

going deeper into the linguistic
system...

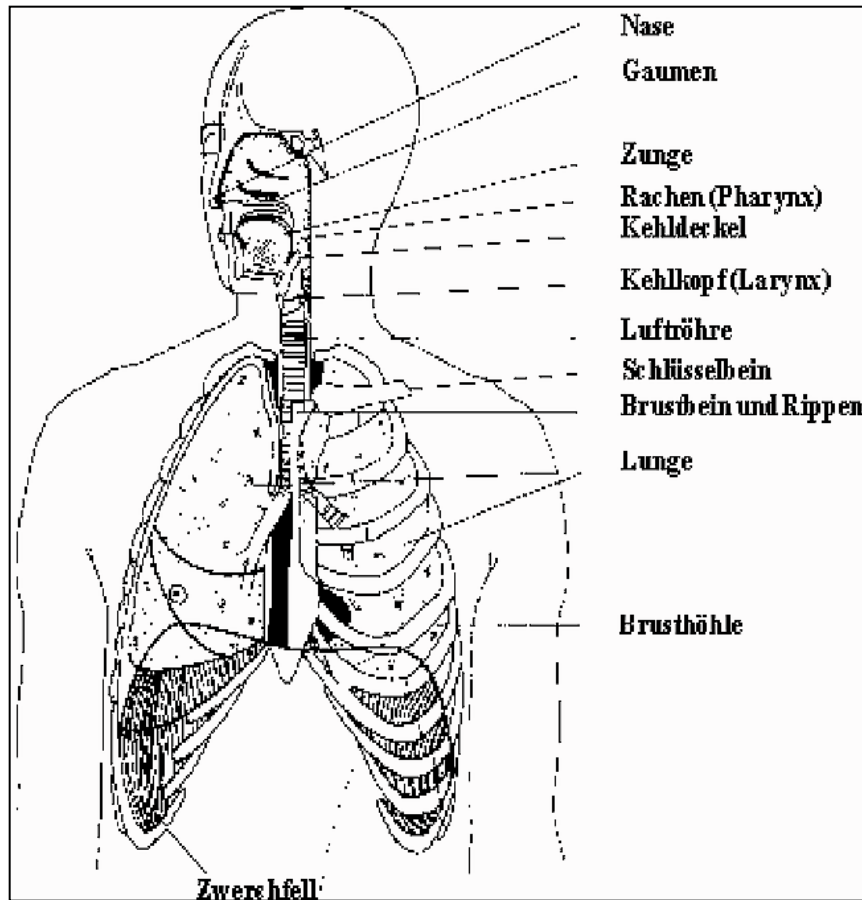
phonetics



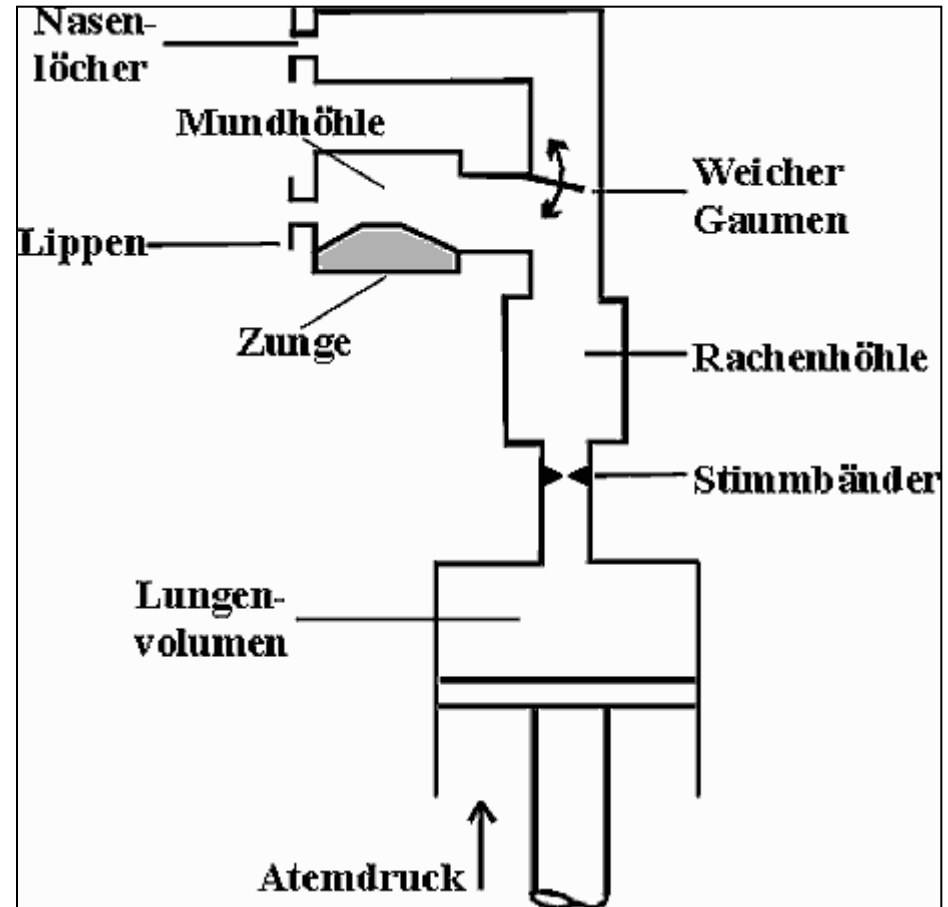
phonology



lexicon + morphology



FORM



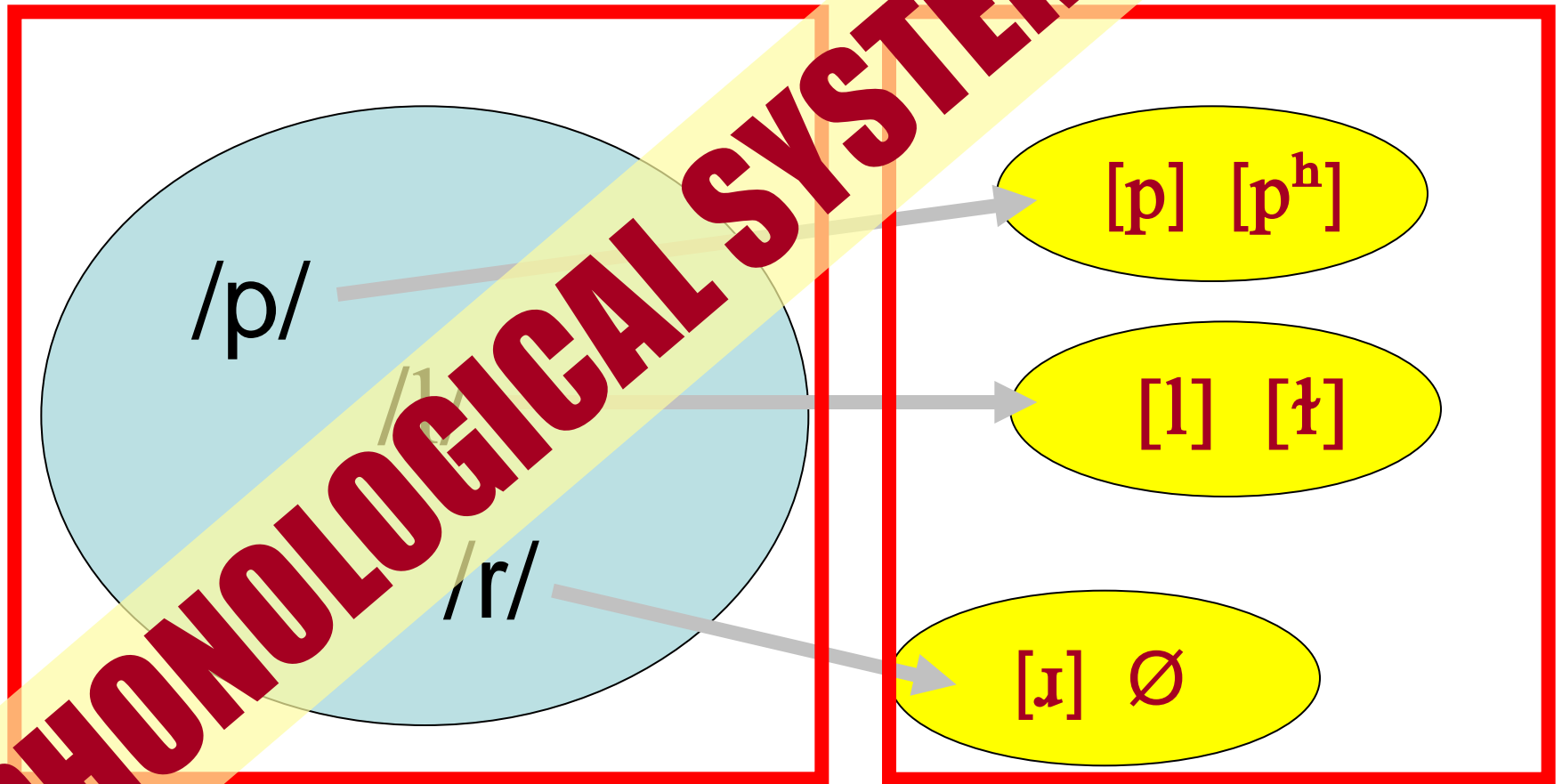
FUNCTION

← *models* →

← *m o d e l s* →

FUNCTION

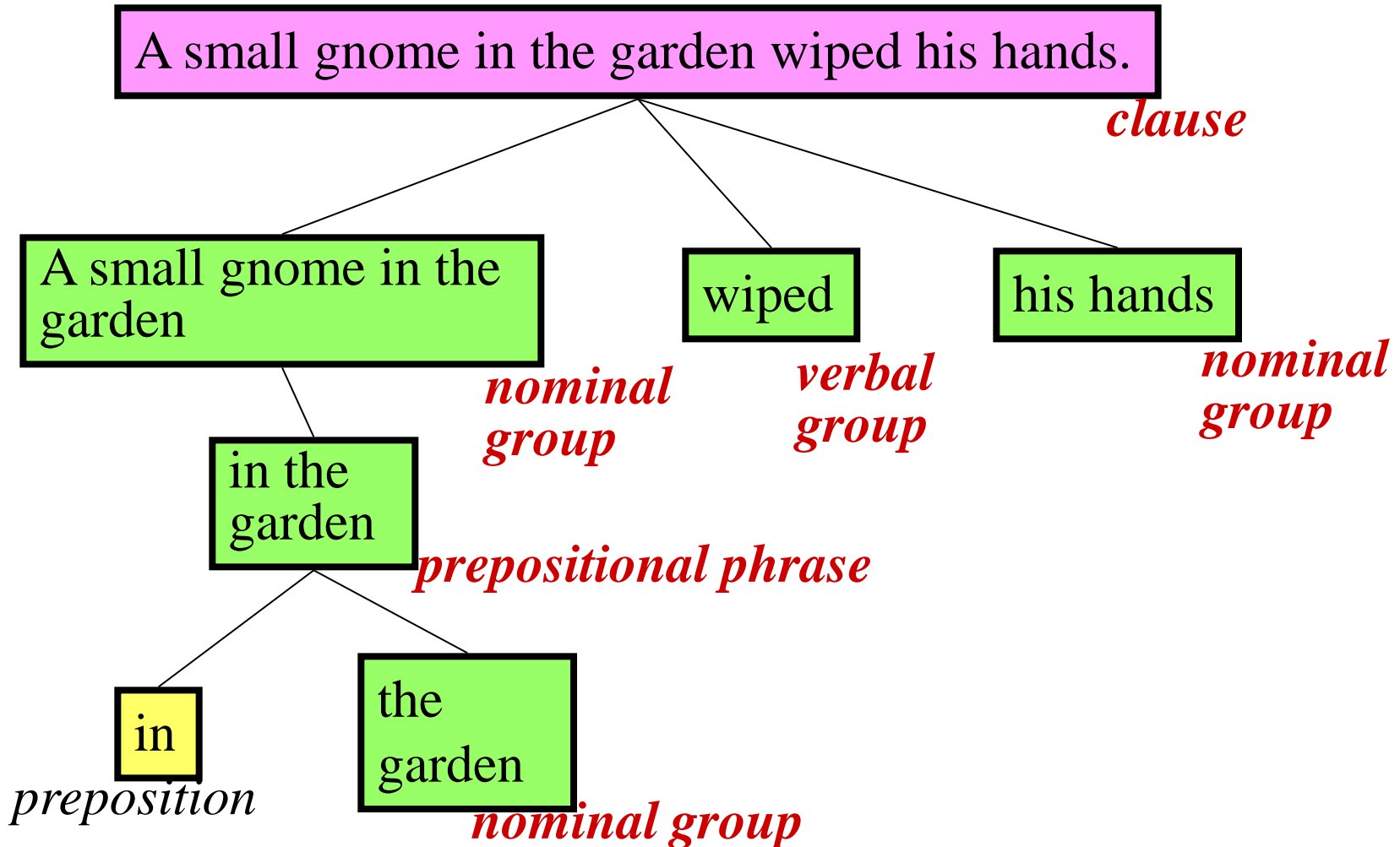
FORM



