

# Book notes: An Introduction to Historical Linguistics

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# 1 Introduction

## 1.1 The nature of linguistic relationships

Saussure suggested that a language could (and should) be studied synchronically rather than diachronically.

When we describe a language synchronically, we describe what are the basic units that go to make up the language (that is, its phonemes, its morphemes, and so on) and the relationship between these units at that time, and that time only.

Similarities in the "core words" of two languages signify a common ancestor rather than simple copying. Similarities in neologisms and loanwords signify simple copying.

Sir William Jones introduced the idea of the parallel development of multiple languages belonging to the same family. Before Jones, people tried to show that some language was derived from another living language (with ridiculous results).

There was no moment when people suddenly realized that they were speaking French instead of Latin, in the same way that there is no single moment when a baby becomes a child, or when a child becomes a teenager.

## 1.2 Deliberately changing languages

After WWII Indonesia overthrew the local Dutch rule and proclaimed Bahasa Indonesia to be the official language. But the chemistry professors knew no technical terms in this language. The government created a "Language and Literature Council" to effect deliberate change in their language, creating words where they were missing.

[Great exercises here with short-answer responses. Inducing lots of critical thinking.]

# 2 Types of sound change

## 2.1 Lenition and fortition

Strength:

- voiced > voiceless

Table 1: "Strong" and "weak" sounds

Stronger	Weaker
b	p
p	f
f	h
x	h
b	w
v	w
a	ə
i	i-
d	l
s	r
k	ʔ

- stops > continuants
- consonants > semivowels
- oral > glottal
- front and back vowels > central vowels

!!

**lenition** sound change in which a "strong" phoneme drifts to a more "weak" one

bulan → [fulan]

topu → [tuf]

**fortition** sound change in which a "weak" phoneme drifts to a "stronger" one. Uncommon.

**rhotic** a phonetic class describing all types of "r" sounds (trills, flaps, glides, etc.)

**lateral** a phonetic class describing all types of "l" sounds

**liquid** a phonetic class describing rhotics and laterals

**rhotacism** lenition of [s] or [z] to a rhotic between vowels

Latin:

ami:kosum → [ami:korum]

genesis → [generis]

hono:sis → [hono:ris]

Special types of sound loss:

**aphaeresis:** elision of an initial consonant

**apocope** elision of word-final vowels. Extremely common.

**syncope** elision of medial vowels. Often the process yields consonant clusters in languages which didn't originally have them.

**cluster reduction** elimination of consonants from difficult clusters

**haplology** loss of an entire syllable when it is followed or preceded by a very similar syllable. Rare and sporadic.

## 2.2 Sound addition

Rather rare. Often takes place at the end of words with final consonants (vowel added).

**excrescence** insertion of a consonant between two other consonants in a word

English:

- [æmtig] → [ɛmpti]
- [θymle] → [θɪmbl]

In English, the [p] stop was added to "close off the velum (which is open during the production of a nasal) before going on to produce the following non-nasal sound (i.e. a stop or a liquid)." Notice that [p] and [b] are homorganic with the preceding consonants in these changes!

**homorganic** (of a phone) having the same point of articulation as another phone

**epenthesis** AKA "anaptyxis." Insertion of a vowel in the middle of a word to break up two consonants in a cluster.

**prosthesis** insertion of a sound at the beginning of a word

### 2.3 Metathesis

**metathesis** an uncommon type of sound change in which the order of sounds in a morph changes.

English [bɪ ɪd] → [bɪd]

### 2.4 Fusion

**fusion** a type of sound change in which two originally separate sounds become a single sound. "The resulting single sound carries some of the phonetic features of *both* of the original sounds."

Opposite of unpacking.

French vowel + nasal → nasalized vowel:

- [œn] → [œ̃]
- [bɔ̃n] → [bɔ̃]

**compensatory lengthening** lengthening of a vowel sound to compensate for a nearby consonant loss

### 2.5 Unpacking

**unpacking** the development of a sequence of two sounds from a single original sound in a morph. Each of the new sounds retain some of the features of the old sound.

E.g., nasal vowel → vowel + nasal consonant

Opposite of fusion.

### 2.6 Vowel breaking

**vowel breaking** sound change in which a single vowel becomes a diphthong, "with the original vowel remaining the same, but with a glide of some kind being added either before or after it." Fairly common.

### 2.7 Assimilation

**assimilation** sound change in which "one sound causes another sound to change so that the two sounds end up being more similar to each other in some way." By far the most common kind of sound change.

If a sound change results in an increase in the number of shared features, then we can say that assimilation has taken place.

Assimilation of place of articulation (bilabial, labiodental, . . . ) is very common.

**phonetic similarity** two sounds are phonetically similar if they have some matching phonetic features. To become more similar, a sound's features can be changed to match another's.

**partial assimilation** subtype of assimilation in which the changed sound retains at least one of its original features which distinguished it from the other sound. More common than total assimilation.

**total assimilation** subtype of assimilation which produces geminates. Less common than partial assimilation.

**geminate** phonetically "double" (i.e., two instances of the same phone adjacent to one another)

**regressive assimilation** assimilation in which the "force" of the sound change operates from right to left.

E.g. [np] → [pp]: The [p] on the right triggered a change [n] → [p] on the left.

**progressive assimilation** assimilation in which the "force" of the sound change operates from left to right.

E.g. [np] → [nb]: The [n] on the left causes the [p] to be voiced to [b].  
Can be total or partial. Much less common than regressive assimilation.

**palatalization** an assimilatory sound change in which a non-palatal sound becomes a palatal sound, usually before a front vowel such as [i] or [e], or before the semi-vowel [j].

"Assimilatory" in the most common case because the palatal feature of the vowel is transferred to the preceding sound.

