Appreciating Linguistics: A typological approach
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Lecture - 29
Introduction to Phonetics and Speech sounds - Part 2

Hi, hello everyone. Welcome to the session of my NPTEL course Appreciating Linguistics: A Typological Approach. We just got to know that these are the three different dimensions of English consonant sounds. Now, I will just let you know each of the sound and its corresponding word.

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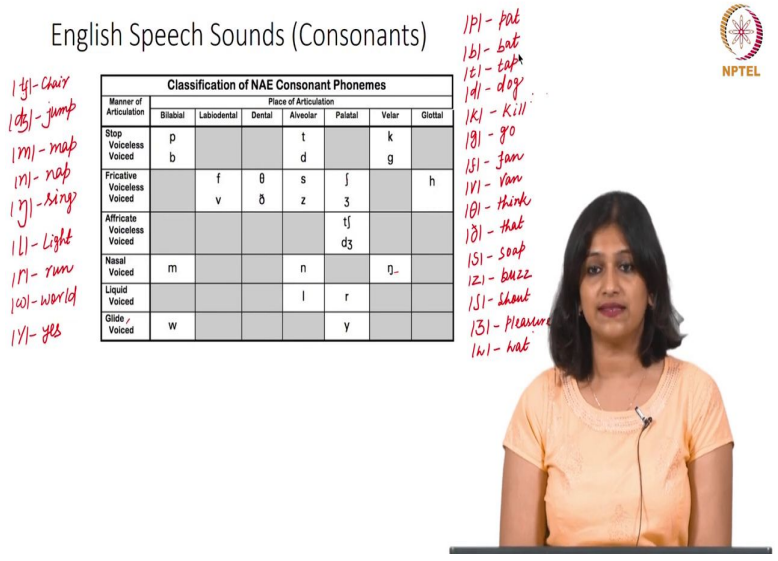

If I say the sound /p/ as in pat, that is the initial sound. The list is written over here; check it out first. Each of the phonemes has a corresponding word and I will just tell you which sound I am referring to. When it is pat the initial sound is p, bat initial sound is b like that. So, we are going to follow it. First phoneme /p/ as in pat, /b/ as in bat, /t/ as in tap, /d/ for dog, /k/ for kill, /g/ for go, /f/ for fan, /v/for van, /θ/ – think, /ð/ – that, /s – soap, /z/ that is buzz final sound. So, until /s/ all of them are initial sounds. If you check /z/ sound as in buzz so, that is the final sound. Then /ʃ/ again initial sound shout, /ʒ/ that is the word medial sound in pleasure; then it is again initial sound /h/ hat.

/ʧ/ as in chair, this side on the left, /ʤ/ as in jump, /m/ as an map, /n/ as in nap. All of them are word initial sounds. Then we have the third nasal sound /ŋ/ that is the final sound of sing. When you utter the word sing, the final sound is the /ŋ/ sound. Then /l/ as in light, /r/ as in run and /w/ as in world, finally, /j/ as in yes. So, these are just one example each I have given for each of the phonemes, but the list is not restricted to this. You can always find more and maybe the assignments will have questions based on the initial, medial and final sounds of such words.

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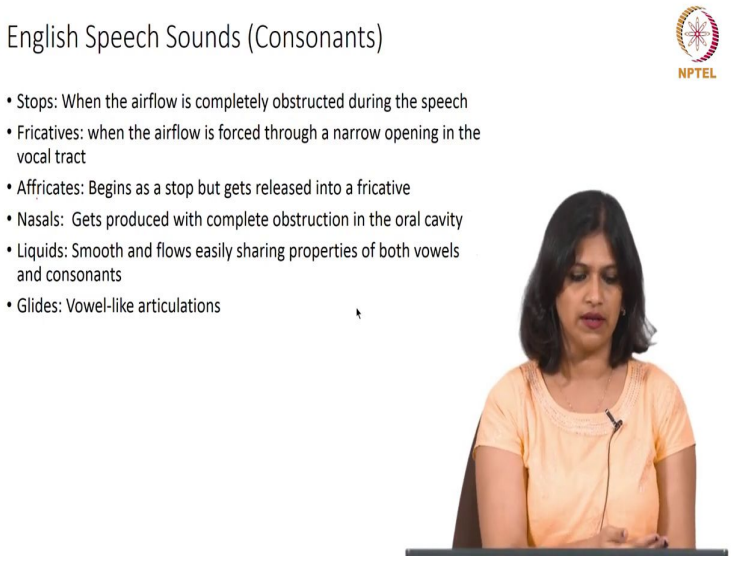

With this information, I would like to take you to the vowels. These are the ones you can easily find. So, just for your information how the stops are produced, fricatives are produced, affricates are produced, nasals, liquids and glides you already got to know about it.

