

**Indian Institute of Technology Madras
Presents
NPTEL**

**National Programme on Technology Enhanced Learning
Introduction to Modern Linguistics**

Lecture – 19

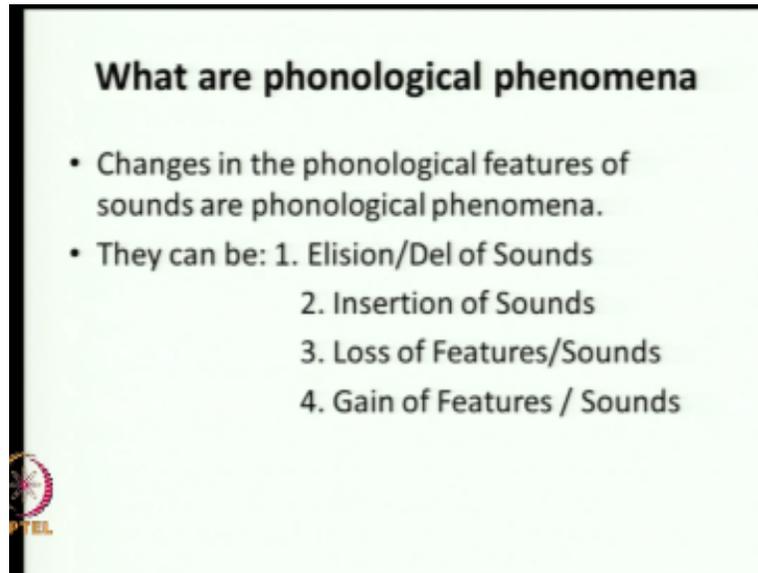
**Phonological Phenomena
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Good morning. See we began talking about variations in a speech sound last week and we saw that speech sounds take different forms in different contexts. There are variants no speech sounds occur exactly alike in all the different contexts. The context may be social the speaker may be happy unhappy excited at ease angry running depressed whatever you know speech sounds vary you know your mood as many people say unless you are a great actor shows in your voice ok so there are variations there are variations because of phonological context.

Also social variations are still by enlarge unpredictable we are not in a position to write rules saying when you are angry how you will speak or when we are in love how we really speak we do not know we do not know enough so that we can write rules but regarding phonological context we know something when we know when in a particular language a voiceless sound occurs between two voiced sounds it is likely to be voiced. Phonological context is predictable sorry and phonological phenomena are predictable in a large measure with reference to the phonological context if you know the sound that is going to come.

Before if you know the song that is going to come after then you can almost confidently say in a particular language what shape what features will that sound take actually in context in use when you are speaking when you are talking to someone listening to someone when you know language is in use only a limited number of things can happen to his speech sounds these are either the sound can be deleted in isolation in the dictionary the word may have four sounds one two three four or five sounds but in use it is possible one of the sounds may be deleted elided you may not hear it I will give you an example soon or it is possible. That in isolation you have only four sounds in the dictionary the word has been given only three or four or five only limited number of sounds but in use some extra sounds get in you know you may have insertion of sounds or you know some sounds very developed.

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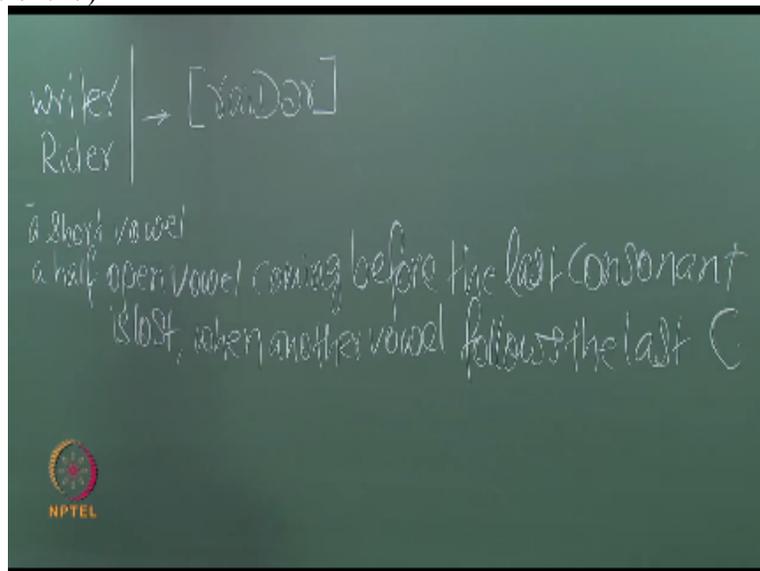
What are phonological phenomena

