Theoretical Phonetics

Lecture 7
Intonation

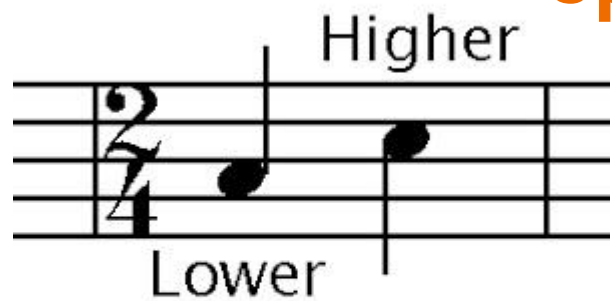# Speaking and understanding English

Grammar

Vocabulary

Ups and Downs

2 sentences

"She got a dog"

Same words...

And meanings?

1 She got a dog

2 She got a dog

- 1complete
- 2 surprise

Voice pitch

Patterns of UPS and DOWNS

Intonation

- She got a dog

Phonetics

Segmental Phonetics

-individual sounds

(i.e. "segments" of speech)

Suprasegmental Phonetics

larger units of connected speech

(syllables, words, phrases and texts)

What is Intonation?

- Part of the suprasegmental phonetics

- Pitch of the voice plays an important role

- In tone languages – difference in pitch pattern on a syllable can change the lexical meaning (Cantonese 6 tones)

e.g / si / - high pitch= silk   low pitch = time middle pitch = to try

English is an Intonation Language

Pitch is described in terms of high and low

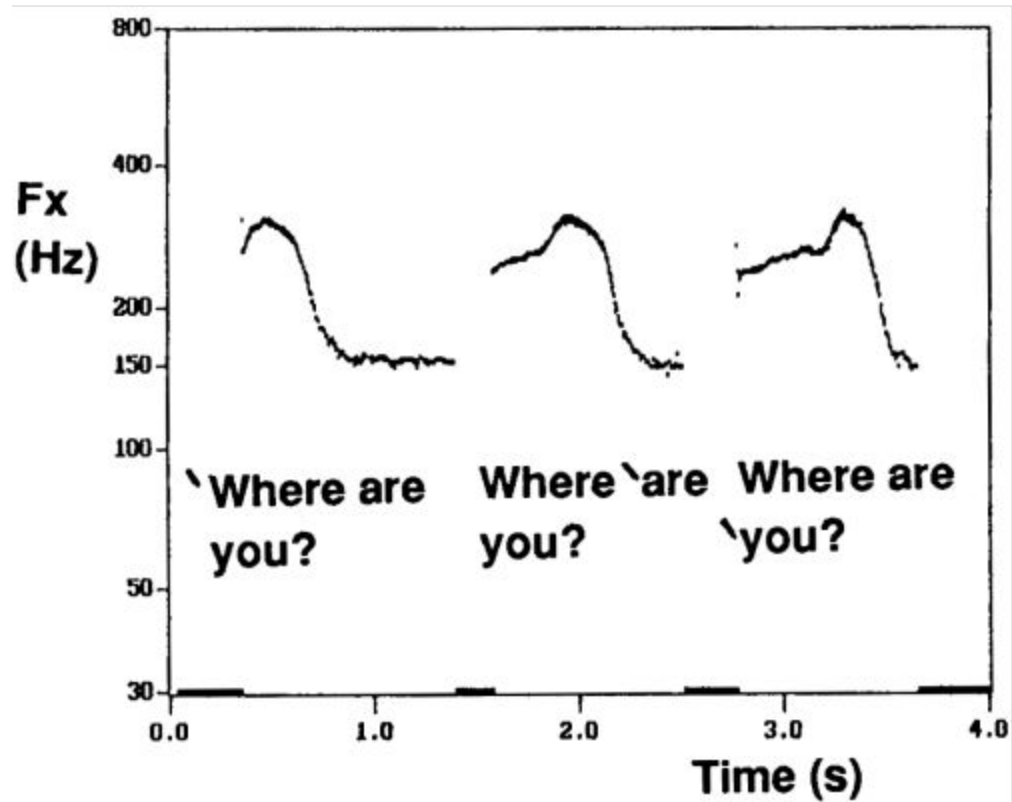Pitch refers to the auditory sensation perceived by a listener

The rate of vibration of vocal folds is called the fundamental frequency, physically measurable and related to activity on the part of the speaker (push the air through lungs, folds, change the glottal area)

Pitch is one of the earliest things that is acquired by children

A note on pitch

Word Focus

<u>Where</u> is my meeting on Friday?	I know I have a meeting on Friday, but I don't know where it is taking place.
Where is my <u>meeting</u> on Friday?	I know where other things are taking place on Friday but not the meeting.
Where is my meeting on <u>Friday</u>?	I know where the meetings are taking place on other days, just not the one on Friday.