Final devoicing is a common sound change (German: [ta:g] → [tak] 'day', [hund] → [hunt] 'dog') which can be considered a case of assimilation. The original sound is devoiced to match the "voicelessness" of the following silence.



**immediate assimilation** assimilation of two sounds in which the influenced sound is immediately neighboring the sound which caused the change. Opposite of assimilation at a distance.

**assimilation at a distance** assimilation of two sounds in which the affected sound is influenced by another sound further away in the morph. Opposite of immediate assimilation. See harmony.

**harmony** the regular assimilation at a distance of certain sounds within a morph. Consider *vowel harmony* as an example, where each vowel in a morph acquires features from all the other vowels in that morph.

The Enggano language has *nasal harmony*, where all voiced stops in a word become homorganic nasals and all plain vowels are nasalized following any nasal sound in a morph.

**umlaut** Most often seen in Germanic languages.

The fronting of a back vowel or the raising of a low vowel under the influence of a front vowel in the following syllable. Very often, the following high front vowel that caused the change to take place in the first place was then dropped in these languages (by apocope), or reduced to schwa. Thus, the new front vowel became the only way of marking the difference between some words.

English foot/feet irregular is the result of umlaut.

[fo:t]'s plural [fo:ti] → [fø:ti] (umlaut) → [fø:t] (apocope) → [fe:t] (unrounding)

## 2.8 Dissimilation

**dissimilation** sound change in which one sound drifts away from another sound in a morph

**Grassman's law** when two adjacent syllables in Sanskrit or ancient Greek both had aspirated stops, the first syllable's stop lost its aspiration (dissimilation at a distance)

### 3 Expressing sound changes

#### 3.1 Writing rules

**unconditioned sound change** a sound change which happens across an entire language, regardless of the sound's context in any certain morph. Obviously not very common.

Hawaiian saw an unconditioned change from  $[t] \rightarrow [k]$  and  $[\eta] \rightarrow [n]$ .

We can write Hawaiian's changes as  $[t] \rightarrow [k]$ , etc.

**conditioned sound change** AKA "combinatory sound change." Takes place in certain phonetic environments (e.g., before a nasal consonant, in an unstressed syllable, in a medial syllable, etc.)

The environment of a change is described after a slash in a sound change rule. A " $\backslash\_$ " indicates the position of the actual sound within the context.

- $t \rightarrow s / \backslash\_ \text{ front V}$  ([t] becomes [s] before front vowels)
- $x \rightarrow k / s \backslash\_$  ([x] becomes [k] after [s])
- $p \rightarrow v / V \backslash\_ V$  ([p] becomes [v] between vowels)

The symbol "#" is used to represent the beginning or ending of a word.

- $p \rightarrow w / \# \backslash\_$  (initial [p] becomes [w])
- $\text{voiced C} \rightarrow \text{voiceless C} / \backslash\_ \#$  (final voiced consonants devoiced)
- $V \rightarrow / \backslash\_ \#$  (word-final vowels deleted)

Optional elements are wrapped in parentheses.

- $V \rightarrow V [\text{nas}] / V [\text{nas}] (C) \backslash\_$  (vowels are nasalized after nasal vowels, whether or not there is an intervening consonant)

#### 3.2 Ordering of changes

We can only make good conclusions about the order of sound changes when two sound change rules "overlap" in some way (e.g.,  $[k] \rightarrow [ʔ]$  and  $[t] \rightarrow [k]$  in Hawaiian).

Sound change rules can be linked with an arc to show that the top change definitely came before the lower change.

### 3.3 Examples

- Intervocalic [s] undergoes rhotacism while [s] before consonants is deleted

$$- s \rightarrow r / V \_ V$$

$$- s \rightarrow / \_ C$$

- Word-initial consonants undergo weakening to [j]

$$- C \rightarrow j / \# \_$$

- Word final high vowels are deleted while interconsonantal high vowels become schwa

$$- H \rightarrow / \_ \#$$

$$- H \rightarrow \text{ə} / C \_ C$$

## 4 Phonetic versus phonemic change

Phonetic description: physical facts of the sounds of the language. Phonemic description: not only the physical facts but the way these sounds are related to each other for that language.

Some sound changes can take place without altering the phonemic structure of a language, and some sound changes do alter it. Also possible: phonemic change without a phonetic change.

### 4.1 Phonetic change without phonemic change

Such change is *allophonic* or *subphonemic*. A phoneme might develop a new allophone (e.g., lengthen or gain a new feature like palatalization or lengthen).

English [r] → [ɹ] is an example. Here the phonetic change has clearly taken place but has "not caused any reanalysis of the phonological system to take place. The same words that used to be distinguished in meaning from other words by a flap or a trill are now distinguished instead by [ɹ]."

$$/r/: [r] \sim [r] \rightarrow /r/: [\text{ɹ}]$$

## 4.2 Phonetic change with phonemic change

We can say that phonetic change is a "tool" of phonemic change in the sense that most instances of phonemic change are the result of a phonetic change in that particular sound.

**phonemic loss** disappearance of a phoneme between different stages of a language.

All cases of unconditioned sound loss directly and necessarily imply phonemic loss. More commonly, a conditioned sound loss represents "partial" phonemic loss (e.g., the loss of word-final vowels).

**phonemic addition** insertion of a phoneme into a word

**rephonemicization** change of phonemes existent in a word

Phonemic shift: two words distinguished by a particular pair of sounds are later on still distinguished but by different sounds.

Phonemic merger: two separate phonemes end up as a single phoneme. Yields homophones / homonyms. Phonemes can merge into one of themselves or into a completely new phoneme. Word-initial merging of /p/ and /w/: [pata] → [wata], [pinta] → [winta], [wapun] → [wapun].

Phonemic split: words which originally contained the same phoneme end up having different phonemes in that position.

