

Today's topics:

- **Word categories**
- **Word structure**

Background reading:

- CL Ch **5**, §1.1
- CL Ch 4, §1

0. Course information and reminders

- The **midterm exam** has been postponed
 - We had too much disruption in the beginning of the semester to be ready for an exam next week
 - The new date is **W Oct 7**
 - Details will be provided closer to the date
 - The exam will be available for you to take on your own schedule within about a two-day window
 - Is the exam open-book? You can find that information on the [“Course information and policies”](#) document!

0. Course information and reminders

- Tips for **success** in this course
 - See the **handout** "[How to learn in this course](#)" for a reminder of what to be doing at each point in the week
 - Learn from **feedback** — see how you did on your Learning Assignment and *read the feedback* before you start the new HW assignment!
 - Read **directions** carefully on HW assignments — we often use problems from the textbook but change the instructions

0. Course information and reminders

- Starting next week, **M Sept 21**, all Zoom links for this course will require a **passcode** (this is a new UNC-CH policy)
 - We will update the web links to include the passcodes automatically
 - But that means that links from open web sites (like the course web site) will pass you through Sakai to get to Zoom for security
 - You will be asked to log in to Sakai when you click the Zoom link if you aren't logged in already

1. Morphemes and words

Review from last time:

- **morphology**: “the part of the grammar that is concerned with words and word formation” (CL, p 122)
- **morpheme**: “the smallest unit of language that carries information about meaning or function” (CL, p 122)
- A morpheme...
 - shows a **systematic sound-meaning correspondence**
 - **cannot be further divided** without losing the sound-meaning correspondence

1. Morphemes and words

- How many morphemes are in the word ***rewriter***?

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- How many morphemes are in the word **rewriter**?
 - 3: *re-write-er*
- Can you propose a meaning for each of these morphemes, based on the **systematic sound-meaning correspondence** you find in a set words that contains it?

1. Morphemes and words

- **free form** (the opposite of **free** is **bound**)
 - “an element that does not have to occur in a fixed position with respect to neighboring elements” (CL, p 122)
 - Many free forms can occur in *complete* isolation (but not necessarily all)

1. Morphemes and words

- **free form** (the opposite of **free** is **bound**)
 - “an element that does not have to occur in a fixed position with respect to neighboring elements” (CL, p 122)
 - Many free forms can occur in *complete* isolation (but not necessarily all)
- **word**: “the smallest free form found in language” (CL, p 122) | **Really??**
 - By this definition, is *cats* [kæt-s] a word?
 - Should *cats* [kæt-s] be a word?

1. Morphemes and words

- **word:** ~~“the smallest free form found in language”~~
- Let's try this again... A **word** is:
 - a **free form**
 - **cohesive** — nothing¹ can intervene² between its parts while keeping the word's *meaning* intact

¹ Infixes, which we will discuss later, are (by definition) a *principled* exception to this claim

² 'Intervene' must also be interpreted with some linguistic sophistication, to distinguish words from phrases (*...more about phrases in the next chapter...*)

1. Morphemes and words

- Which, if any, of the morphemes in the word ***rewriter*** are bound morphemes?
 - Which, if any, of the morphemes in the word ***birdhouse*** are bound morphemes?
- Remember:
- We sometimes use spelling for convenience when discussing morphemes
 - But morphemes are actually made of **phonemes**

1. Morphemes and words

- Which, if any, of the morphemes in the word **rewriter** are bound morphemes?
 - *re-* , *-er* are bound; *write* is free
 - Which, if any, of the morphemes in the word **birdhouse** are bound morphemes?
 - none: *bird* and *house* are both free
- Remember:
- We sometimes use spelling for convenience when discussing morphemes
 - But morphemes are actually made of **phonemes**

1. Morphemes and words

- To sum up:
 - **Words** are **free**
 - **Morphemes** can be **free or bound**
 - **Words** contain **one or more morphemes**
- Next we will see:
 - Words have internal **structure**
 - The mental grammar of a language includes **rules** for **combining** morphemes to make words

2. Word categories

- How do we tell what **word category** (N, V, A,...) a particular word belongs to?
- Word category is important in morphology, because **different categories have different rules** for forming words
- Note: **word category** is also called
 - **syntactic category**
 - word class
 - lexical category/functional categoryBut: linguists don't usually use the term 'part of speech'

2. Word categories

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 - Meaning as a criterion?

