we are talking about the elicited data or spontaneous data from the children when they speak or when they comprehend. So, speaking is an important aspect of your language competence and skills. Even if you go by the competence and performance division or, from a psycholinguistic perspective, it is also important for researchers to get data on how you speak, as that will give us an idea about what you know.

So if you do not speak, it is very difficult to assess bilingual competence. Hence, we need to look at that as well. So in order to understand the finer aspects of simultaneous bilingualism, it is important to study only those children who speak both of their languages. So, there was an update on the definition: Grosjean and Li suggested a combination of Houwer's definition with Grosjean's definition of bilingualism, which was the regular use of two or more languages. That is how Grosjean had defined it.

So, they have suggested that we put these two definitions together, Houwer's and Grosjean's definitions, and then that gave us the "concurrent acquisition of two languages in a child who is exposed to them from birth and uses both regularly in early childhood." That is the working definition we will go by when we talk about simultaneous bilingualism. So, this is our updated definition of BFLA. So, when we have simultaneous bilingualism, no one language is the first language and no one is, of course, the second language; hence, one cannot use L1 and L2 sort of notation. What researchers typically do is refer to both as language A, one with a capital A and one with a small a instead of language A and B.

There are various other kinds of notations, but this is very common. Now this is fine, so we have decided who are the simultaneous bilinguals. Now what happens? Why is it interesting? What happens if a child is growing up as a simultaneous bilingual? Some very interesting things actually happen. What they have found out is that children simultaneously learning two languages at an early age often cannot distinguish between their two languages. So, when we discuss this segment, we will go chronologically, starting with the earliest finding to the later findings.

So, in the initial findings of initial studies, they reported that children who are growing up as simultaneous bilinguals cannot distinguish between their two languages because it seems like they mix up a lot of components from one language to another, which is why we think that they are probably not able to know which is which. So, almost all studies on infant bilingual language acquisition have found that children tend to mix phonological, lexical,

phrasal, and other elements at all levels. So, as a result, some researchers—not all—have argued that children in this kind of scenario have what is called a unitary language system. So, initially, the system is only one, even if they are getting input from two different languages in their mind; it is one system. So, on the basis of this, they propose the three-stage model, which goes back all the way to Volterra and Taeschner's proposal in 1978, which was quite popular; later on, of course, it was refuted, but it was very popular at that time.

The idea was that the entire thesis was based on a longitudinal study of two German-Italian simultaneous bilingual girls. This study was based in Italy. What they say is that there are three stages—stage 1, stage 2, and stage 3—in the developmental stages of a simultaneous bilingual. In stage 1, what happens is they have one system, so one lexicon and one syntactic system. All the input that they are getting from different languages, whether it is at a lexical level or a syntactic level, is part of one system; they have one lexicon and one syntactic system.

Gradually, they go to stage 2 when they have 2 lexicons and 1 syntactic system, and that gives rise to finally stage 3, where they have finally separated the 2 parts, the 2, and now they know that there is system 1 and there is system 2. That is what they proposed. This representation, of course, is from later studies, but this is the idea. So, these are the three stages: in the first stage, the child has one lexical system that includes words from both languages and one syntactic structure, kind of a fused system of the two languages. The second stage, the child distinguishes two different lexicons but applies the same syntactic rules to both languages.

And then in the third stage, which is about 2.9 to 3 years, which is the final stage, that is when the child has two linguistic codes differentiated in both lexicon and syntax. But each language is exclusively associated with the person using that language; that still remains. So, if the mother speaks Italian, she will speak in Italian to the mother, German with the father, and so on. But this is how the idea was formed.

So, I have unpacked these stages a little bit, but you get the idea. So, these are some examples; let us see. So, these are the same examples from the same study on this child; this child's name is Lisa. So, she lives in Rome, and there are these two words, "la" and "da"; "la" in Italian and "da" in German both mean "there" as opposed to "here," creating

a here-and-there distinction. So, this is in German and Italian; these are the two words for the same concept.

