Ling 403/603
Introduction to Phonology

DAY 22
CESAR KOIRALA
Local Environments in Phonology

- Local Environments are the cases in which *trigger* of a phonological process is adjacent to the *target*.
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Some examples:

1. Preglottalization in English:  *Rule:* /t/ is preglottalized when it occurs at the end of a word.

   [lɛ²t] ‘let’
   [fæ²t] ‘fat’
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Some examples:

1. **Preglottalization in English**: Rule: /t/ is preglottalized when it occurs at the end of a word.

   \[
   [lɛ^2t] \text{ ‘let’} \quad [fæ^2t] \text{ ‘fat’} \quad \begin{array}{c}
   \text{-cont} \\
   \text{-voice}
   \end{array}
   \rightarrow \begin{array}{c}
   \text{+ constricted glottis}
   \end{array} / \_ \_ \#\]
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• Local Environments are the cases in which *trigger* of a phonological process is adjacent to the *target*.

Some examples:

2. $V \sim \emptyset$ alternation in karok:  
   
   *Rule*: Delete a vowel that follows another vowel

   $/ni+uksup/$
   
   V deletion niksup
   Palatalization nifikup
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*Some examples:*

2. V~∅ alternation in karok:  *Rule:* Delete a vowel that follows another vowel

\[
/\text{ni}+\text{uk}\text{sup}/ \\
\text{V deletion niksup} \\
\text{Palatalization nikʃup} \\
\text{V} \rightarrow \emptyset / \text{V __}
\]
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Some examples:

3. /w/ insertion in Lardil: Rule: Insert [w] between [i] and [u]

\[
\text{/w/ Epenthesis} \\
\emptyset \rightarrow w / i \_\_ u \\
\text{Insert [w] between [i] and [u].}
\]
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In general:

1. Substitution:  
   (i) A $\rightarrow$ B/ __C  
   (ii) A $\rightarrow$ B/ C__  
   (iii) A $\rightarrow$ B/ C__D

2. Deletion:  
   (i) A $\rightarrow$ $\emptyset$/ __C  
   (ii) A $\rightarrow$$\emptyset$/ C__  
   (iii) A $\rightarrow$$\emptyset$/C__D

3. Insertion:  
   (i) $\emptyset$ $\rightarrow$ A/ __C  
   (ii) $\emptyset$ $\rightarrow$A/ C__  
   (iii) $\emptyset$ $\rightarrow$A/C__D
Practice Problem 1 (Lamba)

<table>
<thead>
<tr>
<th>tense</th>
<th>“do”</th>
<th>“dig”</th>
<th>“scold”</th>
<th>“wound”</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>tita</td>
<td>tula</td>
<td>pata</td>
<td>Lasa</td>
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<tr>
<td>passive</td>
<td>titwa</td>
<td>tulwa</td>
<td>patwa</td>
<td>Laswa</td>
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<td>patika</td>
<td>Lasika</td>
</tr>
<tr>
<td>applied</td>
<td>titila</td>
<td>tulila</td>
<td>patila</td>
<td>Lasila</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tense</th>
<th>“spy”</th>
<th>“receive”</th>
<th>“ridicule”</th>
<th>“bury”</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>teta</td>
<td>poka</td>
<td>seka</td>
<td>sika</td>
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<td>applied</td>
<td>tetela</td>
<td>pokela</td>
<td>sekela</td>
<td>sikila</td>
</tr>
</tbody>
</table>

\[
\begin{array}{|c|c|}
\hline
[+fr] & [-fr] \\
\hline
[+hi (-lo)] & i & u \\
[-hi -lo] & e & o \\
[(-hi) +lo] & a & \\
\hline
\end{array}
\]

Write a rule that explains the alternations in the forms “spy”, “receive” and “ridicule”.
Write a rule that explains the alternations in the forms “spy”, “receive” and “ridicule”.

Is the environment of the rule different from all the environments we saw today? In what sense?
Practice Problem 2 (Sundanese)

pl. -ar/al-

kusut  karusut  ‘messy’
gətəl  garətol  ‘diligent’
nūgar  nālūgar  ‘to dig up’
combrek  calombrek  ‘to dry’
ɲahō  ɲarəhō  ‘to know’
ɲənr  ɲalənr  ‘to say’
niʔis  nəriʔis  ‘to cool oneself’
mōēkən  mərōēkən  ‘to dry’
hormat  halormat  ‘to respect’
Practice Problem 2 (Sundanese)

What is the rule that explains [l/r] alternation in Sundanese?

Is the environment of the rule different from other environments we saw today? In what sense?
Nonlocal Environments in Phonology

- Nonlocal Environments are the cases in which *trigger* of a phonological process can occur at an extended distance from the *target* (For example: long distance harmony)