- Changes in the phonological features of sounds are phonological phenomena.
- They can be:
 1. Elision/Del of Sounds
 2. Insertion of Sounds
 3. Loss of Features/Sounds
 4. Gain of Features / Sounds



One sound may become double our doubles on may become single they may lose a feature or two they may gain a feature or two. Actually only two things happen it is either loss of features or it is a gain of features these things please write are known as four logical phenomenons.

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writer → [waɪtə]
Rider → [raɪdə]

a short vowel
a half open vowel coming before the last consonant
is lost, when another vowel follows the last C



Today we will talk about some of not all we are doing an introductory course I hope some of you feel interested in the study of language and do higher courses and then you will see that there is much more that is yet to be learned and there is a lot that can be done with whatever

knowledge we have in this field okay but basically phonological phenomena include these four things either loss or gain of sounds or loss or gain of some features.

An entire sound may be deleted an entire sound may be inserted or some feature of a sound a voiceless sound may become voiced and voice sound maybe even voiceless some of these things can happen a back sound can become a front sound the front sound can become a back sound a sound produced with open jaws may be produced with closed doors a sound produced with rounded lips may be produced with the spread lips some changes loss or gain of features may happen or loss or gain of entire sounds made up these are phonological phenomena.

Are they predictable can we write algorithms and our computer can say now hear this sound will be deleted now here another new sound will come are these things possible and the claim today's yes these phenomena are predictable let us look at some examples Elision of sounds.

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Elision of Sounds

- In some non-standard varieties of English
- available is spoken as /əv'lebul/
- Biology /bai'lɔ:dʒi/
- develop /'devləp/
- government /'gəvment/
- machinery /'mæʃnəri/
- satellite /'sætlait/

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You know call it deletion call it a lesion you know in literature you will find both the words there is a minor difference but not a very significant one you know elide comes when you are running you and you are you know in your natural position then you might take one or two steps extra and some part of the ground may not be touch so from allied we get Elysian okay or from delete we get deletion it basically you know the effect is the same maybe the process is slightly different.

So one phonological phenomenon you know singular is phenomenon purely phenomena one sing one phonological phenomenon is loss of sound now if you look at the spelling on the left-hand column and look at the pronunciation of these words in some varieties of English actually in India a large number of us in India speak a viable as of label okay this sound this a I what happens to it when available is pronounced as of label what happens to it that is lost in use we still recognize the word you see that is the power of mind.

You know that some insignificant variations some loss of sound you know if in a in a piece of information that contains 100 features the various 10 are lost even if 20 are lost mind has enough to go by you still have 80 features and this word is recognized in the community of these speakers this word is pronounced as of label what happens this is lost in a standard English this is available okay.

There are some other things happen other kinds of deletion happen if we do a course in a spoken English if you do the course in the phonology of English and we offer those courses as well you might see that these processes loss and gain of sounds loss and gain of features are not exclusive to any one language these processes like other natural processes like heat and cold like life and death like aging or you know otherwise happens with everyone but their local form may change their local color may change.

All of us have nose all of us have teeth all of us have eyes hair and skin but in some countries skin may be dark or black in some countries or communities as some people may have fair skin or colored skin or some people may have dark hair some people may have curly hair these are local phenomenon these are there for particular reasons we do not know why we do not yet know enough why some communities have certain kinds of appearance maybe next generation or your generation will know about that or coming generations will know about that similarly these phenomenon loss and gain of sounds part of the phenomena.

