Data sets:  Contrastive and complementary distribution
Phonemes and allophones

The symbol [ɾ] is a **voiced alveolar oral flap**, which is a type of liquid. A flap occurs in English in words like *letter* [lɛɾɪ], *water* [wɑɾɪ], *edit* [ɛɾɪt].

- In the languages shown below, are the sounds [l] and [ɾ] **contrastive**? Or are they in **complementary distribution**?

- What is the status of [l] and [ɾ] in the mental grammar of a native speaker of these languages?

**I. Spanish**

[prenda] ‘jewel’  [ola] ‘wave’
[eroiko] ‘heroic’  [pleno] ‘full’
[ora] ‘(he/she) prays’  [selo] ‘zeal’
[maroma] ‘rope’  [kulero] ‘lazy’
[sero] ‘zero’

**II. Korean**

(Note: [ɯ] is a high back unrounded vowel. [:] shows that the preceding sound is long.)

[talda] ‘sweet’  [kɔɾi] ‘distance’
[ɔːlmana] ‘how much’  [nore] ‘song’
[salhwa] ‘legend’  [purida] ‘to use’
[pulgogi] ‘barbecued meat’  [saram] ‘person’
[tal] ‘moon’  [irum] ‘name’
[sul] ‘wine’  [kuːɾida] ‘to draw’
A. Determining whether or not the Korean liquids [l] and [ɾ] are contrastive

• Consider the environments where the sounds in question occur. Don’t forget to use # (word boundary) when that is the left- or right-side environment for the sound.

<table>
<thead>
<tr>
<th></th>
<th>[l]</th>
<th>[ɾ]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ta da</td>
<td>kɔː i</td>
</tr>
<tr>
<td></td>
<td>ɔː mana</td>
<td>no ɛ</td>
</tr>
<tr>
<td></td>
<td>sɔ hwa</td>
<td>pu ɪda</td>
</tr>
<tr>
<td></td>
<td>pu gogi</td>
<td>sa am</td>
</tr>
<tr>
<td></td>
<td>ta #</td>
<td>ɪ um</td>
</tr>
<tr>
<td></td>
<td>su #</td>
<td>kuː ɪda</td>
</tr>
</tbody>
</table>

• Are these two sounds in **complementary distribution** or **contrastive distribution**?

• Can the environment of either sound be stated in terms of a **natural class**?

B. Some additional data from Korean

• What phenomenon do we see below?

• How does this relate to the conclusion we reached in section (A) above?

[ tal ] ‘moon’ [ tari ] ‘moon-nominative’ (as subject)
[ tarul ] ‘moon-accusative’ (as direct object)
[ sul ] ‘wine’ [ suri ] ‘wine-nominative’
[ surul ] ‘wine-accusative’