Allomorphy

an introduction to the phonology-morphology interface
2nd class: formalizations and representations

Through the prism of allomorphy, we saw two possibly incompatible views of phonology:

1) Phonology as blind filter

2) Phonology also as a UR selector
2\textsuperscript{nd} class: formalizations and representations

Today we will see:

1) Formalizations of optimization

2) Richer representations

3) Should one always go for allomorphy?
Formalization of UR selection

Recall the simple case of allomorphy from French

\[ [\text{de-buʃe}] \quad \text{but} \quad [\text{dez-okype}] \]

\[ \text{vs.} \]

\[ [\text{pχe-buʃe}] \quad \text{but} \quad [\text{pχe-okype}] \]

\[ *[\text{pχez-okype}] \]
Optimality Theory (Prince & Smolessky 1993)

For a given UR, the grammar evaluates several outputs by means of a constraint hierarchy:

<table>
<thead>
<tr>
<th>/górad/</th>
<th>*C [+voice] #</th>
<th>*postonic [a]</th>
<th>FaithC</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. górat</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>b. górat</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>c. górad</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The candidate that violates the lowest ranking constraint is the « last man standing »; it is the optimal candidate.

<table>
<thead>
<tr>
<th></th>
<th>/górəd/</th>
<th>*C[^voice^]#</th>
<th>*postonic [a]</th>
<th>FaithVoice</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>[górət]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>[górət]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>[górəd]</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lethal violation: the candidate exits the competition because it violates a constraint that other competing candidates do not violate.

Non-lethal violation: the candidate violates a constraint, but there is no other candidate to compete with it.
**Optimality Theory** (Prince & Smolesky 1993)

Phonology in this case is two things: 1) a SR generator, and 2) an evaluator of UR-SR relations

<table>
<thead>
<tr>
<th>/górad/</th>
<th>*C_{[+\text{voice}]}#</th>
<th>*postonic [a]</th>
<th>FaithC</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. górət</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>b. górat</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. górad</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Allomorph selection in OT

For allomorphy, we have seen that there are two URs. One may assume that they are both in the input:

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/ + /buʃe/</th>
<th>No epenthesis</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. debuʃe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. dezbuʃe</td>
<td></td>
<td></td>
<td></td>
<td>*!</td>
</tr>
</tbody>
</table>
Allomorph selection in OT

Cases with no allomorphy simply will not have the option of avoiding hiatus (Dep punishes candidates with segments that aren’t there in the input)

<table>
<thead>
<tr>
<th>/pʁe/ + /okype/</th>
<th>No epenthesis</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [pʰeоkupe]</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [pʰezokupe]</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Allomorph selection in OT

Cases with no allomorphy simply will not have the option of avoiding hiatus (Dep punishes candidates with segments that aren’t there in the input)

<table>
<thead>
<tr>
<th>/ʒeoloʒi/</th>
<th>No epenth.</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [ʒeoloʒi]</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>b. [ʒezoloʒi]</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Allomorph selection in OT

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/ + /okype/</th>
<th>No epenth</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [deokype]</td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>✕ b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/ruːe/ + /okype/</th>
<th>No epenth</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✕ a. [rχeokupe]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [rχezokupe]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>
Allomorph selection in OT

<table>
<thead>
<tr>
<th></th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/de/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/dez/ + /okype/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. [deokype]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/pχe/ + /okype/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. [pχeokupe]</td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>b. [pχezokupe]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>
## Allomorph selection in OT

<table>
<thead>
<tr>
<th>/de/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dez/ + /okype/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. [deokype]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The trick: unlike *[pχez], [dez] does not violate Dep, because it is a lexically-stored option

<table>
<thead>
<tr>
<th>/pχe/ + /okype/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [pχeokupe]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [pχezokupe]</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>
Allomorph selection in OT

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/ + /okype/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [deokype]</td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This formalizes the fact that there is **phonological optimization** in the choice of [dez] or [de]. In essence, the analysis **hard-wires solutions to well-formedness constraints into the lexical knowledge**, in this case in the form of two underlying representations.

<table>
<thead>
<tr>
<th>✈ a. [pχeokupe]</th>
<th></th>
<th>*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>b. [pχezokupe]</td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Allomorph selection in OT

<table>
<thead>
<tr>
<th>/de/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dez/</td>
<td></td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>a. [deokype]</td>
<td></td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

This formalizes the fact that there is **phonological optimization** in the choice of [dez] or [de]. In essence, the analytic hard wires:

The price for this trick is to complicate the role of phonology and abandon the idea of phonology as a “blind” interpretive module of representations.

| a. [pχeokupe] |     |       |              |
| b. [pχezokupe] |     | +     |              |

| [pχeokupe] |     |       |              |
| [pχezokupe] |     | +     |              |
Representations: an alternative

Maybe there is a way around this complication of the role of phonology.

