

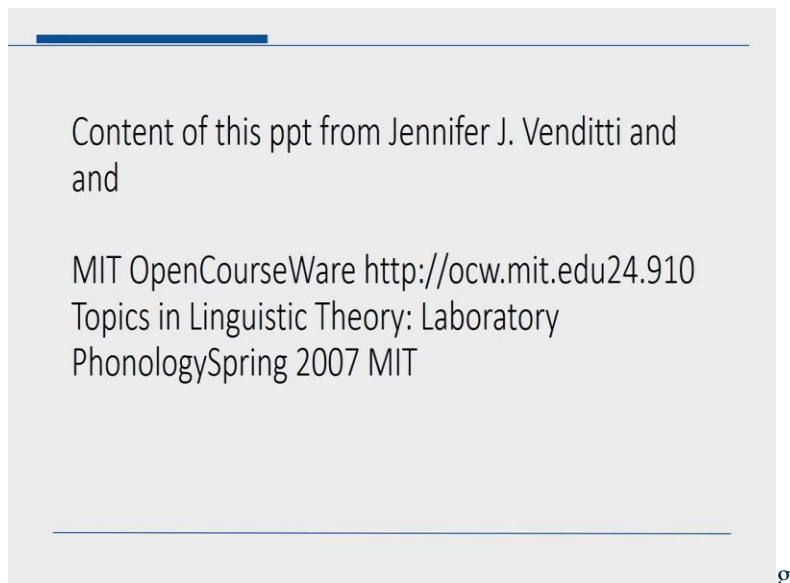
Phonetics and Phonology: A Broad Overview
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Department of Humanities and Social Science
Indian Institute of Technology, Guwahati
Lecture 26

Nuclear Tone, Pitch Accent and Boundary Tones

Hello and welcome to the last unit of this course on phonetics and phonology a broad overview.

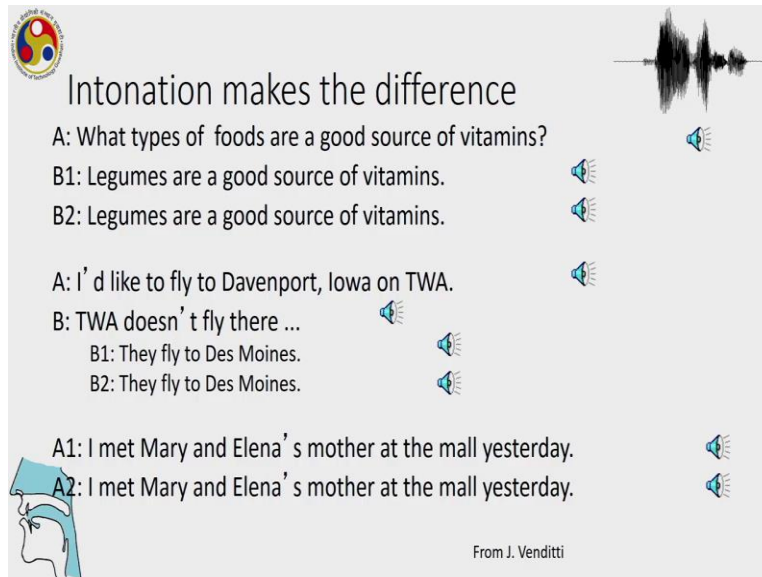
We are talking about intonation now and this is one of the lectures on intonation.

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So, this is unit 8 in intonation and content of this PPT has been taken from a few sources and sources are sited there. So, one course material from Jennifer J. Venditti and MIT open course ware and that is the link for the courseware.

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The slide features a logo in the top left corner and a waveform in the top right. The main title is "Intonation makes the difference". Below it, there are three sets of dialogue examples, each with a speaker icon to its right. The first set shows a question (A) and two identical answers (B1 and B2). The second set shows a question (A) and a response (B) that is a partial sentence. The third set shows two identical sentences (A1 and A2). At the bottom right, it says "From J. Venditti".

Intonation makes the difference

A: What types of foods are a good source of vitamins?
B1: Legumes are a good source of vitamins.
B2: Legumes are a good source of vitamins.

A: I'd like to fly to Davenport, Iowa on TWA.
B: TWA doesn't fly there ...
B1: They fly to Des Moines.
B2: They fly to Des Moines.

A1: I met Mary and Elena's mother at the mall yesterday.
A2: I met Mary and Elena's mother at the mall yesterday.

From J. Venditti

So, we have been talking about intonation, how intonation is about sentence level of fundamental frequency which changes the sentence level and that conveys a lot about the structure of sentences or we understand a lot about a communication is conveyed through intonation and those are the properties which we are talking about now.

So, intonation makes a lot of difference in how we say one sentence, how we differentiate one sentence from another sentence. So, let us have a look at some examples and here the examples. So, first we have a question, what types of foods are a good source of vitamins? So, we can as a response to that question, we can have these answers. Legumes are a good source of vitamins. Legumes are a good source of vitamins.

So, you can hear that these two sentences, the two options that are given here. Legumes are a good source of vitamins, that where in sentence one, where you have vitamins and in sentence two you hear that legumes are standing out, this word legumes is standing out in that sentence, Legumes are a good source of vitamins.

So, both of these answers are possible to the question that we have in A. So, as a result when we hear these two sentences, even though they are string identical sentences, what we understand from these two sentences are pretty different it would regard to the emphasis what is emphasised in sentence one in B1 and B2 were in one sentence vitamins is emphasised in other sentence legumes are we hear that more prominently. So, now let us hear another question here, I had to

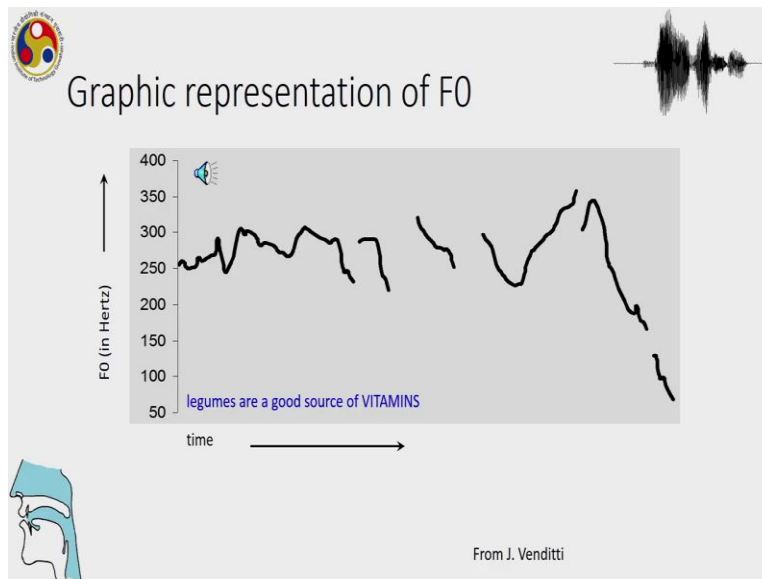
fly to Davenport, Iowa on TWA. So, this is not a question. So, it is a declarative sentence, it is a normal sentence. But there can be a few responses to that sentence.

TWA does not fly there. So, someone can tell you that, no that is not possible because TWA it does not fly there or we can say that even if it does, it flies to another location. They fly to Des Moines, they fly to Des Moines. So, now what we hear is that in one sentence, the intonation lets you know about where the possible fly destinations could be. There is a difference in the way, that is, the message is conveyed to you. So, in one sentence, it is a very pretty straightforward sentence. If that they fly to Des Moines, they fly to Des Moines.

And pretty straightforward. And here, it is more like, you can hear that there is a difference in the way Des Moines is the intonation is structured there, they fly to Des Moines. Now, we will understand what these properties are of intonation that they can make those certain things in intonation can make a whole world of difference in the way we hear sentences and the way we communicate and the way we understand.

So, now, again in another declarative sentence, where you would hear two ways in which you can say a simple sentence. I met Mary and Elena's mother at the mall yesterday, I met Mary and Elena's mother at the mall yesterday. So, again, you can emphasise different parts of the sentence and the intonation contour can add an additional meaning to the way you can understand the sentence.

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Intonation makes the difference

A: What types of foods are a good source of vitamins?
B1: Legumes are a good source of vitamins.
B2: Legumes are a good source of vitamins.

