Allomorphy

an introduction to the phonology-morphology interface
<table>
<thead>
<tr>
<th></th>
<th>‘praise’</th>
<th>‘sleep’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[lóð], [lʊd]</td>
<td>[várd], [vʊrd]</td>
</tr>
<tr>
<td>1sg</td>
<td>lóð</td>
<td>várd</td>
</tr>
<tr>
<td>2sg</td>
<td>lóð-əs</td>
<td>várd-əs</td>
</tr>
<tr>
<td>3sg</td>
<td>lóð-ə</td>
<td>várd-ə</td>
</tr>
<tr>
<td>1pl</td>
<td>lʊd-άŋ</td>
<td>vʊrd-άŋ</td>
</tr>
<tr>
<td>2pl</td>
<td>lʊdɛ-ʦ</td>
<td>vʊrd-ɛʦ</td>
</tr>
<tr>
<td>3pl</td>
<td>lóð-əŋ</td>
<td>várd-əŋ</td>
</tr>
</tbody>
</table>
Other attested patterns

<table>
<thead>
<tr>
<th></th>
<th>‘praise’ [lód], [lʊd]</th>
<th>‘sleep’ [várd], [vʊrd]</th>
<th>‘say’ [déi], [ʃ]</th>
<th>‘come’ [vɪŋ], [n]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>lód</td>
<td>várd</td>
<td>déi</td>
<td>víŋ</td>
</tr>
<tr>
<td>2sg</td>
<td>lód-əs</td>
<td>várd-əs</td>
<td>déi-s</td>
<td>víŋ-əs</td>
</tr>
<tr>
<td>3sg</td>
<td>lód-ə</td>
<td>várd-ə</td>
<td>déi-∅</td>
<td>víŋ-∅</td>
</tr>
<tr>
<td>1pl</td>
<td>lʊd-άŋ</td>
<td>vʊrd-άŋ</td>
<td>Џ-άŋ</td>
<td>n-ίŋ</td>
</tr>
<tr>
<td>2pl</td>
<td>lʊdɛ-ʦ</td>
<td>vʊrd-ɛʦ</td>
<td>Џ-ɛʦ</td>
<td>n-ῖʦ</td>
</tr>
<tr>
<td>3pl</td>
<td>lód-əŋ</td>
<td>várd-əŋ</td>
<td>déi-əŋ</td>
<td>víŋ-əŋ</td>
</tr>
</tbody>
</table>

(transcription here is my guess on the basis of orthography)
Autosegmental Analysis?

\[
\begin{array}{c}
\text{ʃd ei} \\
\text{C V C V C V}
\end{array}
\]

\[
\begin{array}{c}
\text{ʃd ei} \\
\text{C V C V C V}
\end{array}
\]
Unattested, but possible patterns

<table>
<thead>
<tr>
<th></th>
<th>‘praise’</th>
<th>‘to go to EGG’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[lód], [lʊd]</td>
<td>[kórd], [lɪmp]</td>
</tr>
<tr>
<td>1sg</td>
<td>lód</td>
<td>kórd</td>
</tr>
<tr>
<td>2sg</td>
<td>lód-əs</td>
<td>kórd-əs</td>
</tr>
<tr>
<td>3sg</td>
<td>lód-ə</td>
<td>kórd-ə</td>
</tr>
<tr>
<td>1pl</td>
<td>lʊd-άη</td>
<td>lɪmp-άη</td>
</tr>
<tr>
<td>2pl</td>
<td>lʊdɛ́-ʦ</td>
<td>lɪmp-έʦ</td>
</tr>
<tr>
<td>3pl</td>
<td>lód-ən</td>
<td>várd-ən</td>
</tr>
</tbody>
</table>
Autosegmental Analysis?