In the first class, we assume that URs contained sequences of basic sound units (phonemes):

/m æ n/
Representations

But nowadays most phonologists would agree that this view is too simplistic.

Rather, representations involve at least two tiers:

Segmental  m æ n

Skeletal  x  x  x
Representations

Such representations are especially helpful in the understanding of long segments, e.g. Italian [fatːo] ‘done’.

Rather than just two identical consecutive segments (a), they are the same segment attached to two positions (b)

\[
\begin{array}{c|c}
\text{a.} & t & t \\
\hline
\text{b.} & t \\
\text{|} & \text{|} & \text{∧} \\
\text{x} & \text{x} & \text{x} & \text{x} \\
\end{array}
\]
Representations

Once the segmental and skeletal tiers are separated, one must recognize several possible deficient scenarios

\[
\begin{array}{c|c|c|c|c}
\text{a.} & \text{b. t} & \text{c. t} & \text{c. t} \\
\mid & & & \\
\times & & \times & \times
\end{array}
\]
CVCV Phonology  (Lowenstamm 1996, Scheer 2004)

A phonological theory in whose representations the skeletal tier is composed of CV units (strictly alternating Cs and Vs):

a. m æ n  
   | | |  
   C V C V
   [mæn]

b. m æ n l i  
   | | | |  
   C V C V C V
   [mænli]
CVCV Phonology (Lowenstamm 1996, Scheer 2004)

Thus, phonetically V-initial words in this theory begin with an empty V slot:

```
| C | V | C | V |
```

[okype]
CVCV Phonology: floating consonants

Back to [dez] ~ [de], within this framework, we can assume that the lexical representation of this morpheme involves a floating segment, with no C-slot:

```
d e z
| | |
C V
```
CVCV Phonology: floating consonants

Before a C-initial base, there is no position for the floating segment to dock onto, and it cannot be realized.

```
  d e z b u f e
  |   +   |
C V     C V C V
```

[debufə]
CVCV Phonology: floating consonants

But before a V-initial base, there is such a position

d e z o k y p e
| | + | | | | | |
C V C V C V C V C V
CVCV Phonology: floating consonants

But before a V-initial base, there is such a position

d e z o k y p e
 C V C V C V C V C V C V

[dezokype]
CVCV Phonology: floating consonants

But before a V-initial base, there is such a position

(The CVCV skeleton is independently motivated – it was not invented to solve this problem)
CVCV Phonology: floating consonants

This analysis assumes

1) Segments seek to dock (be realized)
2) Segments may remain unrealized

As the OT analysis, it conveys the optimization in the realization
CVCV Phonology: floating consonants

The analysis has the advantages that

1) Phonology remains interpretative
2) There is only one UR
CVCV Phonology: floating consonants

The analysis has the advantages that

1) Phonology remains interpretative
2) There is only one UR

This is NOT allomorphy!!

It has the disadvantage that

1) it integrates another tier into the UR
CVCV Phonology: floating consonants

The analysis has the advantages that

1) Phonology remains interpretative
2) There is only one UR

It has the disadvantage (?) that
1) it integrates another tier into the UR

This is NOT allomorphy!!

But defectiveness of segments has to be encoded anyway...
Comparing the analyses

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/ + /okype/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. [deokype]</td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>

\[ \begin{array}{cccc}
\text{de} & \text{ez} & \text{o} & \text{k} & \text{y} & \text{p} & \text{e} \\
\text{CV} & \text{CV} & \text{CV} & \text{CV} & \text{CV} & \text{CV} & \text{CV} \\
\end{array} \]

\[ \text{[dezokype]} \]
Comparing the analyses: How different are they really?

<table>
<thead>
<tr>
<th></th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/de/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/dez/ + /okype/</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>a. [deokype]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

de  e  z  o  k  y  p  e
C  V   C  V  C  V  C  V
Comparing the analyses: How different are they really?

Both assume an idiosyncracy in the representation

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [deokype]</td>
<td></td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two URS

Floating C

\[
\begin{array}{cccccccc}
\text{C} & \text{V} & \text{C} & \text{V} & \text{C} & \text{V} & \text{C} & \text{V} \\
\text{de} & \text{ez} & \text{o} & \text{k} & \text{y} & \text{p} & \text{e} & \\
\mid & \mid & + & \mid & \mid & \mid & \mid & \\
\end{array}
\]

\rightarrow [dezokype]
Comparing the analyses: How different are they really?