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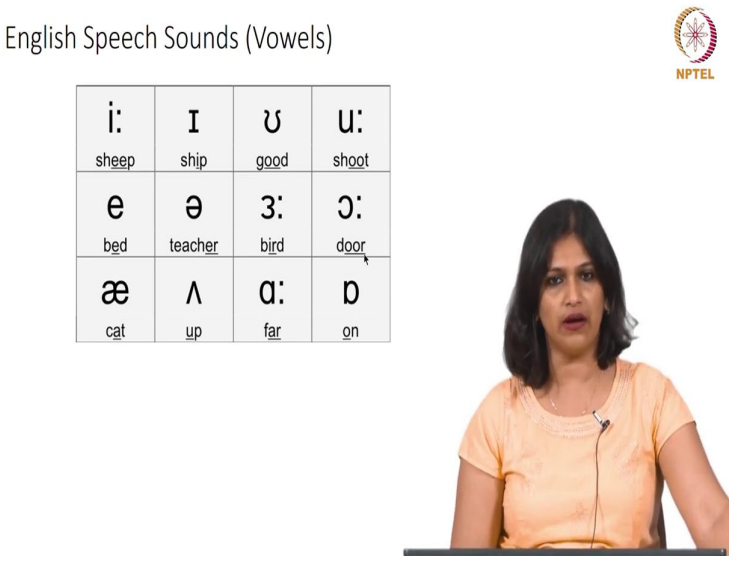

Now let us look at the speech sounds or the vowel sounds in English. If you remember the classification or the division carefully, we had 20 vowel sounds and out of the 20 vowel sounds, 12 of them are pure vowels and 8 of them are diphthongs. What are diphthongs? Diphthongs are primarily the combination of two vowel sounds together.

I will check it with the 12 pure vowels first. Out of these 12 pure vowels, you will have some long sounds or long vowels, some of them are short vowels. So, the basic trick that I have here, look at the symbols given here. These are the symbols used for the vowels. Any symbol which has these kind of two dots after it then you just remember that that is going to be a long vowel.

Let me help you with the pronunciation or how you should utter these sounds. First one is /iː/, as in sheep. The underlined part of the word sheep corresponds to the long vowel /iː/. Then the second one is /i/ as in ship. So, compare sheep with ship. When it is sheep there is a long vowel, when it is ship there is a short vowel. Then there are next two vowel sounds one is /ʊ/, the other one is /uː/. So, /ʊ/ as in good; he is a good boy. When it is good, it corresponds to the short vowel /ʊ/; when it is shoot then it is going to be long vowel /uː/ and please note that there is this colon-like structure that would help you to remember that these are the long ones.

Then, we have /ɛ/ as in bed, pet or send. So, the middle sound is already underlined over here for clarity and understanding, you can easily follow that. So, this is bed as in /ɛ/. Teacher /ə/ as in the last one; generally when you have the orthographic representation or the letter r, that remains silent in most of the Germanic languages, for sure in English in most of the cases. So, when it is teacher, the last sound /ə/ teacher, that is going to be the next vowel which is a short vowel.

Then we have bird /ɜː/, it is a longer one as in bird. Then we have door, another longer sound door /ɔː/, a longer one. Both bird and door, in both the cases you will see there is this colon-like thing. Then you have /æ/; that is cat, bat /æ/ sound. Then we have up, cup; it is a very short sound, that is /ʌ/. Then we have /aː/ where the mouth is wide open; that is as in far, car. Then there is /ɔ/ on, the book is on the table; /ɔ/ sound.

So, these are what I am going to talk about in a very brief manner because eventually we will move to phonological typology, but this is the basic information that you need to know about English vowel sounds because a lot of examples are going to be given from this language. So, this is the list of 12 vowels, out of them 5 long ones which you can check here with the colon-like two dots thing. Then the rest of them are the short ones and then the corresponding words are given here. The underlined section would relate with the symbols.

