

Phonetics II

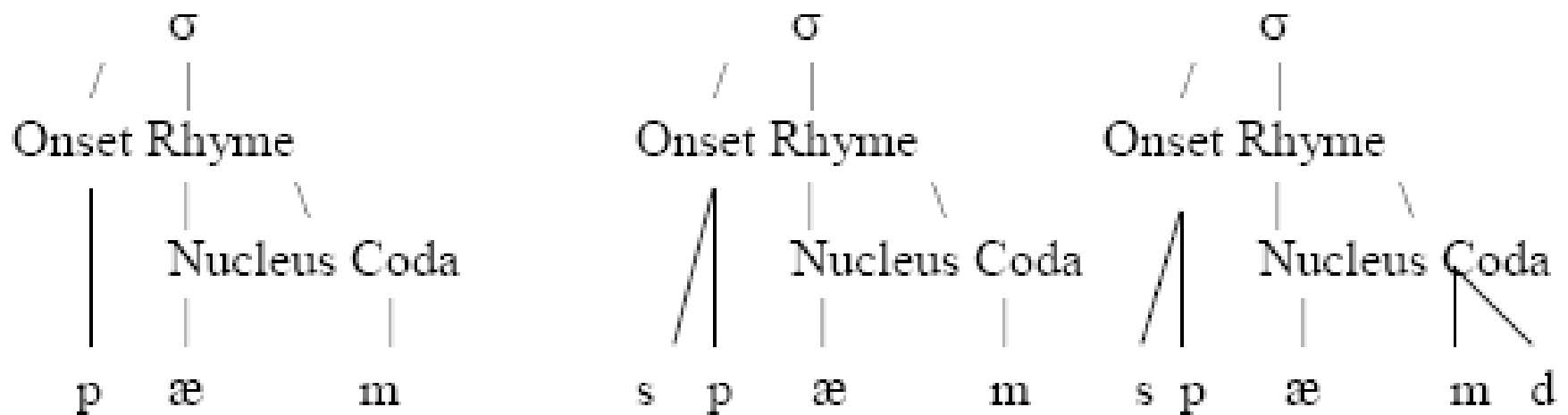
Syllable

Review from the fall

- What do we know about the syllable?
 - We know how to count them
 - Recall *nitriansky*, *extrasyllabicity*
 - But only in your native language!
 - *ski* is 1 syllable for English speakers but 2 syllables for Japanese speakers (Beckman 1996). This is because Japanese has predominantly CVCV structure of words so Japanese speakers ‘think’ they hear *s^vki*, which conforms to the Japanese phonotactic pattern.
 - » *Sukida!* → [skida] ‘I like you!’
 - » *Ame deshita* → [ame deshta.] ‘It was rainy.’
 - But we are less sure where the syllable boundaries are
 - e.kstra vs. ek.stra vs. eks.tra vs. ekst.ra vs. ekstr.a

