

Indian Institute of Technology Madras
Presents
NPTEL
NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING
Introduction to Modern Linguistics
Lecture-12
Diphthong

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Good morning are you alright comfortable lovely okay we will continue talking about vowel sounds in natural languages so far I hope you remember we have seen in we have said that all vowel sounds are oral voiced and unobstructed what are they all vowel sounds are oral voiced or obstructed once again everybody please all vowel sounds are oral voiced unobstructed yet one vowel sound differs from another in terms of the following parameters .

What are they either they are front or back either they are open or closed or the other way round closed or open or they are rounded or unrounded once again how does one vowel differ from another they are either front or back or they are closed or open or rounded or unrounded very simple and we saw that how some vowels are described we describe them with reference to an imaginary area called vowel trapezium okay.

You can describe you know yesterday I gave you examples from English but it would be a good idea if you describe some vowels from your mother tongue say for instance today I will try telling you about you know for about a few minutes four or five minutes you know and the beauty is you do not have to know the language okay you wrote you don't have to say look I don't know Telugu how can I describe the vowels of Telugu.

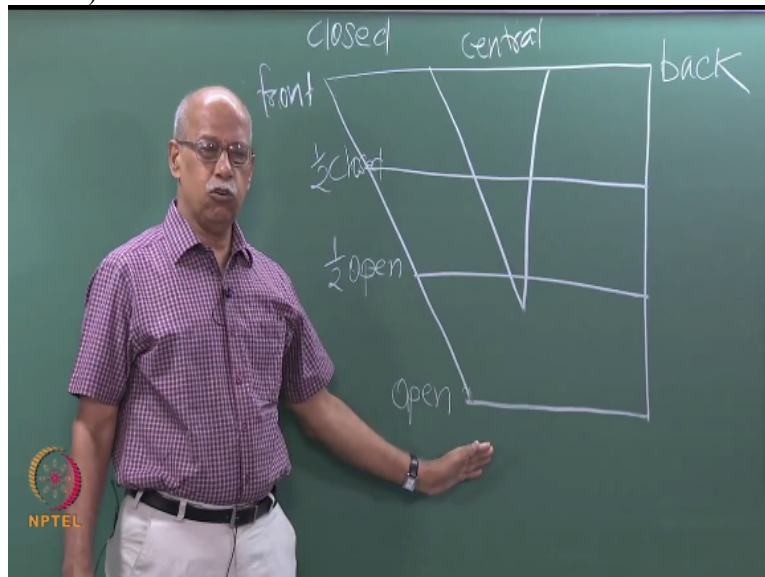
You know you hear and you apply these criteria right you hear and you apply other criteria and describe other levels of the structure of the language as far as sound is concerned you hear it and you describe whether it is vowel or it is something else whether it is a front vowel or it is something else whether it is a rounded vowel or it is something else you do not have to know Telugu or Tamil or Hindi or Maithili to do that right it is an application.

The application of scientific principles to natural data no matter where you apply you get the same results okay so I will do it from my mother tongue and I will expect you to do it back in

your hostel it won't take you more than as I see it ten minutes maybe you are new it might take you about eleven minutes or let us say eleven and a half you know definitely not more than fifteen minutes I can bet with you if anybody feels that it takes longer than 15 minutes please tell me okay.

All right so please watch me draw the let us draw the vowel trapezium first description of vowel sounds once again you know why am I doing this I am trying to tell you that these principles can be applied to any language it is not that they are designed only for English or Sanskrit or French or Latin any language be it a tribal language be it Sanskrit be it Latin be it Vietnamese that does not matter okay this is how we go about let us draw a vowel trapezium first.

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Somewhere on your notebook on one side please draw the trapezium this is the imaginary area from where phoneticians claim we produce all vowels what shall we call this parameter front and therefore this is back and if this is closed then this is open or strictly speaking or should have been opened you know but all terminology is not always logical it has implications this is half closed and this is half open once again there is arbitrariness you know what is half closed automatically should become half opened right .

