

Class 1, 10/1/20: Course Preview; Diachrony; Dialect Survey

1. Assignments for this week

- Read this:
 - First two chapters of Chomsky and Halle (1968) *The Sound Pattern of English*.
 - How to get it? Visit the library, find its catalog record, and go to the “Hathitrust” digital copy.
 - N.B. you must “VPN” to a UCLA computer or they won’t let you look at it.
 - To learn how to VPN to UCLA, visit <https://www.it.ucla.edu/it-support-center/services/virtual-private-network-vpn-clients>.
- Read Hayes (ms.) “Ambisyllabicity in English”. Download from CCLE site.
- Optional reading: extract from John Wells (1982) *Accents of English*

2. For today

- discuss syllabus
- preview
- diachrony
- phonemes and allophones

PREVIEW

3. The Consensus Starting Point: *SPE* (Chomsky and Halle 1968)

- Research method: rationalize a corpus
- The corpus was paper and ink: Kenyon and Knott’s (1944) *Pronouncing Dictionary of American English* (not Chomsky and Halle’s own pronunciations)
- Set up underlying forms with full freedom, such that a set of ordered rules could derive the observed vocabulary.

4. Probabilistic/quantitative principles *tacitly* guided Chomsky and Halle.

- The English stress rule assigns antepenultimate stress to words with light penults
Canada, America, subliminal, Menominee, participant, etc.

- What about words like these?¹

aberrant, achilles, apparel, assassin, banana, cadaver, confetti

- They can't be explained by (a) prestressing suffix (acidic) (b) finally-stressed base (aggressive)
- Nowadays, we might consider a stochastic grammar that admits this as a minority but legal pattern.
- For Chomsky and Halle, they used the full freedom of abstract underlying forms instead:

/æsæssɪn/	UR
æ'sæssɪn	Stress heavy penult (very much the norm)
æ'sæsn	Degeminate (very much the norm; cf. <i>connote</i> , <i>dissect</i>)
ə'sæsən	Vowel Reduction

- Note the opaque rule ordering, found in all discrete uses of phonological material.

5. This strategy can backfire

- It tends to run out of control, since the rules can produce impossible forms.

/dʒɪræffɛ/	UR, "giraffe"
dʒɪ'ræffɛ	stress heavy penult
dʒɪ'ræfɛ	Degeminate
[dʒɪ'ræfɛ]	Drop final [ɛ]

Derivations like the following let us make [ɪ] not a phoneme, helping to capture its distribution:

/dɪŋxi/	UR "dinghy"
dɪŋxi	place assimilation
dɪŋhi	x weakening
[dɪŋi]	loss of medial pre-tonic [h]

Here is the problem:

/mʊfɛxxɛ/	UR "rich base form"
mʊ'fɛxxɛ	Stress heavy penult

¹ I usually find examples with my (very rough) English Phonology Search program:
<https://linguistics.ucla.edu/people/hayes/EnglishPhonologySearch/Index.htm>

mu'fɛɛ	Degeminate
mu'fɛhɛ	x weakening
mu'fɛɛ	loss of medial pre-tonic [h]
*[mu'fɛ]	Drop final [ɛ]

6. The is strategy is insufficient given subsequent research findings

- Chomsky and Halle didn't know about **frequency-matching** in phonology.
- As least in many areas, native intuition is gradient in ways that matches the patterning among existing words.
- Established for Tagalog by Zuraw (2000 et seq.), for Dutch by Ernestus and Baayen (2003 Lg), for Hungarian by Hayes and Londe (2006, Phonology), for English past tenses by Albright and Hayes (2003).
- So we need something that engages directly, not tacitly, with frequency.

7. Some work later in the *SPE* tradition

- Liberman and Prince (1977, *LI*) On stress and linguistic rhythm.
 - This paper caused me to become a phonologist! It's quite good.
 - Puts forth the earlier version of metrical stress theory.
 - But (with occasional brief expressions of doubt) the analytic system is exactly that of *SPE*.
- My first journal article (1982, *LI*) Extrametricality and English stress — same, with a more modern version of metrical stress theory, borrowing from unpublished work by Prince.
 - I did take the trouble of computing the accuracy of my analysis with a single page from the *New York Times*.
 - This is more modern, because I was trying to be *faithful* to the corpus, rather than trying to *rationalize* the corpus.