A: I'd like to fly to Davenport, Iowa on TWA.
B: TWA doesn't fly there ...
B1: They fly to Des Moines.
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A1: I met Mary and Elena's mother at the mall yesterday.
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From J. Venditti

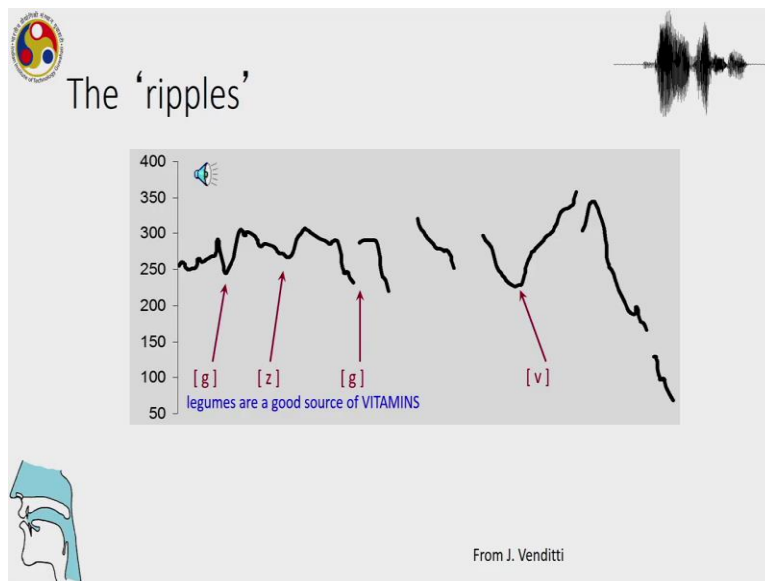
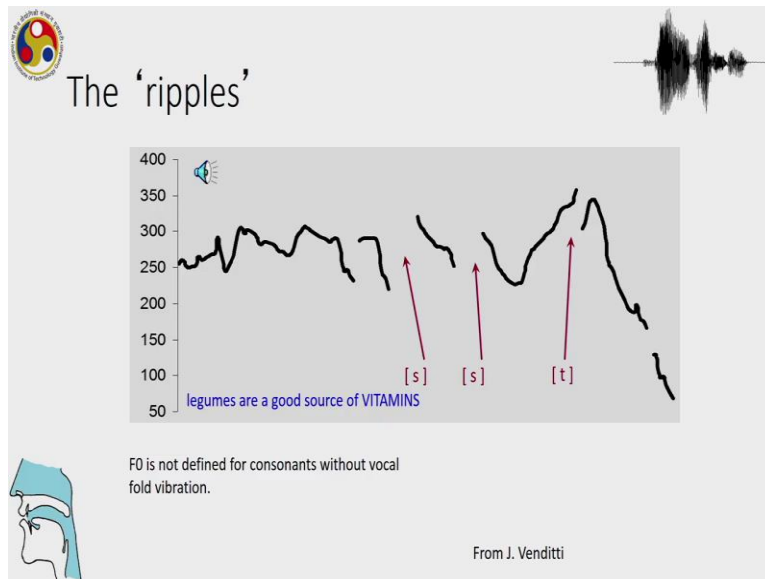
The slide contains dialogue examples with intonation icons (speakers) next to the responses. The first example shows two responses to a question about food sources of vitamins. The second example shows a question about flying to Davenport, Iowa, with two different responses. The third example shows two different intonations for the same sentence: 'I met Mary and Elena's mother at the mall yesterday.'

Let us, look at this graphical representation of the F0 contour to understand intonation. Now, this is the first sentence that you heard as a reply to the question. You heard here, what types of foods are a good source of vitamins. As a response to that we heard the sentence legumes are a good source of vitamins. So, legumes are a good source of vitamins

So, now, when you heard that, the intonation is making all the difference here, because intonation is conveyed in such a way that vitamins is emphasised and you see that because of the rise in the F0 contour towards the end of that sentence. So, and whereas we see the small rises and falls, but towards the end, we see a big rise and a final fall. And that is how this sentence has

been differentiated from the other sentence where it is said that, Legumes are a good source of vitamins. So, let us see how that F0 contour is going to be different from legumes are a good source of vitamins

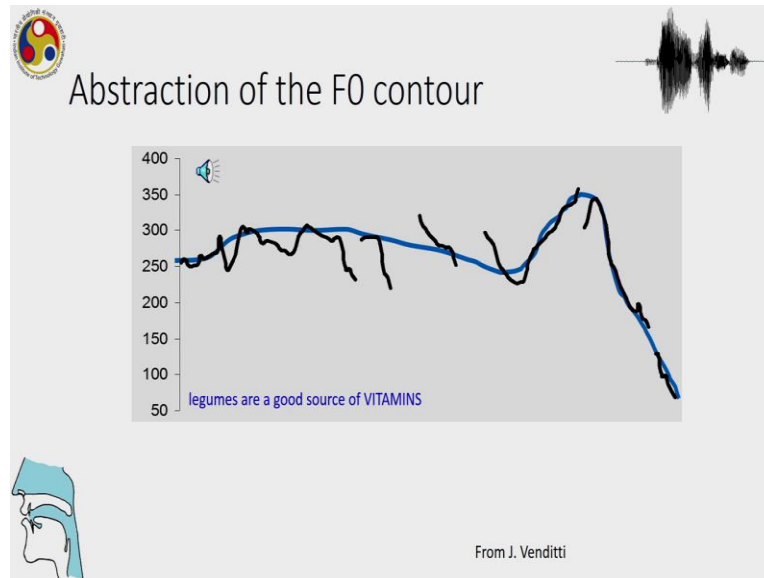
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But before we do that, let us also note that the F0 contour is not one straight line from beginning till the end, there are these small rises and falls and it is not really one it does not start in one position and goes up and goes down. So, we have these little things which are sort of interrupting the flow from one part from legumes are a good source, then we have all these breaks and then the small rises and small falls, that is because of the consonants in between.

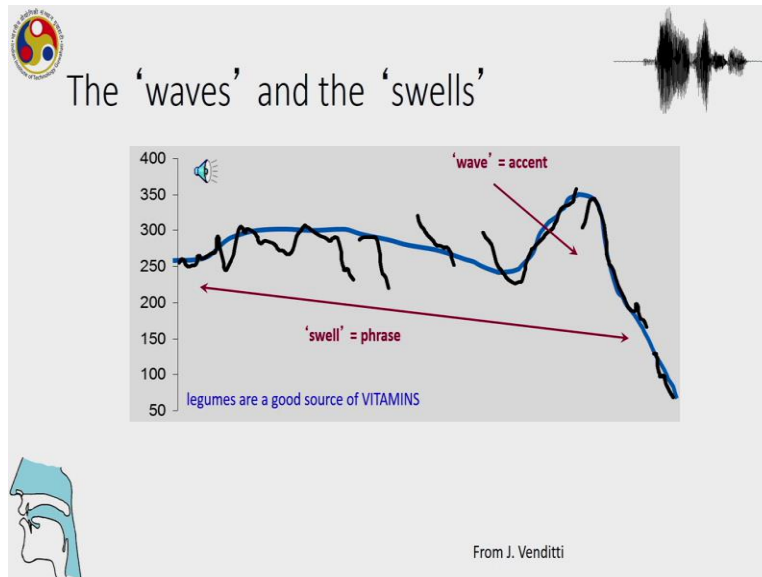
Because we have these small breaks because we have voiceless consonants and then we have another break in F0 contour because the t in between and similarly, we also have some peaks and some falls because of the consonants. So, here we are, because of g or z or g again, we have these F0 falls because these are obstruent. So, and then again, because of v again, you have your small F0 fall.

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And what we are going the point you are going to make is that the F0 contour is abstracted from the F0 the sentence and it is these small rises and falls actually do not contribute to our hearing of the F0 contour. So, because these are consonantal perturbations, and the consonantal perturbations are not really contributing to the way we hear the rise of the falls. And these are below our threshold of perception and what we hear is one F0 contour would rise and falls and these small perturbations, which we see because the consonants are not considered to be a part of the intonation contour.

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So, now, this is this type of a sentence, where we have the waves and the swells. So, this is the waves and this is swell. If you want to try it, if you want to see it that way and you can see what is so this is a small F0 contour, there is it starts at around 250 hertz and goes slightly around 300 hertz and this is like a small wave and then we have a big swell, which we can say is the part where vitamins was produced.

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Stress vs. accent

- **Stress** is a structural property of a word — it marks a potential (arbitrary) location for an accent to occur, if there is one.
- **Accent** is a property of a word in context — it is a way to mark intonational prominence in order to 'highlight' important words in the discourse.

(x)		(x)		(accented syll)		
x		x		stressed syll		
x		x		full vowels		
x	x	x	x	syllables		
vi	ta	mins	Ca	li	for	nia

From J. Venditti

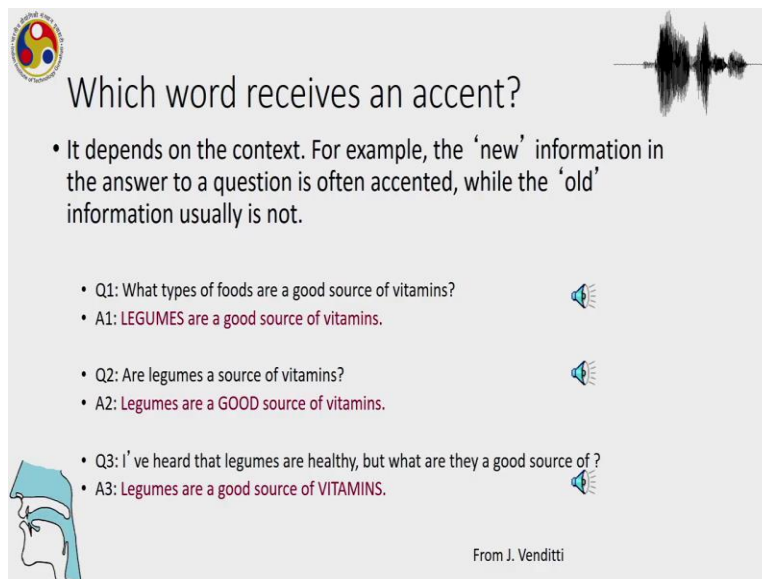
Now, we have been talking about stress a lot in this course, we had an entire lecture on stress and we know that stress is a structural property of the word and it marks a potential arbitrary location

for an accent to occur, if there is one. And accent is as a property of a word in context. So, it is a way to mark intonational prominence in order to highlight important words in the discourse.

