

Language variation and change

Historical linguistics: Sound change

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Expressing sound change

- Unconditioned change:

	Hawaiian	
*tapu	> kapu	'forbidden'
*taʻi	> kani	'cry'
*taʻata	> kanaka	'man'
*ŋutu	> nuku	'mouth'
*tolu	> kolu	'three'

*t > k

*ŋ > n

Expressing sound change

- Conditioned changes

$*t > s / _ V_{front}$

	Motu	
*tama	> tama	'father'
*taja	> tai	'cry'
*tubu	> tubu	'grandparent'
*topu	> tohu	'sugarcane'
*tolu	> toi	'three'
*tina	> sina	'mother'
*qate	> ase	'liver'
*mate	> mase	'die'

Expressing sound change

- Conditioned changes

*x > k/ s _

Afrikaans

*sxo:n	>	sko:n	'clean'
*sxoudər	>	skouər	'shoulder'
*sxœlt	>	skœlt	'debt'

Expressing sound change

- Conditioned changes

*s > r/ V _ V

	Latin	
*ami:ko:som	>	amīcōrum 'of the friends'
*genesis	>	generis 'of the type'
*hono:sis	>	honōris 'of the honor'
*flo:sis	>	flōris 'of the flower'

Expressing sound change

- Conditioned changes

*p > w/ # _

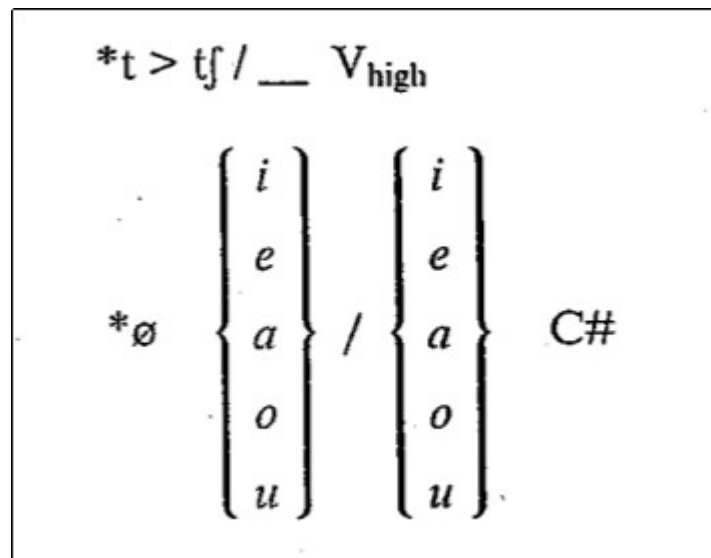
		Uradhi
*pinta	>	winta 'arm'
*pilu	>	wilu 'hip'
*paṭa	>	waṭa 'bite'

$C_{voiced} > C_{voiceless} / _ \# :$

“Auslautverhärtung” (German)

Expressing sound change

- Generalizations



		Banoni	
*koti	>	kotʃi	'cut'
*tina	>	tʃina	'mother'
*puti	>	putʃi	'pull out'
*mata	>	mata	'eye'
*mate	>	mate	'die'
*paʃan	>	βayana	'add meat to staple'
*kulit	>	yuritʃi	'skin sugarcane'

Ordering of changes

	Hawaiian		
*taʔi	> kani	'cry'	*t > k
*ʔato	> ako	'thatch'	*k > ʔ
*takele	> kaʔele	'back of canoe'	*ʔ > ũ
*aka	> aʔa	'root'	*s > h
*pito	> piko	'navel'	
*paki	> paʔi	'slap'	
*tapu	> kapu	'forbidden'	
*taʔata	> kanaka	'man'	
*isu	> ihu	'nose'	
*sika	> hiʔa	'firemaking'	

Can we say something about the relative ordering of the first and the second rule?

