Handout 6: Phonological variables and the sources of accent variation
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- We now discuss (the causes for) the commonest types of phonological variation, illustrating them with some important phonological variables in English.
- All languages undergo phonological change over time. Variation occurs when changes affect some varieties of a language but not others, or affect different varieties to different degrees. The varieties affected may or may not include the standard.

1. Different types of sound changes
1.1. Types of phonological processes which can cause changes
(1) **sound shifts** (one sound replaces another), e.g. [ɒ] to [ɑ] in American (*box*)
(2) **deletion** e.g. loss of /h/ in some British dialects
(3) **insertion/epenthesis** (sound added), e.g. Irish [fɪləm] 'film'
(4) **assimilation**, e.g. Yorkshire assimilation (devoicing of voiced plosives/fricatives before voiceless sounds: *big tale, wide trousers, live performance*)

1.2. Conditioned vs. unconditioned changes
- **Conditioned** (change confined to particular phonological environments):
(5) Early Modern English cluster simplification /kn, gn/ → /n/ (*gnome, knot*) only applied syllable-initially (hence: *acknowledge, agnostic*).
(6) 18th century South-English shift from /æ/ to /ɑ:/ only occurred before certain voiceless fricatives and clusters starting with nasals: /ɑ:/ in *laugh, grass, aunt* but not *mad, hat*.
- **Unconditioned** (no restrictions on the environment where the change happened):
(7) In late Middle English *all* instances of /ç/, /x/ delete or shift to /f/ (*right, enough*)
(8) /h/-dropping affected *all* instances of /h/ in some British varieties (though in other varieties it is conditioned, e.g. it only occurs in function words like *her, have*)

1.3. Diffusional vs. absolute (neogrammarian) changes

Absolute changes	Diffusional changes
exceptionless: apply to all words with appropriate sounds / environments	permit lexical exceptions
involve change to a phoneme	involve change to a lexeme
Example: change in (5) above	Example: change in (6) affected *chance, demand, can't, aunt* but not *romance, band, rant, ant*.

- Background: the *Neogrammarians* (*Junggrammatiker*, Leipzig, late 19th c.) proposed that sound changes were *lexically abrupt but phonetically gradual* (i.e. applied to all lexemes with relevant sounds, and proceeded by gradual changes in the production of a sound, whereby the change was not audible between two generations).
- What they said about apparent exceptions:
  - Analogy: preservation of phonological similarity of members of a paradigm. E.g. [swo] > [so] change affected *sword* but not *swore, swollen* (cf. *swear, swell*).
  - Dialect borrowing: exceptions to sound changes were assumed to be borrowed from dialects that had not undergone the relevant sound change.
  - Some types of sound changes were seen as genuinely unsystematic, e.g. metathesis.
- This was unconvincing for some sound changes, so people concluded that sound changes **diffuse** lexeme by lexeme: Phonemes change because lexemes change.
- It is now said that both types of sound change exist(Labov1981,2007, McMahon 1994).

1.4. Phonemic vs. non-phonemic changes
- **Non-phonemic changes**: only affect <u>one</u> phoneme, specifically its realisation by particular allophones.
(9) E.g. the spread of glottal stop as an allophone of intervocalic /t/ in England
- **Phonemic changes**: lead to change in number of phonemes in a language. Two types:
  - **Phoneme split**: one phoneme becomes two
(10) 17th century change /ʊ/ → /ʌ/ resulted in a new phoneme /ʌ/ (the old one /ʊ/ was kept because the change was diffusional: *put/putt, look/luck, could/cud, book/buck*)
  - **Phonemic merger**: a phoneme is lost, two phonemes become one:
(11) In the 19th century, long mid vowels /e:, o:/ in South England and RP diphthongised to /eɪ, oʊ/, merging with diphthongs that were originally a separate phoneme. (Dialects in North England, Scotland, Wales and Ireland largely maintain the original pronunciation.)
  a. pane-pain, lane-lain, gate-gait   (originally /e:/ - /eɪ/)
  b. nose-knows, moan-mown, sole-soul   (originally /o:/ - /oʊ/)
- The distinction between phonemic and non-phonemic changes refers to <u>changes in the number of phonemes in a language</u>. It is not relevant to cases where one phoneme gains a wider distribution at the expense of another. E.g. South England /i:/ has been spreading into unstressed syllables at the expense of /ɪ/ in words like *mon<u>ey</u>, coff<u>ee</u>, cit<u>y</u>*.

