

# INTONATION

## Lecture 10

# Suprasegmental phonology

- Stress : applied to units larger than phonemes (segmental phonology), i.e. syllables
- Intonation : pitch of voice plays an important part; it is constantly changing during speech; analysing intonation refers to listening to the speaker's pitch and recognising what it is doing

# Pitch

- Defined in terms of high and low (arbitrary choices for end-points of the pitch scale)
- Auditory sensation experienced by the hearer
- We are not interested in all aspects of a speaker's pitch, but in those that carry some linguistic information
- Speakers have control over their own pitch of voice, and the possibility of choice (this may have linguistic significance)

# Fundamental frequency of voiced sounds (should not be called “pitch”)

- The rate of vibration of the vocal folds, physically measurable and related to speaker’s activity
- The distinction must be made between the two
- As long as the distinction is made it is of minor importance if we informally use the same term (“pitch”) for both

# Necessary conditions for pitch differences to be linguistically relevant

- Being under speaker's control
- Pitch differences must be perceptible (great enough to be heard by a listener as differences in pitch)
- Significance in linguistics lies in contrasts (a set of items a unit contrasts with)

# Form and function of intonation

- In the shortest piece of speech – single syllable
- A continuous piece of speech beginning and ending with a pause – utterance
- One syllable utterances like “yes” and “no”
- Even in one syllable words we can either remain at a constant pitch level or change it

**Tone** • Is the term used for the overall behaviour of the pitch

- It can be level or moving
- The latter are more common
- Level tone does not sound natural
- When saying yes or no in a final manner, falling tone is usually used
- For questioning manner rising tone is used (now we are already talking about function)

# Tone and tone languages

- Tone is marked before the syllable:

level          \_yes

falling        yes

rising         \yes

In this way we can also mark the high tone level and low tone level

The case for some other languages is different:

In these the tone can determine on the meaning of the word in question, in Croatian as well



Speech may be divided into tone units.  
Each tone unit is composed of:

- A tonic syllable (obligatory)
- Optional elements which precede the tonic syllable (pre-head, head)
- Optional elements which follow the tonic syllable (tail)

# In synthesis:

- (pre-head) (head) tonic syllable (tail)

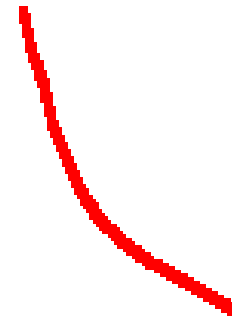
# Complex tones and pitch height

- Each of these may express particular attitudes:
- **Fall**: neutral statement
- **Rise**: neutral question, doubt
- **Fall-Rise**: scepticism
- **Rise-Fall**: emphatic statement
- **Level**: boredom, disinterest

In ordinary speech intonation tends to take place within the lower part of the speaker's pitch range. Only with strong feelings we use extra pitch height.

## Fall: neutral statement, conclusion

- E.g. Have you seen John?
- Yes. (Falling intonation indicates  
‘I have answered your question and do not intend to add anything else’)



Yes

## Rise: questioning, doubt, desire to continue conversation

- E.g. Have you seen John lately?
- Yes... (Rising intonation indicates 'I want to continue the conversation, I am curious')



Yes

## Rise-Fall: emphatic statement, irritation, command

- Do I really have to clean my room?
- Yes!



## Fall-Rise: surprise, scepticism

- Ann and John were on good terms at the party?
- Yes!



Yes

## Level: boredom, lack of interest

- Can you remember Peter Jackson, the cost consultant for our company in Taiwan? The other day in the office I invited him for dinner, he'll be coming tomorrow.
- Yes.

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Yes



We shall begin by considering the fall:  
here is a tone unit solely composed of a tonic syllable