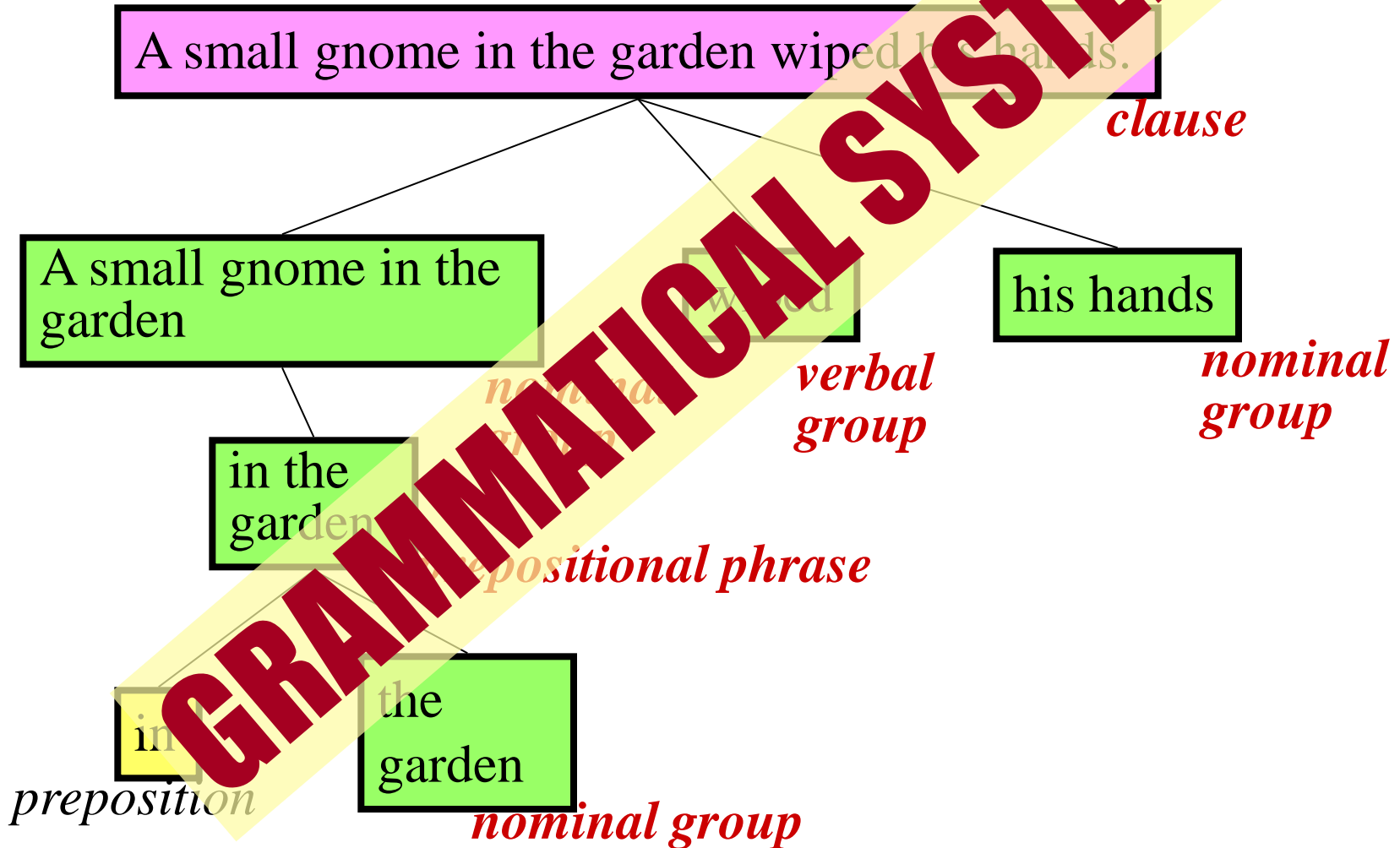
phonology

phonetics

Rank Units: down to groups



Rank Units: down to groups



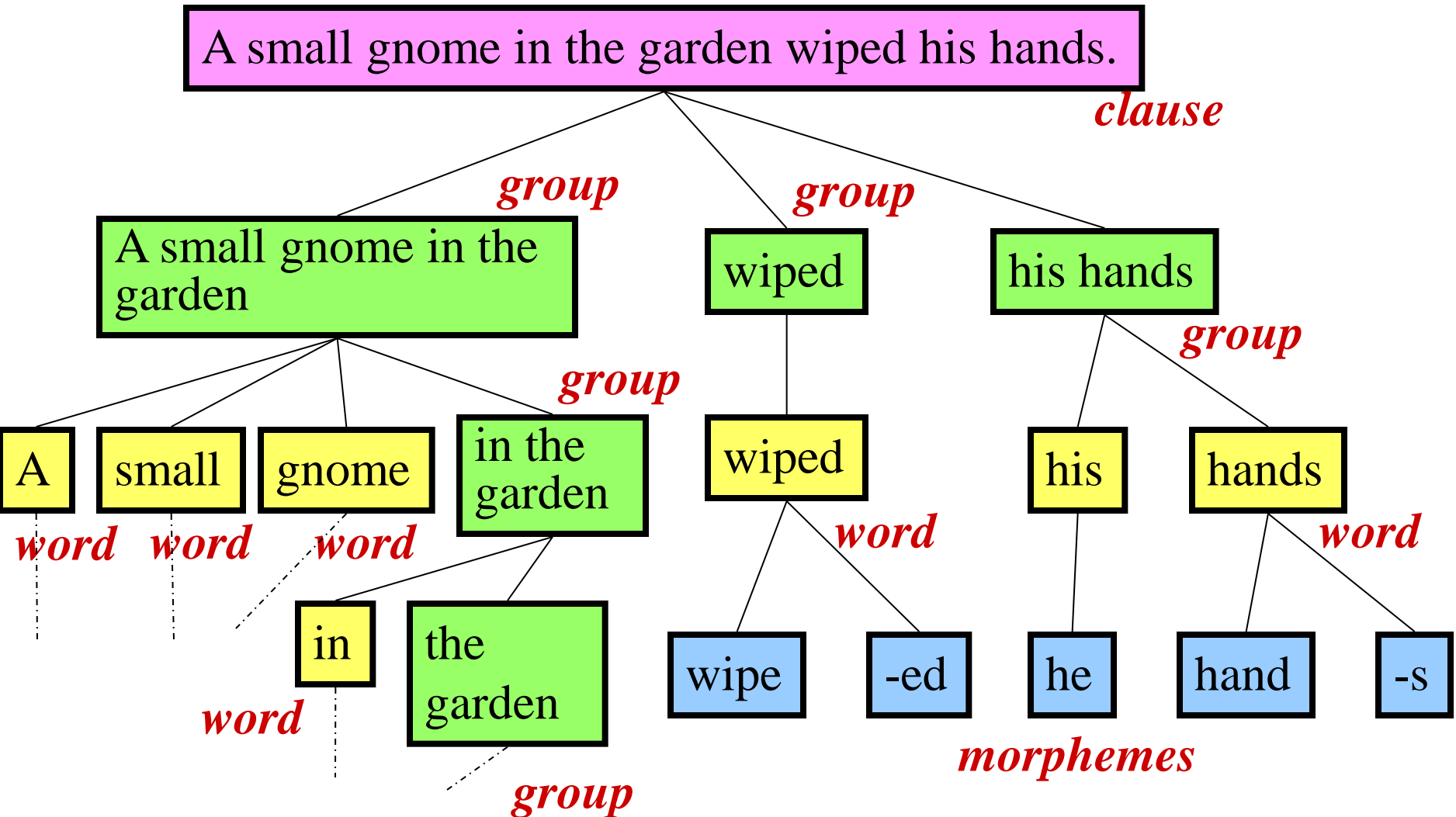
Grammar: The Rank Scale

- clauses
- groups and phrases
 - nominal groups
 - verbal groups
 - adjectival groups
 - adverbial groups
 - prepositional phrases
- words