8. One theme here

- Trying to be faithful to the corpus, with methods of stochastic grammar — *Canada* is the norm, *Achilles* is ok by quite possible, *[mu'fɛ] is outright impossible.
- This can be done, I think!
- But it will be easier if we don't play games with things like /dmxi/, /dʒɪræffɛ/, etc.

9. What has been done since *SPE*? I. the Classical OT era

- Shockingly, although the advent of Optimality Theory (Prince and Smolensky 1993) led to an endless sequence of reanalyses of pre-analyzed systems, there was little reanalysis of English.
- Why? Perhaps the existing analytic tradition was so fully grounded in the abstract-UR approach, with massive (analyst-created??) opacity.

- So an innovator had to innovate twice: both the framework, and clearing away the weird abstractionism.

10. What has been done since SPE? II. Other things

- Discovery of syllables and weight — e.g. my 1982 paper was trying to make use of this; but others like Larry Hyman and James McCawley had already figured out that you need syllables to do stress properly.
- Lexical phonology (Kiparsky, 1980's): recasting the SPE + and # boundary symbols as a more sophisticated mode of lexical organization.
- Discovery of remote-base theory (Steriade 1990s to present)
- Martinian leakage —blurring the # + distinction in subtle ways.
- Theories of lexical variation: Pater (2000, *Phonology*) on constraint-cloning

11. There is never been another SPE

- The book weighs about two pounds and its scope, intensity, and difficulty are amazing.

DIACHRONY

12. Goal

- A very bird's-eye view of English from a historical perspective.
 - Typological properties
 - Explanation of synchronic anomalies
 - Basis for sensible comparison of the dialects

13. Good sources on diachrony of English

- Prof. Donka Minkova at UCLA
- Otto Jespersen (1909–1949): *A Modern English Grammar on Historical Principles*. George Allen & Unwin, London
- Other stuff I don't know — is there a favorite modern text?
- I'm doing this in a hurry and am doubtless making mistakes, but hopefully the general drift is roughly correct.

14. General theme

- A diachronic change
- Consequences in the modern synchronic pattern.

15. What was English ca. 400 C.E.?

- This stage is known only through comparative reconstruction

- It had long vs. short vowels, probably monophthongal.
- It had predictable, stem-initial stress.²
- Stems tended to be short.
- This stress was probably strong, as we know from subsequent developments.
- Various sounds were not phonemic:
 - [v, ð, z] were intervocalic allophones of /f, θ, z/.
 - [ŋ] was an allophone of /n/ before velars; final “ng” was [ŋg].
 - before a certain stage [ʃ] did not yet exist.

16. A major change

- Massive loss of atonic syllables at the end of a word, mostly in the transition from Old to Middle English.
- Perhaps this was just sound change, perhaps in part because the stressless syllables were grammatical suffixes, and the grammar (along with the society) got smashed by invading Danes ...
- English became, in its native vocabulary, much more monosyllabic than other German languages.

17. A modern consequence: schwa-final words

- Wells (*Accents of English*, p. 221): “Middle English had no words ending in schwa.”
- Folksong pronunciations like *Americay*, *Califor-nye-ay*, *Califor-nye-oh* attest that this constraint lasted a long time among the common people.
- So the schwa-final words we have are all borrowed, and form an odd distribution.
 - Learned or semi-learned words (*idea*, *comma*, *melanoma*, *antenna*, etc.), from Greek and Latin
 - Place names, originating from Latin or as Latinate formations (*Indonesia*, *America*, *Liberia*)
 - Feminine given names (*Linda*, *Flora*, *Sheila*, etc.)
 - Noticeably-foreign words from modern languages (*guerrilla*, *samba*, *sabra*)
- Full list, from the lexical database I’ll be using here:

abracadabra, acacia, Africa, agenda, agoraphobia, aha, Albania, alfalfa, algebra, Algeria, alpaca, alpha, alumna, ambrosia, ammonia, amnesia, amoeba, amphora, anaconda, anaesthesia, anathema, Andorra, angelica, angina, Angola, Anguilla, Anna, anorexia, anten na, Antigua, aorta, aphasia, Arabia, arcadia, area, arena, Argentina, aria, armada, aroma, asia, asthma, aura, aurora, Australasia, Australia, Austria, azalea, ballerina, balsam, banana, barracuda, basilica, bazooka, begonia, Bermuda, beta, boa, bohemia, Bolivia, bonanza, bravura, brouhaha, Buddha, Bulgaria, Burma, cafeteria, calla, Cambodia, camera, Canada, canasta, candelabra, cantata, carcinoma, Catalonia, charisma, chihuahua, chimera, china, chinchilla, cholera, cicada, Cinderella, cinema, circa, claustrophobia, cobra, coca, cochlea, cocoa, coda, cola, Colombia, coloratura, coma, comma, concertina, conga, cornea, cornucopia, corolla, corona, Cuba, cupola, Czechoslovakia, dacha, dahlia, data, delta, diarrhoea, diaspora, dilemma, diphtheria, diploma, dogma, Dominica, drachma, drama, dyslexia, eczema, Electra, emphysema, encyclopedia, enema, enigma, era, Eritrea, erotica, Ethiopia, euphoria, Eurasia, eureka, euthanasia, extra, extravaganza, fantasia, fauna, felucca, fibula, fiesta, flea, flora, Florida, flotilla, formica, formula, forsythia, gala, gala, Gambia, gamma, gardenia, geisha, genitalia, Ghana, glaucoma, Gloria, gondola, gorilla, Guatemala, guava, guerrilla, Guinea, Guyana, hacienda, harmonica, Havana, henna, hernia, hula, hydra, hyena, hypochondria, hypothermia, hysteria, Iberia, idea, iguana, impala, India, Indonesia, inertia, influenza, infra, insignia, insomnia, intelligentsia, iota, Ira, ita, Jaffa, Jamaica, japonica, java, junta, kappa, karma, Kenya, koala, Korea, krona, lama, larva, lasagna, lava, lea, liana, Liberia, libra, Libya, Lima, lira, llama, loggia, Macedonia, Madeira, madonna, mafia, magenta,

² English carried forth traces — like lose forlorn, of the ancient Indo-European accent (Verner’s Law).

magma, magnesia, magnolia, mahatma, majolica, malaria, Malaysia, Malta, mama, mamba, mania, Manila, manna, mantilla, Maria, marijuana, marimba, marina, Marsala, mascara, Mauritania, Mecca, media, megalomania, melodrama, memorabilia, mesa, miasma, mica, militia, militia, mimosa, mocha, momma, Mongolia, myopia, Namibia, naphtha, nausea, nebula, neurasthenia, Nevada, Nicaragua, Nigeria, nirvana, Nora, nostalgia, nova, novella, nutria, okra, Olympia, omega, opera, operetta, orchestra, ova, pagoda, panacea, panama, panda, panorama, papa, papaya, paprika, paprika, Papua, parabola, paranoia, paraphernalia, paraplegia, parka, pasha, pasta, patella, patina, payola, pea, pellagra, peninsula, penumbra, pergola, Persia, persona, peseta, petunia, phantasmagoria, philistia, phobia, piazza, pinta, piranha, pizza, pizzeria, placenta, plasma, plaza, plea, plethora, pneumonia, poinsettia, polka, polka, Pomerania, poppa, propaganda, Prussia, puma, pupa, qua, quota, regalia, regatta, Regina, replica, retina, rhea, riviera, Romania, rota, rotunda, rubella, Ruritania, Russia, Rwanda, sabra, saga, saliva, salmonella, salvia, samba, Samoa, sauna, savanna, Scandinavia, scapula, schizophrenia, scintilla, scuba, Scylla, sea, semolina, Senna, senora, sepia, sequoia, Sheila, Siberia, sienna, sierra, silica, Slovenia, soda, sofa, Somalia, sonata, soya, spa, Sparta, spatula, stamina, stanza, stigma, stigmata, subpoena, suburbia, Sumatra, supernova, swastika, Syria, taffeta, Tanzania, tarantula, tea, tempera, tequila, tiara, tibia, toga, Tonga, tortilla, trachea, trauma, trivia, troika, tuba, tuna, tundra, Tunisia, Uganda, umbrella, utopia, vagina, vanilla, vendetta, Venezuela, veranda, Veronica, vertebra, Vesta, via, Victoria, vicuna, villa, viola, Virginia, visa, vista, viva, vodka, vulva