<table>
<thead>
<tr>
<th>/de/</th>
<th>/dez/ + /okeype/</th>
<th>Dep</th>
<th>*Hiatus</th>
<th>*CCV (*Coda)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. [deokype]</td>
<td></td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>✏️ b. [dezokype]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

But the two-UR analysis is less economic/elegant, because

1) Since /de.../ is common to both URs, the analysis does not encode the fact that the locus of variation is only the /z/.

2) It does not relate the possibility of this [z] to any independently-available option in the theory.
Comparing the analyses: How different are they really?

Note that there is nothing about OT that forces one to have two URs in such cases. One can integrate representations into OT and have the same analysis as in CVCV

<table>
<thead>
<tr>
<th>/de z/ + /okype/</th>
<th>Dep</th>
<th>No floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVCVCVCV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. [dezok ype]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVCVCVCVC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. [dez okype]</td>
<td></td>
<td>*!</td>
</tr>
<tr>
<td>CV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVCVCVCV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing the analyses: How different are they really?

Note that there is nothing about OT that forces one to have two URs in such cases. One can integrate representations into OT and have the same analysis as in CVCV.

<table>
<thead>
<tr>
<th>/dez/ + /buʃe/</th>
<th>Dep</th>
<th>No floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV CV CV CV CV</td>
<td>!</td>
<td></td>
</tr>
<tr>
<td>a. [dez buʃe] CV CV CV CV</td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>b. [dez buʃe] CV CV CV CV</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>
Note on the cost of allomorphy

The assumption here:

- allomorphy is costly
- and if a single UR solution works, it’s better
Note on the cost of allomorphy

The assumption here:

- allomorphy is costly
- and if a single UR solution works, it’s better

But recall that we want to know what the speaker knows, not the minimum s/he has to know. There is reason to think that much redundant information is stored...

How would we check what the speaker really knows?
The assumption here:

- allomorphy is costly
- and if a single UR solution works, it’s better

Moreover, if allomorphy is costly, why does it exist at all... The optimization in [dez],[de] can justify its existence; but as we will see, not all phon-con allomorphy is optimizing
Summary

• Any analysis of phonologically-optimizing allomorphy must encode the possibility to optimize in the representation.

• Autosegmental analyses with floating, optional segments are less ad-hoc and – when the two allomorphs are similar, which is nearly always – more economic.
Problems

• How abstract can you be?

• When the loser is not problematic

• When the phon-con allomorphy is not optimizing

• Is all allomorphy epiphenomenal?
How abstract can you get?

• From Scheer (2016):

a. -s
   kap-sz ‘you get’
   dob-sz ‘you throw’
   lök-sz ‘you push’
   vág-sz ‘you cut’
   nyom-sz ‘you press’
   lő-sz ‘you shoot’
   ró-sz ‘you scold’

b. -El
   mos-ol ‘you wash’
   néz-el ‘you look’
   tesz-el ‘you put’
   ráz-ol ‘you shake’
   vonz-ol ‘you attract’
   főz-öl ‘you cook’
How abstract can you get?

• From Scheer (2016):

  a. -s
     kap-sz ‘you get’
     dob-sz ‘you throw’
     lök-sz ‘you push’
     vág-sz ‘you cut’
     nyom-sz ‘you press’

  b. -El
     mos-ol ‘you wash’
     néz-el ‘you look’
     tesz-el ‘you put’
     ráz-ol ‘you shake’
     vonz-ol ‘you attract’

  a. lexical identity
     O N
     |   s  l

  b. after regular stems
     O N O N - O N
     |   |   |   s  l
     C V C

  c. after sibilant-final stems
     O N O N - O N
     |   |   |   s  l
     C V S
How abstract can you get

Problems:
1) The floating /l/ is lost forever – circular?
2) A mechanism of optimization seems to be assumed that would rule out the association of /s/.
3) Is this really so different from assuming two allomorphs?

