Assignment 3

Due: September 22, 2011

Reading

1. Read chapter 4 from Hayes 2009.¹

2. Also read chapter 13 from this same book on syllables. Both chapters are posted on the website.

Written work

1. Recall that natural classes refers to sets of sounds which share the same features. Which sounds belong to the following classes? Use Hayes feature system (but you may ignore diacritics for this exercise).
   a. [+labial,-voice,-sonorant]
   b. [-sonorant,+continuant,+voice]
   c. [+nasal,+dorsal]
   d. [+front,-high,-round]

2. Each of the following groups of sounds consists of members of a natural class of sounds, plus one sound that is not a member of that class. For each group (1) name the sound which not a member of the class and (2) name the fewest features that define the class. Use the feature system from Hayes 2009.
   a. \{y, u, u, y, u, y\}
   b. \{f, t̂s, d̂z, s, z\}

3. Explain why \{y,e\} is not a natural class.

4. Provide an example of two consonants which do not form a natural class and explain why they do not.

5. Is every individual sound a natural class? Explain why or why not.

6. Are unions of natural classes natural classes? Explain why or why not. (The union of sets A and B are all elements belonging to either A or B.)

7. Are intersections of two natural classes a natural class? Explain why or why not. (The intersection of sets A and B are all elements which belong to both A and B.)

8. Consider the following rule: \([+\text{voice}] \rightarrow [-\text{voice}] / \underline{\text{wd}}\). Discuss under what circumstances this rule would apply to the underlying forms /pæm, mæβ/. It will be useful to recall the discussion in chapter 2 of Dresher 2009.\(^2\)

9. On page 259 in Chapter 13 of Hayes, there is a discussion regarding Cibaeño Liquid Gliding. Explain how reference to syllable position simplifies this rule, why this would be desirable, and what this ought to predict under the notion that simpler rules ought to reflect more common phonological processes. In your answer make sure you are clear what you mean by “simpler.” Your answer should go beyond Hayes’ brief explanation.

10. On pages 257-258, Hayes explains that many languages require onsets but none seem to require codas. The glottal epenthesis rule is an example of how a requirement on onsets could be forged with a rewrite rule. The null “∅” notation in the structural change of the rule indicates the epenthesis (“nothing” is rewritten as the glottal stop in syllable-initial position). How would you write a rule requiring syllables to have codas? Is this rule any more complex than the one requiring onsets? If not, do you have any ideas of how such rules could be written so that onset epenthesis rules are simpler than coda epenthesis rules?