A clue, but not fully reliable — translating a meaning from one language to another doesn't always use the same word category

Note the 'typically', 'usually' hedges in the gray box on p 125 in *CL*!
 - Inflection as a criterion?

2. Word categories

- How do we tell what **word category** (N, V, A,...) a particular word belongs to?
 - Meaning as a criterion?
A clue, but not fully reliable
 - Inflection as a criterion? (plural, past tense, comparative,...)
Moderately useful — but there are always exceptional category members, so be aware
 - > Do **all** nouns have a plural form?
 - > Do **only** nouns have a plural form?
 - Distribution as a criterion?

2. Word categories

- How do we tell what **word category** (N, V, A,...) a particular word belongs to?
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A clue, but not fully reliable
 - Inflection as a criterion? (plural, tense, comparative,...)
Moderately useful — but there are always exceptional category members, so be aware
 - Distribution as a criterion?
→ Very useful and reliable

2. Word categories

- Here are some distributional criteria for the word categories that are most important in morphology

(Based on table 5.3 from *CL*, p 171, with new examples)

Category	Distributional property	Examples
Noun (N)	occurs with some or all determiners ("articles")	<u>a</u> sneeze <u>the</u> anxiety
Verb (V)	occurs with some or all auxiliaries ("helping Vs")	<u>can</u> insist <u>may</u> seem
Adjective (A)	occurs with some or all degree words	<u>very</u> concrete <u>too</u> transparent

2. Word categories

- Some distributional criteria for word categories

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- Try some!
 - What word category is *disappear*?
 - What word category is *love*?

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- Try some!
 - What word category is *disappear*? | V
 - What word category is *love*? | N

2. Word categories

- Some distributional criteria for word categories

Category	Distributional property	Examples
Verb (V)	occurs with some or all auxiliaries ("helping Vs")	<u>can</u> insist <u>may</u> seem

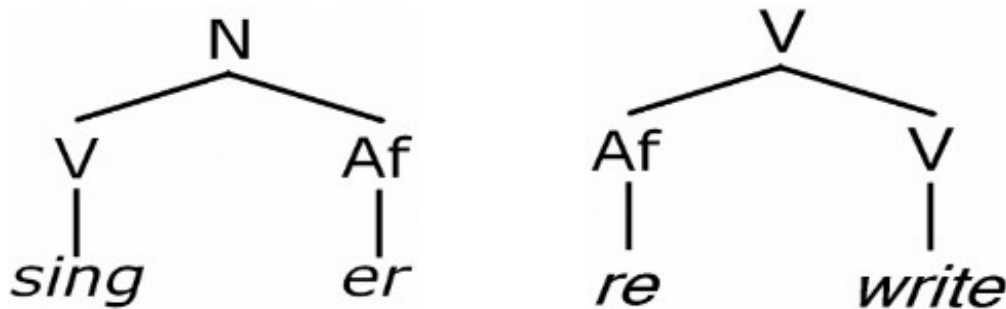
- Warning: If a verb has an **inflectional morpheme** (such as past tense, present progressive *-ing*, etc.), it will not pass this distributional test — remove inflectional morphemes before applying the test
 - You will learn about inflectional morphology in Wednesday's learning activities

3. Structure inside a word

- Every word contains at least one **root** morpheme
 - “constitutes the core of the word and carries the major component of its meaning” (CL, p 125)
 - To a root, **affixes (Af)** may be added
 - bound morphemes
 - do not* belong to a word category (CL, p 125)
- * Some linguists have proposed that an affix itself *belongs* to the word category that it *creates*.
But we’ll go with the textbook: just use the label **Af**.

