

INTD0111A/ARBC0111A

## The Unity and Diversity of Human Language

Lecture #16  
Nov 7<sup>th</sup>, 2006

## Announcements

- LAP questions?
- Fromkin *et al*'s chapter: Any problems reading it?
- Chapter on sociolinguistic diversity on e-reserve later today.

## Historical linguistics

- The 19<sup>th</sup> century was the century for the study of historical (aka *diachronic*) linguistics.
- Herman Paul in 1891: "It has been objected that there is another view of language possible than the historical. I must contradict this."

## Reconstruction and the comparative method

- Historical linguists, aka *comparativists*, were mainly concerned with "reconstructing" the properties of the parent language of a group of languages that are believed to be genetically related.
- *Reconstruction* was done by means of the *comparative method*, whereby earlier forms were determined via the comparison of later forms.
- The earlier forms are called *proto-forms*, and the earlier language is called a *proto-language*.

## Cognates

- The forms compared were typically words that were believed to have developed from the same ancestral root. They are called *cognates*.
- Consider the following table of Germanic cognates:

## Cognates

English	Dutch	German	Danish	Swedish
man	man	Mann	mand	man
foot	voet	Fuß	fod	fot
bring	brenge	bringen	bringe	bringa

Compare Turkish "non-cognates":  
*adam* (man), *ajak* (foot), and *getir* (bring).

## The discovery of Proto-Indo-European

- In 1786, Sir William Jones, a British judge and scholar working in India, noted that Sanskrit bore to Greek and Latin "a stronger affinity ... than could possibly have been produced by accident," and he suggested that the three languages had "sprung from a common source".
- This common source is what came to be known later as "Proto-Indo-European" (PIE), the parent language of most of the languages spoken today in Europe, Persia, and northern India.

## The discovery of Proto-Indo-European

- Thirty years later, a young Danish scholar, named Rasmus Rask, postulated general correspondences between the consonants of Germanic languages and those of Sanskrit, Greek, and Latin, noting for example that where the ancient languages showed a [p] sound, the corresponding words in the Germanic languages showed an [f].

## The discovery of Proto-Indo-European

Sanskrit	Latin	English
pitar-	pater	father
pad-	ped-	foot
—	piscis	fish
pasu	pecu	fee

## Grimm's Law

- In 1822, a German scholar, named Jakob Grimm, extended Rask's observations and provided a detailed exposition of the Germanic consonant shift that came to be known as *Grimm's Law*.
- The crucial observation was that where ancient languages showed a voiceless stop [p, t, k], Germanic languages like English and Gothic showed a corresponding fricative [f, θ, h]:

## Grimm's Law

Sanskrit	Greek	Latin	Gothic	English
pad-	pod-	ped-	fofus	foot
trayas	treis	tres	threis	three
—	kardia	kor	hairto	heart

- Grimm tabulated a series of consonant shifts for Proto-Germanic that differentiated it from other PIE languages:
- |          |   |   |   |   |   |   |    |    |    |
|----------|---|---|---|---|---|---|----|----|----|
| PIE      | p | t | k | b | d | g | bh | dh | gh |
| Germanic | f | θ | x | p | t | k | b  | d  | g  |

## Grimm's Law (note \* = proto)

PIE form	Sanskrit	Latin	English
*p	pitar-	pater	father
*t	trayas	trés	three
*k	śun	canis	hound
*b	No cognate	labium	lip
*d	dva	duo	two
*g	ajras	ager	acre
*bh	bhrātar-	frāter	brother
*dh	dhā	fē-ci	do
*gh	vah-	veh-ō	wagon

## Verner's Law

- There were exceptions to Grimm's Law, but they turned out to be systematic.
- Karl Verner traced a group of exceptions to Grimm's Law, formulating what came to be known as *Verner's Law*, which says:

When the preceding vowel was unstressed, [f, θ, x] underwent a further change to [b, d, g].

## Verner's Law

<b>Sanskrit</b>	<b>Gothic</b>	
bhrā'tā	[bro:θar]	"brother"
pitā'	[fadar]	"father"

(where ' indicates stress).