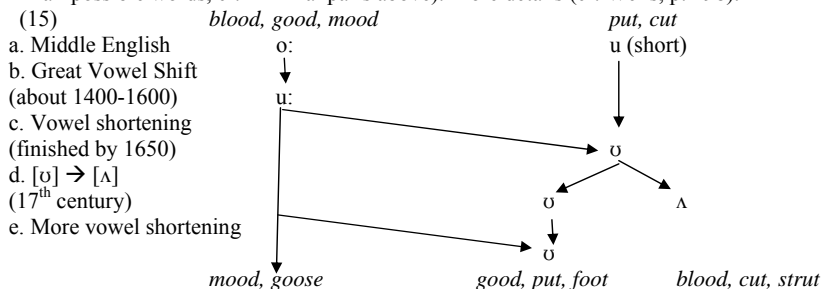**2. Causes of sound changes (selective overview)**
- Ease of articulation:
  - This is most clearly relevant to deletion, epenthesis and assimilation.
  - **Marked** sounds (i.e. sounds found in few languages, acquired late by children) are prone to shift.
(12) Dental fricatives have shifted to /f/ or /t/ in some dialects (Cockney, Irish)
(13) Front rounded vowels have been unrounded in English and several German dialects
- Rearrangement of the phonological system to the end of communicational efficiency. E.g. push/drag chain shifts like the Great Vowel Shift maximise differences between vowels.
- Gradual changes in the pronunciation of a sound, leading to reanalysis of the central variant of the sound by language learners. This is possible with phonological phenomena which are gradable rather than either-or phenomena, e.g.
  - Vowel height
  - Aspiration (can be light or heavy; heavily aspirated plosives can become affricates, e.g. High German Consonant Shift /p,t/ → /pf, ts/).
- Borrowing from other languages/varieties. (E.g. spread of French uvular /r/ in Europe.)
- **Spelling pronunciation**: e.g. *receipt, subtle, phlegm* with [p/b/g]. Sources: myth that 'correct' pronunciation is spelling-based; ignorance of normal pronunciation.
- Social factors: if a phonological variable (be it a relic or an innovation) is emblematic of a socially accepted group, it will spread more readily (cf. Labov on Martha's Vineyard). Strictly speaking this is a source of diffusion of a sound change rather than a cause of it. But one could argue with Labov that sound change would be much commoner if they were not limited by the lack of social impetus in most cases.

3. Examples of variation induced by sound shifts
3.1. /ʊ/ vs. /ʌ/ in the British Isles
- North English dialects have no /ʊ-ʌ/ contrast. The North only has [ʊ], so homophony in
(14) *could / cud   put / putt   look / luck   stood / stud   book / buck*
- Speakers of these dialects may overcorrect when trying to speak standard (*look* as [lʌk]).

- Historical cause: change [ʊ] → [ʌ] in South England in 17th century. This **phoneme split** was **unconditioned**, **phonemic** ([ʌ] was a new phoneme) and **diffusional** (it didn't affect all possible words, cf. minimal pairs above). More details (cf. Wells, p. 198):

(15)   *blood, good, mood*   *put, cut*
a. Middle English   oː   u (short)
b. Great Vowel Shift
(about 1400-1600)   ↓
                             uː
c. Vowel shortening
(finished by 1650)
d. [ʊ] → [ʌ]   ʊ
(17th century)   ↙ ↘
                                                 ʊ   ʌ
e. More vowel shortening   ↓
                                                 ʊ

mood, goose   *good, put, foot*   *blood, cut, strut*

3.2. Glottal stop and flap as allophones of /t/

- Use of glottal stop [ʔ] as an allophone of /t/ between vowels and word-finally is characteristic of Cockney (London) and several other varieties in England.

