Today’s topics:

• Phonetic change and phonemic change, cont.
Phonetic change vs. phonemic change

- The structure of a **synchronic** phonological system:

<table>
<thead>
<tr>
<th>Phoneme level</th>
<th>Mental representation</th>
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<tbody>
<tr>
<td></td>
<td>phonological grammar (rules, etc.)</td>
</tr>
<tr>
<td>Allophone level</td>
<td>Surface, “phonetic” representation</td>
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</tbody>
</table>
Phonetic change vs. phonemic change

• Phonetic change (from the reading):
  - Has the surface-level pronunciation of words changed between $time_1$ and $time_2$?

• Phonemic change (from the reading):
  (a) Has the mentally stored representation of words changed between $time_1$ and $time_2$?
  
  …or…

  (b) Has the structure of the phonological system itself (for example, the number of phoneme categories) changed between $time_1$ and $time_2$?
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Have we covered everything?

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- How should we classify a change that affects the phonological grammar?
  - What would an example of this be?
Phonetic change vs. phonemic change

- Let’s add a *third category* we can call phonological grammar change

- Now, for each sound-change scenario described, we can consider
  - whether the *surface representation* of words has changed
  - whether the *mental representation* of words has changed (or the *number of phoneme categories* overall has changed)
  - whether the rules (etc.) in the *phonological grammar* have changed
Classifying sound changes

• Can a sound change that affects a word be…
  A. Phonetic change but not phonemic change?
  B. Phonetic change and phonemic change?
  C. Phonemic change but not phonetic change?

• Yes to all of these (see reading)

• Today we will
  - look at some examples
  - consider whether there is phonological grammar change as well
A. Phonetic change, no phonemic change

- The phonetic characteristics of a phoneme change without affecting other phonemes
  - Example: /r/ in dialects of English

→ Is there phonological grammar change here?
A. Phonetic change, no phonemic change

- There is a change in the number of allophones a phoneme has, or their distribution
  - Example: Japanese /s/, stages 1-2

→ Is there phonological grammar change here?
B. Phonetic change with phonemic change

- Phoneme loss
  - From a word
  - From a language’s phoneme inventory

- Phoneme addition
  - To a word
  - To a language’s phoneme inventory

→ Is there phonological grammar change here? ...Depends on the exact circumstances
B. Phonetic change with phonemic change

- Rephonemicization
  - Shift
  - Merger
  - Split

- We’ll take these one by one
Shift

• In a case of **shift**:  
  - A minimal pair is still a minimal pair (they don’t become homophones)  
  - But the sounds that distinguish the words in the minimal pair are now different sounds

• Examples:  
  - Grimm’s Law  
  - Various examples of vowel shifts

→ Why does shift count as “phonemic change”?  
→ Why is this different from English /r/ (above)?  
→ Is there phonological grammar change here?
Merger

• In a case of merger:
  - Two phonemes become a single phoneme
  - A former minimal pair is now homophones

• Merger can be complete, or partial (in which case the phonemes merge only in some environments)

• The outcome of merger can be one of the original two phonemes, or both original phonemes can turn into a new phoneme that is different from both
Phonemic merger

• Examples:
  - Consider the English back vowel data sets discussed last class

→ Why does merger count as “phonemic change”?  
→ Is there phonological grammar change here?
Phonemic split

• In a case of split:
  - What was a single phoneme develops into two different phonemes

• Is a conditioned sound change enough to create a split?
  - What has to happen to ensure that the change is phonemic?

→ Whether or not there is phonological grammar change will depend on the details of the changes that create the split
Phonemic split

• Examples:
  - Japanese /s/, stages 2-3
  - Old English /æ/

• What kinds of things have to accompany a sound change for a real split to occur?
C. Phonemic change, no phonetic change

- Given the way we have defined these categories, what kind of situation would this have to be?
  - Example: English /ŋ/ in many dialects
Advanced points to follow up

From the reading

• How can there be phonetic insertion without phonemic insertion?
  - Consider: Initial glottal stop in English

From last class discussion

• Revisiting the phonemic representation of the word spelled <tore> at Stage 2
  - What are some different approaches?
  - If we consider the whole series of changes, is there evidence for one analysis of <tore> over another?