3. Structure inside a word

- We can use a **tree diagram** to represent the internal structure of a word
 - Show what category an affix attaches to
 - Show what category it has created

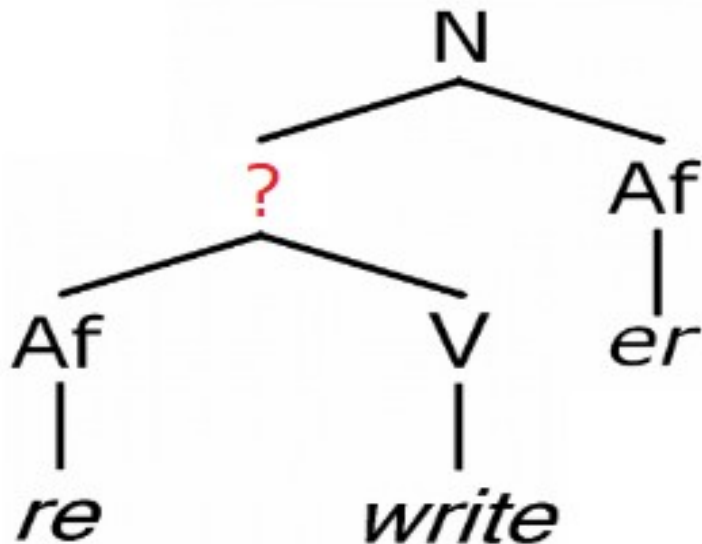


- Try drawing a tree diagram for *rewriter*
 - Hint: Always start with the **root**

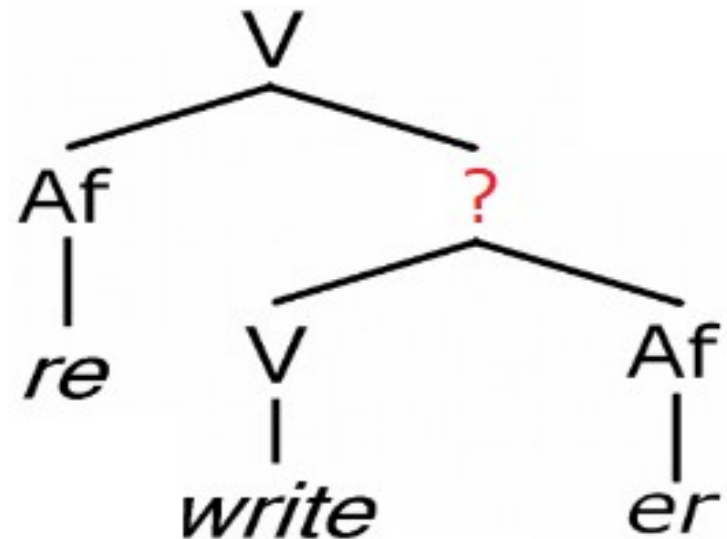
3. Structure inside a word

- **Which** tree is the right one?