But you know rather than say ABCD we describe it in this manner this is central okay now let us describe the vowel so Maithili is a language like Bengali like Assamese like Korea it is

a spoken in the plains of Bihar and Nepal okay until about 1831 to 1832 if you know let us say until about 1830s the plains of Bithla which is now divided between Nepal and India we are all in India but when the British got some hills and hill stations like Shimla in northwestern India then in bargain.

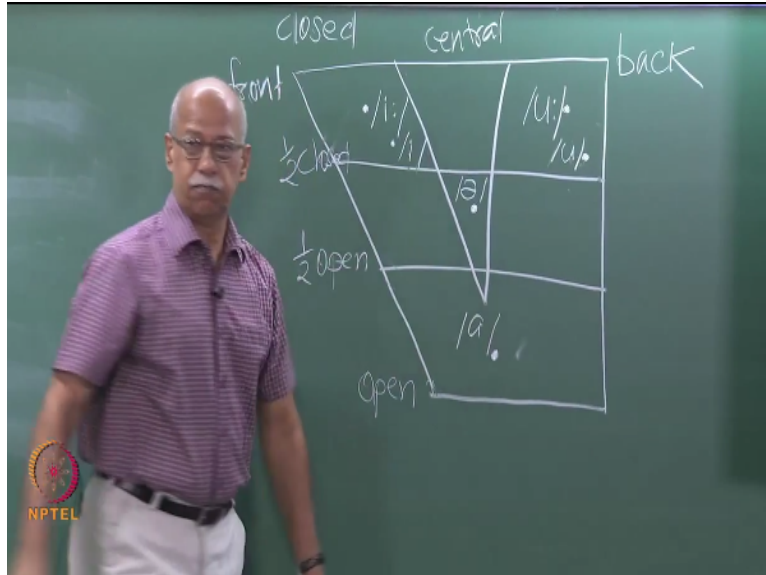
They gave some plane tracks to the king of Nepal so a good part of what we today called Mithilanchal or layer Gorakhpur speaking area an entire good paddy growing rice growing chunk went to Nepal and Nepal gladly gave them about 400 miles of Himalayan hills which include Dehradun Mussorie Shimla Dalhousie Dharamshala have you ever been to any of these places for trekking in the Himalayas.

How many just let me see it has nothing to do with linguistics wonderful tell your classmates about as I am sure you enjoyed it did not you love it is a great experience you know you are face to face with the best that nature can give you when you trek in those areas anyway okay so you know that part is now the Maithili speaking part which where we traditionally believed Sita was discovered Rama was married etc so that part is now divided between India and Nepal but that is political boundary people speak the same language as Punjabi is spoken in Pakistan in India as Bangla is spoken in Bangladesh and India .

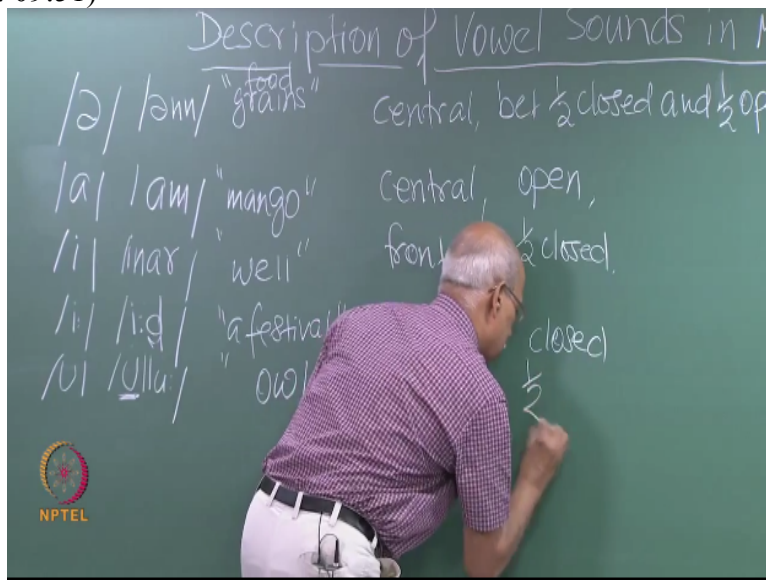
Similarly Maithili is spoken in Nepal in India I am describing some vowel sounds from Maithili language let us begin here you know unlike English unlike English or standard British English in many Indian languages vowel sounds do not come from extremes what is the extreme very close to front very close to back okay are very highly open not like that okay they come mostly come from main peripheral area.

