Lingua 'tongue' from *dingua* (Paul.Fest.): OE *tunge*, NE *tongue*.
Oleō 'have an odor' beside noun *odor* : G ὄζω, ὄδωδα.
Solium 'throne' (and perhaps *cōnsulēs* "'having the same seat') from **sed-* 'sit' in *sedeō*.
Levir for **laever* 'husband's brother' (first attested in 6th century AD) : Ved. *devár-*, G δᾱήρ (207), OE *tácor*.
Capitōlium one of the hills of Rome, for orig. *Capitod-*.
Impelimenta (Paul.Fest.) for *impedīmenta* 'baggage'.

The question of whether L *Ulixēs* vs. G Ὀδυσσεύς 'Ulysses' is an example of this phenomenon is confused by the existence of variant G forms of the name already containing λ: Ολυττευς, Ωλιξης.)

a. Ancient authorities were aware of the phenomenon (they supply such forms as *dacrima*, *dingua*, *Capitodium*, and *impelimenta* which are not otherwise attested). Since the late 19th century it has been customary to identify Sabine (that is, Oscan) as the source of these *l*'s; but in Oscan, and all other known Italic languages near Rome, reflexes of **d* and **l* everywhere remain distinct. However, the allegedly Sabine origin of this phenomenon may help explain a peculiarity of the native Oscan alphabet: the symbol whose shape corresponds most closely to **R** stands for the sound /d/, while letter **D** stands for /r/. Evidently there was in fact something about the phonetics of the Sabine reflex of **d* (a flap perhaps) which, though always distinct in O from both *r* and *l*, confused whoever adapted the alphabet for writing Oscan; and the same phonetics may have on occasion led to O forms being taken over in L with *l* for *d*.

b. Perhaps somehow related to the foregoing, in early L *r* is also found for *d*: ARFVISE, ARVORSVM (SC de Bacch.), APVRFINEM (*apud fīnem*). Possibly this was a regular change of *d* before *f* or *v* (with some extension to other cases) which was later leveled in favor of the usual *ad* and *apud*. —L *merīdiēs* 'noon' from **medīdiēs* is a case of anticipatory dissimilation. L *crūdus* 'raw' is perhaps from **krūros* (*cruor*, cf. Ved. *krūrá-* 'slaughter, atrocity') by lag dissimilation; cf. It. *rado* 'scarce' < L *rārus*.

DORSAL STOPS

152. The PIE dorsal stops were as follows (for a survey of the usual reflexes see **154**):

	Palatal	(Plain) Velar	Labiovelar
voiceless	ḱ	k	k^w
voiced	ǵ	g	g^w
voiced aspirated	ǵh	gh	$g^w h$

In considering the relations of the PIE dorsals—the general term for all kinds of *k*-sounds—it is necessary to distinguish two main series and, as regards their reflexes, to divide the IE languages into two groups (**11**).

One series, known as the *palatals* and denoted here by **ḱ*, **ǵ*, and **ǵh*

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in view of: the discrepancy in gender; the discrepancy in the length of the second vowel; and the L development of *l-*. Besides, δάκρῡμα is a poetical, high-flown, and rare word—altogether unlikely as a source for a borrowing. As if these considerations were not enough, 'tear' is among the 15-odd lexical items known to be most resistant to borrowing.

—other notations are met with—is represented by simple dorsals in the more conservative IE languages. These are the western group (Greek, Italic, Celtic, and Germanic, and unattested strains of BS); Tocharian in the extreme east of the range; and Anatolian in the extreme south of it. In the innovative ('satem') subgroup, the palatals are reflected as sibilants; these languages are Armenian, Albanian, Indo-Iranian, and the historically attested members of BS (132).

The other series, the *labiovelars*, are denoted here by $*k^w$, $*g^w$, and $*g^wh$; other notations are common, especially in the older literature. In the satem languages these stops reveal no trace of a labial coarticulation. Instead, they split into affricated or palatal articulation before front vowels (PIE front vowels, that is), while remaining dorsal stops elsewhere. The 'centum languages' without exception attest to labialized articulation, though it is manifested in various ways (cf. 155, below, on *P*- and *Q*-dialects).

A contrast between plain dorsals and labialized dorsals is widespread among the world's languages; but so is a constrast between plain dorsal stops and palatal stops. Typology thus is no guide in framing the best hypothesis for the PIE dorsal system. The universal development of sibilants in satem languages from the first group of stops mentioned above implies a saliently palatal articulation, but of this there is no trace in the 'centum languages'. Two possibilities might account for this: (1) The 'centum languages' RETRACTED two series of stops—palatal and plain—converting them into plain and labialized, respectively; or else (2) the satem group FRONTED plain velar stops (whose aboriginal phonetics are faithfully reflected in the 'centum languages'), with the concomitant loss of rounding in the aboriginal labiovelar series.

The latter must be the correct view, for at least three reasons. First, in view of the diachronic instability of palatal stops, if palatal articulation was a feature of the parent language, the total lack of evidence pointing to specifically palatal articulation of $*\acute{k}$, $*\acute{g}$, and $*\acute{g}h$ in ANY 'centum language' is nothing short of phenomenal. Second, the distribution of the two branches—satem languages in a central area flanked by 'centum languages' on three sides—is a classic one in dialect geography: the peripheral languages are the relics of an earlier state of affairs, cut off from one another by a centrally-located area of innovation. Finally, shifts of point of articulation typically move from back to front, so that diachronic norms favor the originality of velar articulation over palatal for the PIE $*\acute{k}$-series. Linguistic norms are a rocking foundation which cannot sustain arguments of much weight, but in this case the structure is sufficiently sturdy. Starting from an ORIGINAL series $*\acute{k}$, $*\acute{g}$, $*\acute{g}h$, the called-for development is not merely rare; there seem to be NO cases of palatal[1] stops developing into velar shops in

[1] For this discussion the distinction between the concepts PALATAL and PALATALIZED is

the course of the known history of any language—and the PIE **ḱ*-series would have to have become 'centum plain velars' not once but at least three different times, namely to the east, west, and south of the putatively conservative satem group. The simultaneous and independent evolution of coarticulated labialization in **k*^{w} and so on would be less incredible but still remarkable.