## 4.3 Phonemic change without phonetic change

Loss of conditioning environment: in English, we originally had no velar nasal phoneme /ŋ/, but this sound did occur as an allophone of *n* before velar sounds. ('singer' was /smɪŋə/ [smɪŋə]). But then /ŋ/ gained status as its own phoneme. This is because the word-final velars which caused the allophony were lost, but the velar [ŋ] was retained as it was. Now [ŋ] and [ɪ] were in contrastive distribution rather than complementary distribution. Now we have /sɪŋ/ 'sing' and /sɪn/ 'sin'. The velar nasal never changed *phonetically*, but its *phonemic* status changed.

## 5 The comparative method

"Intelligent guesswork."

## 5.1 Sound correspondences and reconstruction

**reflex** evolved forms of a form from a parent language found in its daughter languages.

Spanish *diente* and Sanskrit *danta* are reflexes of the PIE root *\*dont-*.

**comparative method** derivation of an original form of a proto-language by examining correspondences among its reflexes in the language's daughter languages

We compare cognate forms in two (or preferably more) related languages in order to work out some original form from which these cognates could reasonably be derived.

—

Tongan	Samoaan	Rarotongan	Hawaiian	[meaning]
tapu	tapu	tapu	kapu	forbidden
tahi	tai	tai	kai	sea
aka	aʔa	aka	aʔa	root

1. Select cognates.
2. Sort out those forms which appear to be cognate from those which do not.

Reconstruction gets complex when a reflex has an extra morpheme that was added since its language's diversion from the parent language.

Tongan /tafaʔaki/, Samoaan /tafa/, Rarotongan /taʔa/, Hawaiian /kaha/ 'side': it's evident the Tongan reflex has an extra morpheme /aki/ on the end. In performing reconstruction we should replace this root with a hyphen before performing analysis ( $\rightarrow$  /tafa-/).

3. Determine the complete set of *sound correspondences*.

You should list *all* such sound correspondences present in the entire data set.

This set is straightforward: the vowels correspond in every case.

Tongan	Samoaan	Rarotongan	Hawaiian
t	t	t	k
a	a	a	a
p	p	p	p
u	u	u	u
h (word-medial)			
k	ʔ	k	ʔ

4. Determine what original sound in the proto-language might have produced that particular range of sounds in the daughter languages.

It's often best (and easiest) to assume that each correspondence was generated from a distinct original phoneme.

Principles to follow:

- (a) Sound changes must be plausible
- (b) Any reconstruction should involve as few overall sound changes as possible between parent and daughter languages
- (c) Reconstructions should fill gaps in phonological systems rather than create unbalanced systems.

"Balance": e.g., if we see that a language has two back rounded vowels /u/ and /o/, we can expect to see two front unrounded vowels /i/ and /e/ as well.

- (d) A phoneme should not be reconstructed in a proto-language unless it is shown to be absolutely necessary from the evidence of the daughter languages.

5. Most in this set are obvious: if /u/ appears in all four daughter languages, it's fairly likely this phoneme corresponds to a proto-language sound /\*u/.

For the first row, the obvious choice is that a proto /\*t/ produced /t/ in three languages and /k/ in one. (You could suggest a proto /\*k/, but this would imply sound change in three branches rather than one and thus break principle #2.)

More complicated is the /k/ <-> glottal stop correspondence. We have an equal distribution of different sounds here. Follow principle #1 here: /k/ → /ʔ/ is a very common form of lenition. So we can be fairly certain that the proto sound is /\*k/. You can use principle #3 as well: we already know proto Polynesian has a velar nasal consonant,

and in other points of articulation where we have seen a nasal there has also been a stop. Thus we probably need a  $\$/k/\$$ !

6. Reconstruct the original forms by applying sound changes in reverse.

## 5.2 Reconstructing of conditioned sound changes

Most of the previous changes were unconditioned.

Tongan	Samoaan	Rarotongan	Maori	Hawaiian	meaning
kafa	ʔafa	kaʔa	kaha	ʔaha	strong
ʔufi	ufi	uʔi	uhi	uhi	yam
afi	afi	aʔi	ahi	ahi	fire
faa	faa	ʔaa	$\phi$ aa	haa	four
feke	feʔe	ʔeke	$\phi$ eke	heʔe	octopus

Now we see multiple correspondences:

Tong	Samo	Raro	Mao	Haw
f	f	ʔ	h	h
f	f	ʔ	$\phi$	h

Yes, these correspondences could have come from two separate phonemes, but it's very unlikely that two different phonemes merged in the same way in four languages.

Look for evidence of complementary distribution between phonetically similar correspondence sets.

Look at the context of the correspondences in Maori.  $/h/$  appears word-medially while  $\phi$  appears word-initially. Then we can keep the old parent-language sound  $/f/$  and assert that

1. Maori:  $f \rightarrow \phi / \# \_\_$
2. Maori:  $f \rightarrow h / V \_\_ V$

—

**complementary distribution** relationship between two different elements, where one element appears in a certain environment and the other appears in an opposite environment. Indicates that the two complementary units are actually the same linguistic unit at a deeper level.

**contrastive distribution** relationship between two different elements where both elements are found in the same environment with a change in meaning.

E.g., English 'sin' /sm/ and 'seen' /sin/: /ɪ/ and /i/ are in contrastive distribution.