<table>
<thead>
<tr>
<th>a. lexical identity</th>
<th>b. after regular stems</th>
<th>c. after sibilant-final stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>O N</td>
<td>O N O N - O N</td>
<td>O N O N - O N</td>
</tr>
<tr>
<td>_</td>
<td>_ _ _ _ _</td>
<td>_ _ _ _ _ _ _ _ _</td>
</tr>
<tr>
<td>s l</td>
<td>C V C</td>
<td>C V S _ _ _ _ _ _ _</td>
</tr>
</tbody>
</table>

E
When the loser is not problematic

Catalan theme vowel allomorphy (Bonet et al. 2007)

a. gət ‘glass’ gət-s ‘glasses’
b. awt-u ‘car’ awt-u-s ‘cars’
c. mos-u ‘lad’ mos-u-s ‘lads’
d. gos ‘dog’ gos-u-s ‘dogs’

• For C-final masculines, there are two allomorphs: Ø and /u/.
• /u/ surfaces only to prevent a sibilant sequence. But why? What’s so wrong with *[gətus]?
When the loser is not problematic

*Catalan theme vowel allomorphy* (Bonet et al. 2007)

a. gòt ‘glass’
gòt-s ‘glasses’
b. awt-u ‘car’
awt-u-s ‘cars’
c. mos-u ‘lad’
mos-u-s ‘lads’
d. gos ‘dog’
gos-u-s ‘dogs’

Bonet *et al* propose that allomorphs are **ordered**: one allomorph – ø in this case – is **default**, and will be used unless it raises a problem
When the loser is not problematic

An autosegmental analysis again provides an alternative:

The vowel floats above its position, and will only associate if required to
When the loser is not problematic

An autosegmental analysis again provides an alternative:

There is no need for priority.
Comparing the analyses: How different are they really?

In an OT analysis, one can assume that because /u/ floats, associating it to a position violated DEP

<table>
<thead>
<tr>
<th></th>
<th>OCP</th>
<th>Dep</th>
<th>No floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>/g ɔ t-u s/</td>
<td>C V C V C V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. /g ɔ t-u s/</td>
<td>C V C V C V</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>b. /g ɔ t-u s/</td>
<td>C V C V V C V</td>
<td>*!</td>
<td></td>
</tr>
</tbody>
</table>
Comparing the analyses: How different are they really?

But when not associating it entails an OCP violation, it’s better to associate it.

<table>
<thead>
<tr>
<th>/g o s-u s/</th>
<th>OCP</th>
<th>Dep</th>
<th>No floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>C V C V C V</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

✍️ a. /g o s-u s/  
| C V C V C V  | ⬅️ | *   |            |

✍️ a. /g o s-u s/  
| C V C V C V  |     |     | ⬇️        |

*
Comparing the analyses: How different are they really?

But when not associating it entails an OCP violation, it’s better to associate it.

Again, no priority is necessary

<table>
<thead>
<tr>
<th></th>
<th>OCP</th>
<th>Dep</th>
<th>No floating</th>
</tr>
</thead>
<tbody>
<tr>
<td>/g o s - u s/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C V C V C V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. /g o s - u s/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C V C V C V</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>a. /g o s - u s/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C V C V C V</td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>
Non-optimizing phon-con allomorphy?

An example that is often brought up:

Haitian definite article allomorphy (Klein 2003)

liv-la    ‘book-the’
papa-a    ‘father-the’
Non-optimizing phon-con allomorphy?

An example that is often brought up:

Haitian definite article allomorphy (Klein 2003)

liv-la  ‘book-the’
papa-a  ‘father-the’

The opposite of what one would expect based on phonology!
Non-optimizing phon-con allomorphy?

An example that is often brought up:

*li.v-

Haitian definite article allomorphy (Klein 2003)

<table>
<thead>
<tr>
<th>liv-la</th>
<th>‘book-the’</th>
</tr>
</thead>
<tbody>
<tr>
<td>papa-a</td>
<td>‘father-the’</td>
</tr>
</tbody>
</table>

Alternative: in this language, there is an alignment force that militates in favor of syllabifying the base and suffix separately. *li.v-a
Non-optimizing phon-con allomorphy?

An example that is often brought up:

\[
\text{Haitian definite article allomorphy (Klein 2003)}
\]

- liv-la ‘book-the’
- papa-a ‘father-the’

**Problem no 1:** [papa.la] is still better than [papa.a].

**Solution:** default status to /a/. One will use /la/ only if /a/ is not good.
Non-optimizing phon-con allomorphy?

An example that is often brought up:

Haitian definite article allomorphy (Klein 2003)

liv-la ‘book-the’
papa-a ‘father-the’

This is a baaaad soltion. It only means that we push the part of the problem that bothers us to the realm of the arbitrary. One must ask **why** [a] has default status...

