An Introduction to Historical Phonology 1

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The contents of this session

1. Historical phonology – what's it all about...?
2. How do we know phonology has changed?
3. What is phonology, anyway?
4. Are there different 'types' and 'parts' of phonological changes?
5. Historical phonology and phonological history

Historical phonology – what's it all about...?

Really, 'historical phonology' involves anything that combines 'phonology' and 'the past'

- this may seem obvious, but the two can be combined in a number of ways...
o it involves both *synchronic* and *diachronic* study (NB!)
o it involves both general historical phonology and language-specific phonological history

- we want to understand the details of specific changes
o *and* we want to reconstruct past stages of languages' phonologies

- we want to understand how and why phonology *can* change in principle
o *and* we want to know how we can reconstruct past synchronic stages of languages

[NB: reconstructing past stages of languages was the start of scientific linguistics...]

These are big questions; they require a number of things:
- evidence of what the past was like
- knowledge of what phonology is like
- an understanding of how new things can be innovated and integrated into a phonology

"We will firstly consider something of the broad context that historical phonology exists in – all the kinds of thing that we would need to understand in order to figure out both what the phonology of particular languages was at various stages in the past, and what kinds of changes have occurred between such stages."

We'll see if we can answer some of these questions:
- what does it mean to say that phonology has changed?
- how can we know that phonology has changed?
- what kinds of changes have occurred in languages?

- are there different 'types' of phonological change?
- are there different 'parts' of a phonological change?
- are there different motivations for phonological change?

- are there characteristics that phonological changes (or particular types of changes) always show?

- can we distinguish between possible and impossible phonological changes?

- what can phonological theory say about how changes are integrated into or lost from a grammar?

It's not completely straightforward to define precisely what we mean by 'phonological change'
- are these examples?
- phonological changes are typically shown using the diachronic 'shaftless arrow' >
- ○ this is NOT the same as the synchronic 'shafted arrow' →

[muːsi]	>	[maɪs]	English	'mice'
[pund]	>	[p͡fund]	High German	'pound'
[gʷénh₂-]	>	[ben]	Irish	'woman'
[keture]	>	[t͡ʃʷetiri]	B/C/M/S~SerBo-Croat	'four'
[koren]	>	[t͡ʃoːsen]	English	'chosen'
[hilpθ]	>	[hɛlps]	English	'helps'

NB: all of these diachronic equations are true, but most of them are missing the point
- because the changes involved didn't just affect individual words

Here's one attempt to define phonological change:

$$\Phi^x \Big/ P_i, T_1 \quad > \quad \Phi^y \Big/ P_i, T_{>1}$$

- Φ = a phonological entity
- $x \neq y$
- P = person, population, place, phonology
- T = time
- $_i$ = the same
- > = in diachronic correspondence

NB: Φ does not just refer to transcriptions of words ([muːsi], [maɪs])
- it can also be a realization of a segment and/or a phonological 'rule'
o a phonological generalisation

NB: the diachronic arrow '>' is ambiguous:
- does it relate the directly pre-change and post-change states?
o or were intermediate stages – were more than one quanta involved?

Joseph & Janda (2003) propose that we should use '>...>' for correspondences that involve several quanta and reserve '>' to describe single-step innovations

- with these conventions, we could say that English change involves:
o muːsi >...> maɪs

This is because we a sure that a series of changes are involved in this correspondence:

muːsi > myːs > miːs > maɪs

NB: the diachronic arrow > has a further problem:
- it does not by differentiate between segments of different phonological statuses
o what about the distinction between underlying ('phonemic', contrastive) phonology and surface ('allophonic', predictable) phonology?
o can change occur at both levels?

We need knowledge of what *phonology* is like

This is an intro course, but I'm assuming you know something about symbols...