So, that much we know about that stress is the structural property and we know that it marks the location for the accent to occur. And now how it is related to the sentential part in a sentence where a word is going to be accented, is now those things are related, because when something has to be accented, the intonational structure is going to target that part where which is actually the location for the occurrence of stress.

So, accent is a property in context and that is why we will see that given the meaning that one wants to convey that accent, the placement of accent is going to depend on the stress, but it is again going to target that part of the word which normally receives, which is a location for the occurrence of distress.

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The slide features a circular logo in the top left corner with a colorful design. In the top right corner, there is a black waveform representing an audio signal. In the bottom left corner, there is a profile illustration of a person's head wearing a blue headscarf. The main text is centered and includes a title, a general principle, and three Q&A examples with speaker icons.

Which word receives an accent?

- It depends on the context. For example, the 'new' information in the answer to a question is often accented, while the 'old' information usually is not.

• Q1: What types of foods are a good source of vitamins?
• A1: LEGUMES are a good source of vitamins.

• Q2: Are legumes a source of vitamins?
• A2: Legumes are a GOOD source of vitamins.

• Q3: I've heard that legumes are healthy, but what are they a good source of?
• A3: Legumes are a good source of VITAMINS.

From J. Venditti

Intonation makes the difference

A: What types of foods are a good source of vitamins?
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A: I'd like to fly to Davenport, Iowa on TWA.
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A1: I met Mary and Elena's mother at the mall yesterday.
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From J. Venditti

Let us, see how that happens. So, which word receives an accent then? So, it depends on the context. So, for example the new information in the answer to a question is of an accented while all information usually is not. So, we will look a bit at all the new information again in this lecture, but for the time being, let us look at the answers to the question.

What types of foods are a good source of vitamins? Legumes are a good source of vitamins. So, unlike legumes now, we have seen the two sentences where legumes is emphasised or vitamins emphasise, but good can also be emphasised, legumes are a good source of vitamins, legumes are a good source of vitamins.

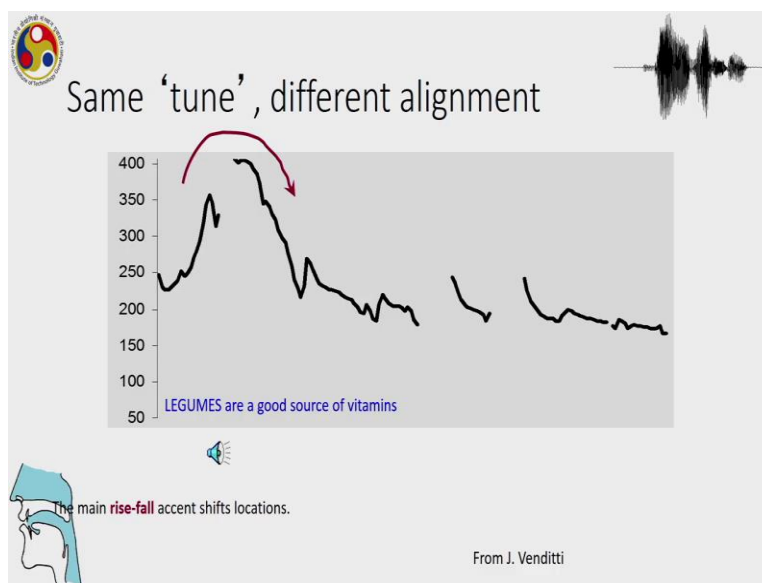
So, now you can see that the accent placement is varying in the sense that it could either be legumes it could be good or it could also be vitamins. So, now what is the difference among these three sentences? Is that here, unlike the first question, where what types of foods of are a good source of vitamins with the questions are different for each of the sentences. So, hence, all information and new information is different for each of the sentences even though the sentences are string identical, because their answers to different types of questions which demands different answers which are asking for different answers.

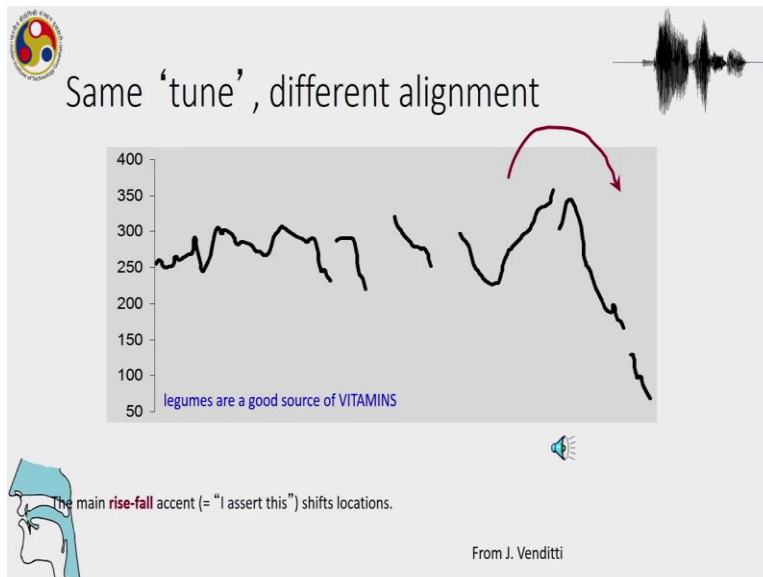
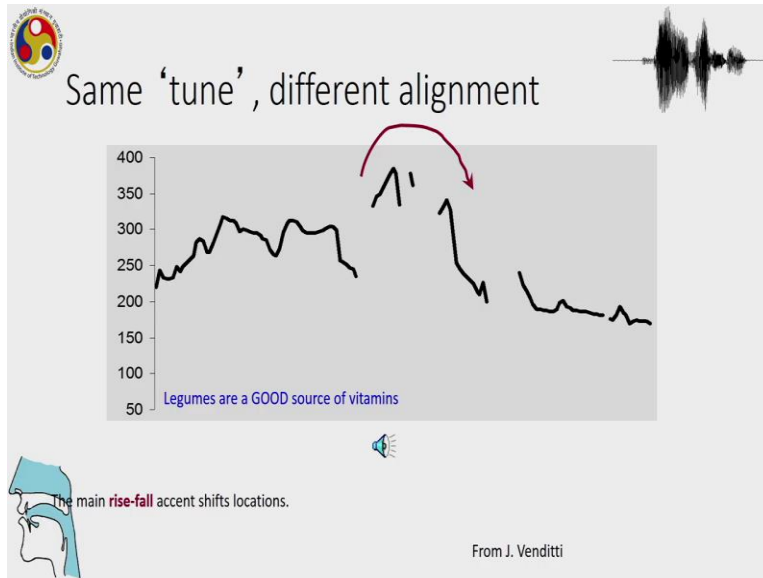
So, are legumes a good source of vitamins legumes a good source of vitamins and that is why in the string identical sentence, the new information that is provided here is good unlike a previous sentence, where legumes was a new information which is conveyed there. And I have heard that legumes are healthy, but what are a good source? What are they a good source of? So, if that is

the question, then here the new information provided will be that legumes are a good source of vitamin, Legumes are good source of vitamins.

So, what are the good source of the vitamins the good source of vitamins and hence the new information for each of the sentences are different here legume is good information is a new information here good is a new information and vitamins here vitamin is a good new information and they are providing different new information in each of these sentences and therefore what does it tell us about accent it tells us that it can be context dependent, depending on what information is being asked for the position of the accent may be different. What types of foods are a good source of vitamins? Legumes are a good source of vitamins. What is a good source of vitamins?

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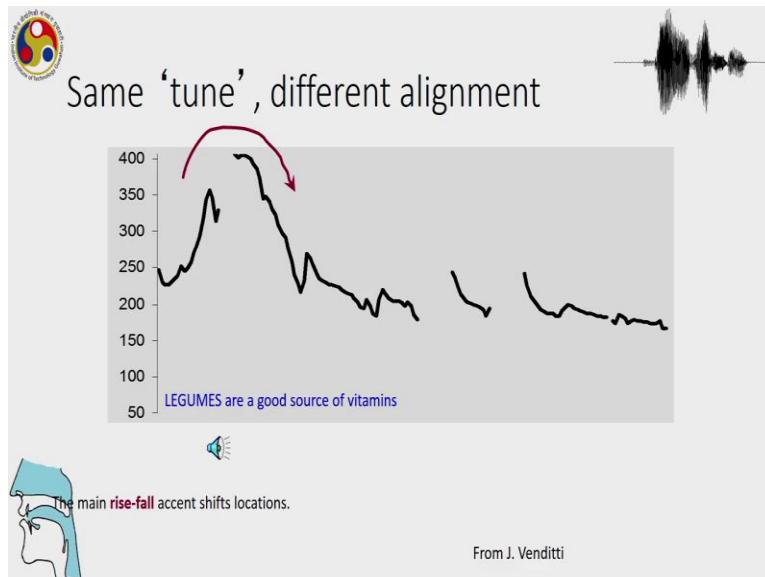
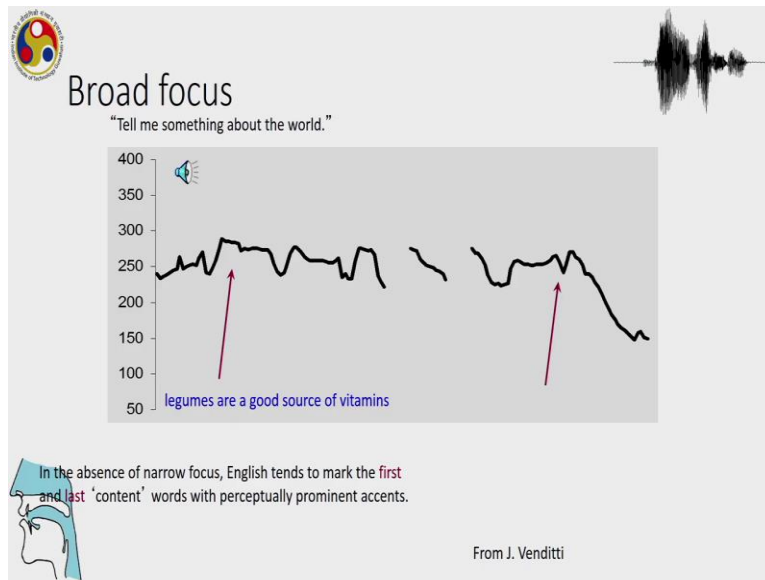


