

## Late 19<sup>th</sup> Century Linguistics: Triumphs and Failures

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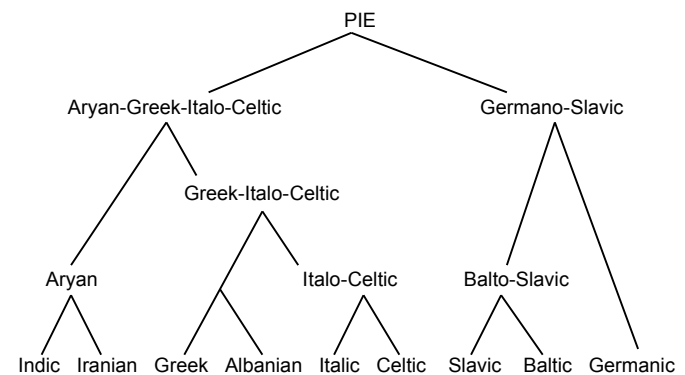
## Correspondences

- French *père*, Spanish *padre*, Italian *padre*, Sardinian *patre*, Catalan *pare*, Portuguese *pai*. Trans-mogrifications of Latin *pater*,
- English *father*, Dutch *vader*, German *Vater*, Danish *fader*, Gothic *fadar*.
- Chinese *fuqin*, Japanese *titi-oya*, Basque *aita*, Finnish *isä*, Korean *apeci*
- A two-syllable word, and the initial segment is a labial consonant (/p/ in Romance, /f/ in Germanic), followed by an open vowel and an alveolar consonant, then some kind of vocalic *r*.

## Sir William Jones (1786)

- Greek, Latin and Sanskrit are similar in ways that indicate that they descended from a common source, which might no longer exist
- Origin should not necessarily be found in other, currently observable languages like Hebrew or Sanskrit

## Cladograms (Schleicher 1861)



## Homologies/analogies

- Homologies: features from a common ancestor.
- Analogies: features evolving independently, in response to life in similar environments.
- Humans share hair and a warm-blooded physiology with chimpanzees and mice as a result of evolutionary history, or homology.
- Birds and bats both fly by analogy; they have a very different evolutionary history, bats being mammals.

## Nostratic and Proto-World

- Henry Sweet: Indo-European, "Ugrian" (Finno-Ugric), "Altaic" (Turkic, Mongolian, Tungusic, Japanese).
- **Nostratic**: Indo-European, Kartvelian (south Caucasus), Afro-Asiatic, Uralic-Yukaghir, Elamo-Dravidian, Sumerian (maybe a Korean-Japanese family and a new Chukchi-Eskimo)

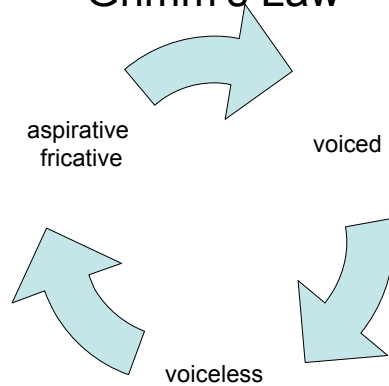
## Language history

- How did a language get to be the way it is?
- It has been objected that there is another view of language possible besides the historical. I must contradict this. Hermann Paul

## Sound change

	Sanskrit	Greek	Latin	Gothic	English
<b>Voiceless stops</b>					
p		pod-	ped-	fotus	foot
t	trayas	treis	tres	threis	three
k		kardia	kor	hairto	heart
<b>Voiced stops</b>					
b			turbe	turba	thaurp
	thorp				
d	daśa	deka	decem		ten
g		agros		ager	akrs
	acre				
<b>Aspirates</b>					
b <sup>h</sup>	b <sup>h</sup> arāmi	p <sup>h</sup> ero	fero	baira	bear
d <sup>h</sup>	dhā-	ti <sup>h</sup> emi	facio		do
g <sup>h</sup>	stigh-	steik <sup>h</sup> o		steiga	"go"

## Grimm's Law



## Exceptions

- Voiceless stop stays, if preceded by a fricative: *est, esti, asti: ist*
- Grassmann's Law: *duhītā: dauhtor; bod<sup>h</sup>āmi: -biudan*
- Verner's Law: *pitar: fadar; b<sup>h</sup>rātā: brōpar*