(16) the bo**tt**le of wa**t**er I bough**t**

- In recent decades intervocalic glottal stop has been gaining ground in South-West England and in contexts where RP pronunciations would have been used.
- This change is **non-phonemic**, **conditioned** and **absolute**.
- The change can be seen as an extension of the environments where [ʔ] can be used, as many British/American/Southern-Hemisphere varieties of English use [ʔ] as an allophone of /t/ in fast speech before syllabic nasals and word-finally before consonants:

(17) *moun**t**ain, co**tt**on, Mil**t**on; ge**t** down, no**t** much, i**t** says, no**t** bad*

- Some American and Australian varieties have developed an alternative allophone of intervocalic /t/, namely the flap [ɾ], used in fast speech (*better, flautist, water*).

3.3. /æ/ vs. /ɑ:/ (Wells, vol 1, p. 232ff)

(18)   RP   Nth Engl.   USA   Australia
a. *pat, bad, cap*   /æ/   /æ/   /æ/   /æ/
b. *path, laugh, grass*   /ɑ:/   /æ/   /æ/   /ɑ:/
c. *dance, grant, demand*   /ɑ:/   /æ/   /æ/   both
d. *part, bar, cart*   /ɑ:/   /ɑ:/   /ɑ:/   /ɑ:/

- The alternations between /ɑ:/ and /æ/ exist because of an 18th century sound change in which /æ/ was lengthened to /æ:/ and later shifted to /ɑ:/.
- /æ/ → /ɑ:/ occurred in South England, hence North England unaffected.
- The shift started in 18th century, so America keeps /æ/. Southern Hemisphere varieties have /ɑ:/, since shift had started before settlements. Australia was settled before NZ and SA, while the change was still occurring, so it has /æ/ or /ɑ:/ in some words, with the choice governed by regional, idiolectal and sociolinguistic factors.
- The change was **diffusional**. Examples of its unsystematic nature in RP (/ɑ:/ underlined):

(19) a. *ant, <u>aunt</u> (avoids homophony), pant, recant, rant, banter, pl<u>a</u>nt, c<u>a</u>n't, gr<u>a</u>nt*
      b. *romance, d<u>a</u>nce, Fr<u>a</u>nce, <u>a</u>nswer, ch<u>a</u>nce, adv<u>a</u>nce, Hanson, cancer, cancel, fancy*
      c. *br<u>a</u>nch, mansion, expansion*
      d. *band, land, hand, gander, expand, dem<u>a</u>nd, comm<u>a</u>nd, rem<u>a</u>nd, sl<u>a</u>nder*
      e. *camp, ex<u>a</u>mple, s<u>a</u>mple, ample, trample*
(20) a. *gr<u>a</u>ph, st<u>a</u>ff, l<u>au</u>gh, ch<u>a</u>ff, r<u>a</u>ft, gaffe, riffraff, <u>a</u>fter, r<u>a</u>ft, Taft*
      b. *p<u>a</u>th, b<u>a</u>th, math(s), hath*

c. *gr<u>a</u>ss, br<u>a</u>ss, p<u>a</u>ss, gas, mass, crass, l<u>a</u>st, m<u>a</u>ster, n<u>a</u>sty, hast, Astor, enthusiast, <u>a</u>sk, b<u>a</u>sket, mascot, casket, c<u>a</u>stle, hassle*

- The change was **conditioned**: it occurred before clusters with nasals, and before voiceless fricatives (see above examples). No change to /ɑ:/ before plosives (*mat, mad, map, mag*).

4. Examples of variation caused by deletion

4.1. /r/-deletion, (non-)rhotic accents, and linking /r/ (Wells, vol. 1, p. 218-227)

- **Non-rhotic** accents have no /r/ except before vowels, **rhotic** accents lack this restriction:

(21) [bɑː**r**kiːpə**r**]   vs.   [bɑːkiːpə]

- This started as a **deletion** process, which did not occur if next syllable started with a vowel:

(22) *far better* [fɑːr betər] →   [fɑː betə]
(23) *far away* [fɑːr əweɪ]   (no deletion before vowel)
      Similar: *directo[r] of; fea[r] of; ca[r] and bike*