That is why we do not say we do not say na do you know we say Nana what is the Telugu word for father do you say nana those who go to English medium school they say like that you know they say Babu Nara that is English in Telugu is bahunara our vowels are shorter relatively short they are produced from one central periphery .

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Let us begin here somewhere the symbol is what is this what does it represent you have the chart what sound is this okay right what is the description how do we describe it and this can be the template for you as well when you describe the sounds of Telugu or Malayalam or whatever language okay .
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So let us now describe as in as in that that we can English as in and I am again writing it within phonetic transcription because you do not know Maithili so to be respectful to you to respect your right to know. I am giving you additional information translation in English and translation in linguistics is always given within quotes because there can be more than one translation .

So ann. means food grains okay how do we describe it is it front or back what is it please speak up center everybody please is it front or back it is central lets write central is it open or closed let us say between half closed and half open is it rounded or unrounded obviously aas a thumb rule only back vowels around it and not all back vowels again back half open half close those vowels around it in most languages of the world okay.

So what is the phonetic description of this vowel sound we have said a as in under which means food grains and this is central between half closed and half open unrounded lets go to the next and lets describe it next we will take up here somewhere here the symbol is a mark please I am not putting a length marker here because our vowels are vowels in many Indian languages are not as long as they are in English okay.

So if you have to indicate extra length then you can add those two dots colon okay otherwise just plain ah okay how shall we describe it lets first give you the example ah as as in what is this word um will write the meaning within codes mango okay perhaps the best fruit in the world okay how do you describe it front or back come on please central right correct right in the central close or open almost open we can say between half closed.

In half open but near open okay to avoid that I am just going to say open right rounded or unrounded okay let us look at the next is somewhere here the symbol is ah don't put a little marker what is this word inar English meaning is well how shall we describe it front or back come on please hurry up front or back front okay please right front open or closed or we will say half closed because it is you know it is somewhere here close you mean here correct because it is so close to half closed .

So we will say half closed right front half closed rounded or unrounded unrounded correct let us go to the next there is a long counterpart of this sound and it is somewhere here a little above e with a length marker okay so for example let us say mark the symbol I have not told you anything about this symbol I will tell you later in the next class but at the moment write it this way it indicates not der this is the dental mark and therefore it indicates the as in you know that ha da ,da so this is eyed not so long in our language.

I am under the influence of English I am making it heed it is not eed it is eed what is it eed II think you know the meaning in English would roughly be a festival many people believe eid is

a festival which Muslims celebrate Eid is the Arabic name for any festival it means festival anyone from you in Hyderabad anyone here from Hyderabad anyone from among you in the Telugu of Hyderabad day any festival is Eid you know where I studied there for 10 years and I was first surprised when my landlord says up to eid ah raha hai I holy was coming.

So I don't know if the holy well then I realized that it is the Arabic word just as in English we say festival is approaching so you know eid is the Arabic word for festival and Muslims have a variety of eids Idul Fitri there are all kinds of Bakrid where they sacrifice goat okay so Eid a festival how do you describe it look at it there is it front or back you will be guilty of murder of a teacher okay if you don't respond you know I will commit suicide and leave a note saying my BTech students killed me okay.

By remaining silent front or back front okay closed or open closed we can say in this case actually if you want to be accurate if you want to be accurate and you should be accurate please write between half closed and closed what closer to closed please right but for the sake because I am lazy I have only written closed front closed round are unrounded let us look at next just as you have e eel you know in many Indian languages we have ooh right so here is somewhere here is without the length marker oh yeah oh okay.

