Basics of Language Science
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Lecture 14

Making of a Word: Rules and Constraints

We will continue looking at it before we reach sentences. Now, we are looking at part of language which is becoming more and more abstract, which is again underlying patterns. These underlying patterns are part of our, these generative apparatuses, which is to say we can look at these things or we understand these things when we try to understand generative apparatus or vice versa. So, yesterday we looked at certain underlying patterns, rules, which work as a template for the formation of words, where we have some templates which give us a lot of words, and then the more constraints are heavier the fewer words.

With clusters of two consonants, we have fewer words, with a cluster of three consonants, we have way too few words that are a handful of them and with a cluster of four in the beginning of a word, we have none in any language whatsoever. We have looked at these things. Now, we want to look at certain more processes, which add grammatical meaning to words and we want to see how they work. I have a question from yesterday somebody asked about syllables. No, okay. So, I will discuss that part later.

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Words

· How do we make words?



So, let me take you through more on how to make words.

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The following examples demonstrate the plurals in Hindi:

- Masculine Nouns:
 - kamaraa kamare 'rooms'
 gamalaa gamale 'flower pots'
 paaniiØ paaniiØ 'water'
 - ghar ghar ghar 'house'
 - A masculine noun that ends in a sound /aa/ changes to /e/
 - A masculine noun that ends in any other sound does not change form for plurals.



I want to give you some examples of Hindi. And at the same time while I am discussing these examples, I want you to look at languages that you speak, and see how such rules are going to apply in those languages. Keep in mind, these rules are not going to apply verbatim. However, once you see the underlying pattern of these rules, they will help you understand underlying patterns of rules in the languages that you speak.

And finally, you will see how language-specific rules are, how language-specific rules have, to say about generic rules of language, and how these rules really work in our minds. So, let me show you some of these things. Now, what is this about? This is about a singular word and a plural counterpart. Everybody knows about singular and plural counterparts, right? So how do we make plurals in languages in general? Now the basic point is, every language will have plural counterparts of singular nouns. We have nouns that we make that become plural.

And I am going to kind of rush through these things. I am not taking you through every single step. I am going to show you as I said, I am going to show you some of these from Hindi. And then I want you to apply them to English and more specifically to your languages. Now, have you heard these words before, even some people who may not be speaking Hindi, have you heard these words before? And you have heard their plural counterparts as well?

If we speak Hindi, we use these words quite often and these are just a few examples. So, what is going on in this singular and plural counterpart? How is it working? How is this working?

Student: We add another sound at the end of the word.

Professor: Sorry.

Student: We add another sound at the end of the word to all the words.

Professor: We add another sound in the word? At the end of it. Do we just add? Or do we do

something else too? So, if we have two words, one is, let us say gamalaa or kamaraa, and the

plural is kamare. Are we simply adding a sound to the end of the word, or we are doing

something else with that? We are?

Student: Removing.

Professor: We are removing one and only then we are adding the other one. So, if someone

asks, someone looks at the word kamare you try to tell them that you see the end of this word.

And the marker at the end of the word is actually a plural marker that we have added, this is

one way to describe. But why should anybody believe you? If I am not a speaker of Hindi, I

would simply say, look, this word sounds like just one word to me.

Why should I believe you that the sound e at the end of this word is an addition of a sound?

Do you understand my question? Why should we believe that this is an addition of a sound?

This looks like a word to me.

Student: Because it is happening with every word.

Professor: No, not necessarily. How is it happening with the other word, I have given you

only four of them here and it is not happening with even four of them?

Student: Majority of the words.

Professor: Not necessarily. That I can tell you for sure that not necessarily it happens with

every single word. Now, before we go to that, let us focus on my question that I asked you.

You understand the question, the question is, why should we believe that something has been

added to the word? It looks like just one word to me. How will you convince someone that

something has been added to it? Then the answer to that question is, we need to look at the

singular counterpart.

And then you can show systematically that the sound aa is dropped. And only then in place of

that there is another sound. And on the top of that, this addition of a sound has a meaning.

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The following examples demonstrate the plurals in Hindi:

- · Masculine Nouns:
 - kamaraa kamare 'rooms'
 - gamalaa gamale 'flower pots'

 - ghar ghar 'house'
 - A masculine noun that ends in a sound /aa/ changes to /e/
 - A masculine noun that ends in any other sound does not change form for plurals.



