Class 17
Analogy and morphological change
11/14/19

1 More paradigm leveling

- We can see some additional types of paradigm leveling (more sporadic, though) in other examples from Latin.
- Both center around the operation (and later undoing) of a regular sound change that de-labializes labiovelars before round vowels:

(1) a. *labiovelar stop* > *velar* / __*roundV*
b. *w* > Ø / __*roundV*

- But consider the paradigm of the word for 'horse':

(2) The Latin paradigm of 'horse'

	Pre-Latin 'horse'		*expected*		Latin 'horse'	
NOM.SG	**ek^w-us*	>	*^{x}ek-us*	⇝	*ek^w-us*	<*equus*>
					⇑	
GEN.SG	**ek^w-iː*	>	*ek^w-iː*	=	*ek^w-iː*	<*equī*>

- The regular sound change ought to have applied in the nominative (which begins in /u/).
  - But attested Latin does not show the expected outcome, unexpectedly retaining labialization in this case form.
- Unlike in the nominative, the labialization was regularly retained in other case forms like the genitive.
  - It is the regular retention of labialization in the genitive (and other case forms) that "analogically" causes it to surface in the nominative.

- This could potentially have happened in one of two ways:

(3) a. The sound change *did* apply (in the Latin's pre-history), and labialization was later "re-introduced" on the basis of the other case forms.
b. The sound change was *blocked* from applying in the first place to avoid the creation of an alternating paradigm.

- On the basis of this particular instance, we don't have evidence one way or the other.
- However, we have evidence for the first option when we look at a similar instance:

- The same thing happens in the paradigm of the adjective 'little', but with the added twist that a form that is excised from the paradigm through analogy is retained elsewhere in the language (as an adverb):

(4) The Latin paradigm of 'little'

	Pre-Latin 'little'		*expected*		Latin 'little'
NOM.SG	**parw-us*	>	[x]*par-us*	⇝	*parw-us*
					⇑
GEN.SG	**parw-iː*	>	*parw-iː*	=	*parw-iː*
					⇓
ACC.SG	**parw-um*	>	[x]*par-um*	⇝	*parw-um*
			⇓		
			Latin *parum* 'too little' (ADV)		

⋆ Since we have direct evidence of the archaic accusative form (which survives as an isolated adverb), we know that the sound change *did in fact apply*, at least to that particular form.

→ We can thus (cautiously) infer then that these changes occurred, and then analogy reintroduced the labialization later.

- Another interesting example of paradigm leveling comes from the paradigm of the verb 'choose' in the Germanic languages:

(5) The Germanic paradigms of 'choose'

	(Pre-)Proto-Germanic	Old High German	German	Old English	English
Present	***k**éu**s**-an	**k**iu**z**an	**k**y**r**en	**ʧ**eːo**z**an	**ʧ**u**z**
Past sing.	***k**áu**s**	**k**oː**s**	**k**o**r**	**ʧ**æːa**s**	**ʧ**oʊ**z**
Past plur.	***k**u**s**-ún-	**k**u**r**un	**k**o**r**	**k**u**r**on	**ʧ**oʊ**z**
Past ptcpl.	***k**u**s**-án-	**k**o**r**an	**k**o**r**en	**k**o**r**en	**ʧ**oʊ**z**ən

- In both Old High German (OHG) and Old English (OE), the root-final consonant shows three different variants in different verb forms:
  - Voiced [z] (post-tonic, word-medial)
  - Voiceless [s] (post-tonic, word-final)
  - Rhotacized [r] (pre-tonic, word-medial)

→ Both German and English have completely leveled out these variants:
  - German has chosen [r]
  - English has chosen [z]

- Furthermore, Old English showed regular palatalization before front vowels, creating a [ʧ] ∼ [k] alternation.
  → English has leveled this out as well, in favor [ʧ].

- These cases very clearly illustrate what has been called "Sturtevant's Paradox":

(6) **Sturtevant's Paradox:** "Sound change is regular and causes irregularity; analogy is irregular and causes regularity" (Campbell 2013:96).

