LING 110 || Summer 2011, Class #9, 7 July

McFetridge, Chapter 10

Prefixation, which we looked at last week, is fairly straightforward. But there are other processes that are more subtle.

The Nasal Increment

root	nasal increment	other words, same root
√tag = touch	tangent	tactile
√frag = break	frangible	fragile
√pos = compose	component	compose
√cub = lie	incumbent	cubit
√vic = conquer	invincible	victory
√pug = pierce	punctual	pugilist

What we don't know about the nasal increment would fill a warehouse.

> How does it get inside the root? The rule system that we've developed so far works OK for prefixes and suffixes, but it does not allow for infixes.

But maybe it's not an infix at all. Consider the following derivations from the root √pos:

compose	component
propose	proponent
expose	exponent
depose	deponent

Note that when the nasal appears, the "s" of the root deletes, e.g.,

compose vs. component

So if we propose a structure like pos + n, then we can explain the deletion of the "s". Do you recall why? Hint: it has something to do with assimilation. I'll illustrate in lecture.

If, on the other hand, we assume the "n" is part of the root, there's no way of getting rid of the "s" and we end up with a form like *componsent.

— We know from lexemes like "pension" and "sense" that "s" doesn't (usually) delete from this position

So we can propose that at least in the early years, Latin had a rule like this:

$$Root_{nasal} \Rightarrow Root + n$$

tangent	tag + n + e + nt
frangible	frag + n + e + ble
incumbent	in + cub + n + e + nt
invincible	in + vic + n + e + ble
puncture	pug + n + e + t + ure

So, how do we get the nasal increment into the root?

metathesis

rule = C + n → nC

Note that we can accomplish phonologically what we could not do morphologically. And, in fact, metathesis is found in a wide range of the world's languages.

There's still an issue with words like "incumbent". But perhaps you can already see the solution here …

The word "dimension" also requires a multi-rule derivation, but we already have the rules we need:

dis + met + n + e + t + ion	
diz + met + n + e + t + ion	Voicing Assimilation
di + met + n + e + t + ion	zC → C
di + ment + e + t + ion	Metathesis
di + ment + t + ion	e + t → + t
di + menss + ion	t + t → ss
di + mens + ion	Css → Cs
dimension	English spelling

NOUNS AND THE NASAL INCREMENT

root	nasal increment	other words, same root
√sop = sleep	somnambulist	soporific
√pet = feather	pennate	helicopter < Gk
√at = spirit	animal	Mahatma < Skt
√mag = great	magnify	magic
√dec = befit	dignity	decent

So it seems that while the nasal increment metathesizes in verbs, in nouns it does not; rather we sometimes see instead assimilation, e.g.,

sop + n → somn

How to explain this difference between the behaviour of nouns and verbs with respect to the nasal increment?

1. The noun nasal increment is a different sort and not subject to the same rules as the verb nasal increment. This is a weak argument.

2. The noun nasal increment is a later construction and so not subject to the earlier metathesis rule. This is at least consistent with what we've seen before about newer structures behaving differently than older ones.

We can illustrate this rather neatly with the nasal root pug + n meaning "pierce"

The word "puncture" from that root has the thematic vowel "e" and displays metathesis.

> "pugnacious", on the other hand, has the thematic vowel "ā" and does not show metathesis.
>
> Checking the dictionary, we find that "puncture" entered English in the 14th century; "pugnacious" not until the 17th.

Medial Vowel Weakening [MVW]

We've seen vowels raise before, and here it is again. In short, [e] will raise to [i] when it appears in the middle of a word and is followed by a single consonant.

This is called a "weakening" phenomenon because if it were to continue, a vowel would disappear, e.g., in a Latin word like solidus → soldus meaning "dense".

Consider the following examples:

root	with MVW	other words, same root	other words, same root
√spec = see	suspicion	species	inspection
√reg = rule	incorrigible	regal	correction
√sed =sit	president	sediment	session

Note that in the last two columns the "e" is either not a medial vowel or is followed by more than one consonant.

But that is not the end of the matter.

Medial "a" also changes; sometimes to "e", sometimes to "i". Why?

root	words formed with no root change	a → e	a → i
√fac = make, do	fact	effect	efficient
√cap = have	capture	receptive	recipient
√sta = stand	status	obstetric	constituent
√tag = touch	tact	integral	contiguous
√da = give	data		tradition

Well, we already have a rule that changes "a" to "e". So maybe all we need now is a rule that will change "e" to "i", e.g.,

ex + fac + ie +nt → effecient → efficient

Alternatively, we can propose a rule that changes "e" to "i" as before and then two other rules:

— "a" changes to "e" when followed by two consonants

— "a" changes to "i" when followed by one consonant

Usually, we'll take the simpler rule set and go for the proposal that offers just two rules.

But there's a fly in the ointment. The two-rule system won't always give the correct result. Consider **compounds**:

manu + fac + e + t + ure	manufacture
satis + fac + e + t + ion	satisfaction
bene + fac + e + t + ion	benefaction

No medial vowel weakening! Hmm. Well, it's an old process; maybe it had no effect once compounding (a later process) had come along.

mag + n + i + fac + e + nt	magnificent
sec + n + i + fac + a + nt	significant
quant + i + fac + a + t + ion	quantification

How to explain these where there IS "a" to "i" weakening?

In order to derive, say, "magnificent", there must be a rule (or rules) that converts "fac" to "fic".