- /r/ deletion began in SthEast England in the 18th cent. It spread to much of England and was taken to Southern Hemisphere colonies. It did not affect Irish, Scottish, SW England, and most American accents. (There are non-rhotic American accents, but they arose from contact with English, as was commoner near seaports, e.g. New York.)
- The change was **conditioned** and **non-phonemic**.
- The change was **absolute**. No exceptions (unlike French final consonant deletion, which allowed exceptions, e.g. *plus* [ply] 'no longer' vs. *plus* [plys] 'more').
- Retention of /r/ in (23) was later **reanalysed** as an **insertion** of **linking /r/** to break up vowel-vowel sequences, as there was no evidence as to whether a word had final /r/ (spelling does not count, since spoken language is not based on orthography).
- Consequence: epenthetic /r/ inserted where /r/ had not existed before and is not present in spelling. Examples of this so-called **intrusive /r/**:

(24) Russia [r] and France; ma [r] and pa; law [r] and order; Shah [r] of Persia
(25) draw[r]ing; saw[r]ing; dada[r]ist

- Intrusive /r/ is inserted when the previous vowel is not high. Linking /j/ can be inserted before high front vowels and linking /w/ before high back vowels:

(26) my [j] other car; free [j] a prisoner, free[j]er laws, enjoy [j] icecream
(27) few [w] arrests, go [w] away; few[w]er rests; now [w] or never

- Intrusive /r/ is stigmatised by language purists, particularly if /r/ is word-internal or corresponds to a <w> in spelling (i.e. when they notice it).
- There is no intrusive /r/ in rhotic dialects. You should be able to find the reason.

4.2. /h/ dropping (Wells, vol. 1, p.253ff)

- /h/ is deleted in many English working-class accents (in informal style) due to an **unconditioned absolute** change (probably 18th-19th century, since America unaffected).
- This change could be called phonemic in varieties completely lacking the /h/ phoneme. For these speakers, /h/ is present only when speaker is trying to use Standard English, in which case overcorrections may occur). This is less clear in other varieties:

(28) a. [edʒ]   'edge or hedge' vs. [hedʒ] 'edge or hedge   (emphatic)'
(29) a. [ən edʒ] 'an edge' vs. [ə edʒ] 'a hedge'   ([ə] is otherwise used before consonants)
      b. [jər edʒ] 'your edge' vs. [jə edʒ] 'your hedge'   (linking /r/)

- Most (all?) English varieties have h-dropping in clitic forms of function words:

(30) *They've seen 'er; I would've seen 'im*

- Don't confuse /h/-dropping with words like *hour, heir* where /h/ is never pronounced. These are from French (which has <h> but not /h/). Some French-derived words like

habit, heritage, host, which originally lacked /h/ acquired it as a spelling pronunciation (in *herb* the earlier h-less pronunciation is retained in America).

4.3.   / juː/ vs. /uː/ (Yod dropping) (Wells, vol 1, 206ff, 247f)
- Disappearance of /j/ in the sequence /juː/ in RP:
 (31) a. *rule, rude, blue, plume, glue, lunatic, Luke*   /uː/, but formerly /juː/
       b. *super, suit, lewd, pollute, enthusiasm*   /uː/ (or /juː/ in conservative RP)
- The change was **conditioned** (commonest environments: after /r/ and /l/).
- The change was **diffusional**, since /j/ disappeared later in the words in (31)b than in others, and thus didn't affect all potential words at the time it was operating.
- In some varieties the change has extended further than in RP:
  - Most US varieties, including GA, dropped /j/ after all coronal consonants:
 (32)   *tune, duke, new, enthuse, pseudonym, presume*
  - Some Eastern English varieties lost /j/ after <u>all</u> consonants (stigmatised):
 (33)   *music, pew, view, beauty, queue, human*
- Historical background: The sequence [ju] originated as a diminuendo diphthong [ɪu] that changed to a glide-vowel sequence (late 16th century). This created hard-to-pronounce clusters which were simplified by dropping /j/. Hence, there do not seem to be varieties that drop /j/ word-initially (*unite, use, uterus*).

