Class 1
Introduction to Allomorphy

8/27/21

1 Types of Allomorphy

ALLOMORPHY:
One "morpheme" (≈ same morphosyntactic/morphosemantic feature (bundle)) surfaces with different phonological content (morph) in different contexts; i.e. one morpheme has multiple *allomorphs*.

⋆ Many different phenomena fall under the broad umbrella of "allomorphy", running the gamut from purely phonological to purely morphological/lexical.

- Carstairs (1988) lays out four main logically possible types. (All types exist.)

(1) Logically possible types of allomorphy (Carstairs 1988:113) [order different here]

a. Morphs phonetically **similar**, distribution **describable** in purely phonological terms.
b. Morphs phonetically **dissimilar**, distribution **describable** in purely phonological terms.
c. Morphs phonetically **similar**, distribution **not describable** in purely phonological terms.
d. Morphs phonetically **dissimilar**, distribution **not describable** in purely phonological terms.

(2)

		Phonetically similar?	
		Yes	No
Phonologically predictable?	Yes	(1a)	(1b)
	No	(1c)	(1d)

- Type (1a) is clearly all about phonology.

↪ We'll talk about that a little today, but not much beyond that, since this is a morphology course.

- Type (1d) clearly has nothing to do with phonology.

↪ What *do* they have to do with? Morphosyntax and lexical factors — we'll talk about that in a few weeks.

⋆ Type (1b) and (slightly less so) Type (1c) are the cases that will help us understand the **phonology-morphology interface** (see esp. Paster 2009, 2015, Nevins 2011), because it is clear that both phonological and morphological factors are at play simultaneously.

⇒ This will be the main topic this week and next week.

1.1 Purely phonological "allomorphy" (Type (1a))

- Different allomorphs can arise because of the application of general phonological processes.
  - ○ Sometimes referred to as "phonologically *driven* allomorphy".

- For example: regular allomorphs of /-z/ and /-d/ suffixes in English.

(3) Plural *s* in English

1. (epenthesis)	/-z/ → [-ɪz] / $C_{[+\text{strident}]}$+_	/pæs+**z**/ → [pæs**ɪz**]
2. (voicing assim.)	/-z/ → [-s] / $C_{[\text{-voice}]}$+_	/kæt+**z**/ → [kæt**s**]
3. (elsewhere)	/-z/ → [-z]	/dɔg+**z**/ → [dɔg**z**]

- English doesn't allow strings of sibilants (1.) or obstruent clusters that disagree in voice (2.).
  - ○ So, the different allomorphs can be explained fully by the *phonological* context, by invoking **general** phonological properties of the language.
  - → No special morphological devices are *required* in order to explain the distribution, and parsimony suggests they should not be employed here.

- To confirm that we can do everything in the phonology using a single UR, here's a quick OT analysis.
  - ⋆ If you need a primer on Optimality Theory, check out Kager (1999).

(4) Regular plural allomorphy in English is phonological

a. Sibilant-final stems → [-ɪz]

/pæs-z/	*[+strid][+strid]	AGREE[voice]	DEPV-IO	IDENT[voice]-IO
a. pæsz	*!	*!		
b. pæss	*!			*
c. ☞ pæsɪz			*	
d. pæsɪs			*	*!

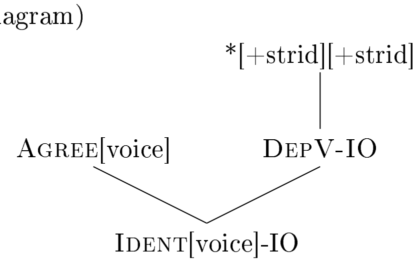
b. Voiceless-final stems → [-s]

/kæt-z/	*[+strid][+strid]	AGREE[voice]	DEPV-IO	IDENT[voice]-IO
a. kætz		*!		
b. ☞ kæts				*
c. kætɪz			*!	
d. kætɪs			*!	*

c. Other stems → [-z]

/dɔg-z/	*[+strid][+strid]	AGREE[voice]	DEPV-IO	IDENT[voice]-IO
a. ☞ dɔgz				
b. dɔgs		*!		*
c. dɔgɪz			*!	
d. dɔgɪs			*!	*

(5) Ranking summary (Hasse diagram)



1.2 Morphological allomorphy (Types (1d) and (1c))

- Sometimes, different allomorphs look (totally/mostly) unrelated phonologically (i.e. cannot be derived from same or similar UR via anything resembling regular phonology) and are distributed arbitrarily (from a phonological perspective) across particular morphosyntactic/morphosemantic contexts.
  - Usually referred to as **suppletion**.

