

Language, Culture and Cognition: An Introduction
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Lecture - 03
Part 3: Language, meaning, reality

Welcome to the part 3 of module 1. We call this part *Language, meaning and reality*.

Before we move ahead, let us have a quick recap on the two parts that we have already completed; two different trajectories in history that we have already looked at. Part 1 basically traced the history of the studies on the nature of human thought as it has taken place over centuries. Here, we looked at how the working of the human brain, human mind has always intrigued scholars across centuries, across space and time and how it all started, what are the different trajectories it took, what are the different standpoints in different times of history and so on. So, starting with the ancients till the modern time, we have charted the history in terms of important landmarks and important scholars that have been, that have given us various new insights into this discipline, which helps us understand as the field is today.

Part 2 looked at the relationship between brain and cognition and the developmental trajectories that have taken, that the field has seen in these two discipline, in these two different domains of research.

Now, it is very, it is not probably entirely correct to say that these two disciplines have been separate. From the very beginning, the idea of mind and the idea of thought, and the idea of brain, and language have been intertwined with each other in different degrees. Depending on the time, depending on the particular scholar we are talking about, particular given philosophical thought at that point, but they have remained connected through history and this is what we have seen till now.

We have also looked at the role of language in all of these, how language was seen from, starting from the ancient time till the cognitive revolution and up to the modern time, as to what role does language play? Is it an important tool or is it just a mirror that helps us reflect the events, the facts, the truth of the world into the human mind and so on.

We have also talked about some of the debates, some of the controversies surrounding these ideas and how there have been primarily two different camps in terms of the nature of thought and in terms of how language fits into this, whether language is entirely symbolic or it is embodied. Embodied understanding of language, which is quite well taken these days, also traces its roots to the ancient times, the ideas, the debates have always been there.

So, after looking at these issues from philosophical, and neuroscientific points of view of course, in very brief, now let us move on to looking at this from a linguistics point of view, because this course is primarily a language course, linguistics course, that looks at language from the perspective of cognition.

So, a historical overview about how the field of linguistics itself has developed and what have been the primary pre-occupations of linguists over time and what are the primary what are the main theoretical standpoints and how things have how theories and their uses have changed over time and what are the main debates, this is what we will look in into in this section.

So, this is a road map: language from linguistics point of view and where we will discuss some very important milestones in linguistics, because this is only a part in the introductory module, we will not get into all the... it will not be possible to get into all the major events that have happened. But we will try and cover as much as possible, and as much as is relevant for this course, to give you an idea about the background in which we place this entire course. And then we will move on to how meaning has been dealt with in the in this field, in the field of linguistics and then move on to meaning and reality and the relationship of language.

So, to start with language, from the linguistics perspective that is, there are some sobering thoughts. Initially it was thought that only humans are capable of language, only humans *speak*, so to say. However, there are some very sobering discoveries in of late. There have been studies ongoing studies the on animal in the animal kingdom, their communication system, various kinds of signals that various animals are putting into use for various purposes.

We are yet to know the entire scenario we are in, yet to know the entire truth in this discipline in this domain yet. But what we do know is that certain animals, certain members of the species, various species like bees, whales, zebra finch and so on, have very complex signal system among themselves among to be used within the community, for various purposes, and the complexity of which we are only beginning to understand; for example, zebra finch have been found to actually literally *learn* to sing. In the initial stages, the baby zebra finch just babbles like human babies and it is an unstructured apparently and over a period of time, noticing the adult zebra finch, they learn how to sing as far as the pattern in the community goes.

So, there are all these interesting findings. Recently, quite recently in fact, a very similar discovery was made about prairie dogs as well. The prairie dogs are a very intelligent a very intelligent species apparently in terms of language use. They use a variety of squeaks, yips, chatters, chitters and so on, various kinds of different calls and research shows that these calls are not just some sounds, that arbitrary sounds, that they are making.

In fact, there is a structure to it, there is a purpose to it and there is an usage, you know, almost like a speech act quality to it. So, we depending on the need of the hour they will be using different kinds of chitters. For example, to warn of approaching predators that caused they will have they will create they will use some one kind of chitter and which will eventually, as a result of which, there will be defensive and evasive actions in the colony.

So, the one or two or few members will warn the rest of the community to take a defensive position or to hide or you know, various actions that are necessary at that given point of time. In fact, acoustic analysis shows that individual differences do not actually exist, what the differences that actually come out is dependent on the kind of stimulus that they have.

So, different kinds of stimulus would elicit different kinds of calls which is, which means it is very structured. It has a it has its own structure which is understood by all members of the community. Faced with humans, when humans approach their colonies, they have a distinct set of calls, which are different from other kinds of calls.

So, that is as refined as it goes. Of course, there are finer details into this if one is interested and I will add the reference at the end, it is a very fascinating study. So, this kind of findings, this kind of different findings with respect to the different signal systems however, complex they are, ultimately lead, have led, researchers to make a judgment on the basis of their use.

The kind of the there is an amount of agreement that even when these animals are capable of using signals for various kinds of purposes, it is still dependent on the current scenario, dependent on the events that are unfolding in real time: here and now. So, they can, dependent on the kind of predators they see, they can warn their members group members to run away or to, you know, to be defensive and so on and so forth. So, this is and this is entirely dependent on the immediate environment. Whatever is happening in the immediate environment, they can, in some sense, *talk* about it. As a result of which many believe, many presume, that animals suffer from some kind of an imprisonment, cognitive imprisonment so to say, in the present.

