LCS

S1

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Phonology

- **Phonology** is the study of:
  - **(1)** how the speech sounds of a language are used in that language to **distinguish meaningfu**l units (words) from each other,

- **Phonology** is the study of:
- **(2)** how **sounds are patterned in a language**.
  - It describes the relationships they contract with each other, and the various systems and patterns they constitute.

Phonology

- Phonlogy is concerned with the **mental or abstract aspect of sounds in a languages** rather than their physical actual articulation. (Yule, 1996)

The minimal unit in phonology is the phoneme

- All sounds in a language can be grouped together into **abstract units called phonemes**.
  - Phonemes are **abstractions** that can be perceived ONLY when one of their members is pronounced.
- The phonemes of the language constitute the **psychological, cognitive** image, or **underlying deep structure of the sound system** of a language.

Phoneme

- **Phoneme is** the minimal **distinctive** (**contrastive**) sound unit.
  - e.g. /z/ and /s/ are phonemes of English since they are responsible for the **difference in meaning** between:

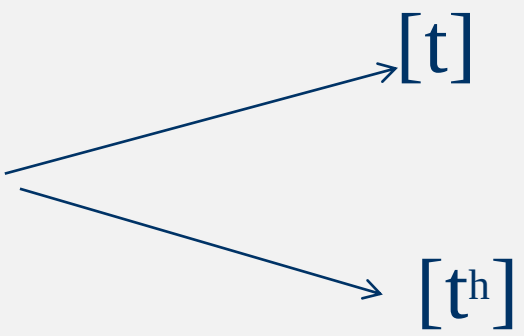
    ‘zip’ /zɪp/ vs. ‘sip’ /sɪp/

    ‘buzz’ /b ʌ z/ vs. ‘bus’ /b ʌ s/

Phonemes are used to **differentiate words**: *Substituting one phoneme for another will result in a word with a different meaning.*

Phoneme

- Phonemes are **abstract**
- **Each phoneme consists of one or more allophones**, or physical variants (the actual phones of the language).
- /t/



Allophones

- The prefix "**allo-" means one of a closely related set. The allophone is ONE of several similar sounds.**
- **Allophones are vers*ions of one phoneme*.** *They are **realizations (or variants***) of a phoneme.

Allophones

- Allophones are **contextually determined** variants of a phoneme.
- Allophones are **not contrastive** (make no difference in meaning).

Phonemic/tic Transcription

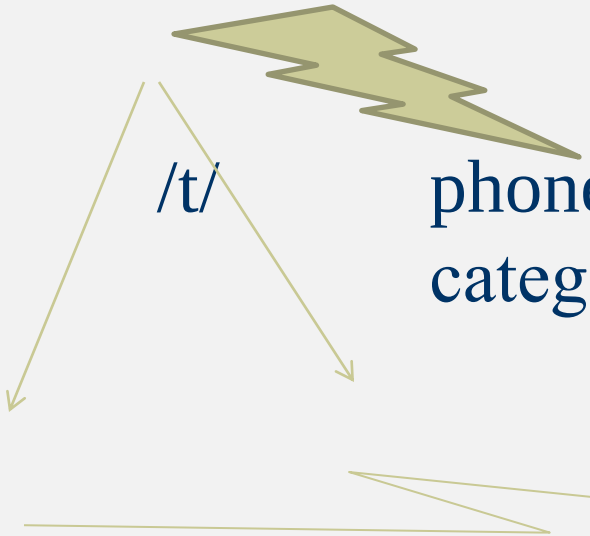
- **Phonetic** (allophonic) transcription is written in brackets [ ]
- **Phonemic transcription** transcribes phonemes in a broad sense. Phonemic transcription is written in slashes **/ /**

Phoneme ↔ Allophone

- Allophones differ in terms of only one single phonetic feature, as is the case with the two English variants of

  /p/: [p] & [p^h]

Phonemes & Allophones



/t/

phonemic (**abstract/mental**) category in speaker's mind

[t] [t^h]

allophonic (phonetic) variants, **actual, physical realizations**

Minimal pairs

Minimal pairs

- **Minimal pair:** two words (with different meanings) that are phonetically the same (same sounds + same order) except for one sound in question.
  - [pæd] [bæd] ***minimal pair***
  - Mean different things: /p/ and /b/ contrast
  - [p^hæt] [pæt] ***not minimal pair***
  - Mean the same thing: [p] and [p^h] do not contrast

Minimal set

- **A minimal set includes more than two similar words.** [pæt], [bæt], [sæt], [fæt], [mæt]
- Is *try*, *cry*, *fry* a minimal set????

