Appreciating Linguistics: A typological approach
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Lecture - 31
Phonological typology - Part 2

Hello everyone. Welcome to this session of my course Appreciating Linguistics: A typological approach.

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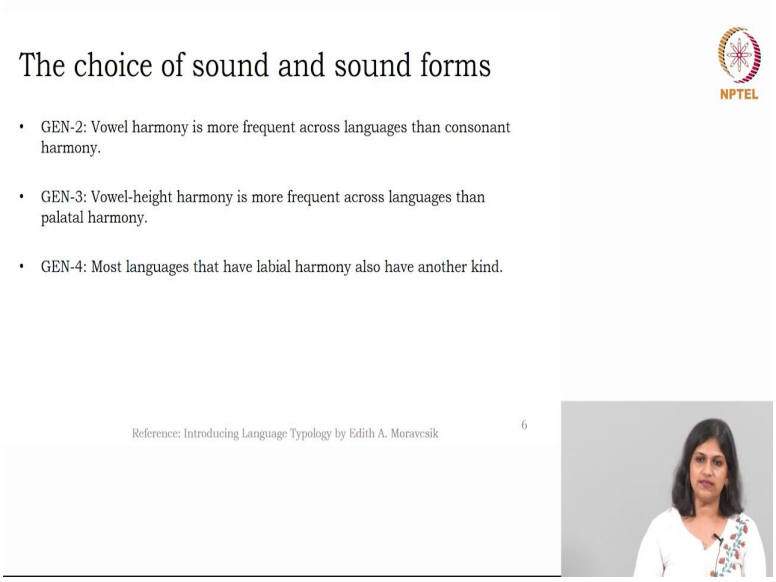

So far the sample that the typologists have worked on, new languages might be identified by the researchers and may be the generalization may not hold true for that. But as of now, the huge sample that has been studied so far by the typologists, give us an idea that all the words in the world's languages will surely have at least one vocalic segment; that means, there must be one vowel found in in all the words in any of the world's languages. That is about the first generalization.

What is the second generalization? The second generalization is about vowel harmony. When you look at vowel harmony, you see that vowel harmony is more frequent across languages than consonant harmony.

Consonants might have varied forms, some might have a stressed, some might have a non-stressed, some could have let us say in case of pa and pha, /t/, /θ/ difference, some languages might have an aspirated form. Aspirated /k/, aspirated /t/ and aspirated /p/ may not be available in many of the world's languages. The consonants may not have a harmonious presence as the vowel harmony.

Remember the second generalization carefully. If you compare the vowels and the consonants, it is vowels whose harmony is more frequent across languages, then the consonant harmony. Consonants might be varied, there could be wide variation among the usage or among the pronunciation of consonants. But in most of the cases, in the phonological segments of the world's languages, the vowel harmony is found more frequently and these are the statistical statements. When I say more frequent, that means, I am talking about the statistical presence or the statistical indication.

So, vowel harmony is more frequent, consonant harmony is less frequent. Then the second generalization is also related to the harmony discussion. That means, the vowel height harmony is more frequent across languages than palatal harmony. When you talk about the height of the high or the low vowel, in that case also, the height of the vowel is more harmonious or you can say is more uniformly available than the palatal harmony.

Whether the manner of articulation and in the place of articulation, when you are talking about the palatal region or the palatal harmony, that is less frequent than the height harmony of the word.

Then the fourth generalization is about another indication of harmony in sound forms. When you are talking about choice of sound and sound forms, we see that as stated in generalization 4, most languages that have labial harmony also have some other kind, it might have palatal harmony, it might have nasal harmony. Labial harmony is considered to be the most rudimentary form of this. So, if /p/ is pronounced as /p/ in most of the languages then obviously, nasal sounds like /m/, /n/, they will also be pronounced in the same harmony like the labial one. So, labials are the most rudimentary one, remember this.

The fourth generalization is about labial harmony. Most of the languages which have labial harmony will also have some other kinds of harmony. That means, labial harmony would be considered as the most rudimentary form of the syllables.

