

(Maybe not quite all of)

Linguistics in 75 minutes*

Wednesday, January 21, 2015

Plan for Today:

- A note on readings...
- Crash course in linguistics

Reminder:

- Turn in PReview 1 before you go.

Linguistic universals are a small handful of properties that can be universally applied to every natural language on the planet!



<http://www.qwantz.com/index.php?comic=1503>

A note on readings

Time expectations for PReviews

Techniques for maximizing your time efficiency?

Linguistics Big Picture

Structure Subfields

Phonetics, Phonology, Morphology, Syntax, Semantics, Pragmatics

"Language and" Subfields

Sociolinguistics, Psycholinguistics, Language acquisition (1st, 2nd), Historical linguistics, Forensic linguistics, Lexicography

Grammaticality

Which of these are ok?

The cat is heavy.

The cat are heavy.

I saw the man with whom you were talking.

I saw the man you were talking to.

He been working.

I'll not open it even if you make a dreadful din till night.

The cat about languages is heavy.

How many languages
are there?

The world's languages

~6909 living languages

Biggest?

- Mandarin (955 million native speakers)
- Spanish (405 million native speakers)
- English (360 million native speakers)
- Hindi (310 million native speakers)
- Arabic* (295 million native speakers)

Smallest?

- 473 “nearly extinct” languages
- In the U.S., Arikara (3 speakers), Massachusetts (5 speakers) Achuwami (8 speakers), Central Pomo (8 speakers)

What affects where a language is spoken?

History

Politics

Power, social attitudes

Immigration patterns

What language(s) is English most related to?