- ð, β, ŋ, ʃ, ʌ, ʊ, ə, æ, ø
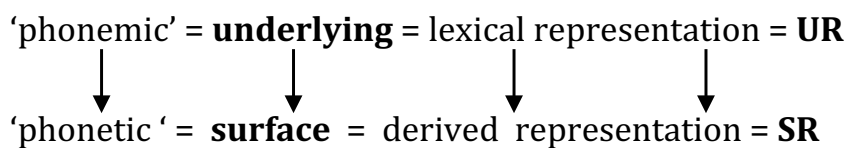
...and that you know something about features...

	m	n	ŋ	p	t	k	b	d	g	f	θ	s	ʃ	x	ʍ	h	v	ð	z	ʒ	l	r	w	j
[Consonantal]	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	−	−
[Sonorant]	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+
[Continuant]	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
[Anterior]	+	+	−	+	+	−	+	+	−	+	+	+	−	−	−	−	+	+	+	−	+	−	−	−
[Coronal]	−	+	−	−	−	+	−	+	−	−	+	+	+	−	−	−	−	+	+	+	+	+	−	−
[Strident]	−	−	−	−	−	−	−	−	−	+	−	+	+	−	−	−	+	−	+	+	−	−	−	−
[Round]	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	−	−	−	−	−	+	−
[High]	−	−	+	−	−	+	−	−	+	−	−	−	+	+	+	−	−	−	−	−	+	−	+	+
[Low]	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	−	−	−	−	−	−	−
[Back]	−	−	+	−	−	+	−	−	+	−	−	−	−	+	+	−	−	−	−	−	−	−	+	−
[Tense]	−	−	−	+	+	+	−	−	−	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−
[Voice]	+	+	+	−	−	−	+	+	+	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+
[Nasal]	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
[Lateral]	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	−

	p	b	t	k	g	s	θ	n	m	ɾ	h	?
	x	x	x	x	x	x	x	x	x	x	x	x
	U	U	R	@	@	R	R̲	R	U	R	h	?
	?	?	?	?	?	h̲	h	?	?			
	h	h	h	h	h			N	N			
	H		H	H								

	p	t̪	t	kʰ	b	f	θ	s	ʃ	ç	χ	v	ɣ	m	n̪	ŋ	r	l	j	w	h
cons	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	−	−	−
son	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+	+	−
approx	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+	
cont	−	−	−	−	−	+	+	+	+	+	+	+	+	−	−	−	+	?	+	+	
nas	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	−	−	−	−	
lat	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	−	−	
voice	−	−	−	−	+	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	−
spread	−	−	−	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+
LABIAL	√				√	√						√		√						√	
COR		√	√				√	√	√						√		√	√	√		
distr	+	+	−		+	−	+	−	+			−			+	+		−	−	+	−
ant		+	+				+	+	−							−		+	+	−	
strid						−		+	+												
DORSAL				√						√	√		√				√				
high				+						+	−		+				+				
back				+						−	+		+				+				

...and that you know something about phonological processes...

- it is standard in phonology to distinguish at least two main levels of *representation* in synchronic phonological knowledge

    'phonemic' = **underlying** = lexical representation = **UR**

    ↓ ↓ ↓ ↓

    'phonetic ' = **surface** = derived representation = **SR**

So... for many accents of English (including RP) this data is representative:

[l]	[ɫ]
light	*pill*
blame	*kilt*
pillar	*pulpit*
feeling	*feel* NB!

In accents like this

- [l] occurs in an onset   NB: [l] and [ɫ] do not contrast
- [ɫ] occurs in a rhyme   A rule can describe all this:

    l-velarisation = $/l/ \rightarrow [ɫ] \,/ \underline{\quad}\ {\overset{\displaystyle R}{\displaystyle |}}$

The following data is representative of my accent, at least:

feet	[fiːt]	*feel*	[fiəɫ]	*feeling*	[fiːlɪŋ]
deep	[diːp]	*deal*	[fiəɫ]	*helix*	[hiːlɪks]
seem	[siːm]	*sealed*	[siəɫd]	*sealant*	[siːlənt]

In accents like this
- [iː] occurs before [l]
- [iə] occurs before [ɫ]

This is sometimes described as 'High Vowel Breaking' or 'schwa insertion'
- HVB can be formalised as a phonological rule:

iː → iə / __ ɫ

There is a crucial interaction between the two rules:

	feet	*feel*	*feeling*
UR	/fiːt/	/fiːl/	/fiːl+ɪŋ/
syllabification	. fiːt.	. fiːl.	.fiː.lɪŋ.
l-velarisation	—	fiːɫ	—
HVB	—	fɪəɫ	—
SR	[fiːt]	[fɪəɫ]	[fiːlɪŋ]