<table>
<thead>
<tr>
<th>l</th>
<th>k</th>
<th>o</th>
<th>ñ</th>
<th>r</th>
<th>m</th>
<th>d</th>
<th>p</th>
<th>e</th>
<th>n</th>
</tr>
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<tr>
<td>/</td>
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<td>/</td>
</tr>
<tr>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
</tr>
</tbody>
</table>

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<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>C</td>
<td>́</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
</tr>
</tbody>
</table>
4\textsuperscript{th} Class: suppletion and levels of representation

Today we leave

the question of optimization
phonologically conditioned allomorphy

And move to

grammatically conditioned allomorphy

the notion of \textit{suppletion}
4\textsuperscript{th} Class: suppletion and levels of representation

Consider the following cases from English past tense.

\begin{align*}
\text{[pleɪ]} & \quad \text{[pleɪd]} \\
\text{[kiːp]} & \quad \text{[kɛpt]} \\
\text{[rɪŋ]} & \quad \text{[ræŋ]} \\
\text{[tiːʧ]} & \quad \text{[tɔːt]} \\
\text{[gəʊ]} & \quad \text{[went]} \\
\end{align*}
4\textsuperscript{th} Class: suppletion and levels of representation

Consider the following cases from English past tense.

<table>
<thead>
<tr>
<th>Word</th>
<th>Pronunciation</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>play</td>
<td>[pleɪ]</td>
<td>[pleɪd]</td>
</tr>
<tr>
<td>keep</td>
<td>[kiːp]</td>
<td>[kɛpt]</td>
</tr>
<tr>
<td>ring</td>
<td>[rɪŋ]</td>
<td>[ræŋ]</td>
</tr>
<tr>
<td>hit</td>
<td>[tɪtʃ]</td>
<td>[tɔtʃ]</td>
</tr>
<tr>
<td>go</td>
<td>[goʊ]</td>
<td>[went]</td>
</tr>
</tbody>
</table>
4\textsuperscript{th} Class: suppletion and levels of representation

Consider the following cases from English past tense.

\begin{itemize}
\item \textipa{[pleɪ]} \quad \textipa{[pleɪd]} \quad \text{suffixation}
\item \textipa{[kiːp]} \quad \textipa{kɛpt} \quad \text{V-change, suffixation}
\item \textipa{[rɪŋ]} \quad \textipa{ræŋ} \quad \text{V-change, no suffixation}
\item \textipa{[tiːʧ]} \quad \textipa{tɔːt} \quad \text{Partial stem change}
\item \textipa{[gou]} \quad \textipa{went} \quad \text{Whole stem change}
\end{itemize}
4th Class: suppletion and levels of representation

Consider the following cases from English past tense.

- **[pleɪ] [pleɪd]**: suffixation, No suppletion
- **[kiːp] [kɛpt]**: V-change, suffixation
- **[rɪŋ] [ræŋ]**: V-change, no suffixation
- **[tiːʧ] [tɔːt]**: Partial stem change
- **[gou] [went]**: Whole stem change, « suppletion »

**regular**

**irregular**
4th Class: suppletion and levels of representation

Consider the following cases from English past tense.

- \([\text{pləɪ}] \quad [\text{pləɪd}]\)  
  No special information is necessary

- \([\text{kiːp}] \quad [\text{kɛpt}]\)  
  Retention of specific facts about the past stem is necessary.

- \([\text{rɪŋ}] \quad [\text{ræŋ}]\)

- \([\text{tɪʃ}] \quad [\text{tɔːt}]\)

- \([\text{ɡəʊ}] \quad [\text{wənt}]\)
Consider the following cases from English past tense.

<table>
<thead>
<tr>
<th>[pleɪ]</th>
<th>[pleɪd]</th>
<th>No special information is necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>[kiːp]</td>
<td>[kɛpt]</td>
<td>Retention of specific facts about the past stem is necessary.</td>
</tr>
<tr>
<td>[rɪŋ]</td>
<td>[ræŋ]</td>
<td>Some linguists claim that all of these cases are grammatically identical:</td>
</tr>
<tr>
<td>[tiːʧ]</td>
<td>[tɔːt]</td>
<td></td>
</tr>
<tr>
<td>[gou]</td>
<td>[went]</td>
<td></td>
</tr>
</tbody>
</table>
4th Class: suppletion and levels of representation

Consider the following cases from English past tense.

\[
\begin{align*}
\text{[pleɪ]} & \quad \text{[pleɪd]} \\
\text{[kiːp]} & \quad \text{[kɛpt]} \\
\text{[rɪŋ]} & \quad \text{[ræŋ]} \\
\text{[tɪːʃ]} & \quad \text{[tɔːt]} \\
\text{[gɒv]} & \quad \text{[wɛnt]} \\
\end{align*}
\]

No special information is necessary

Retention of specific facts about the past stem is necessary.