→ If phonology has nothing to do with it, these cases must reside (somehow) in the morphology.

- For example: irregular verbal allomorphy in English.

(6) *Present* ∼ *Past* suppletion in English

a. *go* [goʊ] ∼ *went* [wɛn(-)t] (totally phonologically unrelated)
b. *bring* [brɪŋ] ∼ *brought* [brɔ(-)t], *stand* [stænd] ∼ *stood* [stʊd] (partially phonologically related)
c. *take* [teɪk] ∼ *took* [tʊk], *drive* [draɪv] ∼ *drove* [droʊv], *lead* [lid] ∼ *led* [lɛd], *etc.*
(clearly phonologically related by semi-regular "ablaut", but not by regular phonology)
[also irregular plurals: e.g. *mouse* ∼ *mice, foot* ∼ *feet, goose* ∼ *geese, etc.*]

- The distribution of *go* vs. *went* must be located purely in the morphology/lexicon:
  - There are no phonological rules (no matter how *ad hoc*) which can relate the two allomorphs.
  - Furthermore, the distribution appears to be conditioned by the morphosyntax:

(7) a. *go* / _PRES [really the elsewhere context; appears in infinitive, etc.]
b. *went* / _PAST

- The same probably goes for pairs like *bring* ∼ *brought, stand* ∼ *stood.*
  - Even though the respective allomorphs clearly share some phonological material, the ways in which they differ don't look remotely like regular phonology.

- Cases like {*take* ∼ *took, drive* ∼ *drove, lead* ∼ *led, etc.*} are closer to the borderline (basically Type (1c)).
  - They differ only in the vowel, sometimes by just one or two features.
  - There are substantial classes of verbs that all pattern in similar ways (cf., e.g., Pinker & Prince 1988, Albright & Hayes 2003).

→ The point is: it looks like phonological generalizations could be involved, so maybe it's not purely morphological/lexical.

1.3 Phonologically Conditioned (Suppletive) Allomorphy (Type (1b))

- The types of cases which are likely to be most enlightening are what is sometimes called "Phonologically *Conditioned* (Suppletive) Allomorphy" (PCSA; Carstairs 1988, Paster 2009, 2015):
  → Two (or more) allomorphs which are not transparently phonologically related, but whose distribution is clearly phonologically governed.

- Classic example: English indefinite article *a* ∼ *an*

(8) English indefinite article

a. *a* ([eɪ, ʌ, ə,...]) / _#C... e.g., *a tiger* (**an tiger*)
b. *an* ([æn, ʌn, ən, n̩,...]) / _#V... e.g., *an elephant* (**a elephant*)

- The distribution seems to be structured so as to **avoid hiatus**: the consonant-final allomorph (*an*) appears just in case the vowel-final allomorph would have created a hiatus.

> - Historically, it's actually the reverse: the /n/ is original, and was deleted pre-consonantally (basically to avoid a coda).
> - All the same points would hold thinking of it in this way synchronically as well.

- However, we can't simply view this as a phonological repair for hiatus:
  - English does not use *n* as an epenthetic consonant
  - English generally tolerates hiatus

→ The fact that this morpheme employs a strategy to avoid hiatus is a property **of this morpheme**, not of the language generally.
  - (Though it looks like it operates in the cross-linguistically expected direction — the allomorphs are distributed so as to avoid a marked structure.)

∗ This effect could alternatively be analyzed as some sort of derived environment effect, or with a special cophonology. However, other examples of PCSA, where the morphs are fully phonetically distinct, can't.

- Carstairs (1988:114–115) mentions a number of such examples (see also Paster 2009, 2015, Nevins 2011).

↪ One set comes from noun class markers in Bantu (Guthrie 1956), where phonologically distinct morphs surface in phonologically complementary distribution.

1.3.1 PCSA in Bantu noun class markers

- In Faŋ, one class has a simple V (_C) vs. C (_V) distinction.
  - Any other distribution would result in phonotactic issues — either an initial cluster or hiatus.