So, please check the table carefully and then I am sure you are going to understand it in no time.

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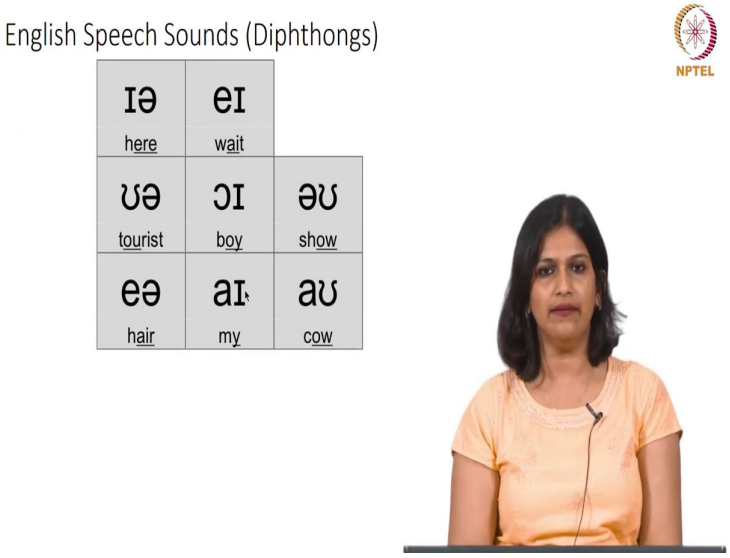

Besides these 12 vowel sounds we also have 8 diphthongs, and when I say diphthongs that is primarily the combination of two different vowel sounds together. So, let me read it. The first one is /ia/. When it is here, please come here. So, /i/ and /a/ are together. Generally remember, you call it a diphthong only when they appear in one syllable. If the syllables are different, they would not be considered as diphthongs anymore; they will be individual monophthongs or the pure vowels. But if they happen to occur in one syllable then it is going to be called as a diphthong.

These are the 8 possible diphthongs in English. So, /ʊa/ as in tourist, poor; then /ea/ as in hair, /ei/ as in wait, /oi/ as in boy, /ai/ as in my, /əʊ/ as in show and /au/ as in cow. So, these are the symbols and their corresponding words. Please check the underlined things like which two letters actually correspond to that sound. So, these are the 8 diphthongs which are also a part of the English vowel sounds. Why we call them diphthongs? I have already mentioned, combination of two pure vowels in one syllable, that is more important. And then these are the 12 pure vowel sounds.

Along with this, all the 44 if you remember the division that we had, all the 44 sounds have been consolidated and compiled and then this is the discussion on that.

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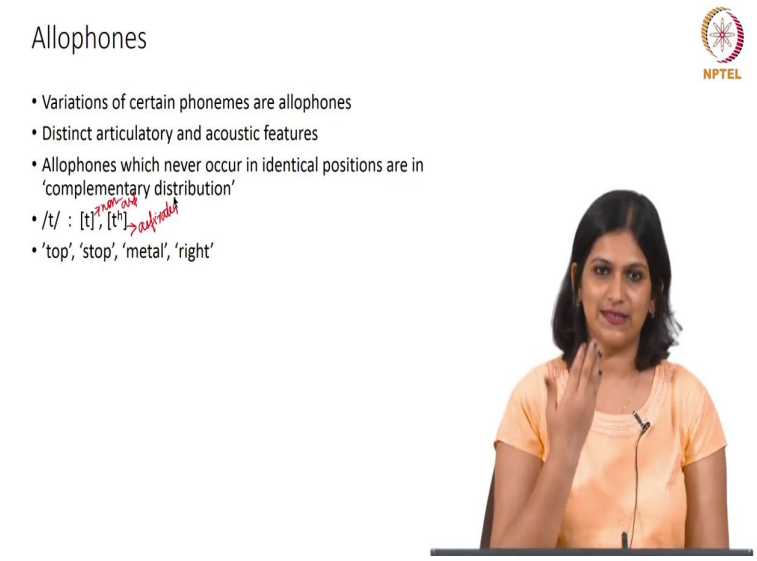

Another interesting thing about phonemes or phonology in a broader sense. We have to understand a discipline-specific jargon that we have in hand, that is allophones. Until we understand allophones it will be tricky for us to understand what is phonetic typology or phonological typology. So, let us see what an allophone is.

