

**Applied Linguistics**  
**Professor Rajesh Kumar**  
**Indian Institute of Technology Madras**  
**Lecture 17**  
**Language Culture and Cognition**

Today, we will look at culture and cognition; culture in particular and cognition in general. We will look at the relationship between these 2 viz-a-viz languages. This relationship is another significant aspect of applied linguistics in our understanding of issues related to applied linguistics, where findings of language study are relevant in understanding issues of the real world.

As we have discussed in detail and we try to underline the point simultaneously regularly that there are 2 parts of language; one is 'I' language and the other is 'E' language. 'I' language refers to the underlying properties of language, at the same time 'E' language refers to rules of language use when communication starts in the real world that is, our society.

The interaction between culture and cognition viz-a-viz in the real world is part of 'E' language. And we are going to see how this has been studied in literature and how it has implications for studying language. And that is the reason why we want to establish a point that proper understanding of the relationship between language and culture, language and cognition and culture and cognition is relevant for understanding issues in Applied linguistics.

So let us start looking at culture straight and then we will see how it has been studied in literature. To begin with the outset, I want to underline the point that culture is part of cognition, culture is part of the way language and cognition are related. Rather, culture is a very significant aspect of that relationship.

(Refer Slide Time: 02:43)

## Introduction

- How is language processed in the brain?
- Do we learn language or is there an inbuilt system in us that helps us acquire it with ease?
- We will discuss the main schools of thought on language and cognition.
- We will discuss the relationship between Language, Thought, and Culture (Sapir-Whorf Hypothesis).



So an answer to the question how language is processed in human brain is a big time question in cognition, cognitive science and also in experimental psychology, where language becomes a serious issue in the sense that do we learn language or is it an inbuilt system in us that helps us acquire it with ease that is in natural circumstances without effort.

We have seen that the learning of language required for the purpose of second language after a particular age, before a particular point in our development we learn language naturally, automatically without effort will help of input from our immediate society. And this is innate in the sense that we will end up learning and speaking a language without any external influence and this process can be interrupted.

However, language becomes a learned process as well and several aspects of language become learned process too for example, speaking is part of innate ability whereas, writing and reading are the part of processes that are learned. So it is not possible to answer this question straight forward in the sense that do we learn language or is there any inbuilt system in us that helps us acquire language.

Of course, both parts are true however, when we look at parts of language where the areas of reading and writing that is to learn script, we see them as a learned process, a system that we need to learn by putting in effort, they do not come to us automatically, they are not part of innate endowment of acquisition of language.

However, the speaking part and the part that triggers the generative ability to come up with new sentences are taken care of by inbuilt system. In other words, inbuilt system is

responsible for the generative capacity of human mind. So, when we move to the point of where we will discuss some of the schools of thoughts on language and cognition like what we have discussed just now in the process of language and cognition.

In the areas of cognitive science which deals with language, there is another important question that cognitive scientist deal with and the question is, “Are all kinds of learning similar?” “Is it possible to come up with an algorithm with a theory that explains all kind of learning?” “Are there different kinds of learning?”

To answer this question, language becomes one of the most difficult aspects. The other kinds of learning and several aspects of language is also part of it like reading and writing the script are like drawing, singing, swimming, cooking, flying, cycling, et cetera. However, there is a part of language, which is regression and which is part of the inbuilt system is the part which creates a challenge for putting all kinds of system all kinds of learning in one basket.


And that question is little tough in the area of cognitive science. Rather, what becomes apparent particularly with the emergence of Chomsky’s understanding in language learning with the help of the role of human mind in the process of acquisition of language, it becomes challenging to unify all kinds of learning together in the area of cognitive science. So there are several schools of thoughts for dealing with this process as well.

Next, we will discuss the relationship between language and thought and culture. That is, thought, culture and language have integrated relationship with each other and this is also known as in literature Sapir Whorf hypothesis. Sapir a seasoned linguist and Whorf student of Sapir came up with several generalizations to deal with a relationship between language and culture.

Some parts of it have been accepted; some parts of it have not been accepted. Rather, there are several questions and objections raised to that; we will evaluate each one of them one by one.

(Refer Slide Time: 08:26)

- Language, thought and culture are closely related with each other.
- What is the nature of relationship between language and thought?
- Does language determine culture or is it the other way round?
- What is primary: Language or thought?
- A discussion between language and culture has important implications for language teaching or the interface between language and computers.