The history of the IE stops, then, is as follows. In a very early period, the stops had four points of articulation [p t k k^{w}] (to use the voiceless series to stand for all three series). The [k] series was of the normal velar sort, and the [k^{w}] series had a definite labial component, manifest in all non-satem languages without exception; that it was also articulated farther back on the velum than [k] is likely, as [k^{w}] seems to have been distinct from [kw]—though that may have been a matter of timing only (like the Polish contrast between [t^{š}] and [tš] in *czy* vs. *trzy*). This system remained unchanged in the early history of the 'centum' (better, non-satem) languages.

At a still very early period, a group of Proto-Indo-European speakers shifted both velars forward phonetically, such that [k] became [ḱ] and [k^{w}] became [k]. However, in certain environments (before **r*, after **w* and **ū*, before **a*), original **k* usually failed to front, thereby falling together with the fronted and delabialized developments of [k^{w}].

	Archaic PIE (= Proto-Centum)	Pre-Satem	Proto-Satem
palatal:	–	ḱ	ś
velar:	k	k	k *and* ḱ (or č)
labio-velar:	k^{w}	–	–
apical:	t	t	t
bilabial:	p	p	p

Examples of unshifted stops:
PIE **krewH*$_2$- > Ved. *kravís-* 'gore', G *κρέας*, L *cruor*, MIr. *crú* 'blood', Lith. *kraūjas*.
PIE **yugom* 'yoke' > G *ζυγόν*, L *iugum* : Ved. *yugá-*, OCS *igo*.
PIE **gras-* 'graze' > Ved. *grásate* 'eat' (of horses and cows), G *γράω* 'nibble', Cypriot *γρασθι* imperat., L *grāmen* < **grasmn̥* 'grass' orig. *'fodder'. (The Gmc. *grass* words are a chance resemblance.)
PIE **ghrem-* 'growl, make a menacing noise' > G *χρόμος* 'racket, whinnying' : Go. *gramjan* 'to anger', Lith. *gruménti* 'to thunder'.

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crucial. The former is a point of articulation, involving the front or dorsum of the tongue and a region of the hard palate just behind the alveolar ridge. The latter is the coarticulation of a high front tongue body position, which may occur simultaneously with any point of articulation. (Thus, despite the occasional statement to the contrary, bilabial palatalized articulation is not only possible, it is more straightforward, mechanically, than some other combinations.) Now, DEPALATALIZATION—that is, the loss of this coarticulation—is a commonplace historical development (as in 198); it is the retraction of a PALATAL POINT OF ARTICULATION to a (dorso-)velar point of articulation that strains credulity.

153. THE PLAIN VELAR STOPS. Why, then, do we not reconstruct according to the list of sounds under 'Archaic PIE'? Because the conditions given above for the merger of Archaic *k and *k^w into Pre-Satem *k are approximations only; there are incontrovertible exceptions:

PIE *$k̑_rHsron$- 'hornet' > L *crābro*, OLith. *širšuo*.
PIE *$ǵ_rHno$- 'grain' > L *grānum*, OE *corn*, Slovene *zŕno*.
PIE *ǵhans-* 'goose' G *χην-*, OHG *gans*, OE *gós*, NE *goose*, Ved. *haṃsá-*, Lith. *žąsìs*.
PIE **steygh-* > G *στείχω* 'march', Go. *steigan* 'climb', Ved. *stigh-*.

Thus we have in fact three partly-similar correspondence sets, $k^w = k$, $k = k$, and $k = \acute{k}$, all strictly speaking in contrastive distribution, which leaves us no choice except the familiar 'Classical PIE' *k^w, *k, and *$\acute{k}$. However, this is an artifact of the method, not a picture of the early history of PIE: there never was a variety of PIE with three dorsal stops.

a. Some hold that Albanian and Armenian reflect the three reconstructed dorsal series directly, and more recently similar claims have been advanced for Anatolian. But the crucial evidence in Armenian and Anatolian seems to hinge upon especially difficult or vague or otherwise dubious etymologies, which is not surprising considering the languages involved and the fundamental improbability of the proposition. The Albanian evidence is of better quality, but can be accounted for (and easily) without recourse to a threefold system of dorsals.

b. In cases where cognates are known only from non-satem languages, such that it cannot be told whether we are dealing with a palatal or a plain velar, it is the custom to write the plain velar in the reconstruction. For example, G *κνήμη* (Dor. *κνᾱ́μᾱ*) 'shin', *κνημῖδες* 'greaves', OIr. *cnáim* /knāμ'/ 'bone', OHG *hamma* 'shank, ham', OE *hamm*, are reconstructed as PIE *k_nH_2mo- (G and Celt.) and *$konH_2mo$- (Gmc.). This custom exaggerates the tally of plain velars for PIE, at least on paper. That is a small demerit; a much more important one is that it turns the comparative method on its head to assume that we should reconstruct a palatal stop only if we have definite evidence for it. The *$\acute{k}$-series of stops was manifestly the unmarked PIE dorsal series, and in the ABSENCE of evidence to the contrary we should write *$\acute{k}_nH_2mo$-. The usual convention will nevertheless be followed here.

c. It is sometimes implied (or even insisted upon) that the defining innovation of the satem group is the COALESCENCE of the PIE *k and *k^w series, NOT the development of a sibilant from the *$\acute{k}$ series. But both components of this view are questionable. First, if the three-way contrast in the dorsal stop system is an artifact of the method to begin with, it follows that the putative coalescence is also an artifact. This objection is vulnerable to the charge of circularity; the second objection therefore is the sturdier: that is, the implausibility of the notion that each satem branch independently developed sibilants, and only sibilants, from original proto-satem *$\acute{k}$, *$\acute{g}$, and *$\acute{g}h$. In all cases where palatalization phenomena are directly observable, such as in the histories of Romance, Slavic, and Chinese, stops of palatalized and palatal articulation evolve very diversely, even in closely related dialects. It is furthermore the case that while the developments thus observed do include sibilants, sibilants are among the less common outcomes and generally evolve from affricates. Accordingly, we must assume that the development of sibilant consonants from the pre-satem palatal stops took place only once and was ancestral to the whole satem group.