Allophones are variations of certain phonemes. If one phoneme can be represented in two different ways when they occur in many different parts of a word, then they would be known as allophones. Why do we call it an allophone? Because of the variations, plus remember they also have very distinct articulatory and acoustic features.

How they are produced and where they are produced, that actually plays a vital role when you are trying to understand the allophones for this session. I am going to talk about English. So, how we are going to find out allophones in English, let us have a look at it. If you notice here you see I have written the phoneme /t/ and here we have /t/ and /θ/. One is called aspirated; this /t/ is non-aspirated and this /θ/ is aspirated. So, /t/ and /θ/ are the allophones of the same phoneme /t/.

When you say /t/ it is non-aspirated, when you say /θ/ it is aspirated. Let us compare the pronunciation with top, the top of it. It is t, teacher. I being an Indian English speaker, I generally do not have the variations in the aspirated and non-aspirated thing. Though I am

aware about theories, but in practice I generally do not have this difference because my speech organs have been trained to speak Indian English in that sense. That is why please pardon me for not making the very clear distinctions when I utter the sounds like /t/ and /θ/. But remember in the British English or American English or any of the varieties of English, there is a clear distinction between the non-aspirated /t/ and aspirated /θ/.

Try to listen to the pronunciation of the words like top, stop, metal, and right. You will see that metal and right these are non-aspirated ones and top,stop would be aspirated ones. So, how to identify which one is aspirated and which one is non-aspirated? Again, the same experiment you have to conduct; keep your palm before your mouth and try to produce the sounds like /t/ and /θ/.

If you feel the air pressure is more when you are throwing air out, that will be the aspirated version, less air that will be the non-aspirated version. Similarly, /k/ – /kh/ and /p/ – /ph/. They also have aspirated and non-aspirated versions.

My suggestion would be you should try for yourself, for your language as well as in English. Find out what are the different phonemes that English has which have allophonic variations. Check the phonetic boundary that we have. These slanting bars are the phonemic boundaries and then this is the phoneme and these are the allophones.The boundaries are going to be different. You can call these square brackets. So, these are slashes and these are square brackets.

One is phonetic, the other one is phonemic. Phonetic symbols will have a separate kind of bar and phonemic symbols will have a separate kind of a bar. So, metal and right would be non-aspirated; top, stop, would be probably aspirated. Similarly try it with /k/ – /kh/ and /t/ and /θ, /p/ and /ph/. You can easily feel the difference between aspirated and non-aspirated ones in case of English.

My suggestion for you would be to conduct a similar kind of experiment in your own language.

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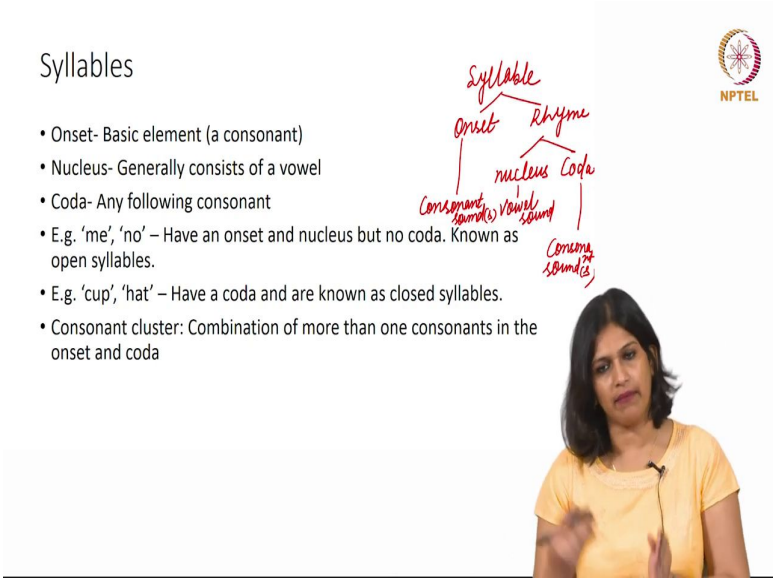

We got to know what an allophone is, and at least in English, we have a couple of allophones. My suggestion for you would be to think about how it works in your own language. After that I will introduce another discipline-specific term that is syllable.