Language, thought and culture are closely related with each other. There does not seem to be any dispute about it. However, what we need to keep in mind is the fact that this entire discussion falls in the area of ‘E’ language. So the close relationship between language and culture can also contribute to our understanding of relationship between language and thought.

So, that raises another question is, “What is the nature of relationship between language and thought? Does our thought get determined by language? Does language did or is there something else going on in between? Does language determine thought or is it the other way round? What is primary; language or thought? Can we think without language or do we not need language?

Decision between language and culture has really serious implications for language teaching, which is yet another part of applied linguistics, where all kinds of findings from the study of language is applicable.

We are going to be looking at language teaching shortly as well and it is also important the that is the relationship between language and thought and language and culture, which is all part of cognition is significant not only for language teaching, but also for understanding relationship between language and computers.

And the relationship between language and thought has implications for understanding the relationship interface between language and computer in the sense that it has been the goal of

scientific enterprise to design a machine in in this case a computer, which works the way human mind does.

There has been a lot of development in this field, computers, machines can do wonders, miraculous things, yet we are far away from making a conclusion that machines can work the way human mind does. And we have seen earlier that in order to understand something at the surface or effect of a thing un-surface, we need to study that surface to understand how it works internally and language is an example of that.

So, the fact that language is one of the most sophisticated part of human mind, the study of language, the internal structure of language and how it works in the external world as well has contributed a lot in developing an intelligent machine that is computer.

But yet, the way language works in human mind has not been put yet in form of mathematical algorithm or can be translated in the language that machines understand for machines to work the way human mind. And this is why, in the domain of 'E' language, the relationship between language and thought and understanding of cultural patterns is going to be important for understanding interface between language and computer.

It is it is going to be important for this area as well, we will be looking at that little later in the course. So what is culture before we look at thought which is part of culture and then we look at their integrate relationship, let us examine culture. And we need to be simplistic in understanding the term we will try to make it simple because an understanding of culture requires understanding complexity.

(Refer Slide Time: 12:36)

## Culture

- Culture means the total way of life of people including the patterns of belief, customs, objects, institutions, techniques, and language.
- In a narrow sense, culture refers to the local or specific practices, beliefs or customs.
- Important names in the study of language and culture are Firth in England and Boas, Sapir and Whorf in the United States.



So culture means a total way of life, we can stop here, if we have the capacity to decode what we mean by total way of life and equate that with culture, then we understand what culture means. However, to help you recode this part let us look at the further process that the total way of life of people includes patterns of belief; this is one of the most significant part. Customs, objects, institutions, techniques and language.

So language though an important part of human life, the other aspects of human life are also part of culture. And in understanding other aspects of human life, language is also one such aspect. Therefore, language is definitely part of culture. And therefore, there is a lot of overlap between culture and language. In a very narrow sense, culture refers to the local and specific practices, beliefs and customs; we can go on and on.

We can find tons of examples of these things, but I want you to focus on what we are discussing right now and then reflect on these parts for you to come up with examples of these things yourself. We can talk about some example from specific cultures, but it is not humanly possible to include examples of all cultures.

Therefore, I invite you to understand these aspects and then come up with examples of these things from your own cultural patterns, beliefs, techniques and your own language and then examine what we are going to be discussing further. So to deal with this thing in the domains of social sciences, the important names in the study of this overlap between language and culture are Firth and Boas from UK England and Sapir and Whorf in the United States.

(Refer Slide Time: 15:25)

## Definitions

- We could summarize the relationship between language and culture as follows.
  - Language expresses cultural reality; language also embodies cultural identity. For example, from a person's use of certain vocabulary, we know where he is from.
  - Language symbolizes cultural reality, that is, people are identified by their use of language; language helps perpetuate the culture – it is through language that culture is passed down from generation to generation, from one place to another.
  - The relation of language to culture is that of part to whole, for language is part of culture. The knowledge and beliefs that constitute culture are habitually encoded and transmitted in language.



So, what we see is the name of Sapir and Whorf in the United States is closely associated with the study of overlap between language and culture. So, we want to look at how we summarize the relationship between language and culture. So, language expresses cultural reality, language is embodiment of our identity. In fact, language is one of the strongest markers of our identity.