Annus mirabilis 1876

## Neogrammarians

- Sound change is phonetically conditioned
- Sound change is regular and exceptionless

## Explanations

- Newtonian mechanics
- Darwinian natural selection
- Psychological forces
- Hegelian Sprachgeist

## Grimm's explanation

... connected with the German's mighty progress and struggle for freedom ... the invincible German race was becoming ever more vividly aware of the unstoppable of its advance into all parts of Europe ... How could such a forceful mobilization of the race have failed to stir up its language at the same time, jolting it out of its traditional rut and exalting it? Does there not lie a certain courage and pride in the strengthening of voiced stop into voiceless stop and voiceless stop into fricative?

## Directionality

- Languages become simpler
- Isolating languages become agglutinating, become inflectional
- Problems: circularity and no explanation for the timing of changes

## Historicism

- Principles of history
- Darwin, Marx, Hegel. Their 18<sup>th</sup> century predecessors, and Hobbes, Spinoza
- Virulent anti-historicism in Boas, Bloomfield, Sapir

## What happens when language emerges in a child?

Children don't learn "English"

- she might could see it.
- bin her happy?

And they don't just imitate what they hear.

They acquire a finite *system* ranging over infinity, an I-language: recursive and compositional

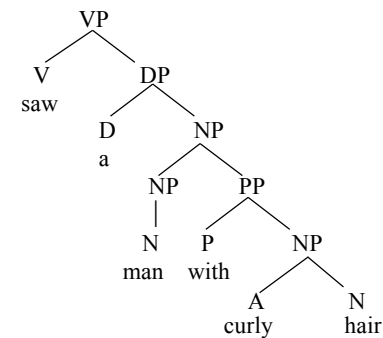
## Recursion

**RELATIVIZATION** This is the cow that kicked the dog that chased the cat that killed the rat that caught the mouse that nibbled the cheese that lay in the house that Jack built.

**COORDINATION** Ray and Kay went to the movie and Jay and Fay to the store, while Gay and May and Clay worked where Shay and Jack were watching, but Zach and Mack and Shaq slept.

**COMPLEMENTATION** Ray said that Kay said that Jay thought that Fay said that Gay told ...

## Compositional



## Poverty of the stimulus.

Kim is taller.

Kim's taller.

is → 's (am, are, have, has, had, will, would)

Kim's taller than Jim is.

I wonder what the problem is with him

## Deletion of *that*

Peter said [that Kay left].

The book [that Kay wrote] arrived.

It was obvious [that Kay left].

Peter said [Kay left].

The book [Kay wrote] arrived.

It was obvious [Kay left].

That → 0

## But not always

The book arrived yesterday [that Kay wrote].  
[That Kay left] was obvious to all of us.

The book arrived yesterday [Kay wrote].  
[Kay left] was obvious to all of us.

Another poverty of stimulus problem

## The linguistic genotype

Something may be deleted, if it is (in) the complement of an adjacent, overt word.

## Complements

Peter said [Kay left].  
The book [Kay wrote] arrived.  
It was obvious [Kay left].

The book arrived yesterday [Kay wrote].  
[Kay left] was obvious to all of us.

## Empty verbs

Jay spoke at 6pm and Fay spoke at 8pm.  
Jay spoke at 6pm and Fay  $\nu$ e at 8pm.  
*Jay spoke at 6pm and Fay at 8pm*

Empty V

## Empty verbs and *that*

Fay said Ray left and Tim <sub>v</sub>e [that Jim stayed].

Fay said Ray left and Tim <sub>v</sub>e [Jim stayed].

*Fay said Ray left and Tim Jim stayed.*

## Reducing *is*

- Is → 's
- <sub>N</sub>Pat+'s

Pat's happy, Doug's happy, and Alice's here.

## Failure to reduce

Kim is taller than Tim <sup>\_\_\_\_\_</sup> is tall.

*Kim is taller than Tim is.*

Kim is taller than Tim's **tall**.

*Kim is taller than Tim's.*

## More failures

I wonder what the problem is <sup>\_\_\_\_\_</sup> what with him.

