

# Morphology: More on Processes, Finding Morphemes and Allomorphy

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## Affixes: derivational vs. inflectional

- Membership in the **derivational vs. inflectional** classes is based on various diagnostics:

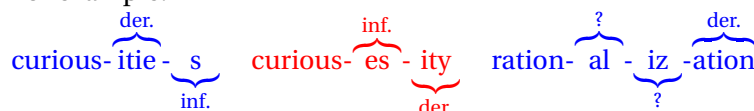
### a. Diagnostic #1: The Morpheme Ordering Constraint

A derivational affix *can't* be added to a word containing an inflectional one.

- (i) Therefore, *if a derivational affix can be added to a word containing affix X, then X must also be a derivational affix.*

This is our most reliable test

- For example:



### b. Diagnostic #2: Category change

- (i) *If affix X changed the category of the morpheme to which it attached, then X is derivational.*

(**note:** derivational affixes *don't need* to change the category, it is just that inflectional ones *can't*)

- For example

[<sub>N</sub> cat] ~ [<sub>N</sub> cat-s]; [<sub>A</sub> happy] ~ [<sub>A</sub> happi-est]  
[<sub>V</sub> walk] ~ [<sub>A</sub> walk-able]; [<sub>A</sub> do] ~ [<sub>N</sub> red-ness]

The dotted boxes represent rules that we can write as  $X \rightarrow Y + Z$  (which reads as "X is built from the composition of Y and Z, in this order.")

- In the case of (1), we have

- $N \rightarrow A + \text{ness}$ ,
- $A \rightarrow V + \text{ing}$ ,
- $V \rightarrow \text{re} + V$

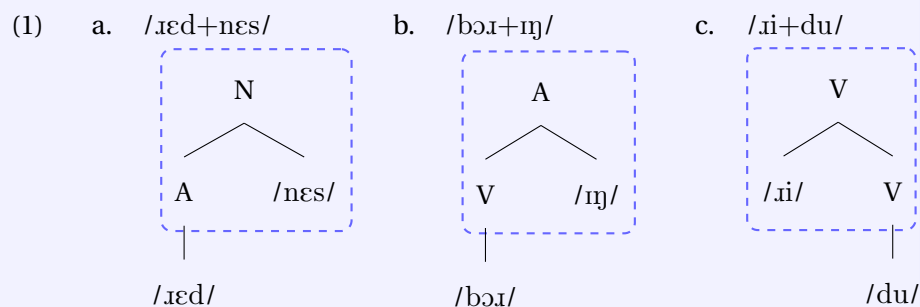
Note that the order matters! (since there is a difference between prefixes and suffixes)

## Practice

- (2) Consider the two uses of the suffix -er: one as in *runner, dealer, kicker*, and the other as in *smaller, cooler, kinder*.
- Write a formal rule for those uses ( $X \rightarrow Y + \text{er}$ ).
  - Which classes do these two suffixes fall under? Use the diagnostics to explain your answer.
- (3) Now consider the suffix /əɪ/ as in *sparkle, crackle, dabble, snuggle*.
- Write a formal rule for it.
  - Given the following words, what can you conclude about the class to which this suffix belongs:  
(i) sparkler                      (ii) crackler                      (iii) snuggler

## Formal Notation - Morphological Rules

Remember those:



## Compounds

We introduced a test to determine whether something is a compound: compounds are stressed **on the first word** by default.

- (4) Where were you?                      (5) What is that?
- at an **open** house                      a. a **cold** sore
  - at an amazing **house**                      b. a cold **soup**

The element of the *right* of a compound that, in a sense, determines what the compound means is called the *head* of the compound.

**The right hand head rule (RHHR)**

The category of a compound is identical to the category of its head, which is always the rightmost element of the compound.

$$X \rightarrow Y + X$$

**Practice**

(6) For each of the following, please state whether or not it is a compound. If it is a compound, please *also* state what the head of the compound is.

- |                     |                         |
|---------------------|-------------------------|
| a. computer screen  | e. general-purpose tool |
| b. nitty-gritty     | f. red socks fan        |
| c. black whiteboard | g. Red Sox fan          |
| d. blue-green dress | h. sweer red berry      |

**Morpho-phonology****Segmentation****The Gist**

Morphological segmentation involves finding **consistent and repeating matches** between the *strings of sounds* present in the words and the *meaning of strings* in the words.

- Let's try it together on the following data from Luiseño (Uto-Aztec; California):

|             |                       |                |                      |
|-------------|-----------------------|----------------|----------------------|
| [ʔoki]      | 'your (sg.) house'    | [potaana]      | 'his blanket'        |
| [ʔohuukapi] | 'your (sg.) pipe'     | [ʔotaana]      | 'your (sg.) blanket' |
| [noki]      | 'my house'            | [ʔomkim]       | 'your (pl.) houses'  |
| [ʔomtaana]  | 'your (pl.) blanket'  | [tʃamhuukapi]  | 'our pipe'           |
| [poki]      | 'his house'           | [notaana]      | 'my blanket'         |
| [pohuukapi] | 'his pipe'            | [nohuukapi]    | 'my pipe'            |
| [pomki]     | 'their house'         | [tʃamhuukapim] | 'our pipes'          |
| [ʔomtaanam] | 'your (pl.) blankets' |                |                      |

**Allomorphy**

In the lectures, you analyzed the past tense suffix in English.

|                      |            |                       |          |
|----------------------|------------|-----------------------|----------|
| [p <sup>h</sup> leɪ] | 'play'     | [p <sup>h</sup> leɪd] | 'played' |
| [mab]                | 'mob'      | [mabd]                | 'mobbed' |
| [jɛl]                | 'my house' | [jɛld]                | 'yelled' |
| [fowld]              | 'fold'     | [fowldɪd]             | 'folded' |
| [bowlt]              | 'bolt'     | [bowltɪd]             | 'bolted' |
| [p <sup>h</sup> æs]  | 'pass'     | [p <sup>h</sup> æst]  | 'passed' |
| [map]                | 'mop'      | [mapt]                | 'mopped' |
| [læk]                | 'lock'     | [lakt]                | 'locked' |

- What are the different forms of the suffix? How do we call those 'forms'?
- What are the environments in which each of them appears?
- What is the underlying morpheme? How do we know that?
- What are the morphophonemic rules for the English past-tense?

**Practice**

(7) Consider the following data from Palestinian Arabic.

|             |                  |              |              |
|-------------|------------------|--------------|--------------|
| [ʔamari]    | 'my moon'        | [ʔalʔamar]   | 'the moon'   |
| [kalbe:n]   | 'two dogs'       | [ʔalkalb]    | 'the dog'    |
| [bæ:bi]     | 'my door'        | [ʔalbæ:b]    | 'the door'   |
| [farase:n]  | 'two mares'      | [ʔalfaras]   | 'the mare'   |
| [ʃamsak]    | 'your (m.) sun'  | [ʔaʃʃams]    | 'the sun'    |
| [ze:tha]    | 'her oil'        | [ʔazze:t]    | 'the oil'    |
| [næ:sha]    | 'her people'     | [ʔannæ:s]    | 'the people' |
| [daʔ(ɪ)nak] | 'your (m.) chin' | [ʔaddaʔ(ɪ)n] | 'the chin'   |

- What are the free morphemes?
- What is the morpheme for: 'my', 'two Xs' (the dual), 'your (m.)', 'her'.
- What are the allomorphs of the definite article ('the')?
- What is the rule that controls which allomorph of 'the' to use?