Basic syllable structure

The hierarchy of the syllable



Syllables across the world

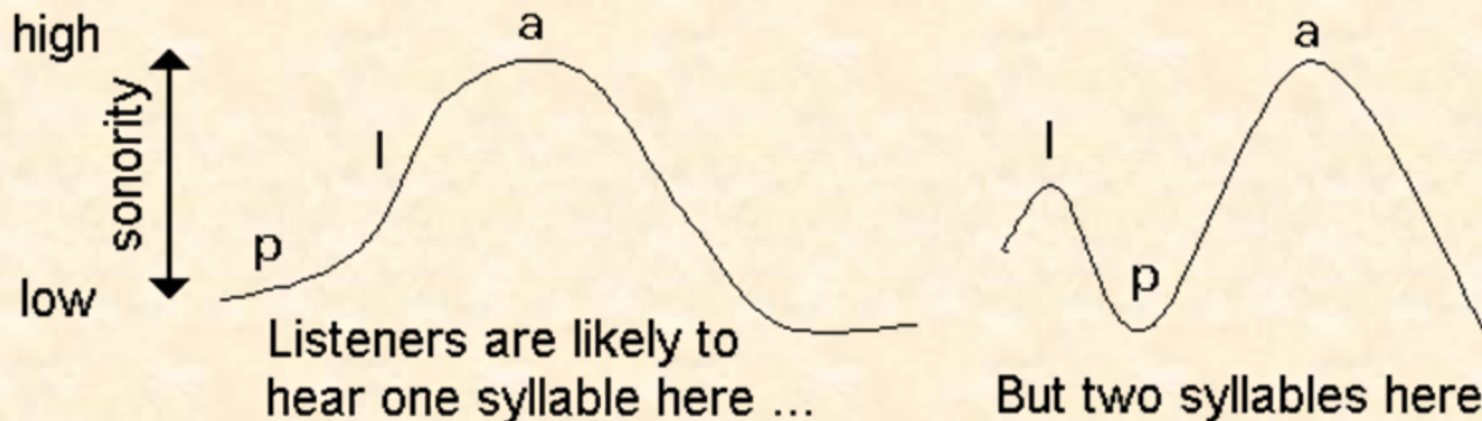
- Japanese, Hawaiian
 - Mamuli o ke noi i waihoia ae eka Makai Nui David L. Desha, imua o ka Loio Kalana Charles S. Davis no kona manao kanawai, e pili ana i ka mana ame ka mana ole o ka makai nui, e hoopau ai i kekahi poe e noho hana ana malalo o ka oihana makai o Honolulu nei, i hoopuka ae ai ka Loio Kalana Davis i kona manao kanawai, e hoakaka ana, no ka loa o ka mana piha I ka Makai Nui Desha, e hoopau ai i oa lunapaahao, na kiai paahao, na makai wahine, na lunanana kaa, na makai kuikawa, na hope, na kakauolelo ame na kokua e ae, a koe ka poe e noho hana ana iloko o ka puali makai kumau. [excerpt from Hawaiian newspapers, <http://nupepa.org/gsd12.5/cgi-bin/nupepa?l=en>]
- Slovak, Polish
 - zmrzlina, štvrt'vrstvový, [sknerstf] 'stinginess, gen-pl', [ʒdʲbwɔ] 'stalk'
- Berber
 - [ssrksxt] 'I hid him'
 - [tzgr] 'She crossed'
- Implicational universal: CCV iff CV, VC iff CV

Phonetic correlates of syllable

- Not very clear
- Articulation
 - Bursts of air expirations
 - Gestural coordination
 - *Hill vs. Hillary*
 - *palec vs. palce*
- Acoustics
 - Loudness peaks
 - R. Clements testimony

Sonority (cont'd)

- Functionally
 - Sonority Sequencing Principle: onsets rise in sonority, codas fall in sonority
 - Because of rise and fall of sonority in syllables the following restrictions occur
 - glide (/w/ /j/) must be immediately adjacent to a vowel,
 - /r/ and then /l/ are next closest consonant(s) to vowel,
 - nasal is next closest,
 - obstruent is farthest from the vowel (but there may be more than one obstruent in onset or coda)
- Special case of /s/



We use syllables in processing what we hear

- Mehler et al. 1981
 - Task: press the button as soon as you hear the target syllable
 - *ba* is recognized faster in the word ‘*balance*’ and slower in the word ‘*balcony*’
 - *bal* is recognized faster in the word ‘*balcony*’ and slower in the word ‘*balance*’
- Cutler et al. 1986
 - Much stronger for French than English
 - Much stronger for liquids ([l], [r]) than other segments

We use syllables in planning what we say

- Speech errors (Fromkin 1971)
 - Segments
 - “a phonological rule” → “a phonological fool” (Consonant Perseveration)
 - “fill the pool” → “fool the pill” (Vowel Reversal)
 - Syllables
 - “unanimity of opinion” → “unamity of opinion” (Syllable Deletion)
 - “Stockwell and Schacter” → “Schachwell and Stockter” (Syllable Reversal)

Speech errors

- More examples
 - *bird watching* ---> *word botching*
 - *clear blue sky* ---> *glear plue sky*
 - *weak and feeble* ---> *feak and weeble*
 - *That money might be better spent elsewhere.* ---> *That money might be better spelt ensewhere.*
 - http://www.mpi.nl/cgi-bin/sedb/sperco_form4.pl
- Recurrent pattern
 - Syllables seem to obey a “structural law of syllable place”. Initial syllables interact with initial syllables, medial with medial, and final with final.
 - Moreover, onsets interact with onsets, peaks with peaks and codas with codas