Let us see will loop this thing Hulu the bird owl the wisest of the birds who can see even at night like owl how is it front or back everybody please is it front of back right lovely great back open or closed half closed rounded or and unrounded rounded lovely you guys are angels god bless you okay lets take the long counterpart here somewhere here with a length marker who as in lately we have a word for this as in you can you read on what this is the English meaning is wool.

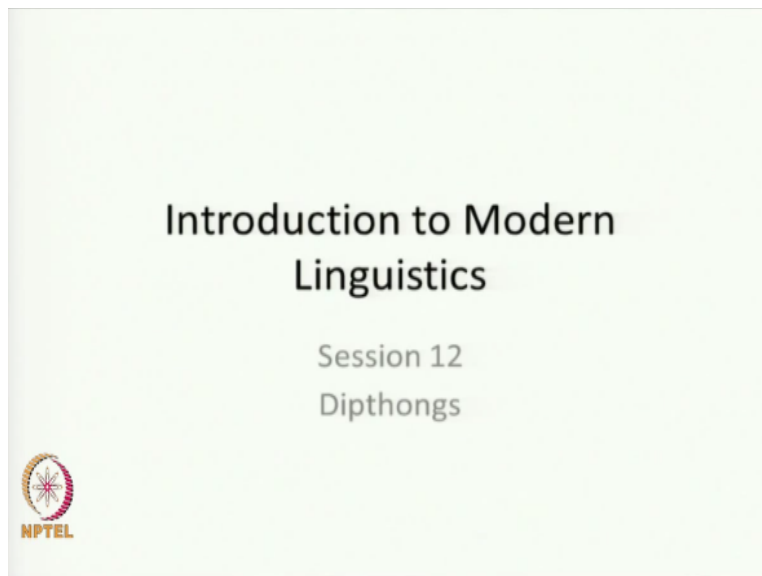
How shall we describe it front of back back closed or open between half closed and closed but closer to close rounded or unrounded back close rounded okay like this we can go on now to save time I am not describing other vowels of Maithili we will talk about them maybe later once again but it will be a good idea for you to attempt describing at least some vowels from Telugu or from whatever you think is your mother tongue except English okay.

But if English is your mother tongue then describe it the way you speak English not the way British English is spoken how many people are going to do it okay anyone else please I want all hands up please sorry describes some vowels from your mother tongue please write

the assignment please write thank you so two people three four five six seven eight nine ten only ten eleven oh you said it twelve everybody please raise your hands who wants to do it now please record them okay lovely great do it.

You see some of these things are learnt best by doing no matter how many times I tell you will understand it easily forget it more easily okay the best way is for you to do it yourself okay in the next fifteen or sixteen minutes let us move forward do you have any questions so far right I am today talking going to talk about another class of vowels please write which is called diphthongs see their spelling on the screen and write it okay.

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We can keep this I am going to talk about another class of diphthong sorry vowel sounds which are called diphthongs in other words I am trying to tell you that there are two kinds of vowel sounds vowel sounds can be classified into two kinds one is monophthongs single explosion ah II a Oh etc but there are some other vowel sounds where you have two explosions and therefore they are called diphthongs you have ai aw okay in many Indian languages also .

We have diphthongs English has a lot of diphthongs English has about 8 you know when you have a vowel sound like I as in kite okay or ah as in cow Moos okay so you know in English has about English has eight diphthongs as many as but even in our languages Indian languages we have two or three in my mother tongue we have i oh I think in Telugu also you have i oh and some other sounds .

So there are phoneticians you know acoustic phoneticians call them either monophthong or call them at the other kind of vowels which take two explosions are called diphthongs there is another way of looking at it you can also call them pure vowels what is a vowel a vowel is sound produced without obstruction okay but when you have a diphthongs when you have two vowel sounds together then in between there is a very there is a very tiny you know an absolutely fleeting moment of change over.