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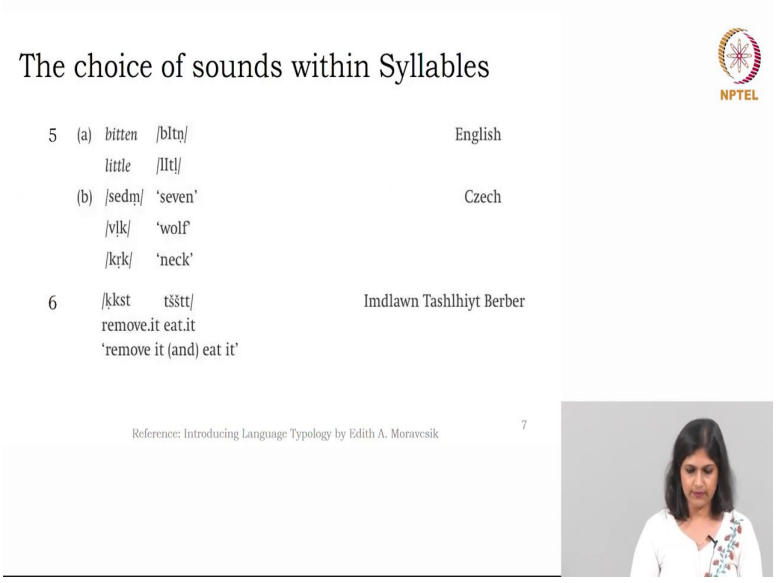

Now, let us look at how the sounds are chosen within syllables. Within a given syllable, what sort of choices do we have as far as sounds are concerned. Let us say bitten and little that is in English, in Czech also you have three different words, sedm, vlk and krk. That is seven, wolf, and neck. Then there is this language which is actually difficult for me to pronounce, but then here also you see there is an exception. Look at the data number 6, you do not find any vocalic or the syllabic sound.

Then the concern is does that mean that the first generalization is nullified here? We are not very sure this could be an exception and probably we will discuss such kind of data at length later, maybe in another course.

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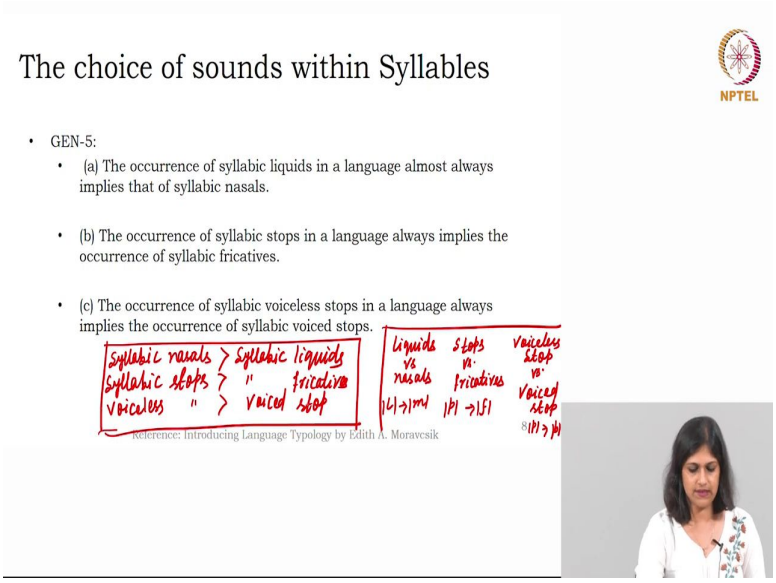

But as of now, you need to remember that in most of the cases, as far as the generalizations are concerned or harmony of the sounds is concerned, vowel harmony is more frequent than consonant harmony. Second, vowel height harmony is more frequent than the palatal harmony; and most languages that have labial harmony will also have the harmony of some other kinds, it could be dental, it could be nasal, it could be labiodental or whatever.

