

# Phonology I

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Week 3

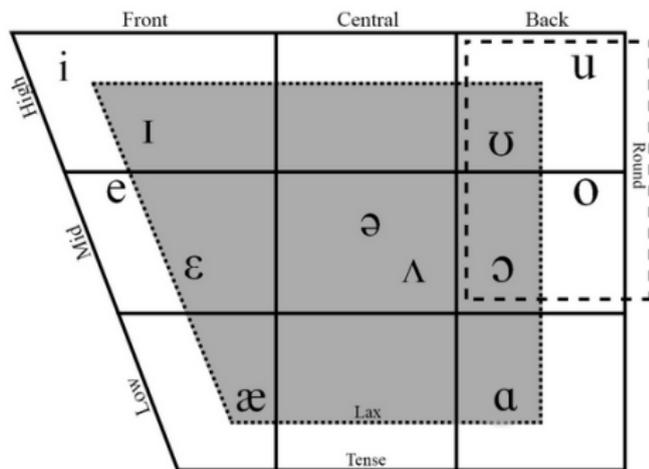
04.11.22

LING 20001: Introduction to Linguistics

# Recap: English vowels

bet  
but  
bit  
boot  
bat  
bot  
bought  
beat

boat  
bout  
bait  
bite



# Recap: English vowels

bet [ɛ]

but

bit

boot

bat

bot

bought

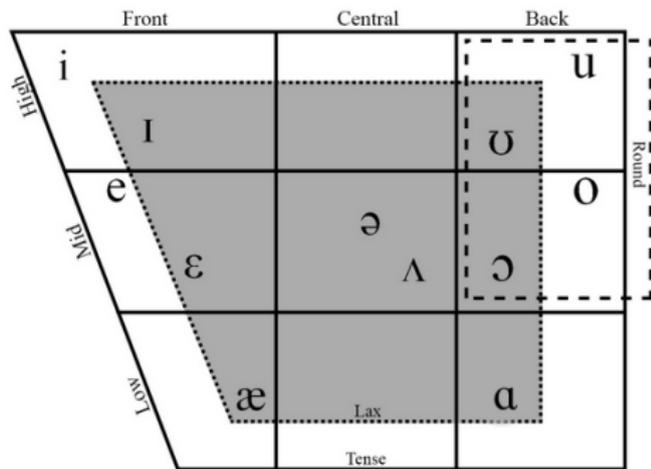
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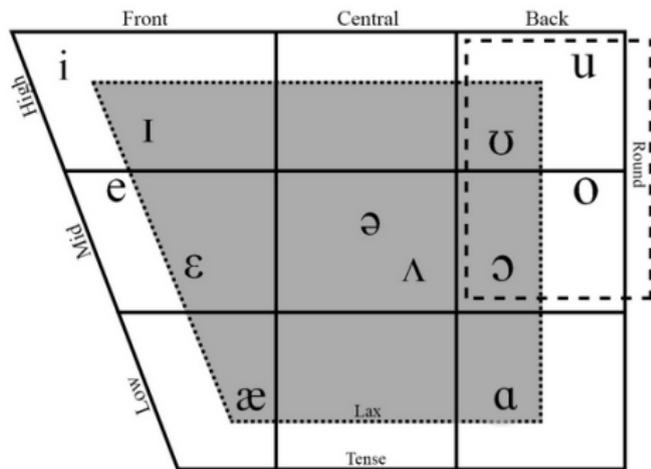
beat

