Phonology HW2: Ch 2 Ex 2

a

	Bilabial	**Alveolar**	**Alveolo-palatal**	**Palatal**	**Velar**	**Glottal**
Stops: Single Geminate	p b pp	t d tt			k g kk	ʔ
Nasal: Single Geminate	m mm	n		ɲ	ŋ	
Affricates: Single Geminate			t͡ɕ tt͡ɕ dd͡ʑ			
Fricatives	ɸ		ɕ		x	
Tap		ɾ̥ ɾ				
Approximamt **Lateral**	w		l	j	w	

b.

p	pp	ɸ	t	tt	ɾ̥	t͡ɕ	tt͡ɕ	ɕ	k	kk	x
# __ ì	ə __ ì	é __ ô	# __ ɔ́	ɔ̀ __ ɔ̀	ɔ̀ __ ɔ̀	è __ #	ú __ ó	ò __ ə	# __ è	ó __ ó	á __ ô
# __ ə	ì __ ó	ù __ â	ɔ̀ __ #	ì __ ɛ̂	ɔ́ __ ó	# __ ɔ̀ː	ú __ ú	ə __ ê	ɛ̀ __ #	ó __ ɔ́	ə __ ə
# __ ó	ɔ́ __ ɔ̀	á __ ô	è __ #	è __ ó	ó __ ɔ́	# __ ù	à __ ó	à __ ê	# __ ó	ó __ í	á __ â
# __ é	ɛ̀ __ ó	à __ ó	# __ è	ì __ ó	é __ ê	ɛ́ __ #	ɛ̀ __ ó	í __ è	# __ w	à __ á	ɔ̀ __ à
# __ á			# __ ɔ̀		í __ é	# __ í			# __ á		
# __ à			ó __ #			ù __ #			# __ ɔ́		
ə __ #			# __ î			â __ #			ɔ́ __ #		
à __ #			í __ #			# __ à			ɔ̀ __ #		
ɔ̀ __ #						# __ ɔ́			# __ ò		
ò __ #						ì __ #			# __ í		
									à __ #		

c. (analysis 1)

/p/
[p] elsewhere
[pp] V __V

/ɸ/
[ɸ] V__V

/t/
[t] elsewhere
[tt] V __V

/ɾ̥/
[ɾ̥] V__V

/t͡ɕ/
[t͡ɕ] elsewhere
[tt͡ɕ] V __V

/ɕ/
[ɕ] V__V

/k/
[k] elsewhere
[kk] V __V

/x/
[x] V__V

The geminate stops/affricates and fricatives/tap cannot be allophones of same phoneme because they are in the same environment (intvervocalically).

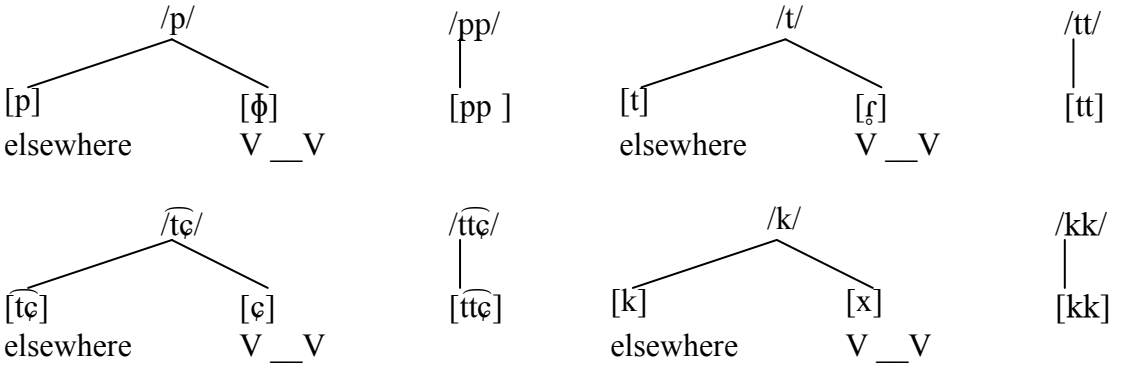
Voiceless stops and affricates can be grouped into voiceless non-continuant obstruents. Voiceless fricatives and taps can be grouped into voiceless continuant consonants.

d.
Analysis 1/Rule: A voiceless non-continuant obstruent becomes a geminate voiceless non-continuant obstruent between vowels (see above).

This analysis groups the single and geminate version of a homorganic non-continuant obstruent into one phoneme unit as they are in complementary distribution. The single version was selected as the phoneme because it occurs in more environments (elsewhere, it is least predictable). The singletons and geminates were grouped together (rather than the non-continuant obstruent and continuant consonant) because they share more in terms of manner of articulation. However, this analysis predicts that intervocalically, a singleton non-continuant obstruent becomes a geminate non-continuant obstruent, which would be a case of dissimilation.

Analysis 2/Rule: A voiceless non-continuant obstruent becomes a voiceless continuant consonant (not all fricatives because of tap) between vowels.

(**analysis 2**)



Because the continuant and singleton non-continuant consonants are in complementary distribution, they are grouped into phonemes based on place of articulation. The singleton non-continuant obstruent was selected as the phoneme because it has the widest distribution of the two sounds. In this analysis, the rule would change the underlying phoneme (the voiceless singleton non-continuant obstruent) into its respective (of place of articulation) voiceless continuant consonant intervocalically. This not only accounts for the data, but it also further supported phonetically as this would be a case of assimilation of manner of articulation (i.e., vowels are continuant and therefore the single non-continuant consonant assimilates this feature between vowels, resulting in the continuant consonants in the data).

There is really no way to decide here which is better based on environment. We can say that it is more likely (due to assimilation) for the continuant to appear between vowels

since they are also continuant. It would be phonetically odd (dissimilation) that a stop becomes stronger (that is becomes a longer more pronounced stop – the opposite of a vowel) between vowels.

e. Due to the morphology, we can see that when a morphological ending puts the phoneme in question (/p/) in the environment between vowels rather than word finally, we see [p] alternating with its corresponding fricative rather than geminate stop. This would indicate that Analysis 2 is a better analysis since it can incorporate the morphological data as well.
