Morphology

The study of words, word formation, and word structure.

Lexicon

Speaker's mental dictionary, where words are permanently stored.

Entry:
- Phonological
- Morphological
- Syntactic
- Semantic
- Pragmatic

Example of Entries

- Phonological: [insert example]
- Morphological: [insert example]
- Syntactic: [insert example]
- Semantic: [insert example]
- Pragmatic: [insert example]

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More on Arbitrariness

Any one sound string can often be chunked into words in multiple ways in a language.

Adeline Moore = add a line more
Ineeds Czech = I need a check
Mauri Mollins = more emissions
Dewey, Cheetham & Howe = do we cheat 'em and how!

Exceptions: Onomatopoeia

Sounds are chosen to simulate the sound of the thing being named.

In English: buzz sizzle cuckoo
But compare:

English
- meow
- chirp

Japanese
- nyaa
- pi-pi

Tegalog
- ngiyaw
- tiritir

What is a word?

Arbitrary pairing of a string of sounds with some meaning.

/{/au/ + place of residence = house
phonological form + meaning = word

What is meant by “Arbitrary Pairing”?

Nothing intrinsic to the string “h-a-u-s-e” implies the meaning “place of residence”.

We know this because the sound string associated with any particular meaning changes from language to language:

- Hawaiian
  - [aau] = casa (house)
  - [aau] = casa (house)
  - [aau] = un petit d’un petit
  - [aau] = Humpty Dumpty
  - [aau] = S’Ilonne aux Hales
  - [aau] = Sat on a wall

Types of Words (1)

Simple: words whose form and meaning cannot be predicted from anything else.

- penguin
- about
- girl

Simple words are composed of one morpheme, where a morpheme is the smallest unit of meaning in a word.
Types of Words (2)
Complex words are those whose form and meaning can be constructed and comprehended by the application of general rules.
- penguins roundabout undone fishing
Complex words are composed of two or more morphemes (marked by hyphens).
- penguin-s round-about undone fishing

Types of Morphemes
Free: a morpheme that can occur on its own as an independent word.
- penguin about round done fish the
Bound: a morpheme that must be attached to another word (cannot stand alone).
- a s er pre un ing ly

Language Specificity
Morphemes that are free/bound in one language are not necessarily free/bound in another.
English
- hair hair
- stomach stick
- hand hand

Diné
- hair -tsíi head shítsíi my head
- stomach -bit stomach níbid your stomach
- hand -la’ hand bila’ hands hand

In Diné, body parts are bound morphemes. In English, body parts are free morphemes.

Words & Morphemes
Simple
Free
- free
- free-bound
- free-free

Bound
- un-done
- pro-view
- dis-able
dis-able

Complex
 NEVER: bound-bound
- only: un
- ly

Allomorph
Some morphemes have more than one associated morph. The variant forms of a morpheme are called allomorphs.

Morpheme Allomorphs
- /t/ “walked”
- /d/ “sneezed”
- /ed/ “handed”

Morpheme vs. Morph
A morph is the phonological instantiation of a morpheme (the sound of a morpheme).

Morpheme Morph
{ADV} adverbial suffix /t/ /n/ /s/
{PREP|PROG} present progressive /tg/ /n/ /s/
{SPEAK} speak /spk/ /spk/

Distribution of Allomorphs
The distribution of allomorphs can be conditioned by a number of factors, including:

- Phonological: cat-s /s/ dog-s /z/
- horse-e /z/

Lexical: oxen /n/ children /sw/ /sw/

Complex words
Consist of a root morpheme and one or more affixes.

Root: core of the word that carries the major component of its meaning.

Affix: always a bound morpheme; contributes meaning but does not constitute the core meaning of the word.
- teach-er teach-able
- un-teach-able
Roots & Lexical Categories

Roots typically belong to a lexical category:

Noun (N) = car, otter, Tucson, mask
Verb (V) = run, jump, hide, analyze
Adjective (Adj) = tall, green, smart, funny
Adverb (Adv) = slowly, yesterday, always

Affixes do not belong to a lexical category.

Open Class vs. Closed Class Words

- **Open Class or Content Words**: belong to a lexical category (N, V, Adj, etc.).
- **Closed Class or Function Words**: have no clear lexical meaning or are required only by the rules of syntax.

