

# Allomorphy

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# Allomorphy

Allomorphy is the phenomenon when the same morpheme exhibits distinct pronunciations.

**allo** - **morph** - **y**  
'different' - 'form' - 'state of'

- Allomorphy complicates the comparison and subtraction methods.
- Allomorphy is the rule, not the exception.
- Allomorphy raises questions about how our knowledge of language is organized, mentally.

## Example: English Plurals

	singular	plural
cat	k <sup>h</sup> æt	k <sup>h</sup> æts
sack	sæk	sæks
dog	dɑg	dɑgz
grub	gɹʌb	gɹʌbz
dish	dɪʃ	dɪʃəz
fudge	fʌdʒ̃	fʌdʒ̃əz
pea	p <sup>h</sup> i	p <sup>h</sup> iz
cow	k <sup>h</sup> aʊ	k <sup>h</sup> aʊz

What are the allomorphs of the regular English Plural?

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cow	k <sup>h</sup> aʊ	k <sup>h</sup> aʊz

What are the allomorphs of the regular English Plural? **-s**, **-z**, **-əz**

## Example: Georgian Adjectival Suffix

phizik-uri	‘physical’
kimi-uri	‘chemical’
akti-uri	‘active’
phrang-uli	‘French’
german-uli	‘German’
reakti-uli	‘reactive’
real-uri	‘real’
terminal-uri	‘terminal’

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What are the allomorphs of the Georgian adjectival suffix?

**-uri, -uli**

## Example: Kerewe (Tanzania)

Infinitive	1sg habitual	3sg habitual	Imperative	
kupaamba	mpaamba	apaamba	paamba	‘adorn’
kupaanga	mpaanga	apaanga	paanga	‘line up’
kupima	mpima	apima	pima	‘measure’
kupuupa	mpuupa	apuupa	puupa	‘be light’
kupeketfa	mpeketfa	apeketfa	peketfa	‘make fire with stick’
kupiinda	mpiinda	apiinda	piinda	‘be bent’
kuhiiga	mpiiga	ahiiga	hiiga	‘hunt’
kuheeka	mpeeka	aheeka	heeka	‘carry’
kuhaanga	mpaanga	ahaanga	haanga	‘create’
kuheeba	mpeebe	aheeba	heeba	‘guide’
kuhiima	mpiima	ahiima	hiima	‘gasp’
kuhuuha	mpuuha	ahuuha	huuha	‘breathe into’

**What allomorphy is present here?**

# Allomorphs in Kerewe

meaning	allomorphs
‘hunt’	<b>piiga, hiiga</b>
‘carry’	<b>peeka, heeka</b>
‘create’	<b>paanga, haanga</b>
‘guide’	<b>peeba, heeba</b>
‘gasp’	<b>piima, hiima</b>
‘breathe into’	<b>puuha, huuha</b>

1. What long-term memory representation of the pronunciation of these morphemes do Kerewe speakers have?



## Questions Allomorphy Raises

When there is no allomorphy, it appears straightforward: what you see is what you get.

Mental Lexicon	
meaning	pronunciation
infinitive marker	<b>ku-</b>
1st sg habitual	<b>m-</b>
3rd sg habitual	<b>a-</b>
imperative marker	∅ (null/zero)
‘adorn’	<b>paamba</b>
‘line up’	<b>paanga</b>
‘measure’	<b>pima</b>
‘be light’	<b>puupa</b>
‘make fire with stick’	<b>peketja</b>

What long-term memory representation of the pronunciation of the other verbs do Kerewe speakers have?

# Analysis #1

## Phonological Hypothesis

1. Kerewe speakers store ONE representation of the verbs in long-term memory.
2. This form undergoes *phonological changes* depending on its *phonological context*.

Mental Lexicon	
meaning	pronunciation
'hunt'	<b>hiiga</b>
'carry'	<b>heeka</b>
'create'	<b>haaŋga</b>
'guide'	<b>heeba</b>
'gasp'	<b>hiima</b>
'breathe into'	<b>huuha</b>

- Kerewe speakers change “h” to “p” after “m”.

## Analysis #2

### Morphological Selection Hypothesis

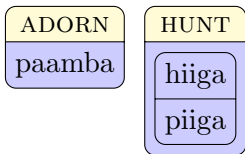
1. Kerewe speakers store two representations of verbs in long-term memory.