Contrastive focus   "I wanted the RED pen not the BLUE one

Intonation

Variations which take place in the pitch of the voice in connected speech (D. Jones)

The use of pitch variation to convey meaning (P. Roach)

Intonation

Intonation is a complex unity of changes in voice pitch or tone, intensity or accent, and tempo, i.e. the rate of utterance and pausation
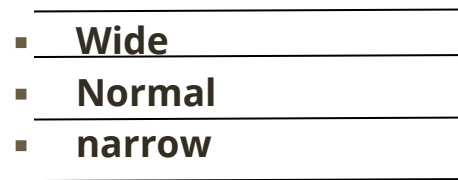
Intonation (prosody)

- Speech melody (pitch)

- Sentence-stress (accent)

- Timber (voice quality)

- Speech tempo (speed)

Pitch

- **LEVEL**

  _____

  _____
  - High

  _____
  - Medium

  _____
  - Low

- **RANGE**

  _____
  - **Wide**
  - **Normal**
  - **narrow**
  _____

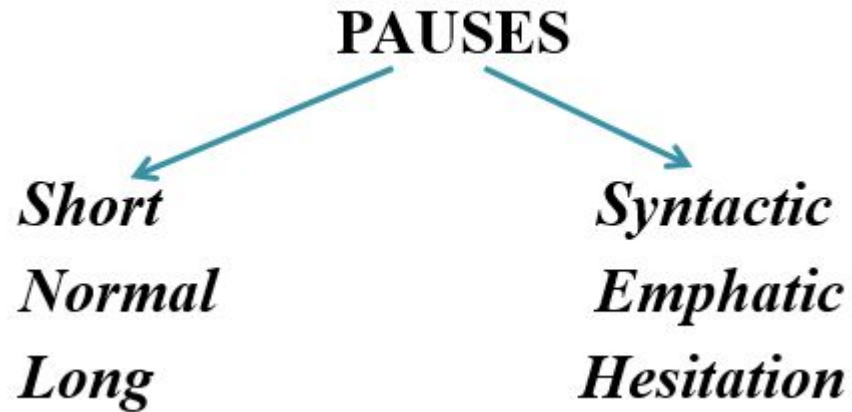# TEMPO

- The term "tempo" implies the rate of the utterance and pausation.
- The rate of speech can be **fast** (or rapid),
                                  normal (or mid),
                                  slow.

"My mother thinks him to be a common labouring boy", said Betty with a smile.

"I'm not ready," he said slowly.

PAUSE a complete stop of phonation

PAUSES

Short
Normal
Long

Syntactic
Emphatic
Hesitation

Pause

- A **syntactic** pause

    delimitates the text syntactically.

- An **emphatic** pause

    emphasizes the following part of the utterance.

She is the most _ charming girl in the group.

- A **hesitation** pause (in spontaneous speech)   serves to gain time to think over what to say next.

1.   speech sounds: *um, er*.
2.   prolonged vowels: *theee, tooo, ayyy*
3.   special phrases: *frankly speaking, let me think for a moment,*

Utterance (sentence)

- **Sentence real** = **Sentence potential + Intonation**
- **Intonation patterns** is the basic unit of intonation which is formed by pitch, loudness and tempo (stressed, unstressed syllables + nucleus)
- **Intonation group (**an actualized **syntagm)** – a group of words which is

  - semantically and syntactically complete (a meaningful unit)

  - The structure depends on the number of syllables and rhythmic groups

  - Minimally consists of one syllable which is the nucleus (Yes! No. Oh)

  - Maximally : the pre-head-the head – the nucleus – the tail

A potential and an actualized syntagm

"I think   **he is coming soon"**

a potential syntagm   **a potential syntagm**

"I think he is coming soon"

an actualized syntagm

Form and Function

- FALLING

A falling nuclear tone indicates to the listener that the phrase is complete or definite

  - She lent him her ↘CAR

  - Would you leave the ↘ROOM

  - Do be ↘QUIET

- RISING

A rising nuclear tone indicates to the listener that the phrase is open-ended or indefinite, usually inviting a response

  - She lent him her ↗CAR (really?)