d. INDO-IRANIAN. The stops classed as *palatals* in Sanskrit grammar must not be

confused with the PIE palatals, with which they have no connection. Skt. palatal *c* (pronounced something like [č]) and Av. *č* are the result of secondary palatalization, namely they are reflexes of PIE **k*^{w} or **k* when followed by a PIE front vowel. PIE palatal **ḱ* typically gives Indic *ś* (a palatal sibilant). In PInIr., there were three distinct series of obstruents from the pre-Satem inventory of two series:

	Pre-Satem	Satem	PInIr.	Skt.	Avest.
	ḱ	ś	ś	ś	s
	ǵ	ź	ź	j	z
	ǵh	źh	źh	h	z
Before front vowels:	k^{w}, k	k, č	č	c	č
	g^{w}, g	g, ǰ	ǰ	j	ǰ
	g^{w}h, gh	gh, ǰh	ǰh	h	ǰ
Elsewhere:	k^{w}, k	k	k	k	k, χ
	g^{w}, g	g	g	g	g, γ
	g^{w}h, gh	gh	gh	gh	g, γ

From this array, two important differences between Indic and Iranian are evident. 1. In Indic, three manners of articulation remain distinct (voiceless, plain voiced, and voiced aspirated) whereas in Iranian the two voiced series coalesce. 2. In Iranian, the reflexes of the PIE palatals and the Indo-Iranian secondary palatalization remain distinct, whereas in Indic the reflexes of the voiced (plain and aspirated) palatals fall together with the voiced palatalized stops. Thus Indic (Ved.) *jātá-* 'born' might continue either PIE **ǵ* or palatalized **g*$^{(w)}$; the Iranian (Av.) cognate *zāta-* might continue either PIE **ǵ* or **ǵh*. Taken together, however, the Indic and Iranian cognates point unambiguously to PIE **ǵ* as the initial consonant of this word, as that is the only item among the alternatives which will yield the attested reflexes in both branches.

Even wholly within Indic, patterns of alternation may reveal the etymological identity of Skt. *j* or *h*. Thus Skt. *yaj-* 'offer' and *vij-* 'tremble' have many similar forms (such as Ved. pres. *yájate*, *vijáte* and caus. *yājayati*, *vejayati*), but the participles *iṣṭá-* vs. *viktá-* reveal that in PInIr. the roots were **yaź-* and **wayg-/wayǰ-*, respectively.

154. The normal reflexes of the PALATALS and, in G, Italic, and Gmc., of the PLAIN VELARS may be summarized as follows:

PIE	G	Latin	Sab.	NE	Indic	Lith.	OCS
ḱ	κ	c	k	h	ś	š	s
ǵ	γ	g	g	k	j	ž	z
ǵh	χ, κ	f *before ŭ* g *before/after cons.* h (or ∅) *elsewh.*	f	g, y[1]	h	ž	z

1. PGmc. **g* > OE *y*, written *g*, before original front vowels; see 30.2.

The normal reflexes of the LABIOVELARS (and, in the satem languages, of the plain velars) are more complicated, but may be summarized as follows:

PIE	Greek	Latin	Sab.	NE	Indic	Lith.	OCS
k^{w}	π, τ, κ	qu, c	p	wh, f	k, c	k	k, č, c
g^{w}	β, δ, γ	v, gu, g	b	qu, c	g, j	g	g, ž, z
g^{w}h	φ, θ, χ	f, gu, v	f	w, g	gh, h	g	g, ž, z

1. GREEK. In late Proto-G the labiovelars fell together with the plain velars before **y*; see **199-201**. In all varieties of G including Myc., the labial element of the remaining labiovelars was lost when the cons. was adjacent to *u̯* or *ϝ*: Myc. *qo-u-ko-ro*, G *βουκόλος* < PG **g^{w}ow-k^{w}olos* 'cowherd' vs. *a-pi-qo-ro*, G *ἀμφίπολος* 'attendant' (see **161-4** for further examples). The syncretism of the remaining labiovelars and the labial and apical stops is not seen in Mycenaean, in which the labiovelar series remains separate from the other three. In all other dialects, the GENERAL pattern is that a labiovelar stop becomes an apical stop when it is followed by a front vowel; and becomes a labial stop elsewhere, as shown in **161-4**, especially **164A**.

a. Myc. evidence sometimes sheds light on the history of G forms; for example, Myc. *a-to-ro-qo* 'man' shows that in the etymology of G *ἄνθρωπος* 'man', whatever it might turn out to be, *π* continues a **k^{w}* rather than a **p*.

2. LATIN. All labiovelars lose the labial element when followed by any consonant. Otherwise, PIE **g^{w}* regularly becomes L *v*, except that **-ng^{w}-* > L *-ngu-*. PIE **g^{w}h* becomes *f-* initially, *-v-* intervocalically, and like **-ng^{w}-* becomes *-gu-* after an *n*.

This development contrasts with G, where labiovelars followed by a consonant (other than **y*, **199-200**) fall together with labial stops, as **k^{w}riH$_2$to* midd.aor. > G *πρίατο* 'bought' (cf. Myc. *qi-ri-ja-to*).

3. In GERMANIC the normal reflex of **k^{w}* is *hw*, written in Go. with a special letter here transcribed *h^{w}*, in early OHG *huu*, NE *wh* (written *hw* in OE); but it sporadically becomes *f*, as seen in NE *wolf*, Go. *wulfs* < **wl̥k^{w}os* (**155**). PIE **g^{w}* > Gmc. **k* (OE *c*) before rounded vowels: **g^{w}ōws* 'cow' > OE *cú*, NE *cow*.

4. INDO-IRANIAN reflexes, with their secondary palatalization, have been discussed above (**153d**); in SLAVIC also there was such a palatalization—a succession of palatalizations, in fact. The earliest two produce *č*, *ž* before original front vowel (OCS *vlьkъ* 'O wolf' < **wl̥k^{w}e*; *žena* 'woman' < **g^{w}eneH$_2$*); but the dorsals give *c* and *(d)z* before a front vowel developing from **oy* and **ay* (*vlьci* nom.pl. < **vlīkī* < **wl̥k^{w}oy*, *lędzěte* 2pl. imperat. (old opt.) < **lęgěte* < **lengoyte*).

