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Good morning they are still sleeping, good morning sir welcome to this last session of the course in the last 40 41 hours we have seen that language has a structure language is systematic and we have made a lot of claims about different aspects of language. I hope you have learned something okay, that is a big thing to hope at least it has triggered some questions in your head at least it has made you curious at least next time.

You use the language or somebody else uses with you know how to distinguish between good and bad language quote unquote good quote unquote bad there are no hard and fast definitions what are the things we do not know you know there are lots compared with what we know the area of ignorance the things we do not know are very large we do not know a lot of things and even what we know is based on idealized data okay, so today I am going to tell you about one or two not too many of the important questions.

In language in linguistics that remain unresolved unsolved and maybe you know someday people from Sciences people from engineering can address themselves to these questions and try and find answers but it is always good to know what we do not know and why we do not know okay so this last session is about some of those questions which loom large over the field and have remained unanswered let us go.

(Refer Slide Time: 02:47)

What we know about Language

- Language is systematic.
- It uses relevant units & rules at all levels of structure.
- Order of Units is important for meaning :

1. John is mortal. All men die. John is a man. ~ All men die. John is a man. So John is mortal.
2. I saw the bike-rider jump through the window.
3. After some rest from 2 to 5 p m the doctor will work
4. woman without her man is nothing.

What is it we know about language we know that it is systematic. But is it absolutely 100% systematic can we mathematically can we write an algorithm and can a machine generate language is it systematic to that extent and the answer is no it is not there are areas of arbitrariness there are exceptions to rules sometimes the rules themselves appear to be arbitrary but it is generally agreed that like any other aspect of nature as in biology as in geology as in geophysics as in botany language also has a system has a structure.

It is made up of lots of small units put together in larger unit and larger unit put together in still larger unit and that is how we use them in other words order an order of units are important to language that is one thing we know for certain that order and order of units at each level of a structure of language there is unit there are levels like speech sounds there are levels like phrases Rajesh talked to you about there are you know different levels and different kinds of units we know that order of units is important look at this example.

I have put three sentences course John is mortal all men die John is a man is it a good order or the other all men die John is a man so John is mortal which order is better at or be me of course you know it is logically structured lots of other examples you know look at example the sentence number two. I saw the bike rider jumped through the window is it a good sentence can a bike rider jumped through the window what is the speaker trying to say look at the sentence carefully he was watching through the window.

Yes he looked through the window but through the window the prepositional phrase should have appeared soon after saw not after bike rider, you see the place is important it is like a button in your shirt it must be in the right hole it is not that button should go into any own it must go to the appropriate hole this is important to meaning look at the next sentence three after some rest from 2 to 5 p.m.

The doctor will work when will the doctor take rest before - or after - before - then the sentence should have been rewritten how should the sentence be rewritten how should the sentence be rewritten from 2:00 to 5:00 p.m. obviously that is what he wants to say not that he will rest from 2:00 to 5:00 p.m. god bless him okay, and then he will do some work so you know order is important in language in any language okay , order is important look at the final sentence it can mean more than one thing depending upon.

How you interpret it what order you take what are the interpretations you get fourth sentence how would you like to read it in the fourth sentence please a woman without her man is nothing yes is nothing yes these are two you know very easy interpretations a woman without her man is nothing how many men believe that well you should you should believe that right the other interpretation is also possible the other interpretation is also possible a woman without her man you know without a husband without her or why without a friend is nothing.

You know so order the way you relate one with another the way you put two phrases together two words together two sounds together is you know this way is important to the structure of language we know that okay.

(Refer Slide Time: 08:15)

Meaning

- Meaning is more than the sum of words in an order.
- **Semantics** is the least understood branch of Linguistics.

"Mine is a long and sad tale", said the mouse.
"Long I understand", asked Alice, "but why sad?"

