## Class 6: Hayesian Anticorrespondence

## To do for next time

- Finish antifaithfulness/anticorrespondence assignment
- Finish reading Alderete, Hayes


## Background: Yidin ${ }^{\text {y }}$

1. Penultimate lengthening in odd-syllabled words

Proto-Yidin ${ }^{y}$
absolutive purposive dative

| mud'am | mud ${ }^{\text {j}}{ }^{\text {jam }}+$ gu | 'mother' |
| :--- | :--- | :--- |
| gudaga | gudaga + gu | 'dog' |

yunaygara yunaygara+ndanda

## Modern Yidin ${ }^{y}$

| absolutive | purposive | dative |  |
| :---: | :---: | :---: | :---: |
| mud ${ }^{\text {j }}$ am | mud ${ }^{\mathrm{j}}$ am+gu |  | 'mother' |
| guda:ga | gudaga + gu |  | 'dog' |
| yunaygara |  | yunaygara+nda:nda |  |

2. Final (C)V deletion (if the result has an even number of syllables and ends in a legal $\mathbf{C}$ )

Proto-Yidin ${ }^{\text {y }}$

| absolutive | ergative |  |
| :--- | :--- | :--- |
| buna | buna + ngu | 'woman' |
| yunaygara | yunaygara + ygu | 'whale' |
| mulari | mulari + ygu | 'initiated man' |
| gindanu | gindanu + ygu | 'moon' |


| Modern Yidin' (underlining $=$ exception) |  |  |
| :--- | :--- | :--- |
| absolutive | ergative |  |
| buna | buna:y | 'woman' |
| yunaygara | yunaygara:n | 'whale' |
| mula:ri | mulariygu | 'initiated man' |
| ginda:n | gindanuygu | 'moon' |

- Which rule comes first (at least historically)?


## 3. Invariant lengthenings-origins unknown

## absolutive dative

durgu: durgu:nda 'mopoke owl'

Hayes points out a RoB problem: invariant long vowels never occur in odd syllables, closed syllables (though this is allowed on the surface), or trisyllabic stems:

|  | absolutive | ergative | locative of genitive |
| ---: | :--- | :--- | :--- |
| * nula:ri | nula:ri+ngu | nula:ri+ngu | 'bnick' |
| cf. mula:ri |  |  | 'initiated man' |
| cf. |  | durgu: $+\mathrm{nu}+\mathrm{la}$ | 'mopoke owl' |

- Why is this a ROB problem? Why doesn't a standard OT grammar rule out the paradigm we want to rule out?


## 4. Vowel "restorations"

The historically deleted vowel shows up in suffixed forms. But,

- its quality is largely predictable
- its quality often deviates from the historical quality to follow the predictable pattern

Predicting the vowel quality

- [u] if preceded by nasal
- else copy of preceding V
- or sometimes [a]
- or sometimes, when preceding V is [a], [i].

An analysis needs to account for these strong tendencies but allow for the exceptions and for the fact that many final vowels idiosyncratically fail to alternate with $\varnothing$. And the vowels that don't alternate with $\varnothing$ don't tend as strongly to follow the generalizations about the last 2 vowels (or obey slightly different ones).

Hayes concludes that what we have is not generalizations about underlying forms, and certainly not generalizations about surface forms, but rather generalizations about the relationships between unsuffixed and suffixed surface forms.

## 5. Hayes's anticorrespondence constraints

$\mathrm{V}: / \ldots \quad \sigma] / / \ldots]_{\text {Absolutive }} \rightarrow \mathrm{V} / / \ldots \quad \sigma$
$=$ the long vowel in a V: $\sigma$ ] configuration in the absolutive corresponds to a short vowel when that whole configuration is followed by another syllable.

- Can you formulate anticorrespondence constraints for the vowel restoration generalization?
- What are the differences in typological predictions between Hayesian anticorrespondence and Alderetian antifaithfulness?