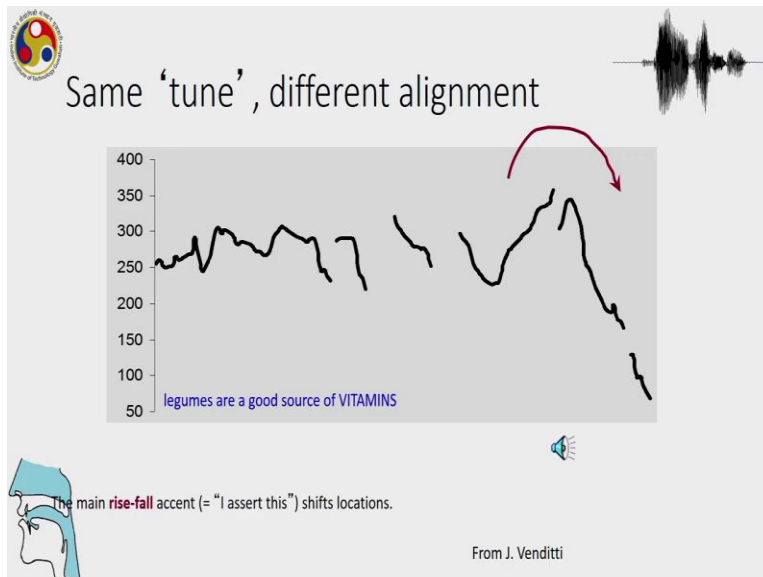
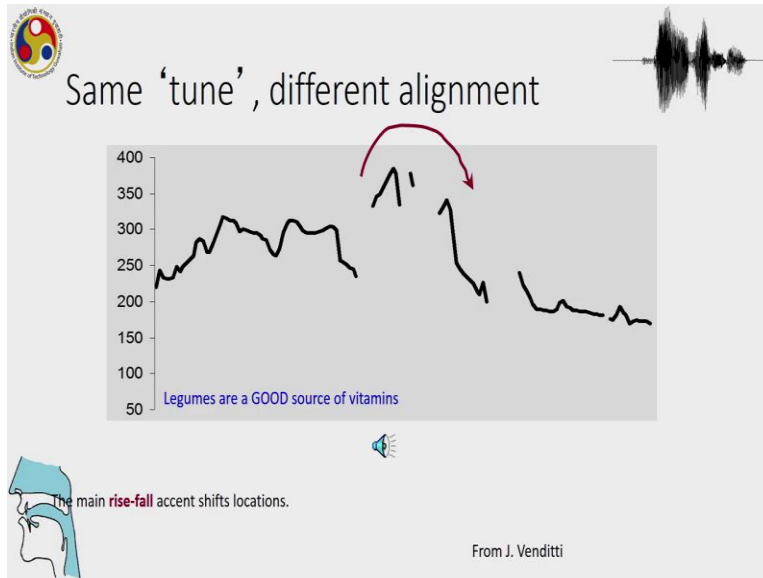
So, again, what we will see in the next slide is about tune and alignment. So, the same tune can have different alignment. So, now this swell that we saw earlier this can have different places the swell can be on vitamins, the swell can be on legumes it can be on good and the main the rise this is or technically it can be called a rise fall, is a rise and fall. So, the rise fall can shift location here it is on legumes. Because it is providing new information there of what are a good source of vitamins.

And here it is the new information provided is good. Because this is an answer to the question are legumes good source of vitamins, are legumes a good source of vitamins and it is in the answer is in the positive legumes are a good source of vitamins. Legumes are good source of

vitamins. So, here again the rise fall is on the accented word which is shifted, its location to good instead of legumes as a result of different question. And as we saw before here the new information is vitamins hence the main rise fall is on vitamins. Legumes are a good source of vitamins.

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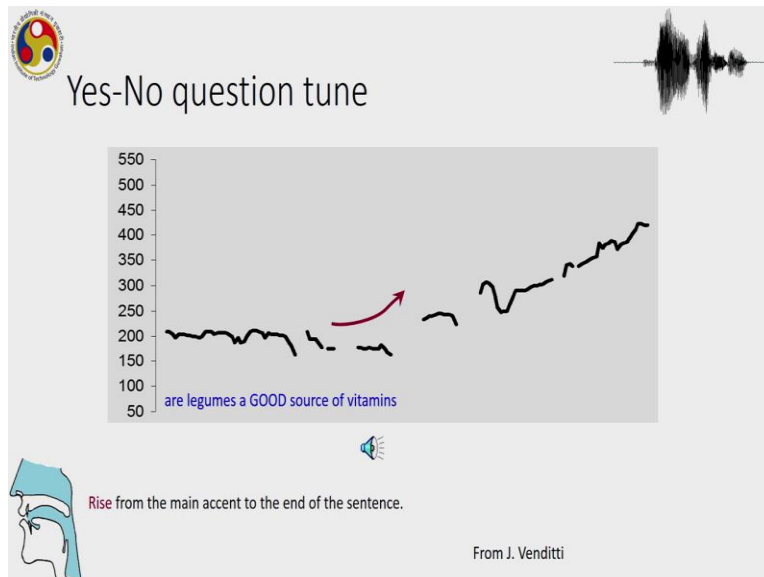
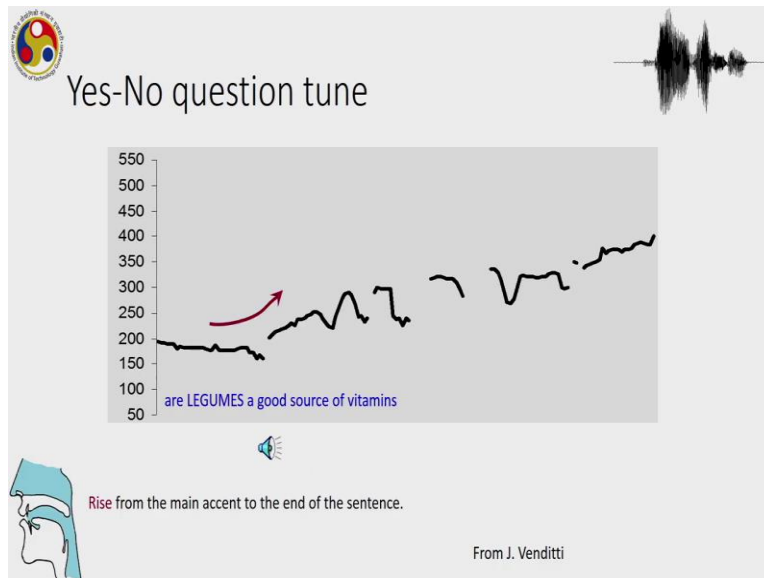


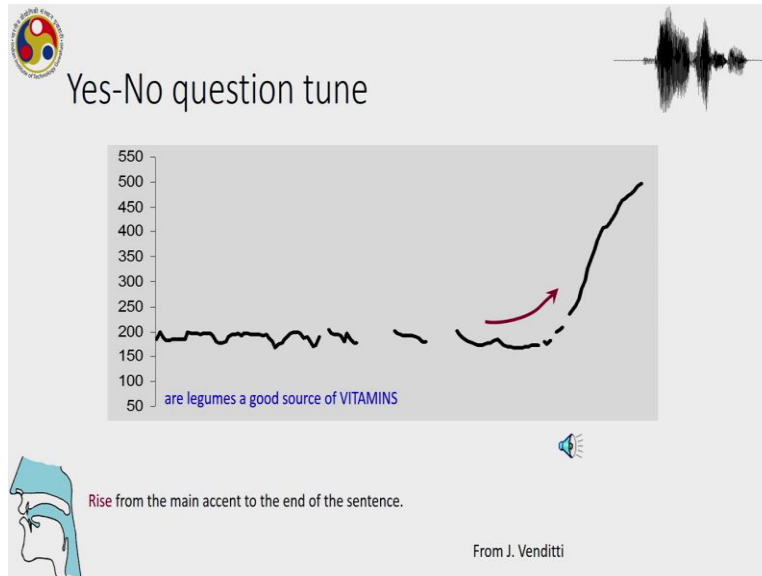
So, unlike any of the sentences, now here we have a sentence which is called broad focus, which is just states a declarative sentence with just a matter of fact sentence which is which does not have to give any new information the entire sentences telling us a fact, basically, about something. So, here as we can see, we do not have the rise fall pattern that we saw before and we have a normal sentence with normal accent and without focus placement. So, earlier we saw focus placement here we have normal accent accented sentence legumes are a good source of vitamins.