The Minimal pair test

- ***The minimal pair test*** *helps us discover which sounds have a contrastive value in a given language.*
- To demonstrate that two phones constitute two separate phonemes in the language, we use the minimal par test.
- Through inserting **[æ, ɒ, ɪ, ʊ]** in the environment given, you'll decide whether they are phonemes in the English language or not.
  - /p—t/ , /pæt/, /pɒt/, /pɪt/, /pʊt/
  - /k—t/, /kɪt/, /kɒt/, /kæt/,/kʌt/
  - These are called **Minimal sets** because they are made up of more than two words each.

Minimal pairs

- Decide whether these are minimal pairs in English or not:
  - Cat - bat
  - Wide - wise
  - Base – phase
  - Way- weight
  - Ride – road
  - Lime - rhyme
  - Kite - night
  - Maid - made
  - Caught - cot
  - Wise - rice
  - Look- leap
  - Spring- string
  - Rot-rap
  - Teach-peach
  - Team- beam
  - Dumb- come
  - Toast-ghost
  - Tie-guy
  - May- maid
  - Purse-verse
  - Pine-vine
  - Toffee-coffee
  - Cheap- joke
  - Late-name
  - Take,- eight
  - Let- get
  - Pen-best

Sounds in context

Sounds in context

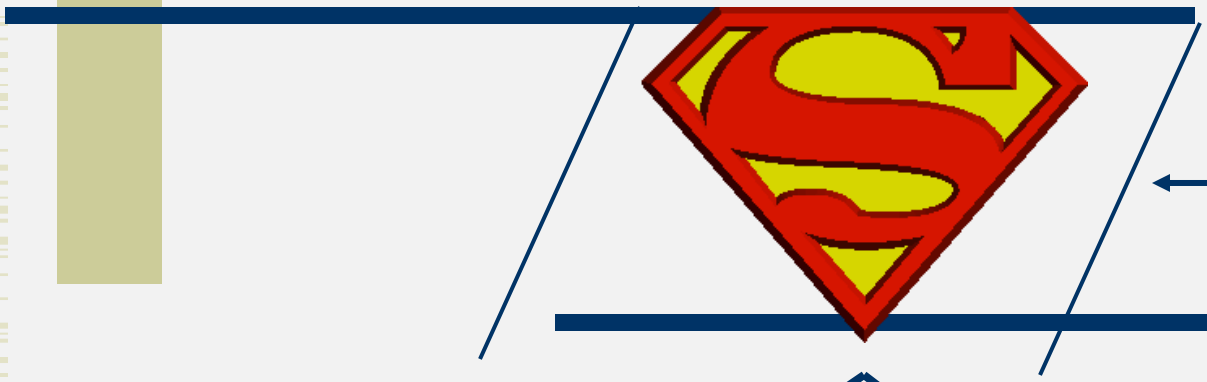
- The pronunciation of a phoneme is often determined by its nearby sounds (the ***environment*** of that phoneme). The environment for [æ] in the word [kæt] is [k—t]
- In **English** all voiceless stops are **aspirated word initially.**
  - [t^h] *tall*, *take*, *team*
  - [t] stream, last, asteroid