But can we predict meaning from rules of syntax from rules of phonology, morphology phonetics discourse can be difficult you know many people say semantics that is the study of meaning is the least understood branch of linguistics okay ,look at the following conversation the mouse says you know this comes from the book Alice in the Wonderland if you have not read this book then this vacation you should one of the greatest books written by mankind in any language.
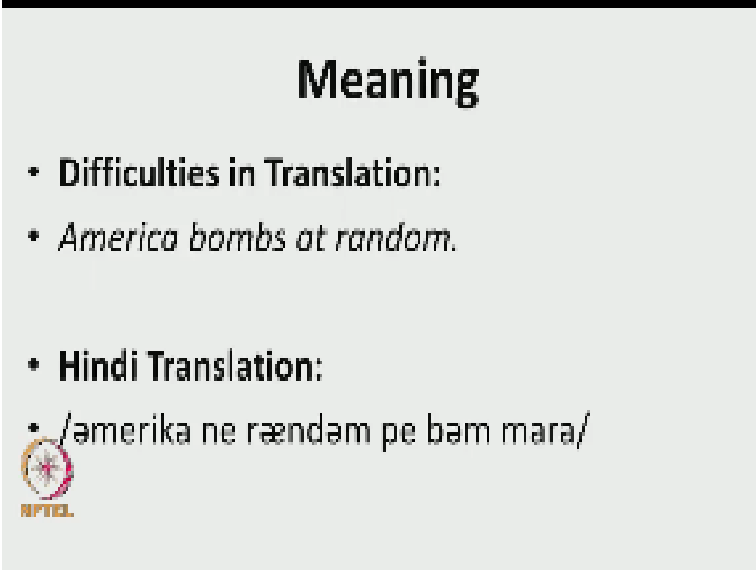
It was written by a professor of mathematics for the birthday of the daughter of one of his friends and it you know it simply tells you that nothing is impossible great literature ok so there is a conversation between the mouse Dormouse and the little girl Alice ,Alice asks the mouse how are you in the mouse cage mine is a long and sad tale said the mouse and Alice said long I understand but why sad why does why did Alice ask this question yeah she mistook T EI 4 T A I L.

So meaning is not just the product of rules and dictionary units and rules meaning as we know so far his product a much more than that if it were so mechanical then machines could translate from Telugu Kannada at least from Telugu to Hindi at least if not from Telugu to English because Hindi and Telugu have nearly 80% of those same words they have the same word order they have the same sounds there's hardly any difference and yet machines can let alone translate from Hindi to English they cannot even recognize all words from Hindi all words from

Telugu correctly they cannot separate words in a running his speech the best results are close to 70 72 percent fewer than 80 percent okay.

Which human beings recognized easily so meaning is more than that you see this is machine translation America bombs at random and how does machine translate it.

(Refer Slide Time: 11:01)

Meaning

- **Difficulties in Translation:**
- *America bombs at random.*

- **Hindi Translation:**
- /əmerika ne rændəm pe bəm mara/

You can read phonetic transcription hey pe Mara those who offer you who know Hindi is it a correct translation what should be the correct translation Americana Jonathan hub Amara banana daiquiri kiss Kumar hospital Kamara Hotel Kamara jockey for Zuko Faust Kumar hae the bombs art random is without target but you know at random here has been translated as a place as if random where a place and America is bombing random how would you translate that in Telugu just the Hindi translation of you know this thing American.

A random by mammarra America okay this is incorrect why is it incorrect because translation comprehension you know uh trances can be differently understood.

(Refer Slide Time: 12:01)

Utterance & Comprehension

- Utterances can be differently understood : "A woman without her man is nothing."
- Linguistic theory is based on idealized data. But in speech, distortions happen. Words and sounds are missed and merged, yet they are understood.
- I wll b hm drng wntr. hw abt u ~ I a e e I o ue i ai

Linguistic theory whatever we know today is based on idealized data we take sounds in isolation we describe phonetics we take words in isolation and we write phonology we take sentences in isolation and we write syntax actually corrected speech in context when you start a sentence one way finish it another okay, when you use one word and mean another when you say oh so he is a nice man you know what you mean is anything but a nice man you know there is sarcasm there is satire there is meaning in the context okay.
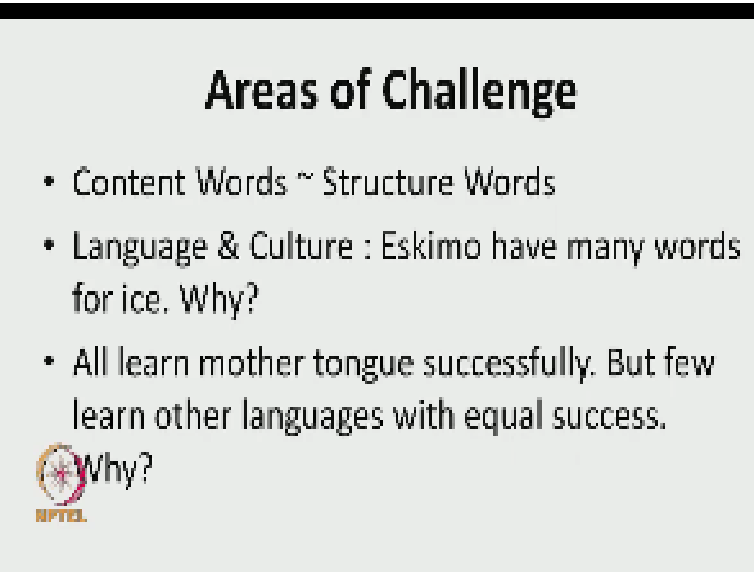
So linguistic theory is based or idealized data but and in speech distortion happens sounds will not be pronounced correctly words may not be pronounced correctly this weekend .I was at the airport examining air traffic controllers they are English you know they have to certify in order to continue working and a lot of simple phrases you know they have to say go ahead and they say go ahead it can be missing this - do you mean HEAD.