Can you please repeat loss and gain of sounds or loss and gain of features only these four they happen with nearly every language but they may not happen to the same world they may not happen in the same place they may not happen at the same speed local manifestations local occurrence may change local occurrence may differ so similarly in this variety this is Indian English a large number of people who speak cotton coat a variety of English called Indian English.

When you pronounce available as of label what happens this vowel you know together this makes one vowels a,e,i,o,u you know this is lost or look at this other word you know in a standard English it is biology but in India we pronounce s by logic what happens we get rid of this vowel Oh okay or in standard English this is develop but how do you pronounce it in India develop what happens which vowel is lost a the second vowel from left is lost is elided we still recognize the word as I told you know the mind.

If you get 100% data that is called clear speech good as a manager as a leader as a user you should speak as clearly as possible but in natural speech in natural language we do not always speak very carefully we do not speak always speak very dramatically we may be in a hurry we may be quarreling who may be happy lots of words may be deleted lots of words may be repeated lots of words may not be heard some words may be overheard okay all kinds of things happen but mind recognizes.

These words as I told you because my nose what is significant what is insignificant mind also knows what pattern can there be for which word okay so in this word for instance develop okay the second vowel from left is lost look at the next word government what happens yeah an entire syllable is lost or is lost we in India do not say government many of us and you can't generalize about India is such a vast country with such a vast number of groups of people that anything that happens anywhere in the world also happens.

In India has the coldest place the hottest Plains the wettest place the driest place we have besets speakers of English in India we have almost pidgin speakers of English in India we have all kinds of people but in one variety okay this word government suppose if it is pronounced as government or government what's happening one entire syllable you know this entire cluster of letters this entire cluster of letters oh no that is E or N has disappeared okay.

Look at the next word machinery many of us in India pronounce it as machinery it is not machinery but we pronounce it as nationally when we pronounce it as machinery some of us what happens what is lost this e is lost that I know is in a spelling it is I in pronunciation disease at his e is lost it is it delight it is elided you know an illusion has occurred deletion has occurred or look at this word satellite how do you pronounce it some of us in India pronounce it as satellite okay.

Sat light what happens one vowel is deleted there are two lessons here number one any sound can be deleted vowel or consonant it is not the case that only vowels are deleted it is not the case that only consonants are deleted but now comes the beauty of literature look at the pattern look at the pronunciation this stroke in the it is stress this is this a stroke indicates stress do you see a pattern I will give you 60 seconds just look at it this is where your analytical ability this is area where here you know this is.

Where you are trading at scientist comes in play can you find a pattern can you see if there is a pattern you may be long it does not matter but making this look at it hard look I could full 60 seconds with your eyes pouring on it okay and tell me if you see a pattern quite often yes that is it though there are examples when it following stress is also deleted in this case correct do you agree in this case in this case there are two or three words but by your large you know you got the pattern the pattern is a sound in the neighborhood of a stressed syllable.

Do not write okay, try and see you know try and train yourself as a scientist who looks at the nature and understands pattern that nature behaves in a pattern you know people like Galileo Copernicus looked at the Stars and found pattern on certain night certain kinds of stars do not appear is it that we are moving our stars are moving and then they wondered okay so in pseudo science there's only one thing science does nothing but science does science is the quest of truth by observation by looking at the facts of life look at the facts of life and as your friend said can you please say it again.