155. P-DIALECTS AND Q-DIALECTS. 'Centum languages' may be classified in two categories, defined by the fate of the labiovelars, which become (1) DORSAL obstruents with a more or less prominent labial satellite articulation, (2) LABIAL obstruents (in G apical obstruents as well). These are sometimes known as *Q-dialects* and *P-dialects*, respectively. Old Irish among the Celtic languages, and Latin-Faliscan in Italic, are *Q*-dialects; Welsh, Gaulish, Oscan, and Umbrian were *P*-dialects.[1] It is unclear whether the treatment

[1] In the Celtic branch, the difference between *P*- and *Q*-groups is limited to the development of **k^{w}*. In Proto-Celtic, PIE **g^{w}* > **b* and (apparently) **g^{w}h* > **g^{w}*.

of the labiovelars in Mycenaean vs. later forms of Greek reveals the existence of *Q* and *P* strains of Greek, or is purely a matter of chronology.

No literary variety of Germanic belongs to a *P*-dialect, but scattered through the Gmc. lexicon there are a good number of PGmc. labials from PIE labiovelars. The distinction is chiefly evident in reflexes of PIE $*k^w$ which, in mainstream Germanic, becomes PGmc. $*\chi^w$ and (by Verner's Law) $*g^w$. But there are a number of words where it shows up as **f*, PGmc. **wulfaz* 'wolf' < PIE $*w\dot{l}k^wos$ for example. There is at least one clear form for each of the other two labiovelars: PGmc **skēp-* 'sheep' (OE *scéap*, OHG *scāf*) and Ved. *chāga-* 'goat' point to PIE $*sk\acute{e}g^w$- or $*sk\acute{e}H_1g^w$-. PIE $*g^when$- 'strike dead' is the likely etymon of OE *bana*, OHG *bano* 'killer', Go. *banja*, OE *benn* 'wound' and such compounds as OE *bróþorbana* 'slayer of [someone else's] brother' (cf. Hom. πατροφονεύς 'slayer of [someone else's] father'). Such forms do not necessarily show up in all three Germanic branches uniformly, as in OE *ofen*, OHG *oven* 'oven', but a dorsal in NGmc. (Swedish *ugn* for example); here the WGmc. forms point to $*u\chi^wna$- < $*úk^wno$-, the NGmc. to $*ugna$- < $*ug^wna$- < $*uk^wnó$-. Much effort has been devoted to trying to discover the conditions under which $*k^w > f$ might be a regular Germanic development, but without success. The probable explanation is that these forms are dialect borrowings from an otherwise unattested *P*-dialect of Germanic.

In the innovative satem group, as mentioned above, the labial component of the labiovelars disappears without a trace. It follows from this that in satem languages, as in the parent language, there is a distinction between reflexes of $*k^w$ and $*\acute{k}w$ (Archaic PIE $**kw$), that is, between a labialized velar stop and a palatal stop followed by a glide. In the conservative ('centum') languages, *P* and *Q* strains alike, these two coalesce more or less completely. (For more detailed remarks see **160**.)

PALATAL STOPS

156. PIE $*\acute{k}$.

PIE $*d\acute{e}k\dot{m}t$ 'ten' > G δέκα, L *decem* : Ved. *dáśa*, Av. *dasa*, Lith. *dẽšimt*, OCS *desętĭ*, Go. *taihun*, NE *ten*.

PIE $*\acute{k}\dot{m}t\acute{o}m$ 'hundred' > G ἑκατόν, L *centum* : Ved. *śatám*, Av. *satəm*, Lith. *šimtas*, OCS *sŭto*, Go. *hunda* (pl.), NE *hund(red)*. (This $*\acute{k}\dot{m}t\acute{o}m$ is probably a derivative from the preceding, which is to say $**d\acute{k}\dot{m}t\acute{o}m$; the only actual evidence for the initial consonant, however, is the lengthening of the vowels in the decads, as in $*tr\bar{\imath}$-$\acute{k}\dot{m}t$- from **trĭ-* 'three'; see **391**.)

PIE $*woy\acute{k}o$- 'settlement' > G οἶκος 'house(hold)', L *vīcus* 'village' : Go. *weihs* 'country' (opposite of 'city', *in weihsa* transl. G εἰς ἀγρούς), Ved. *viś-* 'clan; homestead', Av. *vis-*, Lith. *viẽš-pats* (archaic *viẽšpatis*) 'master'.

PIE $*dey\acute{k}$- 'point (out)' > G δείκνῡμι, L *dīcō* 'say' : Ved. root *diś-* (*diśánt-* pres.pple.; cf. pple. *diṣṭá-*, 3sg. imperat. *dídeṣṭu*).

157. PIE *ǵ.

PIE **ǵenH₁-* 'beget' in G γένος, L *genus* : Ved. *jánas*, Av. *zanō*, OE *cynn* (**ǵn̥H₁-yo-*), NE *kin*.
PIE **ǵneH₃-* 'know' > G γιγνώσκω, L *(g)nōscō* : Ved. root *jñā-*, OE *cnáwan*, NE *know*, OCS *znati*. Cf. L *cognōscō* 'become acquainted with' < **kom-gnōskō*.
PIE **ǵews-* 'taste' > G γεύω; **ǵus-tu-* > L *gustus* : **ǵows-o-* > Ved. *jóṣa-* 'enjoyment' (root *juṣ-*) = Av. *zaoša-*; Go. *kiusan* 'test', OE *céosan*, NE *choose*.