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bout

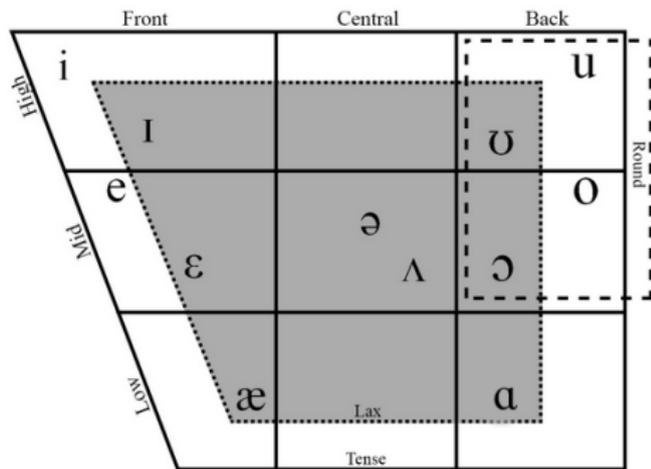
bait

bite



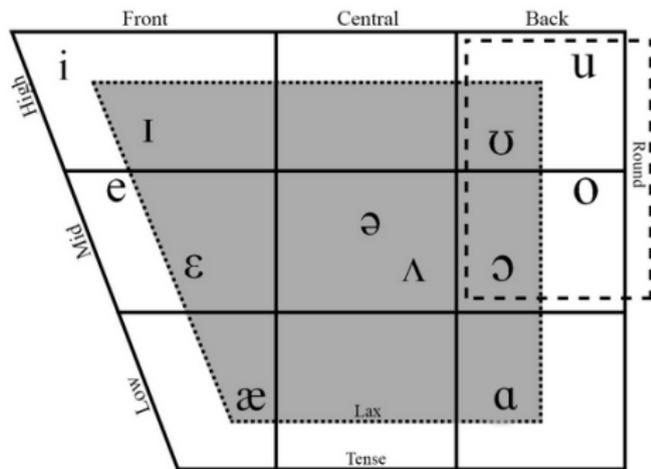
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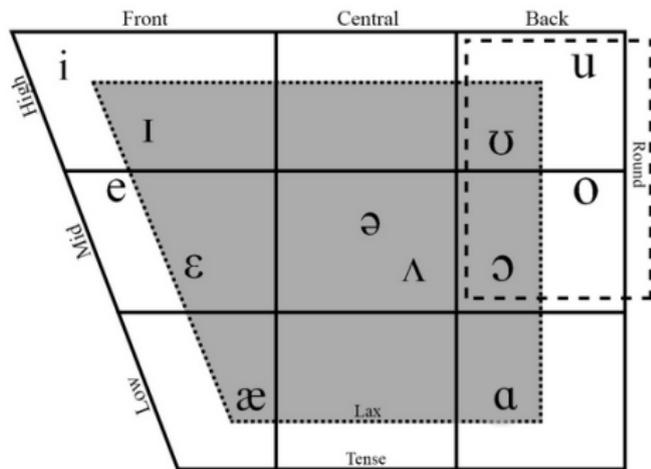
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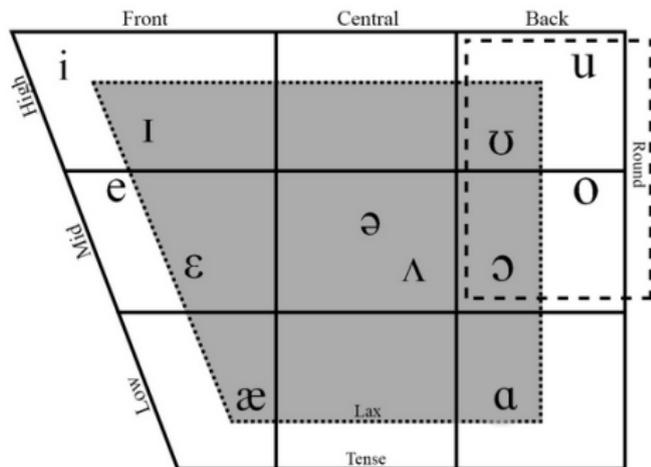
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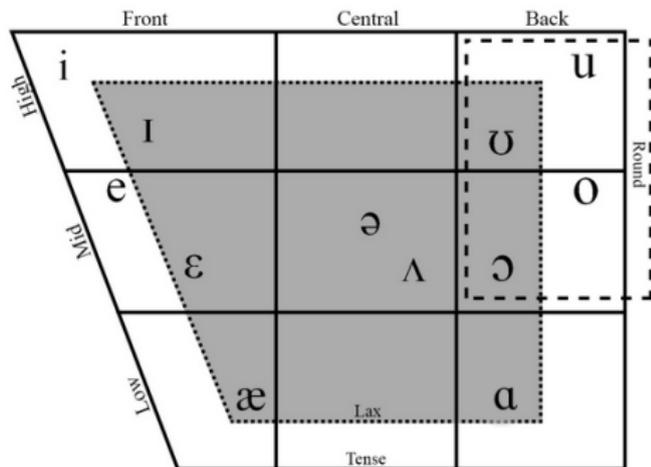