But we know the rule that converts "fac" to "fec" does not apply to compounds.

Therefore, there **must** be a rule for "a" to "i".

We can't get away with just having two rules, as we had hoped on slide 10.

Further proof of the existence of an "a" → "i" rule comes from looking at derivations with √ag, meaning "drive".

The "a" → "e" rule does not (for some reason) apply to this root:

in + ag + e + t + ion	inaction
trans + ag + e + t + ion	transaction

Yet we do find "a" → "i" weakening:

nau + ag + a + t + ion	navigation
fum + ag + a + t + ion	fumigation

So we do need that "a" → "i" rule!

Medial Vowel Weakening and the Nasal Increment

Given the rules that we've got so far, we'd expect a derivation from, say, √frag (break) to give us *"infrenge" because the root vowel is followed by two consonants.

> — but obviously we don't find that; we have "infringe".
>
> Note that the sequence here (and in "contingent" and "impinge") is "ng". In Latin this is [ŋg].
>
> So we propose the rule [eŋ → iŋ]$_{\text{Latin}}$

Rhotacism

Oddly, it often happens that when [s] appears between vowels it will rhotacise to [r].

> As long as [s] is followed by a consonant or word-final, it stays [s], but when it appears between vowels, it changes to [r]

root	unrhotacised derivative	rhotacised derivative
√corpus = body	corpse	corporeal
√os = mouth	osculate	oral
√jus = law	justice	jury
√venus = love	Venus	venereal

The rule here is $[VsV \rightarrow VrV]_{Latin}$.

Interestingly, English shows evidence of an old rhotacising rule:

was	were
is	are

Alternations between "u" and "v"

Recall that "v" was created from the character "u". This "u" originally represented both [u] and [w].

> Eventually [w] changed to [v] and the characters "u" and "v" were converted to represent [u] and [v].

Thus we have word pairs like "nautical" + "naval"; "solution" + "solve"; "caution" + "caveat".

The orthography doesn't really tell the whole story. In fact, Latin had the rule $[uV \rightarrow wV]_{\text{Latin}}$.

But later, during the Romance period, [w] changed to [v] and this meant the creation of a new character.

$[w \rightarrow v]_{\text{Romance}}$.

VOWEL RAISING

English and Latin have two kinds of the liquid sound "l".

— one is called "light l" and is "fronted" in the mouth; it appears at the beginning of syllables

— the other is called "dark l" and is pronounced further back in the mouth with the tongue lower

Vowels raise when they appear before the dark "l". More exactly, roots that ended in "l" in Latin will often show "u" when the root is followed by a consonant. The rule is VlC → uLC.

root	unraised derivative	raised derivative
√col = cultivate	colony	cult
√ol = old	adolescent	adult
√pell = drive	compel	compulsion

THE "S" INCREMENT

Like the nasal increment, the function of this augment to the root is unknown.

root	no 's' increment	with 's' increment
√fig = attach		infix
√noc = injure	innocent	noxious
√vegh = bring, way	vehicle	convex
√fluc = flow	fluctuate	influx
√tag = touch	tangent	tax
√sec = cut	sectarian	sex
√pell = drive	compel	pulse
√fall = deception	fallacy	FALSE

The velar roots follow a familiar pattern whereby [ks] is represented by "x". (Remember that g + s → k + s).

The root "vegh" requires additional rule machinery, but no big deal.

The roots ending in a geminate "l", that is, two "l"s, can be handled by the following rule combination:

i) ll + s → lss (we've already seen cases where a consonant will assimilate to a following "s")

ii) lss → ls

There's trouble with the word "false" because we'd expect *fulse from our rule about vowel raising.

> Unfortunately, we have no good explanation for this apparent exception. Lack of data.

EPENTHESIS

Certain consonant clusters get broken up. A common case in Latin arose with the root √em, meaning "buy", when it appeared before the past participle "t". An epenthetic "p" would be inserted by the rule m + t → mpt.

We see this in "exempt", "pre-empt", and "redemption"

A more complicated variant arises in words like "consumption" where the root √em is preceded by "sub". The "sub + em" combination reduces to "sum" and the epenthesis rule applies when the nominal ending "-ion" is added.

REDUPLICATION

In many languages, the morphology includes rules that duplicate all or part of a word.

English examples include "chitchat", "seesaw" ...

Latin required reduplication only rarely. One case is the root √sta meaning "stand". The claim runs that in words such as "statue" and "resistant" (partial) reduplication has occurred.

> thus "resistant" derives as follows: sta ⇒ stasta, followed by a vowel-changing rule stasta → stista. Finally, a dissimilation rule gets rid of the "t" on the basis that a consonant cluster will be reduced when part of it is repeated in the lexeme: stista → sista.

A complete derivation of "resistant" looks like this

re + sta + nt

re + sta + sta + nt

re + sti + sta + nt

re + si + sta + nt

THE VERB "TO BE"

Proto-Indo-European looks to have had two forms that function like the English "be".

We have remnants of this in CE: labials like "was" and "be" and a sibilant like "is".

Latin also had labial and sibilant forms. The labial is seen in "fui" meaning "I have been", while the sibilant is seen in "sum" meaning "I am" and "es" meaning "you (sg.) are".

> English "future" borrows the labial root from Latin "futurus" meaning "about to be"

The sibilant root is found in "essence", but this root sometimes surfaced as just "s", e.g., "present" < prefix "pre" + **root "s"** + thematic vowel "e" + present participle "nt".