- morphemes

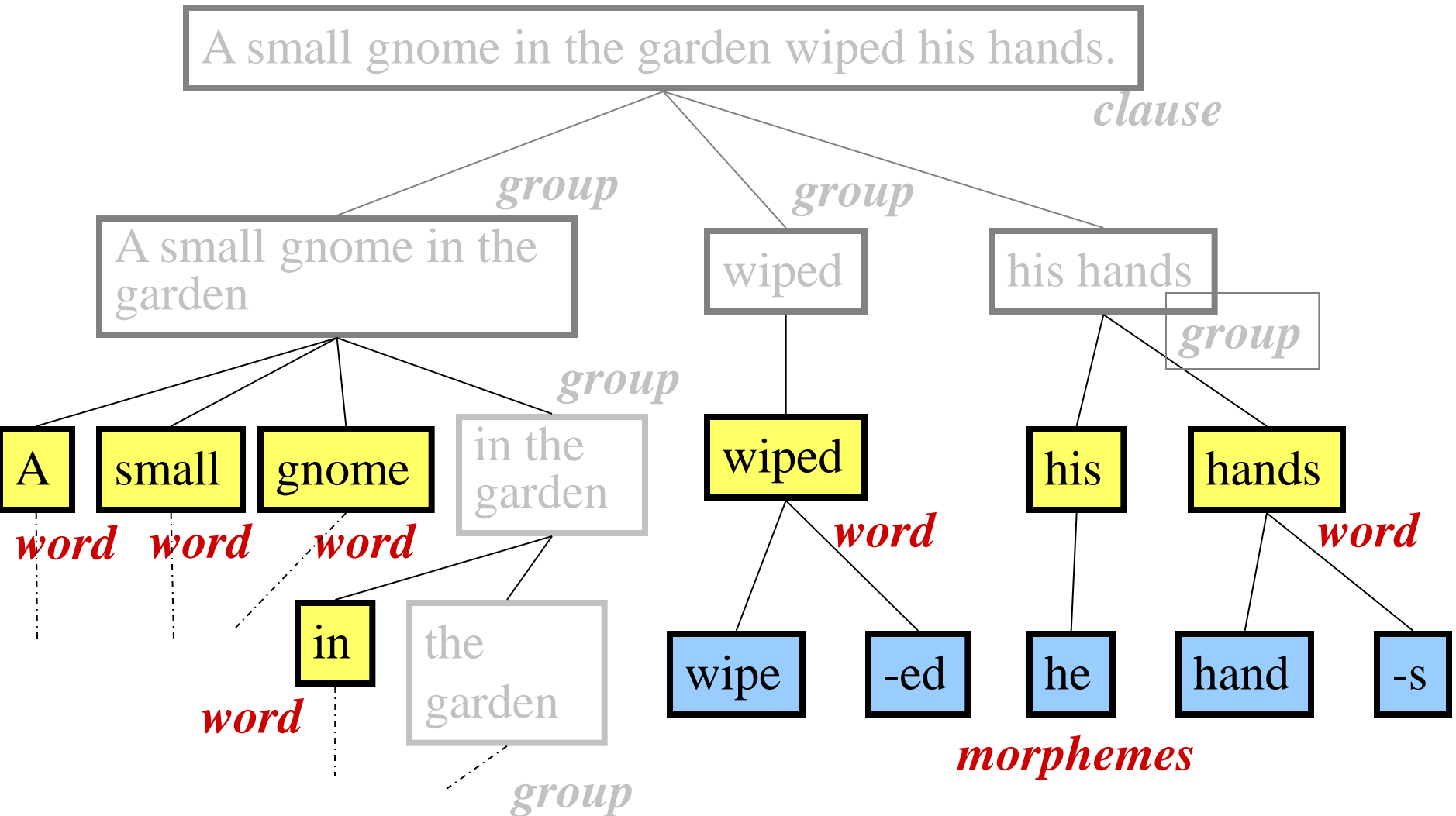
are made up of



Names of parts: Rank Units



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The Rank Scale

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 - nominal groups
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- **words**
- **morphemes**

