

Ling 105 Problem Set 2

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Due: September 20, 2024

Problem 1. Would the plosive in each of the following English words normally be aspirated or unaspirated? Aspiration, as discussed in class, is not an arbitrary function of individual words, but follows a rule.

attain	Aspirated	art	Aspirated
tell	Aspirated	vesper	Unaspirated
space	Unaspirated	liquor	Unaspirated
cancel	Aspirated	starve	Unaspirated
subpoena	Aspirated	impinge	Aspirated

Problem 2. Which English words do the following narrow IPA transcriptions represent?

[ˈfiːl]	Feel	[ˈkʰɪst]	Kissed
[ˈɔsm]	Awesome	[ˈfɪvə]	Fever
[ˈkʷɑɪ]	Choir	[ˈsɑɪnd]	Signed
[ˈnaɪrəd]	Knighted	[ˈsoʊɪŋ]	Sewing
[ˈtʰʌŋ]	Tongue	[ˈhɛɪd]	Herd
[ˈd̥ɑʊn]	Dawn	[ˈkʰoʊm]	Comb
[ˈðɑɪ]	Thy	[ˈʒɔ̃nɛ]	Genre
[ˈkʰɜːɪn]	Curtain	[ˈkju]	Queue
[ˈeɪʒn]	Asian	[ˈʌv]	Of
[ˈkɪɫəm]	Crumb	[ˈkwiːn]	Queen

Problem 3. Transcribe the following words into narrow IPA, as they would usually be pronounced.

Heat	[ˈhit]	Clipped	[ˈkɪlɪpt]
Alarm	[əˈlaɪm]	Lapses	[ˈlæpsɪz]
Carry	[ˈkʰɛɪ]	Nasal	[ˈneɪzɫ]
Stomach	[ˈstʌmɪk]	Banner	[ˈbæ̃nɛ]
Rug	[ˈɹʌg]	Streamed	[ˈstɹiːmd]
Bird	[bɜːd]	Prison	[ˈpɹɪzn]
Bones	[ˈboʊnz]	Allow	[əˈlau]
Item	[ˈaɪtɪm]	Reasoned	[ˈɹiːznd]
These	[ðiz]	Funnel	[ˈfʌnɪl]
Knowledge	[ˈnɒlɪdʒ]	We'll	[ˈwiːl]

Problem 4. Write the appropriate IPA symbol (with a diacritic if needed).

Voiceless lateral fricative	[ɬ]	Voiceless uvular fricative	[χ]
Voiced interdental fricative	[ð̪]	Voiceless dental plosive	[t̪]
Devoiced velar nasal	[ɰ̥]	Voiceless palatal stop	[c]
Alveolar tap	[ɾ]	Tense mid back rounded vowel	[ɔ]
Glottal stop	[ʔ]	Low back vowel	[ɑ]
Voiceless glottal fricative	[h]	High back lax vowel	[ʊ]
Voiceless uvular plosive	[ɢ]	Nasalized schwa	[ẽ̃]
Labiovelar glide	[w]	“ash”	[æ]
Voiced alveolar fricative	[z]	“engma”	[ɲ]
Uvular trill	[ʀ]	Untrilled alveolar rhotic	[r], [ɹ]

Problem 5. At what places of articulation is a rhotic possible? At what places is a lateral possible but not a rhotic?

Rhotics are possible in the alveolar, postalveolar, retroflex, and uvular places of articulation. At the dental, palatal, and velar places, lateral sounds are possible but not rhotics.

Problem 6. Two waveforms and spectrograms are show. For each say whether VOT is positive, negative, or approximately zero, whether each is voiced or voiceless, and whether each is aspirated or unasiprated.

For the first, VOT is positive, the sound is voiceless and aspirated. For the second, the VOT is approximately zero, and the sound is voiceless and unaspirated.

Problem 7. What is the difference in articulation between English “b” and Hindi/French “b” in initial position?

In Hindi/French, the VOT is negative so the sound is voiced while in English, the VOT is approximately zero so the sound is voiceless.

Problem 8. The IPA has simple symbols for voiceless [p] and voiced [b], but not for aspirated [p^h]. Why might this be the case? Furthermore, why is the symbol [b̚] sometimes used when the IPA already has [p]?

There is no need for a separate symbol for [p^h] since we already have the symbols [p] and h – this avoids bloating the alphabet. The natural question might be why we need the symbol [p] then, since it is quite similar to [b]. While these are pronounced essentially the same, the phonemic distinction between /b/ and /p/ is useful, for example in English.