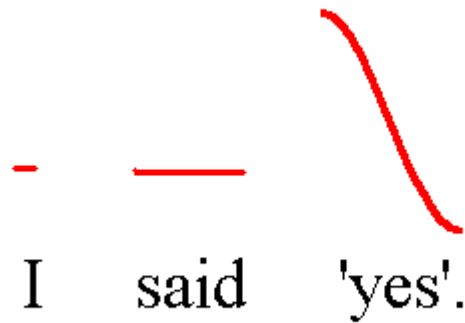


Yes

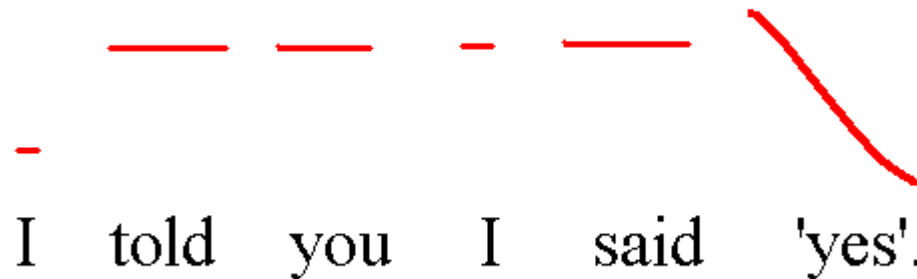
Things become more complicated when we add syllables

I said 'yes'.

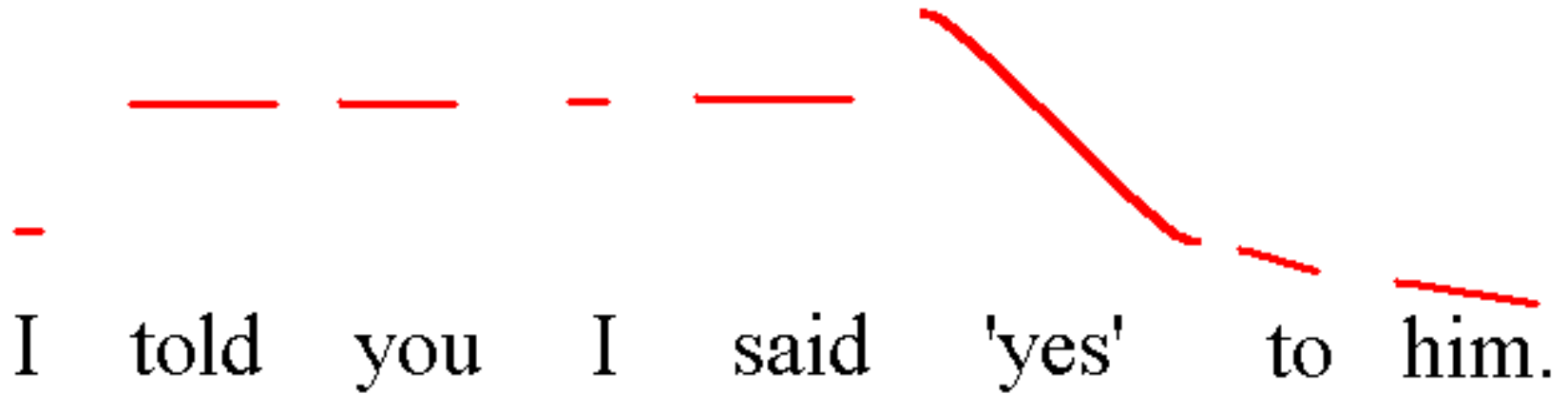
In this case there are no stressed syllables before the tonic: 'I said' is the *pre-head*



Here we have added a stressed syllable, 'told', before the tonic, which is called the *head*. Notice how the intonation rises from the pre-head



Here we have added syllables after the tonic, this is called the *tail*. Note how it tends to follow the intonation pattern of the tonic.

