# More morphology

before we start:
- first problem set is due 'today' (ending at dawn tomorrow)
- will try to put a new one up today
- finally figured out how to let you enroll yourselves in sections…
- anything else?

last time we saw:

lexicon contains **<u>morphemes</u>**, with information on:
- sound
- meaning
- bound vs. free
- prefix vs. suffix (vs. infix vs….)

there are more kinds of morphemes to talk about, and we will.

but first, another kind of information we're going to have to list.

industri-**al**                **-al** attaches to a ...
nation-**al**
autumn-**al**

*assert-**al**
*impress-**al**
*industrializ-**al**

industri-**al**                **-ation** creates ...
\*industrializ-**al**
industrializ-**<u>ation</u>**-**al**

lexicon contains **morphemes**, with information on:
- sound
- meaning
- bound vs. free
- prefix vs. suffix
- what kind of morpheme they can attach to
- what kind of category they create

In fact, sometimes the information about what a morpheme can attach to isn't just information about categories:

| | |
|---|---|
| sincere | -ity |
| chaste | -ity |
| scarce | -ity |
| curious | -ity |
| | |
| deep | -th |
| wide | -th |
| warm | -th |

And there can be idiosyncratic information about what happens when the morphemes combine, too:

electri[k]-al
electri[s]-ity

| hum | humm-ed |
| leap | [lep]-t |
| go | [wen]-t |
| sing | sang |

- **-i[k]** and **-i[s]**,
  **leap** and **[lep]**
  **-[d]** and **-[t]**
  are **<u>allomorphs</u>**; different forms that a single morpheme takes in combination with other morphemes.

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  are **<u>allomorphs</u>**; different forms that a single morpheme takes in combination with other morphemes.

(there is often a *default allomorph*. e.g., if I tell you that there's a verb *fleap*, you're going to assume that the past tense is *fleaped*, not *flept*)

# Word structure

What does *-ment* attach to?  What's the resulting category?
  govern**ment**, treat**ment**...
  *body**ment**, *power**ment**...

How about *em-*?
 **em**body, **em**power...

So why is there this contrast?

      *body**ment**, *power**ment**...

      **em**bodi**ment**, **em**power**ment**...

```
              N

      V        Aff
               ment
Aff            N
em             power
```

- *em*:  'sister' is an N, 'mother' is a V
- *ment*:  'sister' is a V, 'mother' is an N

sometimes we may want to distinguish multiple, similar affixes…

**un-**wrap, **un-**tie

**un-**likely, **un-**happy

sometimes we may want to distinguish multiple, similar affixes…

**un-**wrap, **un-**tie

**un-**likely, **un-**happy

so what does **un-** attach to?  and what does it create?

here's another affix to think about:

drink-**able**
break-**able**
watch-**able**

what does *-able* attach to?  and what does it create?

Okay, so *un1*- attaches to Verbs, and creates Verbs
(meaning "undo the effects of the Verb"):

*un*-wrap, *un*-tie

And *un2*- attaches to Adjectives, and creates Adjectives:
(meaning "not Adjective")

*un*-likely, *un*-happy

And *-able* attaches to Verbs, and creates Adjectives:
(meaning "can be Verbed")

drink-*able*, break-*able*

Okay, so *un₁*- attaches to Verbs, and creates Verbs
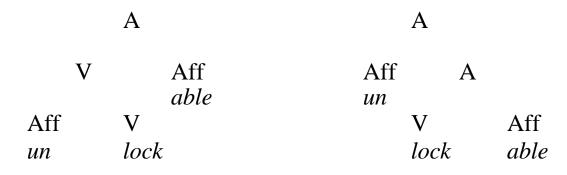(meaning "undo the effects of the Verb"):

*un*-wrap, *un*-tie

And *un₂*- attaches to Adjectives, and creates Adjectives:
(meaning "not Adjective")

*un*-likely, *un*-happy

And *-able* attaches to Verbs, and creates Adjectives:
(meaning "can be Verbed")

drink-*able*, break-*able*

so what's the structure of *unlockable*?

```
              A                              A

       V          Aff              Aff          A
                  able             un
Aff       V                              V          Aff
un        lock                           lock       able
```

'able to be unlocked'              'impossible to lock'

morphemes:

- *-able*:  takes a V, yields an A meaning 'possible to V' (*read__able__*, *understand__able__*)
- *un-*#1:  takes a V, yields a V meaning 'reverse the effects of V' (*__un__tie*, *__un__wrap*)
- *un-* #2:  takes an A, yields an A meaning 'not A' (*__un__likely, __un__happy*)
- *lock*:  here, a V (though there is also an N 'lock'.  Is one of these derived from the other, via an unpronounced affix?)

and a general process, call it "Merge":
    take two things, X and Y, and form a new thing.

Merge is *recursive*: can apply to its own output.

And there are statements like "*-able* must Merge with a V, and the result is an A"

Now let's start talking about allomorphs a little more systematically.

# Allomorphy:  Polish plurals

jezyk 'language'          jezyki 'languages'
garnek 'pot'              garneki 'pots'
sok 'juice'               soki 'juices'
wuk 'bow'                 wuki 'bows'

## Allomorphy:  Polish plurals

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|---|---|
| jezyk 'language' | jezyki 'languages' |
| garnek 'pot' | garneki 'pots' |
| sok 'juice' | soki 'juices' |
| wuk 'bow' | wuki 'bows' |
| brzek 'bank of a river' | brzegi 'banks of a river' |
| dwuk 'debt' | dwugi 'debts' |
| wuk 'lye' | wugi '(kinds of) lye' |

## Allomorphy:  Polish plurals

jezy**k** 'language'          jezy**k**i 'languages'
garne**k** 'pot'              garne**k**i 'pots'
so**k** 'juice'              so**k**i 'juices'
wu**k** 'bow'                wu**k**i 'bows'
brze**k** 'bank of a river'  brze**g**i 'banks of a river'
dwu**k** 'debt'              dwu**g**i 'debts'
wu**k** 'lye'               wu**g**i '(kinds of) lye'

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*wuk* 'bow' and *wuk* 'lye' are a ***minimal pair***.

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*wuk* 'bow' and *wuk* 'lye' are a ***minimal pair***.

   -->we'll never be able to predict which **k**'s change to **g**'s
         in the plural....

## Allomorphy:  Polish plurals

jezy**k** 'language'          jezy**k**i 'languages'                **jezyk**

garne**k** 'pot'             garne**k**i 'pots'                  **garnek**

so**k** 'juice'              so**k**i 'juices'                   **sok**

wu**k** 'bow'               wu**k**i 'bows'                    **wuk**

brze**k** 'bank of a river'   brze**g**i 'banks of a river'    **brzeg**

dwu**k** 'debt'             dwu**g**i 'debts'                 **dwug**

wu**k** 'lye'               wu**g**i '(kinds of) lye'           **wug**

    plus a <u>rule</u>:  **g** changes to **k** at the end of a word.