Some linguists claim that all of these cases are grammatically identical:

Weak suppletion = Strong suppletion
Reminiscent of that, but with a 
morpho-syntactic conditioning

No allomorphy, No Suppletion!!

\[
\begin{array}{cccccc}
\text{v} & \text{ʊ} & \text{a} & \text{r} & \text{d} & \text{ɛ} \ \\
\text{C} & \text{V} & \text{C} & \text{V} & \text{C} & \text{V}
\end{array}
\]

Weak Suppletion

Morphology

\[
\text{WATCH} = /vʊrd/, /vard/
2\text{PL} = /ɛʦ/
\]

Phonology

\[
/\{vʊrd, vard\}+ɛʦ/ \Rightarrow [kəntɛʦ]
\]
A theory of suppletion

Harley (2014) takes suppletion to stand for the situation in which the same “root” has two phonological forms associated to it:

/goʊ/  
/past/ 
/wɛnt/
A theory of supplication

Harley (2014) takes supplication to stand for the situation in which the same "root" has two phonological forms associated to it.

The equation with weak supplication gives:

\[
\text{past } /\text{goʊ}/ = \text{past } /\text{wɛnt}/ \quad = \quad \text{past } /\text{rɪŋ}/ = \text{past } /\text{ræŋ}/
\]
A theory of suppletion

Pre-theoretically, this misses the point that in both [pleɪ]-[pleɪd] and [rɪŋ]-[ræŋ] there is only one change that is introduced - other than that the stems are identical. This is very different from [gʊ]-[wɛnt].
A theory of suppletion

It can even be formalized:

Past = floating /æ/ for a list of verbal bases

A process of overwriting will replace the base /ɪ/ by /æ/.

```
rɪŋ
  └─+æ
  │
  │
  │
  C V C V
```
No suppletion in weak suppletion

As opposed to...
Weak suppletion = strong suppletion

/goʊ/

/wɛnt/

/past /

/ɾɪŋ/

/past /

/ɾæŋ/

/Past /

/∅ /

/for /

/ø /

/d/

/∅ /

/for /

/ø /

/∅ /

/∅ /

/∅ /
Facts unexpressed

• Both views miss the two following points

1) The change in the stem *implies* no /-d/

2) Stems having /æ/ as past marker have similar present URs: they all have /ɪN(C)/ in the present.
Facts unexpressed

• Both views miss the two following points

1) The change in the stem implies no /-d/

   Not necessarily: səl-soʊld

2) Stems having /æ/ as past marker have similar present URs: they all have /ɪN(C)/ in the present.

   Seems to be more important: To reflect what the speaker knows, we should be able to express it.
Facts unexpressed

- Both views miss the two following points

1) The change in the stem *implies* no /-d/

2) Stems having /æ/ as past marker have similar present URs: they all have /ɪN(C)/ in the present.

If the form of a root is CɪN(C), it is liable to change to /æ/ in the past... *(synchronically* – this group is not entirely closed)
No suppletion in weak suppletion

/goʊ/
past
/wɛnt/

/rɪŋ/

Past
/d/ for
∅ for
/æ/ for

Not expressed here
Weak suppletion = strong suppletion

/goʊ/
past
/wɛnt/

/ɹɛŋ/
past
/ræŋ/

/d/

Past

∅ for

Not expressed here
Facts unexpressed

- Still, one might claim that
  1) the /i/=>/æ/ change is not general, so the forms have to remembered anyway (lexical redundancy)
  2) If one adopts “no suppletion” for /rɪŋ/, with /æ/ realizing “past”, then this case is irrelevant for the question of weak vs. strong suppletion...
Facts unexpressed

• Still, one might claim that
  1) the /i/>/æ/ change is not general, so the forms have to remembered anyway (lexical redundancy)
  2) If one adopts “no suppletion” for /rɪŋ/, with /æ/ realizing “past”, then this case is irrelevant for the question of weak vs. strong suppletion.