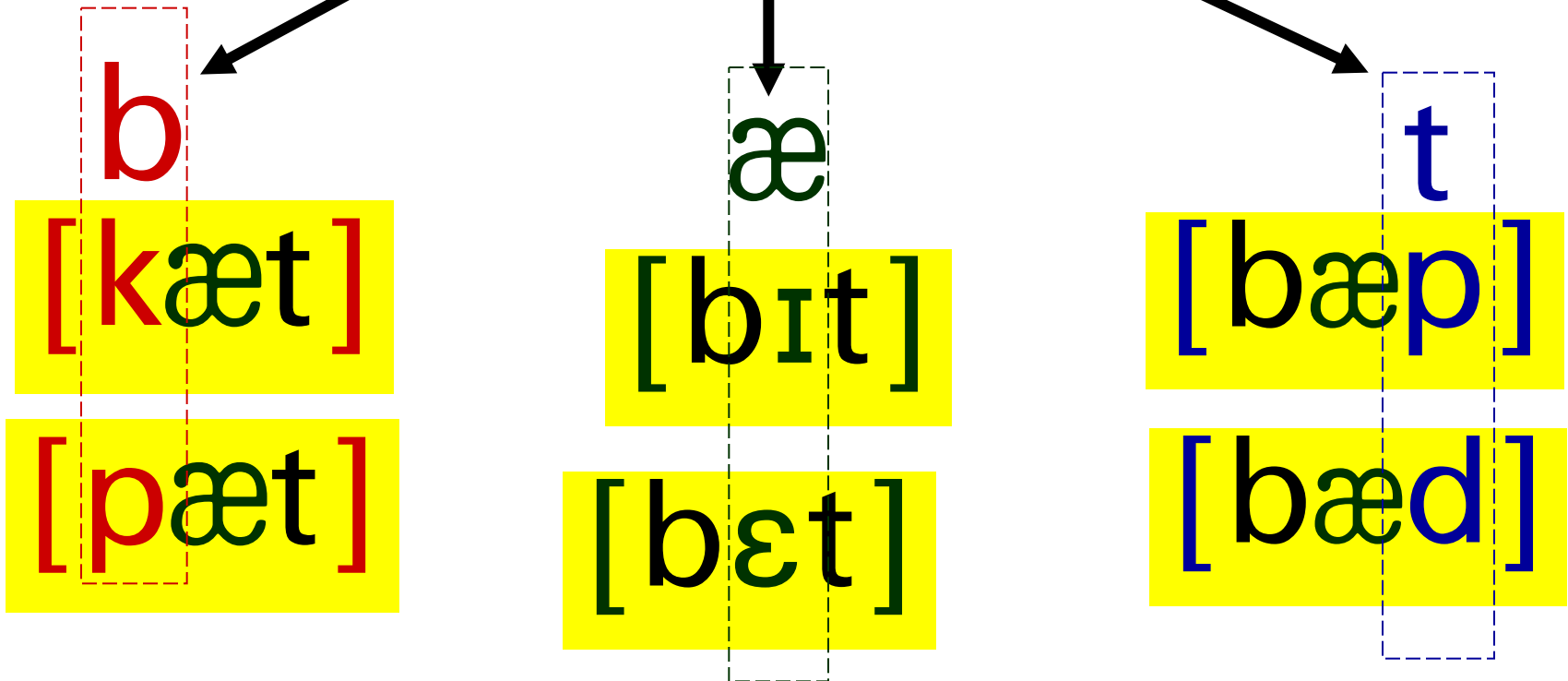
are made up of



Phones / Phonetics

[bæt]

“bat”



Phonemes / Phonology: contrastive units

/bæt/

b
k
p

- phonemes are the minimal units of phonology
- changing a phoneme means that you change the word!

Phonemes / Phonology: contrastive units

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When does a word 'change'?

mail	nail	sail
mailed	nailed	sailed
mailing	nailing	sailing

When does a word 'change'?

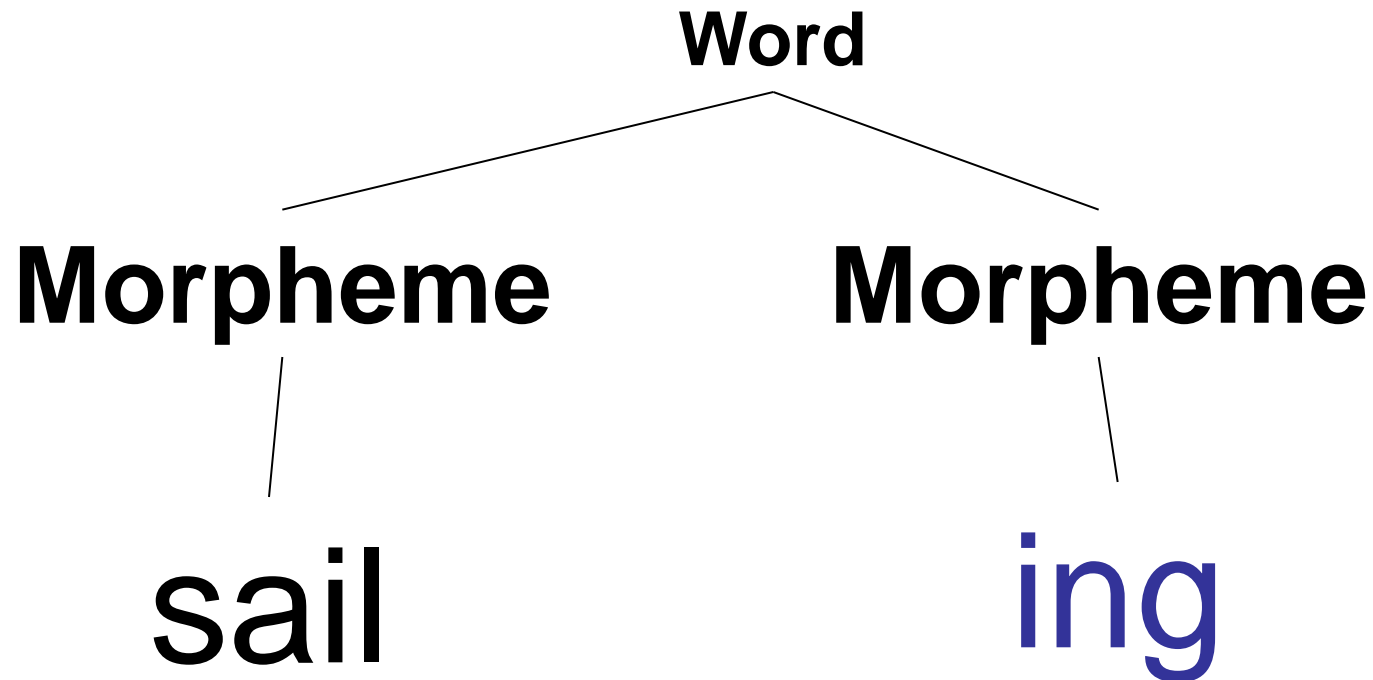
mail	nail	sail
mailed	nailed	sailed
mailing	nailing	sailing

Representing Word Structure

sail

ing

Representing Word Structure



Phonemes / Phonology: contrastive units

/bæt/

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Phonemes / Phonology: contrastive units