(9) Faŋ Class 5: *a∼dz* (Guthrie 1956:551)
  a. Consonant-initial stems have [a-]: *a-fan* (**dz-fan*) 'forest'
  b. Vowel-initial stems have [dz-]: *dz-al* (**a-al*) 'village'

- In one noun class in Tsɔgɔ, consonant-initial and front-vowel-initial stems pattern together (showing a default, presumably) against back-vowel-initial roots.
  - We can probably understand this as a restriction on adjacent vowels mismatching in backness.

(10) Tsɔgɔ Class 7: *gẹ∼s* (Guthrie 1956:551)
  a. Consonant-initial stems have [gẹ-]: *gẹ-dekụ* 'chin'
  b. Front-vowel-initial stems also have [gẹ-]: *gẹ-ẹpa* 'bone', *gẹ-ɛdụ* 'chin'[?]
  c. Back-vowel-initial stems have [s-]: *s-ọma* 'thing', *s-ɔtɔ* 'fire'

- In Kongo, a number of noun classes show no overt marker with stems beginning in a non-nasal consonant, but a consistent overt marker for other stems (i.e. vowel-initial and nasal-initial).
  - Not completely clear what problem this distribution would be solving...

(11) Kongo (Guthrie 1956:551-552)
  a. Class 5: *Ø∼di*
    i. Non-nasal-consonant-initial stems [Ø-]: *(Ø-)pata* 'village'
    ii. Vowel-initial stems have [di-]: *di-aku* 'egg'
    iii. Nasal-initial stems have [di-]: *di-nkondo* 'banana'
  b. Class 7: *Ø∼ki*
    i. Non-nasal-consonant-initial stems [Ø-]: *(Ø-)sanu* 'comb'
    ii. Vowel-initial stems have [ki-]: *ki-ula* 'frog'
    iii. Nasal-initial stems have [ki-]: *ki-nzu* 'pot'
  c. Class 8 (plural of Class 7?): *Ø∼bi*
    i. Non-nasal-consonant-initial stems [Ø-]: *(Ø-)sanu* 'combs'
    ii. Vowel-initial stems have [bi-]: *bi-ula* 'frogs'
    iii. Nasal-initial stems have [bi-]: *bi-nzu* 'pots'
  d. Class 14: *Ø∼u/w* [*u∼w* allomorphy is phonologically-*driven*]
    i. Non-nasal-consonant-initial stems [Ø-]: *(Ø-)fuku* 'night'
    ii. Vowel-initial stems have [w-]: *w-anda* 'net'
    iii. Nasal-initial stems have [u-]: *u-mfumu* 'chieftainship'

- In circumstances like these, it seems clear that there must be at least two URs available (under some conditions) for each particular morpheme.
  - i.e., no phonological transformation(s) could derive both morphs from a single UR.
- Yet it is phonological information which is conditioning the distribution of the two morphs.

1.4 Big Questions

- Along the lines of Nevins (2011:esp. §3), some of the most significant questions are:

  ⋆ Which aspects of "allomorphy" reside in the phonology vs. the morphology?
    ↪ How do we decide for any given case?

  ⋆ What exactly do the mechanisms of *non-purely-phonological* allomorphy look like?
    ↪ What is the proper input to the phonological evaluation?

2 Vocabulary Insertion in Distributed Morphology

- For purely morphological allomorphy, it is (more or less) clear that this must take place in the morphological component, because phonological information plays no role in determining the choice.
  ⋆ There are ways of sticking this into the phonological component nonetheless, if we allow the phonological component to see substantial morphological information (see below).
- Consider suppletion in English *be*:

(12) Person/number suppletion in English *be*

	Present		Past	
	Singular	Plural	Singular	Plural
1st	*am* [æm]	*are* [aɹ]	*was* [wʌz]	*were* [wɹ̩]
2nd	*are* [aɹ]	*are* [aɹ]	*were* [wɹ̩]	*were* [wɹ̩]
3rd	*is* [ɪz]	*are* [aɹ]	*was* [wʌz]	*were* [wɹ̩]

- Within the present and past tense paradigms, there are 5 distinct morphs: *am, is, are, was, were*
  - There are some phonological similarities between some forms (esp. *was*∼*were*), but it seems unlikely that any of these could be related by (synchronic) phonological transformations.
  - Rather, it seems like it's purely **morphosyntactic** information which is making the determination.