We need a case where there is a clear distinction between two completely unrelated stems, and two related ones.
## Suppletion in Semitic

### Suppletion in Palestinian Arabic

<table>
<thead>
<tr>
<th>“root”</th>
<th>a. ‘write’</th>
<th>b. ‘command’</th>
<th>c. ‘walk’</th>
<th>d. ‘eat’</th>
<th>e. ‘come’</th>
</tr>
</thead>
<tbody>
<tr>
<td>perf.</td>
<td>katab</td>
<td>?amar</td>
<td>miʃi</td>
<td>?akal</td>
<td>3a:</td>
</tr>
<tr>
<td>imperf.</td>
<td>-uktob</td>
<td>-uʔmor</td>
<td>-imʃi</td>
<td>-okol</td>
<td>-izi</td>
</tr>
<tr>
<td>imperat.</td>
<td>?uktob</td>
<td>?uʔmor</td>
<td>?imʃi</td>
<td>kol</td>
<td>taʃa:1</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td>√ktb</td>
<td>√ʔmr</td>
<td>√mʃi</td>
<td>√ʔkʃl</td>
<td>√ʔzi</td>
<td></td>
</tr>
<tr>
<td>perfective</td>
<td>katab</td>
<td>?amar</td>
<td>mʃi</td>
<td>?akal</td>
<td>ʔaː:</td>
</tr>
<tr>
<td>participle act</td>
<td>kaːtɔb</td>
<td>?aːmɔr</td>
<td>maːʃi</td>
<td>?aːkɔl</td>
<td>maːzɔi</td>
</tr>
<tr>
<td>imperfective</td>
<td>-uktɔb</td>
<td>-uʔmor</td>
<td>-imʃi</td>
<td>-okol</td>
<td>-iʒi</td>
</tr>
<tr>
<td>imperative</td>
<td>?uktɔb</td>
<td>?uʔmor</td>
<td>?imʃi</td>
<td>kol</td>
<td>taʃaːl</td>
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<td>imperfective</td>
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<tr>
<td>imperative</td>
<td>?uktob</td>
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</tbody>
</table>

- √ktb
- katab +CaCaC
- kaːtəb +CaːCəC
- -uktob +uCCoC
- ?uktob +ʔuCCoC

- √ktb
- katab
- kaːtəb
- -uktob
- ?uktob
Suppletion in Semitic

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<td>kaːtəb</td>
</tr>
<tr>
<td>imperfective</td>
<td>-uktob</td>
</tr>
<tr>
<td>imperative</td>
<td>ḥuktob</td>
</tr>
</tbody>
</table>

\[\text{imperfective} = +ūCUCoC -uktob\]

\[\text{imperative} = +ʔuCUCoC ḥuktob\]
Suppletion in Semitic

<table>
<thead>
<tr>
<th>“root”</th>
<th>(\sqrt{\text{ʔkl}})</th>
</tr>
</thead>
<tbody>
<tr>
<td>perfective</td>
<td>(\text{ʔakal})</td>
</tr>
<tr>
<td>participle act</td>
<td>(\text{ʔaːkəl})</td>
</tr>
<tr>
<td>imperfective</td>
<td>-(\text{okol})</td>
</tr>
<tr>
<td>imperative</td>
<td>(\text{kol})</td>
</tr>
</tbody>
</table>

‘eat’ \(\rightarrow\) \(\sqrt{\text{ʔkl}}\)

- imperfective = \(+\text{uCCoC}\) -\(\text{ukol}\)
- imperative = \(+\text{CCoC}\) \(\text{kol}\)

Weak suppletion
Suppletion in Semitic

<table>
<thead>
<tr>
<th>&quot;root&quot;</th>
<th>√ʔʒi</th>
</tr>
</thead>
<tbody>
<tr>
<td>perfective</td>
<td>ẓaː</td>
</tr>
<tr>
<td>participle act</td>
<td>maːzi</td>
</tr>
<tr>
<td>imperfective</td>
<td>-iʒi</td>
</tr>
<tr>
<td>imperative</td>
<td>taʕaːl</td>
</tr>
</tbody>
</table>