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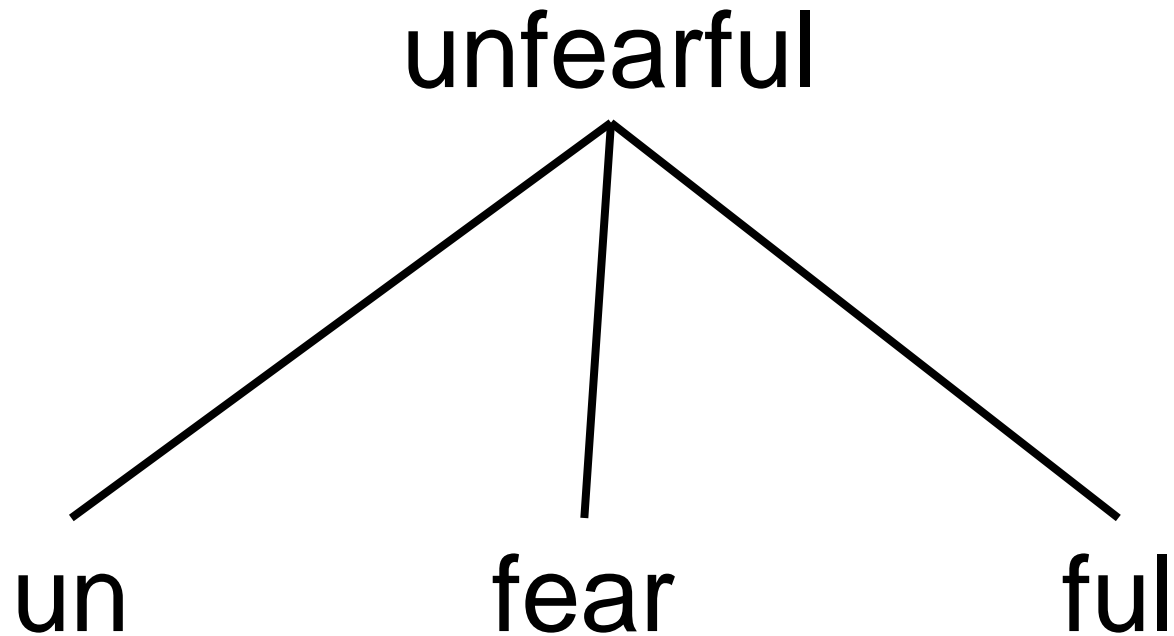
- changing a phoneme means that you change the ***MORPHEME!***

How we do find out what the morphological structure of a word is?

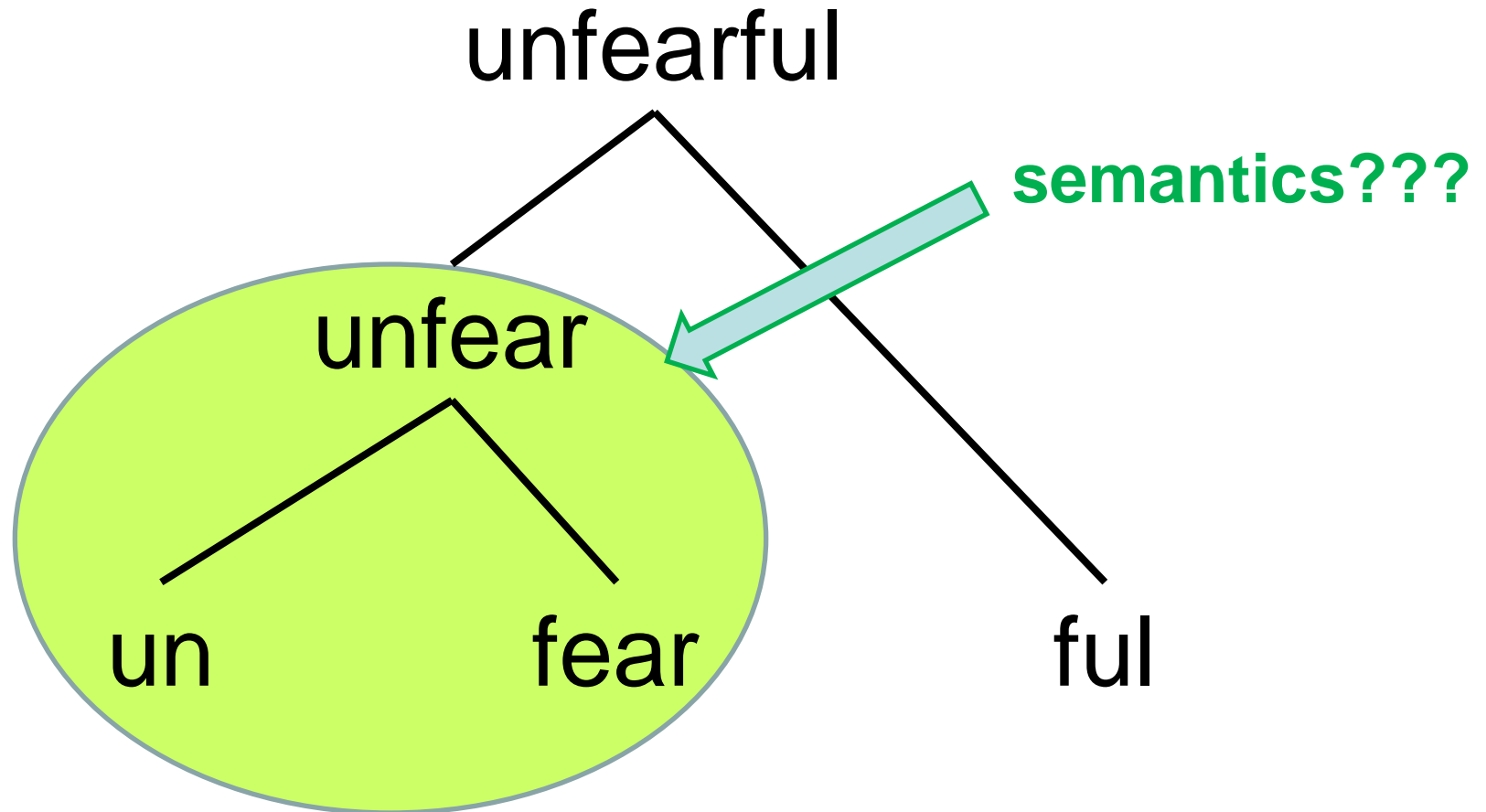
Two basic methods:

- semantic
- distributional / formal

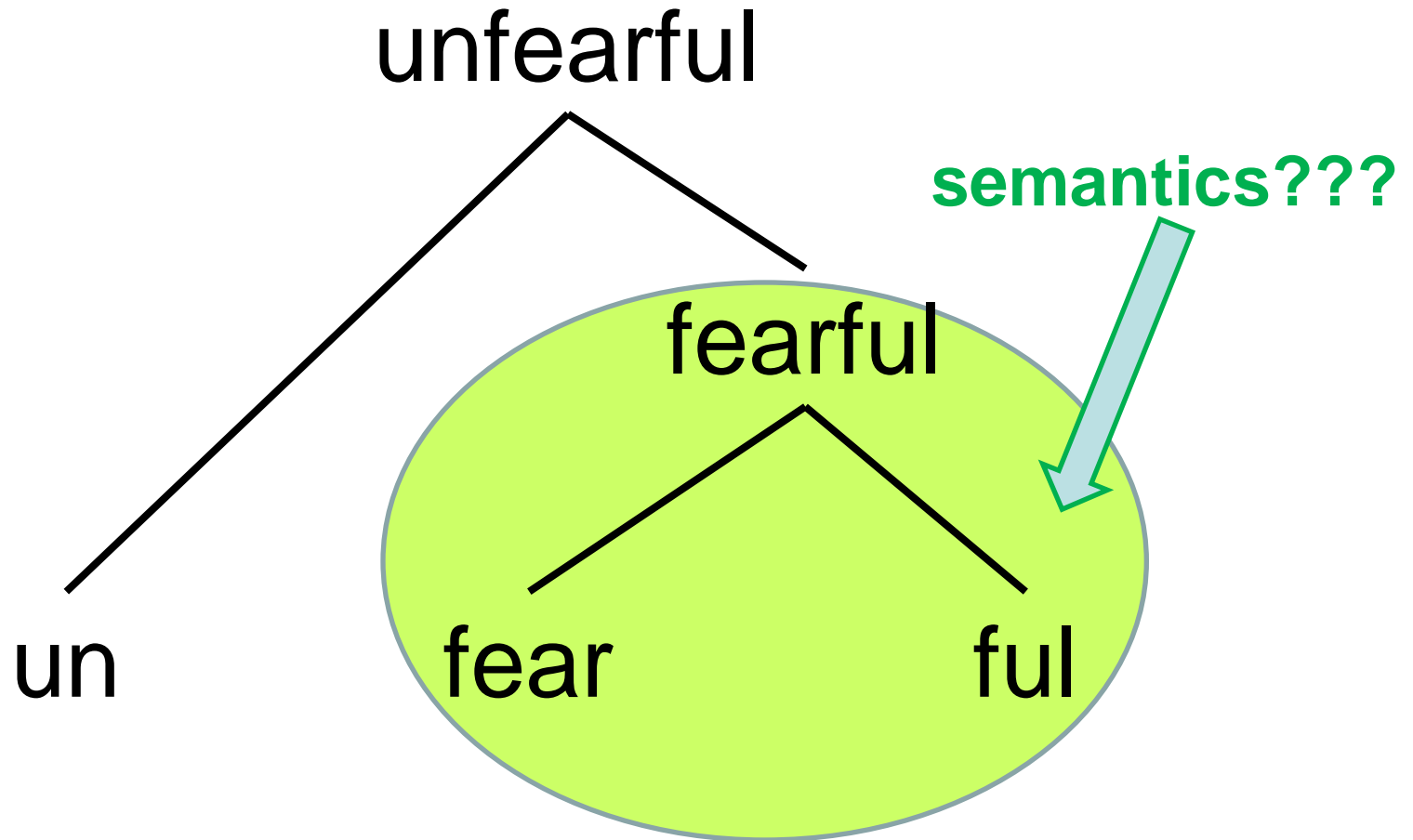
What is the structure of...