158. PIE *ǵh.

PIE *ǵhans-* 'goose' (const. stem) > *χανσ- > χᾱν- > G χην- (nom. χήν for expected *χᾶς by leveling; see **228**), L *ānser* (for **hānser*, **159**) : OHG *gans*, OE *gós*, NE *goose*, Ved. *haṃsá-*, Lith. *žąsìs*.
PIE **weǵh-* 'convey': G ὀχέω 'lead' (? caus. **woǵh-ey^e/o-*); Myc. *wo-ka* (ϝοχᾱ) 'wagon', Hom. τὰ ὄχεα n.pl. 'chariot' (wrong root grade for an *s*-stem, perhaps influenced by ὄχος m. 'wagon' < **woǵh-o-*), L *vehō* : OE *wegan* (NE *weigh*), OE *wægn* (NE *wain—wag(g)on* is a lw. from Du.); Ved. *váhati*, pple. *ūḷhá-* < PInIr. **uźdha-* < **uǵh-to-*, Av. root *vaz-*, Lith. *vežù*, OCS *vezǫ*.
PIE **leyǵh-* 'lick' > G λείχω, L *lingō* : Ved. *lih-*, Lith. *liežiù*, OCS *lizatĭ*.[1]
PIE **dheyǵh-* 'smear, model' > G τεῖχος 'wall', O **feíhúss** acc.pl., L *fingō* 'model' (*figulus* 'potter' and *figūra* 'shape' have *-g-* from *fingō*) : Ved. *dih-* 'smear', *dehī-* 'wall', Av. *pairi-daēza-* 'garden' ('surrounded by a wall', the source of G παράδεισος), Go. *digan* 'model', OE *dág* 'dough', OHG *teig*.
PIE **ǵhew-d-* 'pour' > G χέω, L *fundō*, *fūdī* (the one example of **ǵhu-* > L *fu-*) : Ved. root *hu-*, pres. *juhóti* < **źha-źhaw-ti*, *hótar-* 'priest', Av. *zaotar-*; Go. *giutan*, 'pour' OHG *giozan*, NHG *giessen*.

a. The outcome of initial **ǵhr-*, **ǵhl-* in L is uncertain:

Some L forms suggest *gr-*, *gl-*, as *grāmen* 'fodder' (p. 153); PIE **ghredh-* 'walk' > *gradior* 'step' (cf. Go. *grid* acc.sg. of a presumed fem. *i*-st. *griþs* 'a step', OCS *grędǫ* 'come'); and *glaber* 'hairless' (**ghladh-ro-*, cf. OHG *glat* 'smooth, shiny', OCS *gladŭkŭ*).

In several good-looking etymologies, however, **ghr-* seems to give L *r-*: *rūdus* 'rubble, gravel' < **ghrewd-*, cf. OE *gréot* 'sand' (= NHG *Grieß*), OE *grytt* 'grit' (= NHG *Grütze*); and *rāvus* 'grayish-yellow' < **ghrōwo-* (**46.2**), cf. OHG *grāo*, OE *grǽg*, NE *grey*). Perhaps the most persuasive evidence for this particular development comes from forms which are without satisfactory outside connections: on the one hand, L *congruō* 'run together' and *ingruō* 'fall upon violently' imply a simplex **gruō*, though no such form occurs. On the other hand, there is a *ruō* 'rush; collapse violently'; formally and semantically appropriate, it itself occurs in no straightforward compounds, and therefore might be the element in *congruō*, *ingruō*.

159. LATIN *h*. The sound written *h* in L was faintly sounded, and probably absent in colloquial speech from an early period. This is shown by the

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[1] L *lingō* is probably not the *n*-infix present stem (**453**) it looks like: other evidence strongly supports a PIE root present. Perhaps *lingō* was influenced by *lambō* 'lick' and the unrelated *lingua*.

Despite appearances, NE *lick*, NHG *lecken* are unrelated to these forms.

fact that *h-* does not interfere with: (1) elision; (2) shortening of vowels before another vowel (85, cf. *dēhinc* from *dē-*); (3) the change of intervocalic *s* to *r* (173, if *dirībeō* is in fact from **dis-habeō*;[1] or (4) the contraction of like vowels (88.1, cf. *nīl* from *nihil*, though *nīl* might as well stand for **nehil* via **neil*, 57). Furthermore, there was confusion of spelling in many words, as *humerus* 'arm' beside correct *umerus* < **omesos* (45.1), and the correct use of initial *h-* was much discussed by the grammarians. Generally the approved spelling, which we still follow, was the historically correct one—but not always: the best usage endorsed unetymological *humerus*, *ānser* 'goose', and *arēna* 'sand'. (The etym. of the last is unknown, but *harēna* is vouchsafed by 'Sabine' *fasena* quoted by Varro; and *hānser* and *umerus* are guaranteed by comparative evidence, 158, 45.1.)

The letter *h* was sometimes used as a sign of hiatus, as in AHENVS beside AENVS (*aēnus* 'made of bronze'), where the H stands for no consonant and is used merely to distinguish *aē* from the diphthong *ae* in writing. Such a use proves that [h] was pronounced sporadically at best, since otherwise the letter *h* would have been no more suitable than any other consonant—*s*, say—for indicating hiatus.

160. PALATAL STOPS + **w*. PIE **ḱw* and **ǵhw* show a development in centum languages closely parallel to that of PIE **kʷ* and **gʷh*. But in G the two distinct sounds **ḱw* give a double consonant medially, while the unitary **kʷ* gives a single consonant. It is thinkable that until an early L innovation adjusted the syllable boundary between a stop and a resonant (81.6a), a form like *aqua* 'water' (**kʷ*) had a light first syllable while *equos* 'horse' (**ḱw*) had a heavy one. But in all periods of attested L these words scan the same.

PIE **eḱwo-* 'horse' > G ἵππος, Myc. *i-qo*, L *equos* : Ved. *áśva-*, Av. *aspa-*. Cf. PIE **kʷ* in **sekʷ-* 'follow' > G ἕπομαι, L *sequitur* : Ved. *sácate*, Av. *hačaitē*.

PIE **ǵhwĕr-* 'wild animal' (cons. stem) > G θήρ, Lesb. φήρ (164A.2), L *fĕra* : Lith. *žvėrìs*, OCS *zvěrĭ*. (L *ferus* adj. back-formed from *fera*. —Either all extra-Latin attestations have independently generalized *ē*-grade or L *ĕ* requires explaining.) Cf. PIE **gʷh* in **gʷher-* 'warm' > G θερμός 'warm', θέρος n. 'summertime' (formally = Ved. *háras-* 'flame'), L *fornus* 'oven' (form = Ved. *ghṛ́ná-* 'heat') : Ved. *gharmá-* 'warm', OPr. *gorme* 'heat', OCS *goritŭ* 'burn'.