1. Sort out those forms which appear to be cognate and ignore the non-cognate forms.
2. Write out the full set of correspondences between the languages you are looking at (including correspondences where the sounds are identical all the way through). Be careful to note correspondences where a sound in one language corresponds to (or the absence of a sound) in another language.
3. Group together all correspondences that have reflexes that are phonetically similar.
4. Look for evidence of complementary and contrastive distribution between these suspicious pairs of correspondences.
5. For each correspondence set that is not in complementary distribution with another correspondence set, assume that it goes back to a separate original phoneme.
6. Make an estimation about the original form of the phoneme using the following criteria:
  - The proposed original phoneme must be plausible, meaning that the changes from it to the reflexes in the descendant languages must fit our knowledge about what kinds of sound changes are common in the world's languages.
  - The sound that has the widest distribution in the daughter languages is most likely to be the original phoneme.
  - A sound corresponding to a gap in the reconstructed phoneme inventory of a proto-language is also likely to be a possible reconstruction for one of the correspondence sets.
  - A sound that does not occur in any of the daughter languages should not be reconstructed unless there are very good reasons for doing so.



7. For each group of correspondence sets that are in complementary distribution, assume that they all go back to a single proto-phoneme, and use the same criteria given in (6) to reconstruct its shape.

### 5.3 The reality of proto-languages

Some linguists argue we shouldn't suggest any original phonetic form - just provide the sound correspondences.

Others say the proto-language might have never actually existed.

The comparative method can fail when a feature has been lost in all daughter languages.

## 6 Internal reconstruction

Allows you to make guesses about the history of a language.

You reconstruct only on the basis of evidence from within a single language ...

This analysis doesn't yield a proto-language but rather an earlier stage of the examined language, or a *pre-language*.

### 6.1 Synchronic alterations

We can rely on 'residual' forms of past features to perform reconstruction.

#### 6.1.1 Samoan transitivity markers

Modern Samoan has a set of suffixes to mark transitivity (lack of a suffix indicates intransitivity). Suffix pairing with roots seems to be almost random. We know, however, that Samoan used to have terminal consonants in its verbs (but does not anymore). If we look at a sibling or parent language, we find that the terminal consonants in these languages matches the initial consonant in the Samoan transitivity markers. This means that, when the Samoan terminal consonants were elided, they were actually retained in the transitivity suffix and reanalysed as part of the morph. Now Samoan has many *allomorphs* of different forms all with the same meaning.

Look at cases of morphological alteration (or *allomorphs* of morphemes) and ... work on the assumption that unusual or complex distributions of allomorphs may well go back to a simpler state of affairs than you find in the modern language.

Samoan's irregularity and unpredictability in its transitivity markers hinted at a much simpler past with some kind of morphological confusion between then and the present.

### 6.1.2 German word-final stop devoicing

Sing.	Pl.
laut	lautə
bo:t	bo:tə
ta:k	ta:gə
hunt	hundə

Could this complexity have been reasonably derived from an earlier and simpler form?

The suffix /-ə/ is common to all forms, so we can assume this to be part of the earlier form.

Assuming the plural forms have the original roots, we can say that the singular forms have had their terminal consonants devoiced (with no other conditions, given this limited data set).

## 6.2 Limitations of internal reconstruction

Because of limits, not used nearly as much as comparative method. Can't take us as far back in time as the comparative method.

Cases where internal reconstruction fits:

- When investigating an isolated language or a language only very distantly related to another
- When you want to see changes *between* a proto-language and its children
- When you want to construct from a proto-language further back in time

Can only be used when a sound change has brought about a morphological alternation (e.g., Samoan transitivity marking, Ger. plural alternation).

Internal reconstruction can't deal exactly with any language that has undergone overlapping sound changes.

Even if we get a pre-language, we can make only very vague conclusions about when it was used and how accurate it is.

### 6.3 Exercises

Wonderful internal reconstruction exercise (#5, p131):

Use the internal method of reconstruction to suggest what the original roots and the active and passive prefixes might have been from the following data in Bahasa Indonesia.

Active	Passive	-
məmbuka	dibuka	open
məndapat	didapat	get
mənjelaskan	dijelaskan	explain
mənggosok	digosok	rub
məmərlukan	dipərlukan	need
mənanam	ditanam	plant
məpərahkan	disərahkan	surrender
məjaraj	dikaraj	compose
məjurus	diurus	arrange
məjeja	dieja	spell
mənambil	diambil	take
məjikat	diikat	tie
məjərikan	dijərikan	give a fright
məjhapuskan	dihapuskan	wipe

## 7 Grammatical, semantic, and lexical change

Phonological change is much easier to study than morphosyntactic change because it is restricted in its possible mutations. We have better-kept histories of phonological change from which to create analyses.

### 7.1 Typology and grammatical change

A typological classification of languages groups languages by a specific set of common features.

Typological association by no means implies genetic association. English and the Tolai language of Papua New Guinea are both SVO, for example.

Upcoming: major grammatical typologies.

### 7.1.1 Morphological type

**morphological type** the way in which the main features of a language's grammar are expressed morphologically. Isolating, agglutinating, inflectional

**isolating language** a language where there tends to be only one morpheme per word (-> many free morphemes with just a few bound morphemes).

Table 2: Hiri Motu: 'My mother bought a fish at Koki.'

Lauegu	sinana	gwarume	ta	ia	hoia	Koki	dekenai.
My	mother	fish	one	she	bought	Koki	at

**agglutinating language** a language in which a word may contain many separate morphemes (both free and bound). The boundaries between morphemes are clear to recognize.

Bits of the language are "glued" together to make up larger words.

Table 3: Bandjalang: 'The man really hit the child.'

Mali-ju	bajgal-u	mala	da:dam	buma-ni-da:N.
the-subj.	man-subj.	the-obj.	child-obj.	hit-past-really

**inflectional language** a language in which there are many morphemes included within a single word, but the boundaries between one morpheme and another are not clear. Not a clear "gluing" of morphemes.

