

PIE phonology

History

- * Heinrich Schleicher, 1860s, three vowels (*a i u*) and fifteen consonants
- * 19th century: 25 consonants and 10 vowels
- * PIE sounds are similar to IPA (International Phonetic Alphabet), but not identical

Consonants

- * Formed by partially or completely blocking the flow of air through the vocal tract
- * The place in the vocal tract where air flow is obstructed is called the **place of articulation**.
- * Consonants are classified according to where the obstruction takes place, how it takes place (**manner of articulation**), and whether there is a vibration of the vocal cords (**voicing**).

Stops (plosives)

- * Produced by completely blocking, then releasing the flow of air through the mouth.
- * IE daughter languages suggest that PIE was rich in stops.
- * Stops can be:
 - * labial (p, b, b^h)
 - * dental (t, d, d^h)
 - * palatal (k', g', g'^h)
 - * velar (pure velar, k, g, g^h)
 - * labiovelar (k^w, g^w, g^{wh})

Some things to be aware of:

- * The apostrophe after $*g$ and $*k$, i.e. $*g'$ and $*k'$, indicates there is a palatalization of the velar (e.g. 'Tokyo' and 'argue').
- * The superscript w , i.e. $*k^w$ and $*g^w$, indicates labialization of the velar (rounded velars).
- * The superscript h , i.e. $*b^h$, indicates an aspiration.
- * Only voiced stops are aspirated in PIE.

Labial and Dental Stops

*	Skt.	Av.	Gk.	Lat.	W.	Eng.	Arm.	Lith.	PIE
*	p	p	p	p	–	f	h	p	*p
*	t	t	t	t	t	th	t ^c	p	*t
*	b	b	b	b	b	p	p	b	*b
*	d	d	d	d	d	t	t	d	*d

* *p (labial stop), *t (dental stop) are voiceless stops; *b (labial stop), *d (dental stop) are the corresponding voiced stops

Velars (gutturals): plain (pure), palatal, labio-

* *k*'s and *g*'s produced with the back of the tongue raised to touch the soft palate.

* Skt.	Av.	Gk.	Lat.	W.	Eng.	Arm.	Lith.	PIE
* k	k	k	k (c)	c	h	k ^c	k	*k
* ś	s	k	k (c)	c	h	s	š	*k'
* k	k	p	qu	p	wh	k ^c	k	*k ^w
* g	g	g	g	g	k (c)	k	g	*g
* j	z	g	g	g	k (c)	c	ž	*g'
* g	g	b	u (or v)b		qu	k	g	*g ^w

* palatal stops: k' = Tokyo g' = argue

* labiovelar stops: k^w (voiceless) g^w (voiced)

Velars

- * ‘Although the term *velar* normally refers specifically to *k* or *g*, all six sounds we have just reconstructed--**k *g *k' *g' k^w g^w* – are collectively referred to as “velars” in Indo-European Studies (or “gutturals” in older literature; occasionally they are also called *dorsals* and *tectals*. To avoid confusion, **k* and **g* are often called the *plain velars* to distinguish them from the others (which, as we have seen, are called palatal velars and labiovelars)’ (Fortson 50).

Voiced Aspirated Stops

*	Skt.	Av.	Gk.	Lat.	W.	Eng.	Arm.	Lith.	PIE
*	bh	b	ph	f	b	b	d	b	*b ^h
*	dh	d	th	f	d	d	d	d	*d ^h
*	h	z	kh	h	g	g	j	ž	*g ^h
*	gh	g	kh	h	g	g	g	g	*g ^h
*	gh	g	ph	f	g	b	g	g	*g ^{wh}

* voiced stops followed by a puff of breath or a brief breathiness (murmur); still preserved in Hindi and Bengali

* aspiration was originally present, but was lost in the daughter languages that do now exhibit aspiration of these consonantal sounds

Here is a summary that you may find helpful

- * Stops can be labial, dental, palatal, velar, labiovelar.
- * Palatal velars, pure/plain velars, and labiovelars are are velars.
- * There are voiceless stops, voiced stops, and voiced aspirated stops.

Here is the same information in a chart: PIE stops
(labial, dental, and velar; voiceless, voiced, voiced
aspirated)

	labial	dental	palatal	velar	labiovelar
voiceless	p	t	k'	k	k ^w
voiced	b	d	g'	g	g ^w
voiced aspirated	b ^h	d ^h	g' ^h	g ^h	g ^{wh}

Exercise #1: identify the PIE sound correspondence

- * Vedic Sanskrit: pad-
- * Luvian: pata-
- * Greek: pod-
- * Latin: ped-
- * Armenian: hotn-
- * English: foot-
- * Tocharian A: pe

Exercise 2

- * Hittite: *kiss-* (comb)
- * Greek: *késkeon* (<kes-kes-o, course flax prepared from spinning)
- * Middle Irish: *cír* (<*kes-ra*, comb)
- * Old English: *heord* (hair)
- * Old Church Slavonic: *kosa* (hair)
- * Lithuanian: *kasa* (hair)

Exercise 3

- * Hittite: *kuit* (what)
- * Vedic Sanskrit: *kás* (who)
- * Avestan: *ko* (who)
- * Greek: *ti* (what)
- * Latin: *quid* (what)
- * Welsh: *prwy* (who)
- * Armenian: *k'ani* (how much)
- * Old Church Slavonic: *ku-to* (who)
- * Lithuanian: *kas* (who)
- * Albanian: *ke* (whom)

Exercise 4

- * Hittite: *kard*
- * Sanskrit: *śrād-dha* (putting one's heart in, trust)
- * Greek: *kardia*
- * Latin: *cord-*
- * Old Irish: *cridle*
- * English: *heart*
- * Armenian: *sirt*
- * Old Church Slavonic: *srǫd-ŭce*
- * Lithuanian: *širdis*