  - Would you leave the ↗ROOM (polite request)

  - Do be ↗QUIET (lack of authority)

Form and Function

- FALLING

A falling nuclear tone indicates to the listener that the phrase is complete or definite   (Starts relatively high and ends low)

- In categoric statement
- Special question WH
- Commands
- Exclamations
- Offers

- RISING

A rising nuclear tone indicates to the listener that the phrase is open-ended or indefinite, usually inviting a response

- Non-Categoric statements
- General questions
- Requests
- Enumeration
- Non-final sense-groups
- Enlisting
- Echoing questions

Examples (rise)

A: Excuse me.

B: ´yes

A: Do you know John Smith?

B: ´yes

- Invites A to continue

B: `yes

- This makes it difficult for A to continue

Examples (rise)

A: Have you seen Ann?
B: ´no

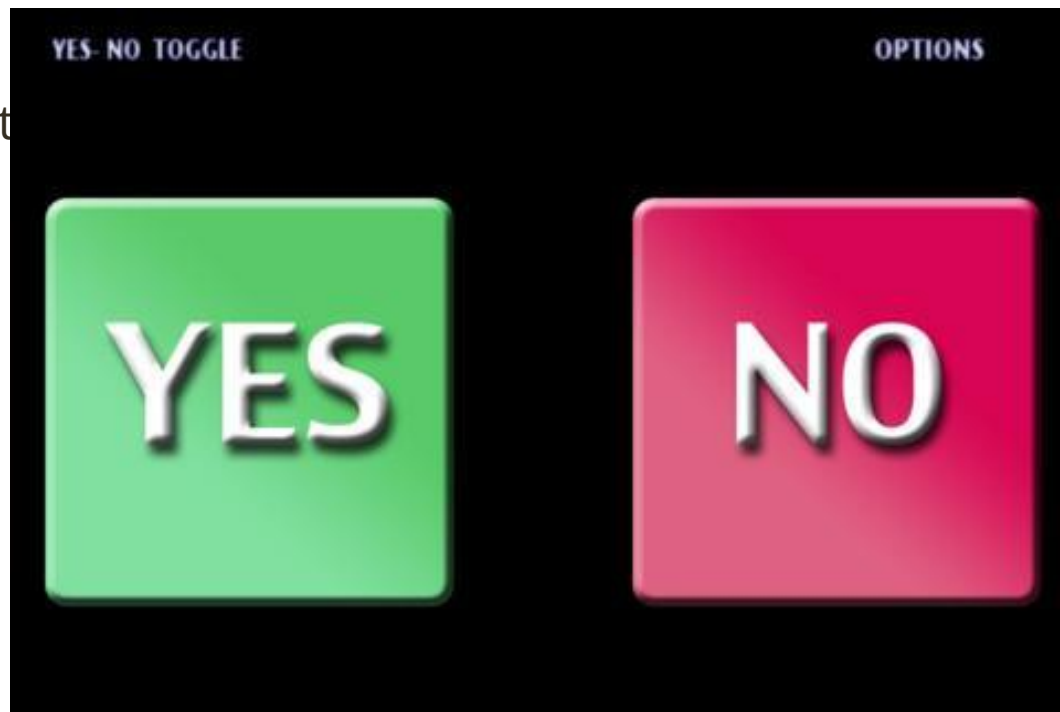- Implies B is interested in the whereabouts of Ann

B: `no

- Implies B has no interest in Ann's whereabouts

Using changes in intonation only

How many different ways can you say these two words?