So, they are capable of, of course, communicating about various threat perceptions and so on however, that is restricted to the current environment, immediate present. Well, that is as far as our current knowledge goes. We really do not know, it is quite possible that after more research, we will get to know, we will be better in a better position, to talk about this, but at present this is the presumption.

So, there is a difference between human language and the *language like* communication system in various animal species that we find. So, humans on the other hand, (what is the main difference?) humans on the other hand, have used language to set us free from this imprisonment. Language actually helps humans to talk about the present, the past, the future; you know to make judgments, to deliberate on actions, to talk about the universe as we have already seen.

We have already seen that language used by humans has been, has made us capable of talking about the cosmos, to the atom and you know beyond. So, to start with, we believe that language can be a thought a vehicle of the of thought itself and one can talk about past, present, future and so on and so forth. Another interesting aspect of human language is of course, the intentionality as intentionality as a part of language.

And we talk about, we use language, to talk about the world outside of us. It also creates a social world for humans. Of course, we can argue that animals capable of using signals also create a social world, but probably it is as of now, as of now that is, we still believe that our social world creation of the social world is far more complex and multi layered as opposed to other animal species.

So, we now, we create knowledge of the world, like science and mathematics as well as abstract domains transmissible. So, we can use language to talk about mathematics. We can talk about language use language to talk about art, culture, history, architecture and so on and so forth. We can use language to transmit that knowledge from one person to another, one community to another, from one time to another and basically across time and space and people.

So, that sets us apart from other species as to what are the purposes of language, how do we use language and what is the what is one unique feature of human language. So, so far what we have whatever we have seen in terms of philosophy and neuroscience of language and various schools of thought, we can safely say that there are primarily two ways of looking at language.

If we ask what is language? There are of course, there are subtle nuances here and there, but largely we can say that on the one side we look at language as a structured set of forms and manipulation of abstract symbols. So, there are symbols which are arbitrary of course, and then those symbols are manipulated in terms of certain rules.

And that is what makes language something, somewhat like a computer function, somewhat because its ultimately a symbol manipulation system. That is one part of the story. On the other hand, there is a equally dominant school of thought that says language is predominantly a process, which is devoted to conceptualization and communication of meaning.

Because ultimately language helps us communicate and communication is heavily dependent upon the meaning. There is no point talking if you do not mean anything by your sentences. So, and how do we arrive at that meaning, that is a process in itself. The process of conceptualization and transmission of that conceptualization is what language is all about. So, these are roughly the two ways of looking at it.

Or maybe we can say as we will see towards the end maybe these are two sides of the same story. In the previous parts as we have already discussed, we have already looked at the historical aspects of language related studies from different perspectives, not in terms of linguistics as a discipline. In modern times around the time of cognitive revolution the nature of language of course, underwent a lot of debate. as we have seen.

That symbolic cognition on the one hand thinks language is purely a symbol manipulating system, whereas, on the other hand, the embodied cognition approach takes a different stand on this matter. So, now let us look at the story from a historical perspective of linguistics as a discipline.

We will start with Ferdinand de Saussure because not because he was the first to study languages, but in many ways, he is considered the first linguist of the modern era. Of course, we can go back in time and talk about Panini in India and other scholars in the in other places. But let us start with the modern era other in order to understand how in the modern time how linguistics as a discipline have flourished.

So, Ferdinand de Saussure worked in the late nineteenth century, early twentieth century. He is credited with the with bringing in new changes, with bringing in changes into the study of language itself. Before Ferdinand de Saussure, it is important to remember that this was a time after the colonial period or it is colonial period was still going on.

So, during the colonial period, there were a new languages, new worlds as they are called, were found. New languages, new communities came to light. Western, western European voyagers they went and found new countries, new languages, new people that naturally gave rise to a lot of debates as to how these languages are different from the languages that they spoke; for example, English, Spanish or Dutch or Portuguese and so on: the dominant languages of the world of the time, dominant colonial powers of the time. So, there was a lot of activity in terms of trying to understand language in terms of culture. And more often than not, it took a slightly, there was a there was a hierarchy that was you know put in place that certain languages, that they did not understand, were somehow not at par with the European languages and so on.

But overall language anthropological linguistics basically started from these endeavors and slightly before that as we all probably, as you all probably know that William Jones's work on the on Sanskrit and how this actually unleashed a lot of work in historical linguistics trying to find out the how languages changed over time, how known the creating the Proto language formulating the Proto languages, how the language families came into being.

A lot of work lot of very important work took place around that time. So, our eighteenth and nineteenth century was primarily devoted to understanding the history of languages, how languages, different kinds of languages came into being, what are the historical connection between them, how the changes took place, how the sounds changed over a period of time, time as well as space and so on.

So, these were the focus of a language studies at that time at, before Saussure. They were studying language not to understand language itself as in at a given point of time, but they are looking at the historical processes that has been at work since time memorial immemorial as to what language came out of what, which are the sister languages, which is the mother language and so on.

In that light, Saussure becomes very very important figure for us, because he was the person who said that we can study language for its own sake. We do not really, even if we do not look at the history of it, even if we do not look at the not sound change across languages and so on, even then it does make sense.

So, that is what basically he did, he assured in the idea of studying language for itself, not to understand history, not to understand anything else beyond language, but just to understand language itself, how the structure works, what are the final nuances within a language and so on.