So, with these generalizations, we would move to the 5th generalization that we have within syllables. There are three sections or there are three parts of this generalization. Let me read it. The first one is the occurrence of syllabic liquids. Liquids like /l/ sound, in a language, almost always implies that of syllabic nasals. Let me read it one by one then we will get back to the data. Second one the occurrence of syllabic stops in a language, always implies the occurrence of syllabic fricatives. The occurrence of syllabic voiceless stops in a language always implies the occurrence of syllabic voiceless stops.

That means these are the implicational universals. If x is there then y will also be there. But that does not mean that if y is there x will be there, not really. It will always move from x to y direction. If it moves from x to y then we will find out which one is the implication of what. I will focus to the first one first. So, generalization 5a, what is it written? It is written the occurrence of syllabic liquids in a language almost always implies that of syllabic nasals. So; that means, in a language, if we have a syllabic liquid, that language will definitely have a

syllabic nasal. So, if you have liquids in a syllable, you can always have nasals too. So, liquids and nasals are in the implicational category.

The second one is related to syllabic stops and syllabic fricatives. Let us read, the occurrence of syllabic stops in a language will always imply the occurrence of syllabic fricatives. So, the first one is liquid to nasal; if there are syllabic liquids there would be syllabic nasals. The second one if there are syllabic stops, there will also be syllabic fricatives. What is the third one? If there is a syllabic voiceless stop, then there would definitely be a syllabic voiced stop. Let me give you some examples of all the three things that will help you to understand.

Let me write it over here, liquids. I would rather ask you to go back to the sounds or the place of articulation, manner of articulation, consonant and the vowel chart, that we had in the previous discussion. We have liquids and let us say liquids versus nasals that is one category; we have stops versus fricatives, then we have let us say voiceless stop. So, let us look at the liquids that we have. When we have let us say liquid, we will come back to the 5th generalization that we have been discussing. The first part of the 5th generalization is the occurrence of syllabic liquids in a language almost always implies that of syllabic nasals.

When I say liquids, let us say I have this /l/ and it will surely have the implication of /m/. If it has a syllabic liquid, it will have a syllabic nasal. Then the second generalization is if it has a syllabic stop let us say /p/, then it will surely have a fricative that is /f/. Then the third one if it has a voiceless stop /p/, then it will surely have a voiced stop /b/.

So, these are the three segments or the three sections of the 5th generalization. /l/ syllable or syllabic liquid will imply to syllabic nasal, syllabic stop will imply to syllabic fricative, and syllabic voiceless stop will imply to syllabic voiced stop. In other words, if I can say syllabic nasals are preferred over syllabic liquids, syllabic fricatives are preferred over syllabic stops, and voiced stops are preferred over voiceless stops.

Maybe to write these three generalizations, I am going to rephrase it as done by Moravcsik. So, which one is preferred over what? I will say syllabic nasals are preferred over syllabic liquids. Similarly syllabic stops are preferred over syllabic fricatives, and voiceless stops are

preferred over voiced stops. So, this is what the 5th generalization would tell us as far as the phonological system is concerned.

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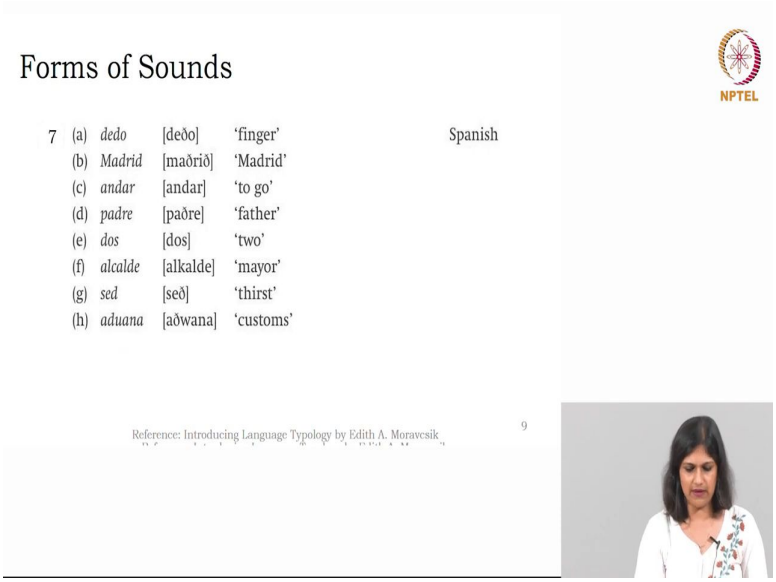

Now, these are a form of sounds you might have a look at it, when you have time.