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Can we say something about the relative ordering of the first and the second rule?

$$\left(\begin{array}{l} *k > ʔ \\ *t > k \end{array} \right)$$

Phonetic and phonemic change

- Some changes do not create new contrasts

*t > s

- no /s/ in proto-language

- [s] is allophon of /t/

Motu

*tama	>	tama	'father'
*tapis	>	tai	'cry'
*tubu	>	tubu	'grandparent'
*topu	>	tohu	'sugarcane'
*tolu	>	toi	'three'
*tina	>	sina	'mother'
*qate	>	ase	'liver'
*mate	>	mase	'die'

Phonemic loss

- C > Ø / # _

Angkamuthi

*maji	>	aji	'food'
*nani	>	ani	'ground'
*ŋampu	>	ampu	'tooth'
*n̩ukal	>	uka:	'foot'
*yantu	>	antu	'canoe'
*wapun	>	apun	'head'

Phonemic addition

$$*t > tʃ / _ V_{\text{high}}$$

$$*∅ \left\{ \begin{array}{c} i \\ e \\ a \\ o \\ u \end{array} \right\} / \left\{ \begin{array}{c} i \\ e \\ a \\ o \\ u \end{array} \right\} C\#$$

		Banoni	
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Second rule adds a sound that is not fully predicable > phonemic, not just phonetic, addition

Rephonemization

- Creation of a new pattern of oppositions
- Three sub-types:
 - Shift
 - Merger
 - Split

Phonemic shift

- Grimm's Law

$b^h \rightarrow b \rightarrow p \rightarrow f$

$d^h \rightarrow d \rightarrow t \rightarrow \theta$

$g^h \rightarrow g \rightarrow k \rightarrow h, x$

- Opposition between /b/ and /p/ in PIE is maintained as opposition between /p/ and /f/ in Proto-Germanic etc.

Merger

- A, B > B

TABLE 2.1: Sanskrit–Latin cognates showing Sanskrit merger of *e, o, a* > *a*

<i>Sanskrit</i>	<i>Latin</i>	<i>Proto-Indo-European</i>	
ad-	ed-	*ed-	‘to eat’
danta	dent-	*dent-	‘tooth’
avi-	ovi-	*owi-	‘sheep’
dva-	duo	*dwo-	‘two’
ajra-	ager	*aĝro-	‘field’ (compare <i>acre</i>)
apa	ab	*apo	‘away, from’

Merger

- A, B > B

	<i>PIE</i>	<i>Greek</i>	<i>Latin</i>	<i>Gothic</i>	<i>OHG</i>	<i>English</i>
*o	*oktō(u)-	oktṓ	octo	ahtau [axtau]	ahto	'eight'
*ə	*pəter-	patḗr	pater	fadar	fater	'father'
*a	*aġro-	agrós	ager	akrs	ackar	'field' (acre)

Merger

- A, B > C
 - Iberian Spanish θ, s > Latin American Spanish $\ʃ$
caza /kaθa/ 'hunt, chase', *casa* /kasa/ 'house'
> /kaʃa/

Mergers are irreversible.

Phonemic split

- Arises via conditioned sound change

$$*X > \begin{cases} Y / A \\ Z / B \end{cases}$$

If both [A] and [B] exist elsewhere in the language, we speak of phonemic split.

Phonemic split

TABLE 2.2: Historical derivation of 'mouse', 'mice', 'foot', 'feet'

	<i>mouse</i>	<i>mice</i>	<i>foot</i>	<i>feet</i>
Stage 1 (no changes)	/mu:s/ [mu:s]	/mu:s-i/ [mu:s-i]	/fo:t/ [fo:t]	/fo:t-i/ [fo:t-i]
Umlaut	/mu:s/ [mu:s]	/mu:s-i/ [my:s-i]	/fo:t/ [fo:t]	/fo:t-i/ [fø:t-i]
Loss of <i>-i</i> (= split after merger)	/mu:s/ [mu:s]	/my:s/ [my:s]	/fo:t/ [fo:t]	/fø:t/ [fø:t]
Unrounding	/mu:s/ [mu:s]	/mi:s/ [mi:s]	/fo:t/ [fo:t]	/fe:t/ [fe:t]
Great Vowel Shift	/maus/ [maus]	/mais/ [mais]	/fu:t/ [fu:t]	/fi:t/ [fi:t]

Splits follow mergers.

Phonemic split

- Arises via conditioned sound change

$$*X > \begin{cases} Y / A \\ Z / B \end{cases}$$

If both [A] and [B] exist elsewhere in the language, we speak of phonemic split.