It is at times a stronger marker than religion and then there are overlaps between several identities as well. So for example, when a person uses a language and in particular vocabulary and sounds, we know where the person is from. We do not need to be a linguist or really in formal sense educated person to understand where the person comes from.

In other words, if we hear a person who speaks the similar language that I do, then it is easy for me to locate whereabouts of this person. What helps us do this? It is the embedded cultural pattern that has reflections in language is what helps us understand where this person is from. Therefore, it is a cultural reality and our social and domestic identities are embedded in language. And language as an external reality expresses this embodiment successfully.

Language symbolizes culture reality that is; people are identified by their use of language. Language helps perpetuate the culture; it is through language that culture passes down from generation to generation and from one place to another. So, language becomes a medium of cultural transmission as well. Language expresses cultural reality and at the same time it becomes a medium of cultural transmission.

The relationship between language and culture is that of part and whole for language is part of culture. The knowledge and belief that constitutes culture are habitually encoded and transmitted in language. So, these are the intricacies that we need to keep in mind when we are looking at the relationship between language and culture. To understand this part, we need to look at Sapir Whorf hypothesis, which is precisely done in this area.

(Refer Slide Time: 18:15)

### Sapir-Whorf Hypothesis

- The Sapir-Whorf Hypothesis states that language determines our thoughts and our world view. For Whorf, language is basic and thought and culture are built by it. We see the world as our language dictates us to see it.
- The hypothesis states that the way people think is strongly affected by their native languages. In other words, the Sapir-Whorf hypothesis is a theory that states that an individual's thoughts and actions are determined by the language or languages that an individual speaks.



So Sapir as I mentioned earlier is a seasoned linguist, he was a TL and Whorf was an insurance agent. The story is the following, as an insurance agent working for an insurance agency; Benjamin Whorf found certain underlying patterns and correlations between how people think and what people speak. He was investigating a fire on behalf of his insurance agency; he takes that up to Sapir TL and then starts working on American Indian languages.

He was a speaker of American English and he started working on American Indian languages to examine his hypothesis which is the following. So part of his hypothesis is that language determines our thoughts and also our worldview. Language is basic and thought and culture are inbuilt by it that is, language builds our thought, language builds our culture.

We see the world as language dictates us to see it that is, language becomes a carrier for us to see the world, this was his fundamental hypothesis. So a part of hypothesis also states that the way people think is strongly affected by their native language. And it is a theory that states that an individual's thought and action are determined by language or languages that individuals speak.




So, all these things put together brings us to the point that language determines thought. That is, language shapes up our worldview and it happens through the embedded patterns in language.

(Refer Slide Time: 20:38)

### Sapir-Whorf Hypothesis

- The stronger version of the hypothesis states that all human thoughts and actions are related to the language that an individual speaks. That is our world is constructed by our language and we see the world through our language. If our language tells us to see five colours, we see the world only in terms of those five colours. If it tells us to see our family network in terms of say four different names of our uncles, that's the way we would see our family.
- The weaker version of the hypothesis says that language only somewhat shapes our thinking and behavior.



The stronger version of this hypothesis says that all human thoughts and actions are related to language that an individual speaks. He generalizes this in form of a stronger version of this hypothesis. That is, our world is constructed by our language and we see the world through our language. If our language tells us to see 5 colours, we see the world only in terms of those 5 colours.

If it tells us to see our family network in terms of let us say 4 different names of uncles, we see as 4 different names of uncles. However, when it tells just one lexical item to express, all those 4 types of differences in relationship and 4 different types of uncles, then we use only one word for that.

That is what he means when he says we see the world the way our language dictates. The weaker version of this hypothesis says that language only somewhat shapes of our thinking and behavior. So it is the same thing, one is the stronger part, the other is the weaker version.

(Refer Slide Time: 21:55)

### English and American Indian Languages

- Whorf found that many Indian languages are fundamentally different from Indo-European languages represented by English. Such differences in structure correspond to different ways of perceiving the world. For example, English sentences consist of two main parts, the subject and the predicate. The expression of any given situation is divided into an agent and an action.
- Some American Indian languages, for example, Hopi, doesn't make this subject-predicate division, i.e., a verb can exist or occur independent of a subject. In English we say A light flashed, while in Hopi the same meaning is expressed by one simple word *rehpi* (flash occurred). The action of flashing and the agent of light are combined together. What English speakers perceive is mainly an action while the Hopi perceives the state.