Something like not exactly but something like stop okay something like a very nano second pause perhaps and you move over anyway it is not one explosion only so some people describe the monophthongs has pure vowels okay and diphthongs has glides so these are glides or diphthongs and these are monophthongs are pure vowels the idea is when you produce a glide your tongue moves from one position to another. one position to the other .

When you say for instance when you produce a word like this what is this kite in English it is not kite in English it is kite what is it is long and lengthy it is a slow and lengthy vowel it is kite okay so underneath you know you have this thing kait this is the vowel you have a junction of two vowels now what do you do your tongue starts moving here and goes right up to here to produce I therefore some people call it glides because the tongue glides from one position to the other position in the production of kite.

The tongue glides from central open unrounded position to front half closed unrounded position but if it is cow instead of kite let us say it is cow how shall we transcribe it please transcribe it on your notebook and then compare with me do not look at the board until I tell you this is kau is your transcription correct everybody please lovely great now in this case the movement is here this way movement is from a to u in other words the movement is from central open or closed to open unrounded to back half closed rounded.

It glides from this position to that position there can be a different glide as well okay you can have a glide from this position to this position or any other position theoretically there is no restriction but in fact in real life in languages like English which have too many vowels you see that there is a glide or there is a diphthong of this kind so E as in here near queer dear fear you know what happens is let us see here can you transcribe it please is optional at this position in English okay here now what happens is in this case the tongue glides from front closed unrounded position to central near half closed unrounded position okay .


You can have another kind of glide you can have from here to here ooh as in poor tour sure let us look at this world how to transcribe it to work this rise optional in a standard British English you can pronounce it you need not pronounce it depends entirely upon you okay so - sure su ar e okay or poor okay the lots of English words so what happens here in this case is tongue starts moving at this position and stops at this position it glides.

It starts somewhere near are we together everyone please are we together right so we use the tongue starts gliding from this back closed rounded position to central half closed unrounded position like that you know glides or diphthongs are described look at the diagram for the English okay .

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**English Vowels:
Glides/Diphthongs**

- Two-Plosion / two articulation vowel
- Tongue glides from one position to the other
- 1st unit is long, 2nd unit is short
- Both initial and terminal points are described
- **/ai/**, as in kite, **from** back open unrounded **to** front ½ close unrounded



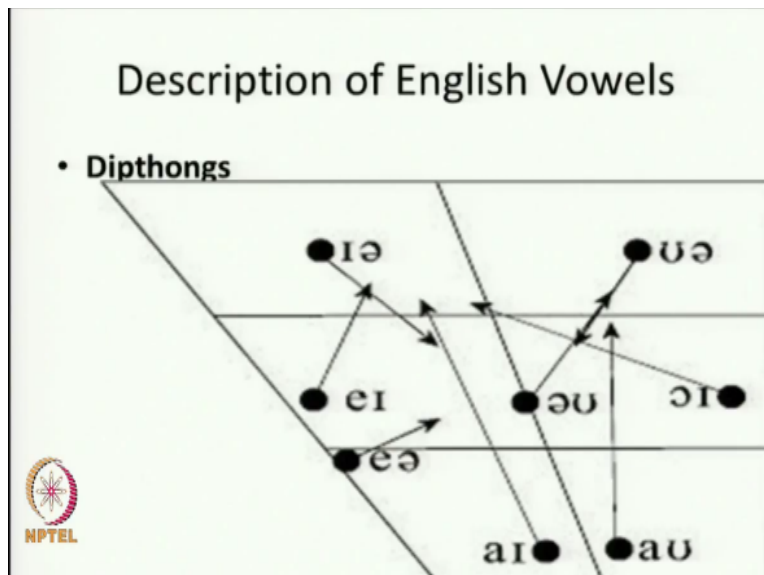
The characteristics are you may note but I am going to send these ppts to Mahesh and I will request him to circulate it among all of us the characteristics of English vowels are that they take two positions okay they are also our trip tongs when you say when you have word English words like quiet together quiet so you have a e okay I that is how you say quiet you also have to but the not very many so we just described diphthongs .