Allophones can be either in **Complementary Distribution or in Free Variation**

Complementary Distribution

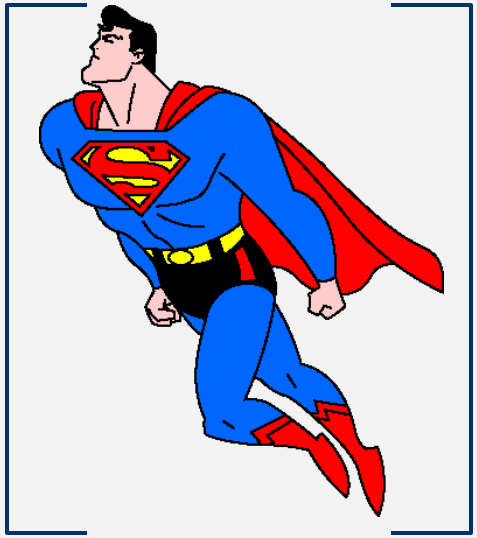
Complementary Distribution

- [p^h] and [p] are in ***complementary distribution***. They are **mutually exclusive**: they appear in ***different environments.***
- When sounds are in complementary distribution, **their environments are predictable.**
  - [spæt] [p^hæt] *[sp^{h}æt] *[pæt]
  - The aspirated [p^h] happens word initially where the non aspirated one does not.