What is the structure of...



What is the structure of...



A basic principle...

- As far as possible,

all intermediate parts of a meaningful structure should also be meaningful!

... we shall also use this throughout our considerations of grammar and syntax, where it is called

'compositional semantics'.

What is the structure of...

distribution???

unfearful

un

ful

unusual
unpleasant
unclear
unhappy
unworthy
unhappy



Adjectives

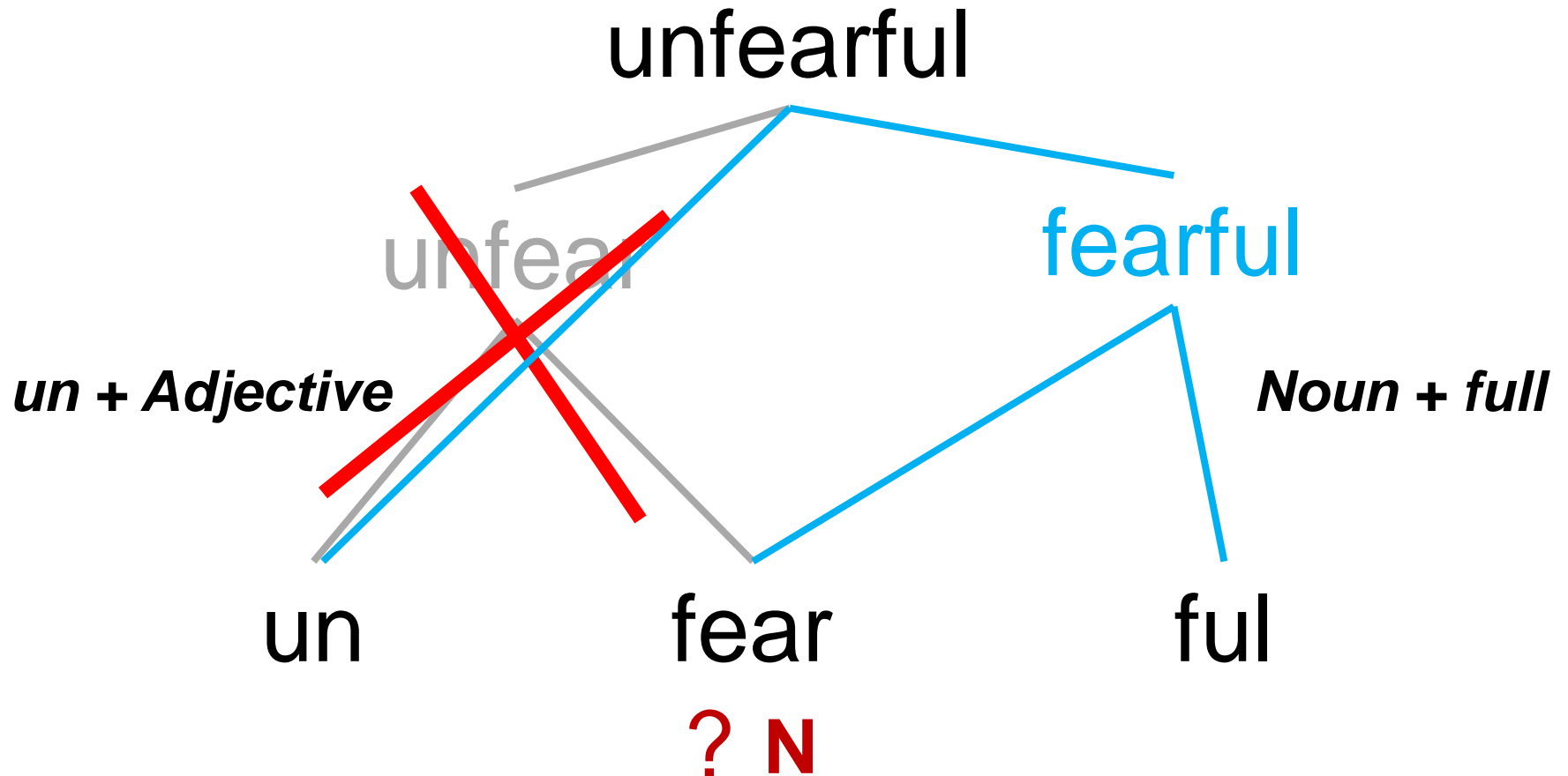
respectful
regretful
pitiful
joyful
tactful
willful



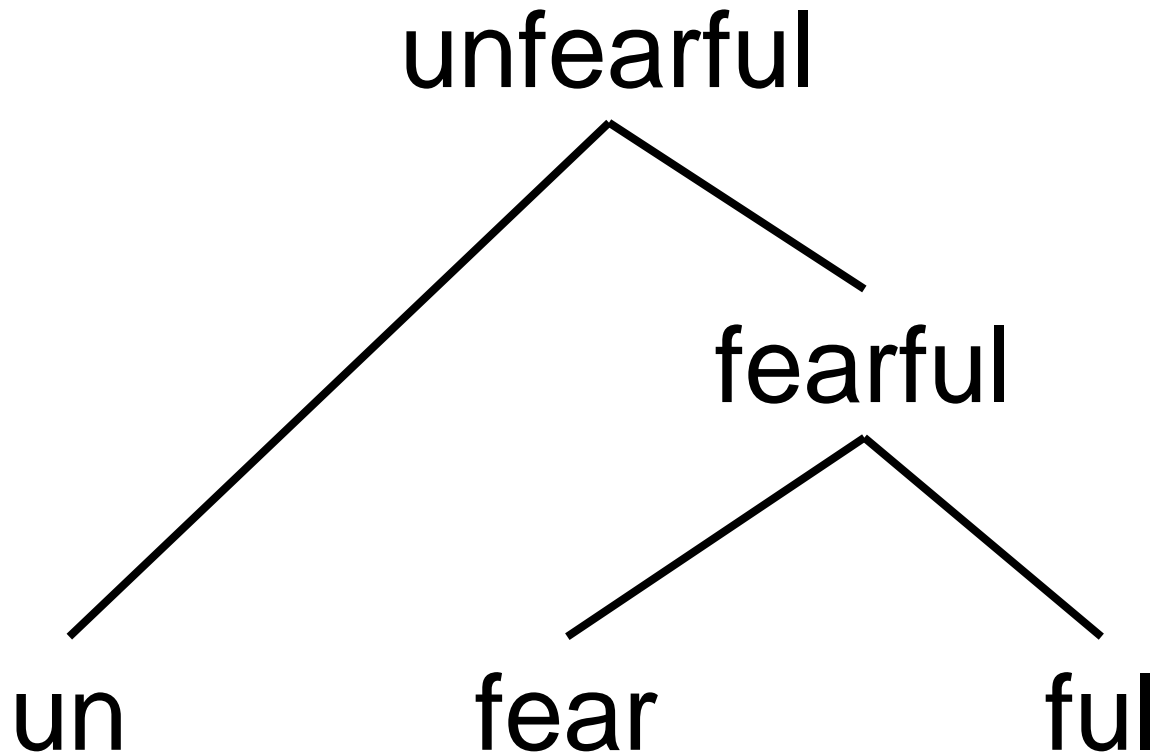
Nouns

What is the structure of...

distribution???



