

Allophones of American English

1. Speaker

is me, with a migratory childhood; Seattle WA (0-5), Cambridge, MA (6), Riverside CA (7), Ithaca NY (8-18).

2. Consonants in word-initial position before similar (low) vowels

[p] <i>pa</i>	[t] <i>tot</i>	[k] <i>cot</i>
[b] <i>Bach</i>	[d] <i>dot</i>	[g] <i>got</i>
	[tʃ ^w] <i>chop</i>	
	[dʒ ^w] <i>jot</i>	
[f] <i>fa</i>	[θ] <i>thaw</i>	[s] <i>sot</i>
[v] <i>Vons</i>	[ð] <i>thy</i>	[ʃ ^w] <i>shot</i>
[m] <i>mop</i>	[z] <i>zap</i>	[ʒ ^w] <i>Zha-Zha</i>
	[n] <i>not</i>	[ŋ] <i>sing</i>
	[l] <i>lot</i>	[j] <i>yacht</i>
	[ɹ ^w] <i>rot</i>	
[w] <i>walk</i>		
[ʌ] <i>whopper</i>		

3. Observations on Consonants

- Dental fricatives are dental, not interdental, except in emphatic speech
- /s/ is tongue tip down, not up (laminal [s], not apical [s̺])
- /ɹ/ is bunched, not retroflexed ([ɹ̺])
- The labialization observed on /ɹ/ and palatoalveolars is modest.

4. Vowels in a single context

Front	Back		
unrounded	Unrounded	Rounded	
[i] <i>peat</i>		[u] <i>pooch</i>	[putʃ]
[ɪ] <i>pit</i>		[ʊ] <i>put</i>	[pʊt]
[eɪ] <i>pate</i>		[oʊ] <i>tote</i>	[toʊt]
[ɛ] <i>pet</i>	putt [ʌ]	[ɔ] <i>taut</i>	[tɔt]
[æ] <i>pat</i>	pot [ɑ]		

plus rhotacized upper mid central: [ɜ̥] pert

5. Unusual Vowels

a. **Schwa**: telegraph, standardization, centrifugal, abracadabra

- Schwa can vary; its other version is a high central vowel [ɨ]
- Some speakers have both vowels as separate phonemes: Rosa's [ə] vs. roses [ɨ]

b. **Stressed Syllabic /l̩/**

pull, bull, full (other speakers have /ʊl/
vary between [ʌl] and [l̩]: null, dull, hull

SOME PHONOLOGICAL RULES THAT APPLY TO VOWELS

6. Vowel Nasalization

Vowels are nasalized before nasals:

bead - bean; bide - bind; pad - pan

But not when the nasal is part of a suffix:

Venus - freeness

7. Transcription practice

Answers in footnote below; give AB or BA ¹

“bow-ness” “bonus”

“Oness” (resemblance to the letter O) onus

“intra-V-ness” (property of being between two V's) intravenous

“furness” (property of resembling fur) furnace

By this criterion, should “highness” as in “your highness” count as suffixed?

8. /æ/ Diphthongization

/æ/ optionally is realized as [ɪə] before /m/ and /n/:

mad - man; lab - lamb [Socratic q: what else would you check?]

¹ AB AB BA BA

[iə] is not a phoneme: banner, banner

9. /aʊ/ Diphthongization

Similarly, /aʊ/ optionally is realized as [ɛəʊ] before /m/ and /n/:

out - town; German *kaum* 'hardly'

10. Vowels are shorter when they precede voiceless consonants:

You can use the symbol [ǎ] for this.

moo - mood - moot	Lou - lose - loose	Lee - leave - leaf
cab - cap	lug - luck	

11. Fricative Devoicing

Fricatives are often devoiced at the end of a phrase.

[z]	lose vs. loose
[v]	live vs. life
[ʒ]	leash vs. (my) liege
[ð]	soothe vs. forsooth

You can use a transcription like [z̥] for these allophones.

12. Transfer of Contrast

The devoicing of final fricatives doesn't mean we lose word identity (phonology: "it is not neutralizing"). Reason: we can identify the word by the vowel length, which is itself determined by the *phonemic* character of the fricative, not its *phonetic* character.

lose	/luz/	[lu:s]
loose	/lus/	[lus]

13. Dark /l/

/l/ is fairly back everywhere, but is especially back word finally and before a consonant. In those position, it may become non-alveolar.

listen, lay, look, law [ɫ] = dark, velarized/pharyngealized /l/
allow, relay, release, allude

fall, pill, peel falter, Falk, palm, elm, helper)

14. Allophonic effect of dark /l/ on vowels

Vowels have different, backer allophones before dark [ɫ]:

peel, pill, pale, Pell, pal, pol, Paul, pole, pool

/iɫ/ = [i̠ɫ]

/ejɫ/ = [e̠ɫ]

/owɫ/ = [o̠ɫ]

15. /u/ Fronting

/u/ is central [ɯ] when it follows a palato-alveolar and precedes an alveolar:

chew - ooze - choose

Jew - jewel - Bruce - juice

shoe - loot - shoot

16. /aɪ/ is optionally raised to [ʌɪ] before a voiceless consonant

Can only have [aɪ]	Can have either [aɪ] or [ʌɪ]
bide	bite
eyes	ice
jibe	hype
live	life

This is a dialectal trait of areas a few hundred miles from where I grew up: coastal New England, NYC, Philadelphia, Canada
But in these locations the raising is *obligatory*.