His major contributions are of course these two. Though he was a scholar, a very important scholar and it is not possible to limit him only to couple of things, but for the brevity of space we will have to do that. So, we will stick to his two major contributions, which is the difference between synchronic and diachronic linguistics and his contribution in terms of *langue* and *parole*.

So, synchronic versus diachronic linguistics was a very very significant aspect of his contribution. As we have just mentioned that the comparative philologists before him contributed towards understanding and knowledge about the historical development of languages, right?

So, they were looking at: if Sanskrit is the mother language, what are the daughter languages, what are the sister languages and how language is spread across continents and what are the differences, what are the similarities and how sound changed and so on. This was the background Saussure brought in the assertion that the studying contemporary languages was equally important.

It's not only important to understand the history, but looking at languages, as it is right now, is also important. That is how he proposed this two-way difference. Saussure was very fond of giving analogy of chess, to make his argument in terms of language. So, he does this with this as well, with this case of synchronic versus diachronic linguistics.

Now diachronic, let us make the let us define what it is. Diachronic linguistics basically refers to understanding language, studying language across time. So, the historical aspects of it how languages came into the current shape, how it came to the current structure, how it got the current sound system and so on.

So, across time, studying language across time, is diachronic linguistics. Synchronic, on the other hand, studying the language as structure as it is, at a particular given point of time. Time remains fixed. So, you look at language right now. So, he gives an example, he gives an analogy, through the game of chess in this case. He says, just in the game of chess, the arrangement of the board is constantly changing.

We are all if you are if it is a this is a game in progress, the arrangement of the pieces, chess pieces, on the board constantly changes, because of the movements of those pieces across the board. Similarly, language also changes all the time. Language is a living thing. So, and it depends on humans. So, language is also changing. At any given point of time if you look at, it is in a process of change.

However, at any given point also, the arrangement is itself meaningful. If you look at a chessboard while the game is on and you look at the arrangement of the pieces on the

chess board, it does tell you something. It tells you where exactly the what is the arrangement, how who is winning or what stage of the game one is and so on.

So, just as any at any given point of time, the pieces on a chess board are meaningful by themselves, even if they have come to that situation, they have come to the that particular arrangement, over a period of time during the game, it is still meaningful even if you do not look at the history of it. So, even if one does not know how this arrangement came into place, even then the arrangement itself makes sense.

So, that is how language also has a similar, can be understood in a similar way. Even if we do not know how English came to be structured the way it is now, it is still important to look at the structure as it is now, without looking at the history of it.

In terms of meaning, we are talking about meaning because that is what we will be ultimately following up. So, Saussure talks, uses the same analogy to talk about meaning as well. How is meaning important? Is meaning important and how do we understand that? So, he says any piece of chess can be called a Bishop. Any piece of chess, any we just decided it is just a matter of conventional agreement that, we this particular piece comes to be called as a Bishop.

As we have seen before also the this is arbitrary. The relationship between a *signifier* and a *signified* that is, the name and the object, the referent and the name, the relationship between these two is arbitrary. That is what Saussure basically means. That there is no reason as to why the *bishop* in the chess should be called a *bishop*. There is no *bishopness* about the piece itself. So, this is the matter of convention. Similarly, any sound can represent the idea of a tree, or for that matter anything, a computer or a screen like this behind me and so on. So, this about this particular relationship is arbitrary.

So, he said that *signifier* and *signified* share a relationship that is arbitrary. Now how do we come to the meaning of what is this, what is the status of meaning of each word in a given sentence or in any particular formation. So, he said that words are meaningful in terms of their relationship with other words.

Again, he comes to the analogy of chess and he says that just as the move of one chess piece has meaning for other chess pieces. Similarly, language a word gets meaning from its association with other words in the same system to a large extent. So, thus it words do

not function in a vacuum. They do not make sense in a vacuum. It has to be in the, understood, in the context of its usage with other words. So, basically language is an organized system.

Language is an organized system with *signifier* and *signified* into it which has an arbitrary relationship, but the *signifiers* themselves are related to each other. This is the gist of the matter.

Then we move on to his idea of *langue* and *parole*. This is also a very important contribution because a lot of, he gives a name to it, but these ideas have been there and it has been also taken up later and debated very significantly.

So, the he uses the words *langue* and *parole* to refer to two different aspects of language itself. So, *langue* refers to the rules of the total system of language. Something that we have been calling the, ah, the abstract representation in the brain of language, the entire system of language. What we mean by what do we mean when we say that we know a language? That is a system of language. We know if I say I know English language, it means that I know the rules that govern this language. I know how to use a, how to create grammatical sentences and I also know when somebody speaks an ungrammatical sentence that this is wrong and this is wrong because this is the violation of these rules and so on.

So, the entire system, the rules, entire system of rules of a language that is there in our understanding, in our mind, is what he refers to as *langue*. On the other hand, *parole* refers to the actual use of the language, which is the speech. So, when we speak the output that is there in that which is dependent on many factors is what he calls *parole*.

After giving this binary opposition of *langue* and *parole* or the two sides of the of how language is he also mentions that it is *langue* which is the primary concern of linguists because linguists must be talking about, must be bothered about concerned with the rules that govern the language, something that is unchangeable, something that is there, for all language speakers to know. It is *parole* is not an even, not should not be and the idea that we should be studying.