18. Other consequences of the fall of posttonic syllables

- Voiced fricatives become phonemic, but with a strange distribution: medial, final, but seldom initial
- [v] in *live*, [s] in *rise* are lautgesetzlich.³
- Words like *vowel*, *zoo*, are borrowed.
- *vat* is dialect-borrowed, from West Country English

19. Norman conquest (1066)

- This led to massive vocabulary replacement.
- English is like Persian, Albanian: native words form a minority (but are dominant among common words).
- It probably opened the door for even more massive vocabulary imports from Latin and Greek — widely known to the educated subclass of English speakers.
- So learned words in English have far more “nativized” phonology in English than they do in Dutch or German: *genitive* ['dʒɛnətɪv] German [ge:ni:ti:f]⁴
- Nevertheless, the borrow layer still forms a **vocabulary stratum**, rather like the Sino-Japanese stratum in Japanese (Ito and Mester).

20. A MaxEnt study of the English Greco-Latin stratum

- Hayes (2016) (2016) Comparative phonotactics. *Proceedings of the 50th meeting of the Chicago Linguistic Society*, 265-285.
- You can use constraints, like *w IN LATINATE, *PRETONIC [tʃ] IN LATINATE, to predict stratumhood (diagnosed with particular affixes; needs experimental work).
- Conjecture: native speakers would judge that

[wɛpə'tʃeɪʃən]

is less plausible as a learned word than

³ “sound-law-ly”, “following the expect pattern due to sound change”

⁴ Heinz Giegerich’s books on German phonology are a useful guide here.

[vɛpə'keɪʃən]

21. SPE and the borrowed stratum

- They recognized it, for instance as the diacritic allowing Velar Softening (*focus ~ foci*)

22. The Great Vowel Shift (ca. 1450), from Wells (1982:184)

i:	→	eɪ	ultimately	aɪ	<i>price</i>
e:	→	i:			<i>fleece</i>
ɛ:	→	e:	ultimately	i:	<i>clean</i>
a:	→	ɛ:	ultimately	eɪ	<i>name</i>
ɔ:	→	o:	ultimately	əʊ, ɒʊ	<i>goat</i>
o:	→	u:			<i>goose</i>
u:	→	oʊ	ultimately	aʊ	<i>mouth</i>

23. Vowel Shift made many synchronic patterns look very weird

- Trisyllabic Shortening

Shorten a vowel if two atonic syllables follow.

<i>divine, divinity</i>	aɪ	ɪ
<i>serene, serenity</i>	i:	ɛ
<i>profane, profanity</i>	eɪ	æ
☞ <i>there is one more, find it</i>		

- Precluster Shortening

keep, kept
produce, productive

- Managerial Lengthening

lengthen nonhigh vowels before Cɪə

manager, managerial	ə	i:
Newton, Newtonian	ə	oʊ

24. SPE bit the bullet, did a recapitulatory analysis

- UR of [aɪ] is [i:]

- UR of [i:] is what?
- The rules above are simply adjustments of length.
- Synchronic Vowel Shift produced endless scholarly wars that have most abated.
 - We now know phonological acquisition is precocious — could a fundamental point of the phonology depend on fancy words like *serenity*?

25. Vowel Shift and Unnatural Phonotactics

- English has a puzzling phonotactic constraint: **jai*, violated only in expressive vocabulary (*yikes*, *ay-yay-yay*, *yippie-yi-yo-ki-ay*)
- English is also unusual in allowing [j] before its highest front vowel: *yeast*, *yield*, *ye*

☞ explain what's going on here

☞ explain why English has words like *woo*, *wound*, *swoon*, *womb*

26. The origin of [ʃ]

- It mostly derives from **sk*.
- It is spelled *sc* in Old English.

27. Unnatural patterns with diachronic origin: *aɪʃ

- ☞ So what is the story here?
- See:
 - Iverson, Gregory K. and Joseph C. Salmons. 2005. Filling the gap. *Journal of English Linguistics* 33:207-221.