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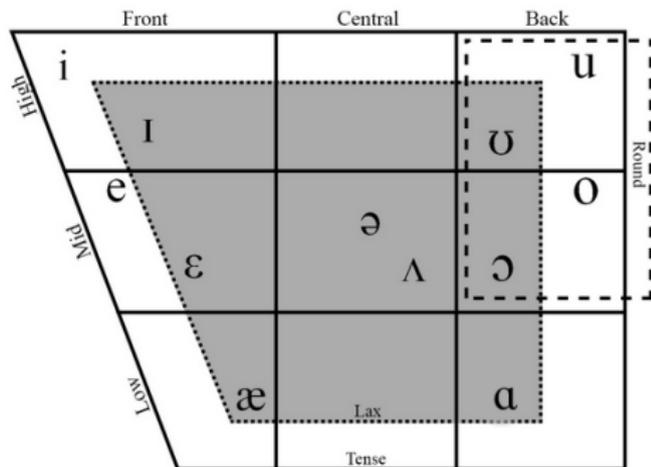
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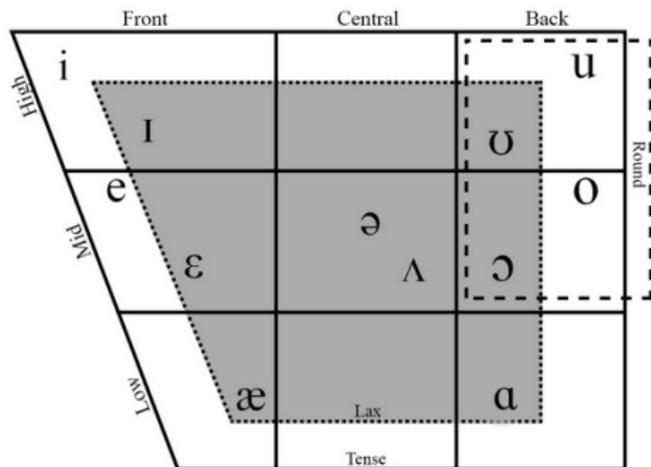
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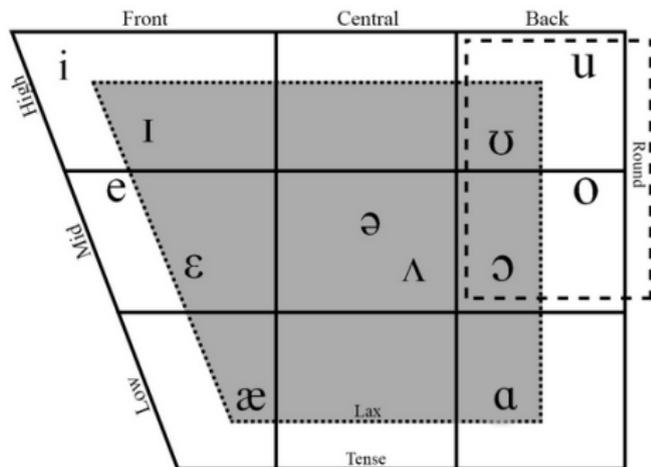
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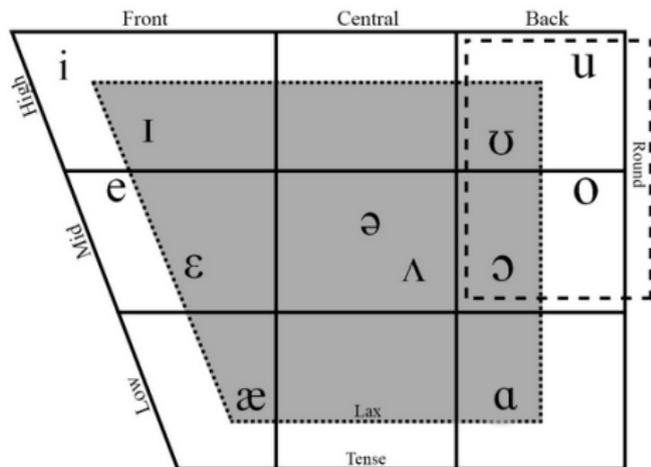
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# Minimal pairs

