

# What are mergers?

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# Example mergers

- You'll all have heard of the following (and many other phonological mergers besides):
  - the MEAT-MEET merger: the merger of Middle English /ɛ:/ and /e:/
  - the /o/-/oh/ merger or COT-CAUGHT merger: the merger of English /ɒ/ (or /ɑ/) and /ɔ:/
  - the NEAR-SQUARE merger: the merger of the vowel in words such as *beer*, *fear*, *near* with the vowel in words such as *bare*, *fair*, *square*
- But what are these phenomena?
  - and why are they of considerable interest to linguists?

# Phonological merger

- ‘Merger’ in these cases refers to loss or absence of phonological distinction
- ‘Merger’ can refer to a property of a language, of variety of a language, or of a speech community
  - these are convenient cover terms for collections of individuals (and their phonologies) who are more or less similar
- It can refer to a feature of an individual’s phonology
  - in comparison with those of other speakers

# Synchronic and diachronic merger

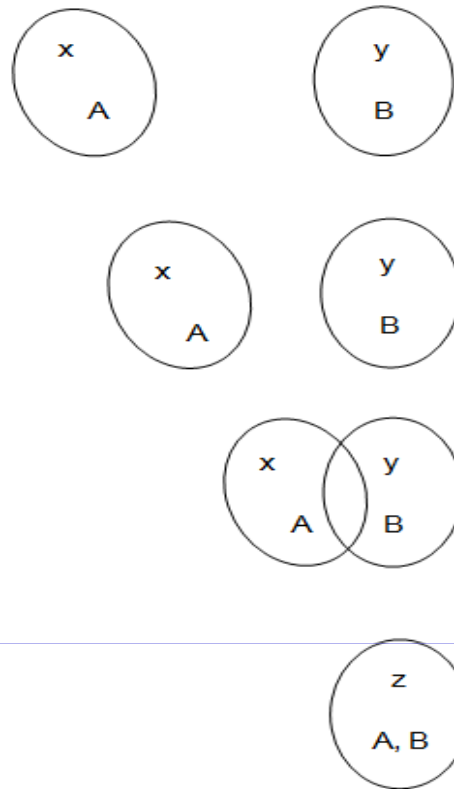
- ‘Merger’ may refer to a synchronic state
  - absence of a historic distinction (which may still exist elsewhere)
  - in varieties
  - in individuals
- Or to diachronic change
  - loss of a distinction over time
  - in varieties
  - can individuals lose distinctions?

# Synchronic merger

- A complicating issue is that, though phonology is a cognitive state, speakers don't live in vacuums but are exposed to other speech patterns which may be different than their own
  - how much knowledge do we have of other people's phonologies (and how does that affect our own)?
  - How 'visible' are mergers?
  - How can we best model these phenomena?

# Mergers as processes

- Mergers have been found to develop in three different ways:
  - merger by drift/approximation
  - merger by transfer
  - merger by expansion
- Each different type of change predicts certain things about the outcome



- Two phonemes (x, y) in two sets of words (A, B) in a variety become one (z)
- Their phonetic distribution gradually becomes more similar until they are no longer distinguished

## Merger by drift / approximation

### Consequences:

- Intermediate stages should be observable
- Potentially no lexical conditioning (Neogrammarian change)
- In its last stages, the change = 'near merger' and it may never complete

# Merger by transfer

- **Process:**

- “words are transferred gradually from one phonemic category to another” (Labov 1994: 321)
- The end result of such a change is that all instances of the input phoneme are replaced by the output phoneme