FURTHER DIACHRONIC EXPLANATION: THE DIALECTS AND THEIR ORIGIN

28. A reference work I have enjoyed

- John Wells (1982) *Accents of English* in 3 vols. Cambridge University Press.
- Comprehensive taxonomy
- Perhaps unique in the pursuit of careful allophone description in *SPE* style.

29. Where is English spoken?

- Its home island, since Anglo-Saxon times (ca. 400 C.E.)
- The U.S. and Canada, starting in the early 17th century
- Ireland, gradually displacing English over the centuries since Elizabethan times, but also exported with Scottish colonists to Ulster, at the same period the American conquest began.
- Australia, New Zealand, South Africa, since the early 19th century
- Caribbean islands, often in creole or semi-creolized form, since the 1700's

- Around the world (notably India), there are *native* speakers whose dialect derives from intensive English use by L2 parents.
- Around the world there are zillions of L2 speakers.

30. Traditional dialect and accent (Wells pp. 4-8)

- Traditional dialects are spoken only in Britain and are rare and dying.
 - They involve a direct descent from earlier versions of English (obviously with mainstream influence)
 - They can be very hard for us to understand.
 - Perhaps the best known traditional dialect is Lowland Scots, at one time a literary language.
- Regional *accents* are ubiquitous and robust.
 - Their phonology may reflect a traditional dialect once spoken in the area.
 - Their syntax and vocabulary is more standard.
 - The more extreme cases are also hard for us to understand.

31. Dialects and the historical perspective

- Dialects can be treated systematically by reconstructing their descent from a common ancestor.
 - Obviously, if our interest is the ancestry of American English there is no need to date this any earlier than 1607.
 - Wells dates the North American “splitoff” at ca. 1750
 - ... the Australian, New Zealand, South African splitoffs are 19th century at earliest
 - I suspect that widespread L1 English in India etc. is a 20th century phenomenon.

THE PHONEME INVENTORIES OF TWO DIALECTS

32. Well's sets for British "Received Pronunciation"

- RP is a declining standard, still heard from (some) Brits, and in history-recreating movies.

ɪ	ʊ	ɪː		uː	ɪə	ʊə	
e		eɪ	ɔɪ	əʊ	ɛə	ʒɪ	ɔɪ
	ʌ						
æ	ɒ	aɪ		aʊ		ɑː	

*checked**free*

KIT

FOOT

FLEECE

GOOSE

NEAR

CURE

DRESS

FACE

CHOICE

GOAT

SQUARE NURSE NORTH,
FORCE,
THOUGHT

STRUT

TRAP

CLOTH
LOT

PRICE

MOUTH

START,
PALM

plus some stressless vowels, like [ə] in LETTER, COMMA and [ɪ] in HAPPY

☞ would anyone like to try a demo of these?

- "Checked" means, confined to closed or semi-closed syllables.
 - Semi-closed: following consonant is ambisyllabic (= intervocalic pretonic).
 - Compare: *donation* [dəʊ'neɪʃən], *dough* ['dəʊ], *boa* ['bəʊ.ə] / *[dɛ.'neɪʃən], *[dɛ], **[dɛ.ə]
 - But: ['betə] *better*, where the /t/ is ambisyllabic
- Wells chooses his example words for a reason to be given shortly, but it's not that hard to find minimal and near-minimal sets of the kind that can justify a phoneme inventory; e.g.
 - *bit, bet, bat, foot, but, lot / beet, bait, bite, loiter / boat, bout, boot / beard, bared, Bert, Bart, boor, bore*

33. Wells's sets for "General American"

- Roughly, the Midwest and further west.
- I think I more or less speak General American.⁵

I	ʊ	i		u		
ɛ	ʌ	eɪ	ɔɪ	o	ɜ	ɔ
æ		aɪ		aʊ	ɑ	
KIT	FOOT	FLEECE		GOOSE		
DRESS	STRUT	FACE	CHOICE	GOAT	NURSE	THOUGHT CLOTH
TRAP		PRICE	MOUTH		PALM, LOT	

- A number of the vowels given above for RP are not present here because in GenAm they are segment sequences:
 - NORTH, FORCE [ɔɪ]
 - NEAR [ɪɪ]
 - SQUARE [ɛɪ]
 - START [ɑɪ]
 - CURE [ʊɪ]
- Stressless vowels include HAPPY [ɪ], LETTER [ə], COMMA [ə].
- Wells is being peculiar, if not outright ethnocentric, in using [ɜ] instead of [ɜ̃] for the GenAm NURSE vowel.