There are no certain instances of PIE **ǵw*, but on the evidence of L *mālō* 'prefer' < **mag-wel-* (484.3), Ital. **gw* and **gʷ* (162) fall together, just as **kw* and **kʷ* do.

a. Greek is the only centum language (so called, 11) attesting a contrast between reflexes of **ḱw* and **kʷ*. Although the notion that **ḱw* > G ππ distinct from **kʷ* > π is reasonable on its face, the only obvious evidence for it is G ἵππος, whose peculiarities

[1] *dir-* for **der-* is unexpected on two grounds (see 37a), and its meaning, 'sort ballots', is semantically unobvious as a derivative of 'have'.

however—the unexplained rough breathing and the unexplained ι- from PIE *e- —do not inspire confidence. Myc. *i-qo* at least underwrites the ι, but raises another question: where *-kw-* occurs elsewhere it is written differently, as *te-tu-ko-wo-a₂* (*tetuk^{h}woha*) 'wrought' perf. pple. of τεύχω. Perhaps a monomorphemic /(h)ikwos/ was different (phonetically? or just graphically?) from formations with an analyzable suffix beginning with *w*. But the writing *i-qo* may mean that the -ππ- of ἵππος is just one more odd thing about the word, and not a straightforward reflex of *ḱw.

Even slenderer evidence is afforded by in Boeot. πᾱμα 'possessions', on account of such epigraphic attestations as τα-ππαματα 'possessions', θιο-ππαστος ?'belonging to the god'. But the supposed cognate, Ved. *śvātrá-*, is a word of uncertain meaning used only of soma. An etymon **ḱwelH₂-* would account for all forms, Boeot. -ππ- and all; but the absence of semantic controls would enjoin extreme caution even without the discouraging evidence of the Homeric hapax πολυ-πᾱ́μονος gen.sg. 'exceedingly wealthy', which must scan πολῠ̄-. (This accords with the usual treatment of the initial, as in the aor. ἐπᾱσάμην 'get, acquire', and many others.)

b. Clusters of dorsal stop + *w* arising from affixes such as -ϝως perf.pple. (561-2) do not show labial development: δεδορκώς 'having in sight'.

LABIOVELAR STOPS

161. PIE *k^{w}.

PIE **k^{w}i-*/**k^{w}e-*, **k^{w}o-* pron. stems 'who' and the like > G ποῦ 'where', πόθεν 'whence', τίς 'who', ὅ (τ)τι 'why' (= Myc. *jo-ti*) < **yod k^{w}id*, L *quī*, *quod*, *quis*, *quid*, O *pod*, **pid** : Ved. *kás*, *cit*, Hitt. *ku-iš*, *ku-it*, Go. *h^{w}as*, *h^{w}a*, OE *hwá*, *hwæt*,[1] NE *who*, *what*, Lith. *kàs*, OCS *kŭto*, *čĭto*.

PIE **-k^{w}e* enclit. 'and' (perhaps ultimately related to the preceding) > G τε, Myc. *-qe*, L *-que* : Ved. *-ca*, Av. *-ča*, Go. *-uh*.

PIE **penk^{w}e* 'five' > G πέντε, πεμπάς, -δος 'group of five', πέμπτος 'fifth', Hom. πεμπάζω 'count on the fingers', L *quīnque* (141a, 81.2); *quīncu-plex* 'fivefold', *quīncūnx* 'five twelfths' : Ved. *páñca*, Av. *pančа*, Lith. *penkì*; Gmc. forms (Go. *fimf*, OE *fíf*, NE *five*) show **f* < PIE **k^{w}*, 155.

PIE **k^{w}etwor-* 'four' (with complex and only partly understood ablaut; 389.4) > G τέσσαρες, τέτταρες, Myc. *qe-to-ro-*, L *quattuor* : Ved. *catvā́ras* nom.pl.m., Lith. *keturì*; Gmc. forms (Go. *fidwor*, OE *féower*, NE *four*) show *f* < **k^{w}* (155).

PIE **leyk^{w}-* 'leave' > G λείπω, Myc. pple. *re-qo-me-no*, old *n*-infix pres. -λιμπάνω (Sappho) = L *linquō*, *līquī* (= λείπω), pple. *relictus* : Ved. *riṇákti* 'gives up', *ricyate* 'is emptied', *ririk-vás-* perf. pple., *rekú-* 'deserted', Lith. *liekù* 'leave', Go. *leih^{w}an* 'lend' (transl. δανείζω), *o*-grade in OE *lán*, NE *loan*. —OE *lǽfan*, NE *leave* and the like point to PGmc. *laibija-*, as if from **loyk^{w}-éy^{e}/o-*, the caus. of this root, with **b* (via Verner's Law, 139) from PIE **k^{w}* (155), but other explanations are possible.

PIE **sek^{w}-* 'see', in midd. 'follow' > G ἕπομαι, L *sequor*, *secundus* < **sek^{w}uon-*

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[1] WGmc. *-t* in 'what' is either imported from *þæt* = Go. *þata* < PIE **tod-ōm*, or else WGmc. **hwat* continues a PreGmc. etymon with an enclitic, **k^{w}od-ōm*, different from Go. *h^{w}a* < PGmc. **hwa* < **k^{w}od*.

dos, 183 : Ved. *sacate*, OIr. *sechithir* /šeχ'əθ'əρ'/. L pple. *secūtus* is secondary; the intensive *sectārī* 'follow eagerly' proves the prior existence of the expected pple. **sectus*. The model for *secūtus* is prob. *volvitur* : *volūtus* :: *solvitur* : *solūtus* :: *sequitur* : *X*, where *X* = *secūtus*.

PIE **pek*^{w}- 'ripen; cook' intrans., **pek*^{w}-*y*^{e}/*o*- > G πέσσω (199), **pek*^{w}-*s*- > πέψω fut., **pek*^{w}-*to*- > πεπτός pple., L *coquō* (either denom. or contaminated by *coquos* 'cook' < **pok*^{w}*o*-, 141a), *coctus*, *coquīna* 'kitchen', *popīna* (lw. from a *p*-dialect) 'cookshop' : Ved. *pac*-, pple. *pacatá*- and *pakvá*- (**pek*^{w}-*wo*-)—neither is regular in formation—W *poeth* (*p* < **k*^{w}) 'hot', Lith. *kepù* (with metathesis) 'bake, roast'; BS shows orig. *pek*^{w}- mainly in transferred senses, like OCS *potŭ* 'sweat' (< **pok*^{w}-*to*-).