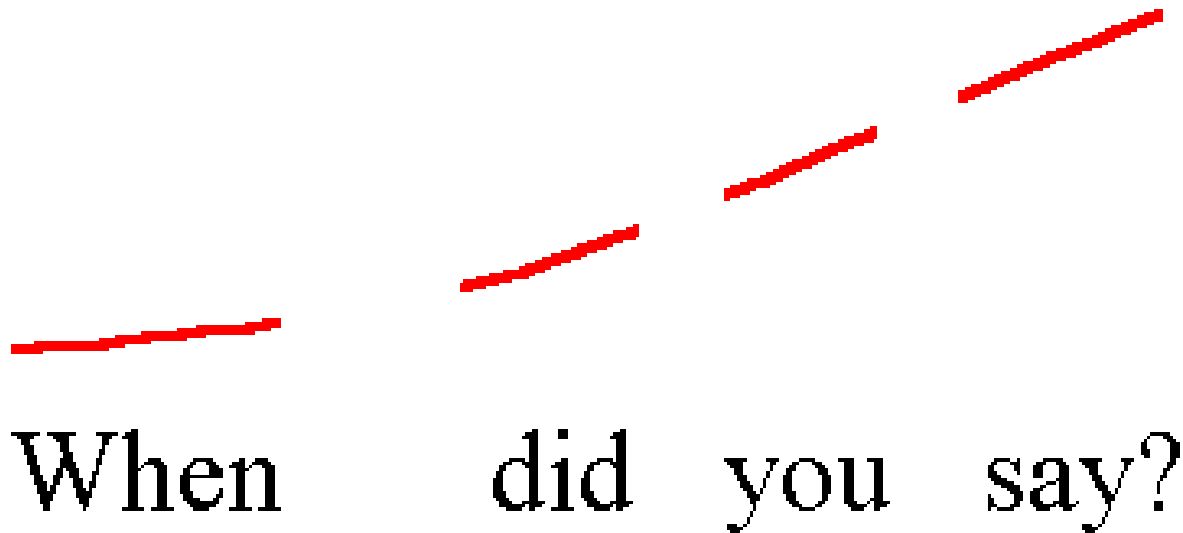


This is obviously not the only possible realisation of this sentence. If we put the main stress on 'told', it changes the pattern completely

I told you I said 'yes' to him.

The diagram illustrates a pitch contour for the sentence "I told you I said 'yes' to him." The pitch starts at a low level for "I", rises sharply to a high peak on "told", and then falls to a low level for the remainder of the sentence: "you", "I", "said", "'yes'", "to", and "him.". The words "I", "said", "'yes'", "to", and "him." are marked with horizontal red lines, indicating a low and relatively flat pitch level for these words.

In a similar way a rising tonic syllable will condition its tail: here 'when' is the tonic syllable

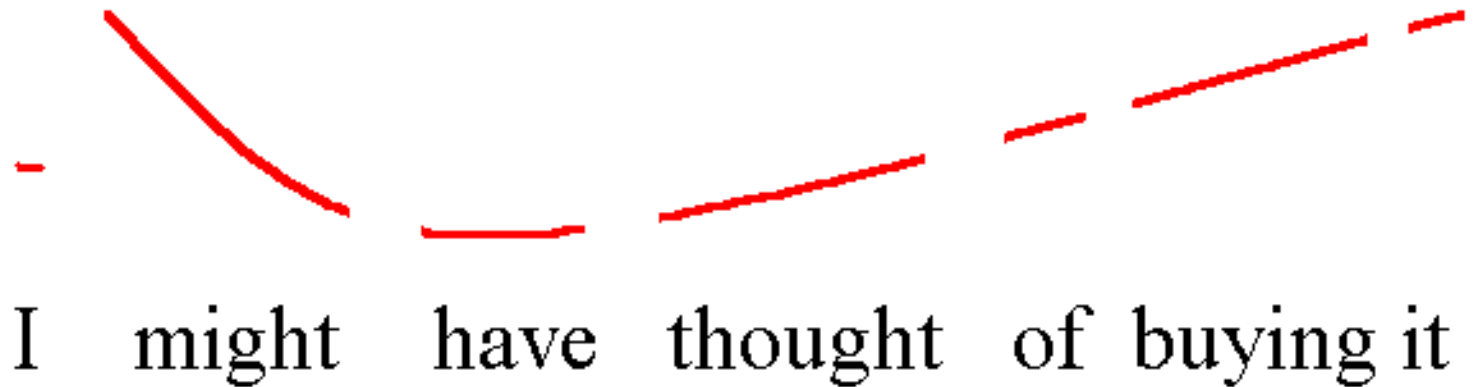


Again when we come to complex tone we find the tail following the tonic syllable: for a fall-rise the fall occurs on the tonic and the rise at the end of the tail





No matter how many syllables there are in the tail, the rise finishes on the last



While diagrams are immediate and clear, a more practical system of symbols has been developed to denote innotation

∖Fall   √Rise   √Fall-Rise   ∧Rise-Fall

Stressed syllables in the head are noted with a vertical tick

- I want to 'go to the 'dentist's.

Stressed syllables in the tail are noted with a dot

- I want to 'go to the 'dentists to.morrow .morning

## A vertical bar divides tone units

- I want to 'go to the 'dentists to.morrow .morning Ive  
got a terrible toothache

Thank you very much for your attention!!!