- Emphasis
- Low pitch range

Types of nuclear tones (tone syllable)

Simple tunes

Low Fall - **Yes**　　　　Low Rise - **Yes** ╱

High Fall　**Yes**　High Rise - **Yes** ╱

Mid Level

Complex tunes

ᵛFall-Rise – **ᵛ Yes**

^Rise-Fall - **^Yes**

Rise-Fall-Rise -

Compound tunes

╱Rise + Fall

╲ Fall + Rise

Fall-Rise (highly implicatory tone)

- Common to British English
- Starts high and ends high
- Indicated given information or common ground

e. g. *He is ˎthirty. – He is ˎthirty-ˏfive* (a mild correction).
We'll ˎgo there.–- You ˎˏ shan't. (a contradiction).
I must be on ˎtime. – ˎYou'll be ˏlate (a warning).
It's all so ˎawful. – ˎCheer ˏup. (pleading).
Goodnight, Betty. – ˎGood ˏnight, Mrs. Sandford. (friendly).

Examples (fall-rise)

A: Do you think this is a good idea?
B: ˇyes

- Means B doesn't think it's a completely good idea

A: This outfit isn't very expensive ...
B: ˇno

The Rise-Fall

- Sarcastic and rude

Are you sure? – ⌃⌄Yes.

You aren't ⌃⌄*trying.* (You aren't *even* trying).

Don't treat me like a baby. – *Be* ⌃⌄*sensible then.*

Has he proposed to her? - *Why should you* ⌃⌄*worry about it?*

Did you like it? – *I simply* ⌃⌄*hated it.*

I'm awfully sorry. – *No* ⌃⌄*doubt.* (But it's too late for apologies).

Mid-level tone

Couldn't you help me ? >At present | I'm too busy.
What did Tom say? >Naturally, | he was delighted.

High Rise

You ⟋like it !

Compare:
He's ᴵhardly ᴵhurt at ₎all. *(a reassuring statement)*
He's ᴵhardly ᴵhurt at 'all? *(an echoed statement = a question)* (ᴵWho ₎says it?)

High Fall   personal concern, interest and warmth

e.g Iᴵhear you've bought à house.

Is it ⸝you

- Three syllable utterance
- The third syllable more prominent, and carries the rising tone
- The other two syllables are less prominent (length, loudness)

ˇ

John is it ⸝you

- There are two tonic units (intonation groups) because there are two tonic syllable's (nuclei)
- Fall-rise is a common "calling" tone
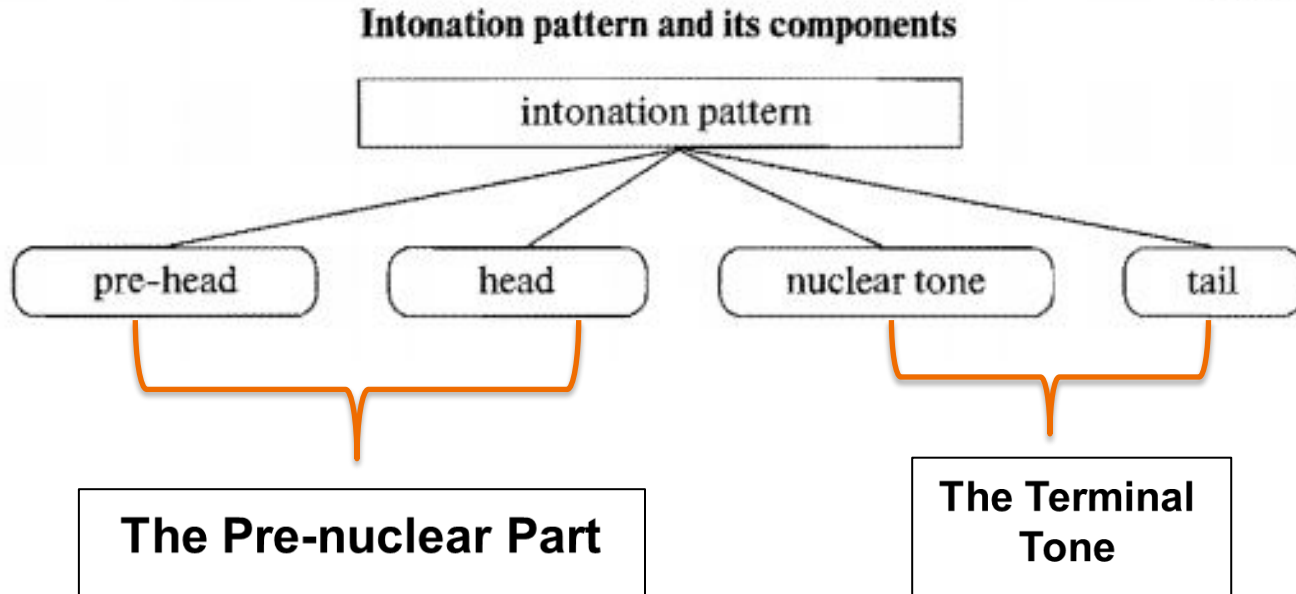
Tone Unit = intonation group = sense group