4.4.   G-deletion (NG coalescence, Wells Vol. I)
- Distribution of [ŋg] and [ŋ] in Standard English accents such as RP and GenAm is basically that [g] does not occur after [ŋ] at the end of a morpheme:
 (34) a. no [ŋg] word-finally: *tongue, swing, wrong, bang*
       b. [ŋg] in middle of morpheme: *finger, hunger, anger, English, language, Hungary, bungle, linger*
       c. no [ŋg] before inflection: *sings, swinging, wronged, songs*
       <u>Exceptions</u>: comparative/superlative: *younger, strongest, longest, $^{\%}$wronger*
       d. no [ŋg] before derivational affixes: *singer, banger, songster, slangy, longish*
             <u>Exceptions</u>: *elongate, prolongation, $^{\%}$diphthongal, $^{\%}$diphthongise*
- Variation: (i) Some Northern English and East Midlands accents (e.g. Liverpool, Manchester, Birmingham) have /g/ everywhere in (34). (cf. pronunciation of *Meinung, Schwung* with final /nk/ in some Nth. German dialects).
                (ii) Some Scots and Irish accents lack /g/ inside morphemes, in (34)b. Of these, some accents lack /g/ only before schwa (cf. German *single, Finger, Inge* vs. *Inga*).
- Historical source: late 16th century, /g/ was deleted after a nasal before a morpheme boundary. In varieties of type (i) in previous point, the process did not occur, and in type (ii) varieties the deletion was more general (not confined to morpheme-final contexts).
- The change was **conditioned** (since /g/ only disappeared after a nasal), **absolute** and **phonemic** (in the indirect sense that it led to the creation of a new phoneme /ŋ/, since before then [ŋ] only occurred as an allophone of /n/ conditioned by assimilation to a following velar consonant).
- Some linguists assume that g-deletion is synchronically active. *Sing* is underlyingly [sɪŋg], but /g/ is deleted morpheme-finally, except in exceptional cases in (34)c,d. Evidence for this includes that [ŋ] is otherwise only found before a velar consonant.

5.   Appendix: An apparent case of phonological variation: the affix *–ing*
- In working class speech and/or informal style throughout the English-speaking world, [ɪn] replaces standard [ɪŋ] in certain contexts:
 (35) a. *–ing*-participles (*He's working*): […ɪn] is very common.
       b. the pronouns *nothing/something*: […ɪn] is less common than (a)
       c. *–ing*-nominalisations (*a meeting*): […ɪn] is less common than (a) or (b)
       d. apart from the affix *–ing* and pronouns, […ɪn] is not found as a variant of [ɪŋ] in other words (e.g. *ring, plaything*)
- Historical facts (from OED and Wells vol 1):
  - The modern *–ing* suffix goes back to two distinct affixes in Old English: [en(d)] (used in participles) and [ʊng]/[ɪng] (for nominalisations). By Middle English they were both spelt <-ing>, and [ɪŋ] replaced [ɪn] as a spelling pronunciation in the 18th-19th century.
  - *nothing* and *something* were pronounced […ɪng], […ɪŋk], […ɪn] or [ɪŋ] in Old English. The nasal-final pronunciations involved deletion of plosives, which was otherwise not yet common (another case where function words more readily undergo deletion than content words; cf. the distribution of h-dropping in standard pronunciations).
- These facts are not facts about the phoneme /ŋ/, but the items *–ing*, *something, nothing*. In the case of *–ing* they are are morphological as well as phonological. They are thus not (wholly) due to other causes of phonological variation seen above (sound change, deletion).
- Notice that the stigmatisation of [ɪn] is irrational. Speakers who use [ɪn] only for participles and [ɪŋ] elsewhere are making distinctions absent in the standard language, so are thus more 'sophisticated'. Speakers using [ɪn] in all cases in (35) are no less sophisticated than those who use [ɪŋ] in all such cases.

6.   Some general remarks
- Note the problems with popular criticisms of non-standard or historically newer features:
  - Standard English has been affected by many deletion processes (cf. the formerly pronounced underlined graphemes in *ta<u>l</u>k, thou<u>gh</u>, name, k<u>n</u>ight, bom<u>b</u>*). If deletion were inherently bad, then we should speak dialects that have undergone fewer deletions (e.g. Scots *night* [nixt], *knee* [kni]).
  - Why do many British speakers regard h-dropping but not r-deletion as 'lazy'?
  - Many Americans are 'guilty' of yod dropping, but stigmatise non-rhotic accents.
  - Criticising Yorkshire speakers of unclear speech due to the homophony of *look* and *luck*, and of *wide pants* and *white pants* (cf. (4), (14)) is unfair unless accompanied by a demand that standard speakers adopt the distinctions in (11) (*pane/pain, sole/soul*).

7.   References
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