It cannot be primary. Parole cannot be a primary that is what it means. An example that can make this point clearer is that even if a parrot can speak the words of a language, we often see that many birds do a mimic a human language. So, you can teach, so to say, a parrot to *speak*, but even if a parrot does utter the words of a language, it cannot be really said to have the knowledge of the language.

Even if I teach a pet parrot to speak in Hindi or in English or for that matter any other language, we cannot really say that the parrot knows that language. On the other hand, if somebody knows the language, if somebody has idea about the system of the language, he or she may choose not to speak.

So, you even if you have a if you can have a *langue*, but no *parole*, but if you have a *parole*, you cannot be said to have a *langue*, that is the idea. So, you might have the knowledge of the language, but you do not speak. So, there is no output. There is no *parole*, but you still have the knowledge.

But just having *parole* does not mean much. That is why he said that *langue* is the one that should be studied in detail and that is what will ultimately give us insight into the structure of languages. So, in viewing language as a system in itself, he was the first person to really come up with this as a system, as a you know he was on his way to establish language studies, linguistics as a discipline in itself, as a as an important domain to investigate.

So, in viewing language as a system in itself, that too a cognitive system, because he said that this is internal, the *langue* is internal, it is there in the brain and we already have this knowledge. If you have a if you know a language, you have the *langue* inside you, in inside of your mind.

So, he basically places language as a cognitive system, within one's mind that is there within one's mind. So, as in that way Saussure is always often understood as a precursor to modern linguistic theories. This is something that we already know, but in his time this was this was a major standpoint to take, because language was considered not so much of a mental state and so much of you know the cognitivism was still not fashionable.

So, that is why Saussure is understood to be a precursor to today's mentalistic approach to language studies.

The next scholar, a towering figure that we will talk about, without whom any study of linguistics will be will not be complete is Leonard Bloomfield. Bloomfield was also a structuralist and he is he was he brought structuralism to America. He is an American linguist and he is credited with the development of formal methods and procedures to study languages.

So, he believed that language structure should be studied of course, and they should be studied in a proper way because of and to do that he devised methods, notational systems, he devised for studies of language, how to really create formal methods that is what, where his major contribution lies and procedures. So, analyzing language needs some kind of a structured approach, it needs some kind of a scientific method. This is what Bloomfield brought into it.

He studied a lot of languages, many of them were on considered exotic languages at that time and remember the colonial hangover. So, these are these were understood to be exotic from their perspective, from the western perspective. So, Tagalog in Philippines and Malayo Polynesian and many other languages that he studied and he used his methods, his scientific method, to analyze and describe these languages using these methods.

And he became a very very important figure, the most probably the most looming figure in linguistics in America in his time. He was a behaviorist, he came under the influence of A.P Weiss in Ohio and he gradually became a total behaviorist towards in a later in the later days. So, as a result of which, he completely rejected the psychological features of language. So, he did not consider it a mental state, so to say, and he considered it entirely a physical phenomenon, something that we have, something that we see.

So, the tangible evidence, the tangible system that we see and those outputs that can be studied explained through rules and thus yield some amount of prediction, only those aspects need to be studied, as far as Bloomfield is concerned. So, meaning was not really given much importance to, in Bloomfield study. Though he is created with refining the structure of analysis, defining the methods of analysis of languages in terms of structure; however, meaning was not his favorite topic.

Now, we come to another very important strand in this entire puzzle is Franz Boas. Franz Boas worked on various American native American languages of that time and that brought, as I previously mentioned, that and the exposure to various languages that they that the western world did not previously know, gave a rise to a lot of you know that opened the floodgate, literally, of studying the exotic languages. So, Franz Boas was also among them.

However, he is a he took a completely different turn. He established a tradition in the within the study of language in America that concentrated on the links between language and culture. However, unlike his predecessors he did not link this relationship between language and culture from hierarchical perspectives. The others before him did give a lot of importance to this hierarchy where western languages were considered to be at the pinnacle of civilization and finery and so on.

He had a strong departure from that standpoint and in his study of native American languages, he argued very strongly against close relationship between race and language, a standpoint that was quite favorable at that time. He said that it is this language this language, one particular language, probably has this kind of structures which are different from the languages that we speak does not mean that this language is deficient in some sense, that was primarily the standpoint.

So, languages, in his descriptive studies of various native American languages, he primarily tried to show that these languages have this kind of structures and this is related to this particular community; that is all; there is no value judgment there. So, different languages have different structures different ways of expressing the same thing and this is just a matter of differences not a matter of quality in some sense. This is just a difference, plain and simple.

Edward Sapir, his student, carried this idea on and later on he his Sapir is the one half of the Sapir of duo. So, in his work, language culture interrelationship grow grew a lot further after he was influenced by Franz Boas and linguistic differences and cultural differences he looked at from a very different standpoint.

Just like Boas he also carried this forward, that linguistic and cultural differences probably have something that that can tell us about the world. How different points of view are there different points of view as enshrined in language structure. So, because

some languages have different ways of expressing the same thing, like the sense of time and space and relationships and so on, that the worldview basically that probably tells us something about the relativity aspect. So, that is where we will move, that is what Edward Sapir, Benjamin Lee Whorf credited with the relativism the idea of relativity, linguistic relativity. So, languages are important to understand how different people are how different world views are there in different cultural systems.