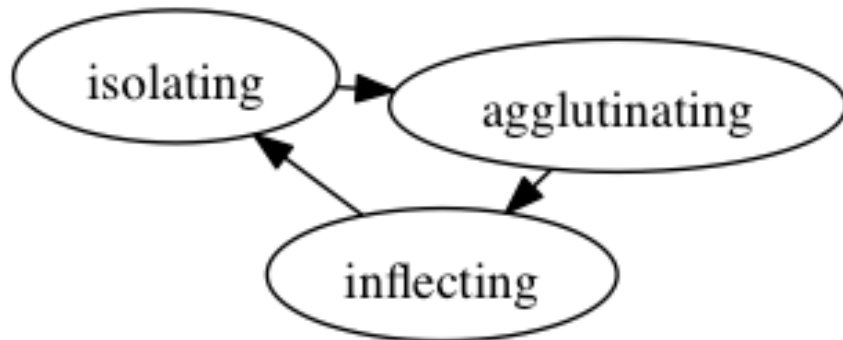
Table 4: Latin: 'Marcus loves Sophie.'

Markellus amat Sofiam.

We have a root *Markell-*. The suffix *-us* indicates that *Markell-* is the subject and also that *Markell-* is masculine and singular. *-m* in *Sofiam* shows that *Sofia-* is the feminine singular object. *amat* indicates love and also shows that the action occurs in the present tense with a singular third-person subject.

There is no single Latin marking morpheme that expresses the idea of 'singular', 'feminine', or 'subject'.

Languages have a tendency to evolve through the morphological types in a cycle:



1. Isolating → agglutinating change

Free-form grammatical markers can be phonologically reduced to bound form markers (i.e., suffixes or prefixes).

2. Agglutinating → inflectional change

By morphological fusion, two distinct morphemes in a word may drift so that their boundary becomes unrecognizable.

Table 5: An agglutinating gloss

na-	i-	lesi-	-o
I	future	see	it

Table 6: The same language, becoming inflectional

ni-	lesi-	-o
I+fut.	see	it

Here na-i was reanalyzed as nai- and then the *a* was dropped.

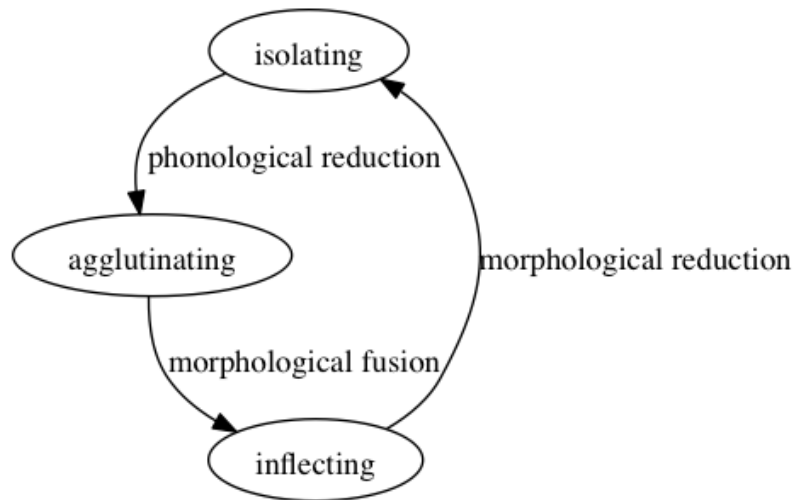
*ni* is an example of a *portmanteau morpheme*.

**portmanteau morpheme** a morpheme which was formed by the fusion of two or more earlier morphemes

3. Inflectional → isolating change

It's very common for inflectional morphemes to reduce and reduce until they are completely lost. The remaining words are composed of single morphemes. "Morphological reduction."

See the drift from Latin to Italian: noun declensions were lost, and nouns became simple free morphemes on their own. Whereas Latin had free word order thanks to its noun markers, Italian has a fixed order, more befitting of an isolating language.



### 7.1.2 Accusative / ergative languages

Way of marking subject / object noun phrases in a sentence.

- English distinguishes the sub-items:
  - Intransitive subject, transitive subject (nominative)
  - Transitive object (accusative)
- Bandjalang distinguishes:
  - Transitive subject (ergative)
  - Intransitive subject, transitive object (absolutive)

Acc/nom is much more common than erg/abs.

### 7.1.3 Basic word order

Commonly found: SVO, SOV, VSO

Word order can change in languages which begin with free word order but then soon favor one order over others.

#### 7.1.4 Verb chains

Some languages allow "verb chains" or "serial verbs", sequences of verbs strung together sometimes in a single phonological word.

Table 7: Paamese: 'You sat on the plank, breaking it.'

Keik	ko-ro:	vul	a:i.
you	you-sat	break	plank

Languages which allow this often see the "collapse" of some commonly used chains into independent morphemes.

## 7.2 Mechanisms of grammatical change

### 7.2.1 Reanalysis

**reanalysis** the grammatical process by which a form comes to be treated differently from the way it was originally interpreted by speakers of a parent language. See other parts of these notes for many examples of reanalysis.

The English morpheme *-burger* comes from *Hamburger* (as in, a product of Hamburg, Germany). But speakers reanalysed the first syllable of *hamburger* as referring to *ham* and thus as an independent morpheme. Now we use *-burger* as its own morpheme in words like *cheeseburger*, *eggburger*, *fishburger*, etc.

**back-formation** the creation of a new morpheme by removal of affixes.

English *cherry* comes from French *cerise* (pronounced the same in singular and plural form). When *cerise* was pulled into English, speakers determined the final /z/ was the plural marker, and dropped it for singular use. Now we have *cherry* and *cherries* rather than *cherries* and *cherrieses*! This is an example of grammatical reanalysis.

### 7.2.2 Analogy

English has fairly regular noun plurals, with a few exceptions like *man* / *men*, *child* / *children*, etc. A child might say *mans* instead of *men*, and this would be an example of analogy. The child is extrapolating based on the major pattern for pluralization in English. This is how we have today *shoe* / *shoes* instead of *shoe* / *shoen*, etc. Analogy in general increases grammatical regularity in a language.