Do you see, if I simply write a word, write a sound, let us say aa, or e, do these sounds have any meaning? Without looking at these words, do they have any meaning? No. But when they are added to a word, they have a meaning, understand this. When they are added to a word, they have a meaning. There are names for these categories, but without those names, let me go ahead and talk about them. What is the meaning of this sound in this word? In these words, the meaning of this sound is what? Singular. The meaning of this sound is plural.

Now everybody understands what singular is and what a plural is, right? Now see how, when we are learning languages, or a language or language itself, how language specific rules get triggered with the input. So no, once again to remind you about the things that I have

promised you that I will keep reminding you from time to time that when a child is learning a

language, the child comes across with words like kamaraa and kamare.

And nobody tells them or at least at the time when this input is coming to the child, the child

is not in a position or at the age to be told these things that look as that you see at the end of it

is a singular marker e at the end of another word, is a plural marker. Do you agree with me, it

is difficult for us to see these things even now. So much so that we have to put these things in

color to see them clearly. So, it is not possible for anyone to tell a child or for a child to see

these things.

However, what a child is figuring out or the mind is figuring out by itself is these things.

There is absolutely no confusion in the mind of a child after the child has acquired the

language that this is the plural formation pattern. This is why without giving you this thing, if

I asked you, can you write down in 5 minutes, the plural formation rules of Telugu or Tamil,

take 20 nouns and see how nouns are changing in plural. And give me a rule or summary of

rules or a set of rules, which will apply to all the nouns across the board.

A, it is not, it could not be done in five minutes. And B, it is very difficult to figure those

things out. However, you know every single noun of your language and you also know the

underlying plural formation pattern of every single word of your language. That consists of

knowledge of language and then on the other side, it confirms that when we acquire

language, these are the underlying rules of principles and parameters, which are part of

universal grammar that are getting triggered by language specific inputs.

Now, what are such rules? Unless we look at these words, we do not even know that a

particular sound may also have a meaning in a word. A particular sound may not have any

independent meaning elsewhere, that is outside of a word. But in a word, it may have a

specific meaning. Also, and we do not stop here. Also, we know for sure that if this is the

plural marker in a language like Hindi, this is not the plural marker across the board. This is a

plural marker in only some words. For example, if you see word number three, what is the

word?

Student: Paanii.

Professor: And what is the plural marker?

Student: Paanii.

Professor: The plural of paanii remains paanii. Nobody has any confusion about that. Now, not only the plural form remains the same, but we know that the plural marker is zero no plural. Now, someone can argue, someone can tell you there are descriptive grammars given to us, which describe things like every aa ending word will change to e. How many of you have taken Hindi classes? Anybody? Some of you at least, very nice. Were you told about plural formation rules? What were you told? Any idea?

Student: ((???)) (14:24) words and their plural forms.

Professor: That is right. Words and rules, words and their plural forms. So, you were given every single word and their plural rules. Do you see the problem with that? At least now. If you are learning a language like Hindi, or I am learning a language like Telugu or Malayalam how many words can I learn? What is the length of a semester? 40 hours, right? Which is, if you put it in terms have continuity is less than two days. That we do over a period of let us say 13 or 14 weeks. How many words do you think I can learn is if I am taking Telugu in a semester? Or for that matter, even if I take it for a year, two semesters, including summer?

If I need to learn every single word, and then its plural marker, plural form, how many words do you think I can learn? Answer clearly is not all. You can learn as many as you want, every day, but definitely, it is never going to be an exhaustive list. Now what else were you told? Anybody remembers what else were you told. He is admitting that we were given certain words and it is plural forms, were you also told about the rule underlying it, no.

So, somebody was given let us say a word like kamaraa and told the plural is kamare, something like this. Anybody else?

Student: Some words which do not have plural were also taught.

Professor: Some words which do not have plural were also taught, as an exception. So, one of the things that I remember from such sans classes is there is a rule that is taught that if you see a word ending in an it changes to e and if they do not, then they are exceptions. If they do not work that way, then they are exceptions. The idea here is not to show you the problems of teaching and the idea is also not to blame the teachers.

The idea is to show you there cannot be exceptions. If language is part of generative apparatus, then there cannot be exceptions to rules. Because we are not talking about rules which, okay, let me put it this way. We are not talking about some generic rules, we are

talking about the rules that already exist. Remember what I have told you about what already

exists? What is it that I have told you that I already exist?

Student: Universal grammar.

Professor: Which is? If in a layman's term, you have to describe universal grammar, how will

you describe that?

Student: We intrinsically know.