And then this child is exposed to both words. What would she do? What she did was something quite interesting. She divided it because there are two words and because she is probably not understanding it as two different labels for the same concept. So, she made a finer distinction between the two. So, she started using "la" for visible things and "da" for invisible things.

And this is how they show that in this conversation between Lisa and her mother. So she is talking about a cat that is outside. So when the cat is outside, she is using one term, and when the cat is inside, she is using another term. So, this is how she differentiates them in terms of their conceptual overlap. So, children do not consider two corresponding words in two languages to be corresponding.

So, that is the baseline for this use. Similarly, she uses "da" and "daci" in interesting ways. Da is derived from "dare," which means to give. And then "danke" from "danke," which is "thank you" in German. And then she does her own thing; she uses these words from different languages in her own way because they are somewhat similar, and she has her own concept embedded in them. So, she learned to use it around 1 year and 10 months old and used it only to give something to somebody. When she is offering a sweet to her mother, she says "da." So at this stage, the child's speech has only one lexical form, which is why she makes sure that she has different concepts associated with them. Some researchers have called this form a language system of their own at that stage.

Let us move on to Stage 2. This is when they are able to distinguish words from different languages but apply the same syntactic rule to both. So, the child now has corresponding words in both languages in the sense that the same object can be indicated by two different words, and that bit has been taken care of pertaining to the two different languages. Significantly, words drawn from two lexicons do not occur together in a construction. However, how they arrive at this stage depends on some factors that may influence this choice, which is, of course, language-specific and person-specific, child-specific; but this is how it apparently happens. So, in the case of Lisa again, because she was the subject of the study, she learned two words for specs for glasses in German and in Italian. So she learned the word "occhiali" for glasses early on, as her father wears them.

So one day, when her mother draws a woman wearing glasses, she teaches her the word "Brillen." Her mother is a German speaker, so the word for glasses in German is "Brillen," and she teaches her that word. Then she tells her to go and show the drawing to her father and tell him what it shows. Then this is how the conversation goes: the father is asking, "What is this?" She says "brillen," and then she points to the father's glasses and says "occhiali." So what this entire story is basically telling us is that she learned that the glasses her father wears are called "occhiali". The glasses that the drawing had are called brillen, so she will use them exclusively in that domain. She will never use brillen for her father's glasses. This took her a lot of time to understand, and even after her mother corrected her, she took a really long time to separate that out. Similarly, stage 3 is now when the child speaks two languages differentiated at both the lexical and syntactic levels. However, each language is associated with the person using it.

So, one person, one language. So, Italian only with father, German only with the mother; that is how she went. So this is again from the same girl's data. So when she is talking to her father, she uses some proper German sentences. This is Lisa, small like she uses this kind of structure. At the end of this stage, when the tendency to categorize people in terms of their language decreases, that is when we consider them truly bilingual because, until now, according to older studies, older research, and older theories, scholars viewed them as confused between these two. Many other studies have also ratified this finding that children mix a lot in the initial stages of their bilingual acquisition. Typically, the findings are based on a meta-study, a meta-analysis, summarizing various studies that looked at the percentage of mixing. They found that in stage 1, it is 20 to 30 percent, which is pretty high; stage 2 is slightly less, and stage 3 is 6 to 12 percent. So, this is what later findings had pointed out. Now, though mixing has been reported by many studies, the problem that later arose is that of the explanation as to why there is mixing.

Mixing is fine there. And the initial explanation was, of course, the unitary language system, which has the three-stage model, but the later explanation did not really entirely agree with the unitary model, and there are many other reasons that were put forward, many other explanations that were put forward. I have listed some of them here. So, the unitary language system, of course, is one of the oldest, and there are many others, like mixing, which is possible even in adult speech. It is quite possible that adults who are bilingual or who are in a bilingual environment might mix themselves. So, it is not that the child is doing it on her own; she might simply be inspired.