‘come’

imperative =
+iCCiC

Strong suppletion
# Suppletion in Semitic

## Qaraqosh Neo-Aramaic

<table>
<thead>
<tr>
<th></th>
<th>‘open’</th>
<th>‘put’</th>
<th>+‘it’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infinitive</td>
<td>ρθαχα</td>
<td>draja</td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td>ρθιχ-</td>
<td>dri-</td>
<td></td>
</tr>
<tr>
<td>Non-past 3msg</td>
<td>ραθεχ</td>
<td>darэ</td>
<td>dari-lɛ</td>
</tr>
<tr>
<td>3fmsg</td>
<td>ραθχ-a</td>
<td>darj-a</td>
<td></td>
</tr>
<tr>
<td>3pl</td>
<td>ραθχ-i</td>
<td>dar-e</td>
<td></td>
</tr>
<tr>
<td>1pl</td>
<td>ραθχ-αχ</td>
<td>dar-αχ</td>
<td></td>
</tr>
</tbody>
</table>
### Suppletion in Semitic

**Qaraqosh Neo-Aramaic**

<table>
<thead>
<tr>
<th>Tense</th>
<th>Case</th>
<th>Verb Form</th>
<th>‘open’</th>
<th>‘put’</th>
<th>+‘it’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infinitive</td>
<td></td>
<td>$p\theta\alpha\chi\alpha$</td>
<td>$dra\jmath$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td></td>
<td>$p\theta\imath\chi$-</td>
<td>$dri$-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-past (3msg)</td>
<td></td>
<td>$pa\theta\varepsilon\chi$</td>
<td>$dar\varepsilon$</td>
<td>$dari-l\varepsilon$</td>
<td></td>
</tr>
<tr>
<td>(3fmsg)</td>
<td></td>
<td>$pa\theta\chi-a$</td>
<td>$darj-a$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3pl)</td>
<td></td>
<td>$pa\theta\chi-i$</td>
<td>$dar-e$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1pl)</td>
<td></td>
<td>$pa\theta\chi-a\chi$</td>
<td>$dar-a\chi$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vr</strong></td>
<td></td>
<td>$\sqrt{p\theta\chi}$</td>
<td>$\sqrt{dr}$?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Suppletion in Semitic

## Qaraqosh Neo-Aramaic

<table>
<thead>
<tr>
<th>Tense</th>
<th>Infinitive</th>
<th>‘open’</th>
<th>‘put’</th>
<th>+‘it’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infinitive</td>
<td>pθaχa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td>pθɪχ-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-past 3msg</td>
<td>paθεχ</td>
<td></td>
<td>darə</td>
<td>dari-lə</td>
</tr>
<tr>
<td>3fmsg</td>
<td>paθχ-a</td>
<td></td>
<td>darj-a</td>
<td></td>
</tr>
<tr>
<td>3pl</td>
<td>paθχ-i</td>
<td></td>
<td>dar-e</td>
<td></td>
</tr>
<tr>
<td>1pl</td>
<td>paθχ-aχ</td>
<td>vrpθχ</td>
<td></td>
<td>vdrj</td>
</tr>
</tbody>
</table>

| Non-past 3pl     | paθχ-     |       | dar-e |       |
| Non-past 1pl     | paθχ-aχ   | vrpθχ  |       | vdrj  |
## Suppletion in Semitic

### Qaraqosh Neo-Aramaic

<table>
<thead>
<tr>
<th></th>
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<tr>
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<td>draja</td>
</tr>
<tr>
<td>Past</td>
<td>ρθιχ-</td>
<td>dri-</td>
</tr>
<tr>
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\[\sqrt{\rho \theta \chi} \quad \sqrt{d r j} \]
Suppletion in Semitic

Qaraqosh Neo-Aramaic

Infinitive
Past
Non-past

‘open’  ‘put’  +‘it’

Crucially, all j-final roots behave exactly like this one: an underlying /j/ never surfaces in the 1pl nonpast.

3fmsg  paθχ-a  darj-a
3pl  paθχ-i  dar-e
1pl  paθχ-aχ  dar-aχ

νpθχ  νdrj
Suppletion in Semitic

Qaraqosh Neo-Aramaic

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There is really no synchronic reason for /j/ to surface before /-a/, but not before /-αχ/.
Suppletion in Semitic

Qaraqosh Neo-Aramaic

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The alternation between √CCj and √CCø must be conditioned by the morpho-syntactic features [1pl,-past].
'put'

Non-past 3fmsg  \(pa\theta\chi\text{-}a\)  \(\text{darj}\text{-}a\)

1pl  \(pa\theta\chi\text{-}a\chi\)  \(\text{dar}\text{-}a\chi\)
But what the speaker knows is **not about the verb ‘put’**. It’s independent of meaning, and depends on the **phonological identity** of the **root**.
Namely, on the appearance of /j/ as a third element in the root.

