Rules of English Allophones

Objectives
This list of allophonic rules of English, based on Ladefoged’s *A course in phonetics*, makes clear how to write a consistent narrow transcription, because the output of these rules must be transcribed. Also, in discussions of English phonology, the list provides many examples for practicing rule formulation. Note, however, that some of these rules are not suitable for a categorical phonological description and are likely phonetic rules of a gradient nature.

Rules affecting consonants
(1) Consonants are longer when at the end of a phrase.

(2) Voiceless stops (i.e., / p, t, k / are aspirated when they are syllable initial, as in words such as “pip, test, kick” [pʰiːp, tʰɛst, kʰɪk ].

(3) Obstruents – stops and fricatives – classified as voiced (that is, / b, d, g, v, ð, z, ʒ /) are voiced through only a small part of the articulation when they occur at the end of an utterance or before a voiceless sound. Listen to the /v / when you say *try to improve*, and the / d / when you say *add two*.

(4) So-called voiced stops and affricates / b, d, g, dz / are voiceless when syllable initial, except when immediately preceded by a voiced sound (as in *a day* as compared with *this day*).

(5) Voiceless stops / p, t, k / are unaspirated after / s / in words such as *spew, stew, skew*.

(6) Voiceless obstruents / p, t, k, tf, f, θ, s, j / are longer than their corresponding voiced obstruents / b, d, g, dz, v, ð, z, ʒ / when at the end of a syllable.

(7) The approximants / w, r, j, l / are at least partially voiceless when they occur after initial / p, t, k /, as in *play, twin, cue* [pleɪ, twɪn, kju ].

(8) The gestures for consecutive stops overlap, so that stops are unexploded when they occur before another stop in words such as *apt* [æpt ] and *rubbed* [rʌbd ].

(9) In many accents of English, syllable final / p, t, k / are accompanied by a glottal stop, as in pronunciations of *tip, pit, kick* as [tɪ̚p, pɪ̚t, kɪ̚k ]. (This is another case where transcription cannot fully describe what is going on.)

(10) In many accents of English, / t / is replaced by a glottal stop when it occurs before an alveolar nasal in the same word, as in *beaten* [ˈbeɪtɛn]

(11) Nasals are syllabic at the end of a word when immediately after an obstruent as in *leaden, chasm* [ˈlɛdən, ˈkæzəm ]

(12) The lateral / l / is syllabic at the end of a word when immediately after a consonant.

(12a) The liquids / l, r / are syllabic at the end of a word when immediately after a consonant.

(13) Alveolar stops become voiced taps when they occur between two vowels, the second of which is unstressed.

(13a) Alveolar stops and alveolar nasal plus stop sequences become voiced taps when they occur between two vowels, the second of which is unstressed.
(14) Alveolar consonants become dentals before dental consonants, as in *eighth, tenth, wealth* [eɪθ, τɛð, wɛθ]. Note that this statement applies to all alveolar consonants, not just stops, and it often applies across word boundaries, as in *at this* [æt ətɪs]. This is a statement that in English the gestures for these two consonant overlap so much that the place of articulation for the first consonant is changed.

(15) Alveolar stops are reduced or omitted when between two consonants.

(16) A homorganic voiceless stop may occur (i.e., be inserted) after a nasal before a voiceless fricative followed by an unstressed vowel in the same word.

(17) A consonant is shortened when it is before an identical consonant.

(18) Velar stops become more front before more front vowels.

(19) The lateral /l/ is velarized when after a vowel or before a consonant at the end of a word.

**Rules affecting vowels**

(1) Other things being equal, a given vowel is longest in an open syllable, next longest in a syllable closed by a voiced consonant, and shortest in a syllable closed by a voiceless consonant.

(2) Other things being equal, vowels are longer in stressed syllables.

(3) Other things being equal, vowels are longest in monosyllabic words, next longest in words with two syllables, and shortest in words with more than two syllables.

(4) A reduced vowel may be voiceless when it occurs after a voiceless stop (and before a voiceless stop). The parenthesized phrase may be omitted for many people.

(5) Vowels are nasalized in syllables closed by a nasal consonant.

(6) Vowels are retracted before syllable final dark [t].

**Questions:**

1. Which rule does the comparison *cap* vs. *cab* illustrate?

2. Why aren’t the nasals or liquids syllabic in the words *kihn, film*?

3. Why is there an asymmetric relationship between /l r/ and nasals in terms of their syllabic status? Or: why is /n/ not syllabic in *kihn* but /l/ is in *kennel*?

4. Why is the /t/ of *fatty* realized as a tap, but not in *hasty* or *attack*?

5. In the pronunciation of *most people*, what happened to the word-final /t/? Is the tongue tip gesture still instantiated?

6. In the pronunciation of *something*, why does a /p/ get inserted?