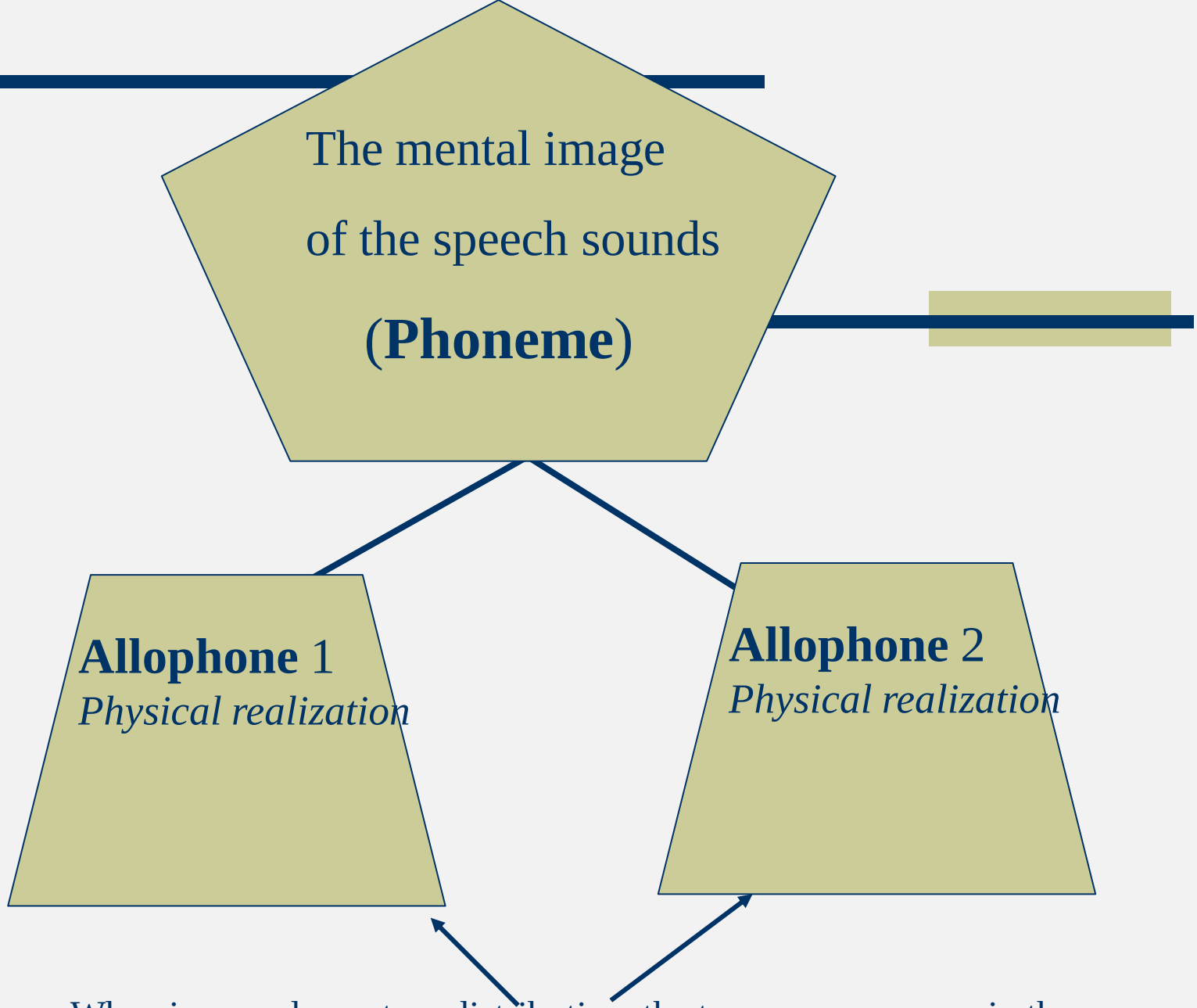


The mental concept of "supermanhood"

(**phoneme**)



In complementary distribution: never seen in the same place at the same time. **Allophones**!



When in complementary distribution, the two are never seen in the same place at the same time. **Allophones**!

Complementary Distribution: Examples

/l/ In RP

[l] (clear)

Before V

[ɬ] (**velarized**)

after V

1. before C

before a pause

Complementary Distribution: Examples

The vowels of *sit and sin differ phonetically: that of sit sin is* ***nasalized,*** *represented by* ***[ĩ]***

/ɪ/

[ɪ]

Elsewhere

[ĩ]

before nasal C

Free Variation

Free Variation

- If variation is **not associated with positioning**, and is rather **unpredictable,** we talk about **free variation or random variation** .

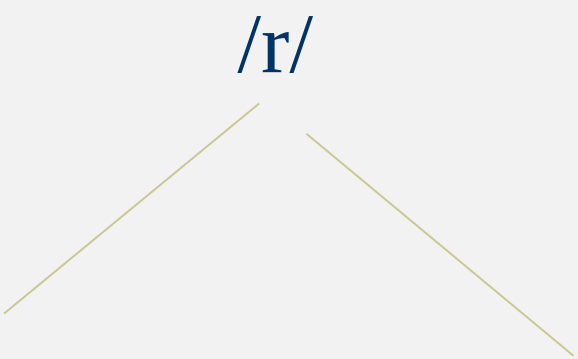
Free Variation

- Allophones of the same phoneme can be in **free variation** when they **can co-occur**. These sounds occur in **contrastive distribution without causing any change in meaning.**

Free Variation

- When a sound said to belong to one phoneme can replace a sound said to belong to another phoneme without any change in meaning we call the phenomenon free variation: /**e**/ vs. /**eɪ**/ in [**əgen**] vs. [**əgeɪn**]

- In Scottish English, speakers may produce a *tap* allophone [ɾ] in ***very***, and on other occasions, an *approximant*.



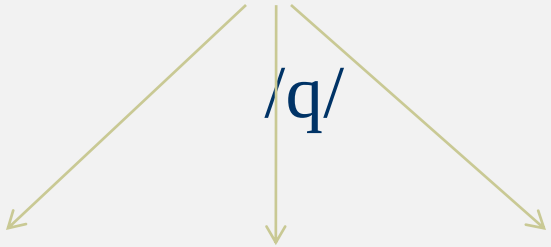
Tap approximant

Free Variation: Examples

- If a person pronounces the word *rock* as either **[r̲ɒ k]** or **[ɹ̲ɒ k],** then we talk about free variation.
- Another example:
  - /i:/ and /e/ in the respective pronunciations of economics:

    [i̲:kənɒmɪks] [**e̲kənɑmɪks**];

Free Variation: Examples



[g] [q] [ʔ]

[q], [g] &[ʔ] are allophones in free variation in MA

Phonology vs Phonetics: Recap

Phonetics & Phonology (in sum)

PHONETICS	PHONOLOGY
Universal/ General	language specific
The basis for phonological analysis	basis for morpho, syntactic,… analyses
Descriptive & classsificatory	prescriptive
Experimental science	soft science
Belongs to science depts	belongs to Humanities
Minimal unit: phone	minimal unit: phoneme
Sounds in isolation	sounds in contact
Sounds as physical entities	abstract entities
Narrow transcription	Broad transcription
Nature	function