**Fundamental Concepts in Sociolinguistics**
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**Lecture - 03**
**Design Features**

Hello class. Today we will talk about design features of language. We call it design features because the features that we are going to talk about today about human language are the intrinsic part of human language design and they represent the nature and character of language.

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They are also known as Hockett's design feature because Charles Ferguson Hockett published his work in 1960 in the 'Origins of Speech' in Scientific American. And he derived 13 total features in the beginning. Later on, three more were added, so making it completely 16 features. Now, they are fundamental design features of any human language because they are the defining elements of a language.

So, Ferguson Hockett, Charles Ferguson Hockett, popularly known as Hockett's design feature, talks about certain fundamental features of language and how human communication system is distinct unique species specific and particular to human. There are certain features that he talks about also are found in other animal communication systems. But only it is human that have, human language that has all these features.

No other species, no other system in the entire animal kingdom had these features and that is why they are known as language design features or Hockett's design feature of language. He talks about vocal auditory channel, that is the first design feature, vocal auditory channel. So, we need to understand that language is primarily oral, writing system came to language very late.

And the writing system is a recording mechanism in terms of orthographic symbols, scripts. So, here we are talking about primarily language as an oral phenomenon. Orality is the primary focus here and all these features of language that we are going to talk about is the idea that language is primarily oral.

The first feature is vocal auditory channel. Vocal means the voluntarily produced sounds with the help of all other vocal organs and auditory the system of receiving these sounds. So, they together create a channel vocal production of sound and auditory reception of sound. Human language is basically a vocal auditory thing, and it is performed using the vocal tract and auditory channels.

Hockett viewed this as an advantage of human primates because it allowed for the ability to participate in other activities while simultaneously communicating through spoken language. So, while speaking we can do other works, you can walk or you can lay down, lay out the table or you can do any other thing and you can communicate.

We communicate in terms of voluntarily produced vocal sounds; by the way you might have noticed that all the sounds that we produce while we breathe out; and we have got a mechanism to manipulate the air volume with certain constructors in the entire vocal tract to produce different sounds. Then auditory channel allows us to receive these sounds, so it is a two-way process.

You produce sounds and receive sounds. The first design feature of human language is that it is performed, or it has vocal auditory channel. Then second one is broadcast transmission and directional deception. That is, all human sounds can be heard by any other person, any other human being, any other individual if the sound is within the range of reception, so we can hear any sound produced around.

Directional reception means that we have a binaural direction finding ability. When you produce sounds, it is received in all directions; and you also receive sounds from all

directions. You can do this experiment in when you keep the room dark and if somebody makes a sound, let us guess whether the sound was from the left corner of the room or the right corner of the room or the front side of the room or the back side of the room, if some sound comes from the top or from the floor without looking at the source of the sound you will be able to understand and guess the direction of sound.

So, not only sound alone but also direction of the source of sound, binaural direction-finding ability that we have; this allows us to produce sounds and transmit it in all directions for receiving by others and also allows us to receive any sound from any direction without even physically looking at that. Even if your eyes are closed you can receive sound and you can guess that the sound is from my back side.

Therefore, broadcast transmission explains that you produce a sound and can be broadcast in all directions and also directional reception, you can receive these sounds from any direction, 360 degrees. So, this is the second design feature of human language.

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Then we move to third rapid fading, or we call it transitory sounds. That is a character of human language that wave forms of human language dissipate over time. They do not stay, so instant reception is required. So, if I am speaking anyone in the proximity will receive the sound instantly, it is not delayed, or it does not wait.

It can never be the case that I speak something and then I leave the room and then somebody enters the room and listens or hears that sound. So, it is simultaneous. That is production of sound and reception of sound is simultaneous. So, it fades away unless we keep a recording system like we are doing a video here and we play it again. At the time of production reception happens simultaneously. So, transitoriness or what we call rapid fading is another character of human language.

Then the fourth design feature is interchangeability. What does it mean? An individual has the ability to both speak and hear the same sound. Anything that a person is able to hear they have the ability to reproduce through spoken language. So, you perform both the roles, role of a speaker and role of a listener of your own speech. So, you produce, and you receive and it happens simultaneously and the roles are irreversible. And we can produce anything that we hear. So, this is interchangeability.

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5. Total Feedback:
A speaker has the ability to hear himself/herself speak. Through this, they are able to monitor their speech production and internalize what they are producing through language.

