Practice Allophone Problem KEY

Linguistics 201

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The following words are from a made-up language.

punok	poodles	ʃpab	brown liquid
blido	brown	fæbop	eyelash
ʃvebnib	toast	buðvizg	magnetic
zifen	grass	vifen	shells
ebupan	navel fuzz	psivæn	water

The $\left[\begin{smallmatrix}\text{+labial}\\ \text{-continuant}\end{smallmatrix}\right]$ sounds and the $\left[\begin{smallmatrix}\text{+labial}\\ \text{+continuant}\end{smallmatrix}\right]$ sounds are allophones. Give me the rule in terms of features that controls their distribution.

Answer:

The $\left[\begin{smallmatrix}\text{+labial}\\ \text{-continuant}\end{smallmatrix}\right]$ sounds in this language are [p] and [b], while the $\left[\begin{smallmatrix}\text{+labial}\\ \text{+continuant}\end{smallmatrix}\right]$ sounds are [f] and [v]. When we compare their distribution, we find that the sounds that can follow [p]/[b] are not the same as those that can follow [f]/[v]:

following [p]/[b] are: u, l, n, #, a, s

following [f]/[v] are: e, æ, i

There is nothing in common to the sounds that follow [p] and [b], so this cannot be the trigger for an allophonic rule. Instead, it must be that [p] and [b] are the phonemes, and the allophonic rule creates from them [f] and [v]. The sounds that follow [f] and [v] are the front vowels of this language. So, our rule is:

$$\left[\begin{smallmatrix}\text{+labial}\\ \text{-continuant}\end{smallmatrix}\right] \longrightarrow [\text{+continuant}] \,/\, \underline{\qquad} \left[\begin{smallmatrix}\text{+vocalic}\\ \text{-consonantal}\\ \text{+front}\end{smallmatrix}\right]$$