PIE **k*^{w}*ey*(H_1)- 'take notice of' (with semantic development to chiefly unfavorable notice) > G τίνω 'pay' (a price, a penalty), Myc. *qe-te-o* verbal adj., τῑμη 'honor', ποινή 'penalty' (whence L *poena*) : Ved. root *ci*- 'note, gather', *cetár*- 'avenger', Av. *kaēnā*- 'penalty', OCS *cěna* 'price'.

PIE **k*^{w}*ek*^{w}*lo*- 'wheel' > **k*^{w}*uk*^{w}*l*- (40a) > G κύκλος 'circle', κύκλα pl. 'wheels' : Ved. *cakrá*-, OE *hwéol*, NE *wheel* (see 40a).

PIE **wl̥k*^{w}*os* 'wolf', metathesized **lúk*^{w}*os* > G λύκος, L *lupus* (lw. from a *P*-dialect, 155); original sequence in Ved. *vṛ́ka*-, Av. *vərəka*-, Go. *wulfs*, OE *wulf* m., *wylf* f., Lith. *vil̃kas*.

162. PIE **g*^{w}.

PIE **g*^{w}*em*- 'set out', pres. **g*^{w}*m̥*-*yoH*$_2$ > G βαίνω, L *veniō*; other stems in Sab. *ben*-, Ved. *gamati* aor.subj., Go. *qiman*, OE *cuman*, NE *come*. Stem **g*^{w}*m̥*-*sḱ*^{e}/*o*- in Ved. *gácchati* 'goes', G βάσκε imper. 'get going!'.

PIE **g*^{w}*erH*$_3$- 'devour': **g*^{w}*r̥H*$_3$- > G βιβρώσκω; L *vorō* (intens./caus. **g*^{w}*orH*$_3$-*eH*$_2$*y*^{e}/*o*-, 456.2B) : Ved. *girati*, Lith. *geriù* 'drink'.

PIE **g*^{w}*ow*- 'cow' (324) > G βοῦς, βουκόλος 'cowherd' = Myc. *qo-u-ko-ro* (and OIr. *búachaill* /būə̯χəl'/) : Ved. *gāu*-/*go*- 'cow', OIr. *bó*, Latv. *gùovs*, OE *cú*. (L *bōs* is a lw. from a *P*-dialect; 155).

PIE **g*^{w}*r̥rú*- 'heavy' > G βαρύς, L *gravis* : Ved. *gurú*-, Go. *kaurus*.

PIE **sm̥*-*g*^{w}*elbh*- (various stem forms) 'brother' lit. 'having the same womb' > Hom. ἀδελφεός, Att. ἀδελφός (both from **ἀ*-, 170a) : Skt. *sagarbhya*- 'full brother', Ved. *gárbha*- 'womb' < **g*^{w}*olbho*-;[1] G δελφύς f. *u*-stem, cf. Av. *gərəbuš*- n. Hom. ἀδελφεός is probably a thematized full grade, **g*^{w}*elbhewo*-, originally an adj. (like NE *relative* 'kinsman' orig. 'related').

PIE **g*^{w}*iH*$_3$- (various suffixes) 'life': **g*^{w}*iH*$_3$-*eto*- 'life' > Hom. βίοτος (154.1), L *vīta* (88.3); **g*^{w}*iH*$_3$-*wo*- 'alive' > G ζωός (49.3), L *vīvus* : Ved. *jīvá*-, Go. *qius*, OE *cwic*, NE *quick*, Lith *gývas*.

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[1] Skt. *sagarbha*- 'pregnant', often cited in this connection, cannot be relevant: it has a late, peculiarly Indic, development of the meaning of the prefix *sa*- (389.1 fn.).

PIE *H_3eng^w- 'anoint': *n*-stem in L *unguen* 'salve', OHG *anc(h)o* 'butter'; *i*-stem in Ved. *añjí-* orig. adj. 'anointing' then noun 'ointment'.
PIE *ng^wen- 'bulge' > G ἀδήν, -ένος f. (later m.) 'gland', L *inguen* n. 'groin' : OIc. *økkr* 'swelling'.
PIE *g^wenH_2, obl. *g^wneH_2-/*g^wnH_2- 'woman' (orig. neut., as still uniquely in arch. OIr. *bé*; much remodeled in the daughter languages) > G γυνή (40A), Boeot. βανα (*g^wnH_2-) : Ved. *jani-* (*g^wenH_2-) 'goddess' (more accurately, consort of a deity), *gnā́s* gen.sg. (*g^wneH_2-*s*, = OIr. *mná*) in *gnā́s páti-* 'husband of a divine wife'; n.pl *gnā́s* disyll. (*gnáas* < *$g^wnéH_2$-es*); OIr. *ben* f. < *$g^wenā$, *bé* n. (legal, poetic) < *g^wenH_2; *ā*-stem OCS *žena* 'woman' (an independent innovation); PGmc. *$k^wenōn$- > Go. *qino*, OE *cwene*, NE *quean*.
PIE *$neyg^w$- 'wash', zero grade *nig^w- in G ἄνιπτος 'unwashed', χέρ-νιψ 'water for washing the hands', gen. χέρνιβος, vb. χερνίπτομαι 'wash the hands', Myc. *ke-ni-qe-te-we* nom.pl. 'hand-washers' (presumably *$k^hernik^wtēwes$ to *k^her-nik^w-*teus*) : Ved. *niktá-* pple. 'washed', OIr. *nigid* /niγ'əθ'/ 'washes'. (For G νίζω < *nig^w-y^e/o-, 200).

PIE *$(H_1)su$-$g^wiH_3ēs$ lit. 'having a good life' > G ὑγιής 'healthy' (implying an unattested neut. *s*-stem *βίος 'life' < *g^wiH_3-*os*-. This etymology, though attractive and generally accepted, has a number of difficulties. The necessary *s*-stem is not found anywhere; and ὑ- rather than εὐ- is a problem for those who hold that initial laryngeals become prothetic vowels in G and trace the usual form of the prefix to PIE *H_1su-.) Cf. G βίοτος above and Skt. *su-jī́vita-* 'living happily'.