2 "Proportional Analogy" and regularization

- Traditionally, all sorts of analogies have been set up as "proportional analogies":

(7) a. *A* is to *B* as *C* is to **X** (where X is the thing that changes)
b. A : B :: C : X

- Most of these paradigm leveling cases can be set up this way (if not always with the greatest precision):

(8) a. GEN *soro꞉ris* : NOM *soror* :: GEN *hono꞉ris* : NOM **X**
b. **X** = *honor*, therefore
c. *hono꞉s* > *honor*

- "Regularization" can often be set up as proportional analogies:

- The plural of *brother* used to be *brethren*.
  - The *-en* PLURAL suffix (still found in *oxen*, *children*, and a few other words) used to be fairly **productive** (could be regularly applied to new words), and was the original way to pluralize *brother*.
  - It caused deletion of the stem-final vowel (through a fairly regular syncope rule), and the /e/ of the suffix umlauted the first vowel of the root (which later unrounded: *o* > *ø* > *e*).
- Eventually, speakers "decided" that this alternation was too complex and that the *-en* suffix was undesirable, so they "regularized" it (on the model of now-regular *-s* PLURALS like *sisters*):

(9) a. SG *sister* : PL *sisters* :: SG *brother* : PL **X**
b. **X** = *brothers*

→ *Brethren* is retained with a specialized usage (≈ 'brotherhood; colleagues')
- Compare Latin *parum* (irregular adverb) vs. *parwum* (regular accusative noun)

- The exact same pattern is found with *old* vs. *elder/eldest*
  - *Elder/eldest* were the original regular comparative/superlative forms of *old* (with vowel change through umlaut).
  - At some point, the regular pattern is re-instituted (*old/older/oldest*).
  - *Elder* and *eldest* have stuck around, but with specialized usages that aren't strictly the comparative or superlative of *old*.

- Some other interesting examples come from English adjectives:

- In English, we have a regular paradigm *near, near-er, near-est*.
  - In Old English, the paradigm that meant that was *nēah*, *nēarra*, *nēahsta*.
  - These three forms are all still around in English:
    - OE *nēah* > Eng *neigh*, OE *nēarra* > Eng *near*, OE *nēahsta* > Eng *next*.

→ The original comparative form was reanalyzed as a positive, and a regular paradigm was built to it (comparative in *-er*, superlative in *-est*).
- The original positive and superlative forms stick around with distinct meanings.

- In English, we have a regular paradigm *late, lat-er, lat-est*.
  - In Old English, the paradigm that meant that was *late*, *latra*, *latost*.
  - These three forms are all still around in English:
    - OE *late* > Eng *late*, OE *latra* > Eng *latter*, OE *latost* > Eng *last*.

→ The positive form was retained, but it got a new regularized paradigm.
- The original comparative and superlative forms stick around with distinct meanings.

⋆ In theoretical terms, none of these changes have to be understood as "analogy" *per se*.
  - Most of these kinds of analogies can be seen as newly applying the productive morphology to non-alternating underlying forms.
  - The variant allomorphs are learned as undivided chunks with special meanings instead of as irregular allomorphs within the original paradigm.

3 Analogy and homophony avoidance

- A very cool case comes from the future tense in Ancient Greek.

- Ancient Greek underwent a sound change that deleted /s/ intervocalically:

(10) s > Ø / V_V

- The underlying form of the future suffix in Ancient Greek just happened to be /-s/.

- In consonant-final roots, there was no problem:

(11) Consonant-final roots

τρέπω	[trép-ɔː]	'I turn'	∼	τρέψω	[trép-s-ɔː]	'I will turn'
δείκνυμι	[deík-nuː-mi]	'I show'	∼	δείξω	[deík-s-ɔː]	'I will show'

- In roots that (for independent reasons...mostly relating to the laryngeals) had different allomorphs in the present than in the future, there was no problem — *s*-deletion applied normally for vowel-final allomorphs in the future:

(12) Roots with allomorphy

στέλλω	[stélː-ɔː]	'I send'	∼	στελέω	[stelé-ɔː]	(< **stele-s-ɔː*)	'I will send'
μένω	[mén-ɔː]	'I remain'	∼	μενέω	[mené-ɔː]	(< **mene-s-ɔː*)	'I will remain'

- But for vowel-final roots that *didn't* have distinct allomorphs, there is a problem — it looks like the *s*-deletion rule didn't apply:

(13) Vowel-final non-alternating roots

πάυω	[páu-ɔː]	'I stop'	∼	πάυσω	[paú-s-ɔː]	(not **páuɔː*)	'I will stop'
λύω	[lú-ɔː]	'I release'	∼	λύσω	[lúː-s-ɔː]	(not **lúɔː*)	'I will release'
ποιέω	[poié-ɔː]	'I make'	∼	ποιήσω	[poiéː-s-ɔː]	(not **poiéɔː*)	'I will make'

⇒ The future *-s-*, which is still recoverable from C-final roots, is reintroduced (or is prevented from being deleted) in order to avoid homophony with the present.

