

Discussion points: Hall (2007), "Segmental features"

I. Major class features

- (1) Here are some traditional descriptive terms for the natural classes that are defined by various combinations of the major class features: **consonant, obstruent, sonorant, liquid, nasal**. See if you can use the major class features to designate each class.
 - Another useful term is **vocoid**, which means any [-cons] segment, i.e., **vowel or glide**.
- (2) How is the contrast between glides and high vowels represented in Hall's model?
- (3) Note: It may well be the case that the values of [\pm cons], [\pm son] for glottal segments are best considered on a language-by-language basis,
- (4) If we set aside the somewhat controversial claim that glottal segments are [-cons], we find that not all combinations of [\pm cons], [\pm son], and [\pm approx] are possible. Certain values of some of the major class features entail particular values for other major class features. Work out the possible combinations of these features, and state which natural class each feature combination specifies.
 - The natural classes that are defined by the major class features form a scale from *most to least vowel-like*; this scale is known as the **sonority scale** and it is important in phonology, especially with respect to syllable structure, stress, and tone.
 - Perhaps unsurprisingly, the position of glottal segments on the sonority scale is also controversial.

II. Laryngeal features

- (5) Hall defines [\pm voice] in a very articulation-based way. What might an acoustically based definition for [\pm voi] look like? How would each version of the definition classify the initial stop in an English word like *book* in phrase-initial position?
- (6) Hall's definition of [+constricted] makes a prediction that a wide variety of rather distinct segment types should behave as a natural class. Which segment types?
- (7) What is the motivation for grouping [voi], [spread], and [constr] under a LARYNGEAL node?

III. Manner features

- (8) What questions or problems concerning liquids (laterals and rhotics) are raised in note 4?
- (9) What are the options discussed for representing affricates? What does Hall prefer?
- (10) What value of [\pm cont] do nasals like [n m] have?

IV. Place features

- (11) What value does [t^w] have for [\pm round] in Hall's model? How about [t]?
- (12) What are the options for representing palatal place of articulation?

V. Feature geometry

- (13) Consider the following three rules. The first is common. The second is not a very plausible phonological rule. The third and fourth are also common.
- (i) Vowels become nasal when they follow a nasal.
 - (ii) Stops become labial when they follow a nasal.
 - (iii) Coronals become post-alveolar when they precede a high front vowel.
 - (iv) Stops become voiced when they follow a nasal.

Questions:

- (a) Can our formal model make a distinction between (i) and (ii)? How? (Hint: Try writing out what a rule might look like in this model.)
- (b) Does the same approach help explain why (iii) and (iv) are also common rules?

Upshot: How much of phonological typology CAN OR SHOULD feature geometry attempt to explain?

- (14) Think of a classic case of nasal place assimilation. What does the phenomenon look like? How can we take advantage of feature geometry to give it a unified analysis? Compare this to what we would have to do in an SPE-style model, where a segment is simply composed of an unordered, unstructured list of features.