'beat' [bit]

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Two words which differ by at most one sound and have distinct meanings

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If the switching out two sounds in a word forms a minimal pair, then we call them **phonemes**.

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- Vowel preceding a nasal stop are nasalized: [ɪ̃]
- What is the status of the difference between [n̪] and [n̩], or [t<sup>h</sup>] and [t]?
- Are these sounds also phonemes?

# Allophones

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[p <sup>h</sup> aʊ.ɹ̩]	'power'	[spaʊs]	'spouse'	[t.ɹɪp]	'trip'
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- Given this predictability, we assume that they are actually different surface forms of the same underlying sound.

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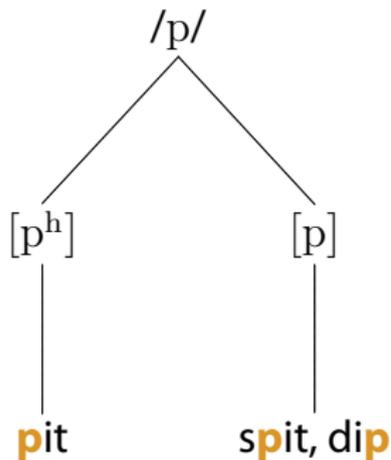
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**underlying representation** →  
(phoneme)

**surface representation** →  
(allophones)



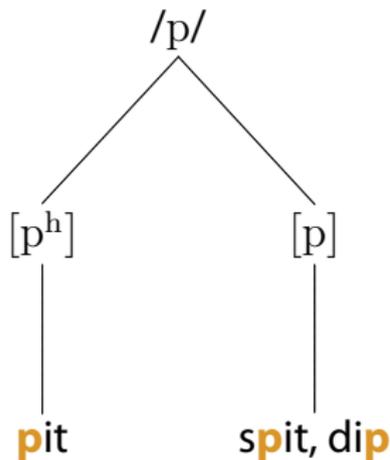
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**underlying representation** →  
(phoneme)

**surface representation** →  
(allophones)



**Conditioning environment:** [pʰ] at beginning of a stressed syllable, [p] in the middle and at the end of a word (everywhere else).

# Conditioned variation: allophones

0 C



50 C



100 C



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- The **substance** (H<sub>2</sub>O) is the same in all three cases...
- The **form** varies predictably by context.
- Much like H<sub>2</sub>O, phonemes can take on different forms in different contexts

# Allophones of /b/

For some sounds, the phonemic and surface representation will be the same (sounds with just one allophone):

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**underlying  
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(phoneme)

/b/

**surface  
representation** →  
(allophones)

[b]

**bit**

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When two sounds are in ...

- **contrastive** distribution, they are **phonemes**

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  - ★ They form minimal pairs
  - ★ Their distribution is unpredictable
  
- **complementary** distribution, they are **allophones**
  - ★ They do not form minimal pairs
  - ★ Their distribution is predictable

What about [h] and [ŋ]: phonemes or allophones?

[hɑp]	'hop'	[b.ɪŋ]	'bring'
[əhoɪ]	'ahoy'	[slæŋ]	'slang'
[hu]	'who'	[sɪŋ <sup>h</sup> ]	'single'
[hɪdŋ]	'hidden'	[strɔŋ]	'strong'

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- An additional criterion for allophone status is therefore **phonetic similarity**.