## English words not affected by Grimm's Law

- Notice that some words in English were not affected by Grimm's Law:

<b>Latin</b>	<b>English</b>	
ped-	pedestrian	(no p → f)
tenuis	tenuos	(no t → θ)
canalis	canal	(no k → h)

- Any ideas why?

## So, how do we decide on the proto-form?

- Reconstruction of proto-forms makes use of two main strategies: *the phonetic plausibility strategy* and *the majority rules strategy*.

## The phonetic plausibility strategy

- The phonetic plausibility strategy requires that any changes posited to account for differences between proto-forms and later forms must be phonetically plausible.

## The majority rules strategy

- The majority rules strategy stipulates that if no phonetically plausible change can account for the observed differences, then the sound found in the majority of cognates should be assumed.

## Romance cognates

French	Italian	Spanish	Portuguese	
cher	caro	caro	caro	"dear"
champ	campo	campo	campo	"field"
chandelle	candela	candela	candeia	"candle"

- The regular sound correspondence for the initial sound is  $\xi$ -k-k-k.
- Two hypotheses: (a)  $k \rightarrow \xi$ , or (b)  $\xi \rightarrow k$ .  
By phonetic plausibility, (a) wins.  
By majority rules, also (a) wins.

## Cognates from "Hypothetica"

- Consider these data from four languages belonging to the Hypothetica family:
 

L1	L2	L3	L4
hono	hono	fono	vono
hari	hari	fari	veli
rahima	rahima	rafima	levima
hor	hor	for	vol

- What's the sound correspondence for the initial sound here?

*h-h-f-v*

## Cognates from Hypothetica

- Can you think of the hypotheses for the proto-form?  
Either (a)  $h \rightarrow f$  and  $h \rightarrow v$ ,  
(b)  $f \rightarrow h$  and  $v \rightarrow h$ , or  
(c)  $v \rightarrow h$  and  $v \rightarrow f$
- By the majority rules strategy, (a) wins.
- But by the phonetic plausibility strategy, (a) actually cannot be right: We seldom see change of [h] to either [f] or [v] phonetically.
- Similarly, by phonetic plausibility, (c) loses to (b). The proto-sound is thus  $*f$ .

## Cognates from Hypothetica

- Now find another regular sound correspondence in the four Hypothetica languages and indicate what the proto-sound is:

L1	L2	L3	L4
hono	hono	fono	vono
hari	hari	fari	veli
rahima	rahima	rafima	levima
hor	hor	for	vol

## Causes for language change

- Some changes are easy to understand: Creating new words to name new objects. Or borrowing for the same purpose.
- We have already seen an example of how social pressure can lead to certain linguistic changes (the loss of postvocalic [r] in some parts of the east coast in the US).

## Causes for language change

- Some sound changes might be driven by a desire for *ease of articulation*, e.g., assimilation of vowels preceding nasal consonants.
- French nasalized vowels originated from nasal assimilation followed by word-final consonant deletion:  $[b\text{ɔ}n] \rightarrow [b\text{ɔ̃}n] \rightarrow [b\text{ɔ̃}]$ .
- But how do we account for the GVS or the Germanic consonant shift in terms of least articulatory effort?

## Causes for language change

- Some changes might be the result of *analogy*: the desire to reduce the number of exceptional or irregular forms in the language as much as possible:

sweep-swept → sweep-sweeped

wake-woke → wake-waked

## But some changes are harder to explain than others

- Why would a language change its basic word order, the way it forms questions, the way it forms negation, its case and agreement system, etc.?

## But some changes are harder to explain than others

- And why are changes systematic and subject to the same constraints that govern cross-linguistic variation?
- So, phonological changes are subject to the same phonological rules that we find in human languages. And a syntactic change in a language never takes the language beyond the limits of what is possible in human languages in general.

## Next class agenda

- On Thursday, we will briefly discuss a possible answer for this question, in the area of syntactic change, within the principles and parameters framework. In this regard, you can read Baker's chapter 7 for a brief discussion of language change.

## Next class agenda

- Linguistic diversity across space and society: Read Fromkin *et al's* chapter on "Language in society".