Professor: Right. We know those things intrinsically, but also that is a set of rules of all the

languages of the world. If that, if it is that kind of innate rule, how could such rules generate

exceptions? The strength of a rule is such that it should not be able to generate exceptions. If

you are generating exceptions, if a rule is generating exceptions, then it is a weaker rule. You

will learn about this particular aspect in your respective disciplines when you move ahead.

Any rule that generates a lot of exceptions, any rule that has a lot of patches is called a weak

rule. So, the third and fourth will be examples of exceptions. These things are exceptions. But

that is not true. If you, we are calling them exceptions, only when we are looking at it not

very carefully. If you look at them carefully, then you see that there is absolutely no exception

to rules. And the rule is the following, the rule is first we have to look at, if we are talking

about a language like Hindi, then we have to look at two types of its gender.

You know that there are only two types of genders in Hindi, which is every word can only be

either masculine or feminine. Now, this intuition about a word and mind it I am calling it

intuition. This intuition about a word is innate, is inbuilt. For example, okay, I will give you

this example in a moment, every single word in Hindi, in a language like Hindi must have a

gender and that gender must manifest in sentence. So, if I say a word like, let us say, give me

any word in Hindi that you know.

Student: Aurat.

Professor: Aurat. It is a, what is the gender, feminine, feminine gender because that is a

natural gender applies there.

Student: Hawa behti hai.

Professor: So, Hawa has what gender?

Student: Feminine.

Professor: You see that, feminine gender. Shirt, what gender shirt have? Now probably this is

an unfair question to ask you. Now my point is, a shirt is masculine in Hindi and if we use for

the same object a different word, let us say kameez, have you heard these words shirt,

kameez, the word kameez is feminine. Sorry, go ahead.

Student: Salwar Kameez.

Professor: Not only salwaar kameez, any shirt in Hindi is called kameez. Shirt is English

word, in Hindi, it is called kameez, right. Now, that word is feminine. So, another point to

notice is there is when we say every word must have a gender, which is either masculine or

feminine, we are not talking about the gender of the object, we are simply saying there is a

gender associated with every word, which is arbitrary association. But it is inbuilt intuition.

And this is also identification of someone being native speaker of that language, they will

immediately figure it out without any training. You just give a word to a Hindi speaker or just

listen to them speaking, nobody needs to tell them that hawa is feminine or table, feminine or

masculine?

Student: Masculine.

Professor: Nobody needs to tell them what it is, however you know, that there is nothing

masculine about the table and there is nothing feminine about hawa. This is intuition. Now,

based on that, if you look at the words of masculine gender, you find two types of words. One

type, which ends with aa, only such word will change to e. Masculine words, which do not

end in aa like paan or ghar, do not have their plural forms across the board.

And this aa to e rule applies only to masculine words, see, my point, applies only to

masculine words, because look at this example that he gave you. What was the example

hawa, does this word end in aa, what is the plural of this? Do we see it as kamare or gamale?

Student: We are adding somewhere, not dropping the aa.

Professor: We are not doing, my point is we are not changing this word, the way we are

changing kamaraa and gamalaa clearly tells you that that is not a masculine word. See the

thing. Now if you look at these two rules, then there is absolutely no exception. Similarly, if

you look at feminine nouns of Hindi, there are only going to be two types of feminine nouns,

one that ends in long e, am I making sense to you. We do not need to learn Hindi or we do not need to look at it. I am only trying to show you the underlying pattern.

Words that end in long e, such as ladaki or gadi and the words that do not end with long e. There are only two categories, either they end with long e or they do not end with long e. If we are talking about masculine nouns, either they end in aa or they do not end in aa. Please pay attention to the second part. We are not saying they end in a consonant or a vowel or a particular type of consonant or a particular type of vowel, nothing of that sort.

We are only saying one type of masculine noun, ending with aa and the other type not ending in aa. One type of feminine noun ending in e, the e is a long vowel and the other type not ending with e. So that way we get four-way classification and for each type there is a specific rule and then that rule does not generate any exception. So, a word like hawa will fit where?

Student: ((???)) (25:19)

Professor: Sorry, feminine noun, which does not end with long e. And similarly, if there is a word which ends in long e, imagine there is a word which ends in long e but it is not a feminine word, which is if it is not a feminine word, then it is going to be masculine. So, can you give me, can you think of an example of such a word? Paanii, I already gave you this word panii, a word which ends in long e, but does not have, it is not feminine, it is not going to change.