34. Consonants

These involve only minor differences between the two dialects.

p		t	tʃ	k
b		d	dʒ	g
f	θ	s	ʃ	h
v	ð	z	ʒ	
m		n		ŋ

⁵ Seattle 0-4, 6, Cambridge MA 5, Riverside CA 7, Ithaca NY 7-18.

$$w = \frac{1}{\sqrt{2\pi}} e^{-\frac{1}{2}w^2}$$

plus \mathfrak{u} , discussed below, found only in GenAm

35. Understanding RP-GenAm differences

- They are usually, but not always, systematic.
- We can attribute them to history, starting with the reconstructed protolanguage.

36. Types of dialect difference

- **Realization**
 - Cockney has [əɪ] where RP and GenAm have [i] — but this has no bearing on the inventory of contrasting categories.
 - Such examples are indefinitely multipliable.
- **Category inventory**
 - My⁶ English has the phonemic category /ʌ/, in contrast with /w/, as in
whale - *wail*
why - *Y*
whine - *wine*
whacky “irrational in a flamboyantly dumb way”
wacky “irrational in a dumb way”
 - Your English probably doesn’t.
- **Distributional limitation**
 - Some Scottish allow the “checked” vowels to occur in syllables closed by r.
 - Wells p. 200
 - heard [ɛr]
 - stirred [ɪr]
 - bird [ɐr]
 - word [ʌr]
 - GenAm neutralizes all of these to [ɜ]; RP to [ɜ], so all five words rhyme.
- **Incidence**
 - Both GenAm and RP have an /æ/-like phoneme and an /ɑ/-like phoneme.
 - RP has [dɑns], GenAm [dæns], for *dance*.

⁶ Also Pam Munro, my siblings, about 7% of the U.S. population according to Labov's research.

- Both my sister (one year younger than me, culturally similar) have /ɑ/ in contrast with /ɔ/; she says ['sɑgi], I have ['sɔgi] for *soggy*.
- The general public, too lazy to generalize, loves differences of incidence (“you say tomato, I say tomato”).

37. Mechanisms by which such differences evolve

- **Mergers** (neutralizing sound changes)
- Loss of “rule momentum”— **sound changes that petered out** in mid course, leaving a new phonemic distinction or distribution behind
- Conditioned change with loss of conditioning environment

38. Sources of information about older pronunciation

- The standard Comparative Method, applied to the modern dialects.
- Rhyming of old poets
- Old spelling, especially spellings that were erroneous or innovative
- Old linguistics! the poet Ben Jonson wrote a not-too-bad phonetic description of English in about 1637, and there were many others.

MERGERS

39. Loss of /ɒ/ in GenAm

- The “Middle English short o” merged with a long vowels /ɑ:/, so that *bother* rhymes with *father*.
- See PALM and LOT in chart 33 above.

40. Loss of /ɔ/ in Canadian English/Much of GenAm

- This also lost a vowel phoneme by merging it with /ɑ/, later on.
- It came later than the loss of /ɒ/, and affects only about half of North America.
- The output vowel is sometimes very lightly rounded, a compromise between the neutralized ancestors—I hear this from Canadians and in Bay Area speakers.
- Merger: THOUGHT and CLOTH from chart 33 join up with PALM and LOT.

41. Further mergers before /r/

- More conservative dialects of GenAm make a contrast between upper mid, lower mid, and low front vowels before ambisyllabic (but not strict-coda) /ɹ/.