Determiners (Det) = a, the, this, these
Auxiliaries Verbs (Aux) = is, am, was

Some More Practice

faith ful ness dis appear ing

Chist oso Poder oso

Llor ona cry baby

Ambiguities (2)

un lock able un lock able
"able to be unlocked" "not able to be locked"

Morphological Distinctions

- **Simple vs. complex words**
  - words composed of one or more than one morpheme

- **Free vs. bound morphemes**
  - morphemes that are independent words vs. those that must attach to another word

- **Morpheme vs. morph**
  - the smallest unit of meaning vs. the phonological instantiation of it

- **Separate morphemes vs. allomorphs**
  - same phonetic form with two distinct meanings vs. different phonetic forms with same meanings

Categories of Bound Morphemes

**Prefix**: affix that attaches to the left of a root or base (e.g., re-, un-, dis-, pro-, anti-).

**Suffix**: affix that attaches to the right of a root or base, includes contracted forms (e.g., -ize, -ed, -able, -ill, -re)

**Circumfix**: two affixes surround the root/base.

**Infix**: affix inserted into a root (e.g., p**it**in)**
**Morphological Analysis (1)**

<table>
<thead>
<tr>
<th>English</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>tense</td>
<td>'went'</td>
</tr>
<tr>
<td>stem</td>
<td>'mined'</td>
</tr>
<tr>
<td>verb</td>
<td>'he was going'</td>
</tr>
</tbody>
</table>

1. List the morphemes for these words.
2. Write a word formation rule for these verbs.

**Morphological Analysis (2)**

<table>
<thead>
<tr>
<th>English</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>worker</td>
<td>'one who works'</td>
</tr>
<tr>
<td>builder</td>
<td>'one who builds'</td>
</tr>
<tr>
<td>rower</td>
<td>'more rowly'</td>
</tr>
<tr>
<td>faster</td>
<td>'more fast'</td>
</tr>
</tbody>
</table>

1. List the meanings for the morpheme for -er.
2. Do they have the same phonetic form?
3. Are they the same or different morphemes?

**Inflectional Affixes (1)**

- Do not change the lexical category of the root or base.
- Are obligatory under certain conditions.
- Are typically productive (new words use them freely).

**Inflectional Affixes (2)**

- Are added to the base after derivational affixes.
- Express important grammatical distinctions.
- Are always suffixes in English.

**Language Specificity & Inflection (1)**

- Not all languages express the same grammatical distinctions in the same way. For example:
  - Dine: 'N' does not express number for inanimate nouns, 'MO' for animate nouns.
  - Russian uses a set of suffixes for feminine nouns and different sets for masculine nouns.

**Language Specificity & Inflection (2)**

Some languages group nouns into classes according to shared semantic or phonological properties.

**Dine Handling Verbs**

- Identify particular classes of objects by appearance.
  - Self-contained items: tooth, knife, book
  - Plural objects: A group in the palm of your hand
  - Animate being: baby, little gilboy, kid goat, stuffed toy
Case

A system a language uses to indicate a noun’s grammatical role (subject, object) in the sentence.

Can be shown on the nouns. This type of inflection is very common in languages with freer word order.

English Case

1. "The baby the dog saw"
2. "saw the baby the dog"
3. "The baby saw the dog."

rigid word order

+ -------- +

Southern Ute Case

1. Nurudáb nupíúla punkíui̱ + The baby sees the old man.
   Punikíui̱ nupíúla nurudáb.

2. Nurudáb sandíi punkíui̱ + The dog sees the baby:
   Sandíi punkíui̱ nurudáb.

a) List the meaning for the following words:
   nurudáb
   sandíí
   punkíui̱

b) How is the Case marked in Southern Ute?
   Subject: Nominative (NOM) End with [-vol] vowel
   Object: Accusative (ACC) End with [-vol] vowel

Derivational Affixes

Are added to the base before inflectional affixes
operationalizes not operates-ionalize

Are typically unproductive
blockable? reblock? unblock?

Are optional
I am happy.
Happiness abounds.
Happily, I sing.

Derivational Affixes (2)

Are prefixes and suffixes in English

Morphological Affixes

Inflectional
- Do not change the lexical category of the root or base
- Are obligatory under certain conditions
- Are typically productive (new words use them freely)

Derivation
- Change the meaning of the root or base
- Are optional
- Are typically unproductive

Morphological Processes

- Attraction
- Reduplication
- Affixation
  - Suffixation
  - Prefixation
  - Inflection
  - Circumfixation
- Internal Change
- Suppletion

Morphological Process Types

Concatenative
- Words are built by assembling morphemes in an additive, linear fashion. Ex: suffixation, prefixation, citation, reduplication (?).

