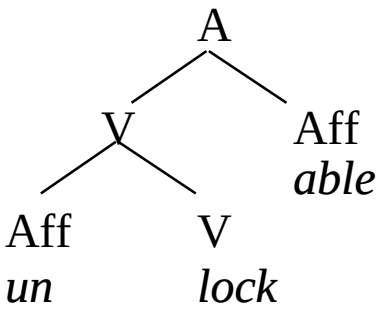
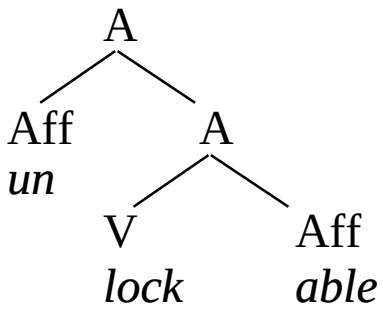
Even More Morphology

first some review…





'able to be unlocked'

'impossible to lock'

morphemes:

- *-able*: takes a V, yields an A meaning 'possible to V' (*read<u>able</u>*, *understand<u>able</u>*)
- *un-*#1: takes a V, yields a V meaning 'reverse the effects of V' (*<u>un</u>tie*, *<u>un</u>wrap*)
- *un-* #2: takes an A, yields an A meaning 'not A' (*<u>un</u>likely*, *<u>un</u>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”

There also need to be statements about *allomorphy*:

- sometimes statements that are particular to particular morphemes
  (‘go’ + ‘PAST’ = ‘went’)
  (‘electri[k]’ + ‘-ity’ = ‘electri[s]ity’)

- sometimes more general statements
  (‘in Polish, *g* at the end of a word becomes *k*’)

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one way of thinking about it:

putting a sentence together is like assembling any other complicated object (jigsaw puzzle, model airplane, IKEA furniture, etc., etc.): there are various parts, and they go in particular places.

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If you can grammatically finish a sentence like:

We are talking about (the) ___

with a single word, that word is a noun.

We have been casually using words like ‘noun’ and ‘adjective’, so I thought we should talk about what those terms mean…

If you can grammatically finish a sentence like:

We are talking about (the) ___

with a single word, that word is a noun.

If you can grammatically finish a sentence like:

I consider her __ (*meaning* “I think she is __”)

with a single word, that word is an adjective.

(…etc.)

Most of our discussion of morphology has been about language-specific properties:

- a morpheme with a given meaning may be pronounced differently in different languages (Saussure)

- a morpheme may be a prefix, a suffix, an infix...

English	*Lardil*	*Tagalog*
dance**d**	**yuud**-luuli	s**um**ayaw

- a morpheme may be bound or free...

English	*Turkish*
in my hand	el -im -de
	hand my in

English	*Mohawk*
I **bought** a **bed**	Wa'- ke- **nakta**-**hnínu**-'
	PAST 1sgS bed buy PUNCT

In fact, languages are sometimes informally classified by how likely their morphemes are to be bound.

Isolating languages; not many bound morphemes

Chinese

Tā chī fàn le

he eat meal PAST

'He ate the meal'

Polysynthetic languages; opposite of isolating

Wampanoag

nu-pâhk-nuhtô-peepeenaw-uchuchôhq-ôkan-uhtyâ -eenun -eum -unôn-ak

1 clear skill look reflection device make person POSS 1PL AN.PL

'our very skillful mirror makers'

Agglutinative languages; morphemes easily separable from each other

Turkish
tanı -sh -tır -ıl -dı -lar
know each-other cause passive past 3PL
'They are introduced to each other'

Fusional/inflectional languages; morphemes tend to squash together

Russian
komnat -u
room Feminine.Singular.Accusative

komnat -y
room Feminine.Plural.Accusative

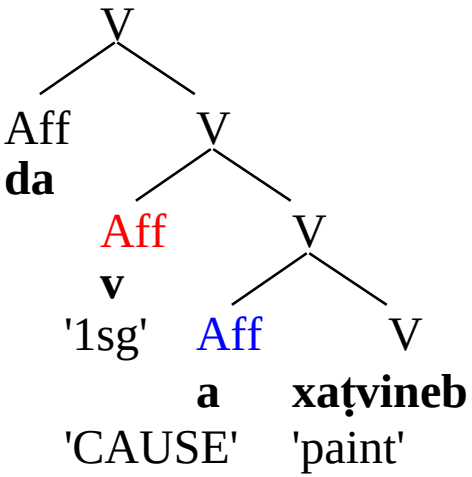
brat -a
brother Masculine.Animate.Singular.Accusative