	<i>older</i>	<i>newer</i>
<i>Mary</i>	[¹ mɛ.ɪ]	[¹ mɛ.ɪ]
<i>merry</i>	[¹ mɛ.ɪ]	[¹ mɛ.ɪ]
<i>marry</i>	[¹ mæ.ɪ]	[¹ mɛ.ɪ]

- Also for some:

<i>Murray</i>	[¹ mʌ.ɪ]	[¹ mɜ.ɪ]
“myrrh-y”	[¹ mɜ.ɪ]	[¹ mɜ.ɪ]

42. Loss of /j/ after coronals

- Most of North America, merging e.g. *tune* [¹tjun] and *toon* [¹tun], *dune* [¹djun] and (*Lorna*) *Doone* [¹dun]
- Strikingly, not after ambisyllabic sonorants: *annual* [¹ænjuəl] *cellular* [¹sɛljəlɜ]

43. /ɛ/ - /ɪ/ merger before nasals

- The famous *pen-pin* merger
- Output is usually described as [ɪ]; perhaps often a bit lower.
- Academic types who speak this natively are vulnerable to hypercorrection; e.g. [pen] for *pin*.
- Areas: U.S. south, southwest, southern Midwest (Indiana), inland California. Black English, of southern origin, also has it.

44. British r-Dropping

- Wells regards GenAm as more phonologically conservative than RP, a pleasing counterweight to popular stereotype.
- The catastrophic process of /r/ Dropping produces several new phonemes, seen in chart 32.
- It also often merged Vr sequences with existing vowels

NORTH/FORCE with THOUGHT
 START with PALM
 LETTER with COMMA

- It spawned an extremely productive rule of epenthesis, the result of overgeneralization.

the idea[r] is
 ich bin ja[r] auch fertig ‘I am indeed also ready.’
 j’étais déjà[r] ici ‘I was already here.’

Gloria[r] in excelsis deo ‘glory to God in the highest’ Wells 226

45. American r-dropping

- Often said to have been the product of still-British-oriented parts of America;
 - Boston
 - New York
 - not Philadelphia
 - the eastern part of the South

46. The NORTH-FORCE merger

- I have met one or two individuals who preserved this ancient distinction, which is normally absent in both RP and GenAm.
- The FORCE words originally had a higher vowel, like [o]; the NORTH words a lower one, like [ɔ].
- Very conservative RP has [o ə] for FORCE words, [ɔ:] for NORTH words.
- Wells gives lists. Generally, words with silent *e* (*ore, adore, wore*) are FORCE words; words with *oa* are NORTH words; but often the spelling is ambiguous.
 - *thorn* is NORTH, *torn* is FORCE.

SOUND CHANGES THAT PETER OUT IN MID COURSE

47. *ʊ → ʌ (Wells pp. 196-199)

- This should have wiped out *ʊ from the language, but it somehow failed; leaving behind a (fair small number) of /ʊ/ words.

put, could, foot [ʊ]

vs. *fun, mud, strut* [ʌ] which did change

- The old /ʊ/ survived in the North of England and in Scotland, and is vaguely familiar to many Americans.
- Probably a source of impediment for this change was the creation of new ʊ from earlier u:, as in *good*.
 - More subtly, Wells says that the [ʊ] from [u:] that got there early enough *did* become [ʌ]: *blood, flood*,
 - Those [ʊ] from [u:] that got there later stayed [ʊ]: *good, hood*

48. The trap-bath split in RP (Wells 232-234)

- Today's [æ] was probably backer long ago, more like [a].
- A sound change started to lengthen this [a] to [a:] in various phonetic environments involving a following fricative or nasal.
- It petered out, while (perhaps at the same time), [a] and [a:] polarized to [æ] and [ɑ:]⁷ (the latter already existed in *father*, *palm*, etc.)
- This created a dreadful mess for Americans trying to fake British English.⁸

Quick quiz. Cover up or fold up the bottom of the page.

	RP [æ]	RP [ɑ:]
fasten	_____	_____
fancy	_____	_____
chance	_____	_____
sample	_____	_____
ample	_____	_____
ankle	_____	_____

Correct answers appear in the footnote below.⁹

49. Petering-out sound changes and theory

- These give comfort, perhaps, to “episodic” viewpoints (e.g. Pierrehumbert 2001); i.e. each word participates in a sound change at its own rate, with the speaker perhaps retaining detailed statistics on how many times each variant has been heard for each word.
- Such word-by-word representations of the change in progress emerge as a permanent distribution when the sound change as a whole gets cold feet.
- As always with episodic approaches, we have to get the forest for the trees—*no* words drifted in this way in GenAm; the “sound change as a whole” is thus a real thing.

