Morphophonemic analysis

Morphophonemics:

↓

Analysis and classification of the phonological factors which affect the pronunciation of morphemes or, correspondingly, the morphological factors which affect the appearance of phonemes.

Allomorph: A predictable variant form of a morpheme (e.g., the English plural morpheme has three allomorphs).

tops

- cuffs

thoughts

- cobs

- pins

- wings

- teas

- doves

- lids

- calls

- hisses

- judges

- wishes

- crutches
Which allomorphs should be selected as the *underlying form*?

[-s]: The stem ends in a consonant that is

\[
\begin{align*}
\text{(- coronal)} & \quad \text{(+ coronal)} & \quad \text{(- coronal)} \\
\text{- strident} & \quad \text{- strident} & \quad \text{- strident} \\
\text{- voice} & \quad \text{- voice} & \quad \text{- voice}
\end{align*}
\]

never:

\[
\begin{align*}
\text{( + coronal)} \\
\text{+ strident}
\end{align*}
\]

[-z]: The stem ends in a consonant that is

\[
\begin{align*}
\text{(- coronal)} & \quad \text{(+ coronal)} & \quad \text{(- coronal)} \\
\text{- strident} & \quad \text{- strident} & \quad \text{- strident} \\
\text{+ voice} & \quad \text{+ voice} & \quad \text{+ voice}
\end{align*}
\]

never:

\[
\begin{align*}
\text{( + coronal)} \\
\text{+ strident}
\end{align*}
\]

or, the stem ends in a vowel.

[-æz]: The stem ends in a consonant that is

\[
\begin{align*}
\text{( + coronal)} \\
\text{+ strident}
\end{align*}
\]

\[
\downarrow
\]

sibilant!
Underlying representation: /-z/

Wider distribution!

Rules:

1. ø-Epenthesis: Insert a [ø ] between two adjacent sibilants in the same word.

   \[ \emptyset \rightarrow \text{ø} / \left[ \begin{array}{c} +\text{coronal} \\ +\text{strident} \end{array} \right] \text{[+Plural]} \]

2. Devoicing: A voiced obstruent becomes voiceless after a voiceless obstruent.

   \[ z \rightarrow [-\text{voice}] / \left[ \begin{array}{c} -\text{sonorant} \\ -\text{voice} \end{array} \right] \]

Derivations:

<table>
<thead>
<tr>
<th>UR</th>
<th>/mæp+z/</th>
<th>/bæg+z/</th>
<th>/wɪʃ+z/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ø-Epenthesis:</td>
<td>-</td>
<td>-</td>
<td>wɪʃæz</td>
</tr>
<tr>
<td>2. Devoicing taps</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

PR

| taps | [bægz] | [wɪʃæz] |

The application of these rules is determined both by morphology and phonology.
Aspiration Rule

Nasalization Rule

e tc.

\{ Apply whenever their

environment is met \}

Note: The θ -Epenthesis Rule must be applied \textit{before} the Devoicing Rule – why?

The rules that derive English plural allomorphs apply only to the plural
morpheme:

\begin{align*}
\text{race} & \quad [\text{rejs}] \\
\text{ray} + \text{Pl} & \quad [\text{rejz}] \\
\text{rice} & \quad [\text{rajs}] \\
\text{rye} + \text{Pl} & \quad [\text{rajz}]
\end{align*}

[z] is \textit{not} determined by the phonological context only, because in an
\textit{identical environment} [s] occurs.