Danish

French

German

Irish

Italian

Japanese

Lithuanian

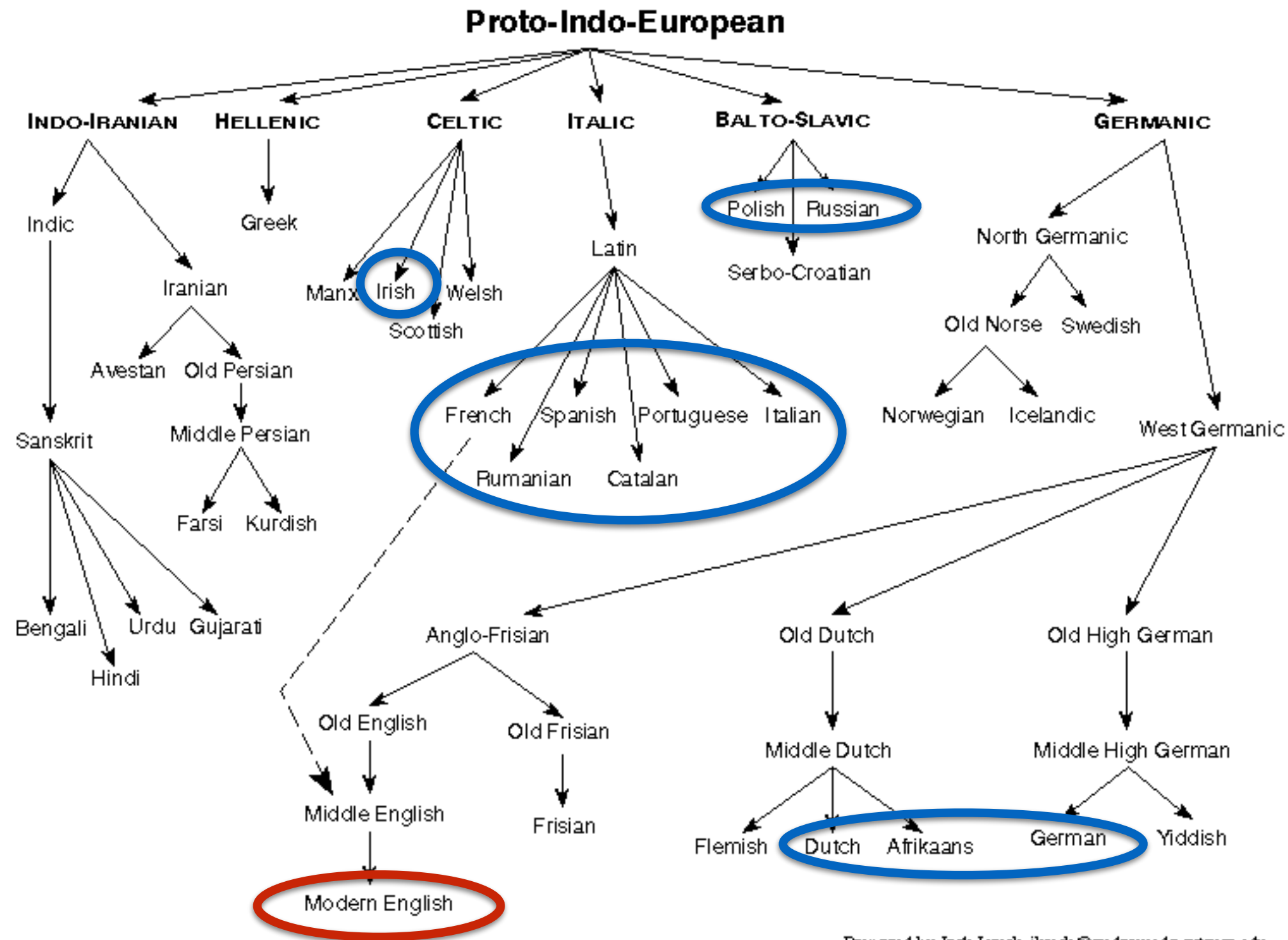
Polish

Rumanian

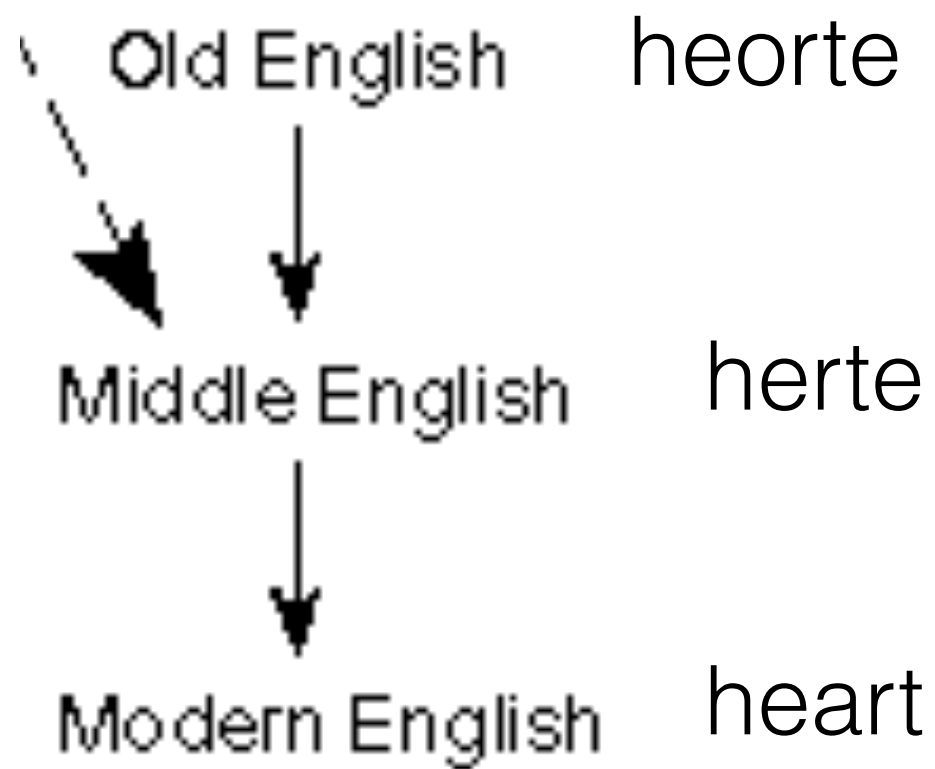
Russian

Spanish

(Language) Family Tree



Language Change



Modern example(s)?

I LIKE THIS



BECAUSE REASONS

memegenerator.net

Phonetics & Phonology

Sounds (and how they connect)

Phonemes, allophones, and phones...