In Rule-Based Phonology, one rule can apply to the output of another rule
- this shows rule ordering: it is a case of feeding order
o in feeding, rule 1 creates an environment which allows rule 2 to occur: LV feeds HVB

The mapping from the UR to the SR is known as a *derivation*
- there has been considerable disagreement as to how different the UR and SR can be due to a derivation: how *abstract* is phonology?
- current work in Optimality Theory works with a different way of mapping UR to SR, but the two levels remain, if in a somewhat reinterpreted way
- current work in representational models, such as Government Phonology, typically assumes two levels, whether this is made explicit or not

Rule ordering can get more fun...

What about these transcriptions, which represent some varieties of AmEng:

set	*sent*
[sɛt]	[sɛ̃t]

cat	*can't*
[kʰat]	[kʰã̃t]

- are there underlyingly nasal vowels in English?
- we do not need to say this if we allow for rule ordering (or some analogous mechanism)

We simply need to assume two ordered rules:

	set	*sent*
UR	/sɛt/	/sɛnt/
V → Ṽ / __ [nasal].	—	sɛ̃nt
n → Ø / __C.	—	sɛ̃t
SR	[sɛt]	[sɛ̃t]

This involves opacity
- 'counter-bleeding' = a later rule removes the context that allows an earlier rule to apply

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Why is all this relevant here...?

This was an attempt to define phonological change:

$$\Phi^x\Big/P_i,T_1 \quad > \quad \Phi^y\Big/P_i,T_{>1}$$

NB: Φ does not just refer to transcriptions of words ([muːsi], [maɪs])
- it can also be a realization of a segment and/or a phonological 'rule'
○ a phonological generalisation

So...
- Φ can be a rule?
- Φ can be a rule ordering?
- Φ can be an UR-SR mapping?

there is a regular segmental correspondence between (i) northern accents in England (such as Present-Day traditional dialect Yorkshire) and (ii) southern accents (such as Present-Day RP, which has southern roots) in terms of their lax vowel phonology:

o every occurrence of [ʌ] in PD RP corresponds to [ʊ] in PD Yorkshire, as in the following set of words:

	PD Yorkshire	PD RP
lung	[lʊŋ]	[lʌŋ]
blush	[blʊʃ]	[blʌʃ]
cup	[kʰʊp]	[kʰʌp]
gulf	[gʊɫf]	[gʌɫf]
love	[lʊv]	[lʌv]

- this isn't *always* the case, however: *some* occurrences of Yorkshire [ʊ] correspond to RP [ʊ], as in the following second set of words:

	PD Yorkshire	PD RP
bush	[bʊʃ]	[bʊʃ]
put	[pʰʊt]	[pʰʊt]
full	[fʊɫ]	[fʊɫ]
wolf	[wʊɫf]	[wʊɫf]
pull	[pʰʊɫ]	[pʰʊɫ]

Why is there this situation? We know that these linguistic systems are closely related because everything else about all these words is the same in both varieties.

To say that these two lects are closely related means that they diverged not all that long ago – they were the same relatively recently
- as they are now different in vowel phonology *some kind of change must have occurred*
- else why would there be the same correspondence in the first whole *set* of words?

The data in the two sets of words above is thus evidence for historical phonology
- some of the most crucial evidence for past states of languages – some of the best evidence for phonological change – comes from the *comparison* of contemporary systems which are related
o this is *comparative evidence*

[**We need evidence of what the past was like**]

What kind of change gave rise to the data?
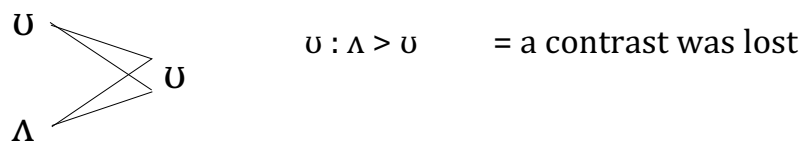- from this data, there seem to be two options