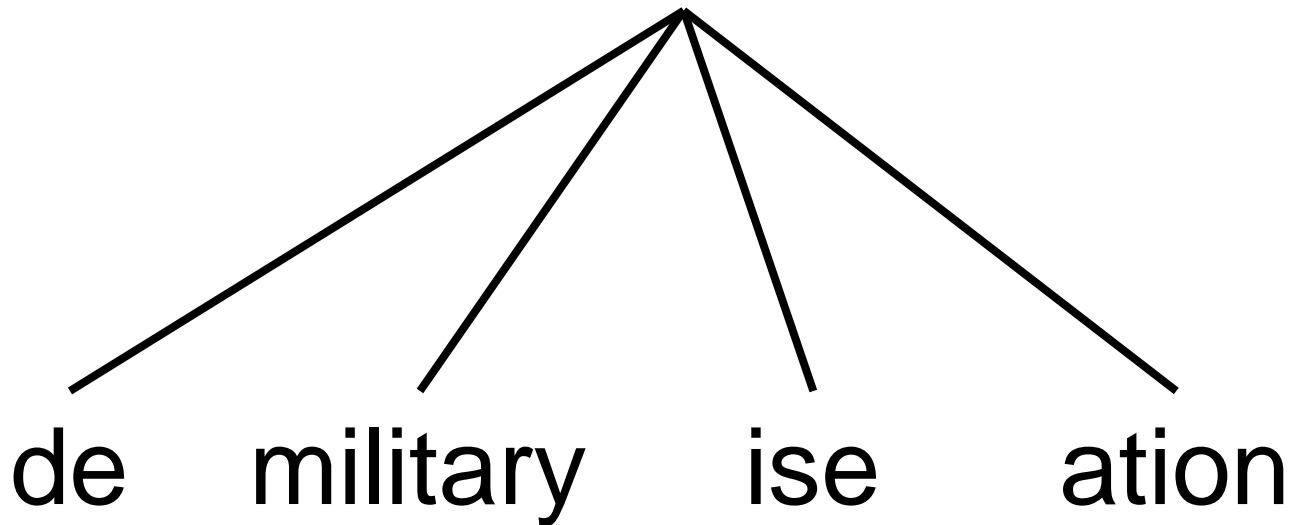
The “formal behaviour” of elements



What is the structure of...

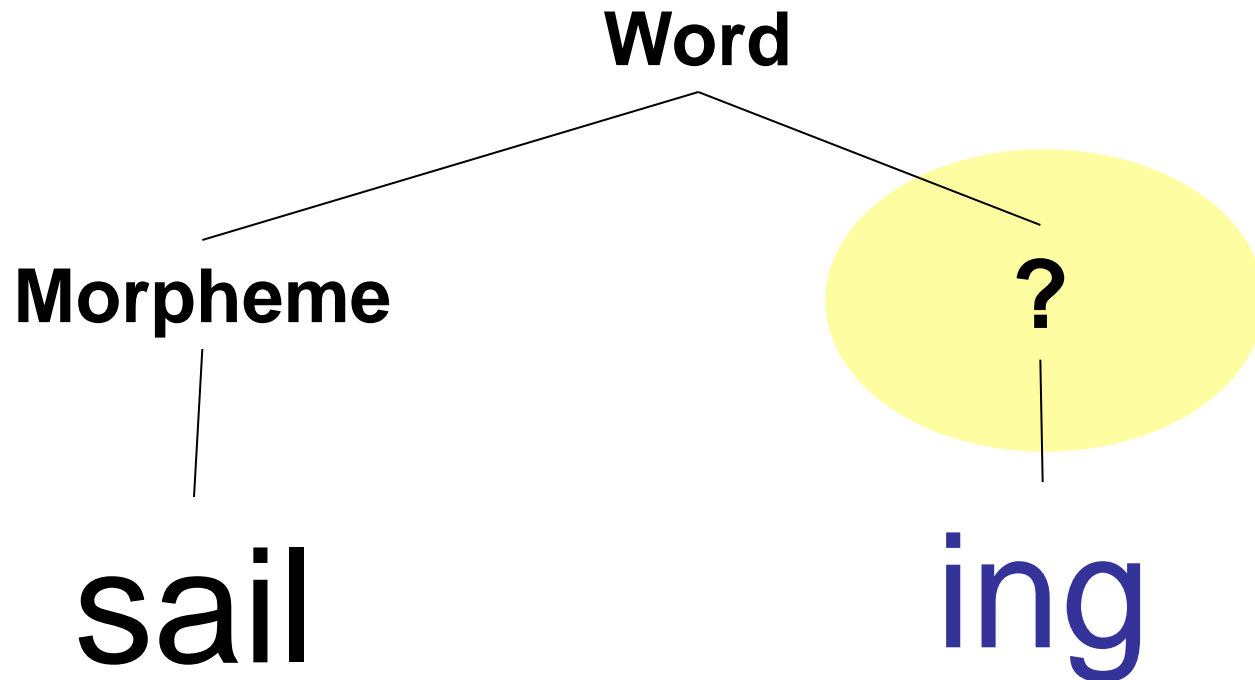
- semantics
- distribution

demilitarisation

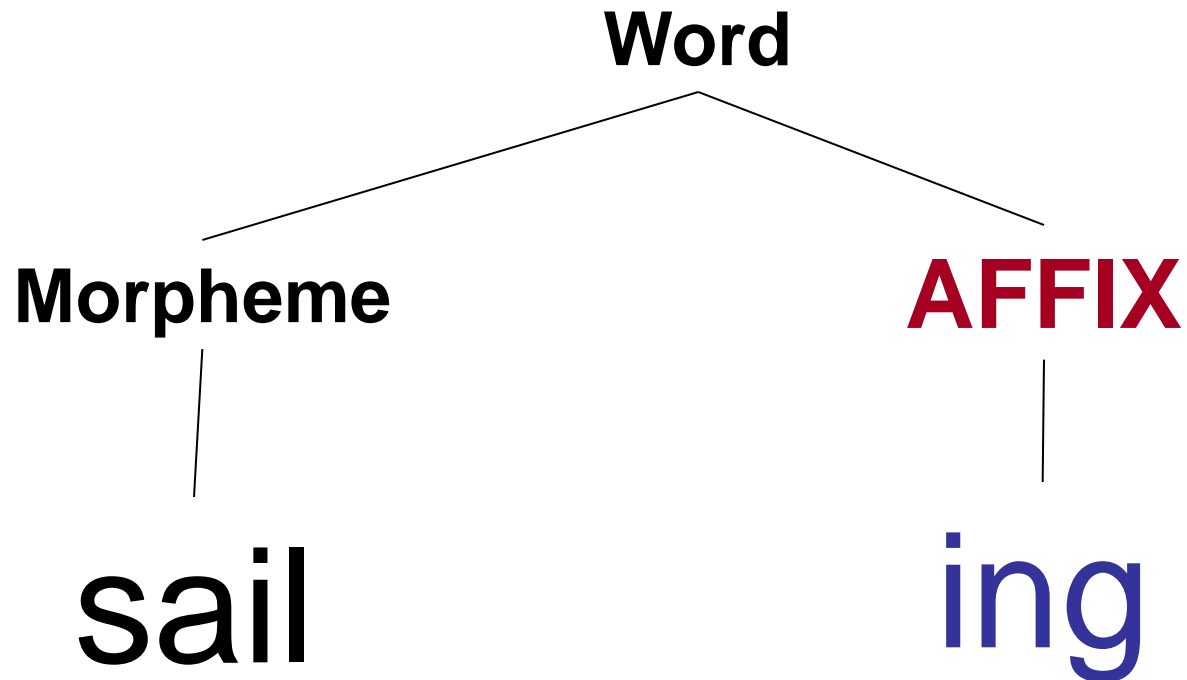


? + ary

Representing Word Structure



Representing Word Structure



Morphemes

```
graph TD; A[Morphemes] --> B[FREE]; A --> C[BOUND]
```

A hierarchical diagram with 'Morphemes' at the top level. A vertical line descends from the center of the 'Morphemes' box and connects to a horizontal line. From the left end of this horizontal line, a vertical line descends to the 'FREE' box. From the right end of the horizontal line, a vertical line descends to the 'BOUND' box. The 'Morphemes' box is light red with a red border. The 'FREE' and 'BOUND' boxes are light pink with pink borders.