Mental Lexicon	
meaning	pronunciation
'hunt'	<b>hiiga</b> \ <b>piiga</b>
'carry'	<b>heeka</b> \ <b>peeka</b>
'create'	<b>haanga</b> \ <b>paanga</b>
'guide'	<b>heeba</b> \ <b>peeba</b>
'gasp'	<b>hiima</b> \ <b>piima</b>
'breathe into'	<b>huuha</b> \ <b>puuha</b>

- Kerewe speakers use the “p-form” when the 1st sg habitual prefix *m-* is used and the “h-form” everywhere else.

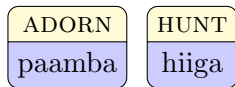
# Comparing these Hypotheses

## Morphological Selection



Select [piiga] for 1sg habitual,  
else use [hiiga].

## Phonology



Change [h] to [p] after [m].

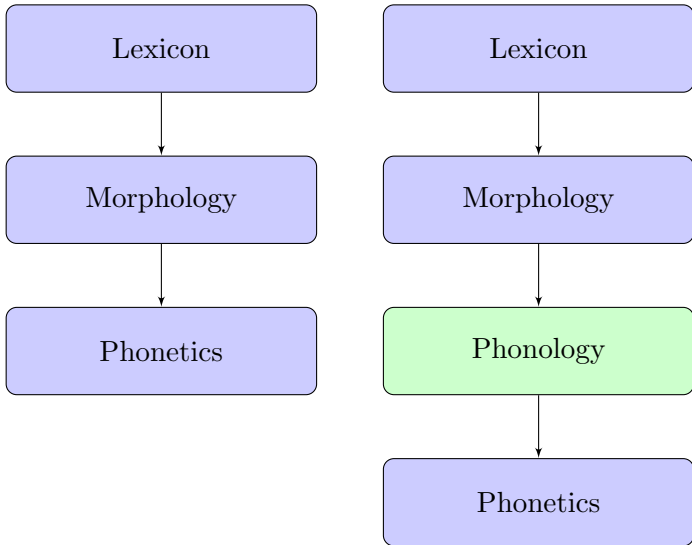
## Let's discuss

1. What do the lexicons look like when we consider additional lexical items such as GUIDE?
2. What prohibits a lexical item like this one 

DRAW
hiiba

 in the morphological analysis? In the phonological analysis?
3. Which analysis explains why the pronunciations for HUNT and GUIDE *pattern the same way*?
4. Can you think of other testable predictions these different hypotheses make?

# Competing Architectures of Grammar



# Let's Practice

Martian (not a real language)

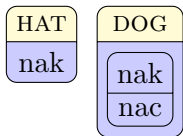
- a. naka 'a dog'
- b. naci 'the dog'
- c. naka 'a hat'
- d. naki 'the hat'

1. What are the morpheme allomorphs for *dog*, *hat*, *a*, *the*?
2. What is the lexicon and morphological rule for the morpheme selection hypothesis?
3. What is the lexicon and phonological rule for the phonological hypothesis?

# Practice

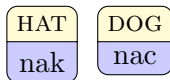
In both hypotheses, the indefinite article is **-a** and the definite article is **-i**.

## Morphological Selection



Select [nak] for indefinite,  
and [nac] for definite.

## Phonology



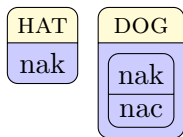
Change [c] to [k] before [a].



# Practice

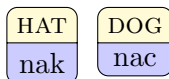
In both hypotheses, the indefinite article is **-a** and the definite article is **-i**.

## Morphological Selection



Select [nak] for indefinite,  
and [nac] for definite.

## Phonology



Change [c] to [k] before [a].

Suppose we observe *sapuci* ‘the cat.’ What does each hypothesis predict for ‘a cat?’

# Summary

1. When doing morphological analysis, the comparison and subtraction methods often reveal more than one pronunciation for morphemes.
2. There are multiple hypotheses consistent with the data.
  - Phonological
  - Morphological Selection
3. The Phonological analysis predicts that **the allomorphic variation is systematic.**
4. The Morphological Selection analysis does not.

## For Monday

- Read *Phonology: A Coursebook*, pages 1-16 (up to section 2.5).

[Link to Google Books \(Preview makes chapters 1-3 available\)](#)

- Next week, I plan to give HW assignments on Monday and Wednesday.