Nick Aoki HW4 Practice - Worksheet 1

October 30th, 2024 LIN 103A - Lawyer

Practice for Questions 1-3 on HW4:

Translate the following rules into a sentence in English that explains what it does (for example, something like "final stops are devoiced after high vowels").

Example: $[+syllabic] \rightarrow [-voice] \,/\, \begin{bmatrix} -syllabic \\ -voice \\ -delayed\ release \end{bmatrix} \_\_\_\_\_ \begin{bmatrix} -syllabic \\ -voice \\ -delayed\ release \end{bmatrix}$

The rule in the example above would be translated as: **Devoice vowels between voiceless stop consonants.**

Practice Q1: $\begin{bmatrix} -syllabic \\ +continuant \\ -sonorant \\ +labiodental \end{bmatrix} \rightarrow \emptyset \,/\, \_\_\_\_\_\ [e]$

Practice Q2: $[+syllabic] \rightarrow [+nasal] \,/\, \begin{bmatrix} +syllabic \\ +nasal \\ +front \end{bmatrix} C_0 \_\_\_\_\_$

Practice Q3: $\begin{bmatrix} -syllabic \\ +consonantal \\ +delayed\ release \end{bmatrix} \rightarrow [\alpha\ voice] \,/\, \#\ \_\_\_\_\_\ \begin{bmatrix} +syllabic \\ \alpha\ voice \end{bmatrix}$

Practice Q4: $\emptyset \rightarrow \begin{bmatrix} +syllabic \\ +high \end{bmatrix} \,/\, \begin{bmatrix} -syllabic \\ +distributed \\ +anterior \end{bmatrix} \_\_\_\_\_$

"Check Your Understanding" About Rules and Features (Practice for HW4, Questions 4 + 5):

1. Recall that in Homework 2, there was a data set where one allophone always appeared between vowels, unlike the other allophones. Why is the rule below no longer a full-credit response? How should the rule below be rewritten to earn full-credit?

/r/ → [ɾ] / [+vowel] ____ [+vowel]

2. Let's take the same example of an allophone always appearing between vowels. Why is the rule below an incorrect way of summarizing this allophone's environment? What is a strategy you can use to avoid this issue?

/r/ → [ɾ] / [-consonantal] ____ [-consonantal]

3. Imagine a hypothetical data set where there are 3 allophones in complementary distribution (i.e., the sounds never appear in the same environments). You eventually figure out that Allophone X only appears before [u] and [ʊ]; Allophone Y only appears before [i], [ɪ], [e], [ɛ], [ə], [ɑ], and [o]; and Allophone Z appears everywhere else (before [d], [z], [g], [ʃ], [ɹ]).

a. Among the 3 allophones, which is the more likely underlying phoneme and why?

b. How would you describe the distributions of Allophones X and Y in plain speaking (i.e., just using the terminology on the IPA chart and not writing any rules).

c. How would you write a rule to explain the distribution of Allophone X?

d. Why is writing a rule for the distribution of Allophone Y more difficult? How should we write this rule?

4. Let's say that an underlying form (X) becomes an allophone/allomorph (Y) before *two* segments in a row (e.g., a consonant-vowel sequence). How would you write this as a rule?