So, his major contribution again he was in terms of the studies on the indigenous languages of the Americas. So, he studied a lot of them and he also, of course he did many other things apart from his language culture relationship studies. He also developed the concept of phoneme and he was also a torchbearer of Yiddish language studies in the US. He was, he spoke Yiddish as his first language and he did a lot of important works on that, given the structural description and so on.

However, since we are talking about meaning here, he did not ignore meaning in the language. In fact, that is where his whole contribution, a lot of his contribution actually lies. He mentioned in his book that human thinking is structured by the language one uses. It is a very strong claim to make. His, he showed that because he showed, through his study on different indigenous languages, that they are structured differently. In fact, as a result of which he says in fact, they look at the world also differently. So, the gradual next step that he took was to say that the language that you speak basically colors the way you look at the world.

So this is, and I quote: “language habits of our community predispose certain choices of interpretation”. So, the language that you speak makes you look at the world in a particular way. This was the claim that he made in his in his book *Language: and Introduction to the study of speech 1921*.

Now, we will move on to Benjamin Lee Whorf. His student Benjamin Lee Whorf was basically a fire safety engineer by profession, but he also studied native American languages to a great extent and he developed Sapir’s ideas further and opined that along with language, our basic notions may also be influenced by along with language our basic notions will also can also be influenced by language.

Language shapes conceptualization. He says that language may actually create conceptualization, it may not just color, but it creates a, our conceptualization. This

particular stand of that has been espoused by both Sapir and Whorf and as a result of which it is called Sapir Whorf hypothesis, which is the other name for it is linguistic relativity.

So, what is linguistic relativity? It is entirely based on the meaning aspect of language. So, the way a language is structured, the way it conveys the meaning about a particular aspect of the world basically structures the way we look at the world as well.

So, if your language has many different ways of looking at a particular object, probably it looks at it, makes you more adept at understanding that concept at a finer aspect, if as opposed to a language that does not have so many different ways of looking at it, structurally speaking. So, they had a very very strong claim to make and linguistic relativity was quite popular for some time and it actually made very important claims.

So, he studied again many in native American languages. Hopi in the is the famous case. In fact, in that case of time in Hopi is a famous one. So, notions of space, time, matter can differ, he says, something as basic. So, its not only you know on the surface that you talk differently about certain things, but even your primary notions about basic human cognition, basic human understanding about things like space, time and so on, might also change depending on the language that you speak.

Hopi was a language that was given as an example and the concept of time in Hopi due to brevity of time we cannot really go into the details of the language, but yeah that is, but based on that languages studies he made this very strong claim. Another important contribution of Whorf is on the in the case of *habitual use*.

So, if you use a language, if you use certain structure in a language it colours, it changes you the way habitually you look at a particular thing that it denotes; the very first famous example of this was that understanding of full versus empty gasoline drums. So, as you know Whorf was a fire safety engineer. He worked for an insurance company.

So, during one of his visits to a particular facility, one particular store house or somewhere, so, he went there and he saw that you know the full drums of gasoline were placed in one room. The other room had empty gasoline drums. Now the empty gasoline drums actually have the vapor, gasoline vapor in that, which makes them far more flammable as opposed to the full drums. However, he saw a lot of workers sitting in that

room and smoking and when he asked how can they smoke in the room with the gasoline drums, they said it is empty.

Now he knows as a as an engineer, that this is very very this can be extremely dangerous. In fact, the empty gasoline drums are far more dangerous than the full gasoline drums, but because it is called *empty*, the workers, normally the people who are using that language, do not take them as seriously. So, they are not taken as a threat at all. So, this is an example he gave, to show that how the use of language, the structure of language also colors our habitual thought process.

So, in many ways, they actually were the pioneers to study language, culture and cognition. This is a statement he makes, and I quote: “We dissect nature along lines laid down by our native languages”. Thus, the work of Sapir and Whorf contributed to the understanding of the relationship between language, culture and cognition to a large extent.

However, all these were descriptive studies. They were speculative and descriptive to a large extent and there was there was hardly any experimental work that backed up their that their claims. By 1960’s, Sapir Whorf hypothesis however, was very harshly critiqued and it went out of fashion.

If you remember we talked about the cognitive revolution that was taking place in 19., the ground was already prepared in the 40’s and 40’s- 50’s and 60’s saw a lot of activities and a lot of new you know new disciplines came into being, a lot of new work was going on, lot of new findings, empirical data available.

All that made Sapir Whorf hypothesis go completely out of fashion and cognitive universalism was more important, was the flavor of the season so to say, so it completely disagreed with the question of relativity; cognitive universalism basically talks about the centrality, the universality of the central mental mechanism of the human mind.

So, you cannot really, as a result of which it did not find much support for relativity hypothesis. So, in the late twentieth century, however, there was a resurgence of interest in this in their work in their work and it is called neo-Whorfism. A lot of new interest has been generated and with the help of empirical research, with the help of latest technology, some researchers are looking at those questions yet again.

But we will discuss this during the course of course. Many of these will be discussed.

Then during 1950's/60's cognitive revolution took place. Behaviorism came under attack, as we have discussed before; behaviorism for language basically refers to the aspect that language is learned behavior, it is out there in the society.

You know, it is there in the, it is a stimulus-response kind of a system. So, that was also attacked in terms of language studies. It was most heavily, most famous attack on it came from Chomsky, Noam Chomsky and then of course, the advances in allied fields all these relate to the serious challenges to structuralism in linguistic studies.