So, in the absence of narrow focus unlike this sentence, which is broad focus, so all the earlier examples can be called examples of narrow focus and unlike those we have this which is broad

focus and in broad focus the first and the last content words are the places which will receive accent situation in a declarative sentence in normal broad focus declarative sentence, the first and the last content words receive some accent and this is called broad focus, which is unlike the previous narrow focus sentences.

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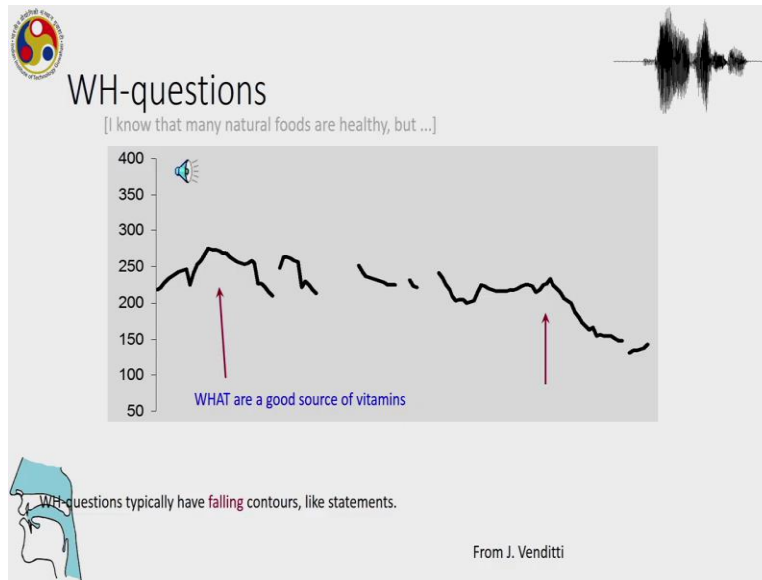




And let us look at a few other question tunes. So, we have a tune here which is a yes no question tune, are Legumes a good source of vitamins. So, here our question is as being asked whether legumes are a good source of vitamins and you can see that this rise is very different from the rise that we saw in the other rise fall that we saw in the other sentences. The rise starts from the main accent and it goes all the way till the end of the sentence. So, this is a yes no question tune.

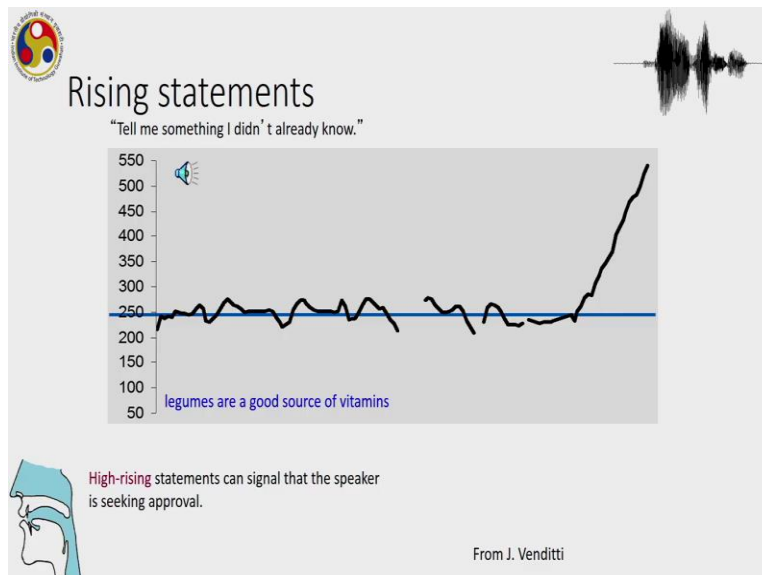
And then we have, are legumes a good source of vitamins? Here again when the accent is on good again, we have the rise from main accent from here. So, here it was from legumes. So, here it is from a good, the rise starts from the main accent and then here if it is this kind of sentence are legumes are a good source of vitamins where it is a yes no question, but the accented word is a vitamins it will start the rise will start from the main accent to the end of the sentence, are legumes are a good source of vitamins? So, basically in these three questions, yes, no question was asking about either legumes or about good or about vitamins. So, because the new information sought was of regard to all these different words, so hence the rise will start from the accented word.

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So, a normal WH questions will have different pattern. So, WH questions have falling contours like statements. What are a good a source of vitamins? So, as a response to that question, we have legumes are a source of vitamins. So, what are a good source of vitamins? Legumes are a good source of vitamins

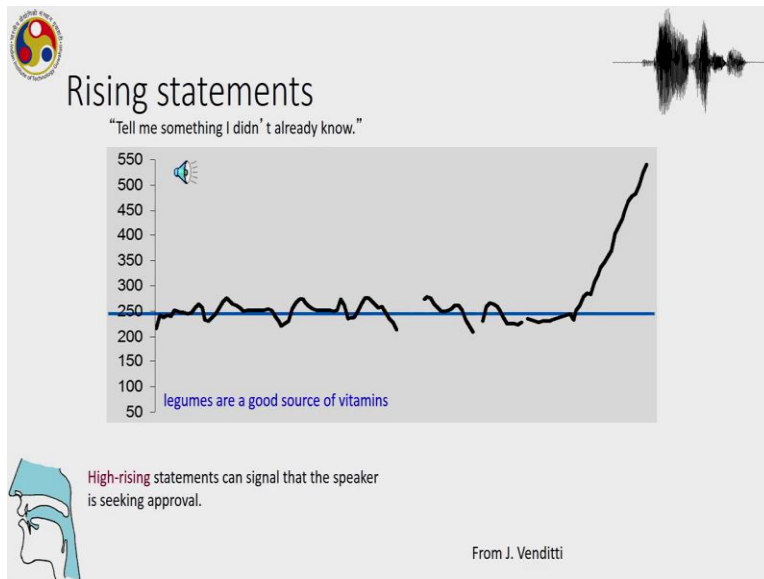
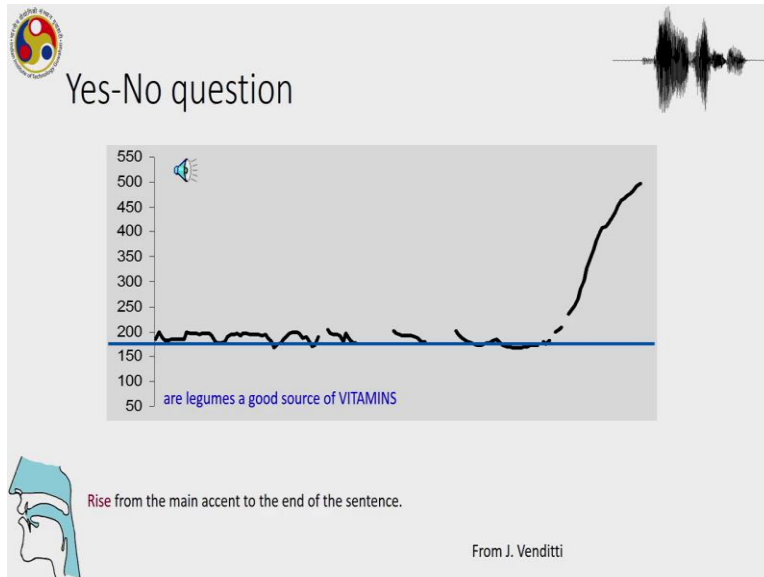
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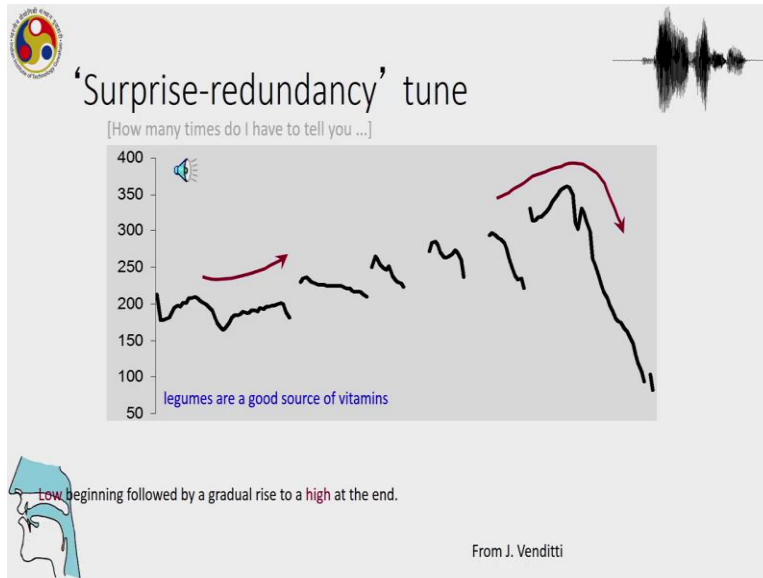


And then we have rising statements, legumes are a good source of vitamins. So, in this one, so, this is a high rise in statement and it seeks for some approval. And hence, this sentence is different from all the others that you saw here, that this sentence is pretty much does not have

any rise or fall all the way till the word vitamins where we have a very sharp rise. So, this is a sentence is a rising statement and this is also possible and this sort of asks for approval, even though this is a statement. Legumes are a good source of vitamins.