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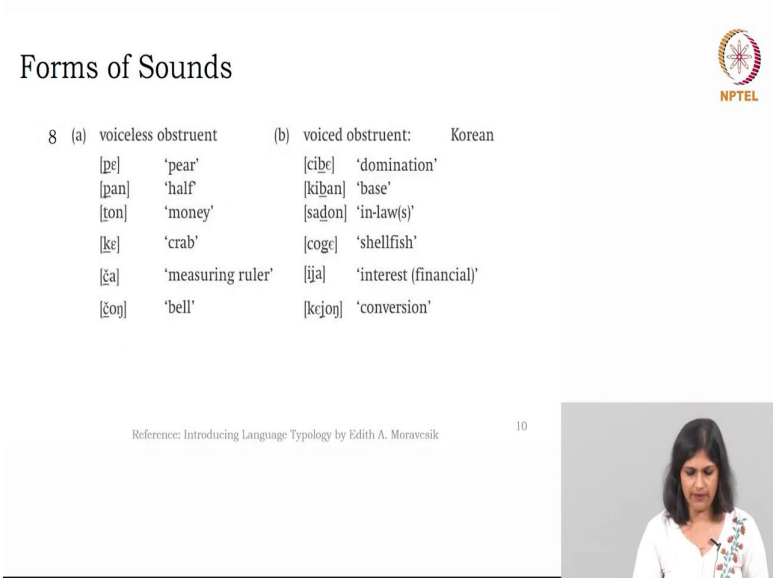

I have examples from Korean, basically Moravcsik's examples, then from Spanish then we have Korean then we have again Spanish.

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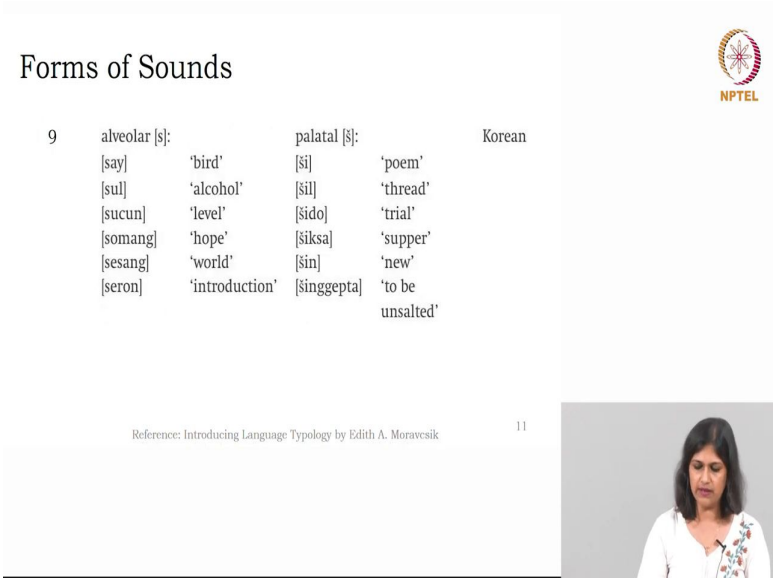