And we say they can have two positions are two articulations related though tongue glides from one position to the other necessarily nearly without exception in all glides or diphthongs the

first element is long please write the first vowel in diphthong is long you know in all these cases you may see that the first vowel of the two vowels involved in a diphthong the first vowel is always long deer the second vowel is short thrust okay nearly without exception okay and then the description is initial.

The description is easy you describe the initial position and then said to do you describe the final position in other words you can say from central open unrounded to front half closed unrounded or in this case you can say from can you try please try from central open unrounded to back half closed unrounded I will be the only person in the world to have produced 30 phoneticians in one morning great congratulations okay.

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This is the English vowel try and describe one or two let us describe this e as in here okay we have done that let us describe this please look at this is a as in gate late how does it move in a it moves from this position to this position can you describe this position together you can work in groups you can work individually take full 60 seconds and describe it come on now time begins now this please write it on your notebook.

Here a as in gate late fate eight can you describe it please write on a notebook you can work individually you can work together does not matter okay anyone who is ready please read it out you don't have to stand up but speak loud enough for camera to capture you okay what is the description slowly front you just say from front half close to open okay the wonderful

attempt unrounded anyone else who would like to join come on make don't be shy of making a mistake when you make an experiment.

When you learn is there anything we have learnt without making mistakes come on please make an attempt anybody else another person please how do you describe it front between half open and half closed unrounded front half closed unrounded lovely that is great you got it that is how we describe it okay let us look at another now this time.

Let us take this vowel we have done it lets do this e lets do this o as in boil oil toy coil in a coil of wire COIL okay can you describe this on your notebook and then compare take your time there is no hurry write on your notebook compare with each other help each other you have to say from ABC to XYZ from three-term level ABC to three-term level X Y Z all you have to do is fill in the slots for ABC and XYZ can I see your note book from back open rounded o is rounded to front half closed and rounded lovely.

Try another did you get it that way okay . do it did you get it can I say can you read it to me I cannot see sorry pardon what that that guy is outside the class you can sit back look of more accurate purely mechanical you know computers can do it you don't have any great algorithms more than central you can some front okay right moved in the temple no do follow that quickly to take longer than two minutes it is just you are from ABC to X Y Z can you read it to him .

It crosses the central area it comes in the front area central is only within that triangle okay try for other diphthongs lead one to anyone correct same thing right do for other words yes good try for other response will come on quick try did you get it can you read it to me please oh as in boy how did you describe it from back half between half close in half over rounded - it's a little more than so it goes into the front okay lovely do it for others it's purely it's mechanical you know even a computer can generate all of these descriptions you can say front ok did you get it read it to me okay.


This description is entirely mechanical you know if you can ever in real life you know you can record a sound these days almost by default computers give you software where you can do a spectrogram and if you speak to the Machine you will know where your verbal sound is plotted and you can ask your machine to you know keep simple algorithm said your machine

can describe some of these things these are no great guns today for your convenience. I have described English vowels here.

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Description of English Vowels
Diphthongs

- **/ai/** as in **bite** from back open unrounded to front ½ close unrounded
- **/ei/** **bait** from front bet ½ close and ½ open unrounded to front ½ close unrounded
- **/ɔi/** **boil** from back bet ½ close and ½ open rounded to front ½ close unrounded

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I will mail it to Mahesh and please take a look when you get out get it and try and describe the diphthongs in your mother tongue in the following manner as I have said say for instance ai where is I this is I here can you see everybody please can you see this is I as in bite I say our bite are light lots of English words with that kind then.

We have a as in bait okay or as in gate as in late etc where is it this is here a okay how do we describe a and it from front half open unrounded to front half closed you can have both ways doesn't closed unrounded okay oi as in boil from back between half closed and half open rounded it to front half closed unrounded or e as in beer near here you know it is purely mechanical you can go on please try and bring me description of some diphthongs and some pure vowels tomorrow and we continue doing more of this thank you have a good day .

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