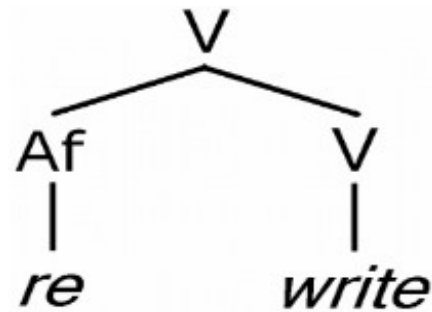
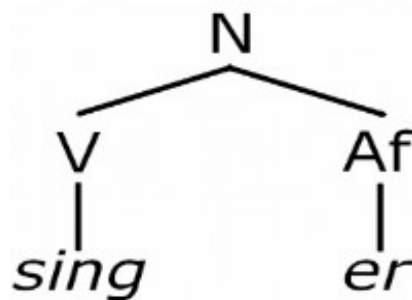
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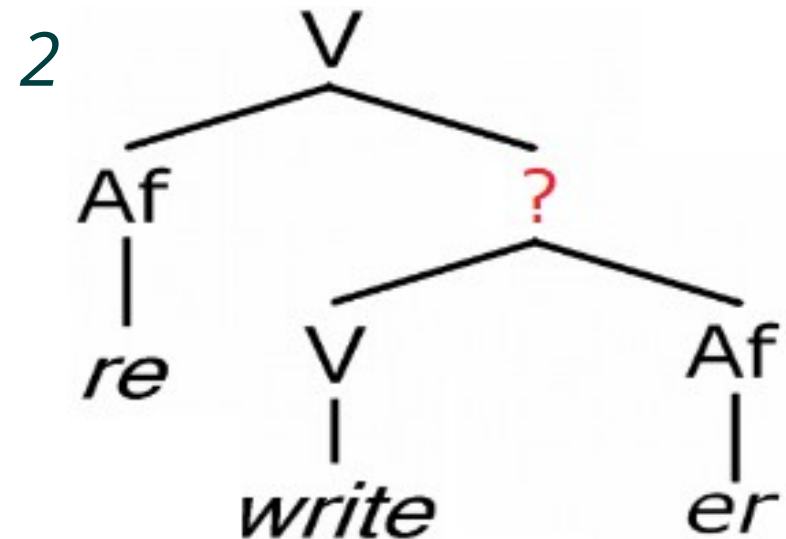
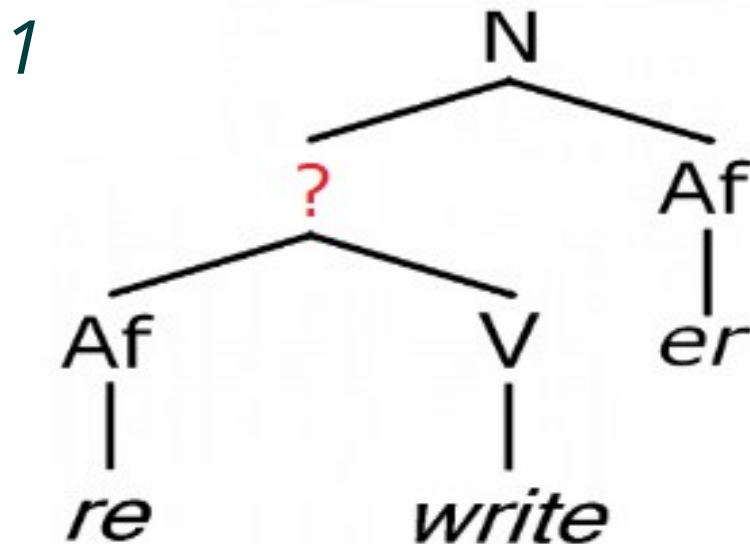


- Compare:



3. Structure inside a word

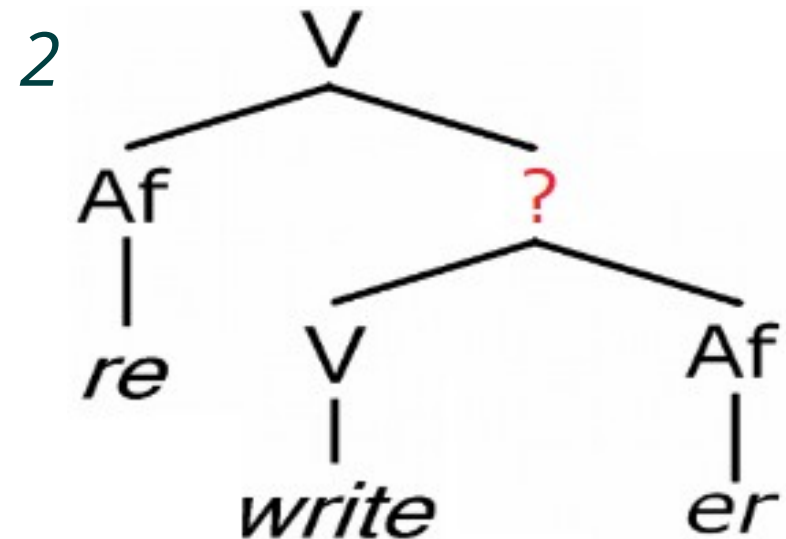
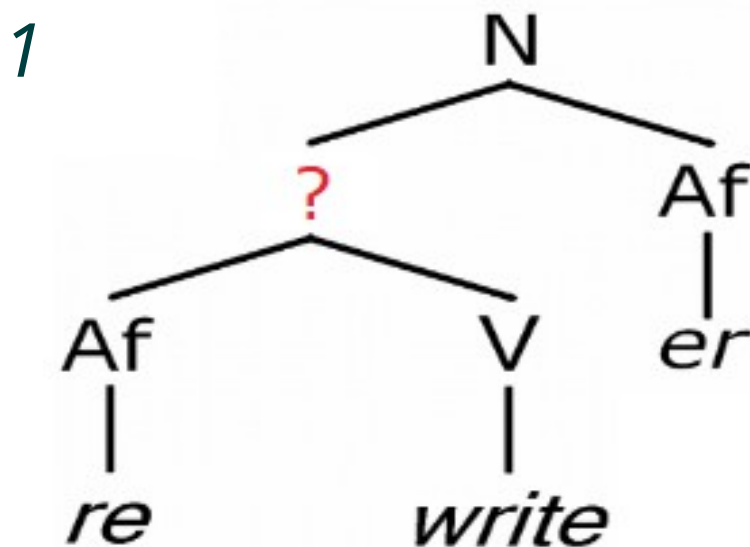
- **Which** tree is the right one?



- What category does *re-* ... Attach to?
Create?
- What category does *-er* ... Attach to?
Create?

3. Structure inside a word

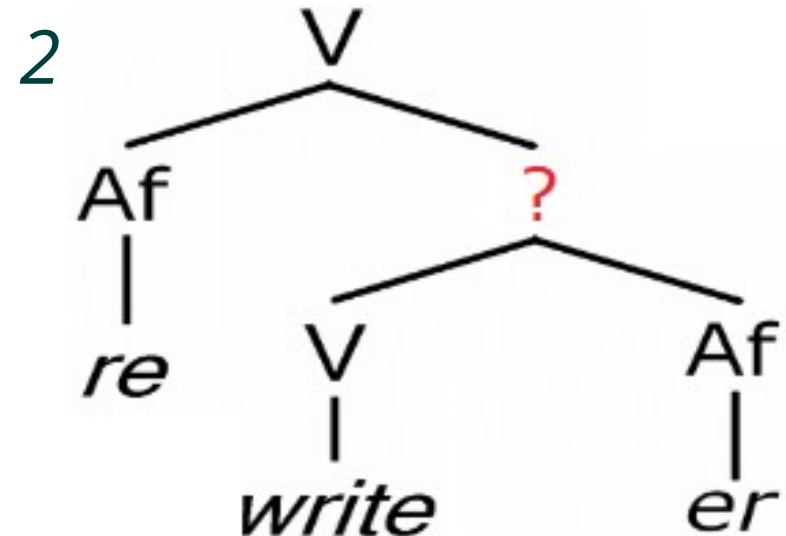
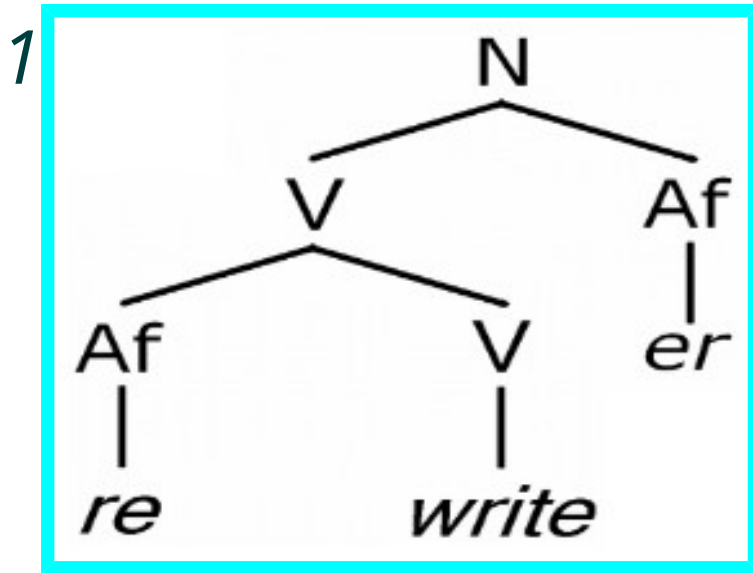
- **Which** tree is the right one?