So much so, that even well-known structuralists like Charles Hockett and Zellig Harris also started bringing changes to the way they looked at language studies. So, Hockett agreed that it is not possible to have an entirely objective analysis and description of language, because descriptive is the structuralists were looking at language objectively only the structure as it is.

But Hockett, towards the towards later period of time, agreed that probably some amount of empathy, he called it *empathy*, by the researcher was always put in the analysis of the structure. So, it is not probably entirely objective. So, descriptive studies, structuralism was getting a questioned from the practitioners of the field themselves.

Similarly, Zellig Harris also started bringing in transformation rules while describing the syntactic system in a language. So, he brought, he was though he was working still within the descriptive framework, he tried to bring in transformation rules to organize the data in a better way, but he does not, of course, try to create one single abstract rule that applies to all languages which of course, his student takes it forward.

So, that is where we come to Chomsky. Noam Chomsky is probably the most well-known linguist all over, for of all times, not only in terms of the powerful claims he makes, but also in terms of the contribution he has held had to myriad disciplines, not only linguistics, but he has his contribution was felt among various disciplines of the time.

So, his primary contribution of Chomsky was, as I said, he attacked behaviorism very strongly, giving very strong arguments against it and we can actually talk about his

contribution only in terms of two-three things here. So mentalism, he says that language is something that is not out there. It is not in the environment that you *teach* somebody. Students do not need to be *taught* language. So to say, children do not need to be taught language. Language is something that we are born with. It is hardwired into our brain. So, it is something that is innate. So, *innateness hypothesis* is Chomsky's biggest contribution to the study of languages. He says that every every human being, by virtue of being a human, is born with a system, which initially called LAD, Language Acquisition Device, which he later called Universal Grammar.

So, there is an abstract, there is a system of abstract rules that applies to languages which is something that everybody, all humans, are born with. So, this is innate capacity in us and this is something that you cannot probably *teach*. This idea he carried forward with the help of a very strong argument of *poverty of stimulus*. He says that every human is capable of generating an infathomable number of sentences in his, during his lifetime; sentences and structure that he has never ever heard.

So, if language was a, power, language was a stimulus-response system, then stimulus and response should be similar, they should be equal, at least equivalent. But this is not the case, you cannot have learnt all the sentences that that you that you generate in your lifetime.

So, that *poverty* in terms of stimulus is something that proves that we are capable of creating sentences based on the rules, because we have those rules in our head. We are able to create those sentences using the same rules. We can create multiple permutations and computations on those same set of input that we have, the words that we have and so on.

So, *innateness* on the one hand his primary contribution and on the other hand he focuses his studies mostly on syntax. So, his idea like we have seen how language was understood as a logical, if you look at language as logical language. Then it also has, you know, serious repercussions for the idea of logic, for the idea of mathematics and so on.

Similarly, Chomsky also takes the similar kind of stand and he says that syntax is most important thing to study. How the sentence structures are created, how they are transformed, what are the rules that govern them so on and so forth. He does not give

much extra importance to meaning. Of course, Chomsky is one figure who changes, who has made revisions to his own theory over a period of time.

So many revisions and he has taken, toward later time, he has included semantics to a some to some extent. But by and large, he means he looks at syntax as the central aspect of language, meaning is not so very important, the most important sentence that he has you know among many he has given out to make this point is that *colorless green ideas sleep furiously* that which all of you are of course aware of.

So, the even if a sentence as meaningless as this can still be understood, so to say, by the native speakers of English as having some kind of a meaning. So, that is where he really makes a point that it is the because it is structured properly, because it is not violating any of the syntactic rules of the language, it is a perfect language.

So, grammaticality, the syntactic, you know, grammaticality in terms of syntactic formations is what is paramount, meaning is not so important. So, as a result of which we see that science then during the emergence of cognitive science as a discipline, Chomsky was working on language. So, he was trying to position linguistics, position language studies, ah, firmly as a scientific endeavor.

So, Saussure if Saussure and Bloomfield and others were are credited with making linguistics as a serious subject to look at, serious endeavor to pursue, if language they brought language to the center point to the focal point of studies on its own right, in its own right, on its own ground, Chomsky, on the other hand, is credited with aligning the same with science. Science, as in the hard sciences like physics, like mathematics and so on.

In fact, often he aligns linguistics with mathematics though, of course, he has faced lot of criticism because of this from various standpoints; however, his contribution cannot ever be denied. So, one of the central points of attack, on critique, on Chomskyan paradigm is that it concerns itself more with theory than with *understanding language*.

So now, till now, we have seen that language has been seen from various standpoints. Before Chomsky it was the you it was the language as it is, like the structure of language. With Chomsky we go into the theory of how it actually is so, the mental aspect of it. The way it is inbuilt into our system.

So, basically while trying to theorize about language, about some rules that are that govern it, we are going away from the understanding aspect of language. So, basically from the nature of language to the theory of language compromises certain aspects, which are inherent to something as human as language. That is the first critique of that is, in fact the most important criticism, that Chomsky faced.

So, in order to establish linguistics as a science, efforts were made to make it a system that is independent of context and users, because the abstract aspect. Remember *langue* that is the abstract set of rules that human languages have, that knowledge of which every human has is that it should be understood in terms of its features, in terms of the rules, in terms of the permutations and combinations, the way it really functions.