**Solution:** default status to /a/. One will use /la/ only if /a/ is not good.
Non-optimizing phon-con allomorphy?

An example that is often brought up:

Haitian definite article allomorphy (Klein 2003)

liv-la ‘book-the’
papa-a ‘father-the’

This is a baaaad soltion. It only means that we push the part of the problem that bothers us to the realm of the arbitrary. One must ask why [a] has default status... ... floatingness of /l/?

/a/ is not good.
Non-optimizing phon-con allomorphy?

An example that is often brought up:

Haitian definite article allomorphy (Klein 2003)

<table>
<thead>
<tr>
<th>liv-la</th>
<th>‘book-the’</th>
</tr>
</thead>
<tbody>
<tr>
<td>papa-a</td>
<td>‘father-the’</td>
</tr>
</tbody>
</table>

**Problem no 2:** the allomorph for [ʃɛk] ‘cheque’ is also [la]: [ʃɛk-la]. But then the usual syllabification of [vklv] is [ʃɛ.kla], which violates alignment...

**Solution:** To say that despite this, the syllabification in [ʃɛk.la]. Requires proof.
Non-optimizing phon-con allomorphy?

Many other such examples can be solved by the notion of alignment.

However, if one accepts them, then phonology does 1) well-formedness
2) allomorph selection
3) priority-sensitivity
4) syllabification is variable
Non-optimizing phon-con allomorphy?

Many other such examples can be solved by the notion of alignment.

However, if one accepts these, then phonology does

1) well-formedness
2) allomorph selection
3)antity-sensitivity
4) syllabification is variable

Very different from the blind filter approach!
Non-optimizing phon-con allomorphy?

There are nevertheless many cases that cannot be accounted for even assuming phonology does all that:

<table>
<thead>
<tr>
<th>Modern Hebrew</th>
<th>base]#</th>
<th>base-V</th>
<th>‘turtles-turtles’</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>ʦav</td>
<td>ʦab-im</td>
<td>‘turtle-turtles’</td>
</tr>
<tr>
<td></td>
<td>daf</td>
<td>dap-im</td>
<td>‘sheet-sheets’</td>
</tr>
<tr>
<td></td>
<td>ʨak</td>
<td>ʨak-ut</td>
<td>‘soft-softness’</td>
</tr>
<tr>
<td></td>
<td>ʨuχ</td>
<td>ʨuχ-ot</td>
<td>‘board-boards’</td>
</tr>
<tr>
<td>b.</td>
<td>ʨuχ</td>
<td>ʨuχ-ot</td>
<td>‘board-boards’</td>
</tr>
<tr>
<td></td>
<td>ʨuχol</td>
<td>ʨuχol-im</td>
<td>‘blue (sg-pl)’</td>
</tr>
</tbody>
</table>
Non-optimizing phon-con allomorphy?

There are nevertheless many cases that cannot be accounted for even assuming phonology does all that:

**French** (regular plurals)

<table>
<thead>
<tr>
<th>Base</th>
<th>Base-V</th>
</tr>
</thead>
<tbody>
<tr>
<td>form-εl</td>
<td>form-al-ite</td>
</tr>
<tr>
<td>verbeʁt-wab</td>
<td>verbeʁt-ɔʁj-e</td>
</tr>
</tbody>
</table>

**Palestinian Arabic**

<table>
<thead>
<tr>
<th>3pl</th>
<th>1pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʔaːl-u</td>
<td>ʔul-na</td>
</tr>
</tbody>
</table>

(cf. katab-u katab-na ‘write’)
Phon-con allomorphy is not epiphenomenal

Indeed, it seems that in such cases one *must* admit that allomorph-selection can be sensitive to phonology without there being any optimization in it.
Indeed, it seems that in such cases one must admit that allomorph-selection can be sensitive to phonology without there being any optimization in it.

And of course, there are many cases of non-phonologically-conditioned allomorphy that are not epiphenomenal...
Summary

Any approach must acknowledge non-optimizing phon-con allomorphy.
We’ve seen two approaches to *optimizing* phon-con allomorphy.

1. Two lexical allomorphs, phonology selects the better allomorph.
2. A single representation - optimizing phon-con allomorphy is epiphenomenal.
Summary

The latter approach cannot accommodate lexical allomorph selection in the phonology.

What can support or refute this approach?
In the next class

We will further examine the locus of phon-con allomorph selection in the grammar.
In the next class

We will further examine the locus of phon-con allomorph selection in the grammar;

And we will look at a case study from Surmarian (Romantsch), which is arguably problematic for an approach that denies phonological allomorph selection.