Morphology

What is Morphology

- **Morph** = form or shape, **ology** = study of

- Morphology is the study of the basic building blocks of meaning in language. These building blocks, called **morphemes**, are the smallest units of form that bear meaning or have a grammatical function.

What Are Morphemes?

- Words are not the most basic units of meaning. They are frequently composed of even more basic elements.

  (1) a. **obvious**: homework, dinnertime, moonlight, classroom

  b. **medium**: fearless, quickly, fishing, momentary

  c. **difficult**: walks, tenth, dog's, flipped

- The most basic elements of meaning are called **morphemes**. Each of the preceding examples contained at least 2 morphemes. We can take, for instance, "th" from "tenth" and say that it has a meaning all to itself – namely, "the ordinal numeral corresponding to the cardinal numeral I'm attached to".

Basic Concept Of Word Structure

- Morphemes do not combine in arbitrary ways. There are definite patterns to the distribution of morphemes in polymorphemic words. e.g. rewrite $\neq$ write-re, walks $\neq$ s-walk. The number, order of and type of morphemes used to make up a particular word is called its *structure*. Morphologists study not only the meanings of the various morphemes, but also their patterns of distribution – the *structures* they are capable of forming. This knowledge is part of linguistic *competence*.

- The structure of words can be represented by *trees*.

Classification Of Morphemes

Free And Bound Morphemes

- A morpheme is **free** if it is able to appear as a word by itself. It is **bound** if it can only appear as part of a larger, multi-morphemic word. Every morpheme is either free or bound.

- Free morphemes are also referred as *roots*.

- **Bound** morphemes are also referred to as **affixes**, among which there are **prefixes**, **infixes**, and **suffixes**.

  (2) a. **prefixes**: un-happy, re-write, pre-view

  b. **suffixes**: writ-ing, quick-ly, neighbor-hood

  c. **infixes**: (very rare in English) speech-o-meter

- **Bound** morphemes may be **derivational** or **inflectional**

- A **stem** can be defined as a root to which an affix can be added. Thus, the root *dog* is also a stem, because, even though it contains no affix(es), an affix could be added to it - to form, e.g., dog-s. This notion is necessary because not all roots are such that affixes can be added to them - e.g., *of, or, I*, etc.

Derivational Morphemes

Derivational morphemes create new words. They **derive** new words from other words.

e.g., unhappy ← un + happy;
happiness ← happy + ness; preview ← pre + view.

Further properties

- change part of speech or the meaning of a word

  (3) a. part of speech: *us-able* (V → A), *trouble-some* (N → A), *judg-ment* (V → N)
  b. meaning: *dis-comfort, ex-boyfriend*
  c. both: *use-less* (V → A)

- are not required by syntax

- are not very productive: *dis-like,* *dis-hate

- usually occur before inflectional suffixes: *work-er-s*

- can be either suffixes or prefixes (*in english*)

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Inflectional Morphemes

Inflectional morphemes, on the other hand, do not change meanings or parts of speech, but instead simply make minor grammatical changes necessary for agreement with other words.

e.g., cats ← cat + s; cooler ← cool + er.

- There are only **eight** inflectional morphemes: -s, -ed, -ing, - en, -s, -'s, -er, -est

- They do not change meaning or part of speech:
  cat - cats - cat's → nouns

- They are required by the syntax

- They are very productive

- They occur after derivational morphemes, usually at the very end of the word (*in english*)

- They can only be suffixes (**in english**)

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Cranberry Morphemes

In the word *cranberry,* is *cran* an affix?

No, it is a bound root, a so-called **cranberry morpheme**.

Cranberry morphemes are morphemes that occur only as bound roots and that have no constant associated meaning.

- *cranberry, boysenberry*

- *permit, commit, submit*

- *receive, perceive, conceive*

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Content and Function Morphemes

Morphemes (bound or free) can be either **content** or **function** morphemes.

- **Content** morphemes carry some semantic content as opposed to performing a grammatical function. For example *car, -able, -un.*

- **Function** morphemes act solely to provide grammatical information and syntactic agreement. *and, plural -s*

- Note that these are not simply different names for the **derivational/inflectional** distinction – D/I morphemes are all **bound**, while **content/function** morphemes may be **free** as well (e.g, prepositions are free function morphemes)

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Pitfalls Of Identifying Morphemes

- morphemes ≠ syllables.

  (4) a. **monomorphemic**: rigamarole, syllable, rutabaga

  b. **polymorphemic**: cats, likes, its, cried

- The sounds associated with a morpheme are not unique – other morphemes may share them

  (5) a. cats ≠ cat's, likes ≠ likes (... and dislikes),

  b. (care)-*ful* ≠ full, (care)-*less* ≠ less

- Don't be fooled by spelling obscuring the phonetic representations of morphemes

  (6) a. writ-er, edit-or, li-ar

  b. ed-ible, wash-able

The Hierarchical Structure Of Words

- Words are formed in steps, with one affix attaching to a complete word, which can be a free word or a morphological complex word.

- Affixes in general can only combine with words of a single part of speech. (e.g., "-able" and "re-" only combine with verbs). Also, the words affixes form after combination are usually of a single part of speech as well, not necessarily the same as the words with which it combines. ("-able" forms adjectives, "re-" forms verbs).