Speech recognition

- Map acoustic signal to phones
 - Map phones to words
- It's hard to wreck a nice beach.
It's hard to recognize speech.

Types of structure

- Syllable structure — $(C)^3V(C)^5$
- Prosody
- Voicing (cats vs kittens)

Orthography

How are languages written?

Most aren't! Why?

For those that are...

- Some are left-to-right (e.g. Portuguese)
- Some are right-to-left (e.g. Arabic, Kurdish)
- Some are top-to-bottom (e.g. Japanese, Korean)
- Some are written with alphabets (e.g. Russian), others use syllable-based characters (e.g. Cherokee) or words/morphemes (e.g. Japanese, Vietnamese)

What is a word?

English, we can start with whitespace tokenization.

- What about punctuation?
- What about contractions?

It gets more complicated from there...

- No white space in many character-based languages
- Clitics in Romance languages
lo atamos, but dámelo
- Noun compounds may or may not have white space separating them
building permit vs. Baugenehmigung

Morphology

Morphology: Overview





- Morphology: The study of the internal structure of words
- Morphotactics: What morphemes are allowed and in what order
- Morphophonology: How the form of morphemes is conditioned by other morphemes they combine with
- Morphosyntax: How the morphemes in a word affect its combinatoric potential

(From “100 Things You Always Wanted to Know about Linguistics,” by Emily Bender

Morphology

- Morphemes: The smallest meaningful units of language, i.e., smallest pairings of form and meaning

the small+est mean+ing+ful unit+s of language

- Form is prototypically a sequence of phones. However:
 - The phones don't have to be contiguous 
 - The form doesn't have to be phones: tonal morphemes, signed languages, non-phone-based writing systems 
 - The form can vary with the linguistic context (cf. morphophonology) 
 - The form can be null (if it contrasts with non-null) 

Example of non-contiguous morphemes

- Semitic root & pattern morphology

Root	Pattern	POS	Word	gloss
ktb	CaCaC	(v)	katav	‘write’
ktb	hiCCiC	(v)	hixtiv	‘dictate’
ktb	miCCaC	(n)	mixtav	‘a letter’
ktb	CCaC	(n)	ktav	‘writing, alphabet’

Hebrew [heb] (Arad, 2005: 27)




Example of tonal morpheme

- Marker of tense/aspect in Lango (Nilo-Saharan, Uganda):

Form	Gloss
àgíkò	‘I stop (something), perfective’
àgíkô	‘I stop (something), habitual’
àgíkkò	‘I stop (something), progressive’

Lango [laj] (Noonan, 1992: 92)

Morphology

- Morphemes: The smallest meaningful units of language, i.e., smallest pairings of form and meaning
- The meaning part of that form-meaning pairing can also be less than straightforward.
 - *Roots* convey core lexical meaning 
 - *Derivational affixes* can change lexical meaning 
 - But root+derivational affix combinations can also have idiosyncratic meanings
 - *Inflectional affixes* add syntactically or semantically relevant features 
 - e.g.: case-marking affixes arguably don't convey meaning directly
- Morphemes can be ambiguous (alternatively: underspecified)

Examples of inflectional morphemes (English)

Affix	morphosyntactic effect	Examples
-s	NUMBER: plural	cat → cats
-s	TENSE: present, SUBJ: 3sg	jump → jumps
-ed	TENSE: past	jump → jumped
-ed/-en	ASPECT: perfective	eat → eaten
-ing	ASPECT: progressive	jump → jumping
-er	comparative	small → smaller
-est	superlative	small → smallest





(O'Grady et al, 2010:132)

Examples of derivational morphemes (English)

Affix	POS change	Examples
-able	V → A	fixable, doable, understandable
-ive	V → A	assertive, impressive, restrictive
-al	V → N	refusal, disposal, recital
-er	V → N	teacher, worker
-ment	V → N	adjournment, treatment, amazement
-dom	N → N	kingdom, fiefdom
-less	N → A	penniless, brainless
-ic	N → A	cubic, optimistic
-ize	N → V	hospitalize, vaporize
-ize	A → V	modernize, nationalize
-ness	A → N	happiness, sadness
anti-	N → N	antihero, antidepressant
de-	V → V	deactivate, demystify
un-	V → V	untie, unlock, undo
un-	A → A	unhappy, unfair, unintelligent

