# Suprasegmentals: Intonation

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### What is intonation?

- Pitch variation.
- Doesn't affect individual word-meaning, unlike Chinese.
- But may change the meaning of the entire utterance.



## Intonation: An Italian example

#### Fa freddo:

• Falling intoation: *It is cold* 

Rising intonation: Is it cold?

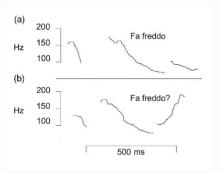


Figure 1: Fundamental frequency for Italian "Fa freddo" and "Fa freddo?".



## Intonational phrases

- Chunks of words of a sentence.
- Unique intonation property.
- IPs make a sentence manageable to say.



## Same sentence, different IP

#### Speaker 1

 It was a windy day || and the child went out || to fly a kite || but she was out of luck that afternoon || as it started to rain cats and dogs || not too late after she was beginning to have fun.

#### Speaker 2

It was a windy day || and the child || went out to fly a kite || but she was out of luck that afternoon || as it started to rain || cats and dogs || not too late || after she was beginning to have fun.



## IP for disambiguation

- Those who spoke || quickly got an angry response.
- Those who spoke quickly || got an angry response.
- Old men and women.
- Old men || and women.



## What marks an intonation?

- Change in pitch.
- Change in fundamental frequency

### Fundamental frequency $(f_o)$ of phonation

The number of times the vocal folds vibrate — they are blown apart and come together — per second.