So let us look at what Benjamin Whorf did to bring this point forward for us to understand this point, how did he come to this conclusion. He compared English and several American Indian languages. We are taking just couple of examples from few languages namely Hopi. So Hopi in other languages suggest that fundamentally they are that is American Indian languages are different from Indo-European languages namely English.

And these differences in structure correspond to different ways of perceiving the world. For example, English sentences consist of 2 main parts, subject and predicate. The expression in any given situation is divided into 2; an agent and action. On the other side, American Indian languages for example, Hopi does not make the subject predicate distinction. That is, a verb can exist independent of a subject.

A verb does not require another lexical item as the subject in Hopi. For example, in English we say “light flashed” while in Hopi, the same meaning is expressed by a simple word like “Rehpi” which the response to “Flash occurred”. The action of flashing and the agent of light are combined together in American Indian language. In other words, what English speakers perceive is mainly an action; speakers of American Indian languages perceive the state.

These are the distinctions that Benjamin Whorf drew from his comparison of English and American Indian languages such as Hopi. What this shows is interesting.

(Refer Slide Time: 24:02)

- This shows that the two different languages namely English and Hopi are different for Whorf in the sense that a subject-predicate language in fact presents a bipolar worldview.
  - Whereas a language with subject-predicate combined sentence pattern presents a holistic and synthetic worldview.
  - This difference in worldview is not abstracted from the external world, but pre-conditioned by different languages. People speaking a certain language will have to follow the logic of this language in their thinking. They will have different perceptions of the world because they speak different languages.
- 

It shows that 2 different languages namely English and Hopi are different in the sense that English happens to be a subject predicate language and speakers of subject predicate language has bipolar worldview, whereas the language where subject predicate are combined together in a sentence pattern presents a holistic and synthetic worldview.

This was the conclusion that Benjamin Whorf drew from the 2 types of languages, where English is called subject predicate language where subject and predicate are 2 separate entities and American Indian languages do not make the decision between subject and predicate. Rather, they are called subject predicate combine languages.

And so this combination is representative of holistic and synthetic worldview, whereas the divide between 2 makes the worldview bipolar was the conclusion of Benjamin Whorf. And keep in mind, and I invite you to look at Sapir and Whorf hypothesis in details that Benjamin Whorf came up with several examples from several languages before making this conclusion.

This difference in the worldview is not extracted from external world, but is reconditioned by different languages. So he finds this distinction in the structural patterns of language. People speaking a certain language will have to follow the logic of this language in their thinking. That is, the fact that the language does not make a distinction between subject and predicate has implications for the worldview of the speaker as holistic.

They will have different perceptions of the world because they speak different languages. So, English speakers are going to have different perception of the world, whereas speakers of

American Indian languages are going to have different perception of the world. These are the conclusion that Benjamin Whorf drew.

(Refer Slide Time: 26:35)

### Critique of the Sapir-Whorf Hypothesis

- There appears to be wider agreement on the weaker version of Sapir-Whorf Hypothesis (Linguistic Relativism). There is evidence in support of Linguistic Relativism to some extent. However, the stronger version of the Sapir-Whorf Hypothesis (Linguistic Determinism) has faced stronger criticism.
- Linguistic relativity has been abandoned and criticized over the decades with critics aiming to show that perception and cognition are universal, not tied to language and culture. But some psychologists and anthropologists continue to argue that differences in a language's structure and words may play a role in determining how we think. There is certainly a close relationship between language and thought. Language helps us represent thought in our minds. It helps us remember and communicate.



Now, this runs into difficulties at times. It was appreciated, it has implications and it was regarded very well however, it was regarded very well in particular when we find that there appears to be a wider agreement on the weaker version of Benjamin Whorf's hypothesis. The weaker version of Sapir Whorf hypothesis is also known as "Linguistic Relativism". There is evidence in support of "Linguistic Relativism" to some extent.


However, the stronger version of hypothesis runs into difficulties and therefore, faces stronger criticism. Linguistic relativity has been abandoned and criticized over the decades as well. With critics aiming to show that the perception and cognition are universal. Now look at this part, the primary opposition comes from the point that perception and cognition are not shaped by language, rather it is universal, it is not tied to culture.