## 6. Another case: Polish

(greatly simplified from discussion in Kaye \& Nykiel 1979)
$\mathrm{V} \sim \varnothing$ analysis of Gussman (1978): V is underlying (deletes unless followed by another alternating vowel, as in -ek, -ka, -ko, -ny, and certain zero affixes)
(a)

| form-a | 'form' | forem-ny | 'adj.' |
| :--- | :--- | :--- | :--- |
| tas̀m-a | 'ribbon' | tasiem-ka | 'dim.' |
| wysp-a | 'island' | wysep-ka | 'dim.' |
| stużb-a | 'service' | stużeb-ny | 'adj.' |

'form' is a loan-means this must be pretty productive.
(b) Some more loans that alternate the same way:

|  |  |  | source |  |
| :--- | :--- | :--- | :--- | :--- |
| pert-a | 'pearl', | pereł | 'gen. pl.', | Lat. per(u)la |
| mebl-e | 'nom. pl.' | mebel | 'furniture' | Fr meuble |
| trefl | 'club' | trefel-ek | 'dim.' | Fr trèfle |
| tawern-a | 'tavern' | taweren-ka | 'dim.' | Ital taverna |
| turm-a | 'jail tour' | turem-ka | 'dim.' | Germ Thurm |
| filtr | 'filter' | filter-ek | 'dim.' | Fr filtre |
| palm-a | 'palm' | palem-ka | 'dim.' | Fr palme |

(c) Some loans that don't alternate:

| park | 'park' | parcz-ek | 'dim.' |
| :--- | :--- | :--- | :--- |
| plansz-a | 'board' | plansz-ka | 'dim.' |
| farb-a | 'colour' | farb-ka | 'dim.' |
| ryksz-a | 'rickshaw' | ryksz | 'gen. pl.' |
| reszt-a | 'remainder' | reszt-ka | 'dim.' |
| langust-a | 'lobster' | langust-ka | 'dim.' |

The loans in (c) are supposed to have an underlying final cluster (no underlying V). The epenthetic vowel comes in if the second member is an obstruent. C-liquid clusters, on the other hand, almost always alternate, as in (b).

But, the constraint is sensitive to gender, so we can't appeal to purely surface phonotactic constraints.

For masc. Ns, a non-nasal sonorant can't be the second member of a final (underlying) cluster, but a nasal sonorant can. For other Ns, no sonorant at all can be the second member of a final cluster:

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pokarm 'food'(masc.) pokarm-ny 'adj.' /pokarm/
vs.
form-a 'form'(fem.) forem-ny 'adj.' /forem/
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Kaye \& Nykiel argue from this for constraints on underlying forms that can be sensitive to things like gender.

Picard \& Nicol (1982), who favor constraints on surface forms, argue that cases like this should be reanalyzed in terms of required relationships between surface forms (although they don't propose a formalism), which can be sensitive to things like gender.

- Can you formulate Hayesian anticorrespondence constraints for Polish?


## 7. Another case: Basque loans from Spanish

Hualde (1993, 1999). Basque loans from Spanish offer speakers strong opportunities to infer cross-language anticorrespondence constraints: there is a large body of loans and nearly all Basque speakers are fluent in Spanish.

Moreover, borrowing has been going on for hundreds of years, so historical developments have resulted in some interesting patterns.

| Spanish | Basque |  |
| :--- | :--- | :--- |
| camión | kamioi | 'truck' |
| macarrón | makarroi | 'macaroni' |
| avión | abioi | 'airplane' |
| melón | meloi | 'melon' |
| patrón | patroi | 'patron, boss' |
| marrón | marroi | 'brown' |

Does Basque forbid final ón? No: native gizon 'man', and...

| Spanish | Basque <br> afán | afan |
| :--- | :--- | :--- |
| atún | atun | 'zeal' |
| delfín | delfin | 'tuna' |
|  | 'dolphin' |  |

## 8. Historical explanation

- $o i$ is phonetically [oj], but underlyingly /oe/ (mid and high vowels, when subject to gliding, merge)