But analogy can work in the opposite direction! People extrapolate (usually in jest) from the pattern *sing* / *sung*, *ring* / *rung* to *think* / *thunk*.

### 7.2.3 Diffusion

Change in grammar when two language communities are heavily mixed.

## 7.3 Semantic change

### 7.3.1 Processes of semantic change

**semantic broadening** a process of semantic change by which a word gains additional meanings, while still retaining its original meanings

**semantic narrowing** a process of semantic change by which a word comes to refer to only one part of its original meaning.

**semantic bifurcation** AKA "semantic split." A process of semantic change by which a word acquires another meaning that somehow relates to its original meaning.

In the English phrase *pitch black*, *pitch* refers to a black tar-like substance. Many would assert, though, that *pitch* in this phrase means something like "very." Here *pitch* has split into a new meaning while still retaining its old meaning (in a different context).

**semantic shift** a process of semantic change by which a word completely loses its original meaning and gains a new meaning.

Semantic change may be classified under more than one of these categories.

### 7.3.2 Causes of semantic change

- The **metaphoric use** of a word can sometimes effect a change in its meaning over time.
- **Euphemisms** as a result of avoiding a taboo / uncomfortable word or phrase can cause semantic broadening.
- **Hyperbole** causes "strong" words to become more normal and common after heavy use.



- Two similar-sounding (including homonymous) words may change in meaning to avoid **interference**. See the semantic split of English "gay" as an example.

## 7.4 Lexical change

Every language will have lexical innovations after its divergence from its closest parent language.

### 7.4.1 Borrowing

One of the most common sources of innovation is *borrowing* a lexical item. The form of a foreign word is taken and reshaped to fit the language's phonology.

Languages are more likely to borrow words outside of their *core vocabulary*. This is why we can expect to see correspondences among sister languages for words like *eat* and *sleep*, whereas they may differ with *church* and *dream*.

### 7.4.2 The interesting case of 'boy'

We aren't sure where English *boy* came from. Whereas *man* has a clear history, *boy* has no distinguishable root ancestry. *boy* may have been a genuine innovation, or it may have simply taken on the meaning of "young male child" through semantic shift (i.e., the form originally had a very different meaning).

### 7.4.3 Lexical compression

**lexical compression** AKA "lexical clipping." The process of lexical change by which one or more syllables is dropped from the end or middle of a word.

English *administrator* → *admin*, *university* → *uni*.

Lexical compression may include the replacement of one of the syllables with a diminutive syllable in English:

Australian English *football* → *footie*, *Christmas* → *Chrissie*.

The use of initials and acronyms is a special case of compression.

### 7.4.4 Word mixes / blends

*Administrative College* → *Adcol*.

## 8 Subgrouping

The comparative method can be used to determine the "distance" between two languages given their parent.

It is clear among the Indo-European languages that English, Dutch, and German belong to a subgroup distinct from the subgroup containing French and Italian.

There must then be a proto-language for each subgroup: a proto-Germanic and proto-Romance.

### 8.1 Shared innovation and shared retention

If two languages are in the same subgroup, this means that they not only share features but have gone through a *period of common descent*. (They did not diverge until a later stage in their development.)

We can detect periods of common descent by finding instances of *shared innovation* from the proto-language (where both children deviated in the same way) and *shared retention* (where both children retained a feature where other children of the proto-language did not).

Of course, shared innovation makes for much stronger evidence than shared retention, as languages will retain a majority of the features of their parent language.

If we find an instance of shared innovation and assume that the two languages are in a subgroup, this shows that the innovation occurred sometime between the divergence of the father language from the grandfather language and the divergence of the children from the father language.

Certain types of innovation provide weaker evidence than others. For example, loss of final consonants is a very common change and would never be considered on its own as evidence of a subgroup.

When subgrouping, look for:

- changes that are particularly unusual
- sets of several phonological changes, especially unusual changes which would not ordinarily be expected to have taken place together
- phonological changes which correspond to unconnected grammatical or semantic changes

"Lower-level subgroups" are subgroups at some deeper level in the tree of relations (i.e., subgroups contained by at least one subgroup).

## 8.2 Lexicostatistics and glottochronology

### 8.2.1 Lexicostatistics

In lexicostatistics we compare the core vocabularies of two languages to determine their lexical "distance." This method operates under two assumptions: that a language's core vocabulary is relatively resistant to change (esp. lexical borrowing) and that "the rate of lexical replacement [by borrowing] in the core vocabulary is more or less stable."

Table 8: Lexicostatistical classes

Level of subgrouping	Shared cognate percentage in core vocabulary
dialects of a language	81-100
languages of a family	36-81
families of a stock	12-36
stocks of a microphylum	4-12
microphyla of a mesophylum	1-4
mesophyla of a macrophylum	0-1

Most lexicostatisticians try to compare word lists of about 200 words. (Too few leads to error, and a requirement of too many can be hard to satisfy for obscure languages.)

The *Swadesh list* is the most popular list of core vocabulary used by lexicostatisticians.

These lists should not be worked out until sound correspondences have been determined. If you find cognates with an exceptional sound correspondence, you can then consider marking this pair as the result of lexical borrowing. It's very important to exclude loanwords in this process!

### 8.2.2 Glottochronology

More controversial is the process of *glottochronology*, where lexicostatistical groupings are used to estimate how long ago two languages diverged. As a very general rule:

### 8.2.3 Controversies

- Different linguists will come up with largely differing lists of cognates for a given sample set.
- Lexicostatisticians don't agree on the ranges for each subgrouping (or even the names of the subgroups!).