And as a result of which, it should not be dependent on contexts and users; because the moment you bring it down to context and users there are compromises to be had. So, its like physics or mathematics, for example, those rules of physics do not change if it is applied to a different context.

Similarly, language; so, that is the that was the ambition of Chomsky... Chomskyan paradigm, to make it a total science and as a result of which, context and users were completely ignored to a large extent. This was one very simple major critique.

Second was the syntax-centric framework. Entire focus was on syntactic formation syntactic rules and so on as a result of which, meaning was compromised. And there was a lot of criticism that Chomsky faced because of this, because without meaning, language has very very limited use. If you do not have meaning incorporated, then there is no point in talking.

Another thing, another important aspect on which the criticism came in, is modularity. This is actually this actually draws from the scientific aspect of language, where he takes language as a field in itself and which should be devoid of context and devoid of any other functions.

So, language is independent of all other mental faculties. A very serious claim to make, but Chomskyan paradigm does make that claim, that it is in that is it is complete in itself, it does not depend on other mental faculties as it does not depend on context and users. So, language however, the developments after 1950's, from various disciplines, like

neuroscience, like psychology and many other disciplines, that show that language use actually involves processing of many aspects of knowledge, experience, beliefs and so on.

And without which, language will not be a viable option for communication at all. It cannot be a mathematical symbol. It cannot be a mathematical formula that we use all the time. It has you know it imbibes belief system, it imbibes knowledge of the world, it imbibes experiences and so on.

If we do not use them, then it is not a viable option for communication because communication refers to conveying these aspects of meaning through a rule-based string of sounds. So, what we ultimately have is an output that is rule based, of course, there are grammatical rules, but what it conveys is of course, also very very important and what it conveys is those understandings, those knowledge system, belief, experiences and so on.

Hence modularity aspect has been very severely criticized. The, as a result of the later findings, from this different different disciplines is now the understanding about language is that language is part of the general cognitive faculty of the human brain. Human brain is capable of carrying out various kinds of various kinds of actions like attention, like executive control, like many other things like that.

Similarly, language is just another general purpose cognitive mechanism. And like any mechanism it also depends on cooperation, across various different kinds of, different types of mental faculty. It cannot be a modular it cannot be it cannot be insulated, from other mental faculties. So, language functions as a result are not dissociated from other mental functions.

Neuroscience, Psycholinguistics, cognitive psychology and this kind of disciplines have given us enough data, enough empirical evidence to take this as a starting point: that language functions are actually in a very strong relationship with many other mental faculties. In fact, this is what we will be exploring in this course through various subdomains, and brain areas responding to executive functions have been found to be associated with language related task as well.

So, you know firmly this is just one example of how language function, language use is dependent on other mental functions. Similarly, findings from visual world studies have

strongly put forward evidence that language and attentional mechanisms are intrinsically related. We will build up on these later on, in the area of attention and executive control.

Similarly, research on *theory of mind* and its use and its use in atypical children is something we will explore in the language learning and how theory of mind, in the development of theory of mind in atypical children is also has something to do with the language use and language exposure and so on.

So, what do all these things mean? It means that language cannot and does not function in a vacuum. We have till now the studies that we have focused on, basically bring us this primary understanding that language is not working in isolation. It works with in relation to other various other kinds of mental mechanisms.

So, understanding any facet of language, either processing or learning, language is not again an unitary thing, it is not a monolith, it has many facets. So, learning language, teaching language, processing language, you know, all these are take into account a plethora of non-linguistic factors, which have nothing to do with linguistics, which have nothing to do with language per say, but it has that has to do with everything *human*.

Then, we can move on to the understanding of mind. We have already talked about cognition and in terms of brain, as in terms of thought. So, we will just see and just talk about the faculties of mind. So, mind again is not unitary. Mind is kind of understood always to be composed of various functions.

So, from the very beginning of the study of mind, it has been understood to be having separate domains of understanding, so, these are called the faculties of mind. So, for example, to start with, reason, thought, you know, morality, emotion, willing, volition, language etcetera are part of mind.

And reality as we have seen already, this is something we have already covered, but we just talk briefly about it. Reality and its relation to the mind, again, we talk about most part of knowledge. Remember we talked about knowledge: what is knowledge? Knowledge refers to the reality, the truth as it is in the world. So, reality also refers to the reality of the world, the idea of the world.

Now, here is where the debate is and does the world come in a structured form or it does come in a unstructured form. If it is in a structured form already, that means, it already exists, without any tempering by the human mind. It is independent of the human mind and its manipulations.

But on the other side, the idea is that reality is really unstructured. It is just a mass that gain structure through the human being's interference. The cognitive processes of the human mind create what reality is for us. It is not a pre-given thing, that is already out there.

So, mind and body relationship we have already seen, in terms of Descartes. So, there is, ah, mind is transcendent. It is independent of the body and it is abstract and goes beyond the body. On the other hand, mind that understanding of embodied cognition talks about mind that is based on the body.

So, we have already seen this before. So, as a result of which, the current status of language studies in terms of, on the in terms of based on the empirical evidence that we already have, is that language is a higher order mental function which works in tandem with other mental faculties.

So, along with that languages relation with context also starts to get in inspected. So, not only in the inside, not only in terms of the brain and mind, language works in relationship with other mental faculties, but it also interacts outside the human brain. So, that is there are two different worlds that are interacting: the world inside of us and the world outside.