ʊ > ʌ in (the history of varieties like) RP   *or*
ʌ > ʊ in (the history of varieties like) Yorkshire

This change is more interesting than that, though:
- it involves different numbers of contrasts
- in PD RP, /ʊ : ʌ/ – this is a way of showing that [ʊ] contrasts with [ʌ] (as in *put* vs *putt*)
- in PD Yorkshire, there is no such contrast: /ʌ/ does not exist – every word with either [ʌ] or [ʊ] in RP has [ʊ] in Yorkshire, so *put* and *putt* sound exactly the same

- this means that there was either a split in one set of varieties (including RP) …

    ʊ   ʊ   ʊ > ʊ : ʌ   = a contrast developed
        ʌ
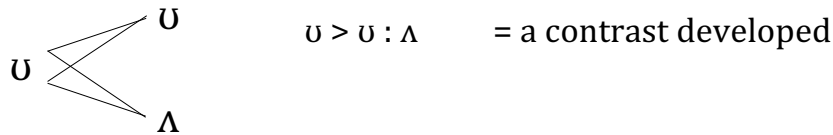
- … or a merger in the other set of varieties (including Yorkshire)

    ʊ
        ʊ   ʊ : ʌ > ʊ   = a contrast was lost
    ʌ

We have a range of evidence which puts beyond doubt which change actually occurred
- we can compare the data with linguistic systems that are more distantly related
- eg, *lung* (/ʊ : ʌ/) has the following cognate in PD German: /lʊŋə/ *Lunge*
- eg, *bush* (/ʊ/) has the following cognate in PD German: /bʊʃ/ *Busch*
- words in both sets have /ʊ/ in more distantly related systems so it seems likely that the older English state (from which both PD RP and PD Yorkshire derive) had only /ʊ/

Another key source of evidence for past phonological states in many languages comes from writing, especially is a language is written using an alphabet
- in early stages of more distantly related languages, both sets of words are spelt with ‹u›
- *lung* (/ʊ : ʌ/)   Old Frisian   *lungen*
- *bush* (/ʊ/)   Old Norse   *buskr*
- this indicates that they likely had a back high rounded vowel (like [ʊ], but not like [ʌ])
- if they had different vowels, we would expect this to be represented in earlier writing using different letters
- the basic alphabetic principle is pretty much the phonemic principle
- when a language is first written in an alphabet, a type of phonemic analysis is involved

English itself has written records which go back for around a millennium and a half

- in earlier stages of English, both sets of words are also spelt with ‹u›
- *lung* (/ʊ : ʌ/)   Old English   *lungen*
- *bush* (/ʊ/)   Middle English   *busche*

- indeed, the fact that many words in both sets are spelt with ‹u› in PD English spelling is evidence, too, because in this case the spelling system reflects an earlier stage of the phonology of a language (the phonology has changed but spelling has not)

A wide range of evidence shows that this was a segmental split in (the history of) varieties like RP

- it is often called the 'FOOT/STRUT split' in work on English
- the FOOT vowel   = the vowel that a dialect has in the word *foot* and others
- the STRUT vowel = the vowel that a dialect has in the word *strut* and others

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This still leaves a lot of questions about this change, for example: when did it happen?

Although English spelling does not reflect this change, written records can still help with our dating of it – here's one way:

- William Shakespeare lived 1564-1616; he wrote towards the end of the 16th and start of the 17th century, including lines like the following; he was writing for a London audience, so it is likely that this represents the pronunciation of that place and time:

  I have been closely shrouded in this bush,
  And marked you both, and for you both did blush.
      Love's Labour's Lost iv, 3, 137-8

  Scale of dragon, tooth of wolf
  Witches' mummy, maw and gulf...
      Macbeth iv, 2, 22-3

- these rhymes now only work in Northern English accents; but they also worked at the turn of the 17th century in Southern English accents (which formed the basis of PD RP)
- these records help us to date the change – it must have happened after Shakespeare
- or, to put it more precisely: this evidence shows that pronunciations with [ʊ] were still normal/unexceptional in London speech in both sets of words in the early 1600s
- this is indirect written evidence: in indirect written evidence, we can interpret a written source in some unintended way to give evidence of the phonology that it represented