Table 9: The general glottochronological classifications

Level of subgrouping	Years of separation
dialects of a language	less than 500 years
languages of a family	500 to 2500 years
families of a stock	2500 to 5000 years
stocks of a microphylum	5000 to 7500 years
microphyla of a mesophylum	7500 to 10000 years
mesophyla of a macrophylum	more than 10000 years

The only thing that linguists can mostly agree on is that the cut-off point for "dialect" vs. "language" is at about 81% of shared cognates.

The claim that languages change their core vocabularies at a constant rate is looking unlikely to be anywhere near true.

## 9 Causes of language change

### 9.1 Anatomy and ethnic character

Racism!

### 9.2 Climate and geography

Some scholars in the nineteenth century suggested that a harsh physical environment could yield "harsh" (one could guess: containing glottal and uvular sounds) phonologies. [Nope.]

### 9.3 Local identification

Don Laycock: speakers in diverse areas intentionally morph their speech so as to differentiate themselves from native speakers of other languages.

Same with ethnic groups.

### 9.4 Functional need

If a language begins to be used in different contexts (i.e., scientific research, religious services), it may be forced to change. The resultant change is visible mostly in vocabulary.

## 9.5 Simplification

Sound change: assimilation and lenition are both cases in which physical effort is (generally) reduced.

Of course, linguistic 'simplicity' is about impossible to define as a universal. Some speakers may find phonetic reduction to a velar lateral a case of simplification, but an English speaker might find this as an increase in complexity because of the strangeness of the sound.

## 9.6 Structural pressure

Take a language with a balanced vowel inventory. One vowel is unconditionally fronted. This leaves an imbalance on the other end of the vowels, and this end should change as well, based on the theory of structural pressure.

We can say that languages *tend* to give in to structural pressure, but it is by no means an overwhelming force.

## 9.7 Conclusion

It certainly seems that, although language can be viewed as a system, there are forces lying in wait to destroy it, in addition to forces lying in wait to protect it.

# 10 Observing language change

## 10.1 The traditional view

Most people agree that language change is evident. (Most are aware of *whom* → *who*, for example.) But many linguists used to hold that it was impossible to view language change as it happened. Leonard Bloomfield (1933):

The process of linguistic change has never been directly observed; ... such an observation, with our present facilities, is inconceivable.

Saussure: to study diachronic linguistics in a scientific way, we need to have at least two synchronic descriptions of a language taken at different times.

Saussure, Bloomfield et al. were too busy arguing about this to realize that their languages were changing right at that moment.

## 10.2 Indeterminacy

"Who isn't that?"

This sentence isn't strictly ungrammatical, but also doesn't sound grammatical. It is *indeterminate*.

Grammars are *not* watertight - they leak all over the place.

The indeterminacy of many of the sentences we use signals that formerly important grammatical rules are beginning to weaken.

## 10.3 Variability

Sociolects show evidence of variability in a small geographic region.

## 10.4 The spread and change of lexical diffusion

**lexical diffusion** the slow spread of an unconditional sound change through a lexicon. The sound change will most likely begin under strict conditions and slowly spread until it appears in retrospect that an unconditional sound change occurred (perhaps through the entire lexicon at the same time).

# 11 Problems with traditional assumptions

## 11.1 The neogrammarians

Sir William Jones made the study of etymology significantly more respectable.

Jones: similarities in the *structure* of languages rather than similarities between a few individual words are what prove relations between languages. Lexical similarities were "poor evidence" of genetic relation. (Linguists in the recent pasts had shown that, with enough effort, you can prove a relation between any two words in any two languages.)

Rasmus Rask (1818): We can still count on repeated sound correspondences in the lexicon as good evidence. Agrees that a few cognates mean nothing.

Grimm, Verner and Grassmann gradually built up a set of "laws" in their studies of Indo-European languages. Inspired by the deterministic and / or regular systems of Newtonian physics and Darwinian biology, they saw languages as subject to universal laws of change.

They believed that semantic or grammatical factors could not affect the process of sound change. The phonetic laws they discovered, they claimed, operated without error, and the only conditioning factors in language change were phonetic factors.

With this new school, the study of language became scientific (i.e., rigorous and open to proof).

A sound correspondence or a similarity between two languages is of no value for reconstruction or for determining linguistic relationships unless it is *systematic* or *regular*.

In reconstruction:

Rather than complicate the statement of the phonemes of the original language, what you do is simply *ignore* such isolated correspondences, and reconstruct *only* on the basis of the evidence provided by systematic sound correspondences.

The neogrammarian hypothesis implies that there are some forces which push against the universal force of sound change.

## 11.2 Analogy

Neogrammarians frequently invoked analogy to solve problems with irregular sound correspondences.

### 11.2.1 Analogical change by meaning

Speakers can perceive partial similarities between the meanings of two words even when their forms are very different. It's common to see two words similar in meaning drift together in form.

This could be a somewhat shaky argument if we believe in Saussure's principle of the arbitrariness of sign. But it *does* happen:

- \*kwetwo:res → kwattwor 'four'
- \*penkwe → kwinkwe 'five'

These are PIE → Latin relations. If only sound change rules had been followed here, we should have gotten a Latin /pinkwe/.

[Doesn't this sort of finger-pointing go against what neogrammarians said earlier? We need systematic change to make any respectable case, no?]

### 11.2.2 Analogical change by form

English *ewt* → *newt* by *an ewt* → *a newt*.

### 11.2.3 Folk etymology

People may change the pronunciation of a word to match it with whatever they believe to be its etymology (accurate or not).

English 'crayfish,' 'sparrow grass' in place of 'asparagus,' 'ashfelt' in place of 'asphalt.'

### 11.2.4 Hypercorrection

Speakers over-adjust when trying to adapt to certain social situations.

## 11.3 Convergent lexical development

Two words similar in meaning combine their shapes and meanings to form a single morpheme.

## 11.4 Spelling pronunciation

In literate societies, speakers may pronounce based on a word's spelling (→ incorrectly).