Which will mean one end of the tarmac runway or do you mean go ahead keep going what do you mean do you mean 19 or do you mean 90 when you do not pronounce it clearly thank God human beings know more than rules of language they know the context the pilot knows that there is no runway call 90 there is only done work or 19 so what the air traffic controller means is 19 okay human beings can understand in spite of distortions look at the SMS on the left hand what is it trying to say winter very simple can you understand on the right hand what is the tricks know ye a lot more than how about you he is saying it is a he is saying I am expecting a lot of guests this time only vowels do not convey anything but only consonants still

do in the written form okay, why we do not know we do not have enough knowledge we do not have enough answer.

The point here is you know yet those of you who are from computer science go and ask your teacher or maybe you can take it up for future research there are fault-tolerant systems you make one or two mistakes and you still get corrected email-id similarly you know your mind knows a lot more than so far has been possible to capture in rules okay, and it is through those clues that meaning is made out.

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In other words how do we understand okay, content words structure words they all help each other if a structure word is not there we can still make out through content words content words are you know home bread come go walk live teacher professor these are content what they are meaning a structure words is am-2 from okay, do we all learn all of them together are they equally important how much space they take what are the rules that connect one another we do not know we do not have sometimes language and culture language is also influenced by culture if you go to places like Antarctica or you know Arctic regions not Antarctica Arctic regions you know I have read in literature.

I have not personal experience that Eskimos have many words for eyes they have about 14 words for eyes in my mother tongue we have only one word for that is also therefore snow okay what is the situation in your mother tongue how many words do you have for ice and

snow okay those who know Hindi how many words for ice and snow only one bar of ice we were slow fever those who know Tamil how many words for ice and snow okay.

But we have lots of different words for rains lots of different words for the Sun Sun in morning is one thing Sun in the afternoon of midday you know we call him Martin Bhaskar you know burning we have through the we have all kinds of words for rains can you give me five words for rains from Telugu different degrees of give me words for drizzle give me words for drizzle give me words pour down food all of those words.

You know English , English Ajit we have much more than many more than that yeah now the point is the question for us the question for us in Sciences is why is it some people have why is it some people are more words for the same thing do they see more than we do or is it that in our place it is limited in their place it is more do you see the point is the same son same run same snow same sand or some people force and in my mother tongue we have only one word but for different kinds of clay.

I come from agricultural country there are at least I can tell you nine words for different kinds of clay ok black soil white soil paddy soil corn soil you so you know we have a phrase all useless boys are compared with that SOI you know it is good for nothing okay so are these you know language and culture are they related do they influence one another we do not know there are other questions you hardly come across anyone who has failed his mother done he has learned to speak to listen and understand.

But we frequently come across people who could not learn French or English as a second language as a another language why you know if all Lang if all human beings are biologically programmed to learn language then why do not we learn all languages equally well and why do some people some people speak English like there it was their mother tongue actually they are Telugu is mad they speak Telugu like they were speaking English they do not say Bognor odyssey bag nara okay we have to tell them please.

You are in second rawad not in Sydney okay why is it we do not know in other words meaning is more than.

(Refer Slide Time: 20:01)

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- Meaning is more than the sum of words in an order.
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"Mine is a long and sad tale", said the mouse.
"Long I understand", asked Alice, "but why sad?"

The sum of words in an order knowledge of world knowledge of words knowledge of order knowledge of structures okay it is a whole lot of things meaning is not just word and rules meaning is also language culture knowledge of world a lot of things put together what does it mean does it mean we need not try we can never know no we can know. B

But this is the way go this way you know try and understand the words try and understand the units try and understand the structural related rules and this will lead you to understand language and society and maybe someday you are able to design a machine write a book of grammar which can answer all of these questions after all whatever we know we know because we have tried okay, I think I want to stop here if you have any questions you can please ask me right okay.

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