So we've seen that there's a lot that's language-specific. Is anything universal?

why, yes:

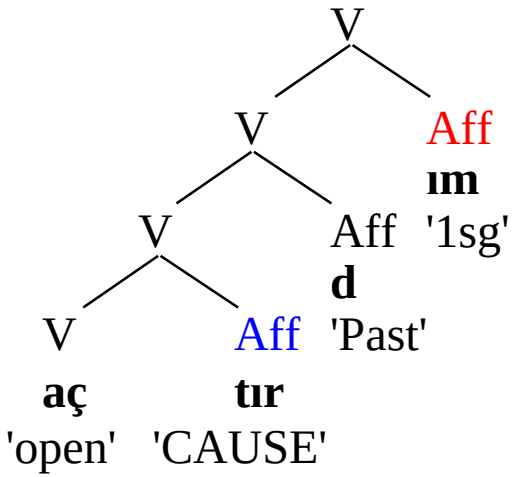
inflectional morphology (agreement, tense, etc.) is always 'higher'
derivational morphology (category-changing, causative...)

Georgian



'I will have him paint it'

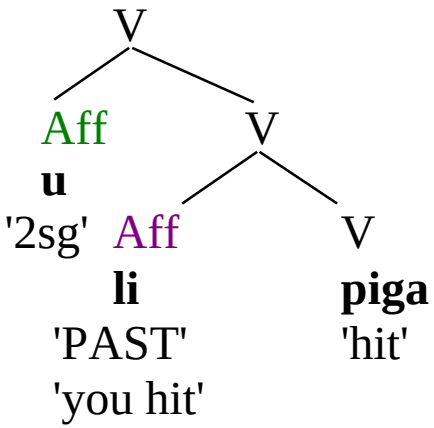
Turkish



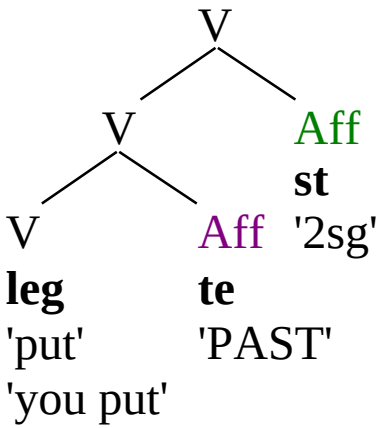
'I had him open it'

similar universals for other kinds of morphemes:

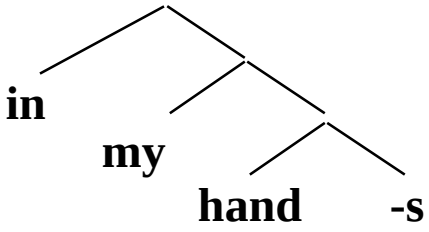
Swahili



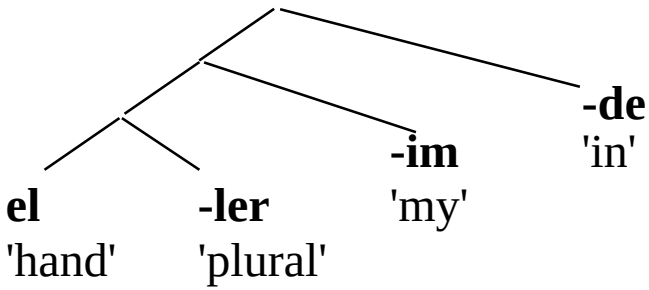
German



English



Turkish



• these trees have something in common; if A is higher than B in one tree, the same A is higher than B in the corresponding tree in a different language (where 'higher' means 'the mother of A has B as a daughter, or as the daughter of a daughter, repeating generations as necessary'). This is true, for instance, of the morphemes meaning 'in' and 'my' in English and Turkish, even though the morphemes are bound, and suffixal, in Turkish, while they are free, and precede their sisters, in English. If we look at these words in the way that we've been arguing that we should, then, we do see universals, despite the apparent variation between languages.

Of course, there are still questions: why do these particular morphemes have to be higher than these other morphemes? We're going to have to put that question aside, for now...

Two imaginable kinds of lexicons:

teach	teach
teacher	mine
teachers	-er
teaching	-s
mine	-ing
miner	
miners	
mining	
....	