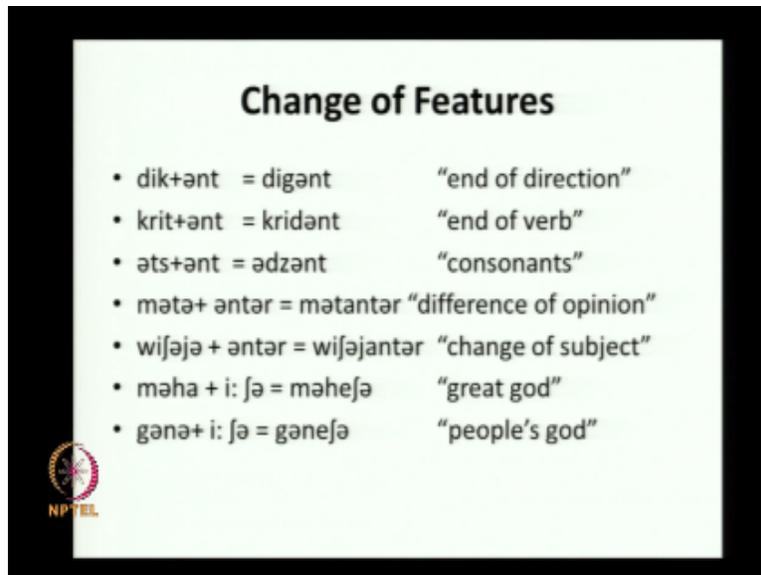
I would like the camera to capture you are you pleased would you like them to stand upon is it okay usually preceded or followed by you know they are in the neighborhood of and it's natural if you have some strong some very high peak in the mountain then it is almost inevitable that a value will follow do you agree if there is a crest in the wave then trough will follow you know nature goes for patterns of fallen rise high and low peaks and valleys crests and troughs the you know why does he do that we do not understand why does it not have Plato entirely a valley entirely we do not understand.

Yet we do not look enough but look at the pattern let us go to another phenomenon change of features now I have taken some data from Sanskrit even if you do not know Sanskrit you will understand that this consonant is it voiced or voiceless can you can you see the arrow head yes

or no please can you see the arrow head but look at this consonant this consonant it is it voiced or voiceless it is voiceless you know feel it just it is voiceless good contrast it good and say good you know you have to train yourself.

It is like music like you know magicians catch the slightest variation in the note of sound how do they do that they train themselves okay you have to train yourself okay so this is voiceless but here it becomes voiced okay so what feature had changed please come on what feature had changed? The feature of one scene had changed it has taken a new feature it has lost an old feature voiceless and taken a new feature voice similarly.

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Change of Features

- dik+ant = digant "end of direction"
- krit+ant = kridant "end of verb"
- əts+ant = ədzant "consonants"
- mətə+ antər = mətantər "difference of opinion"
- wifəjə + antər = wifəjantər "change of subject"
- maha + i: jə = mähəjə "great god"
- gənə+ i: jə = gənəjə "people's god"

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Look at this sound okay in the second word Krita and in Sanskrit. When they come together they become redundant okay tah which was voiceless becomes voiced similarly this it this together makes like okay check such an ant together become urgent or this motto your internal matter plus enters you know mutter coming before entire coming immediately you know in the context on winter okay this is short this is short but or you can say this is central northern this is also central northern but what is this ah you know is it open or closed open so a half closed vowel or half open vowel becomes fully open vowel a short vowel becomes long vowel it has changed or gained some feature.

In use look at this again another example this is we shall subject and entered again half open half open or short you know in all our languages we have legume deal good sorry Horace oil

and ilk a do you have you been total how many people know writing in Telugu have you been taught your husband deal covers okay in English we have sorted long do not call it short and long call it hop open okay if you like so look at this feature in a we share and under this is half open this is half open but when they come together this becomes give me the word and this becomes fully open okay this is half open this is half open oh this is half open but when they come together this becomes fully open to short vowels coming together.

Make long what was half open becomes open similarly here you know place with your permission okay majaf okay and II you see this is where vowel trapezium is useful I is fully open he is fully closed are nearly fully closed okay so when the two come together what will happen one will move down the other will move up in a good family in a good group compromises happen in dictatorial undemocratic groups only one person decides everyone else says yes correct.

So here you know maja this eyes open e this is closed but what do you get you get half closed door half open you know when they come together similarly look at it here Gernon and easy you know this is centrally this is closed this is half open this is closed but when they come together what do you get half closed okay E so these are phonological phenomena you can some features can change can you look at the context and tell me why short becomes long why close becomes open why X becomes Y can you can you look at can you know then we can better answer the question if these things are predictable okay.