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‘put’

Namely, on the appearance of /j/ as a third element in the root.

The root is not this, this is the UR in context.

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But what the speaker knows is not about the verb ‘put’. It’s independent of meaning, and depends on the phonological identity of the root.
But what the speaker knows is **not about the verb ‘put’**. It’s independent of meaning, and depends on the **phonological identity** of the **root**.
So what is the root? Whatever it is, it must have a phonological identity!

The root is not this, this is the UR in context.

Non-past 3fmsg $\text{pa} \theta \chi \text{-a}$  $\text{darj}$-a

1pl  $\text{pa} \theta \chi \text{-a} \chi$  $\text{dar}$-a$\chi$

But what the speaker knows is not about the verb ‘put’. It’s independent of meaning, and depends on the phonological identity of the root.
The phonological index

The phonological index, mentioned also in the work of Hagit Borer, is “the common denominator of all the occurrences of a given root.”
The phonological index

A speaker of Qaraqosh knows that if a phoneme /j/ is the last phoneme in the phonological index, it is elided in the 1pl nonpast.
The phonological index

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The phonological index

Qaraqosh

‘put’ → vdrj

/drj/

/ḍr∅/ in [1pl, nonpast]

Palestinian

‘come’ → /ʔʒi/

/ʔʒi/

/tafaːl/ in imperative
The phonological index

Qaraqosh

‘put’ → vdrj

/drj/ Weak suppletion

/drø/ in [1pl, nonpast]

Palestinian

‘come’ → /ʔʒi/

/ʔʒi/ Strong suppletion

/təʕaːl/ in imperative
The phonological index: English

Qaraqosh

/r_ŋ/

Weak supplication

/rɪŋ/

/ræŋ/ in [past]

Weak supplication

/sɛl/

/søl/ in [past]
The phonological index: English

/гов/ → /went/ in [past]

Strong supplication!!!

/сол/ → /сəl/ in [past]

Weak supplication
Summary

• In a theory that recognizes the existence of the **phonological index**, there is a formal difference between weak and strong suppletion.
  – Weak suppletion: one PI, two URs
  – Strong suppletion: one concept, two PIs
Annex: more proof for the existence of the phonological index

• We’ve seen that the **phonological index** is useful in formalizing the distinction between the two types of suppletion.

• But can we show it is needed independently?
Annex: more proof for the existence of the phonological index

• We’ve seen that the **phonological index** is useful in formalizing the distinction between the two types of suppletion.

• But can we show it is needed independently?

• We will now see a case of allomorphy whose trigger must be the PI.
### Israeli Hebrew vQTy

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<tr>
<th></th>
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<th>c. ‘disturb’</th>
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<td>hifra</td>
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- \( \sqrt{vrk} \)
- \( \sqrt{vrv} \)
- \( \sqrt{fra} \)
- \( \sqrt{fr} \)

\[ \Rightarrow 3fmsg \text{ is } /-ta/ \text{ and not } /-a/ \text{ in the last group.} \]

\[ \Rightarrow \text{The trigger cannot be 1) the vowel-final stem/UR (cf. b,c); 2) some similarity avoidance (c); or specific for ‘fertilize’ (as in Qaraqosh, all y-final verbs trigger this allomorphy).} \]
## Israeli Hebrew \( vQTy \)

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\( \sqrt{vrk} \quad \sqrt{vr} \quad \sqrt{fra} \quad \sqrt{fry} \)

**UR association rule for the 3fmsg.past**

\[ [3fmsg], [past] \Leftrightarrow /-a/ \]
\[ \Leftrightarrow /-ta/ \quad /\sqrt{QTY} \]

---

The phonological Index
Israeli Hebrew vQTY

Past 3MSG
  3FMSG
  3PL

Action noun
  d. ‘fertilize’
  hifra
  hifr^e-ta
  hifr-u
  hafray-a

UR association rule for the 3fmsg.past
[3fmsg],[past] ⇔ /-a/
⇔ /-ta/ / √QTY

AgrP  => /hifrta/  => [hifr^e.ta]

Agr
  [3fmsg]

TamP

Tam[past]

vP

vfr^y

| /frφ/