When we speak we do not speak the entire word sometimes at one go. It is when you are a native speaker, it comes to you naturally to divide the syllables in your own language. I am going to talk about it very briefly what a syllable is and how it is important for us to understand phonetic topology or phonological typology, and what are the jargons that you might encounter in my future lectures.

So, what is a syllable; that is the first thing. A syllable is a part of the word that you speak at one go. When you say picture, that means it has two syllables because you are taking a very brief pause after you say pic. First let us try to understand what is a syllable. A syllable is a chunk of word that you pronounce at one go without taking any pause. I will give you a very simple example let us say there is a word picture. When you say picture, you are not speaking the entire set of letters, when you are trying to speak the phonemes you are not speaking it at one go rather you are breaking it after pic. So, you were saying picture pic-ture. This brief pause that you are taking after pic, that divides the word into two syllables.

This is called a bisyllabic word. If a word has two syllables it will be bisyllabic, one syllable; monosyllabic, more than that polysyllabic. So, when it is picture, pic is the first syllable; ture is the second syllable. But, think about the word like book. When you say book, you do not divide it; you are speaking the entire word at one go. So, this is a monosyllabic one; there is only one syllable. If you take a pause, then that divides the syllable, just remember.

With that, we will find out what are the basic information that I would like you to know as far as a syllable is concerned. Each syllable will have three major components. I am going to draw a division over here and when I say there is a syllable, you should always remember this kind of a classification.

When it is a syllable it will have two major parts; it will have something called onset and then this will be rhyme; it is not your literary rhyming pattern. This rhyme will have a nucleus then you will have a coda. Coda, in this case, the nucleus generally consists of a vowel sound. Onset, generally consist of a consonant sound or sounds, depending on the situation. Coda will also have consonant sound or sounds. This is the division or this is the classification you need to remember, but when you call it vowel sounds then primarily it becomes our diphthong.

So, this is a consonant, this is a vowel and this is a consonant. That is how the division of syllable you need to remember. It will have an onset, then rhyme; rhyme will have a nucleus and a coda; but it is not mandatory that all the words sorry we will also have onset, coda, but something which is mandatory that is vowel sound. The vowel should be a mandatory component of it. The onset might be there, might not be there; coda might be there, might not be there, but what is mandatory, that is nucleus.

So, now let us see what is an onset, what is a nucleus and what is a coda. So, the onset is the basic element generally that is a consonant; nucleus generally consists of a vowel and coda is any following consonant. That is how we are going to remember when we do the syllable division. Now, let us see words like me, no; in this case what is absent? Try to recall, onset that is a consonant; nucleus that is a vowel; coda that is again a consonant. So, when you say me, what is the first phoneme? /m/ What is the second phoneme? /i/. So, in this case, what is missing? The coda is missing. We do not have any coda, rather we have an onset, then we

have a nucleus. Same is the case with no; when you say no, n is a consonant which is the onset /əʊ/ would be the vowel which is the nucleus.

Now, compare this with two other words like cup and hat. When you say cup, what is the first sound? /k/. What is the second sound? /ʌ/. What is the third sound? /p/. So, /k/ would be onset, /ʌ/ would be nucleus and /p/ would be coda. Similarly, hat; so, when you say hat, /h/ would be onset, /æ/ would be nucleus and /t/ would be coda. So, this is just a very simple information that I wanted you to know and then we will talk about it in more detail later.

Then the other technical jargon that I wanted to introduce today is consonant cluster. What is the meaning of consonant cluster? When one or more consonants are coming together in a form of an onset or coda, depending on the situation, that would be known as a consonant cluster. So, what is it? Let us read it; combination of more than one consonant either in the onset or in the coda, we are going to call it a consonant cluster.

We will have more examples and more discussions in the next session about syllables, onset, nucleus, coda and consonant clusters. Please think about more words in English, as well as in your own language, and do some homework to find out if you encounter something interesting to discuss these kind of concepts in phonetics and phonology. Thank you. We will talk more on these issues in the next session.

Thanks.

Keywords: vowel sound, consonant sound, diphthong, allophone, syllable, onset, rhyme, nucleus, coda, consonant cluster