Can you tell me why curve becomes go make a guess I will give you 60 seconds think you know this is gia but it becomes gia why does it become gia in Sanskrit duiker plus hunter becomes the hunted why does it happen all features do not change only some but we are looking at the feature we are not looking at the word at the moment we are looking at a lower unit a tiny unit can you tell can you know please think about it why does voiceless sound here become voiced what is there in the phonological context.

Yes one explanation but a better explanation will be this is voiced look at the fate of car it comes between one voice you know are all vowels voiced yes or no all vowels are voiced and this one poor consonant you know this one poor consonant comes between a voiced sound and another voice sound so naturally on both sides you have voicing and vocal cords do not get enough time to switch off okay so this also becomes voiced look at this can you tell me why it

happens while are changes to da the same reason it has it is surrounded by voiced sounds it has voiced sounds on both sides okay so usually not always it is not necessarily.

You know if you like you can still have a voiceless sound between voiced sounds but quite often in this language in Sanskrit in many other languages it is the case that a voiceless sound can become a voiced sound when it comes between two voiced sounds same is the case with chopped you can almost write a rule can you write a rule can you try and write a rule why it becomes voiced why does a voiceless sound become voiced can you try a write on your notebook and tell me.

Okay can you raise your hand one of you please or as many of you as you like can you raise your hand if you are ready in the rule okay yes tell us when a voiceless sound comes in between two eyes two vowel sounds then it becomes wise voiced in this language in Sanskrit you know you will have to say that otherwise you know it will become a universal root it is not universally true but in a large number of languages in Sanskrit in particular it is quite often the case that a voiceless sound coming between voiced sounds becomes voiced.

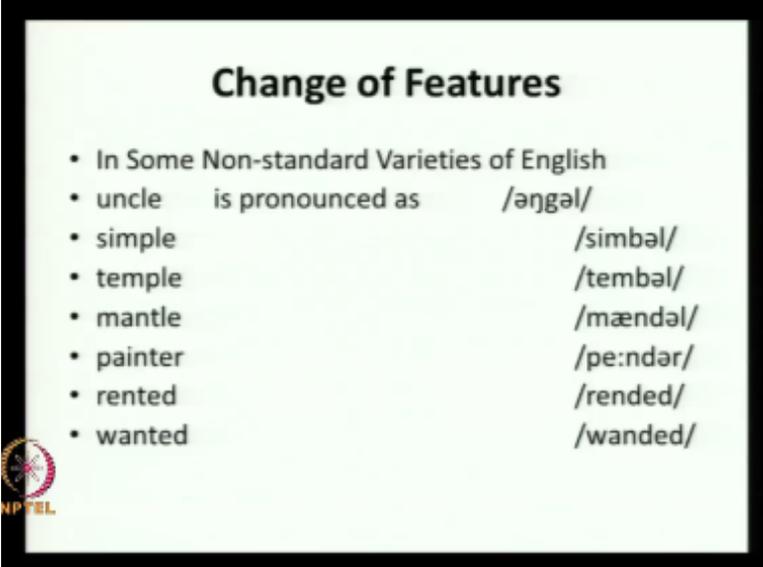
Yeah it can also happen the other way round a voiced sound can become voiceless either you know before silence or between two voiceless sounds okay look at this case this are coming before all but changing into R can you think about it can you tell me why it changes to are can we write a rule - when - similar to similar it is half open hop open changes to full open or you can say short changes too long okay make a guess okay please raise your hand right please raise your hand so that my friends behind camera can capture you.

Very simple please come on this is you know right okay Sarita who do you like to a start up in our sitting okay please what happens no clue no clue so simple so obvious like - yeah when they come together yourself yeah you know there is long and there is short this is short forget that just sit to half you will you see just describe what happens 1/2 open vowel coming before another half open vowel together makes a an open vowel a full open love and an open Lauren okay it is you know you can write rules you can say half open vowel changes - full open vowel when it comes or before.

Okay alright it is you know these are predictable that is why you look grammar books have been written that is why pronunciation books are written okay so you know these are the

phenomenon's you can acquire if you know speech sounds can acquire a feature speed sounds can be completely lost completely gained look at another.