- This fact implies that the order of combination for morphemes makes a difference, because otherwise you would end up with "non-well-formed" words.

  (7) a. unusable = un + (use + able),
       not *(un + use) + able.

  b. reusable = (re + use) + able,
       not *re + (use +able).

(8)

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          Adj
         /   \
        V     -able
       / \
     re-  use
```
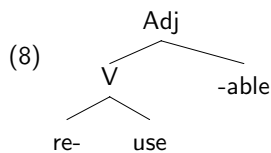
- Because trees have a particular order of morphemic combination associated with them, we can say that their structure is *hierarchical*.

- There is a hierarchy among the various morphemes as to the order in which they were added to the word.

- Some words can have multiple structures associated with them because of various combinatorial possibilities for the constituent morphemes. This is usually due to phonetically identical but otherwise differing morphemes causing some sort of ambiguity, e.g., unlockable. These are *ambiguous* in their word structure.

Morphemes and multiple parts of speech

There are (a very small number of) examples of affixes which combine with more than one part of speech (e.g., pre-).

  (9) a. *preexist, precede, predetermine* (V → V)

  b. *preseason, prewar* (N → A)

  c. *prefrontal, predental, prehistoric* (A → A)

We want to say that all these "pre-s" are the same morpheme and not just different morphemes which happen to be phonetically identical, since the meaning of the prefix does not change, regardless of which part of speech it is combined with. The combinations are nevertheless rulegoverned.

Word Formation Processes

- **Affixation**: process of forming words by adding affixes to morphemes.

  - V + -able → A: *predict+ -able*
  - V + -er → N: *sing+er*
  - un + A → A: *un-productive*
  - A + en → V: *deep+ -en, thick+ -en*

- **Compounding**: word formation process by which new words are formed by combining two or more independent words.

  - A + A → A: *bittersweet*
  - N + N → N: *rainbow*
  - V + V → V: *sleepwalk*
  - P + P → P: *without*
  - V + N → N: *pickpocket*
  - N + V → V: *spoonfeed*
  - P + V → V: *overdo*

Word Formation Processes (cont.)

- **Reduplication**: process of forming new words either by doubling an entire word (total reduplictation) or part of a word (partial reduplication).

  - English: *humpty-dumpty, higgledy-piggeldy* (partial reduplication)
  - Creole: *blak* "black", *blakblak* "very black" (total reduplication)

- **Morpheme-internal Changes**: a type of word formation process wherein a word changes internally to indicate grammatical information.

  - ablaut: *sing, sang, sung; swim, swam, swum*
  - other changes: *man, men; mouse, mice, goose, geese*

- **Suppletion**: a relationship between forms of a word wherein on form cannot be phonologically or morphologically derived from the other, this process is rare.

  - *am - was; go -went*
  - *good - better; bad - worse*

Minor Word Formation Processes

- **Acronyms**: Abbreviations formed by taking the initial sounds (letters) of the words of a phrase and uniting them to form a pronouncable word.

  - *laser*: <u>l</u>ight <u>a</u>mplification by <u>s</u>imulated <u>e</u>mission of <u>r</u>adiation
  - *scuba*: <u>s</u>elf-<u>c</u>ontained <u>u</u>nderwater <u>b</u>reathing <u>a</u>pparatus
  - *radar*: <u>ra</u>dio <u>d</u>etecting <u>a</u>nd <u>r</u>anging
  - *AIDS*: <u>A</u>cquired <u>I</u>mmune <u>D</u>eficiency <u>S</u>yndrome

- **Blending**: process of creating a new word by combining the parts of two different words, usually the beginning of one word and the end of another.

  - *breakfast + lunch → brunch*
  - *smoke + fog → smog*
  - *motor + hotel → motel*

Minor Word Formation Processes (cont.)

- **Back formation**: word formation process in which a new base form is created from an apparently similar form by using proportional analogy.

  - revise : revision; *televise* : television
  - actor : act; editor : *edit*
  - create : creation; *donate* : donation

- **Clipping**: process of creating new words by shortening parts of longer words.

  - *doctor, professional, veterinarian, laboratory, advertisement, dormitory, examination*
  - *bicycle* (bike)
  - *refrigerator*

Morphological Types Of Languages

There are two basic morphological types of language structure: **analytic** vs **synthetic**.

- (purely) **Analytic** languages have only free morphemes – sentences are sequences of single-morpheme words.

- **Synthetic** languages make use of both free and bound morphemes. In general, polymorphemic words consist of a **stem** onto which various affixes are added.

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Subtypes of synthetic languages

There are 3 major subtypes of synthetic languages: **agglutinating, fusional, polysynthetic**.

- **Agglutinating**: morphemes are combined "loosely" – morphemes are attached to each other "cleanly", so it is simple to pick out where one morpheme ends and the next one begins. (e.g., Hungarian, LF – p. 130)

- **Fusional**: like agglutinating, but affixes tend to "fuse together", making them difficult or impossible to separate from each other (and the stem). (e.g., Spanish – LF p. 131)

- **Polysynthetic**: extremely complex, multi-stem and multi-affix words can be constructed, frequently corresponding to entire complex sentences in other, less synthetic, languages. (e.g., Sora – LF, p. 132)

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