⋆ They are undoubtedly related by a *diachronic* phonological transformation:

(13) a. **s* > **z* > *r* / V_V́ (Verner's Law) *[wæs-ón] >> [wər]
b. **s* > *z* / ? *[wǽs-e] >> [wʌz]

- Distributed Morphology (DM; Halle & Marantz 1993, *et seq.*) uses a system of "Vocabulary Insertion" (VI) to relate morphosyntactic information to stored lexical items (Vocabulary Entries) which contain arbitrary phonological information (i.e. URs).

(14) Components of VI in DM
  a. List of Vocabulary Entries (≈ lexicon)
  b. Set of (intrinsically-ordered) Vocabulary Insertion rules, which relate morphosyntactic (or morphosemantic, in the case of roots) information to particular Vocabulary Entries
  c. For a particular derivation, the Vocabulary Entries which are selected by applying the VI rules are sent to the phonological component, where they function as the URs/Input to the phonological evaluation

- VI rules can contain contextual information (much like phonological rules, as it were).
  → For cases like English *be* allomorphy, the context is fairly clearly morphosyntactic in nature.

(15) VI rules for English *be*
  a. BE ⇔ /æm/ / PRES, 1, SG
  b. BE ⇔ /ɪ(z)/ / PRES, 3, SG ([z] could be the 3SG.PRES agreement marker)
  c. BE ⇔ /aɹ/ / PRES
  d. BE ⇔ /wʌz/ / PAST, 1, SG
  e. BE ⇔ /wʌz/ / PAST, 3, SG
  f. BE ⇔ /wɹ̩/ / PAST

  ◦ The rules with person specifications are *intrinsically ordered* before those without via the "Elsewhere Condition", which states that more specific rules are ordered before less specific ones.

⋆ The question of interest today is: **can the context also include phonological information?**
  ◦ If so, how, and is that a good idea?

→ Standard answer in DM: yes, but only if the context is contained in a morpheme which has already been spelled-out — i.e. is lower in the tree, assuming bottom-up cyclic spell-out (see, e.g., Bobaljik 2000, 2012).
  ◦ We'll delve into this more over the next couple weeks.

3 VI with phonological contexts, and Sub-categorization

- For cases of PCSA, we could extend a morphologically-oriented DM VI type analysis to phonological information.

- Consider genitive allomorphy in Dja:bugay (Pama-Nyungan) (Paster 2015:219–223; from Patz 1991):
  ◦ With vowel-final stems, the genitive suffix surfaces as [-n]
  ◦ With consonant-final stems, the genitive suffix surfaces as [-ŋun]
  ⋆ Assume that *-ŋun* cannot be related to *-n* in any phonologically regular way.

(16) Genitive allomorphy in Dja:bugay

a. Vowel-final stems → [-n]

guludu-n	(*guludu-ŋun)	'dove-GEN'
gurraː-n	(*gurraː-ŋun)	'dog-GEN'
djama-n	(*djama-ŋun)	'snake-GEN'

b. Consonant-final stems → [-ŋun]

girrgirr-ŋun	(*girrgirr-n)	'bush canary-GEN'
gaɲal-ŋun	(*gaɲal-n)	'goanna-GEN'
bibuy-ŋun	(*bibuy-n)	'child-GEN'

- We can describe this distribution using VI rules *in the morphological component of the grammar* where the context is comprised of phonological information.

(17) VI rules for Dja:bugay genitive
  a. GEN ⇔ [-ŋun] / [$_{\text{STEM}}$...C]__
  b. GEN ⇔ [-n] (elsewhere)

- However, as Nevins (2011:esp. 14–16) points out for similar examples, this approach seems to be missing a crucial **phonological generalization**:
  - The [-ŋun] allomorph seems to be used in order to avoid a complex coda (word-final CC cluster).

(18) a. /gaɲal+GEN/ ↛ *gaɲal-n (violates *CC#) → gaɲal-ŋun
  b. /guludu+GEN/ → guludu-n (satisfies *CC#) ↛ *guludu-ŋun

- Nevins (2011:22) outlines a way to integrate the phonological explanation into a morphological insertion account: mention constraint violation/satisfaction in the phonological context.

(19) VI rules for Dja:bugay genitive *(revised)*
  a. GEN ⇔ [-ŋun] *if it removes/avoids a *CC# violation*
  b. GEN ⇔ [-n] (elsewhere)

→ This, though, would seem to require a sort of comparison/look-ahead which is odd in (standard) DM.
  - In order to know to use the more specific allomorph, you need to first know that the default allomorph would yield a violation.
  - Yet the intrinsic ordering inherent to VI seems to suggest that you discharge the earlier rule without reference to the later rule.