Similarly, parents' linguistic practices, context of use, and incomplete reporting are another serious concern that has been put forward by many later researchers, stating that only those utterances which fit the theory were reported and not the others, and so on. Better options in one language and many other explanations have been put forward. Similarly, when parents are bilingual themselves, they might also be using a mixed language. Then we also have non-native parents, where one parent addresses the child in a second language despite an otherwise monolingual setting.

So, it is a very nuanced kind of domain. It cannot be one size fits all because every child is different, and every home environment and other kinds of environments are different, so languages are also different. So, it is possible that in some languages, some words are more salient; for example, in the case of Estonian, one interesting study by Vihman looked at the structural factors. So, there can be multiple reasons for children to mix in the initial stages. It need not be only one theory. So, the counter to the three-stage formula came from various studies. For example, the reason for mixing is not due to a lack of equivalent words, as Genesee pointed out. Similarly, another study showed that children differ in their ability to mix. So, not every child mixes languages to the same degree or in the same way. There are qualitative and quantitative differences across children and languages as well. So, that is another pattern, so it is not a similar kind of pattern everywhere.

Then later on, many other studies and experimental studies also showed that children may not really have a fused syntactic system. For example, a rather well-known study involves the study of syntactically contrasting grammatical systems in German and French bilinguals. And what they found was that these two languages have contrasting syntactic features, and you would expect the child to mix; but what they found was that from the very beginning, the children acquired these systems differently; there was no mixing up. Other works have also pointed out similar kinds of observations.

This particular study by Muller et al. looked at the learning of the verb second property among the German-Italian bilingual child Carlotta. She could use this language-specific structure from early on. So, there are many studies that have found counterexamples. Then there was this language-specific subject realization in a German and Italian bilingual child. In German, the subject has to be lexically realized; in Italian, it need not be.

So, for example, in Hindi, the subject need not be lexically realized. So, 'khaungi' means that it is the first-person singular, which is the subject. But only the verb tells you what the subject is, so the subject can be dropped; it can be null, it need not be overtly lexically marked, but German has a lexically realized subject. Even in that kind of contrast, the child could clearly differentiate between the two systems. So, findings from various studies, later

studies found that they pointed towards that probably there is no fused system lexically or syntactically in the initial stages of bilingual development.

Then, there are different kinds of hypotheses since there are two languages that are being developed at the same time; what could be the possibilities of mutual give and take? Is there a connection between the two languages? Since we know that they are able to keep them separate, there are chances of sometimes mixing and sometimes not mixing. So, what are the possible theories? So, there are two theories: the separate development hypothesis and the interdependent development hypothesis. Separate development hypothesis, as the name suggests, states that each language develops separately. As we have already seen with so many examples, even when there are contrasting grammatical structures and syntactic structures, the children are able to keep them separate. So, this is the same thing that the hypothesis talks about: that two languages develop separately; there is no reason for them to be interdependent.

On the other hand, the interdependent hypothesis suggests that, as proposed by Paradis and Genesee, two languages develop in an interdependent way, thus leading to mixing. So this is the hypothesis that tries to explain the existence of mixing, because mixing is also reported. So the funny thing about this kind of experimental study is that you get support for both sides of the argument. You do get some cases of mixing. You also get cases where children are able to keep contrasting features separate, keeping contrasting language completely separate.

So, we have proof for interdependent kind of hypothesis as well. So, there are all these studies that I have added. These have all looked at these two hypotheses. Another important concept within this entire debate is that of cross-linguistic influence, which, as the name suggests, is the influence from L1 to L2. So, if we are talking about the separate development hypothesis, it does not allow any cross-linguistic influence because they are kept completely separate, and being interdependent automatically makes way for CLI to happen. So, how does one explain the contradictory evidence again? So, there are many possible explanations that have been put forward.