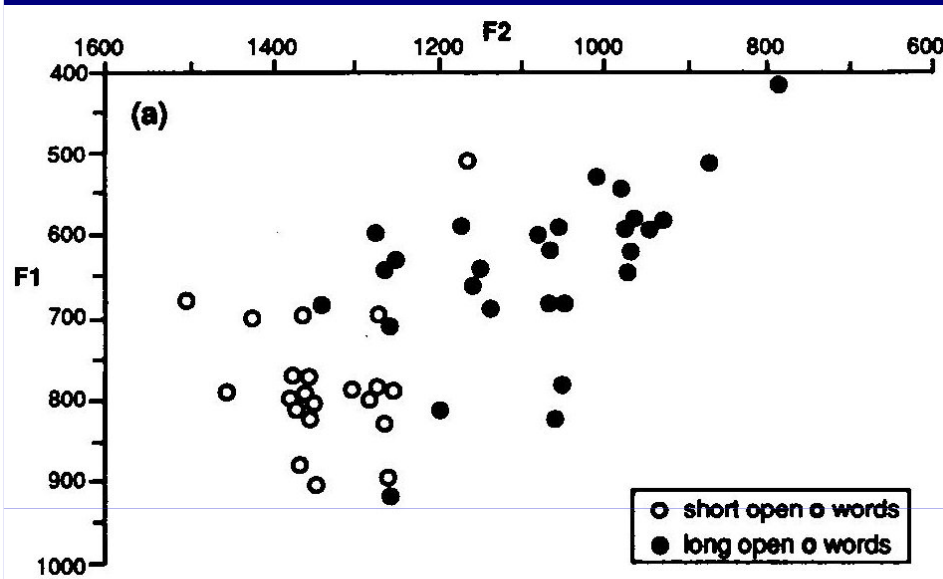
- **Consequences:**

- Transfer is lexically gradual
- Merger by transfer is targeted
- Phonetically intermediate stages do not exist
- Transfer must be ‘phonetically correct’

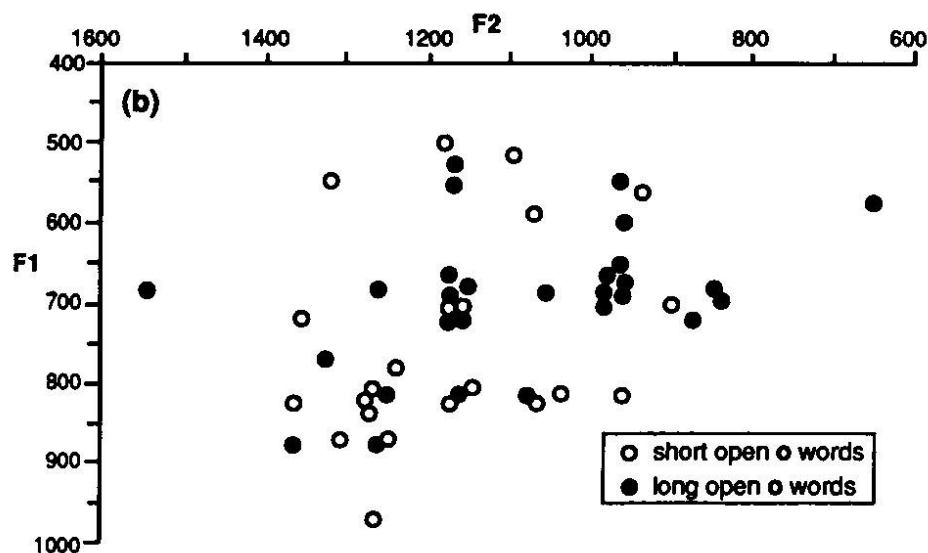


The /o/ - /oh/ merger in Tamaqua, Penn.  
(Herold 1990)

/o/ and /oh/ in the speech of J. Hogan, 81



/o/ and /oh/ in the speech of W. Hogan, 46



## Merger by expansion

- “the lexical constraints on the distribution of the two former phonemes are removed, and the range that was previously divided between the two phonemes is used for the new phoneme” (Labov 1994: 322)
- **Consequences:**
  - Merging and non-merging speakers exist side by side
  - Unlikely that intermediate stages exist
  - Since merger by expansion involves “removal of lexical constraints on the distribution of two former phonemes”, merger by expansion can hardly be partial or variable