3.1 Sub-categorization

- Paster (2006, 2009, 2015) advocates for a "sub-categorization" approach to these sorts of facts.
  - It falls broadly within the Sign-Based Morphology / Construction Grammar approach developed by Sharon Inkelas and other Berkeley/Stanford people.
  - See also Yu (2007) on using this approach for infixation.

- In this approach, each allomorph is assigned its own sub-categorization frame.
  - This sub-categorization frame may include phonological restrictions about which types of stems the allomorph can attach to.
  - It may also specify its own "cophonology", i.e. morpheme-specific phonological grammar (see, e.g., Inkelas & Zoll 2007).
  - This sub-categorization frame is also where (morpho)syntactic and semantic conditions on affixation live.

- If we adopt Nevins's suggestion about what sort of phonological information can be contained in the context of VI rules, then two approaches become very similar, so I'm not going to go into further today.

4 Allomorph selection in the phonology: and the question of optimization

- In most cases, we can do these same things (and maybe better) in the phonological component itself.
  - Several specific proposals exist, but they mostly have the property of allowing *multiple morphs* to co-exist in the *input to the phonological component*, and allowing morphologically-oriented constraints to adjudicate between them *in the phonological component*.
  - The upshot of this is that standard phonological constraints are employed to choose between the different morphs in the part of the grammar where they're supposed to be, i.e. in the phonology.

- This general approach is attributed to McCarthy & Prince's early work in OT (McCarthy & Prince 1993a,b), and often referred to as the "P[honology] ≫ M[orphology]" approach.

→ If/when "phonological" constraints outrank morphological "constraints", the phonology can cause the morphology to do things it doesn't want to do.
  - e.g. use a dispreferred allomorph, displace morphemes within the word, etc.
  - (There usually isn't a clear definition given for what counts as a P constraint and what counts as an M constraint...)

Important Prediction:

- These approaches predict that *all* phonologically conditioned allomorphy must be **phonologically optimizing**; i.e. whenever a non-default allomorph surfaces, it must *improve* the phonological structure in that case relative to the default allomorph.
- This is because the only thing which can divert a derivation away from the default allomorph is high-ranking phonological constraints.

- I'll exemplify this approach with "USE:X" constraints (loosely based on MacBride 2004):
  - The phonological input consists of all possible (allo)morphs associated with a given morpheme (i.e. morphosyntactic feature (bundle))
    - ≈ The output of Vocabulary Insertion is a *set of morphs*.
  - Each morph is associated with a USE constraint, which is ranked in CON.
  - Definitionally, USE:DEFAULT ≫ USE:ALTERNATIVE

→ If a phonological constraint $\mathbb{P}$ ≫ USE:DEFAULT, and $\mathbb{P}$ is violated by the output form with the default morph, then the alternative morph will be selected.

⋆ Mascaró (2007) and Bonet, Lloret, & Mascaró (2007) use a constraint they call "PRIORITY", which does exactly this but with a single constraint. The relevant lesson and mechanics are essentially the same.

4.1 Dja:bugay genitive allomorphy with USE:X constraints

- We can implement the insights of Dja:bugay genitive allomorphy with this approach (see Kager 1996):

(20) **VI rule for the Dja:bugay genitive:** GEN ⇔ /{-n, -ŋun}/ [no context needed]

- We take /-n/ to be the default morph, and /-ŋun/ to be the alternative morph; therefore:

(21) **Ranking:** USE:/-n/ ≫ USE:/-ŋun/

- The default fails to surface just in case it would create a final CC cluster; therefore:

(22) **Ranking:** *CC# ≫ USE:/-n/

- These pieces put together derive the full distribution:

(23) Dja:bugay genitive allomorphy with USE:X constraints

a. Vowel-final stems → [-n] (default)

/guludu+{-n, -ŋun}$_{\text{GEN}}$/	*CC#	USE:/-n/	USE:/-ŋun/
a. ☞ guludu-n			*
b. guludu-ŋun		*!	

b. Consonant-final stems → [-ŋun] (alternative, driven by *CC#)

/gaɲal+{-n, -ŋun}$_{\text{GEN}}$/	*CC#	USE:/-n/	USE:/-ŋun/
a. gaɲal-n	*!		*
b. ☞ gaɲal-ŋun		*	

- The point is: the (accidental?) existence of an alternative allomorph allows the phonology to solve a phonotactic problem by morphological means rather than purely phonological means.
  - *Why not solve it by phonological means, e.g. epenthesis?* Ranking.