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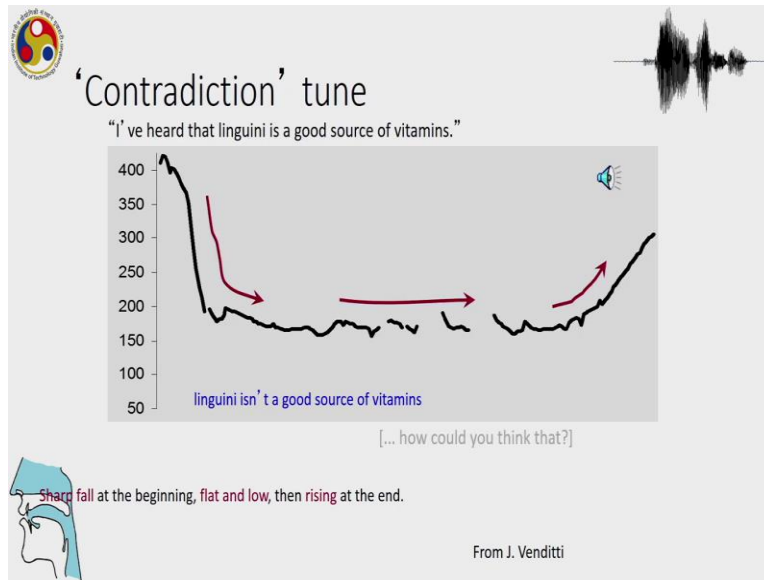




We can also ask a yes, no question, and not a statement. And when it is not a statement and you asking a question, you have the rise from main accent to the end of the word, a legend is a good source of vitamins. So, there is a certain difference from this one and this one, legumes are a good source of vitamins and unlike those sentences, we have surprise redundancy tune like this one, which is expressing surprise and it has a low beginning for it and the gradual rise to the end of the word and a final fall. Legumes are a good source of vitamins.

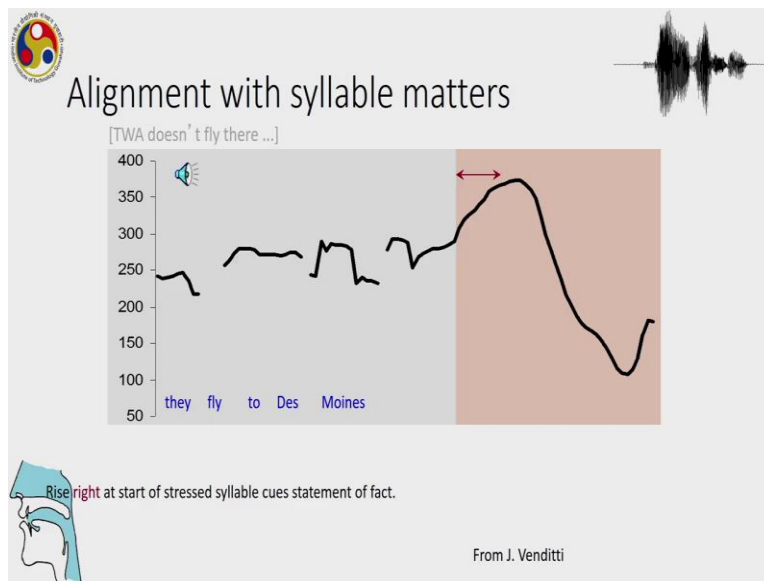
So, this is a surprise, redundancy tone, which is in the sense that this sentence would mean that I already know this as a matter of fact, but then I am surprised that the second person does not or anybody in the audience does not know about it. So, that is why it is called surprise redundancy. It is marked by gradual rise and then a final fall.

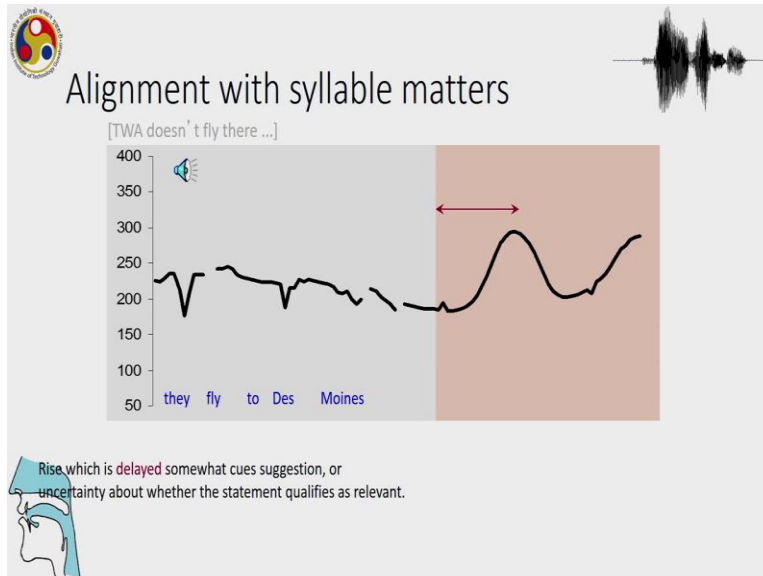
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Unlike that, we can have a contradiction tune which would sort of try to contradict the meaning conveyed by the sentence. So, this is a contradiction tune which will have a fall in the beginning and like all the previous sentences and then low and then a final rising at the end. Linguini is not a good source of vitamins, linguini is not a good source of vitamins. So, a fall and then a rise. It is a contradiction tune.

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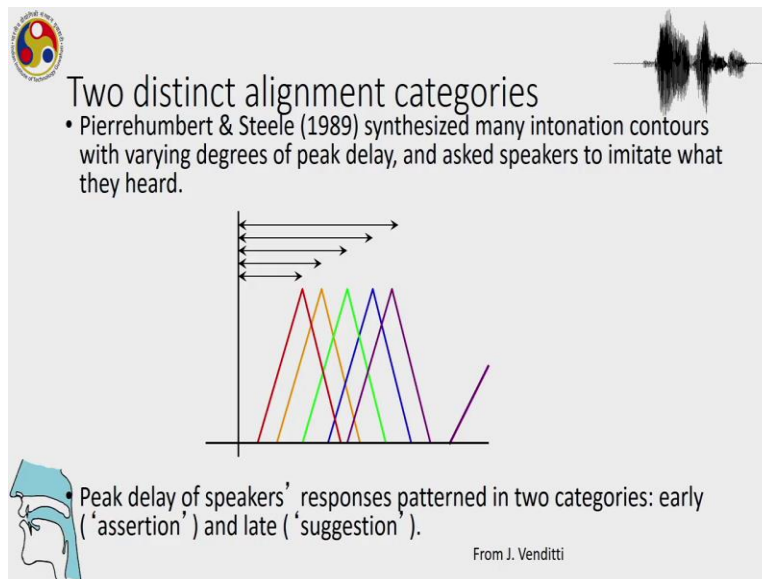




So, however, one has to remember that the F0 contour aligns two syllables and it aligns two particular stress syllables in a language like English, the examples that we have seen are all from English, so there is the stressed syllable is the place where the alignment is almost always happened.

So, here the rise starts from the stress syllable and let us play the sentence they fly to Des Moines. So, this is the point where the rise starts for Des Moines, they fly to Des Moines unlike that sentence the rise can be delayed. So, and then when that happens, it normally implies uncertainty about whether something is possible or relevant. So, this is what it sounds like they fly to Des Moines. So, this is another text tune alignment.

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The slide features a logo in the top left corner, a waveform in the top right, and a central graph. The graph plots four intonation contours (red, orange, green, purple) with arrows indicating their peak delays. Below the graph, a profile of a speaker's head is shown with arrows indicating the timing of their responses to the contours.

Two distinct alignment categories

- Pierrehumbert & Steele (1989) synthesized many intonation contours with varying degrees of peak delay, and asked speakers to imitate what they heard.

Peak delay of speakers' responses patterned in two categories: early ('assertion') and late ('suggestion').

From J. Venditti

So, now alignment with relation to syllables can have two distinct alignment categories. So, Pierrehumbert and Steele synthesized many intonation contours with varying degree of peak delay and asked speakers were emitted what they heard and then peak delay of speakers' responses pattern in two categories early and late.

So, when they were asked to imitate, they would either imitate early or late and then the two patterns early and late have two different intonational meanings one is assertion and the other is suggestion. So, these could be understood as two different alignment categories at one early if it is early peak delay then it is assertion, if it is late it is suggestion.

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Intonation makes the difference

A: What types of foods are a good source of vitamins?
B1: Legumes are a good source of vitamins.
B2: Legumes are a good source of vitamins.

A: I'd like to fly to Davenport, Iowa on TWA.
B: TWA doesn't fly there ...
B1: They fly to Des Moines.
B2: They fly to Des Moines.

A1: I met Mary and Elena's mother at the mall yesterday.
A2: I met Mary and Elena's mother at the mall yesterday.

From J. Venditti

The slide features a logo in the top left, a waveform in the top right, and a speaker icon next to the second dialogue set. A small illustration of a person's head is in the bottom left.

I'd like to fly the Davenport, Iowa on TWA. So, now as a response, TWA does not fly there or they fly to Des Moines, they fly to Des Moines. So, here this they fly to Des Moines they fly to Des Moines suggestion versus assertion. And we can hear this assertion tune, they fly to Des Moines versus they fly to Des suggestion tune.