# Partial mergers

- Merger of only some members of a lexical set with another
- This may be part of an ongoing ‘merger by transfer’ or may be the result of a partial (but no longer ongoing) lexical diffusion
  - E.g. Most words with ME /ɛ:/ (MEAT) merged with ME /e:/ (MEET) but some words failed to merge and now belong to the MATE lexical set (*break, drain, great, steak*)
  - e.g. MEAT → MEET in Ulster English, but some words retain /e/ – e.g. *real, treacle*

# Variable mergers

- Speakers vary between a single merged category and two (obviously) distinct categories
  - FOOT-GOOSE merger in Ulster English  
[fʌt]/[fʊt] *foot*, [gʊs] *goose*
  - MEAT-MEET merger in Ulster English  
[met]/[mit] *meat*, [mit] *meet*
- The original lexical distinction is still available
- Often the result of a merger by transfer
- Can easily be lost (with disappearance of one of the variants)

# Near mergers

		Spoken	
		same	different
Judged	same	<i>a</i>	<i>b</i>
	different	<i>c</i>	<i>d</i>

Often the output of  
a near merger

- Mergers by drift
  - Difficult to know when the merger is fully complete
- Near mergers:
  - Close phonetic approximation of two phonemes
  - Small but significant differences (or potential differences) between the categories remain

# The *source/sauce* merger in NYC

- First illustrated by Labov, Yaeger & Steiner (1972)
- Merger is predicted for this phonological environment in NYC
- But subtle acoustic differences and...
  - “There is considerable individual variation within the community: some individuals show near-merger, others a complete merger, and still others a distinction” (Labov 1994: 359)
  - “Speakers who make a consistent [near-merger] difference in spontaneous speech often reduce this difference in more monitored styles” (Labov 1994: 359)

# Reversal of mergers

- Garde's Principle (Labov 1994: 311):
  - Mergers are irreversible by linguistic means
- Since speakers with a merger have no sure way of identifying which words contained which original phoneme
- But, perhaps mergers can be reversed through external (i.e. Social) influences
  - “given the right social conditions is it reasonable to think that a distinction can be re-introduced into a speech community in a consistent way”

# Reversal by variation within the speech community and swamping

- Thomas (2006) suggests that mergers can in effect be reversed by 'swamping' of a merging population by a population without the merger
  - children learn both systems; i.e. variable merger, which can easily be lost
  - the same explanation has been given for the loss of the MEAT-MATE apparent merger in Early Modern English (Wyld 1936, Kökeritz 1953)

# Questions for this workshop

- How do we know that a merger has taken place?
  - What evidence do we need?
  - Native speaker intuitions? Perceptual tests? Auditory and acoustic analyses?
- What is the best way to 'measure' a merger?
  - Euclidean distance between formant measurements?
  - Pillai-Bartlett statistics or the Weber fraction?
  - How can these techniques be used in the discussion of what a merger is?



# Questions (2)

- How do mergers develop?
  - Do the merger types outlined here (drift, transfer, expansion) fit the reality of the situation?
  - How can current methodological practices in sociophonetics help us to determine the type of merger taking place?
  - What are the appropriate conditions for merger reversal?
  - Who leads these types of change?

# Questions (3)

- How are mergers evaluated by speakers?
  - Labov (2001:27): mergers are ‘invisible to social evaluation’; Warren & Hay (2006) mergers are directly commented upon...
  - What are people reacting to?
    - Changing phonetic qualities?
    - Collapsing of two categories? Both?
  - How do we tap into metalinguistic awareness to find out?

# Questions (4)

- What can mergers tell us about phonology?
  - To what extent is knowledge of phonological variation part of phonological knowledge?
  - How do phonological and sociolinguistic constraints interact in shaping phonological change?
  - Which phonological models best represent patterns of mergers as change?
  - What does this mean for our understanding of phonological systems?

# Importance of mergers

- Better understanding of the current state of research on mergers in English
- Study of mergers forces us to consider key questions
  - What is language?
  - Where does language change take place?
- Study of mergers “goes right to the centre of what we are doing as phoneticians, (historical) phonologists, and linguists (Maguire 2007:8)

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