## 11.5 Lexical copying

In English, we have a regular reflex of /\*sk/ → ʃ. But we have *skiff* and *skirt* derived from the same sources as *ship* and *shirt*! We can blame lexical copying (borrowing) for this: the *sk*- words were borrowed from Danish at a later point in time. So we would need to exclude these *sk*- words while establishing sound correspondences with English siblings / ancestors.

This is unusual – copied forms are most often easy to distinguish from genuinely evolved forms.

## 11.6 Non-phonetic conditioning

Most linguists agree that sound changes can't be restricted to a certain class of word meanings (thus agreeing with the neogrammarians). But some languages do show evidence of change in specific word classes (e.g., parts of speech). Paamese is an example here.



## 11.7 The wave model and lexical diffusion

Many scholars have pointed out that the subgrouping model upon which the comparative method and the neogrammarian hypothesis rely is somewhat silly. It posits that there is a unique moment in time at which two languages diverge from a parent, after which they evolve completely independently. When stated this way, the flaws in the reasoning are obvious.

Generally what happens is that a language develops two closely related dialects which only very gradually diverge into separate languages. While these languages are slowly becoming more and more different, there is usually some degree of contact between the two speech communities, often with some kind of mutual influence between the two dialects.

The 4000 speakers of Paamese on the island of Paama in Vanatu have significant differences in speech. There are two recognized dialects of Northern and Southern Paamese, even though the island spans only ten kilometers from north to south. It's *impossible* to draw a line that geographically separates all features of the two dialects. We can, however, determine *isoglosses*.

**isogloss** a geographic division about which a certain feature of a language differs

Gillieron was a nineteenth-century dialectologist who opposed the neogrammarians. He stated that "every word has its own history": sound changes are not rigidly determined by purely phonetic factors. Which words undergo a particular change can be quite arbitrary. Gillieron proposed the *wave model*.

**wave model** an alternative model of language change which suggests that a change in one area "ripples" out towards connected areas, generally losing strength as it spreads. (Imagine a stone falling in a puddle and the resultant ripples. The stone may be fronting of vowels after dentals, and the ripples spread the change to nearby speakers.) As waves accumulate, dialects separate into languages.

This opposes the traditional family tree model, which holds that languages split at a distinct point after which they do not come in contact.

This model has gained respect in modern linguistics, especially with analogous discoveries in lexical diffusion. As lexical diffusion suggests that sound changes propagate radially through a language, the wave model suggests the same thing on the spatial plane.

## 11.8 Dialect chains and non-discrete subgroups

German and Dutch exist on a *dialect chain*. If we ignore the political border between the Netherlands and Germany, it's exceedingly difficult to decide where German ends geographically and where Dutch begins. Because of the political boundary, however, these "mixed" dialects will evolve mostly separated from one another and eventually appear as different languages.

Some languages are on a similar *language chain* in that they can be classified as a member of multiple subgroups. Subgroups *overlap* and it becomes unclear as to where they begin and end.

## 12 Language contact

### 12.1 Convergence

Fluently bilingual speakers can produce interference between their two languages. One language may "leak" into the other.

Phonological interference: Japanese saying *rots of ruck* instead of *lots of luck*.

Grammatical interference: a Frenchman marking a topic separately from the sentence

**calque** the borrowing of meaning from a second language while using the form from the first.

E.g., Quebecois *chien chaud* 'hot dog'. This is an exact relex.

A person from Vanatu speaking English might say, "He sat there and just listened to his kava." This is another instance of a calque: the verb 'listen to' in Vanatu languages can also refer to the consumption of kava.

English displays a minor form of grammatical interference in some of its irregular plurals (*phenomena, indices, kibbutzim*, etc.). We retain the pluralization rules from the source language rather than using the regular English rule. (Bound morphemes are unlikely to have much effect on the grammar of the entire language, and so these remain the exception.)

**diffusion** the spread of a certain linguistic feature from one language to another

**areal features** linguistic features shared among a group of languages spoken in a certain area / region which arose as a result of diffusion

Chinese, Thai and Vietnamese share the areal feature of tone distinction.

Convergence makes clear the inadequacy of the comparative method. Each language experiences areal diffusion and some can thus be said to have multiple proto-languages: their genetic parent and the parent of the language with which they have mixed.

Linguists can't agree on whether the languages of the Reef-Santa Cruz islands are Austronesian languages heavily influenced by non-Austronesian languages or non-Austronesian heavily influenced by Austronesian.

## 12.2 Language genesis – pidgins and creoles

[Basics]

**superstrate language** AKA "superordinate language." A dominant language with which a pidgin is in contact as it develops.

**substrate language** AKA "subordinate language." A non-dominant language with which a pidgin is in contact as it develops.

The structure of a pidgin often more closely parallels its substrate languages than its superstrate(s).

## 12.3 Language death

Language death is almost always associated with language contact (the only other significant case arises when an entire population is wiped out).

Signs of a language death: young speakers constantly use grammatical and lexical structures from an interfering dominant language, make mistakes, and exhibit a poor command of the language's style.

# 13 Cultural reconstruction

Historical linguistics can tell us:

- Relative sequence of population splits
- Sequences of cultural contact with respect to population splits

Paamese *kumala* 'sweet potato' was copied from Quechua *kumar*. Had this been copied in the proto-language, we would have seen more sound

change in the resultant form. So the existence of *kumala* tells us that sweet potatoes weren't a major part of Paamese culture until after its major sound changes had already diffused through the lexicon.

- Content of a culture

*Wörter und Sachen*: if we can reconstruct a proto-language root for a word, that concept must have held some amount of importance in the proto-culture.

- The homeland of a people

**age-area hypothesis** the area that has the greatest diversity (judging by number of first-order subgroups) is likely to be the location of the original homeland