There is another word that I can give you. I only picked a few to make a point. Do not need to look at the exhaustive list of them, dhobi. Another very generic word, everybody must have heard this word dhobi means someone who washes clothes, is a masculine or feminine?

Student: Masculine.

Professor: Masculine word. It does not, but it ends in long e, what do you expect, will not change in plural form. Neither is it going to work the way feminine nouns work. Now there are only four types and four simple rules for them. If they end in aa then change to e, if they do not end in aa no change. If they end in, when we talk about feminine nouns, if they end in long e, they change in a particular way. And this is where I said I do not want to take you through every single step because we do not need to learn these things, we only need to see a particular point.

Now the second part of feminine nouns, which are words that do not end with long e they change in a particular way. Can you see the rationale that in this category we cannot say words that do not end in aa that do not end in long e will not change, we cannot say that. Because if they do not change then, there will be no difference between masculine and feminine nouns. And that will create again confusion.

Now, do you see how systematically they are classified and why they generate no exceptions and create no confusion here. This is one particular rule, which is language specific. Now, it is about Hindi. Now, I invite you to look at the underlying pattern of plural formation of your language. This is, I am giving you this thing as an assignment, which is an optional assignment, you do not have to submit it. See how categorically I have shown you the rules.

Now, I had a plan to show you rules of at least one more language, which is English. But I leave that for you to figure that out also. Because English is one language, which everybody has studied, which everybody has learned as a second language or I remember some of you telling me you started learning English in kindergarten. Remember A for Apple and B for Boy. You have not forgotten that yet. How did you learn plural formation? I just want you to think about that and then tell me how it works.

Student: Sir, what is the question again, you want us to do the same thing for English.

Professor: I want you to do this definitely for English and tell me how it works. And also, I want you to do the language that you speak, which is the language that you grew up with.

Student: Mother tongue.

Professor: Mother tongue. Take some examples and see the plural pattern of that language. That will be one application of something that you are learning. I am not going to give you such assignments every now and then. Because we are going to move very fast and it is difficult in a semester in a short period of class for me to tell you to apply every rule to your language. However, you will get a taste of how it works, when you need to, when you are asked to look at your own language.

If your own language looks difficult to you just look at the language of your neighbor. And see how it works. By neighbor, I mean, if you speak Tamil and Tamil sounds difficult, you can look at Malayalam or Kannada or Telugu whatever you like, but everybody is definitely going to look at English. And I also ask you feel free to consult any internet, any library, any

resource at your disposal, people that you know, teachers you may have interacted with. Just

feel free to interact with anything, consult anything, but please do work on this thing. Get my

point. All right.

Now, this was just one underlying rule that languages operate with. And I wanted you to see.

Any questions so far before I move? Any confusion about what I have just described, what

you need to do? No? No? So you promise that you will do it? I do not see commitment in

your promise. Go ahead.

Student: Sir, are there no exceptions at all in any language when it comes to this?

Professor: Yes. And why am I saying so?

Student: There are rules.

Professor: The simple reason of me saying so now that I know all the languages. Underlying

rules of language are such that they are not supposed to generate exceptions. Suppose we still

find exceptions. That simply means we have not looked at the rule hard enough. See, I think

you asked me this question yesterday, or somebody asked me this question, do we have first

words and then we have, sorry, do we have first sounds and then we apply them in a format

and get words?

Or do we have words, and then we see them? Either way the point is, we have rules. And if

we have not come up with a rule of this type, I am giving, I have given you a rule, which I am

convinced that there is no exception. I want you as a Hindi speaker, whether you speak Hindi

or not, I want you to find one single example, which does not work this way, which forms an

exception to this four-way categorization. And it is these rules.

Student: What about the times when we ((???)) (33:15)

Professor: Such as?

Student: Kamaro.

Professor: Kamaro is not good. Kamaro is not plural. I mean it is plural. But it has something

else on it. Now, I do not want to start in the class with you here. However, that is a very

genuine question, a very genuine concern kamaro has more than plural. And if you are

interested in this look at some materials, what you will find is, people use this word kamaro

only when there is something following it, which is called a post position. Like kamaro me or

kamaro ke bahar.

We never use this word kamaro or kamaro without a post position. So, it is the effect of the

following post position on the previous word, which turns it into kamaro.

Student: In that case we do not discriminate words as masculine.

Professor: Masculine for plurals yes. Now Ladkiyon, Kamaro, hawao, dhobiyo, all of them

work the same way. So that is something more than singular, plural, masculine, feminine, that

is all I can tell you. About plurals and singulars only what I have told you. Are you convinced

that kamaro is something else?