6. Specialization:
Human language sounds are specialized for communication. When dogs pant it is to cool themselves off, when humans speak it is to transmit information.

Next is total feedback. You might have seen in music concerts, you might have seen that we have multiple speakers around for audience. But there are some speakers which have direction facing the performer, the singer. On the stage you might have seen that these speakers are put and they are facing the singer. Why do we do that?

Because, singer is singing and he does not have to worry about, because he can listen to his own voice, but the singer wants to be confirmed that if his voice is traveling in a particular channel how it is being received by the audience. Total feedback means a speaker has the ability to hear himself or herself while speaking and through this they are able to monitor their speech production and internalize what they are producing through language.

Imagine if the feedback is not possible, then what I am saying, suppose that what I am saying I am not able to hear that, what will happen? I will have no clue on what I am speaking. So, human language has this feature of total feedback, which allows the speaker to monitor his or her own speech, make corrections.

We do corrections while we speak because we have the feedback, we are the first person, in the first person to give feedback to ourselves, we produce the sound, we produce the speech and also we get the feedback. And we can manage, we can internalize and we can understand what we are producing.

So, that is total feedback that is the fifth design feature of human language. Then specialization is number six; that is a specialization, human language sounds are specialized for communication. Earlier also I told you that individual sounds do not mean anything, but they are put in a particular combination, in a string to give you some meaning.

So, everything that you speak every word that we speak represents an objective reality or reality around us. And it triggers a mental image and when I say 'dog' it triggers a mental image. So, every word that we speak or the sentences that we speak, they carry certain meaning. We do not have meaningless words and meaningless sentences; we do not produce meaningless words and meaningless sentences.

So, when you produce speech or these sentences/ words/ phrases/ clauses, they all carry meaning. And why do you have these meanings? To communicate, to interact, to socialize. So human language is designed to communicate meaning, some meaning out of it, it can never be meaningless.

A specialization refers to  human languages sound that is specialized for communication because they carry the chunks combinations strings carry certain meaning. Unlike other animals like, for example, panting of a dog, not necessarily they have some meaning to communicate, but it is for cooling themselves.

Or for example, the dance of bees. Different dances represent the distance between nectar and hive, but otherwise so they do not have the kind of specialized developed system that human language has. Human language goes beyond time and space we will come to that very quickly.

Next is semanticity that means special signals, or the word of the sentences carry special meaning we never use or produce a word or a sentence that does not have meaning. Because, if it does not have meaning it is not a word, if it does not have a meaning it is not a sentence, so we produce meaningful words meaningful sentences.

And there everything that we produce, every signal that we produce it represents or triggers certain image or certain reference, so it gives us meaning. Semanticity refers to meaningfulness of human language, every chunk or word or utterance or sentences that we produce they all carry certain meaning.

Then number eight is arbitrariness. Interesting, this is very interesting arbitrariness. So, there is no limitation to what can be communicated about and there is no specific or necessary connection between sounds, used and the message being sent. Arbitrary that means for example, sound 'ka', it does not carry any meaning individually.

But they are combined in a particular way and when they are combined in a particular way like cow for that matter, pen for that matter, fan for that matter, they give us a certain meaning, they refer to something some object or they trigger some mental image. But when we look at the relationship or connection between a word call let us say pen and the actual object called pen, there is no one-to-one relationship.

So, why is a pen called a pen? A fan is called a fan? You might have seen different words for pen in different languages. So, you will have different words, let us say in Hindi we call it

kalam, in Telugu you call it something else, in Tamil something else. Every language will have a word for pen or a fan or any other word.

But that does not change the objective; reality of the word, a pen will be pen whether you call it in English or in Hindi or in Telugu or in any language. Because there is no one-to-one relationship, the character or the property of the object has nothing to do with the way it is named. So, your name has no direct link and connection with you as a person and your characteristics.

It is arbitrary this relationship is arbitrary. Is not it beautiful that with the help of these sounds which are individually meaningless we create strings; and the meanings assigned to them are arbitrary but we are able to perfectly communicate with each other, socialize and interact - that is the beauty of language. Arbitrariness is another important design feature.