4 "Analogical" changes by mis-analysis

4.1 Folk Etymology

- **Folk etymology** is a process where a long, unanalyzable word gets slightly reshaped to give it a (quasi-)compositional meaning that it never actually had. (This is often happens with borrowings.)

(14) a. Eng *asparagus* > (dialectal) *sparrow grass*
b. Spanish *vagabundo* 'vagabond' ∼ *vagamundo* (≈ *vagar* 'to wander' + *mundo* 'world')
c. Eng *outrage* is analyzed by many speakers as *out* + *rage*, but it's a borrowing from French *outrage* 'outrage, insult' < Latin *ultrā* 'beyond' + *agium* 'NOMINALIZER'
d. Eng *woodchuck* was a borrowing from Ojibwe *ottʃek*, which had nothing to do with 'wood'

- Take also the example of *bridegroom*.
  - It comes from Old English *brȳd-guma*, which literally meant 'bride's man'
    - *guma* 'man' (cognate with Latin *homō* 'man') was already gone from Old English except in this expression.
  - So *guma* was replaced by *groom*, which meant 'a man who sweeps the stables'.

- There is also the case of *hamburger*.
  - This comes from German *Hamburg* (city name) + *er* 'citizen of'
  - English speakers picked out the first syllable as relating to *ham*, and so put in a morpheme boundary there: *ham-burger*.
  - *Burger* thus took on a meaning like 'patty', and started getting recombined transparently with words other than *ham — cheese burger, turkey burger, veggie burger —* or even just *burger* by itself.
  - NB: *ham burger* would now mean something different than *hamburger*

4.2 Re-analysis and back-formation

- You can also get changes when collocations are divided up in the wrong way.

- In English, there is a productive alternation in the indefinite article between *a* (_C) and *an* (_V).
  - And there used to be similar alternations in some of the possessive pronouns: *my* vs. *mine* and *thy* vs. *thine* used to be _C vs. _V, now they are *attributive* (pre-nominal) vs. *predicative* (post-verbal).
- There are lots of instances where words have either picked up or lost an *n* because people didn't know which version was being used.

(15) a. ME *(an) ekename* (lit. 'also + name') > *(a) nickname*
b. *(a) napron* > *(an) apron* (cf. *napkin* with the same *nap-* root)
c. *(a) nadder* > *(an) adder* (cf. German *Natter*)
d. *(an) ewt* > *(a) newt*

(16) Eng *(an) umpire* < ME *(a) noumpere* borrowed from French *nonper* 'umpire, arbiter' = *non* 'not' + *per* 'peer'

(17) a. ME *(mine) uncle* ∼ Shakespearean *(my) nuncle*
b. *(mine) Ed* > *(my) Ned*

- We find similar cases with misinterpretation of final [z]:

(18) a. OE borrowed french *cherise* 'cherry'; English speakers interpreted this as plural and created a singular *cherry*.
b. OE has *pise* (sg.) / *pis-an* (pl.); speakers then changed it to *pea* (sg.) / *pea-s*.

- This kind of re-parsing can yield changes that go beyond individual words:

- Latin *argent-um* 'silver' and *argent-arius* 'silversmith' > French *argent* [aʁʒã] 'silver, money' and *argentier* [aʁʒãtje].
  - In Latin terms, the suffix in *argentier* should have just been /-je/, with the [t] belonging to the root.
  - But since the [t] was lost by regular sound change in the base form, speakers came to analyze the suffix as /-tje/.
  - This new /-tje/ suffix then spread to new forms:

(19) a. *bijou* 'jewel' ∼ *bijou**tier*** 'jeweler'
b. *café* 'coffee' ∼ *cafe**tier*** 'coffee house keeper'

- Cases like this can sometimes be referred to as **back-formation**, where a new morpheme is created and re-deployed by cutting up words in an innovative way. (*burger* was such a case.)

(20) Latin agent nouns in *-tor* were reinterpreted in English as having suffix *-er/-or*
a. *editor* → *edit*
b. *sculptor* → *sculpt*
c. *orator* → *orate*