Student: Yes, sure.

Professor: Okay, so that is different.

Student: ((???)) (34:55).

Professor: Exactly, very true. And I am convinced that you can see patterns very well, at

least, and I am trying to show you patterns, which are easy to see. Anything else?

Student: Sir, if language is natural, how come Hindi has got this issue of like the nouns

changing with the post position, whereas other languages do not have?

Professor: Probably many would do, many languages would work that way, not all. So, what

is important here is languages will have two-way categorization, let us say singular and

plural, this is part of a universal set of principles.

Student: So, all languages will have.

Professor: Singular and plural. Okay. However, language, what was the other part of your

question, how come Hindi?

Student: How come some languages like Hindi have got the post position?

Professor: Post position and its effect.

Student: And English does not.

Professor: So, when we say on table, there is no change in the word table. Whereas if we say, on table or on tables, when you say on the table, you do not see any change in singular, what is in Hindi phrase on the table singular.

Student: Table par.

Professor: And when we say on the tables, tabalo par, the same thing is added that you were trying to add to what kamaro or gharo or ladko or ladkiyo. Now, coming back to your question, this effect is restricted only to Hindi. You are right. This is not in English. Now, this is an exact example of what we say parameters that some rules are parametric in nature, where they will apply only to some languages and will not apply to others. This is what becomes responsible for differences in languages.

Otherwise, if there were no parameters, take it this way. If there were no parameters, then we will have, we will end up with one language. This is why both together principles and parameters help us understand what we say language, the underlying rules of language. We will not be able to see underlying rules of language only with the help of principles, we need to see that also with parameters. Making sense.

Now, one more thing, which I discussed with you yesterday, which is important for word formation rules and then we move ahead in the remaining few minutes. Now, are you familiar with these words? I thought you will be familiar with a lot of them, therefore I have not even added meanings to these words. Anybody who is not familiar with all the words? So, what are the words? Can you read them?

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Nasals		
• ka <mark>Ngh</mark> aa	ng gh	
• pa <mark>Nj</mark> aa	ny j	
• aNDaa	ND	
• aNdhaa	n dh	
• mu <mark>Nb</mark> ai	m b	
NPTEL		

Student: Kanghaa, panjaa, andaa, andhaa, mumbai.

Professor: There are two of them after punja, the first one is?

Student: Andaa.

Professor: Andaa, andhaa and Mumbai. Have you heard of Mumbai, everybody? Andhaa? Andhaa means a blind man or blind. Andaa?

Student: Egg.

Professor: Heard this one? Panjaa, it means palms, I should have given meaning to these things, but nonetheless, I can tell you that and Kanghaa is a comb with which we set our hair. Now, I want to show you something else. That is, I have shown you a rule which is a morphological rule, where we add something to the word and they are, they give a new grammatical meaning, which is plurals. Now I am trying to show you something which happens word internally.

This rule works internal toward. To wind up the story of words and move to sentences, I need to wind this up. Now, remember the story of clusters? What was the story of the cluster, two consonant sounds will form a cluster in which way? One will lose, the first one will lose its vowel quality, and then form the cluster. Now, if we apply the same thing to the clusters, where a nasal sound is a part of the clusters. The first consonant happens to be a nasal sound.

Are you with me? First consonant happens to be a nasal sound. Then how does it work? If you see the first one, what is the sound which is following the nasal? Gha, what is the place

of articulation of this, gha?

Student: Back of course.

Professor: Back of course, which one?

Student: Velum.

Professor: Velum. Right. The next one? Ja. What is the place of articulation for that, palate?

The next one is da, da. It is a retroflex sound, right? In our language, it is retroflex. And then

the next one dha, a dental, and the next one is ba, which is bilabial. Do you see the example

of all the five of, five places of articulation in these words? Now in each of these words, the

first sound is nasal. That is in each of these clusters the first consonant of that cluster is a

nasal sound.

Now, the way it works is, if the following consonant is a labial, then the nasal is also labial. If

the following consonant is dental, then the nasal is also dental. If the following consonant is a

retroflex one, the nasal is also retroflex. If the following consonant is palatal, the nasal is

palatal. And if the following consonant is velar, then the nasal is velar. So, in a word like

Kanghaa right Kanghaa, do you hear a nasal sound? Where do you hear this nasal sound right

before ghaa, right?