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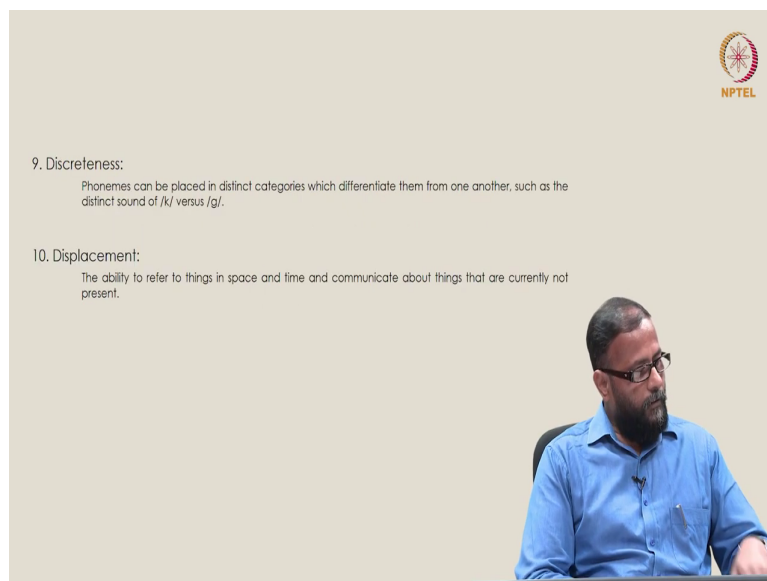


Then we move to discreteness. Discreteness refers to the uniqueness of each sound a particular language may have so these sounds are discrete in nature different in nature distinguishable, you can recognize them separately they do not overlap. So, pa is not ba, ba is not ka, ka is not cha, cha is not ta, ta is not la. So all these sounds that a language has in any language they are unique, identifiable are arbitrary and discrete.

We can count them and it is interesting to see that every language has a limited set of sounds which are discrete, they can be counted, they are distinguishable, identifiable and they can be differentiated. So, it is not a single stretched sound of blurred sound, every word, every sound

has a boundary. One sound ends and other sound begins. In a word we are able to identify a word because we have different sounds in that particular word.

Then number 10 is displacement. What is displacement? Displacement means language allows you to go beyond the front limitations of time and space. That means language can represent something which is not really present in the space and something which has not happened in the particular synchronized time that I am speaking (at the time of speaking)

So, I can defy the limits of time and space. Human language can defy the limits of time and space and it can transcend the limits. So, I can talk about something that had happened five years back. I can talk about something that I am planning to do next year. So, time, the limits of time can be defied in terms of language and also space.

I can talk about someone in Delhi while sitting in Chennai or I can talk about someone in New York sitting in Delhi. So, the person or the event or the idea does not necessarily have to be present here while I am talking about it. So, language allows us to defy and transcend the limits of time and space- this is displacement.

It is a very unique character of human language which is not found in any of the animal communication system. It allows us to be to travel in time and to cover unimagined space that is the beauty of  human language and that is called displacement.

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Then comes productivity. Now Chomsky also talked about set of linguistic elements and the infinite set of output that we have. So, human language has finite set of linguistic elements, like sounds for that matter. Every language has a particular number of sounds, but if you look at the words it produces, sentences it produces, they are unlimited.

So, English is restricted to let us say 24 consonants and 20 vowels, if we broadly look at it. So, total 44 sounds, but with these 44 sounds we cannot actually count the number of words, we can produce out of it. Similarly, we cannot count the number of utterances and sentences we can produce out of all these words.

So, it gives you an infinite productivity with a finite set of elements available in that particular language that is infinite productivity of human language, that is the beauty of it. It is very important design feature/character of human language. Then we have traditional transmission (number 12).

Now, what do you mean by traditional transmission? Human language or any particular language is inherited from older generation to the new generation, it is not completely innate. Let us not confuse the idea with which Chomsky uses the word innate, but we go by the general idea called innate.

So, language is not genetically inherited. It is learned, it is transferred, it is transmitted from one generation to the other. So when the human child is born, the child requires language in a

social environment. And it is transmitted traditionally. That is the only reason why (let us suppose a Hindi speaking parent adopts a Tamil speaker, child from Tamil speaking parent, the child will acquire Hindi as mother tongue not Tamil.) Because language is not genetically transferred, it is learned in a social environment, but traditional transmission means that language is not completely innate, and acquisition depends in part on the learning of a language in a particular social environment.