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Change of Features

- In Some Non-standard Varieties of English
- uncle is pronounced as /əŋgəl/
- simple /sɪmbəl/
- temple /tɛmbəl/
- mantle /mændəl/
- painter /pe:ndər/
- rented /rendəd/
- wanted /wændəd/



In some variety of English in India and in some other countries as well even in America you know in America also in American English quite often are I you know this is pronounced alike in American English they are both pronounced as Ryder okay but look at this variety of English in some parts of India some English words like uncle may be pronounced as angle okay a simple as symbol temple as temple mantle as vandal you know then becomes predictable painter as bender rented as rendered wanted as wondered.

What is happening what is happening can you tell you what is changing first look what is changing this car changes to God power changes to bar it is not that Parchin just to talk or da okay what is happening can you write a rule writer write it on you know do you know it happens when it happens X when Y okay can you write that can you write a rule exchanges - why when okay do you understand are we together everybody please yes so are we together okay you know you have to say what happens exchanges - why when so what is X here X here is cup.

What does it change - it changes to God when does it happen look at its context and write the rule please is this voiced or voiceless this I have written is spelling it is it voiced or voiceless is this voiced or voiceless voiced so a voiceless sound changes to voice sound when look at its

context is it voiced or voiceless Oh all little sounds of voice is it voiced or voiceless all whorls are voiced so what happens a voiceless sound changes to a voiced sound when it comes between when it is surrounded by when it comes between voice sound can you write Cap Tel camera to remember this rule please hello he speak even.

I cannot hear you I want the entire world to hear I want them to believe that IIT girls get some food please speak to the camera not to me okay voiceless sound is converted into voice sound when it is when it occurs between what can you say the same thing to the camera please not to me smile to the camera and tell it okay pick up you are you port here guys second year third year okay when do you learn to speak well tomorrow you have to lead your colleagues tomorrow you have to justify the salary of 2,00,1000 per month how would you do that unless you speak.

Somebody please would anyone else like to say what is the rule looking at the entire data come or tell it tell the camera but loud enough and clear enough - a voice tone insulted by a voice Oh correct when it comes between 1 and that will explain the entire data here okay the point I'm making is a large number of phonological phenomena particularly those that are Taggard by phonological context not by social context you know some people may start suddenly expressing every syllable when they are angry may to talk about Lata pardon me please will delete this.

You know you know this is when men have quarrels with their wives okay particularly in the dowry age okay that is that is an unusual situation that we cannot say when a B Tech boy who takes dowry from his father-in-law when he gets angry then he speaks with a stress on every syllable we cannot write those rule we do not want to write those rules we do not know enough okay but phonological context says that when a voiceless sound occurs between two voice sounds this happens okay this is predictable look at another.

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Loss of Sound

- Kəməḷ "lotus" ~ kəmlā "of lotus"
- wiməḷ "dirtless" ~ wimlā "of dirtless"
- dhəṛək "beat" ~ dhəṛkā "beaten"
- əkəR "arrogance" ~ əkRā "arrogant"
- pəkəR "catch" ~ pəkRā "caught"
- nəmək "salt" ~ nəmki:n "saline"
- ləpək "hold" ~ ləpka "held"



Loss of sound this is Hindi look at this these data. What is happening this is from Hindi our Sanskrit not so much Sanskrit but Sanskrit words in Hindi okay and you do not have to know Hindi it is not that only those who know Hindi can write rules about in the grammar the meaning is given you know common this vowel okay this power is lost when common changes to Kamala when we mulch angels to via mala when the her exchanges to her car who in occur changes to occur.

When packer changes to Bhadra when Newark changes to Nam keen okay when luck changes to plop okay lots of words what is happening why is this sound lost can you write this is this is a little more difficult now you have to look more carefully you have to look at the surrounding I will give you full 90 seconds your time begins now okay and write a rule on your notebook first and then speak what is happening first describe the data. Let us first describe the data what is happening now it is not wise to ideal.