- What category does *re-* ... Attach to? | V
Create? | V
- What category does *-er* ... Attach to? | V
Create? | N

3. Structure inside a word

- **Which** tree is the right one?



- *re-* ... Attaches to V, creates V
 - *-er* ... Attaches to V, creates N
- If *-er* applies first, it creates a N, and *re-* can't apply
 - Meaning also fits: 'one who [writes again]'

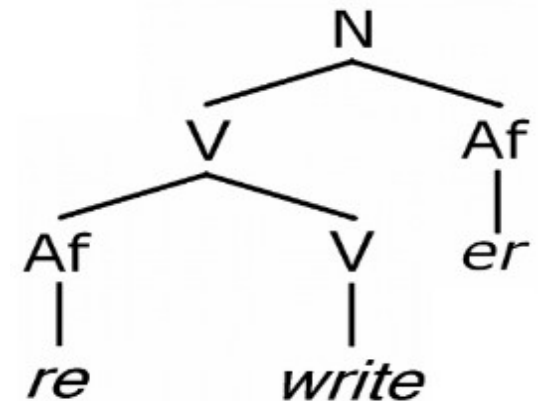
3. Structure inside a word

A few more useful terms to know:

- **base** = “the form to which an affix is added”
(CL, p 126)
 - Is **base** the same thing as **root**?

Try this with *rewriter*

- The **root** of *rewriter* is...
- The **base** of *re-* is...
- The **base** of *-er* is...



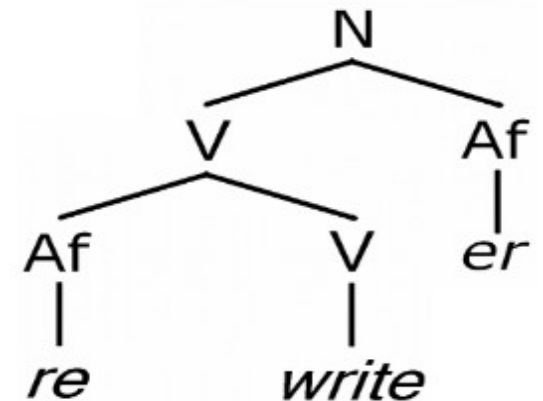
3. Structure inside a word

A few more useful terms to know:

- **base** = “the form to which an affix is added”
(CL, p 126)
 - Is **base** the same thing as **root**? | No!

Try this with *rewriter*

- The **root** of *rewriter* is... *write*
- The **base** of *re-* is... *write*
- The **base** of *-er* is... *rewrite*



3. Structure inside a word

A few more useful terms to know:

- Some types of **affixes**
 - **prefix**
 - **suffix**
 - **infix**

3. Structure inside a word

A few more useful terms to know:

- Some types of **affixes**
 - **prefix** — attaches to the left of its base
 - *re-* in *re-write*
 - **suffix** — attaches to the right of its base
 - *-er* in *rewrite-er*
 - **infix** — attaches inside its base
 - Not really part of English morphology*; see *CL*
 - *English does have the 'expletive infixation' pattern indicating emphasis: *fantastic* → *fan-freakin'-tastic*