Intonation group (an actualized **syntagm)** – a group of words which is

- semantically and syntactically complete (a meaningful unit)

- The structure depends on the number of syllables and rhythmic groups

- Minimally consists of one syllable which is the nucleus (Yes! No. Oh)

- Maximally : the pre-head-the head – the nucleus – the tail

Intonation pattern is the basic unit of intonation which is formed by pitch, loudness and tempo (stressed, unstressed syllables + nucleus)

Pitch-and-stress structure of the intonation pattern (or pitch-sentence stress pattern)

Figure 10

Intonation pattern and its components

intonation pattern

pre-head head nuclear tone tail

The Pre-nuclear Part

The Terminal Tone

The head

- All syllables **from the first stressed syllable** up to (but not including) the `TS
  - 'john said `yes
- `yes is tonic
- 'john said is the head
- If there is no stressed syllable before the TS, there is no head

The head

- More examples:
  - 'mary and 'john said `yes
- 'mary and 'john said is the head
  - 'bill 'called to 'give you `these
- 'bill 'called to 'give you is the head

The pre-head Pre-

- All the unstressed syllables preceding the first stressed syllable
- Can occur on its own ...
  - in an `hour
- ... where the TS is the first stressed syllable in the TU and in an is the pre-head ...
- ... or before a head
  - in a 'little 'less than an `hour

The tail

- All syllables between the TS and the end of the TU
  - `yes
  - `yesterday
  - `yesterdays news

- To mark stress for rhythm in the tail, a small raised dot is used
  - `yesterdays •news

Pitch-and-stress structure of the intonation pattern
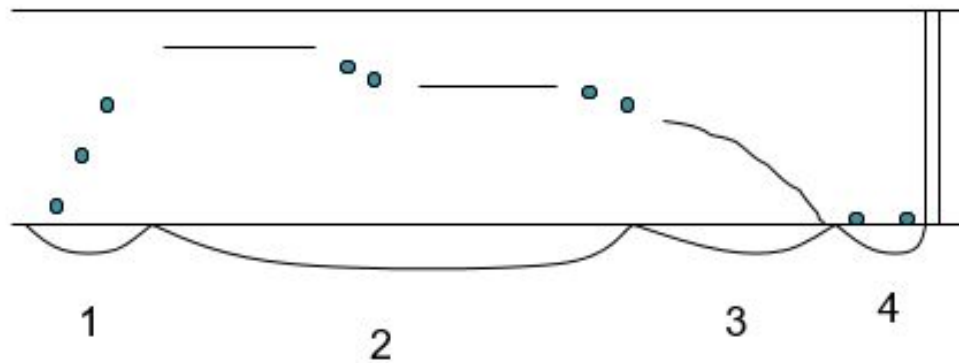
He is a very remarkable novelist.

Peter Roach

|| and then 'nearer to the ˅<u>front</u> || on the ⁄<u>left</u> | theres a 'bit of ⟍<u>forest</u> | 'coming 'down to the ⟍<u>waterside</u> || and then a 'bit of a ⁄<u>bay</u> ||

PH	H	TS	PH	TS	PH
and then	'nearer to the	˅<u>front</u>	on the	⁄<u>left</u>	theres a

H	TS	T	H	TS	T
'bit of	⟍<u>for</u>	est	'coming 'down to the	⟍<u>wa</u>	terside

PH	H	TS
and then a	'bit of a	⁄<u>bay</u>

Fall

- The TS **may be** the highest point in the utterance (if a high fall)
- It is necessary to be high/mid to go down
  - Some falling tones begin quite low, however
- Pitch movement is completed over the tail of the TU