*I wonder what the problem is with him.*

I wonder what the problem's **what** with him.

*\*I wonder what the problem's with him.*

## VP ellipsis

- Max left for Rio on Wednesday and Mary did <sub>VP</sub>e as well.
- Max left for Rio, although Mary didn't <sub>VP</sub>e
- Although Max couldn't <sub>VP</sub>e, Mary was able to leave for Rio.
- Susan went to Rio. Yes, but Jane didn't <sub>VP</sub>e.
- The man who left for Rio knows the woman who didn't <sub>VP</sub>e.
- Don't <sub>VP</sub>e!

## Failures

They denied reading it, although they all had <sub>VP</sub>e.  
*They denied reading it, although they had all <sub>VP</sub>e.*

They denied reading it, although they often/certainly had <sub>VP</sub>e.  
*They denied reading it, although they had often/certainly <sub>VP</sub>e.*

I haven't seen that movie, but John has <sub>VP</sub>e.  
*I haven't seen that movie, but John's <sub>VP</sub>e.*

## Triggers

that → 0  
empty V  
is → 's  
ellipse VP

*Peter said Kay left*  
*Jay saw Ray and Jim Kim*  
*Kim's happy*  
*Mary didn't*

## The explanatory schema

- Experience (linguistic genotype → phenotype)
- Primary Linguistic Data (Universal Grammar → grammar)
- I-language vs. E-language



## An Inflection category

He has understood chapter 4.

He *has could* understand chapter 4.

Understanding chapter 4, ...

*Canning* understand chapter 4, ...

He wanted to understand.

He *wanted to can* understand.

He will try to understand.

He *will can* understand.

He understands music.

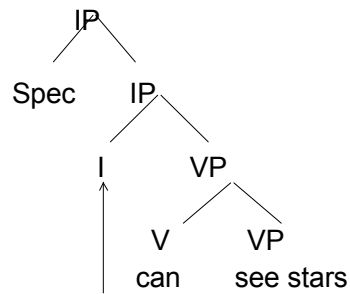
He *can* music.

## Modal auxiliaries

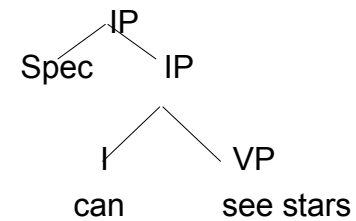
Can, could, must, may, might, will, would, shall,  
should, do (dare, need)

They became Inflectional elements

## Verbs moved to I



## Can became an I item



## Verb morphology

- Present: fremme, fremst, fremþ, fremmap
- Past: fremed, fremedest, fremede, fremedon
- Present: sēo, siehst, siehþ, sēoþ
- Present: rīde, rīst, rītt, rīdap
- Past: rād, ride, rād, ridon

## Domino effects

earlier morphological changes:

- massive simplification of morphology
- verbs with no –s ending became distinctive

## Loss of verb movement

Understands Kim chapter 4?

Does Kim understand chapter 4?

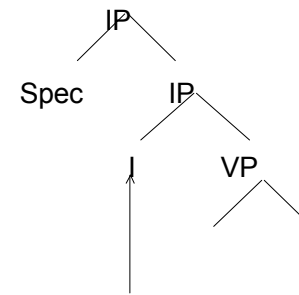
Kim understands not chapter 4.

Kim does not understand chapter 4.

Kim reads always the newspapers.

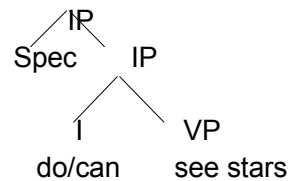
Kim always reads newspapers.

## Verbs moved to I



## The causes

- Recategorization of modal verbs
- Introduction of *do*



## Chaotic Shakespeare

Where didst thou see her? - O unhappy girl! -  
With the Moor, say'st thou?

I like not that. // What dost thou say?

Alas, what does this gentleman conceive? -  
How do you, madam?

## Conclusion

- Language acquisition happens as children learn simple structures, which are subject to principles of the linguistic genotype.
- The combination of simple learned structures and simple genotypical principles yields the immense complexity of the human language capacity.
- As different structures are learned, language change takes place catastrophically.
- Acquisition of a complex system grounds understanding of change.