CONDITIONED SOUND CHANGES WITH LOSS OF CONDITIONING ENVIRONMENT**50. This is quite common**

I would guess that before the 20th century it was the most common way for languages to get new phonemes.

⁷ Such polarization is seen in Dutch and Hungarian, with [ɑ], [ɑ:]; and in Swedish with [ɑ:], [ɑ].

⁸ Our revenge comes with r-Dropping, which Wells point out is extremely difficult to undo despite clear orthographic evidence.

⁹ ['fasən], ['fænsɪ], ['tʃʌns], ['sæmpəl], ['æmpəl], ['æŋkəl]

51. Creation of /ɪə/, /eə/ in RP

- Wells p. 215 gives a subtler story than mere “r-dropping” — first there was schwa epenthesis, and only then did the /r/ drop.
- The following derivation slightly adapted from Wells’s:

<i>beer</i>	<i>idea</i>	<i>chair</i>	
bɪr	aɪ'diə	tʃeɪr	original form
bɪə	—	tʃeɪə	Schwa Epenthesis
bɪə	aɪ'diə	tʃeə	Pre-Schwa Laxing
bɪə	aɪ'diə	tʃə	r Dropping

52. Could dialect contact, as *synchrony*, be/become a research area?

- What does it mean for a speaker of GenAm to have “fluent perceptual command” over other varieties of English? [example: Bruce understanding Peter Ladefoged or Nina Hyams or Tim Hunter]
- It is plainly something BH has learned, for on the rare occasions I encounter a thick native accent (Ireland, once) it was very hard to understand.
- I also understand Megha Sundara much better than I used to.
- Do I have OO_{RP-me} correspondence constraints?
 - [Anecdote of Peter Ladefoged saying “Pali”]
- Do I have a lexicon of other varieties? (*nappy*, *spanner*, *boot*, etc. etc.)
 - Is this lexicon used only for perception or can it be used in production (*tuna/tuner*)? — Maddieson says no.

CRUMMY PHONEMES

53. Defining a crummy phoneme

- One where minimal or near-minimal pairs exist, but pairs involving the crummy phoneme are highly limited (often in their distribution).
 - In other words, a dialect identical in every respect except lacking the crummy phoneme would sound extremely similar.

54. Crummy phonemes, Type I

- These are the so-called “junctural” phonemes, where words of different grammatical structure have distinct realization, but there is no necessity to include the crummy phoneme in lexical entries.

55. Example 1 of Type I: /iə/ in GenAm

<i>Ely</i>	‘proper name’	[ˈili]
<i>eel-y</i>	‘covered with eels’	[ˈiəɪ]
<i>keeling</i>	‘keel (over)-progressive’	[ˈkiəlɪŋ]
<i>keyling</i>	‘little key’	[ˈkiɪŋ]
<i>Ealing</i>	‘district of London’	[ˈilɪŋ]

- The data given are oversimplified.
 - *keeling* seems not too bad as [ˈkiɪŋ].
 - *Ealing* seems not bad as [ˈiəɪŋ].
- Most of the data can be explained as follows.
 - The [i]-[iə] distinction (or /l/-darkness?) is inherited in paradigms.

bases: *eel* [ˈiəɪ], *keel* [ˈkiəɪ], *key* [ˈki]

- Inheritance is strong in forms derived productively (*eel-y*, *key-ling*), less so in words that may have their own lexical listing (*keeling*).

56. Example 2; /ɑ/ before /rd/, /rt/

- Source: Leonard Bloomfield (1933) *Language*, 366
- He describes for some GenAm speakers:

<i>cart</i>	[ˈkɑːɪt]
<i>carter</i>	[ˈkɑːɪtə]
<i>Carter</i>	[ˈkɑːɪtə]
<i>hard</i>	[ˈhɑːɪd]
<i>harden</i>	[ˈhɑːɪdən]
<i>garden</i>	[ˈgɑːɪdən]

“The word *larder* (not part of the colloquial vocabulary) could be read with the shorter variant, but the agent-noun *larder* (‘one who lards’) could be formed only with the longer type.”

57. Using MaxEnt grammars for these sounds

Aaron Braver, Modelling incomplete neutralisation with weighted phonetic constraints
Phonology 36(1).