Now, what if we need to talk about it, which type of nasal is this? This is, this can only be a

velar nasal. And how do we know that this is a velar nasal because the following sound is a

velar one. In the second one, it can only be palatal nasal because the following sound is

palatal and likewise, in all of them. Now, besides being a little bit fancy and interesting, what

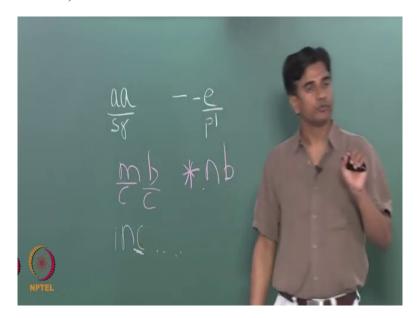
does this tell us? That if we, if there are two sounds forming a cluster and the first one is

nasal, that nasal and the following consonant must share the same place of articulation.

In nasal from a different place of articulation and the following consonant from a different

place of articulation will not be allowed.

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Okay, which means in a word like let us say Mumbai, in a word like Mumbai, we have ma and ba. This consonant is a nasal and it must only be bilabial nasal. In other words, a dental nasal na and ba, this is not going to be a warranted sequence in a word. This is not going to be a warranted sequence in a word. Are you with me, do you follow this thing? Then the nasal sound must match, I am using a non-technical term, the technical term for this is assimilation, that is, these two sounds assimilate each other's quality.

Because this is bilabial, this must be bilabial and not anything else therefore not warranted. Now, the examples that you see on the screen are from which language, Hindi right? However, this rule is not specific to Hindi. What is the rule? The rule is when we talk about a nasal sound and it is following a consonant, they must come from the same place of articulation. This rule is not as specific to Hindi alone. Now, I can give you some examples from English.

If I give you a word, I want you to write that word, let us say the word is possible, okay possible and patient, only two words. I want you to negate this. What is the negative of these two words?

Student: Impossible and impatient.

Professor: Impossible and impatient. Did you write both right next to each other? Now, one more example is consistent. Must have heard this word before the consistent, English word. The negative is? I want to hear the word.

Student: Inconsistent.

Professor: Now, how do you write that? Let me first go to the writing. How do you write

that? You can only tell me the first part.

Student: I N.

Professor: I M. Do you write I M? Why not? In the previous one we just saw it was I M in the

following when it becomes I N. Why is this I M in the previous one? Because the pa sound is

labial. If the negative is coming before that that must be a labial nasal, which is ma. We

cannot say in-possible, we cannot say that, we cannot say in-patient we have to say impatient.

Rather, we can put the same thing in the following way. It is really not a point that how we

say that, this is how it is said, this is how it becomes because the following, if the following

one is a labial, it is easier to have the previous nasal also as labial.

One moment before I come to you. Now, the second example that I have given you, which

type of nasal is that? You have written them as I N. Right? And then only you write

something consistent right. Now, what is this sound, the sound is ka. Which is?

Student: Velar.

Professor: Velar sound. The nasal must be a velar nasal. So, it is not really inconsistent. It

sounds different or it is supposed to sound different. It is inconsistent, where the nasal is a

velar nasal. And you can find tons of examples in English or in other languages, which is

going to follow this rule. Now this was just a language internal rule, the other one that I

showed you is which is sorry, this was word internal the other was applying at the word

boundary.

Student: For pleasant, why is it not im-pleasant?

Professor: What is that?

Student: For pleasant it is unpleasant.

Professor: Well that then it is a different thing. See, you are absolutely right. Let me first say

that now, why am I saying that is a different thing. I am saying the following if it must be

nasal then it has to be this way. Now un is a different kind of prefix which then for us to

understand that we need to look at negative prefixes in English. And then we will be looking

at language-specific rules of English, which will fall in a different domain.

Now, I am not taking a shortcut, I am not trying to avoid that thing, I am only trying to show you that there are some rules which may not be part of principle. This assimilation of nasals is a principle which works across language. So, we are looking at word internal and things at word boundaries, we are looking at rules that may not, may not really change the meaning of a word, if we are looking at Hindi and we have looked at some Hindi examples, where some addition to the word changes the meaning of the words. But these are the rules which help us understand the structure of words.

Likewise, we are going to see tomorrow, rules that are going to be underlying, but significant in formation of sentences. And then we will come to, once we understand such rules from sentences, with that we will conclude the story of sounds, words and sentences, and then I will take you to see more generic principles of language that apply across the board. Thank you.