24.914
Language Variation and Change
Introduction
Language Variation and Change

• Variation and change are fundamental and pervasive features of language

• Do you pronounce *pin* and *pen* the same, or differently?
  – *tin*, *ten*

• How about *cot* and *caught*?
  – *Don*, *dawn*

• How about *which* and *witch*?
  – *whine*, *wine*
Geographical variation

• In the Southern US, words like pin and pen are pronounced the same by many people, while they are distinct in most accents outside the South.

• The contrast between /t/ and /ɛ/ is neutralized before nasals in most Southern accents.
  – Usually both are pronounced as [1]
  – him-hem, many-mini, ten-tin
Geographical variation

• *Cot* and *caught*, *Don-dawn*, *stock-stalk*
• [ɑ] and [ɔ]

The Merger of /o/ and /oh/

Contrast in production of /o/ and /oh/ before /t/ in COT vs. CAUGHT.

Figure by MIT OpenCourseWare. Adapted from the Linguistics Laboratory of the University of Pennsylvania.
Geographical variation

- *Which* and *witch*, *whine-wine*
- Voiceless \[\text{ʍ}\] and voiced \[\text{w}\]

[Map of geographical variation in North America showing the distribution of voiceless and voiced /\text{ʍ}/ sounds.](https://www.ling.upenn.edu/phono_atlas/maps/Map8.html)

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Social variation

• Different social groups can speak differently, even in the same geographical area.
• E.g. Words like *pin* and *pen* are often homophonous for speakers of African American Vernacular English in areas where non-AAVE speakers maintain the distinction.
  – A study of speech patterns in the Calumet region of NW Indiana found *pin-pen* neutralization in 1/7 white speakers and 5/5 African American speakers.
Age-related variation

- Different age groups in a given geographical area often speak differently.
- E.g. older speakers in Charleston S.C. are more likely to distinguish *pin* and *pen* (or *him* and *hem*) than younger speakers (Baranowski 2013).
  - Speakers read potential minimal pairs, and were asked to judge whether they were the same (0), close but slightly different (1) or different (2).
  - Plot shows mean rating for each age group.

Figure 10. Merger of *him* and *hem* in production by decade; minimal-pair test (0 = merged, 2 = distinct) mean values for 96 speakers
Variation within individuals

- We don’t only find variation between speakers of different dialects, we also find variation within the speech of individuals.
- E.g. deletion of word-final /t, d/ after a consonant
  - *just* [dʒʌst] *last* [læst] ‘just last night’
  - *west, hand, etc*
- but the same speaker sometimes pronounces the /t, d/ in the same words
  - ‘*just* a sign of the times’
Variation in every component of grammar

Lexical variation

• people use different words, sometimes for the same referent,
• e.g. soda vs. coke vs. pop, or crawfish vs. crayfish vs. crawdad (for ‘the miniature lobster that one finds in lakes and streams’ (Vaux & Golder 2003).
  – http://www.tekstlab.uio.no/cambridge_survey/maps/13
Variation in every component of grammar

Syntax

• Dialects of English differ in the sentences that they admit as grammatical
• E.g. ‘The car needs repaired’ (cf. ‘The car needs to be repaired’ or ‘The car needs repairing’), ‘The house needs painted’, etc
• grammatical in W. Pennsylvania, E. Ohio, NW Virginia, central Indiana, and Scotland.

ygdp.yale.edu/phenomena/needs-washed
Sources of variation

• Where do these patterns of variation come from?
Change

• All languages change all of the time
• English text from the 1380’s – Chaucer, ‘Troilus and Criseyde’, II.22-28

Ye knowe eek, that in forme of speche is chaunge
With-inne a thousand yeer, and wordes tho
That hadden prys, now wonder nyce and straunge
Us thinketh hem; and yet they spake hem so,
And spedde as wel in love as men now do;
Eek for to winne love in sondry ages,
In sondry londes, sondry ben usages.
Language Change

- 1490 - William Caxton, *Prologue to Eneydos*
  
  Certaynly our langage now vsed varyeth ferre f rom that which was vsed and spoken whan I was borne.

- 1747 - Dr Johnson
  
  Those who have been persuaded to think well of my design, require that it should fix our language and put a stop to those alterations which time and chance have hitherto been suffered to make in it without opposition. With this consequence I will confess that I flattered myself for a while; but now begin to fear that I have indulged expectation which neither reason nor experience can justify.
Variation and change

• Language change is a basic source of synchronic variation.
• A language change cannot occur simultaneously in the speech of all individuals in all places, so change inevitably gives rise to variation.
• Geographical variation: Even if we start from a uniform language, if different changes apply in different geographical areas, then we end up with geographical variation.
  – The same process over longer time scales can give rise to geographical distribution of different languages, e.g. French, Italian and Spanish are descendants of Latin.
• Social variation: If different changes apply among different social groups living in the same area, then we end up with variation related to social groups.
• Age-related variation – how might this arise?
Other sources of variation

Migration

• Spanish is widely spoken in Mexico, and English is the majority language in neighboring US, but this reflects patterns of migration rather than language change.

• Similarly, variation in the English spoken in a region can result from migration of speakers from an area where a different dialect is spoken. E.g. the Western migration of ‘Okies’ in the 1930’s.
Language variation and change

The study of synchronic variation and language change are mutually informing:

• The nature of sound change helps us to explain observed patterns of variation, and the nature of patterns of variation provide evidence concerning how language change works.
For example, in just about every word where Southern British English uses a lower mid back rounded [ɔ], California English uses low back unrounded [ɑ].

- Many US accents outside the West and N. New England also use the [ɔ] vowel in these words.

<table>
<thead>
<tr>
<th>S. British English</th>
<th>California English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought</td>
<td>θɔt</td>
</tr>
<tr>
<td>Lawn</td>
<td>ʌn</td>
</tr>
<tr>
<td>saw</td>
<td>sɔ</td>
</tr>
<tr>
<td>talk</td>
<td>ʈɔk</td>
</tr>
</tbody>
</table>

- Regular correspondences between sounds in different accents are common.

- What kind of sound change could give rise to them?
- What is the mechanism by which this kind of change occurs?
- Do all sound changes work this way?
Language variation and change

• The development of social variation within a geographical area provides evidence that not all speakers participate in sound changes, even when they interact regularly with speakers who are participating in the change.

• How does that work? What determines who participates in a change?

• Explore the properties of sound change and try to understand them in terms of computational models of the process.

• Questions:
  – What triggers sound change
    ➢ Why did [ɔ] > [ɑ] in the Western US, but not in the UK or the North?
    ➢ Why didn’t it change earlier?
  - Why is sound change phonetically conditioned?
  - How can sound changes continue across generations?
Variation and change in grammar

• Language change involves grammar change
  – And variation involves variation between (and within) grammars
• So an understanding of synchronic grammar is crucial to understanding language change.
• Conversely, studying language variation and change can illuminate our understanding of grammar.
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