Language and Mind
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Module – 04
Lecture - 17
Words

We are looking at Words and through the structure of words, we are trying to look at underlying patterns in the formation of words in natural languages; and that we want to take as examples for understanding human mind, the role of human mind and understanding the relationship between language and human mind. We are going to take one more example from English and one example from Hindi to discuss one more type of structure, one more type of pattern, one more type of rule underlying formation of words.

However, I do want to invite you to review the rules that you have seen so far and rules of Hindi that you have seen so far. Having seen such rules for the last 3, 4 days, I have been mentioning this to you and now, I wanted to invite you to work on your own language. It will be nice to work on a language other than Hindi, if you are a Hindi speaker. For those of you who are speakers of other languages, who speak other languages primarily, will be nice to look at your own language.

And remember, in the short period of time, I am trying to show you rules which are going to be, which are applicable to couple of structures with just a few examples. It is going to be difficult to be quoting numerous rules. However, I am sure you must be developing a sense that, there could be numerous examples underlying a structure. With the limited examples that we have been talking about, we can at least get to understand the theoretical point that words and the structure of words have underlying patterns.

And all of them are part of our mind, all of them have been figured out, while learning language; and this much, I repeat again and again, all these things get done by the age of 4 and 5; children have figured out. If a child can tell you the plural form of a word in Hindi, that becomes an evidence for having internalised these rules. So, hope things are clear so far.

And let us see two more examples today. These examples are going to be coming from, what we know as nasal assimilations. I will describe this to you. But, again we are looking at this phenomena of nasal assimilation, like we have looked at plural formation. We are going to look at nasal assimilation for us to understand underlying role of human mind in understanding language and the role of the structure of language in understanding human mind - the structure, the patterns of human mind. So, let us look at some examples from English first.

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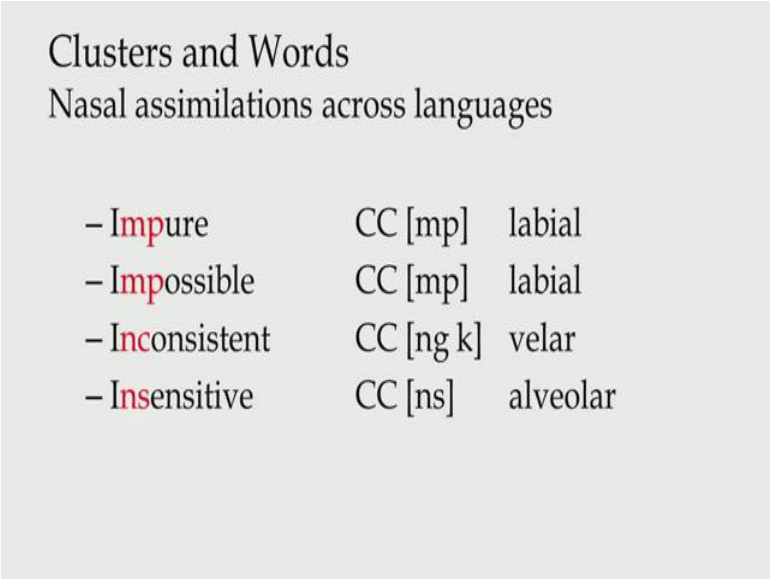

These are some of the words that you may have seen several times. We use these words on a daily basis, but today I want you to pause with these words and see the structure of these words and see the description that follows that and see…and again, please try to find out examples of these things from your languages to see that these the whole process works for your language as well. Now, let us look at what you need to look at in your languages.

So, the examples are, I have picked up only four, only four examples again for you, so that we can be looking at these things in details to understand the phenomenon. We have the first example - impure, it is a very common word in English; impossible - another very common word in English; third is inconsistent - not a difficult word, must have heard several times, you must have used these words several times; and last one insensitive – again, a very common word.

Please pay attention to the sounds that are marked red and then see what is happening. All these words are negative words; all of them have a negative prefix, again a morpheme; again, we can classify this negative prefix as a morpheme. Now, we know the definition and the meaning of the term morpheme, but the point is, these are negative markers, they turn the word with their negative meaning.

So, if we have a word like pure, possible, consistent and sensitive, the use of these prefixes before these words makes them negative words. So, how is this adding prefix working with these examples, is what I want your attention at. So, what is the initial sound? Please, pay attention to the initial sound without prefix. So, the initial sound in the first word, pure is pa. The initial sound in the word possible is again pa, the initial sound in the word consistent is ca and the initial sound in the word sensitive is either alveolar or dental.

Now, you can pause again and check the places of articulations of the initial sound of these four words again. We have two examples of labial sounds, then ca as a velar sound and sa as a alveolar sound or as a dental sound. I am using both dental and alveolar, because sometimes it varies for some people and some varieties of English. That is not a crucial distinction; you can take either… take it as either alveolar or as teeth being place of articulation for the sound sa.

So, what is the next step of this story? These are what we have discussed so far - places of articulations of the initial sounds of these words. Now, please pay attention to the negative prefix. In the first one and the second one, when we have the initial sound labial, we see the negative prefix as im…im… the final sound of this is ma. And similarly, in the remaining two, for the word consistent, it is something else and for the word sensitive, it is something else.

Now, this is not a coincidence that we have these words, these negative prefixes sounding differently. What happens is, the negative prefix gets… the negative prefix has a nasal sound in it and the nasal sound becomes… nasal sound gets assimilated by the initial sound of these words. So, if the initial sound is pa, it makes the nasal labial nasal; therefore, we get ma.

At this point, I should remind you about the distinction between oral sounds and the nasal sounds, which we discussed when we were talking about places of articulations of

sounds and we were looking at mechanism of sound production, when we have discussed sound. If you think you need to go back and check, please check the points where we have discussed the distinction between oral sounds and nasal sounds.