→ As long as DEPV-IO ≫ USE:/-n/, selecting the alternative allomorph will be *less costly* than performing epenthesis.
  - This holds whether the language otherwise allows final clusters (DEPV-IO ≫ *CC#) or otherwise repairs them via epenthesis (*CC# ≫ DEPV-IO). I don't know which is true.

(24) Allomorphy not epenthesis

/gaɲal+{-n, -ŋun}$_{\text{GEN}}$/	DEPV-IO	*CC#	USE:/-n/	USE:/-ŋun/
a. gaɲal-n		*!		*
b. ☞ gaɲal-ŋun			*	
c. gaɲal-*i*n	*!			*

4.2 Is PCSA always optimizing?

- When the selection between different morphs is phonologically optimizing (i.e. improving on some high-ranked phonological constraint), the **P** ≫ **M** approach works very nicely.
- The problem is, there are at least some cases where it doesn't look optimizing.

4.2.1 Apparently phonologically arbitrary distributions

- There are a number of PCSA patterns where the allomorphs don't seem to serve any different phonological function, including the following from Nevins (2011:15):

(25) Kaititj ergative suffix allomorphy: [-ŋ] after bisyllabic stems, [-l] after trisyllabic stems (Paster 2006)

a. aki-ŋ	'head-ERG'	b. aliki-l	'dog-ERG'
ilt^{j}i-ŋ	'hand-ERG'	aʈuji-l	'man-ERG'
ajnpni-ŋ	'pouch-ERG'	aɣiki-l	'sun-ERG'

(26) Axininca Campa genitive allomorphy: [-ni] after bimoraic stems, [-ti] elsewhere Bye (2008)

a. no-jorja-ni	'my manioc worm'	b. i-wisiro-ti	'his small toucan'
i-çaa-ni	'his anteater'	no-jairo-ti	'my termite'
a-sari-ni	'our macaw'	a-jaarato-ti	'our black bee'

- In both of these cases, you get an alternation in the featural composition of a consonant, but this alternation serves no discernible purpose.
  → At present, such cases look like they do require arbitrary specification in the morphology.

- However, if some phonological motivation could be conjured up, then we could do without it.
  - It seems like most of the apparently arbitrary patterns are "syllable-counting allomorphy", i.e. the distribution of different morphs appears to be governed by the syllable count of the stem.
  - I don't think we have a good handle on how these work to begin with...

4.2.2 Apparently(/allegedly) phonologically "*perverse*" distributions

- Some PCSA distributions seem not only arbitrary, but actually counter to expected phonological patterns — "perverse" in Paster's (2015) terms.
- The banner case is definite suffix allomorphy in Haitian Creole (see Klein 2003, Paster 2015:229, and other references therein).
  - Consonant-final stems take *-la*, but vowel-final stems take *-a*, yielding a hiatus which could have been avoided by using *-la*.

(27) Haitian Creole definite suffix (data taken from Paster 2015:229)

a. Consonant-final stems → [-la]

pitit-la	'the child'
ãj-la	'the angel'
kay-la	'the house'
madãm-la	'the lady'

b. Vowel-final stems → [-a]

panié-a	'the basket'
trou-a	'the hole'
figi-a	'the face'
chẽ-a	'the dog'

- If we were to try to use Onset and/or NoCoda as the relevant phonological factor(s), we would actually derive exactly the wrong result; hence "perverse".

(28) Haitian Creole definite suffix allomorphy with syllable structure constraints (doesn't work)

a. Vowel-final stems → [-a]

/trou+{-a, -la}$_{\text{DEF}}$/	Onset	NoCoda	Use:/-a/	Use:/-la/
a. ☹ trou.-a	*!			*
b. 💣 trou.-la			*	

b. Consonant-final stems → [-la]

/pitit+{-a, -la}$_{\text{DEF}}$/	Onset	NoCoda	Use:/-a/	Use:/-la/
a. 💣 piti.t-a				*
b. ☹ pitit.-la		*!	*	

→ Paster (2009, 2015) and others thus use this case to argue against the **P** $\gg$ **M** approach.