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....	

(the wrong theory) (the right theory)

We've seen evidence that words are broken up into **morphemes**

(evidence that the **right** theory is right)

- gives you a lexicon with fewer entries
  - the plight of the Nimborans (27,000 forms per verb)
- lots of evidence that we manipulate morphemes, including:
  - application of morphemes to new words (wug**-s**)
  - creation of new morphemes (Water**gate**, Monica**gate**...)
  - backformation (sculptor > sculpt, pease > pea)

Lardil

Nom.	Acc.	
mela	melan	'seawater, beer'
barnga	barngan	'stone'
katha	kathan	'nest'
wunda	wundan	'stingray species'
thungal	thungalin	'tree'
ketharr	ketharrin	'river'
miyar	miyarin	'spear'

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miyar	miyarin	'spear'
wunda	wunin	'rain'
belda	belin	'tip'
dalda	dalin	'curve'

Lardil

Nom.	Acc.	Underlying Form	
mela	melan	mela	'seawater, beer'
barnga	barngan	barnga	'stone'
katha	kathan	katha	'nest'
wunda	wundan	wunda	'stingray species'
thungal	thungalin	thungal	'tree'
ketharr	ketharrin	ketharr	'river'
miyar	miyarin	miyar	'spear'
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wunda	wunin	wun	'rain'
belda	belin	bel	'tip'
dalda	dalin	dal	'curve'
yaka	yakin		'fish'
birrka	birrkin		'string'
lelka	lelkin		'head'

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belda	belin	bel	'tip'
dalda	dalin	dal	'curve'
kanda	kandun		'blood'
nguka	ngukun		'water'
ngawa	ngawun		'dog'
karda	kardun		'woman's child, man's sister's child'

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belda	belin	bel	'tip'
dalda	dalin	dal	'curve'
ngalu	ngalukin		'story'
wangal	wangalkin		'boomerang'
thalkurr	thalkurrkin		'kookaburra'
kundul	kundulkin		'umbilical cord'

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ngalu	ngalukin	ngaluk	'story'
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Lardil

some rules:

1. one-syllable stems add **-***da*: *bel* ->*belda* 'edge'
2. ..unless they end in **-***k*, then just add **-***a*: *lelk* -> *lelka* 'head'
3. final *u* ->*a*: *kandu* -> *kanda* 'blood'
4. final *k* drops: *wangalk* -> *wangal* 'boomerang'

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rule 2: *lelka* 'head'

Lardil

some rules:

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2. ..unless they end in **-***k*, then just add **-***a*: *birrk* -> *birrka* 'string'
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lelk-->
rule 2: *lelka* 'head'

why not rule 4? *lelk*--> *lel*
(then maybe rule 1: *lel*-->*lelda*)

Lardil

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ngaluk-->
rule 4: *ngalu* 'story'

Lardil

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ngaluk-->
rule 4: *ngalu* 'story'

why not then apply rule 3? *ngalu* --> *ngala*

Lardil

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one response to this kind of problem:

rule ordering

Rules 2 and 3 apply before Rule 4.

Lardil

some **ordered** rules:

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input	*lelk*
rule 2	*lelka*
rule 3	--
rule 4	--
output	*lelka*

Lardil

some **ordered** rules:

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2. ..unless they end in **-***k*, then just add **-***a*: *birrk* -> *birrka* 'string'
3. final *u* ->*a*: *kandu* -> *kanda* 'blood'
4. final *k* drops: *wangalk* -> *wangal* 'boomerang'

input	*lelk*	*ngaluk*
rule 2	*lelka*	--
rule 3	--	--
rule 4	--	*ngalu*
output	*lelka*	*ngalu*

Lardil

some **ordered** rules:

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2. ..unless they end in **-*k***, then just add **-*a***: *birrk* -> *birrka* 'string'
3. final *u* ->*a*: *kandu* -> *kanda* 'blood'
4. final *k* drops: *wangalk* -> *wangal* 'boomerang'

input	*lelk*	*ngaluk*
rule 2	*lelka*	--
rule 3	--	--
rule 4	--	*ngalu*
output	*lelka*	*ngalu*

(...these all happen to be cases in which only one rule applies...)

- abstract underlying forms (***yak*** 'fish', ***nguku*** 'water'; Polish ***brzeg*** 'bank of a river')
- rule ordering (***ngaluk*** 'story' becomes ***ngalu***, not ***ngala***)