www.pearsoned.ca/text/ogrady/phonology/epenthesis

Epenthesis and alpha rules

Recall that epenthesis involves the insertion of a segment (see chapter 2, section 2.9.4) into a sequence of other segments. In section 3.2.5 we saw that the glides following English tense non-low vowels are predictable by a general rule: the tense mid [-back] vowel /e/ is followed by the [-back] glide /j/; the tense mid [+back] vowel /o/ is followed by the [+back] glide/w/.

In order to represent this epenthesis, we can make use of a type of notation called *alpha notation*. Here, the Greek letter α is a variable (like *x* in algebra) that can stand for either feature value. For example, a feature statement like [α round] can be read as either [+round] or [-round], but the alpha variable or variables used in a rule must match. Whenever the alpha is used in a rule, it must have the same value wherever it occurs. Since alpha notation is used to capture two rules, alphas are read twice, once as '+' and once as '-'. When the first alpha is read as '+', all other alphas in the same rule are to be read as '+'; when it is read as '-', all other alphas in the same rule are read as '-'.

With alpha notation, we can capture the variability of the glide insertion in English as shown in figure 1.

$$\emptyset \rightarrow \begin{bmatrix} \text{-consonantal} \\ \text{-syllabic} \\ \text{+sonorant} \\ \text{oDORSAL} \\ \alpha \text{ back} \end{bmatrix} \quad / \quad \begin{bmatrix} \text{-consonantal} \\ \text{+syllabic} \\ \text{+sonorant} \\ \text{oDORSAL} \\ \text{-high} \\ \text{+tense} \\ \alpha \text{ back} \end{bmatrix} \quad \underline{\qquad}$$

Figure 1 Alpha notation in English glide epenthesis

Remember: in reading an alpha, you are reading a rule twice, once with the plus value for the alpha feature, and once with the minus value. The rule in figure 1 states that a [+back] glide is inserted after a [+back] mid tense vowel and that a [-back] glide is inserted after a [-back] mid tense vowel. Since there are only two glides in the phonological inventory of English, [+back] /w/ and [-back] /j/, the correct glide will be inserted by the rule.