- But that's probably not what it's actually about: following Klein (2003) (Nevins 2011:8), we can explain this data by assuming that the conditioning factor is (something like) morphophonological alignment.

(29) **Align(Stem, R; σ, R)**
Assign a violation * if the right edge of the stem does not coincide with the right edge of a syllable.

  - Using *-la* with consonant-final stems avoids re-syllabification across the morpheme boundary, which would create a mismatch between syllable boundary and morpheme boundary.
  - This constraint will also be satisfied by suffixing *-a* to vowel-final stems.

- If *-a* is the default, and Use:/a/ $\gg$ Onset and NoCoda, this all works out in the phonology.

(30) Haitian Creole definite suffix allomorphy with morphophonological alignment

a. Vowel-final stems → [-a] (default)

/trou+{-a, -la}$_{\text{DEF}}$/			ALIGN-R	USE:/-a/	USE:/-la/	ONSET	NOCODA
a.	☞	trou.-a			*	*	
b.		trou.-la		*!			

b. Consonant-final stems → [-la] (alternative, driven by ALIGN)

/pitit+{-a, -la}$_{\text{DEF}}$/			ALIGN-R	USE:/-a/	USE:/-la/	ONSET	NOCODA
a.		piti.t-a	*!		*		
b.	☞	pitit.-la		*			*

- This looks good, but there's actually two problems.

1. New candidate (31c), where you simply don't resyllabify, should win if the relevant constraint is ALIGN-R, because ONSET (and NOCODA) have to be ranked low to explain the *-a* forms.

(31) Consonant-final stems → [-la] (alternative, driven by ALIGN)

/pitit+{-a, -la}$_{\text{DEF}}$/			ALIGN-R	USE:/-a/	USE:/-la/	ONSET	NOCODA
a.		piti.t-a	*!		*		
b.	☹	pitit.-la		*!			*
c.	💣	pitit.-a			*	*	*

2. In Haitian Creole, certain *obstruent + l* sequences, e.g. *kl*, syllabify as a complex onset, therefore:
   - *syèk* 'century' → *syèk-la* [sye.kla] (*[syek.la]) 'the century' (Ben Storme, personal communication)
   - If re-syllabification is required anyway, these stems should take *-a* (*[sye.ka]), but don't.

- I think this may be saveable if we replace the notion of syllabification with the notion of **CV transitions**.
  - Assuming that transitions are automatic (unlike syllabification), there should be no substantial difference (31a) and (31c), or between [sye.kla] and *[syek.la].
  - Something like (32) would rule out (31a) and (31c) in favor of (31b), likewise *syekla* ≻ **syeka*. It would also not mess with the vowel-final forms.

(32) **DEP[CV transitions]/V-IO:** Assign one violation for each vowel bearing CV transitions in the output that lacked CV transitions in the input.[1]

→ Maybe some of the other weird patterns can be explained if we think more creatively about the phonetics.

4.3 Opacity in allomorph selection

- One of the other main points of contention between the "allomorphy in the morphology" people and the "allomorphy in the phonology" people is the status of opacity in allomorph selection.
- There are a number of patterns where allomorph selection appears to be based on the underlying representation not the ultimate output; for example, Turkish, Japanese, Galician (see, e.g., Nevins 2011:17–18).
  - Most of these are cases of allomorphy determined by adjacent C vs. V, where the relevant C is deleted at a "later" point in the derivation.

- Paster uses such cases to argue for selection in the morphology, where only the UR is visible.
  - Kalin (2020) makes a very similar argument based on infixation.

[1] This particular formulation, at least, assumes that CV transitions, and thus detailed phonetic information, are present in the phonological input; cf. Flemming (2008).

- Nevins points out, however, that this could simply be garden-variety opacity.
  - Allomorph selection could precede the opacifying phonological process.
  - This is doable in phonological frameworks which permit intermediate levels of representation, e.g.
    - Lexical Phonology (Kiparsky 1982) / Stratal OT (Kiparsky 2000)
    - "Optimal Interleaving" in OT with Candidate Chains (OT-CC) (Wolf 2008, 2015).

→ Opacity in allomorph selection may be amenable to general approaches to opacity, and thus does not on its own necessarily decide between the different views of allomorphy.

↪ ...but then we need to understand how opacity interacts with morphology more generally.

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