Some psychologists and anthropologist continue to argue that the differences in language structure and the words may play a role in determining how we think. So there are different and that comes from psychology and anthropology both that support that still support Sapir Whorf hypothesis to great extent. And there are evidences from South Asian languages as well, which can establish the strength of Sapir Whorf hypothesis.

Therefore, it is not easy to dismiss relationship between language and culture in particular however, a language helps us represent thought in our mind, it helps us remember and communicate, and all these things are fine.

(Refer Slide Time: 28:36)

- But it would appear that thoughts are not completely determined and structured by language. If that were the case it would be impossible to say things expressed in one language in another.
- Even though one recognizes that completely accurate and reliable translation is an impossible target, it is definitely possible to convey things from one language to the other.
- It is true that words in one language do not have single word in another. For example, Hindi words like 'dupaTTaa' can only be closely translated as *scarf* in English. But it is possible to convey the meaning and idea of *dupaTTa* in any language. One could say: 'It is a long white or coloured scarf that women generally wear along with their long shirts and salwars.' Color terms have been discussed a lot in this context.



But it would appear that thoughts are not completely determined and structured by language any that were the case, it would be impossible for us to say things expressed in one which in another. Keep in mind that it is possible to say things in one language that does not exist in other language and still it is possible to understand and explain them.

This would not be possible if the structure of language really determine our thought patterns. So we recognize that completely, accurate and reliable translation is an impossible target. Yet it is definitely possible to convey things from one language to the other. Look at this; it is true that words in one language do not have single word in another.


For example, Hindi word like “Dupatta” can only be closely translated as “Scarf” in English, but it is possible to convey the meaning and idea of “Dupatta” in any language including English, though English does not have one word for it. “Scarf” does not mean “Dupatta” yet it can be explained to English speakers and English speakers understand what it really means and it is part of culture and society.

One could say that it is a long white or colored scarf that women scarf that women generally wear along their long shirts and salwars. Colour terms have been discussed in lot of context on the other side. So, many languages have far less colour words than English.



(Refer Slide Time: 30:49)

- Many languages have far less basic color words than English, whereas languages like Greek, Russian and Hindi have more words to talk about different shades of the same color. This definitely does not mean that the speakers of language of less color words do not recognize differences between shades. Unlike the commonly held view, there are only a few words (merely four) for 'snow' in eight languages of the Eskimoan family.
- However, even if we were to believe a few more words for snow available in Eskimoan family, does this give them an edge over English speakers for perceiving the world? English also has different kinds of words for snow including say 'ice', 'slush' etc.



Languages like Greek, Russian and Hindi have more colour words to talk about different shades of the same colour. This definitely does not mean that the speakers of language of less colour words do not recognize differences between shapes. Let us understand this again, there are languages which have got less number of words representing colours.

There are languages like Hindi, Russian and Greek, which have got lots of words for lot of colours and also the words for their different shades. However, the claim here is that speakers of the language with less colour terms would also understand things about the shades of different colours and it is not that they do not. This would not have been possible if the structure of language really shape our thoughts.


This is yet another criticism of the stronger version of Whorf's findings Whorf's claims. Unlike the commonly held view there are only a few words for "snow" in 8 languages of the Eskimoan family. We generally understand that Eskimos have a lot of words for "snow" however, it is matter of a different discussion that why we believe that there are lots of words for snow in a in the languages of Eskimos however, there are merely 4, 4 words for snow.

Even if we were to believe a few more words for snow available in the languages that Eskimos speak does not give them an edge over English speakers for perceiving the word. English also has different kinds of words for snow say "ice, slush, etc lot of them. The point is, it is not just the availability of lots of words, which help us understand lots of types of snows.

With lack of words as well we can explain and this challenges the findings of Whorf. In other words, this would not have been possible if we believe that it is only structure of language that shapes our thoughts.

(Refer Slide Time: 33:32)

- Hindi has just one word 'kal' for both 'tomorrow' and 'yesterday'. But, there appears to be no issue for the speakers of other languages understanding this once this is described or the word is used in a context and translated. If this did not work English speakers would not understand Hindi speakers at all even if a bilingual interpreter were present.
- In short, linguistic determinism (which follows from Sapir-Whorf hypothesis) that language structures thought appears to be problematic.