Rise

- The TS is often the lowest point in the utterance
  - **BUT** a high rise will go from the middle of the speaker's pitch range to high
- It is necessary to be down to go up!
- Pitch movement is completed over the tail of the TU

Types of heads convey different attitudinal meaning

Descending

Stepping : conveys the impression of the balanced, active, mood of the speaker

Falling

Scandent

Sliding: excited state of mind

Ascending

Rising

Climbing

Level

High

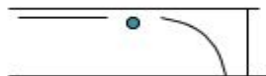Medium

Low : cool, indifferent, hostile

Combinations

Not at all! 🔊

High Head +
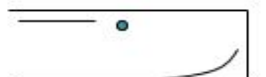
- Low Fall — calm, reserved — *Not at ˌall.*
- High Fall — surprised, concerned — *→Not at ˋall.*
- Low Rise — encouraging, very friendly — *→Not at ˌall.*
- High Rise — questioning — *→Not at ˈall.*
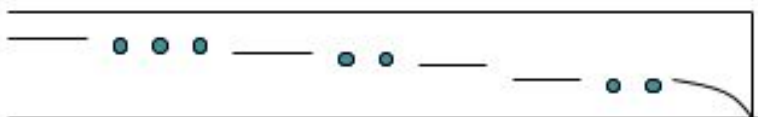- Fall-Rise — protesting, correcting — *→Not at ˇall.*

Descending heads

1. Falling

What did you think of Mary's flat?

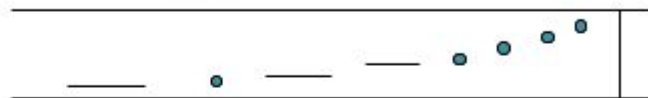2. Stepping

Alice was beginning to get very tired.

3. Sliding

I'll get it rewired at once.

Ascending heads

1. Rising

Did you tell Vincent about it?

Thank you very much!

2. Climbing

"That is too bad," said the professor.

Level Heads

1. Low   All right!

2. High   Who ever saw …

3. Medium

What's your favourite colour?

Functions

- **Syntactically distinctive function:**

She ˈwashed and ˌdressed her ˌbaby. (1)

She ˌwashed ˌand ˌdressed her ˌbaby. (2)

i) 'Those who 'sold ᵛquickly | ˌmade a ˎprofit

ii) 'Those who ᵛsold | ˌquickly ˌmade a ˎprofit

---   The meaning is different.

Semantically distinctive function

I don't give my books to anybody.

- ˌanybody (= to nobody)
- ˌanyˌbody (= to those whom I don't know)

FOCUSING

- I saw a ↘man in the garden. ("Whom did you see?")

While

- I ↘saw a man in the garden. ("Did you hear a man in the garden?")

Attitudinally distinctive function

→Will you be ˎquiet. (order)

→Will you be ˏquiet.   (request)

The pitch differentiates the meaning.

ˎWhy? (no interest, detached)

ˏWhy? (interest, sympathy)

ˋWhy? (much concern)

ˇWhy? (concerned, hurt)

The pitch differentiates the attitudinal meaning.

Functions

- **Phsychological**

"You can have it in red blue green yellow or ↘black"
You can have it in ↗red | ↗blue | ↗green | ↗yellow | or ↘black"

- **indexical function**

acts as a marker of personal or social identity

The communicative types of sentences:

➤ Statements: * *I like music.*

➤ Questions: * *Can you prove it?*

➤ Imperative sentences or commands: * *Try it again.*

➤ Exclamations: * *Right you are!*

a) *Isn't it wonderful!* (a general question)

b) *Isn't it wonderful!* (an exclamation)

Function	Communicative task	Typical intonation pattern	Example
statement	convey information	low falling	it's ˌraining.
binary question	answer yes/no, agree/disagree, true/false	low rising	it's ˌraining?
wh-question	ask for specific information	high falling	who are ˋyou?
alternatives-question	choose from list	rising on first item, falling on last item	ˌred, green and ˎblue.
exclamation	emphatic statement	high falling	it's ˋraining!
conditional statement	agree but with conditions	falling-rising	I ˇwill (but)
challenge	express certainty	rising-falling	I've told you beˆfore.