There can also be direct written evidence from the past, which involves explicit comments on pronunciation from early phonetician-phonologists, spelling reformers, writers of dictionaries and language-learning guides *etc*

- there is quite a range of direct evidence for languages like English from some periods
- Dobson (1968) has interpreted a wide range of it, and says that "Hodges, Wilkins, Coles, and Cooper fail to distinguish ME *ŭ* in free position from stressed and unstressed [ə] ... this is only possible if ME *ŭ* is [ʌ]" (1968, 586)
  - the authors that Dobson mentions explicitly discussed the sounds in sets of words, and state that the vowel in words like *lung* and *blush* is comparable to [ə], which we know is articulatorily very similar to [ʌ]
  - Hodges is the earliest of the authors that Dobson mentions; he published a number of works in the 1640s in which he "... suggest[s] ways in which the traditional orthography may be improved and made more consistent, and ... invent[s] a system of diacritics by which reading and pronunciation may be taught from the ordinary orthography" (Dobson 1968, 165)

All this evidence gives us a remarkably precise indication of the dating of the change:
- it must have become 'normal' in London speech in the mid-decades of the 17th century

We have thus begun to consider what kinds of evidence we can use to discover the subject matter of historical phonology:
- comparative evidence from related but distinct forms
- evidence from written records

We have also done some reconstruction of a past synchronic phonological state:
- 15th century English did not have /ʌ/ (ie, it did not have the /ʊ : ʌ/ contrast)

This still leaves us with a lot of questions that we could ask about the change, including the following:
- where did it happen? only in London...?
- how did it happen? how does a split enter the phonology of a language?
- what conditioned the split? why did it occur in some words (eg, *blush*) but not others (eg, *bush*)?
- is this the kind of thing that normally happens in phonological change?
- why did it happen? what kind of factors lead to phonological change?
  - to answer these kinds of questions, we will need to consider some further fundamental issues in historical phonology...

Innovation *vs* propagation of change (the 'parts' of a change)
In discussing the change mentioned above, we have asked questions about two distinct aspects of the change

- the innovation involved = the alteration in phonological segments or structures
- o = the structural aspect of the change
- o eg: is this the kind of thing that normally happens in phonological change?

- the propagation involved = the way in which an innovation is taken up by speakers
- o = the social aspect of the change
- o eg: where did it happen? only in London...?

Innovation and propagation are conceptually separable, but there are no easily identifiable diachronic events unless both occur
- a particular innovation must be possible in a particular phonological system and must occur in the speech of one or several speakers, and must then 'catch on' and be propagated through a speech community by its speakers
- some changes propagate through all speakers of a language
- some changes propagate through the speakers in a community which takes up only one part of the area where a language is spoken
- o this may involve the change spreading through only one or several dialects of a language
- o or sometimes such events are argued to lead to the creation of new dialects (or languages)

Any change involves a diachronic difference in some aspect of linguistic structure, and for that difference to become part of the phonological history of a language (and so to become subject matter for historical phonology), 'social' propagation is essential
- the 'social' aspect of a change (broadly construed) involves both the sociological categories that speakers fit into *and* the geography of where they exist
- we will need to consider some aspects of the propagation of change in this course, in order to understand the full details of individual changes that have occurred in languages
- o however, we do need to *focus*: the emphasis in this course is on the structural aspect of change – on innovations