And this is possible in human societies not in other animal species. In this entire animal kingdom, language is traditionally transferred only for a human child. So, this is a peculiar and particular human language feature.
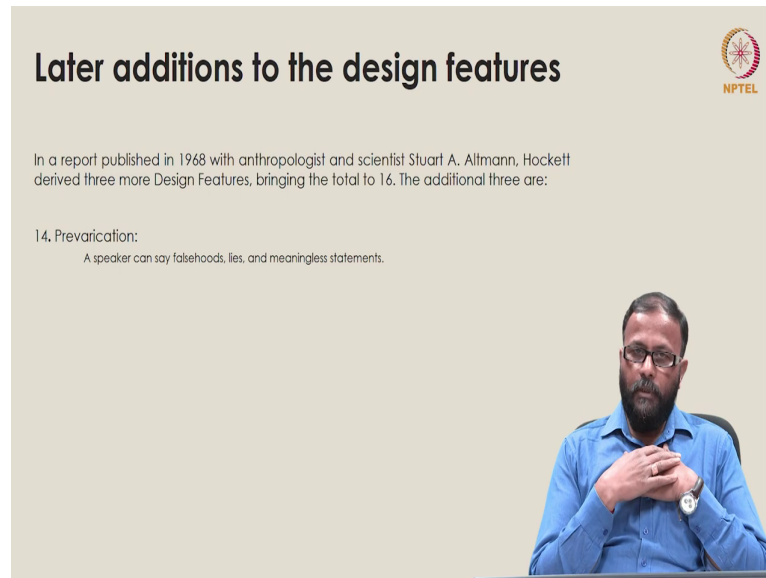
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Then the 13 is duality of patterning that means we have multiple layers of meaning. The meaningless segments or units called sounds are combined to make meaningful words; then these meaningful words can further be combined to get meaningful sentences.

Then these meaningful sentences can further be combined to get meaningful paragraphs and then the whole discourse. So, this is called, this ability of language to do so is known as duality of patterning. Because, the existing elements can be used, linguistic elements can be used and reused for different meanings and different purposes.

So, while Hockett believed that among all communication systems animal and human alike, they share many of these features, but only human language contains all the 13 design

features and additionally, traditional transmission, duality of patterning are the key to human language system. So, these are 13 primary design features that Hockett talked about.

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But, in a report published in 1968 with an anthropologist and scientist Stuart A. Altman, Hockett derived three more design features. So, he added three more features to human language, understanding human language and these three features are, for example, prevarication, reflexivity, and learnability.

So, prevarication refers to the ability of human being to represent something which is not true. So, if you go by the ideal understanding of human language, it must represent objective reality and the truth, if you go by the truth value theory. But human language allows us or the language that we speak allows us to represent falsehood. Prevarication is a very important phenomena and is a character of human language that it allows you, it is all deception, it allows us to represent falsehood.

It can allow us to pretend like which is not possible in any other animal communication system. So, pretensions representing falsehood, producing meaningless sentences, they are not possible in any other animal communication system. But human language system allows us to do so. This is one of the most important characters.

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15. Reflexiveness:
Language can be used to communicate about the very system itself; i.e. we need language to discuss language.

16. Learnability:
A speaker of a language can learn another language.

Then we have fifteenth reflexiveness. It is ironical. It is a strange and it is also surprising to see that we need language to talk about language. I am talking about language to you with the help of language. Language can reflect upon itself; you have no other mechanism to talk about language but the language itself.

So, this is the reflexiveness, so language represents language, language reflects upon language, language discusses language, we can discuss about language, I am talking to you on language in a language called English. This is another character called reflexivity. So, reflexiveness, that is the fifteenth design feature.

Then we have learnability, number 16. What does it mean? That any individual can learn any language. A dog cannot learn how to roar, a lion cannot learn how to bark, but as a human, I can learn French, I am a Hindi speaker, I can learn Telugu, Tamil, French, Italian or any English speaker can learn Hindi or Tamil or Telugu.

So, we have this free will to learn any language. That is the beauty of human language. It allows any human to learn any language and this character is known as learnability So, three features were added in 1968; reflexiveness, learnability and prevarication.

So, these are known as Hockett's design feature or design feature simply we call it of all human language. Because they are the design features which define human language and in any other animal communication we do not find all the 16 features present. So, it is species specific and only human beings are endowed with this ability to have language which is such a beautiful and complex phenomenon.

But interestingly, because it comes to us so naturally, we hardly notice the complexity of it. That is the beauty of language. Thank you.