Hindi has, let us take one more example. Hindi has just one word for “kal” one word “kal” which is for both “tomorrow” and “yesterday”, but there appears to be no issue for the speakers of other languages understanding this once this is described or the word is in the context and translated, there is no confusion. And again if this did not work, English speaker will not understand Hindi speakers at all even if a bilingual interpreter will be present.

To conclude, linguistic determinism which follows from Sapir Whorf hypothesis that language structures our thought is little bit problematic. Yet though we are not getting into that discussion at this point, but there appears to be support from the South Asian languages as well for Sapir Whorf hypothesis as well. There are things that are embedded in this structure of South Asian languages, which are culturally motivated.

So it is not just we are listing few examples to dismiss Sapir Whorf hypothesis, there are things embedded in the structure of South Asian languages including many others, which comes in support of Sapir Whorf hypothesis as well.

(Refer Slide Time: 35:18)

## Language and Sapir

- Language obtains in a setting. The people that speak it belong to a race (or a number of races), that is, to a group which is set off by physical characteristics from other groups. Again, language does not exist apart from culture, that is, from the socially inherited assemblage of practices and beliefs that determines the texture of our lives.
- Still, it is not uncommon to find people from different races speaking the same language and sharing largely the same culture. On the other hand, people belonging to the same race and culture may speak very different languages.



So what is our takeaway from here? We can spend some more time to get into the details of the examples, which comes to support Sapir Whorf hypothesis. Nonetheless, it is important to recognize that there are issues with this. It is not easy to dismiss findings of Benjamin Whorf completely at the same time, it requires explanation. I would like to submit that it may not be as strong as it has been articulated.

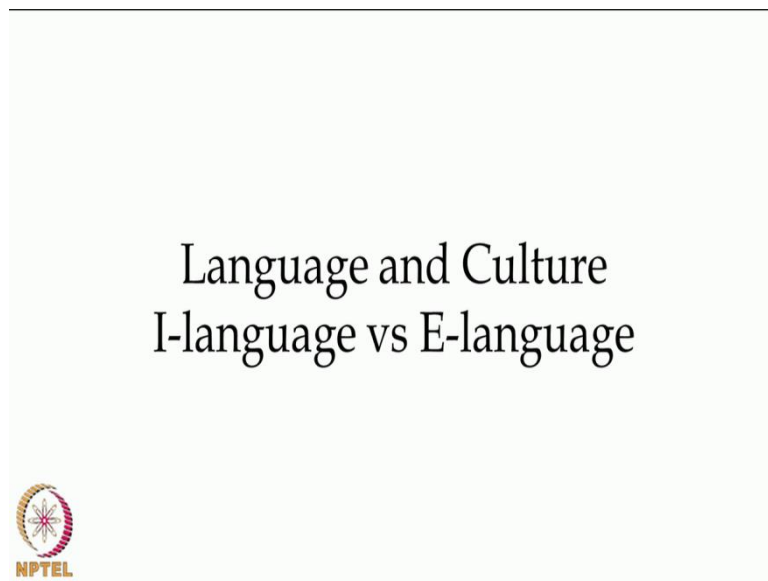
Sapir's thought on language helps us understand this part. And he comes up with that following that we get language from a particular setting, people that speak it belong to a race or number of races that is, to a group which is set off by physical characteristics from other groups. Again, language does not exist apart from culture. To this far, nobody disagrees.

From the socially inherited practices and beliefs that determine the texture of our life and these are the things that constitute culture. Still, it is not uncommon to find people from different races speaking the same language and sharing largely the same culture. On the other hand, people belong to the same race and culture may speak different languages as well.

And this summarizes the relationship between language and culture in particular that a close look at the 2; namely language and culture and its interdependence on the structure of language is significant for understanding cognition. How it is structured in human mind? How socially motivated aspects of culture become part of human mind and therefore become part of a language is relevant for understanding how human perform in the real world.



(Refer Slide Time: 37:51)



And therefore, I would like to conclude this discussion on language and thought, language and culture and language and cognition as the following. Language 'I' language that is, one part of language is 'I' language and the other part of language, where culture is embedded in it is part of 'E' language. And this distinction we need to make in order to understand language in totality.

And to understand the implications of the findings of the study of language for understanding any issue in society, thank you.