So, inside, there is lot of cooperation between language faculty and the other mental faculties and the same brain also interacts with the world, the felt experiences, the human experiences and the context and the user and so on and so forth.

And that all that information is also incorporated in the language structure and use and understanding and communication. So, this is ultimately what language is all about and it is very difficult to separate language from all these aspects and that is exactly how we will look at language in this course.

So, but that does not mean that the abstract, rule-based representation of language in the human brain is negated in any way. So, we can safely say even though the debate is still on, that is the last word is not yet out. So, debate between formal language and everyday language is far from over.

But we can agree and disagree at the same time. We can agree that there is a rule based which is beyond of course, beyond debate, that there is a there is a set of rules that operate at a very higher level, at an abstract level that creates all the grammatical sentences in a language and that is how language remains understandable.

But at the same time, language is also used by humans in real context. So, in this course we will, I hope after this brief introduction over three parts, we have seen that we have seen both sides of the story; however, in this course we will be looking at language, human language as it is used in the real context. And how it really and what are the interesting most interesting aspects of it.

So, for doing that we will start with our point of departure will be meaning construction and its dynamics. So, intensive study of cognition that lies behind language used will and that also goes beyond it.

It is when we speak, when we use language, when we process language in terms of either speaking or understanding, there is a lot that is going on behind the scene, which is basically, which is called the *backstage cognition*.

And it includes a lot of, plethora of mental activities and that is what is the that is what also leads to meaning construction, meaning the dynamics of meaning generation, meaning construction and conceptualization. All these are things that we will look at. So, language not only helps you know creating this, but also reflects it.

A language activity draws unconsciously, as I just said, on a vast amount of cognitive resource, like referring to be different models, set of multiple connections, coordinate large amount of information, engage in creative mapping and transfer and elaboration and so on and so forth.

So, this is basically what is referred to as *backstage cognition* in literature and all that information as we speak, is ultimately you know it is optimized in language structure.

So, a lot of information is given out dependent on these kind of ,you know, mappings like viewpoints, reference, figure ground mapping and then trajectory, landmark and trajectory mapping and metaphors and metonymy and so on and so forth.

Ultimately gives rise to the brevity that we see in language. We can say a lot with very few words, with its a very very cleverly created structure, that is not something that we create all the time of course, that also happens individual creativity is also visible sometimes.

But as a every language has its own way of making those connections across domains and making various kinds of projections, various kinds of you know backstage cognition that reflects through language is what we will, we are more interested in. So, this is these are some of the things that through which we will look at this phenomena of language interacting with other mental faculty. So, framing, prototype, structure, pragmatic functions so on and so forth.

It to do this there is a new relatively new field of linguistics which is called the Cognitive linguistics and this is the domain that we will start our journey with, this is a the relatively new field, it started, it came into existence after the cognitive revolution and it owes its origin to many names like George Lakoff and others.

So, this takes this discipline, this particular standpoint, takes the theoretical standpoint that syntactic validity of utterances cannot be judged without referring to non-linguistic concepts. A sentence is can be judged in terms of its meaning, in terms of what it conveys, that is what he says. So, description of linguistic structures needs to take into account aspects of general cognition like how meaning is construed.

The same sentence can mean different things in a in different contexts. So, its very its very *its very humid today*. Man can mean different things in different contexts whether its in India or it is in a different country, where generally humidity is not the general feature, of course, the meaning is different. It can even have some speech act related to it.

So, meaning cannot be discounted, like Chomskyan in like it is done in Chomskyan paradigm. So, linguistics, basically the understanding of grammar, the understanding of

language structure, is based on the conceptualization and human experience. That is the starting point of cognitive linguistics. So, meaning is said to reside in conceptualization.

So, conceptualization is a mental process that is not linguistic in nature, that is a mental primary mental function which to which language is related and meaning is basically created out of that process. So, grammar is not seen as autonomous.

Grammar, grammar cannot be seen as an autonomous entity and it takes meaning as a central issue in human language study. And that is how it offers, this domain offers, an unified account of meaning in language and by while accounting for various social and cultural phenomena.

So, as a result of which it does not believe, this discipline does not believe, this subdiscipline of linguistic does not believe, that reality is already structured. It is it depends a lot on the language; it depends on the various other non-linguistic factors. So, language, the reality is unstructured.

So however, it is not entirely subjective there are universals as well and which is which arises from the fact that we have similar bodies and brains and that we inhabit similar kinds of environments and that we communicate with each other. So, there are of course, a lot of universality to it; however, this discipline also takes into account the other as other side of the story: the interaction between different kinds of contexts. So, it is this is seriously dependent on the embodied understanding of language.

So this is the linguistics aspect, how linguistics have been structured through centuries through a couple of centuries and how to, over a period of time, theoretical standpoints have changed and where we are today in terms of cognitive linguistics.

So, we will start the first, the module 2, Second first lecture of module 2 with cognitive linguistics and; however, it is also important to look at the psychological side of it, so how that the role of cognitive psychology, psychology and cognitive psychology together, on understanding language has also been extremely important, but we will discuss it in during the course not in the introduction. We will be discussed more in detail later.

Here are some references that are useful to understand this particular aspect. And so here we complete the module 1, first module in 3 parts that again that was designed to give a brief background of the course, that we will be eventually looking at through different points of departure.

Thank you and we will move on to the next module.