To say *something* about propagation, one well-known observation is that: when a change does not spread through all areas of a speech community, an isogloss results
- in changes that occurred in the medium or distant past, we can track the geographic aspect of their propagation through the methods of dialectology
- the ʊ > ʌ change (the FOOT/STRUT split) was innovated in Southern parts of the 'English speech community', but did not propagate to Northern parts; an isogloss indicates the extent of the propagation of the change
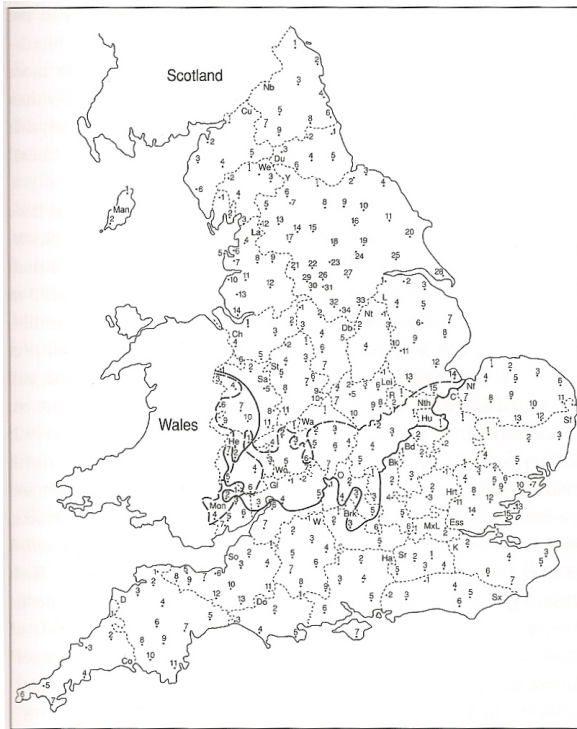
Map 1.6. The FOOT–STRUT split and general northern limit of a long vowel in BATH.

This is a map with information from the *Survey of English Dialects*
- lower unbroken line = FOOT/STRUT
- (upper dashed line = BATH)

Each dot was a sampling locality in the *SED*
- those above the lower isogloss had only /ʊ/
- those below the isogloss had both /ʊ/ and /ʌ/

This flags up the interaction between historical phonology and dialectology
- to an extent they are studying the same things
- dialectology focuses on propagation

If a number of isoglosses coincide (this can be due to political reasons), different dialects or languages can emerge.

In changes that are happening now – that is, in changes in progress – we can track the narrowly social aspect of their propagation by investigating the variation that exists (in terms of the realisation of the phonological categories involved in the change) in different social groups, following Labov's ideas (eg, Labov 2001)
- the FOOT-STRUT split isn't in progress, so let's consider another change which is: GOOSE-fronting (that is, uː > ʉː), which has recently been reported in a number of areas/dialects of English (eg, the SE of England, Birmingham, Nottingham, Manchester)
- this can be seen in the place of *who'd* on this F1-F2 plot for RP-type speakers from London (taken from Ferragne & Pellegrino 2010)
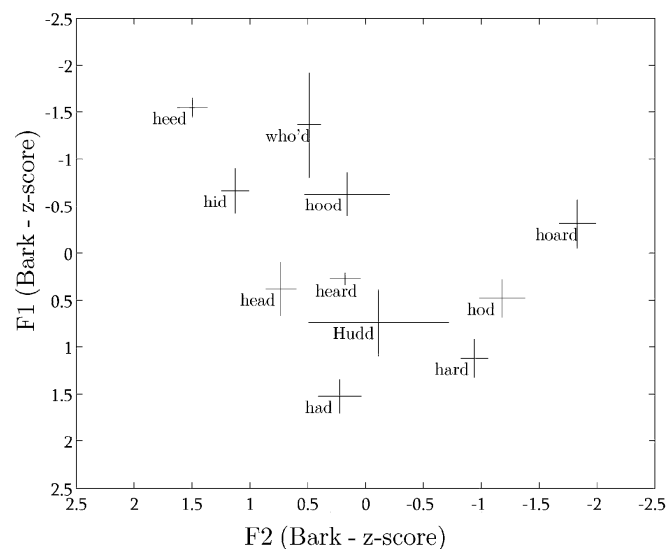
In areas where this change is currently propagating, such as Carlisle, there is variation between social groups of speakers in terms of whether the GOOSE vowel is front or not, as shown in these two F1-F2 plots made from recordings collected in 2007/2008 (taken from Jansen 2017)

