

## SPPA 2220 Child Speech Sound Disorders

<http://academic.mu.edu/sppa/slong/sppa2220.htm>

## Language versus speech

- language
  - the systematic, conventional use of sounds, signs, or written symbols in a human society for communication and self-expression
  - an arbitrary system of signs or symbols used according to prescribed rules to convey meaning within a linguistic community [Kent]
- speech
  - the *oral* medium of transmission for language
  - a system that relates meaning with sound [Kent]

## Transcription terminology

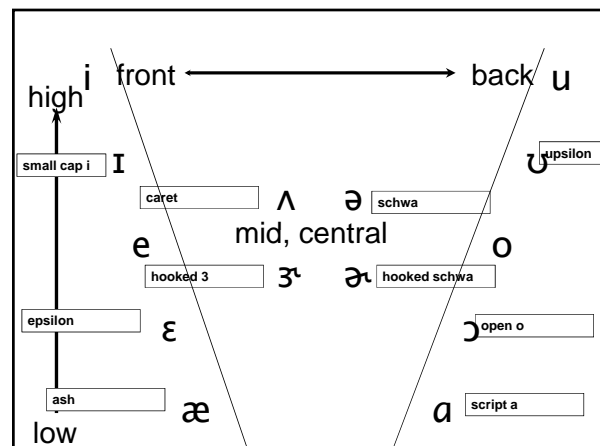
- phonetic symbol            sæntə
- diacritic (mark)            sæntə̥
- phonemic (broad) transcription
- phonetic (narrow) transcription

## Use of diacritics

- use them only when needed
- use them only to mark what is different from expectations
- use them only to mark inconsistencies in production

## Sounds and sound contrasts

- phone
  - the smallest *perceptible* segment of speech sound
- phoneme
  - the smallest *contrastive* unit in the sound system of a language
- allophone
  - one of the sound variants within a phoneme class, often used in a specified phonetic context



i	ə schwa	u
ɪ small cap i	ʌ caret	ʊ upsilon
e	ɚ hooked schwa	o
ɛ epsilon	ɜ hooked 3	ɔ open o
æ ash		ɑ script a

### Phonemic diphthongs

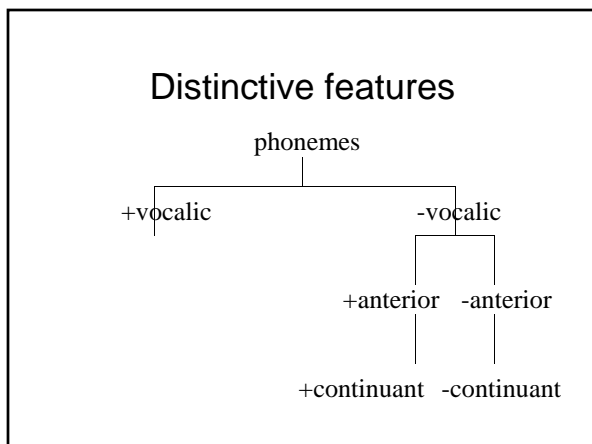
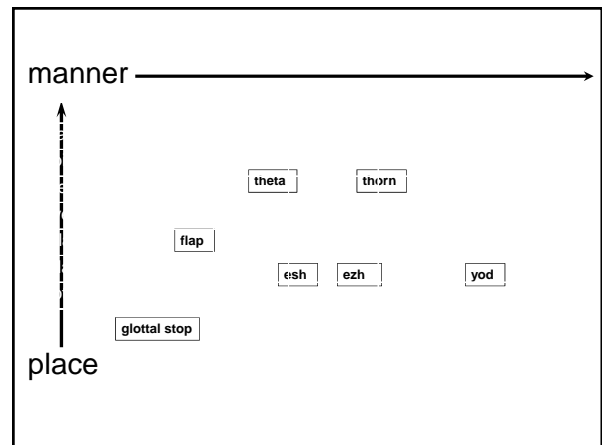
- $\overline{aɪ}$
- $\overline{ɔɪ}$
- $\overline{aʊ}$

### Allophonic diphthongs

- $\overline{oʊ}$
- $\overline{ɛɪ}$

### Coarticulatory effects on vowel production

- nasalization
  - man [mæ̃n]
  - mad [mæ̃d]
- reduction
  - medicine ['mɛdəsɪn]
  - medicinal [mɛ'dɪsənəl]



### Terms to identify like sounds

- *homorganic*: sounds with identical place of articulation
  - [t] and [d] (alveolar)
- *homotypic*: sounds with identical manner of articulation
  - [f] and [s] (fricative)
- *cognates*: sounds with identical place and manner but different voicing
  - [k] and [g] (velar stops)

## Syllables

- each syllable must contain a **vowel nucleus**
- with vowel reduction, **syllabic consonants** may occur (especially with liquids and nasals)

## Word shapes

- VC (vowel initial)
- CV (open syllable with initial singleton)
- CVC (closed syllable with singletons)
- CC(C)V (open syllable with initial cluster)
- VCC(C) (vowel initial with final cluster)
- C(C)(C)VC(C)(C) (closed syllable with initial cluster, final cluster, or both)
- 2 syllable
- 3+ syllable

## metrical concepts

- weak vowels  
ə ɪ ə
- strong vowels  
i ɪ e ε æ u ʊ o ɔ ɑ ʌ ɜ
- metrical strength  
S strong primary stress  
s strong secondary stress  
w weak
- trochaic bias in English

## metrical patterns

- S cup, mouth, snake, hit
  - Ss bathtub, yellow, airplane
  - Sw wagon, table, ladder
  - Sws telephone, Santa Claus
  - Ssw television, caterpillar
  - wS again, below, today
  - wSw pajamas
- } trochaic
- } iambic

## 3 populations of childhood speech disorders

- residual errors
  - do not reflect phonological deficits
  - do not affect intelligibility
  - are not greatly stigmatized
  - are viewed as low priority for funded service

- speech delay
  - phonological deficits affect speech *and* literacy
  - phonological deficits associated with other cognitive-linguistic deficits
  - reduced intelligibility
  - short-term (75%) and long-term normalization

- special populations
  - speech-hearing mechanism
  - cognitive-linguistic processes
  - psychosocial processes