How to tell the difference between /oe/ and /oi/ in Getxo dialect:

| uninflected  <br> gastai absolutive sg. |  |  |
| :--- | :--- | :--- |
| kanpai | gastaya | 'cheese' |
| oi | kanpaya | 'bell' |
| botoi (Sp. botón) | oya | botoya |
| erratoi (Sp. ratón) | erratoya | 'bed' |
| yai | yaye | 'button' |
| gai | gaye | 'rat' |
| sei | seye | 'holiday' |
| goi | goye | 'call' |
| úrdai | úrdaye | 'six' |
| gison | gisona | 'top' |
| plater | platera | 'bacon' |
| lagun | lagune | 'man' |

How to tell the difference between /oe/ and /oi/ in Ondarroa dialect:

| uninflected | absolutive sg. |  |
| :--- | :--- | :--- |
| etxe | etxi | 'house' |
| berde | berdi | 'green' |
| ume | umi | 'child' |
| bide | bidi | 'path' |
| abade | abadi | 'priest' |
| mendi | mendixe | 'mountain' |
| saldi | saldixe | 'horse' |
| barri | barrixe | gorrixe |

- Spanish -ón was once-one: botone, patrone, etc. In the $11^{\text {th }}$ century, $e$ after a coronal C was lost.
- Basque had a rule deleting $n$ intervocalically, with nasalization of the preceding vowel. The rule was already established in the $11^{\text {th }}$ century, and maybe earlier. Doesn't apply any more (and the nasalization is gone now).
vestiges in old borrowings:

| Spanish | Basque |  |
| :--- | :--- | :--- |
| anate | ahate | 'duck' |
| honore | ohore | 'honor' |
| corona | koroa | 'crown' |
| arena | are(a) | 'sande' |
| catena | kate $(a)$ | 'chain' |
| ballena | bale(a) | 'whale' |

vestiges in some alternations in native words:

| free | suffixed |  |
| :--- | :--- | :--- |
| ardo | ardan- | 'wine' |
| gaztai | gaztan- | 'cheese' |
| orga | organ- | 'chariot' |

## 9. Synchronic analysis

- Basque speakers extract and generalize a rule mapping Spanish -ón to Basque /oe/.
- Can you formulate a Hayesian anticorrespondence constraint for this?


## 10. More cases

- Hualde gives some Basque-Spanish cases involving $o$ and $u$.
- Reed (1982): Romance $o$ to English $u$ (less systematic, since less bilingualism):

French
doublon
Italian
ballone
Spanish
vaquero
lazo
salón (or Fr.)
vamos

English
doubloon (why not "doublone"?)
balloon
English
lassoo
saloon
vamoose

- Heath (1989): Classical Arabic to Moroccan Arabic
- Weinreich (1953): German [S] to Danish [sk]
- Haugen (1950): English [o-] to American Portuguese [al-]
also less productive, because they lack the long history of intense contact
(all are less productive than the Basque case, probably because the historical and sociolinguistic situation is different)

Hualde suggests that these 'correspondences' may be similar to those used when 'putting on' another dialect, understanding speakers of another dialect, or learning a word from a speaker of another dialect.

## 11. A surprising case (also from Hualde): Beasain Basque accent

| no lexical accent $\rightarrow$ accent falls on second syllable (default) |  |  | lexical accent |  |
| :---: | :---: | :---: | :---: | :---: |
| zakúrre | 'dog' |  | dénporea | 'the time' |
| zakúrrekin | 'with the dog' |  | líburue | 'the book' |
| Spanish | Beasain Basque |  |  |  |
| maratón | marátoia | 'marathon' |  |  |
| pintalábios | pintálabiosa | 'lipstick' |  |  |
| albaricóque | albárikokea | 'apricot' |  |  |
| automático | autómatikoa | 'automatic' |  |  |
| but |  |  |  |  |
| micrófono | míkrofonoa | 'microphone' |  |  |
| and sim | arly for all Sp. sSss words |  |  |  |

- Why is this surprising?

Hualde's explanation

- Most proparoxytones (words with antepenultimate stress) borrowed from Spanish were trisyllabic, and thus got default initial accent.
- A correspondence was extracted from this giving initial accent to any Spanish proparoxytone.

Studying this kind of case may give us some insights into what kinds of correspondences people are capable of extracting from data...