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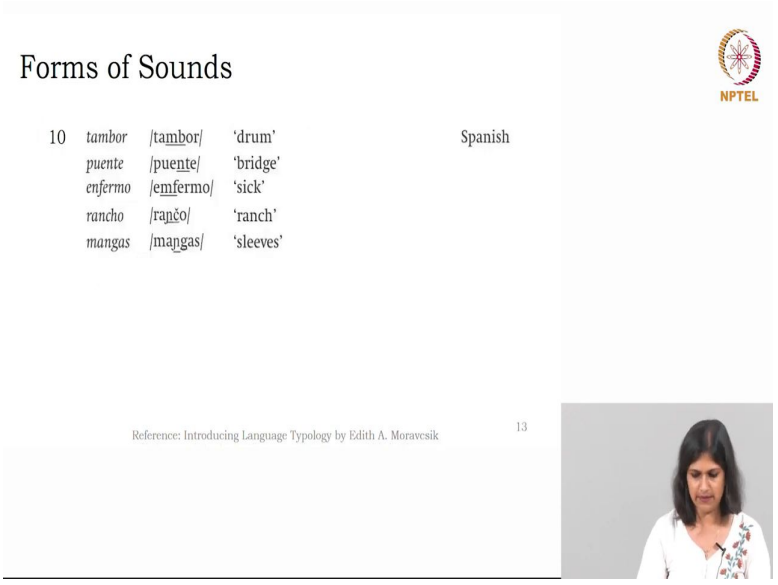

So, basically two different languages which have been discussed here. Just look at the data carefully sometimes, but remember this is what the generalization has been drawn; syllabic nasals over syllabic liquids, syllabic fricatives over syllabic stops and voiced stops over the voiceless stops.

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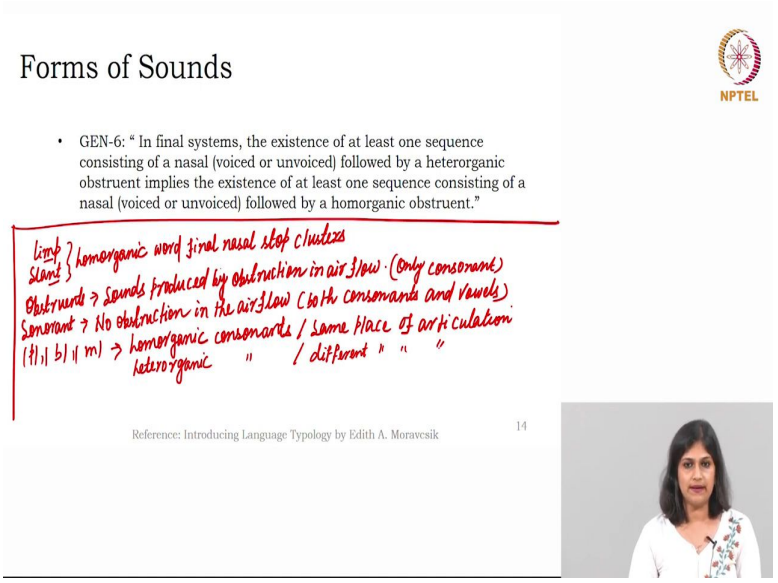

Check the data later. I am not going to discuss much about the data now rather I would move to the next generalization. What is the next generalization? Let us read it first and then we will see how we can explain this generalization in a simpler term.

The 6th generalization says in final systems the existence of at least one sequence consisting of a nasal, whether it is voiced or unvoiced, followed by heterorganic obstruent implies the existence of at least one sequence consisting of nasal followed by a homorganic obstruent. These are heavily loaded philological terms, but let us see how simple we can make it for you to understand.

One is homorganic, the other one is heterorganic; and homorganic nasals and heterogenic nasals, it is mentioned that they occur before the obstruents. And what are the obstruents here? That is what we need to find out. First let us see what are the examples of homorganic clusters.

For example, the words like limp or slant these are the homorganic word final nasal stop clusters. I am going to write here a couple of data. In case of English, let me write a word like limp or let us say slant or limp. These are what? Homorganic word final nasal stop clusters.

Now, let us see what are the heterogeneous ones. When you think about the homogenous ones, we also need to find out what could be the heterogeneous ones. And in case of

heterogeneous ones, generally the nasals are considered to be homorganic, but in case of heterorganic ones, just a minute. Karthik just hold it for a while. There is some confusion here.