One is the case of language dominance. So, even if two languages are separate, they are kept separate; there might be other factors that might result in the CLI being observed. So, the dominance factor is, for example, one study that looked at Cantonese English bilinguals. So, they showed that Cantonese was a dominant language over English and

hence showed a lot of influence of Cantonese on the English of the children. Then there are other possibilities; for example, the interpretation of data. Often what happens is that the same data that has been interpreted in one way can be interpreted by another person in a different way; this is possible in experimental studies, which has happened in this case as well.

An important study finds proof of both SDH and CLI in the Japanese and English languages. But the same data were interpreted as SDH only by De Houwer. So, this is what we mean. It depends on how you look at the data and what kind of tests you run. And then, of course, another possibility is that some domains are more vulnerable to CLI, whereas others are not, as in grammatical domains.

So there, that is why it is possible to have a CLI even if you are talking about separate development hypotheses. Now, what this idea of some domains being more susceptible to influence takes us to is a very interesting domain: the idea of language being made up of subsystems. So language is not one monolithic whole; it has various subdomains within it. So, the language should not be seen as a single system; what has now been proposed is that it is made up of subsystems. So, even when languages are developing separately, on the whole, they are separate, but there might be, at a subsystem level, some amount of give and take between the L1 and the two first languages.

So, in fact, simultaneous bilingualism allows the separation of some grammatical aspects while keeping other domains open for cross-linguistic interference or influence. And then, of course, you have other problems of bilingualism that are similar to monolingual, or let us say L1, acquisition, which is the problem of the data: how much input you get. So, given the sparse input, the poverty of stimulus logic. So, given that it is not enough for even L1, how does it become enough for two languages for the simultaneous bilingual? So, this has been considered as the twice as complex problem.

So, the poverty of stimulus is twice as complex here. Similarly, the quantity and quality of input for both languages may not be equal. They may not be equal in terms of quality and may not be equal in terms of quantity, which has also been looked at. Similarly, balanced and unbalanced developments. So, all of these are part of the same poverty of stimulus idea, but it is only a double poverty of stimulus in the case of simultaneous bilinguals. So in an ideal scenario, you would have both languages having a similar kind of, you know, similar quality, similar quantity, and similar amount of input for both languages, but that does not happen all the time.

That is an ideal scenario. In a realistic scenario, there often will be no balance between the input of the two languages. Now, this might result in unbalanced development in the two languages. So we have already seen that dominance has been put forward as one of the reasons. So one language might be dominant. In the environment, let us say there are these two parents: one speaks Cantonese, and the other speaks English; Cantonese is spoken more, or it is the more dominant language present in the environment, which might lead to an unbalanced outcome.

So, this is also a possibility. So, the language faculty is often thought to be fully capable of handling the challenges of input, as it happens in the case of monolingual acquisition, as in L1 acquisition. But in the case of bilingualism, it is a possibility, and it does happen that some people are balanced bilinguals while others are unbalanced bilinguals. So, even when you are a childhood bilingual, as in simultaneous bilingual, it is theoretically possible for some of them to be unbalanced as well. So, there is also input effect that input plays a larger role than in case of monolingual children and that is why it is important to estimate the same.

So, for example, Singapore English may show a lot of Chinese influences. Now, how do you evaluate that? Why is Chinese influence greater? Is it because of the way Singaporean English is spoken, or is it due to the unbalanced input? So, there are all these nuances even within simultaneous bilingualism concerning children. So, we can sum up this segment by saying that the childhood acquisition of two languages simultaneously is an important domain within language acquisition. And this sheds light on the developmental trajectory, often pointing out that sometimes there are changes and differences, of course, but because both are being learned at the same time, and if you follow universal grammar, they are both being acquired simultaneously when access to UG is complete. So, hence we should see a similar kind of pattern in development in both languages. Which is true in some cases because children are able to keep them separate, but at times we do see some differences.

So, all these different kinds of outcomes make this an interesting domain, but due to the paucity of time, we cannot really break it down further. We will stop this segment here, and in the next lecture, we will look at successive bilingualism in the case of children. So, we will take up childhood bilingualism and childhood SLA in the next lecture. Thank you.