- the 60-year-old male has a back realisation of the GOOSE vowel (around [u]), so does not have GOOSE-fronting – he is not taking part in the propagation of the change
- the 23-year-old female has a front/central realisation of the GOOSE vowel (around [ʉ]), so *does* have GOOSE-fronting – she is not taking part in the propagation of the change
○ [both speakers are judged to be middle class]
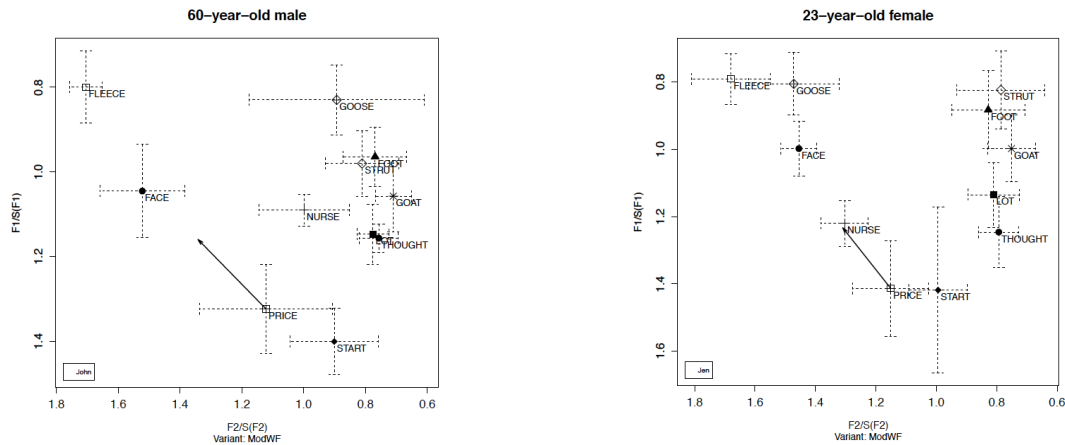
On this evidence, the change has propagated to Carlisle, but has not (yet?) propagated throughout the whole speech community in Carlisle

- it is common in such situations to consider the types of variation involved between groups as showing evidence for change in apparent time
- if older speakers have one variant and younger speakers a different variant, this can be evidence that change is in progress, with the variant used by younger speakers replacing that used by the older speakers
○ Jansen (2017) shows this clearly to be the case in Carlisle GOOSE-fronting
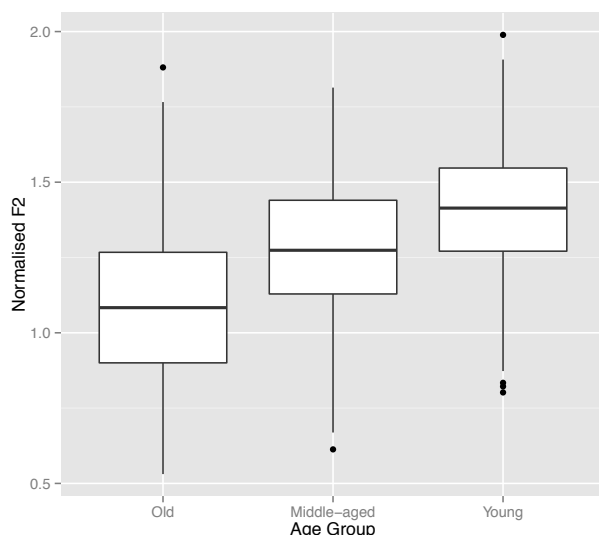
We will not focus in this course on the social mechanisms through which a change progresses through a speech community or on the geography of changes (although both of these *are* part of the overall field of historical phonology)

- much of what we will discuss will focus on innovation, asking questions like:
o what kinds of innovation are possible?
o (as part of this we will need to consider what kinds of innovation have happened – thus far we know that ʊ > ʌ, uː > ʉː, and iː > aɪ are possible...)
o how can innovations be integrated into a phonological system?

Innovations can be endogenous or exogenous (the motivations of change)

Another fundamental question is: where do innovations come from?