Let us see how the 6th generalization works. Before that, you need to remember a couple of things that I have scribbled over here on the screen. What does it say? Let us read it again. 6th generalization says in final systems the existence of at least one sequence consisting of a nasal followed by a heterorganic obstruent. Obstruent implies the existence of at least one sequence consisting of a nasal followed by a homorganic obstruent.

A couple of words you need to understand. What is an obstruent? It is already written there. The obstruents are the sounds which are produced by an obstruction in the airflow. Only consonants can be obstruents. And what is the opposite of obstruents? Sonorants. Sonorants do not generally have the obstruction in the airflow. That is why it could be both consonants and vowels.

A sonorant could be either a consonant or a vowel, obstruents are only consonants. That is what you need to remember. If there is an obstruction the sound would be obstruent, no obstruction the sound would be sonorant. And what is the sixth generalization saying? There are two different concepts which are discussed here: one is homorganic, the other one is heterorganic.

Homorganic consonants are those which are occurring at the same place of articulation, let us say /p/, /b/ and /m/. These are the homorganic consonan. But /p/ and let us say /ʧ/ they would be heterorganic consonants, when the place of articulation is different; when the place of articulation is same you call it homorganic.

Now let us see how this homorganic and the heterorganic obstruents are listed or are accounted for in the 6th generalization. The existence of at least one sequence consisting of a nasal followed by a heterorganic obstruent implies that at least one sequence consisting of a nasal followed by a homorganic obstruent. That means, if a sequence consisting of a nasal, either voiced or unvoiced, it is followed by a heterorganic obstruent, it implies that there must

be at least one sequence consisting of a nasal which is followed by a homo homorganic obstruent.

So, let us say a nasal like /n/, if it is followed by a /p/ or /b/, let us say a /m/ if it is followed by a /ʧ/ then it will surely be followed by a /p/ because /p/ and /n/ these are the homorganic consonants; /p/ and /ʧ/ are the heterorganic consonants or /n/ and /ʧ/ are the heterorganic consonants.

So, one nasal which is followed by a heterorganic obstruent let us say a nasal /m/ is followed by /ʧ/ at the final system, it will surely have at least one more sequence where the nasal /m/ would be followed by a homorganic obstruent like /p/. So, /m/ followed by /ʧ/ will have at least one instance where /m/ followed by /p/. These are the phonological contexts or you can say the phonological boundaries or the phonological system which decides how the nasal sound with a homorganic obstruent is going to imply with a in relation with a heterorganic obstruent.

To understand the 6th generalization I would expect you to understand first what is an obstruent, what is a sonorant, what is a homorganic consonant and what is a heterorganic consonant. Once you understand these four terms you can easily understand the 6th generalization. I have already written on the screen. There are two examples, limp and slant. When you say limp, the /m/ and then the /n/, /m/ and /p/, they have the homorganic word final thing /n/ and /t/ these are also homorganic. But if there is a combination of limp, then there would surely be a combination of limp because /m/ and /p/ these are homorganic, but /m/ and /t/ are not homorganic they are heterorganic one.

So, the implicational universal is that in case of a nasal followed by a heterorganic obstruent implies that there would be a nasal followed by a homorganic obstruent. If you find it difficult or tricky to understand please get back to me, but I would expect you to know the basics of phonology or basics of phonetics first to understand the generalizations. Go back to my basic discussions also. Do not keep yourself restricted to these discussions, please read as much as you can so that the understanding of the next set of generalizations is going to be easier for you.

At least for the 6th one obstruent, sonorant, homorganic, heterorganic, need to be understood correctly. I would stop today's discussion with these set of generalizations. In the next session I will talk about a few more related to phonological typology. Until then please listen to the videos carefully and then read as much as you can. Look at the data given in Introducing Language Typology book by Edith Moravcsik, so that these understandings are going to be clearer.

Thank you we will come back to another session of phonological typology soon.

Keywords: vowel harmony, consonant harmony, vowel height harmony, syllabic liquid, syllabic nasal, syllabic stop, syllabic fricative, cluster, homorganic consonant, heterorganic consonant, obstruent, sonorant