Some sound is lost this there is no voice sounds no voiceless sound becomes voiced or no voice sound becomes voiceless yes RTR is it visible to you from here wait a minute I want camera to catch it yeah okay now come again please loud enough you are seeing two criteria voiceless is phonetics adverb is syntax and there is nothing like voice Lavoie is happening it's very simple you see this earth look at this is a this is lost what happened to it is lost first will describe something else later let us go you know in all Sciences we describe phenomena one

by one step by step so first let us describe loss when is it lost you see this earth is lost in Kamala this or is also lost in viola so the what is happening okay short vowels.

Are being lost when it is followed by another syllable another vowel okay another consonant or vowel okay when it occurs before the last consonant it is there but when last consonant accepts or takes you see this is the last consonant of the word in all of these words there is a consonant at the end can you see yes or no yes and there is no vowel after the consonant correct but when that consonant takes another vowel and in the it is a long haul then this is lost so there can be very simple rule a short vowel is lost when a word final vowel or syllable appears do you agree.

The short you know I am writing a crude rule I am writing first approximation we may refine it but look at the phenomenon a short vowel or we can say a half-open vowel okay does not matter call it sort of a vowel or call it a half-open vowel which half of a vowel coming before the final consonant last consonant of the word coming before last consonant is lost what happens is lost when is it lost when another vowel follows the last consonant simple when another vowel follows the last consonant sees four consonant okay.

And that is across the board that explains the entire data the point I am making ladies and gentlemen give me your attention and natural phenomena including languages changes their art predictable we can write rules we can have computer algorithms that can recognize that can generate you know that sort of things we said there can be loss of sound gain of sound we said there can be loss of features gain of features look at the gain of sound okay.

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Insertion of Sound in Standard English

- India and Pakistan / indijərən(d)pakistan /
- Law and Order /lɔ:rənɔ(r)dər/
- High and Low /hairən(d)ləu/
- Near and Far / ni:ərən(d)fa(r)/
- Far and Near / farən(d)ni:ə(r)/



In some varieties of English actually in standard varieties of English India and partly in standard varieties of British English okay pay attention please I want you to train yourself into recognizing language variations speech variations in some varieties of in standard varieties of British English particularly India and Pakistan can be pronounced as India and Pakistan this several appears do you see the point our law and order can be pronounced as law and order this rock in gets in or high and low can be pronounced as high and low near and far can be pruner raised already there okay.

Far in your eyes already there let us explain this why does this Road law-and-order where why does this rug get in okay can you see what happens and when you can say Row is added between what between which two sounds between vowels or between two long vowels when they both come in adjacent words when they both come in adjacent words you know once again phonological phenomenon are,

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Insertion of Sound in Standard English

- India and Pakistan / indijərən(d)pakistan /
- Law and Order /lɔ:rəno(r)dər/
- High and Low /hairən(d)ləu/
- Near and Far / ni:ərən(d)fa(r)/
- Far and Near / farən(d)ni:ə(r)/



By and large predictable okay.

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Insertion of Sound in Some Non-standard Varieties of English

| | | |
|-----------|---------------|-----------|
| • slate | pronounced as | /səle:t/ |
| • spray | | /səpre:/ |
| • sport | | /səpɔrt/ |
| • station | | /səteʃən/ |
| • film | | /filim/ |
| • against | | /əgenest/ |
| • Charles | | /tʃarles/ |



In some varieties of English in India we add sums and extra sound you know in Andhra in Tamil Nadu in Karnataka Kerala many people pronounce film as filling okay. You see or against as agonist of Prince Charles at Charles okay what happens they add an extra sound to break the cluster of two consonants or in the North you know slate can be pronounced as slate our spray.

Can be posed as a prey or you know many of my many of my people in Bihar Bengal Arias they Prost slow as a snow station as a station what is happening they are again you know changing a difficult consonant cluster into an easy consonant cluster we will talk about it when we talk about syllable based generalizations the point I am making is the point I am making is that in phonological context these phenomena happen and these phenomena are predictable thank you have a good day.

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