

Homework #3

Due in class Tuesday 10/13

1. Elicitation; psychological reality of the phoneme

Do problem 1, p. 65, of your text.

2. Contextually limited contrast in English

Before doing this problem read Chapter 3, section 6 of your text (read with care: experience suggests this is one of the trickier topics in this course).

English contrasts /m/, /n/ and /ŋ/ in minimal sets such as *Sim* ['sɪm], *sin* ['sɪn], and *sing* ['sɪŋ]. However, before /k/, there seems to be no contrast—only one of these three sounds may occur, the particular choice depending on the details of the phonological environment.

Consider the data below. The transcription used is slightly non-IPA: I will use [á] to designate [a] with primary stress, [à] for [a] with secondary stress. The purpose is to focus on stress as a property of vowels, not syllables. You can use $\begin{bmatrix} +\text{syllabic} \\ +\text{stress} \end{bmatrix}$ to designate stressed vowels and $\begin{bmatrix} +\text{syllabic} \\ -\text{stress} \end{bmatrix}$ to designate stressless vowels.

Data set zero

<i>Pam</i>	[páɛm]
<i>pan</i>	[páɛn]
<i>pang</i>	[páɛŋ]

Data Set I

<i>concave</i>	[kankéiv]
<i>encumber</i>	[ɛnkámbə̃]
<i>synclinal</i>	[sɪnkláɪnəl]
<i>include</i>	[ɪnklúd]
<i>inquire</i>	[ɪnkwáɪ]
<i>melancholia</i>	[mɛlɛnkokólɪə]
<i>nomenclature</i>	[nóʊmɛnkléɪt̃ə̃]
<i>encore</i>	[ɛnkokòɪ]

conclave [kánkl̩v̩]

No words like *[kamk̩v̩], *[kav̩k̩v̩]¹

Data Set II

bronchial [bɪájkiəl]
bronco [bɪájkoʊ]
canker [kæŋkəʃ]
cantankerous [kæntæŋkəʊəs]
carbuncle [káɪbʌŋkəl]
conquer [kánkəʃ]
delinquent [dəlínkwənt]
pancreas [pæŋkɪəs]
donkey [dónki]
flamenco [fləménékoʊ]
frankincense [fɪæŋkənsɛns]
hankerchief [hæŋkətʃif]
idiosyncrasy [idióusínkrəsi]
incubation [ínkjubéiʃən]

No words like *[kámkəʃ],² *[kænkəʃ].

Data Set III

think [θínk]
blank [bláŋk]
bunk [bánk]
chipmunk [tʃípmʌŋk]
honk [hónk]
thinks [θínks]
sphinx [sfínks]

No words like *[hómk], *[hónk].

¹ [kav̩k̩v̩] is possible in fluent speech as a variant of [kank̩v̩]; we'll ignore this for purposes of this problem.

² We'll assume a dialect in which *Fromkin* is phonetically [fɪámpkən].

a. Write rules that account for the contextually-limited contrast just described, following the method given in class and in the readings. Give your rules names, and state any ordering needed.

Hint: “optional intervening consonant” can be formalized as “(C)”. You’ll need this for a couple of rules.

Under your analysis, what would be derived for the following underlying forms?

/kamk^héiv/ /kaŋk^héiv/ /hómk/ /hónk/

Give derivations.

b. Do the same analysis using constraints instead of rules. State which of your constraints rule out the four forms:

a. [kamk^héiv] b. [kaŋk^héiv] c. [hómk] d. [hónk]