Today’s topics:

• Types of sound change
• Expressing sound changes
• Change as misperception
Discussion: Group work from last time

- Take the list of “stronger” and “weaker” sounds on p 24 of IHL, and for each pair, identify the phonetic properties by which the sounds differ.
  - Are all these sound pairs related in the same general way?
  - Are there subpatterns?
Sonority

- Speech sounds form a scale from ‘most consonant-like’ to ‘most vowel-like’
  → This scale is called the sonority scale

- The sonority scale predicts many aspects of language behavior cross-linguistically
  - Syllable structure
  - Stress
  - What gets copied in reduplication
  - Patterns in child phonology
  - ...
Sonority

- Here is the sonority scale that we will use:

<table>
<thead>
<tr>
<th>obstruents</th>
<th>nasals</th>
<th>liquids</th>
<th>vowels</th>
</tr>
</thead>
<tbody>
<tr>
<td>stops &lt; fric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vcls &lt; vcd</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Basic scale: O < N < L < V

- Further subdivisions often made, as indicated

- Note obstruents: two options for subdividing

  - /t/ /d/ /s/ /z/ [this is what IHL states (p 24)]
  - /t/ /s/ /d/ /z/
Types of sound change: Lenition and fortition

• Two terms often encountered in discussions of sound change
  - lenition = ‘weakening’
  - fortition = ‘strengthening’

• What do these terms actually mean?
  → Quite a vexed question!
  - Different linguists use them in different ways, or use them without clearly defining
Lenition and fortition

- One definition (H.H. Hock): A sound change is **lenition** if it is an intermediate stage on the way to total loss (and **fortition** is the opposite)

![Diagram of the weakening hierarchy](chart_5.1)

(Chart 5.1. The weakening hierarchy

( graphic from Hock 1991)
Lenition and fortition

• Lenition is a common type of sound change
  - Fortition also occurs, but is less common

• IHL relates lenition to sonority, with qualifiers
  - lenition ≈ increase in sonority
  - fortition ≈ decrease in sonority

• How many of the ‘weakening’ changes listed on p 24 really show an increase in sonority?
  - What other patterns can we identify?
Lenition and fortition

A more careful look at what gets called ‘lenition’

- **Sonority**
  - *Increase* in sonority for *consonants*
  - *Decrease* in sonority for *vowels*

→ Sonority change that makes the sound *less prototypical* for its class?

- **Reduced phonological complexity**
  - Ex: Loss of place of articulation ( > glottal)

Is final devoicing lenition or fortition?
→ Linguists debate this point. Why?
A special case of lenition: **rhotacism**

- The term **rhotacism** refers to a process in which something becomes a rhotic
  - Usually the affected sounds are [s,z]
  - Which subtype of lenition are we dealing with here?
Overview: Types of sound change

• Terms to be familiar with — be able to apply them to language examples

  - lenition, fortition, rhotacism [from today’s class]
  - deletion = sound loss (all positions)
  - cluster reduction
  - haplology
  - epenthesis = sound addition (all positions)
  - metathesis
  - fusion
  - fission
  - vowel breaking
  - assimilation
  - dissimilation
Writing sound change rules

• Use the arrow with no stem, ‘>’, to indicate a diachronic sound change (‘→’ = synchronic rule)

• Whenever we are talking about more than one speech sound, we need to state the class of sounds in terms of properties
  - The sound class affected by a change
  - The environment where the change occurs (unless the sound change is unconditioned)

• Always describe a sound change in terms of the properties that are altered
Writing sound change rules

• More conventions:
  - ( ) means ‘optional’ (usually in environment)
  - C, V are useful abbreviations
  - #
  - Curly brackets { } ? If you must…
  - ‘Zero’ (insertion, deletion) should really be indicated with the empty set sign ‘Ø’, not the vowel symbol ‘ø’

• If there are multiple sound changes, consider whether they need to be ordered
Examples to try

• See handout for cases of sound change to practice working with
  - Practice identifying the type(s) of sound change (see list on previous slide)
  - Also, practice describing each change in terms of the phonetic properties that are involved
  - Consider the Japanese example: Does the order of the sound changes matter?
Why are some types of change common?

- One extremely common force in sound change: **Misperception** (could also be called phonological reanalysis)
  - Articulatory variability
  - Acoustic ambiguity

- Either way, the listener arrives at a different phonological representation than the speaker had intended

- How many of the common sound-change types covered in IHL Ch 2 can be viewed this way?
Examples: Misperception/reanalysis

- One common subtype of lenition: $\textit{stop} \rightarrow \textit{fricative}$
  - Can we form a hypothesis about this type of sound change based on \textit{articulatory variability}?
  - What would the \textit{phonological reanalysis} consist of?
Examples: Misperception/reanalysis

- Example from IHL, Ch 2

  French: *ɔn > ã  *bɔn > bã ‘good’

  - Articulatory variability: Velum may lower ‘early’ for the nasal

  - Acoustic ambiguity: Where is the nasal property localized?

  - What would the phonological reanalysis consist of in this case?
Hypothesis / research question

If one type of diachronic sound change is more common than another, similar change... can we show that the common one is more likely to arise as a result of misperception or articulatory variability in the laboratory?

→ This is currently a very hot topic in linguistic theory