We can recognise a fundamental distinction between sources of innovation; there can be:

- exogenous change ('internal' change)
o these are due to innovations that are imposed on a phonological system from without

- endogenous change ('external' change)
o these are due to innovations that are arise within a phonological system

Exogeny involves some sort of linguistic contact; however, not all contact leads to change – languages can borrow individual words without any real change if:
- the words fit with the phonology of the borrowing language
o eg, *tax* /taks/ (from *taxer*) and *soufflé* /sufle/ from French
- or if a word is adapted to the borrowing language's phonology
o eg, *muesli* /mysli/ > /mjuzli/ (German), *gherkin* /xʏrkɪn/ > /gɜ(r)kɪn/ (Dutch *gurkkijn*)

However, languages can gain specific features or even whole segments through borrowing 'loanwords' – or other types of contact
- eg, the English vowel /ɔɪ/ was introduced through borrowings (eg, *choice, employ, join, buoy*)
- eg, the existence of tone in some languages is thought to be due to the existence of tone in neighbouring, but unrelated languages

Endogenous change does not involve contact; it can be due to such things as:
- system-internal pressures (eg, to maintain contrasts)
- the realisation of pathways allowed by constraints on phonological representations
- the phonologisation of phonetic biases

To return to the main change considered so far, there is no evidence that contact was involved in the ʊ > ʌ change, so it must be a kind of change that is endogenously possible in historical phonology
- one important question for historical phonology is: what kinds of change are possible?

Much of what we will discuss on this course will focus on endogeny, because this is where phonological structure is likely to show its impact
- it's important to bear exogeny in mind, however, in order to be sure that a change *is* endogenous

A distinction of approach: historical phonology and phonological history
In order to *fully* understand a specific phonological change, we would need to answer a whole range of questions:

1. when did it happen?
2. where did it happen? how far did it spread?
3. what was its social patterning as it propagated?
4. how was it innovated: endogenously or exogenously? – which factors gave rise to the innovation?
5. what was its precise phonological patterning? was it conditioned phonologically?
6. how did it affect the phonological system? did it affect the set of contrasts? phonotactics? stress? did it involve changing an already existing rule/process or was it entirely new?
7. did it affect only a number of words, or did it affect everything in the relevant phonological environment?
8. in what way did it get into the phonological system? how was it phonologised?
9. is it a common type of change? or is it surprising?
10. could it have patterned differently? do changes of that type normally pattern in that way?
11. which group of speaker-listeners innovated it? children? adults? speakers? listeners?
12. how do we know that the change happened? what's the evidence for the change?
13. why did it happen at precisely that time and that place?

There are different kinds of questions in the list above, implying different kinds of focus – it can be helpful in this connection to distinguish between two subfields of 'historical phonology'

- phonological history = part of the study of specific languages (sometimes called 'philology')
- o = questions 1–7, with an interest in 8, and interacting with 12
- general historical phonology = part of the study of general linguistics
- o = questions 9-11, with an interest in generalising over 3-8
- different kinds of evidence and argumentation are relevant to different questions

These differences of focus are, however, intimately linked:

- in order to understand any individual change in the phonological history of a language, we need to understand how languages can change in general

- in order to understand how languages can change in general, we need to know about lots of individual changes in lots of languages

- but the approaches are often pursued distinctly:

- o some work focuses on *the phonological history of x* (x = English, French, Russian, Swahili, *etc*)

- o other work is on *general historical phonology*, aiming to work out principles of change

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9. is it a common type of change? or is it surprising?
- this invites further questions:
- o what *are* 'common changes' in the history of languages?
- o what kinds of things do we expect to find in phonological change?
- o are there 'possible' changes and 'impossible' changes?
  – sometimes seen as *the* crucial question
- o is there a set of *possible changes which languages can innovate*?
- these are typological questions
- o the study of diachronic typology is one aspect of historical phonology
- o synchronic phonological typology can also act as a control on what we should reconstruct

13. why did it happen at precisely that time and that place?
- this is, in fact, likely unanswerable – can we ever hope to predict when changes will occur?
- o Weinreich, Labov & Herzog (1968) call this the actuation problem:
- o "What factors can account for the actuation of changes? Why do changes in a structural feature take place in a particular language at a given time, but not in other languages with the same feature, or in the same language at other times? This actuation problem can be regarded as the very heart of the matter."
- o it is often argued that we can't hope to be able to predict exactly when particular changes will occur
- o rather, however, we can hope to understand the principles that govern the introduction of changes when they occur: what *could* happen and what *could not*