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- Some types of **affixes**
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- Try it: Classify each affix in *nationalist*

3. Structure inside a word

A few more useful terms to know:

- Some types of **affixes**
 - **prefix** — attaches to the left of its base
 - **suffix** — attaches to the right of its base
 - **infix** — attaches inside its base
- Try it: Classify each affix in *nationalist*
 - *-ist* — suffix
 - *-al* — suffix (not infix! *nation* → *national* → *nationalist*)
 - *-tion?* — not an affix in this word! (*na-* is not root)

4. A mental grammar for morphology

- A native speaker knows:
 - Things that are arbitrary/unpredictable, and must be **memorized**
 - Things that are creative/predictable, and must be **systematically generated**
- Which type would each of these be?
 - the **meaning of a morpheme** like *sing* or *-er*
 - the fact that the morpheme *-er* can **combine** with (almost?) any verb to **make complex words** such as *singer*, *eater*

4. A mental grammar for morphology

Linguists have proposed the following two components to the mental grammar:

- A **mental lexicon** — a list of **arbitrary/unpredictable** information
 - The sound and meaning of each morpheme
 - A morpheme's lexical entry also includes any exceptional or idiosyncratic information
- A system of **rules and generalizations**
 - These **generate predictable patterns**, such as how a particular morpheme forms new words

4. A mental grammar for morphology

- One school of thought about affixes:

Their lexical entry includes a **word-formation rule** to account for predictable information

4. A mental grammar for morphology

- One school of thought about affixes:

Their lexical entry includes a **word-formation rule** to account for predictable information

Word-formation rule

er: $V + /ɹ/ \rightarrow N$

'someone/something that does V'

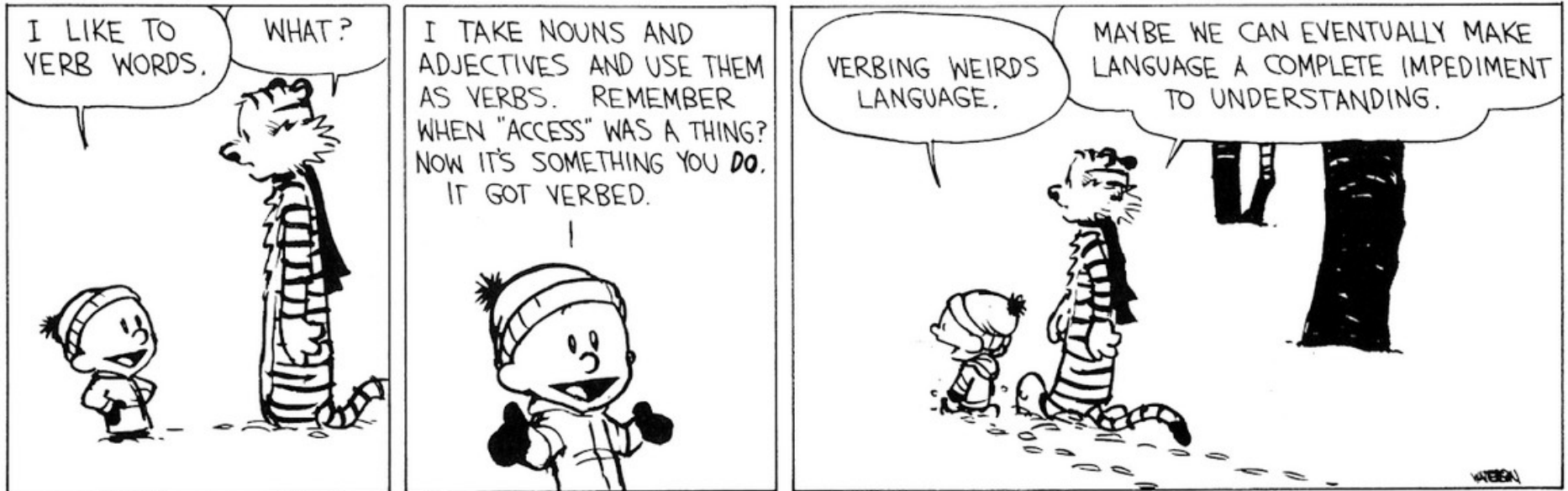
- States what category the affix attaches to
- States what category the affix creates
- Indicates the meaning of the affix