Nonconcatenative
- Words are built by nonconcatenative processes

Concatenative Morphology

Words are built by assembling morphemes in an additive, linear fashion. Ex: suffixation, prefixation, citation, reduplication (?).
Nonconcatenative Morphology

Words are built by nonlinear processes. Ex: infixation, root internal changes, suppletion.

- infix
  - ROOT
  - internal change
  - ROOT
  - suppletion

Reduplication

A grammatical or semantic contrast is marked by repeating all or part of the root.

Tohono O'odham

Root | Reduplicated Form
--- | ---
goga | gogoas 'dogs'
haivai | haivai'ni 'cows'
kawyu | kakawyu 'horses'

Inflixation

The insertion of an affix inside its root.

| Root | Infix form |
--- | --- |
bit | -bil 'buy'
basal | -b-in-asi 'head' (past)
sulat | -b-in-li 'said'

Arabic:

| Root | Infix form |
--- | --- |
ktb | -kt 'write'
kotab | -kt 'write'
aktub | -kt 'being written'

Internal Change

Phonological changes in the root that cause a grammatical change.

- Ablaut: past tense is signaled by vowel change.
  - sing/sang, drive/drove
- Umlaut: plural is signaled by change in vowel.
  - goose/goose, foot/feet

Suppletion

When one morpheme is replaced by an entirely different morpheme in order to indicate a grammatical contrast.

| Basic Form | Suppletive Form |
--- | --- |
English: go | went
Uto: karu 'sit SG'
Russian: 'sosa' 'good'

Stress and Tone Changes

Changes in stress or tone indicate a grammatical contrast.

| English: | Verb | English: |
--- | --- | --- |
Noun | import | import
Verbs | subject | subject

Compounding (1)

The combination of two or more existing words to create a new word. In English, compounding usually results in a N, V, or ADJ.

- Noun compounds: N+N = fire engine; N+V = flyJaypout; N+Adjective = bluebird; N+V+Adverb = matterthought
- Verb compounds: V+V = spoon feed; V+V+V = white mash
- Adjective compounds: N+Adj = American; N+Adj = overgrown

Compounding (2)

The lexical category of the compound is most often determined by the rightmost morpheme.

Compounding (3)

Compounding is recursive; i.e., larger compounds can be made from smaller ones.

pickled eggs jar lid
Language Specificity (1)

Tagalog: compounds are left-headed.

Tagalog:
- tubig
- ulan
- tanod
- bayan
- anak
- araw
- rain
- water
- guard
- town
- child
- sun
- policeman
- albino

Language Specificity (2)

Chukchee: forms compound verbs; process referred to as incorporation.

Without incorporation:
- leave
- reindeer

I'm leaving the reindeer.

With incorporation:
- to-qere-pelakan
- I
- reindeer

I'm in the process of reindeer leaving.

Conversion/Zero Derivation

No affix is added; rather an already existing word is assigned to a new syntactic category.

V from N: N from V: V from A
- ink
- permit
- dirty
- butter
- survey
- right

Clipping

Shortens a polysyllabic word by deleting one or more syllables.

- prof for professor
- burger for hamburger
- phys-ed for physical education
- condo for condominium

Blends

Mixes together non-morphemic parts of two already existing words.

- brunch → breakfast and lunch
- smog → smoke and fog
- channel → channel and tunnel
- spam → spiced and ham

Backformation

Removes a real or supposed affix from an already existing word.

- enthuse → enthusiasm
- edit → editor
- liposuct → liposuction
- attrit → attrition

Acronyms

The initial letters of some or all of the words in a phrase are pronounced as a word.

- laser → light amplification by stimulated emission of radiation
- scuba → self-contained underwater breathing apparatus
- NASA → National Aeronautics and Space Administration

Word Coinage

Creation of new words, usually for a commercial purpose.

Kodak
Teflon

Sometimes the process is so effective that the product name becomes the generic term.

Kleenex
Xerox
Saran wrap
Linguistics for NA Communities

Morphology Type

What Morphological Process?
- ran -> run
- am -> was
- wini -> esa-wini-kači
- sing -> sang
- go -> went
- treat -> pre-treat
- ka- -wa' -> ka-yenin-wa'
- suppletion internal change
- infixation prefixation circumcision

Language Morphological Types
- ISOLATING
  - consists of mostly free morphemes
- POLYSYNTHETIC
  - consists of many morphemes which contain the meaning normally found in one sentence

Language Type?
- English
  - [ə] run
  - I run.

Our Languages