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A single intonation phrase

400
350
300
250
200
150
100
50

legumes are a good source of vitamins

Broad focus statement consisting of one intonation phrase (that is, one intonation tune spans the whole unit).

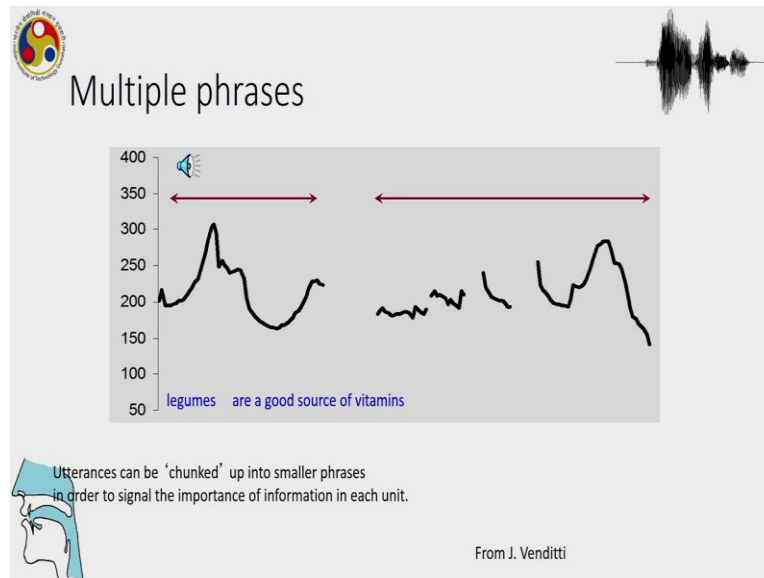
From J. Venditti

The slide features a logo in the top left, a waveform in the top right, and a speaker icon next to the graph. A small illustration of a person's head is in the bottom left.

So, now we have a single broad focus statement, tune here consisting of one intonation phrase and that is one intonation tune in the whole sentence. But we can have more intonation phrases also we will play those now, multiple phrases in this single intonation phrase, we can see that

there is rise, a small rise and then a wave sort which we studied earlier and then a final fall. So, this is what it sounds like legumes are a good source of vitamins.

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And unlike this, let us look at multiple phrases like these legumes are a good source of vitamins. So, here, these utterances are chunked, legumes are a good source of vitamins. So, when that happens, we have a change in the tune of the same text. So, when we have multiple phrases sentence so legumes are good source of vitamins and we can play the sentence legumes are good source of vitamins. And when we are playing this, we can hear that there is a rise and a fall and a rise again this entire phrase by itself legumes and then the final part are a good source of vitamins.

So, this is a chunking into smaller phrases in order to signal the importance of information in each unit. So, if you want to emphasise a lot on a legumes, it can be chunked separately and the information conveyed there is that legumes are is a phrase by itself because of the all the intonation things happening here rise and fall and rise again.

(Refer Slide Time: 24:37)



The slide features a logo in the top left corner, a waveform in the top right, and a profile of a person's head in the bottom left. The main text is centered and includes a bulleted point.

Phrasing can disambiguate

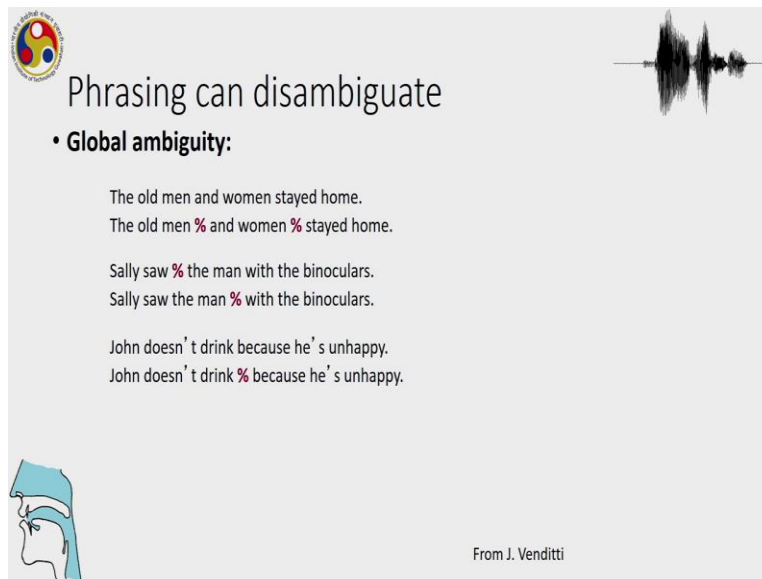
- **Global ambiguity:**
 - The old men and women stayed home.
 - Sally saw the man with the binoculars.
 - John doesn't drink because he's unhappy.

From J. Venditti

So, now we have seen all the different text to tune alignments which tells you different types of sentences assertion versus suggestion versus contradiction versus surprise. So, all these things can be the same text can be conveyed using different tunes. Now, this intonation plays more role than these. So, what are the other roles that intuition plays? Phrasing this type of phrasing that we just saw where legumes are a good source of vitamins, there, using phrasing we can also disambiguate. So, between sentences which are already ambiguous.

The old man the old men and women stayed home and Sally saw the man with binoculars and John does not drink because he is unhappy, from what we know about sentence structure. We know that these sentences are potentially ambiguous because of their syntactic structures. And so these sentences though can be disambiguated using intonation.

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Phrasing can disambiguate

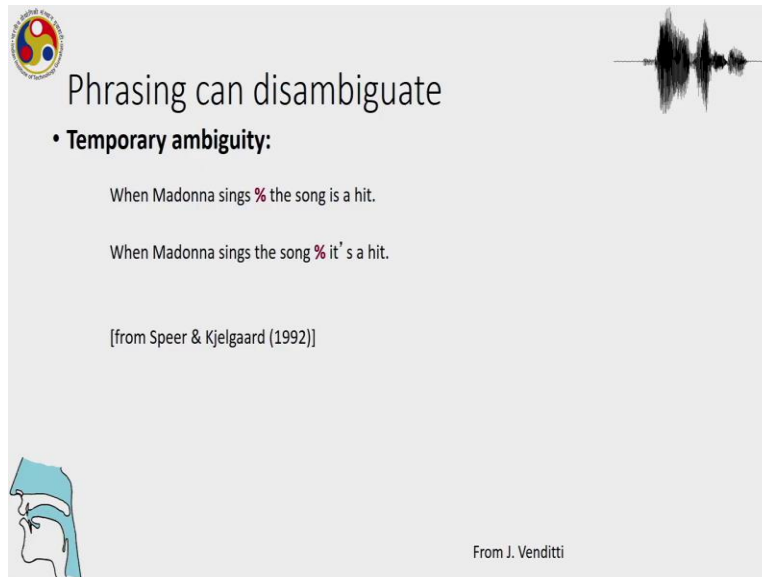
- **Global ambiguity:**
 - The old men and women stayed home.
The old men % and women % stayed home.
 - Sally saw % the man with the binoculars.
Sally saw the man % with the binoculars.
 - John doesn't drink because he's unhappy.
John doesn't drink % because he's unhappy.

From J. Venditti

So, how can these be disambiguated? This can reduce disambiguated by chunking as we saw previously into different parts, the old men and women stayed home and then here then old men and women do not belong to one chunk. So, if they were one chunk then the old men and women stayed home or the old men and women stayed home or we can disambiguate the sentence Sally saw the man with the binoculars, Sally saw the man with the binoculars.

So, these are two separate chunks and if we want to mean that Sally saw the man with the binoculars. So, these would be two different ways of chunking these sentences and then John does not drink because he is unhappy John does not drink, because he is unhappy. Let us, see how the chunking works for these different sentences.

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The slide features a logo in the top left corner, a waveform in the top right, and a profile of a person's head in the bottom left. The main text is centered and includes a bullet point and two sentences illustrating temporary ambiguity.

Phrasing can disambiguate

- **Temporary ambiguity:**

When Madonna sings % the song is a hit.

When Madonna sings the song % it' s a hit.



[from Speer & Kjelgaard (1992)]


From J. Venditti


So, when Madonna sings the song, the song and Madonna sings, so let us just see this, when Madonna sings the song, is a hit. So, when Madonna sings a song, it is a hit. So, as we know that there are two ways of chunking the Madonna sings, the song is a hit and Madonna sings a song, it is a hit.


And these sentences can be. So, various people have experimented with ambiguous sentences and seen how chunking leads to ambiguity or temporary ambiguity as we saw here as in the Madonna sings the song and then this can be disambiguated with further in adding to the phrase and then chunking can lead to final more disambiguation.

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 Phrasing can disambiguate 

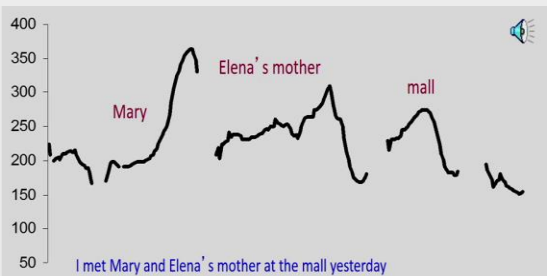

400
350
300
250
200
150
100
50
Mary & Elena's mother mall
I met Mary and Elena's mother at the mall yesterday





 One intonation phrase with relatively flat overall pitch range.