5. To sum up

- Words and morphemes
 - **Words** are **free**
 - **Morphemes** can be **free or bound**
 - **Words** contain **one or more morphemes**
- Words have internal **structure**
 - Must have at least one **root**
 - May have one or more **affixes**
- The mental grammar of a language includes **rules** for **combining** morphemes to make words
 - Affixes: What category does it attach to?
What category does it create?

5. To sum up

- For fun: *Verbing weirds language*

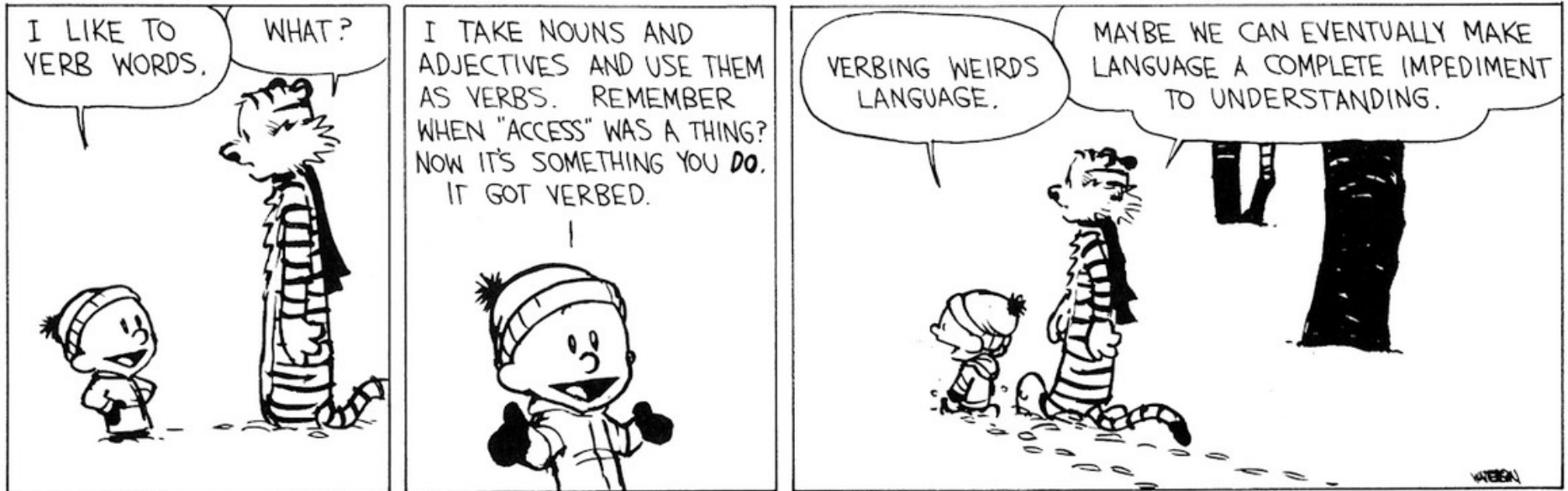


Calvin & Hobbes, January 25, 1993

- How does the mental grammar turn a noun or adjective into a verb like this in English?

5. To sum up

- For fun: *Verbing weirds language*



Calvin & Hobbes, January 25, 1993

- We can propose a **zero morpheme** whose meaning (function) is to turn N or A to V:
 $\emptyset: \{ N, A \} + \emptyset \rightarrow V, \text{'do/be/make/become } \{ N, A \}'$