So, right now we are talking about a rule that applies in assimilating features and converting the sound into a nasal. So, see how it works? The word impure has the initial sound, a labial pa. Therefore, the negative prefix ends with ma, which happens to be a labial nasal. Again, for the word possible, the negative is impossible, the initial sound of the word possible pa makes the negative prefix end with ma and therefore, we get the word as impossible.

Finally, not finally, in the next word, we see the initial consonant being ca; it should be predictable from what you have seen so far that the negative prefix, even though we write as i n, is not na, it is not a dental nasal; it is a velar nasal which is like nga. So, when you say the whole word, it comes up as inconsistent, inconsistent. Please check a dictionary, please check, if it is available to you, tools which can give you the pronunciations of the native speakers. You will find that the nasal part of the negative prefix in the word inconsistent is a velar nasal not a dental nasal and it is totally unlike how it is written.

Similarly, in the word insensitive, here you see the nasal being dental nasal, because the following sound sa is a dental or alveolar. The two reasons are very close by; therefore the nasal in the negative prefix is a dental nasal. These are few examples from English for you to see and this works across languages.

To give you one more example, I am going to take few examples from Hindi. And then, I invite you to look at examples from your languages to see, how this rule is underlying and how this pattern works for natural languages.

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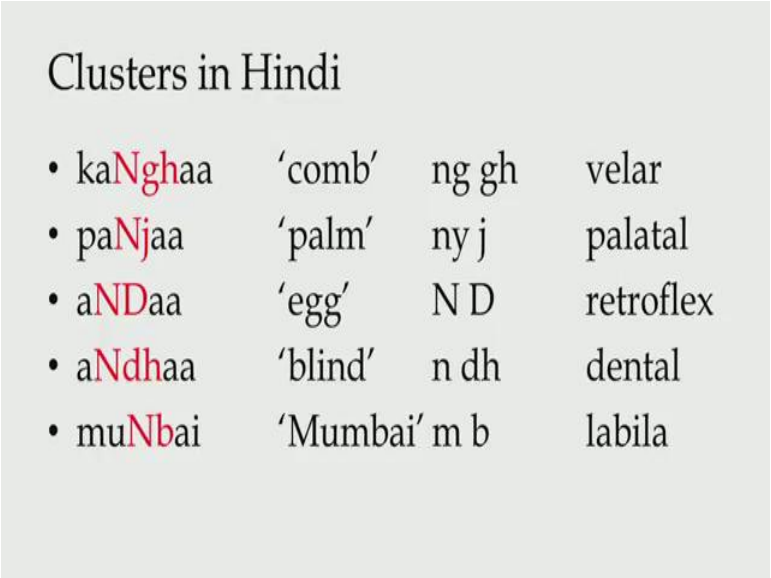

Now, please look at the clusters where nasals are involved in Hindi. Again, in the five words that you see on the screen, I have marked the cluster of nasal consonant and the other member of the cluster in red. So, I am going to read these words for you with their meanings Kanghaa - it means comb, Panjaa means palm, Andaa - egg, Andhaa - visually impaired person, means, dictionary meaning is blind, Mumbai - is the name of a place, is a proper noun.

Now, what I am indicating with the capital letter N is the place for nasals; that is the place for a nasal consonant. And what is the nasal consonant in these places? If you look at the third column, you see in the first word Kanghaa, the nasal is a velar nasal ng, because the consonant that follows the velar nasal is a velar consonant gha. And because the second member of the cluster is a velar, it takes a velar nasal as a member, as a nasal member of its cluster.

This is why it is called nasal assimilation; that, nasals in the cluster are going to be allowed… only the ones that originate from the same place of articulation. And here, by same place of articulation, we mean the place of articulation that the following consonant has. Let us take another example – Panjaa; here, the second member of the cluster is ja, which is a palatal consonant. In the word Panjaa, the second member of the cluster is a palatal consonant ja. Therefore, the nasal member of this cluster is going to be a palatal nasal nya; and therefore, we have the word sounding as Panjaa.

In the next example Andaa, the second member of this cluster is the sound da - it is a retroflex sound; therefore the nasal member of this cluster is going to be a retroflex nasal. In the word Andhaa, the second member of the cluster is a dental consonant; therefore it is going to take a dental nasal as the first member of this cluster. And in the final example Mumbai, because the following consonant, that is, the second member of the cluster is a labial sound ba, therefore it is going to take a labial nasal as the first member of the cluster and hence, we have the sound ma.

Now, we see a reason for why we have nga in the first example as a velar nasal, nya in the second example as a palatal nasal, Na as a retroflex nasal in the third example, na as a dental nasal in the fourth example and ma as a labial nasal in the fifth example. These are the examples of nasal assimilation. Again, when a nasal sound becomes the member of a consonant cluster, it has to share the place of articulation with a sound follows it.

This is one of the very strict rules of natural language and as part of the rule, as part of the underlying pattern, this rule is figured out by human mind from the given little fuzzy input that we get from immediate society, very early in our acquisition process. And these are the examples, which make rules explicit, which make rules that have been internalized, while learning the language explicit. Under no circumstances one can claim that these rules were taught; we were taught these rules while we were learning Hindi, we were acquiring a language like Hindi or English for that matter.

You have seen examples of nasal assimilation from two languages and I invite you to come up with examples of nasal assimilation from your language. If you come up with some of those examples, then you can substantiate this pattern. If you cannot, that still shows that you cannot come up with the rules, you cannot come up with examples, but still you know examples of your languages, which substantiate the claim of knowledge of language.

Thank you.