(O'Grady et al, 2010:124)

Information provided by inflectional morphemes: Tense, Aspect, Mood (on verbs, adjectives)

- Tense/aspect/mood on verbs (and sometimes adjectives): Temporal information about events
 - Tense: (Roughly) how the time of the described event relates to the speech time 
 - Aspect: (Roughly) how the internal temporal structure of the described event is portrayed 
 - Mood: (Roughly) speakers attitude towards sentential content and/or illocutionary force 
- Languages vary in how many values they grammaticize in each of tense/aspect/mood 

Sample systems/values

- Tense: past/non-past, future/non-future, past/present/future, also remote past, remote future, and varying degrees of same
- Aspect: perfect/imperfect, also: habitual, inceptive, inchoative, cessative, resumptive, punctual, iterative, experiential, ...
- Tense+aspect: perfective (completion of event prior to some reference time)
- Mood: indicative, conditional, optative, imperative, irrealis, ...

Information marked by inflectional morphemes: Person, number, gender (on nouns)

- Person: Relationship of referent to speech act: speaker, addressee, other
 - 1st, 2nd, 3rd; sometimes also 4th (!); inclusive/exclusive distinction on 1st person non-singular
- Number: (Roughly) cardinality of set of referents of referring expression
 - sg/pl; sg/dual/pl; sg/dual/paucal/pl
- Gender/noun class: Subcategories of nouns, sometimes related to natural gender, sometimes not
 - m/f, m/f/n, m/f/vegetable/other, ...

#28

#29

#30

Information marked by inflectional morphemes: Case (on nouns)

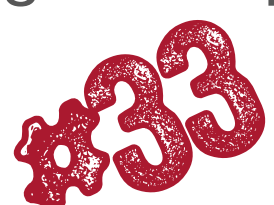




- Case: Role of NP within a sentence
- Distinctions among core grammatical functions: nominative/accusative; nominative/accusative/dative; ergative/absolutive
- More elaborate case systems mark different kinds of adjuncts: genitive, locative, ablative, instrumental, adessive, inessive, ...

#31

#32

Information marked by inflectional morphemes:

Other

- Negation: 396/1159 (34%) languages sampled by Dryer (2011) mark sentential negation with an affix 
- Evidentiality: Speaker's confidence in a statement and source of evidence; de Haan (2011) finds some grammaticized marking of evidentiality in 237/418 (57%) of languages sampled. Most use affixes for this purpose. 
- Honorifics: Speaker's relationship to addressee/referent 
- Definiteness: Referent's relationship to common ground 
- Possessives: Marked on possessor, possessed or both 

Information marked by inflectional morphemes: Agreement

- Inflectional categories can be marked on multiple elements of a sentence
- Usually considered to belong to one element; marking on others is *agreement*
 - Category might not be marked on the word it belongs to
- Verbs commonly agree in person/number/gender with subjects, sometimes other arguments
- Determiners and adjectives commonly agree with nouns in person/number/gender and case
- Agreement can be with a feature that is inherent (e.g., gender, person) or added via inflection (e.g., number)

#38






#39

#40

#41

Syntax

Parts of speech

- Grammatical notion defined in terms of distributional characteristics or functionally 
- Group words according to substitution classes (syntax) and affix sets (morphology) 
- Major categories: noun, verb, adjective, adverb 
- Other categories: adposition, determiner/article, conjunction, number names, numeral classifier, 'particle', ... 
- No one universal set, even among the major categories 

Functional generalizations (Hengeveld 1992)

- Noun: Head (non-optional element) of a referring expression
- Verb: Can only be used predicatively
- Adjective: Non-head (modifier, optional) element of a referring expression
- Adverb: Non-head (modifier) of predicate



Phrases

Groups of words act as units

Noun Phrases

Prepositional Phrases

Verb Phrases

Adjective Phrases

Syntactic Structure

[ROOT [S [NP [DT A] [NN book]] [VP [VBD was] [VP [VBN given]
[PP [TO to] [NP [NNP Sandy]]] [PP [IN by] [NP [NNP Kim]]]]]]]]]