17. Transcription practice

Answers in footnote below; give AB or BA²

knife [naɪf] [nʌɪf]

fight [faɪt] [fʌɪt]

twice [twajz] [twʌɪz]

height [hʌɪt] [haɪt]

² AB BA AB AB

18. The glide part of [ju] is vocalized in less formal speech. The result is a single syllable (diphthong).

few: [fju, fɹu]

Ditto for *pew*, *cute*, *beauty*, etc.

[ju] is illegal after alveolars (tune, suit, dune)

19. Transcription practice

Answers in footnote below; give AB or BA³

shoes [ʃʊz] [ʃuz]

man [mɪ̃n] [mæn]

view [vju] - [vɹu]

whether [wɛðə] - weather [wɛðə]

on [ɔn] - Ahn [ɑn]

SOME PHONOLOGICAL RULES THAT APPLY TO CONSONANTS

20. The nasal /n/ optionally takes on the place of articulation of a following consonant:

unpleasant, in Boston
envelope, in France
month, in the garden
pancake, engrossed

phone book, phone for me, phone thing,
phone call

21. The nasal /m/ becomes labiodental before a labiodental

symphony, emphatic labiodental m: [ɱ]

22. The nasal /m/ otherwise remains unaltered (come quickly), but assimilates to a following consonant in very common words

something, I'm gonna...

23. All alveolars except for fricatives assimilate to following dentals:

width, add the... eighth, at the... tenth, on the... wealth, all the...

We could use [t̪ d̪ n̪] for these.

³ AB BA BA AB AB

but: miss the

24. Apical alveolar /t/ becomes laminal after laminal alveolar /s/

top vs. stop	apical:	t
to the left vs. pass to the left	laminal:	ɾ

25. Voiceless stops are aspirated

if: i. *They are word-initial; or*
 ii. *They precede a stressed vowel; but*
 iii. *They are not preceded by /s/.*

- i. po'tato, to'morrow, col'lection
- ii. ap'lectionpend, at'tend, a'kin vs. 'apple, 'battle, 'tickle
- iii. 'spit, 'stint, 'skit a'spire, a'stound, a'skew

26. Approximants are (partially) voiceless after word-initial stops

play, clay, pray, tray, cray, puke, cute, twin, quick

Transcription: for a voiceless approximant: [ɿ]
 for a partially-voiceless approximant: [ɿ̥]

This is probably the same process as aspiration, viewed abstractly.

27. Voiceless stops are longer than voiced

Take a cap now	vs.	Take a cab now
cat		cad
back		bag

28. Voiced stops are optionally unreleased when word final after an approximant

bib, bulb, barb; bid, build, bard; big, Borg unreleased: [b̚, d̚, g̚]

but banned, sagged, waged, sneezed

29. Voiceless stops are optionally unreleased, and optionally preglottalized, when word final after an approximant or nasal

pip, pulp, harp, camp; sit, silt, sort, can't; Bic, bulk, hark, hunk
 but clasp, act, apt, last, risk glottalized: [ʔt] or [ʰt]

30. Alveolar stops are usually realized as tap when...

- (i) they follow a non-lateral approximant and
 (ii) precede a stressless vowel

- (a) latter, ladder, outer, louder, barter, harder
 vs. falter, older, Sumter, Camden, actor, Ogden, Astor, Cazden
- (b) at'tack vs. 'attic; a'dore vs. ado'ration

Note laterally released tap in: battle, settle.

31. /nt/ Tapping

In the same environment in which alveolars are realized as tap, the phoneme /n/ and the sequence /nt/ are optionally realized as a nasalized tap.

- 'enter, 'winter, onto'logical vs. in'tend, On'tario, on'tology
 'Kenner, 'winner, onomato'poeia i'nert, pla'narian, oe'nology

32. Syllabic /ŋ/ Formation

When stressless /ən/ follows /t,d/, it optionally becomes syllabic /ŋ/. The /t/ or /d/ is unreleased; and /t/ is usually glottalized

button, Latin, sweeten, get in the car
 sudden, Madden, Sweden, when I'm good and ready

33. Velar fronting

The velar stops /k/ and /g/ become fronted when preceding front vowels

- key, kitten, Kate, Ken, cat vs. coo, cook, coat, cup, cop, caught
 geese, Gipper, gape, get, gap vs. goose, good, goat, guppy, got, gawk

The transcription is [k̟ ɡ̟].

34. Limitation on distribution of /ju/

The sequence /ju/ may not appear after dentals, alveolars or palato- alveolars.

- | | |
|---------------------------------|-------------------------------------|
| putrid, beauty, few, view, mute | enthusiasm |
| cute, argue | tune, duty, news, suit, lurid, rude |
| human | issue, visual, chew, juice |

exception: /ju/ may appear after /n/ or /l/ if a stressless vowel follows:

annual, cellular

35. Transcription practice

Answers in footnote below; give AB or BA⁴

tune [tʃun] - [tʌn]
lose [lu:z] - [lu:z̩]
sudden ['sʌdən] - ['sʌd̩n̩]
pip [pɪp̩] [pɪp]
something special [n̩θ] - [mθ]

⁴ BA AB AB AB BA