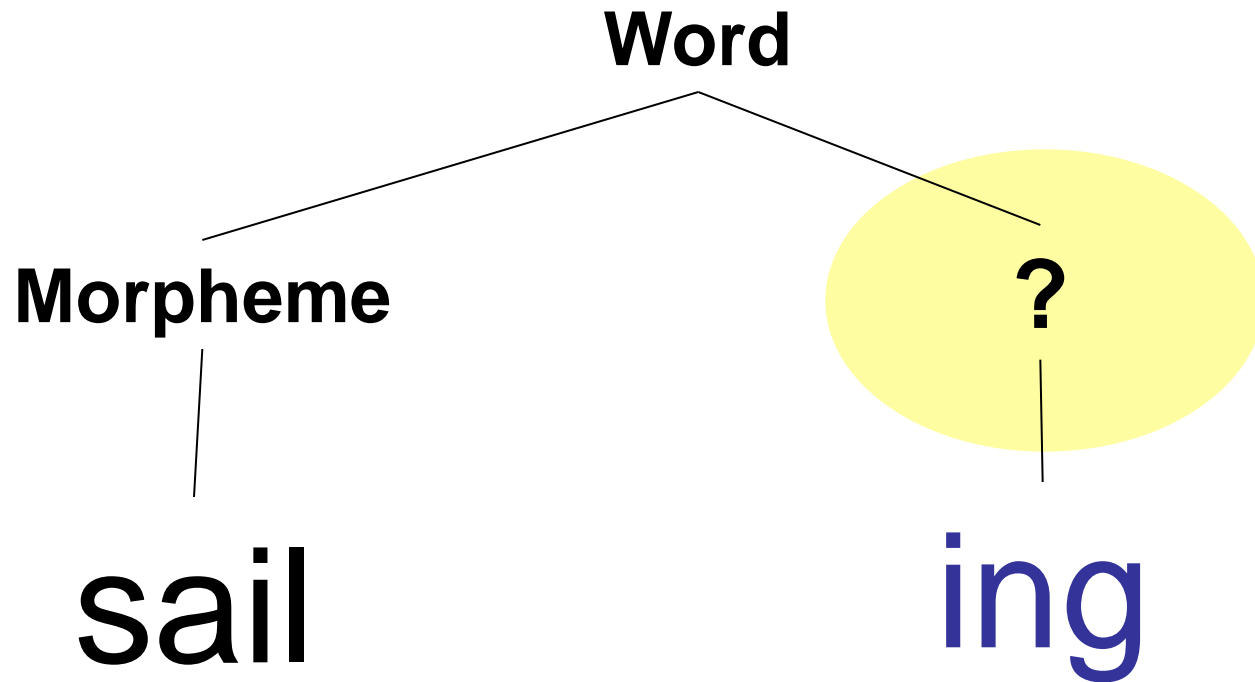
FREE

BOUND

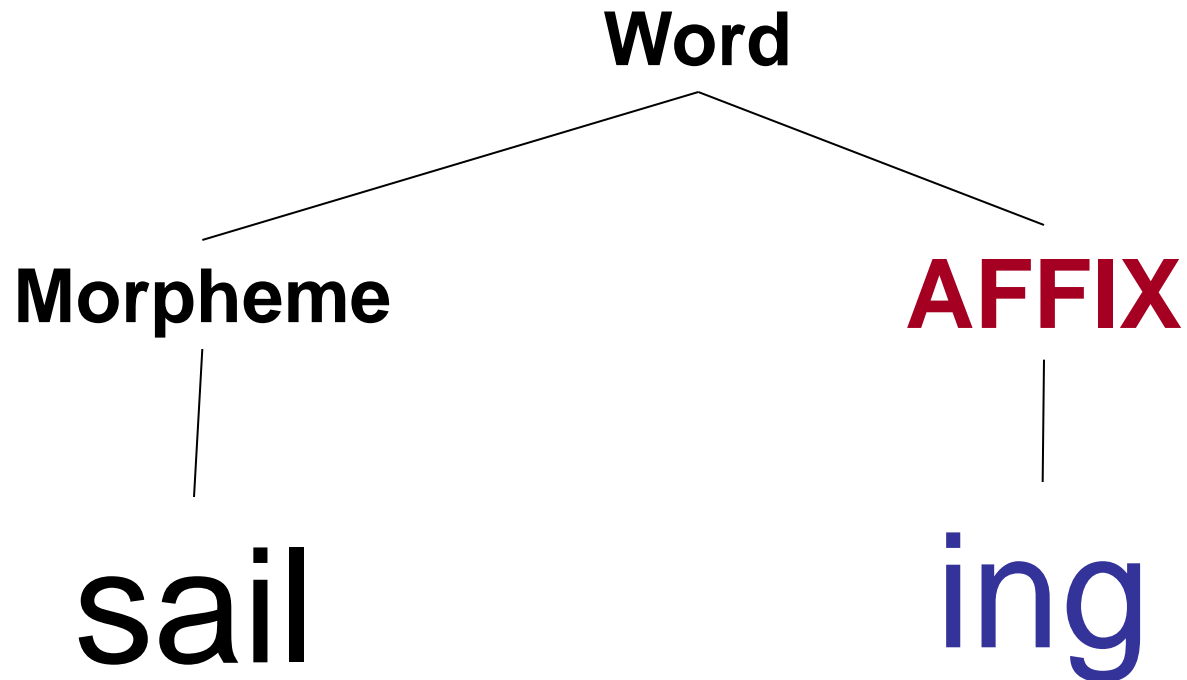
Bound morphemes: Affixes

- Suffixes
 - Prefixes
 - Infixes
 - Circumfixes
-
- Internal changes
e.g., Umlaut

Representing Word Structure



Representing Word Structure



Phonological Rule (from last time)

$$/1/ \rightarrow \begin{cases} [1] & / \text{ } \textcolor{red}{V}_{\text{front}} \\ [ɹ] & / \text{ elsewhere} \end{cases}$$

Phonetics rule

- e.g., ‘**phonotactics**’
 - what sounds does a language like to put together and what effects does this have...
 - e.g.: German ‘schn’ [ʃn]
 - e.g., English ‘sn’ [sn]

Different kinds of rules

- phonetic rules
 - phonological rules
 - **morphophonological rules**
-
- defined according to what we (or the rule) needs to **know** in order to apply
 - e.g., on what kinds of **features** it uses

What about the plural morpheme '-s' ?

- how is this expressed through sounds?

-s → ?

- bat
- bed
- miss

A closer look at the relation between phonology and morphology

plural morpheme: inflectional suffix: -S

[**b**æ**t**]

bat + -s \Rightarrow bats [**b**æ**t****s**]

A closer look at the relation between phonology and morphology

plural morpheme

[bɛd]

bed + -s \Rightarrow beds [bɛdz]

A closer look at the relation between phonology and morphology

plural morpheme

[**mis**]

miss + -s \Rightarrow misses [**misɪz**]

What about the plural morpheme '-s' ?

- how is this expressed through sounds?

-s → ?

plural → ?

- bat
- bed
- miss

Morphemes and Allomorphs

morphophonological rules

plural \rightarrow $\left\{ \begin{array}{l} [-s] / \begin{array}{l} \text{voiceless} \\ \text{nonsibilant consonant} \# _ \end{array} \\ [-z] / \begin{array}{l} \text{vowel or voiced} \\ \text{non-sibilant consonant} \# _ \end{array} \\ [-ɪz] / \begin{array}{l} \text{sibilant consonant} \# _ \end{array} \end{array} \right.$

Morphemes and Allomorphs

morphophonological rules

Different languages have different sets of rules for expressing their morphemes: these can lead to very different, but usually **systematic**, changes in the phonology