

## Vowels, Sonorants, Ablaut, and Laryngeals

### 1. Vowels

<i>Sanskrit</i>	<i>Greek</i>	<i>Latin</i>	
asti	esti	est	‘is’
ašva		equus	‘horse’
sána		senex	‘old’
mád <sup>h</sup> ya	mesos	medius	‘middle’
ávi	ois	ovis	‘egg’
ápas		opus	‘work’
ánas		onus	‘burden’
ma:s	me:n	mensis	‘month’
sa:mi	he:mi-	semi	‘half’
va:k (‘speech’)		vo:x	‘voice’
pá-	po:no	po:tus	‘drink’

\*e > a : e : e

\*o > a : o : o

New pattern:

pitá	patér :	páter	‘father’
*ə > i :	a :	a	

### 2. Sonorants

	<i>Sanskrit</i>	<i>Greek</i>	<i>Latin</i>	
*m	ma:tár	mé:te:r	ma:ter	‘mother’
* <u>m</u>	dáša	déka	dekem	‘ten’
*n	návas	néos	nowus	‘new’
* <u>n</u>	tatás	tatós	tentus	‘stretched’
*l	lag <sup>h</sup> ús	elak <sup>h</sup> ús (‘small’)	lewis	‘light’
* <u>l</u>	mṛdús		mollis	‘soft’
*r	rud <sup>h</sup> irás	erut <sup>h</sup> rós	ruber	‘red’
* <u>r</u>	mṛtís		mort-	‘death’
*w	váhati	wek <sup>h</sup> éto:	wehit	‘convey’
*u	jugám	zugón	jugum	‘yoke’
*j	jugám	zugón	jugum	‘yoke’
*i	vid-	wid	wid-	‘see’

### 3. Ablaut

\*e ~ \*o ~ \*∅

#### *Sanskrit*

e-grade: várte: 'I turn'  
 o-grade: va-várta 'I turned'  
 zero-grade: vavr̥timá 'we turned'

#### *Greek*

patéra 'father-ACC'  
 apátora 'fatherless'  
 patrós 'father-GEN'

#### *Latin*

e-grade: tego: 'I cover' pater 'father-NOM'  
 o-grade: toga 'toga'  
 zero-grade: patris 'father-GEN'

Note: zero-grade of sonorants are either syllabic sonorants (or their reflexes) or high vowels (for \*w and \*j).

### 4. Root Types

*CeC			*CeRC			*CReC		
e-grd	o-grd	∅-grd	e-grd	o-grd	∅-grd	e-grd	o-grd	∅-grd
*CeC	*CoC	*CC	*CeRC	*CoRC	*C <sub>ɹ</sub> C	*CReC	*CRoC	*C <sub>ɹ</sub> C

### 5. Exceptional Root Types

*VC			*VRC		
e-grd	o-grd	∅-grd	e-grd	o-grd	∅-grd
*VC	*oC	*əC	*VRC	*oRC	* <sub>ɹ</sub> C
ago:	ógmos		awso:sa	uśás	
'I drive'	'furrow'		'dawn'	'dawn'	
(Gk.)	(Gk.)		(Lat.)	(Skt.)	

\*CV:

e-grd	o-grd	∅-grd
*CV:	*Co:	*Cə

Note: when there is no sonorant, \*ə shows up in zero-grade

ti-t <sup>h</sup> e:-mi	t <sup>h</sup> o:mós
'I place'	'place'
(Gk.)	(Gk.)
sta:-re	status
'I stand'	'stood'

## 6. Explaining the Exceptions - Laryngeal Theory

*Saussure (1879):*

Posited two abstract 'sonic coefficients': Q and A

Rules:      \*Ae > \*Aa              \*A > ∅      \*Qe > \*o      \*Q > ∅  
                 \*eA > \*a:                                      \*eQ > \*o:

e-grade		o-grade		zero-grade				
*AeC	>	*aC	*AoC	>	*oC	*AC	>	*əC
*AeRC	>	*aRC	*AoRC	>	*oRC	*ARC	>	*RC
*CeA	>	*Ca:	*CoA	>	*Co:	*CA	>	*Cə

This analysis simultaneously accounts for the irregular roots and provides a source for \*ə

*Möller (1917):*

Attempted to link IE with Semitic languages and identified Saussure's sononic coefficients as LARYNGEALS. Subsequently, three such hypothetical consonants were posited:

\*e<sub>1</sub> (e-coloring)    e<sub>2</sub> (a-coloring = A)    e<sub>3</sub> (o-coloring = Q)

Perhaps:      [x̥]                      [x]                      [x<sup>w</sup>]

Note parallels with the three series of velars reconstructed by Brugmann. While the link with Semitic has been almost universally discounted, the term 'Laryngeal' remains (hence, one hears Saussure credited with the 'Laryngeal Hypothesis'). New evidence (below) suggests that Möller may have been on the right track when he gave Saussure's sonic coefficients some kind of 'laryngeal' phonetic value.

Often, nowadays, the three laryngeals are represented as H<sub>1</sub>, H<sub>2</sub>, and H<sub>3</sub>. Their effects are as follows:

(1) a.	[H <sub>1</sub> e ...] > [e ...]	*H <sub>1</sub> es	>	*es	'be'
b.	[H <sub>2</sub> e ...] > [a ...]	*H <sub>2</sub> eg	>	*ag	'drive'
c.	[H <sub>3</sub> e ...] > [o ...]	*H <sub>2</sub> ed	>	*od	'smell'
(2) a.	[... e H <sub>1</sub> ] > [... e:]	*d <sup>h</sup> eH <sub>1</sub>	>	*d <sup>h</sup> e:	'set'
b.	[... e H <sub>2</sub> ] > [... a:]	*steH <sub>2</sub>	>	*ste:	'stand'
c.	[... e H <sub>3</sub> ] > [... o:]	*gneH <sub>3</sub>	>	*gno:	'know'

The idiosyncratic vowel in the exceptional roots are the result of the coloring of e-grade \*e by different laryngeals.