From J. Venditti

 Phrasing can disambiguate 


400
350
300
250
200
150
100
50
Mary Elena's mother mall
I met Mary and Elena's mother at the mall yesterday



 Separate phrases, with expanded pitch movements.

From J. Venditti




Intonation makes the difference

A: What types of foods are a good source of vitamins?
 B1: Legumes are a good source of vitamins.
 B2: Legumes are a good source of vitamins.

A: I'd like to fly to Davenport, Iowa on TWA.
 B: TWA doesn't fly there ...
 B1: They fly into Des Moines.
 B2: They fly into Des Moines.

A1: I met Mary and Elena's mother at the mall yesterday.
 A2: I met Mary and Elena's mother at the mall yesterday.






From J. Venditti




So, let us see how this chunking can happen and we will play a few sentences how phrasing leads to disambiguation. I met Mary and Elena's mother at the mall yesterday. So, one intonation phrase with relatively flat pitch range. So, it is normal sentence with starts with a rise and then a final fall and so, however, the sentence, says, I Mary and Elena's mother the mall yesterday.


So, and then, if we use phrasing to disambiguate the sentence, then the sentence will be having all these different peaks where we separate Mary and as one phrase and then we know that Mary and Elena's mother will be in separate phrases and will not mean that Mary and Elena's mother were together. So, let us play the sentence and see how the disambiguation can work, I met Mary and Elena's mother at the mall yesterday. So, that much about phrasing and disambiguation and how intonation plays a role in all these syntactic issues also where we have sentential ambiguity because of the sentence internal structures.

(Refer Slide Time: 29:10)



Focus

- Given/New
- Given: previously mentioned (accessible).
- New: not previously mentioned (or less accessible).
- It is often suggested that New information tends to be accented, while Given information tends to be unaccented.
- (1)a. I found an article for you in a German journal.
- b. I don't READ German.
- (2)I brought her a bottle of whisky, but it turns out she doesn't LIKE whisky.
- More accurate: Given information can be unaccented.





From J. Venditti 40

Now, bit of discussion on focus because we have seen what given a new information is just a while ago so let us clarify a few of the issues given is previously mentioned information and new is not previously mentioned information. So, it is often suggested that new information tends to be accented while given information tends to be unaccented.

And I found an article for you in a German journal but I do not read German and so this is new information this is capitalised to tell you that there is new information. I brought her a bottle of whiskey, but it turns out she does not like whiskey. So, here given information can be unaccented and here like is being accented, because that is the new information, which is given. So, this is something to remember, new information tends to be accented while given information is unaccented, which we also saw in the previous slides.


(Refer Slide Time: 30:17)



Information conveyed by prosody -Focus

- Focus -“the informative part of an utterance”.
- ‘the information in the sentence that is assumed by the speaker not to be shared by him and the hearer’(Jackendoff1972).
- Presupposition (aka Ground, Background): ‘the information in the sentence that is assumed by the speaker to be shared by him and the hearer’(Jackendoff1972).

–NB substantial overlap with Given/New partition on this view.





- Focus is marked by accentuation.

From J. Venditti 41

Information conveyed by prosody focus and focus is something which we saw in the previous slides. And the focus is called the information part of an utterance and the information in the sentence that is assumed by the speaker not to be shared by him and the hearer and presupposition or background. The information in the sentence that is assumed by the speaker to be shared by him and the hearer.


And there is substantial overlap between given new information on this view of presupposition where presupposition information here that is assumed by the speaker. So, when something is assumed by the speaker then there could be some overlap, but very often in intonation, focus is marked by accentuation.

(Refer Slide Time: 31:10)





- How is focus marked prosodically?
- It is clear that focused constituents contain pitch accents.
- But non-focused elements can bear pitch accents also.

- Who did Annabel marry?
- H* H*L-L%
- Annabel married Maloney.
- Hypothesis: focus is marked by a nuclear pitch accent.
- -The last pitch accent in a phrase, followed by a phrase accent.




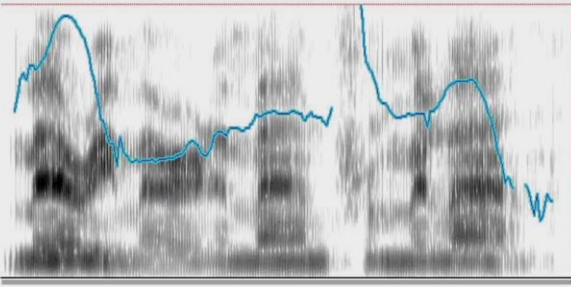

Who married Maloney?

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Nuclear accents and focus

Who did Mary marry?
Mary married a man from Milan.



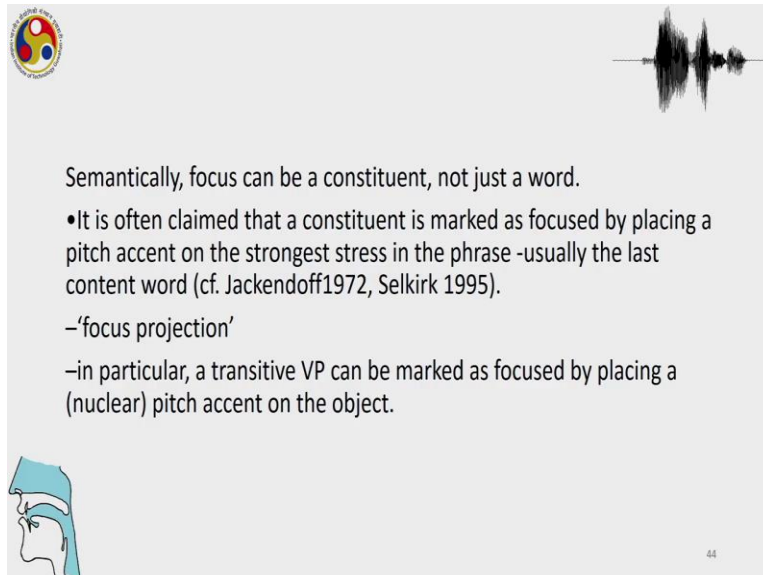
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And how is focus marked prosodically? It is clear that focus constituents contain pitch accents we have seen the rise and the fall to show pitch accents in vitamins and legumes so those are what we call pitch accents, but non-focus elements can bear pitch accents also. So, let us listen to this sentence, Mary married a man from Milan. So, who did Mary marry? Mary married a man from Milan. So, this is your new information. But if you if the question, who did Annabel marry? Annabel married Maloney and then here the hypothesis that focus is marked by the nuclear pitch accents.

And we saw all those examples before in all those previous slides, but here we see something new here, which we did not see in the previous slides. Here we see that Mary, which is already a given information is actually receiving accent here. So, in all the previous example that we saw Mary this part of the sentence, when there was just a simple WH question asking for information would not necessarily lead to accent placement on already given information, which is Mary married someone.

So, Mary is already assumed here and here Mary is receiving accent. So, this is called topic. So, in a lot of languages is seen that topic placement can also lead topic can also have some amount of accent placement on the topic and then sometimes the topic gets accent placement because of issues like contrast. So, we wanted to highlight some of these issues also, apart from the ones that you have just seen about pitch accents and rise and accents or new information.

(Refer Slide Time: 33:13)



Semantically, focus can be a constituent, not just a word.

- It is often claimed that a constituent is marked as focused by placing a pitch accent on the strongest stress in the phrase -usually the last content word (cf. Jackendoff 1972, Selkirk 1995).

-‘focus projection’

-in particular, a transitive VP can be marked as focused by placing a (nuclear) pitch accent on the object.

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- Focus is marked by pitch accents.
- –Focus is marked by a nuclear accent.
- •Prenuclearaccents do not mark focus.
- •All nuclear accents mark focus.
- •Can all types of pitch accents mark focus?
- –Focus projection: accenting an object can mark the whole VP as focussed.
- •(Explicit) contrast is marked by L+H*
- •Only Given material can be deaccented.





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Semantically focus can be a constituent and not just a word and this often claimed that a constituent is marked as focus by placing pitch accent on the strongest stress in the phrase, usually the last content word and this is called focus projection. And in particular, a transitive verb phrase can be marked as focus by placing a nuclear pitch accent on the object.

So, focus is marked by pitch accents and focus is marked by a nuclear accent. In our another lecture, we will talk about nuclear accents and pre-nuclear accidents, pre-nuclear accents do not mark focus and all nuclear accents mark focus, can all types of pitch accents mark focus in focus projection, accenting an object can mark the whole VP as focus. And a contrast which you talked about just now is marked by L plus H star that is a L tune plus H star pitch accent and only given material can be deaccented.

(Refer Slide Time: 34:22)




References

The content of this lecture is based mainly on these two sources:

- Bolinger, D. (1972) Intonation [introduction and chapter 1]. Penguin Books, Ltd. [also appears as: Bolinger, D. (1964) Around the edge of language. Harvard Educational Review 34(2): 282-293.]
- Pierrehumbert, J. (1980) The Phonetics and Phonology of English Intonation. Unpublished Ph.D. dissertation, Massachusetts Institute of Technology.

Other sources cited in the lecture include:

- Pierrehumbert, J. and S. Steele (1989) Categories of tonal alignment in English. Phonetica 46: 181-196.
- Speer, S. and M. Kjelgaard (1992) Prosodic resolution of temporary syntactic ambiguity. Paper presented at the 25th Annual Congress of Psychology, Brussels.



So, these are the references and this is the end of this lecture on Intonation. Thank you for paying attention.