G βάλλω 'throw' and G βούλομαι 'wish' are words of uncertain outside connections, but the correspondence of Att.-Ion. β- with δ- in Arc. δελλω and Locr. δειλομαι points to PG *g^w.[1]

163. PIE *g^wh.

PIE *g^wher- 'be warm': two regular formations in *-*mo*-, a noun *$g^whór$-*mo*- 'heat', and adj. *$g^whr̥$-*mó*- 'warm', variously conflated. G θερμός 'warm' (for *θαρμός), L *formus* (Paul. Fest.) : OE *wearm* 'warm' (as if from *g^whormo-; Go. *warmjan* 'to warm' shows denominative stem *g^whorme-y^e/o-), Ved. *gharmá-* 'heat' (*g^whor-*mo*-, only with accent proper to the adj.). A regularly-formed *s*-stem is seen in Ved. *háras-* n. 'flame' (g^wher^e/os-, formally = G θέρος 'summer').

PIE *g^when- 'strike down, slay': *$g^whenyō$ > G θείνω, L **fendō* (only in *dē-*, *offendō*; 218); *o*-grade *o*-stem in G φόνος 'a slaying', Ved. *ghaná-* 'destroyer, slayer' (evidently *g^whonH-*ó*-) : Ved. *hán-ti* 'slays' 3sg. (= Hitt. *ku-*

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[1] There seems to be no satisfactory explanation of G βούλομαι; to G βάλλω there is a scattering of doubtful etymologies seeming to confirm the reconstruction *g^welH_1- arrived at from the G evidence. The best of these, W *blif* /bliv/ 'catapult' as if from PCelt. **blīmo-* < PIE *g^wleH_1-*mo*-, is isolated not only in Welsh but in Celtic generally, and on historical and cultural grounds is very much more likely to be a borrowing from G than a native term. Morever, apart from W *blif*, all forms can be accounted for by an ablauting root with full grade *g^welH_1-.

(e-)en-zi /g^{w}en-tsi/), *ghn-ánti* 3pl. (= Hitt. *ku-na-an-zi* ?/g^{w}nantsi/). With a labial reflex of **g^{w}h* (155) this yields the Gmc. words exemplified by OE *bana* 'slayer' (NE *bane*) and OIc. *bani* 'a slaying'.

PIE **sneyg^{w}h-* 'snow': root noun **snig^{w}h-* > G *νίφα* acc.sg. (Hes., ἄπ. λεγ.), L *nix, nivis*; *n*-infix *ninguit* 'it is snowing' = Lith. *sniñga*; *d*-stem G *νιφάς* 'snowflake'; *e*-grade G *νείφει* 'ninguit' (usually *νῑ́φει*, an unexplained development, **76d**); *νείφει* for expected **νείθει* is from the fut. *νείψει* and aor. *ἔνιψε*; OHG *snīuuan*, NHG *schneien*, OE *sníwan* 'to snow' (the expected NE verb *snew* replaced by a denom. built to the following); *o*-grade *o*-stem noun in Go. *snaiws*, OE *snáw*, NE *snow*. (The Ved. root *snih-*, occurring in Skt. *o*-grade *o*-stem *sneha-* and a sizable family of derivatives, reconstructs flawlessly to a root **sneyg^{w}h-*. But the meanings—'be sticky, viscid; feel affection for', *sneha-*, 'greasiness; love(!)'—are hard to reconcile with 'snow'. Nevertheless, given the quality of the formal fit, the connection would be likely however improbable the semantics; and besides there are actual InIr. attestations of the usual 'snow' sort in Av. *snaēža-* vb., Prāk. *siṇeha* n.)

PIE **H$_{3}$eg^{w}hi-* (or, less likely, **og^{w}hi-*, as that should give Ved. ×*āhi-*) 'snake, monster' > G *ὄφις* 'snake' : Ved. *áhi-*, Av. *aži-*. (G *ἔχις* 'adder', L *anguis* 'snake' and other cognates point to **eǵhi-* and **ang^{w}(h)i-*, which cannot be reconciled either to one another or to **H$_{3}$eg^{w}hi-*/**og^{w}hi-*, but seem too similar not to be ultimately somehow related.)

PIE **l̥ng^{w}h-* 'light' (various suffixes): zero grade evidently in G ἐλαχύς 'small', ἐλαφρός 'nimble, light', Ved. *raghú-* 'quick', dial. *laghú-* 'light' (first in the AV), OE *lungre* 'quickly', and probably OCS *lĭgŭkŭ* (via **lingu-*), though there are problems with all interpretations of this form; *e*-grade in Lith. *leñgvas* 'light', PreGmc. **leng^{w}h-to-* > PGmc. **linχto-*, **līχto-* Go. *leihts*, OE *léoht*, NE *light*. L *levis* is usually explained as coming from an *n*-less form of the root, **leg^{w}hu-*, apparently also seen in Ved. *l̥ghánt-* 'small, weak', as if from **l̥g^{w}h-ent-*. But *l̥ghánt-* is not itself old, being an Indic creation patterned on the antonym *bṛhánt-* 'tall, strong', the *a* of *raghú-* having been reinterpreted as a full grade (whereas it is the reflex of **l̥*). The L form too is best taken as the result of contamination, but this time by a form of similar rather than antonymic meaning: PItal. **mreχwis* 'short' (etymon of L *brevis*, **223.4**) led to a remodeling of **lenχwis* 'light' (from either **leng^{w}hu-* or **l̥ng^{w}hu-*, probably the latter) as **leχwis*.

PIE **kneyg^{w}h-* 'bend', not really a root because it contains both a voiceless and a voiced aspirated stop, is thought to underlie Gmc. and Ital. forms. Ital. **kom-knoyχweyō* (caus.) > **kongneyw-* (**231.4**) > L *cōnīveō* 'close [the eyes]', hence 'overlook, pretend not to see', perf. (aor.) *cōnīxī*; also *nictō* 'wink'; and perhaps *nītor* 'rest on'. Go. *hneiwan* 'bow', OHG *hnīgan*, NHG *neigen*, *o*-grade Go. *hnaiws* 'lowly'. (For developments of **g^{w}ht*, **ǵht* see **211**.)

a. If L *frendō* 'grind the teeth' is cognate with OE *grindan* 'grind' and Lith. *gréndžiu* 'rub'—all these forms have been plausibly explained in other ways—a possible etymon

would be PIE *$g^{w}hrendh$-. L *fr-* is not wholly expected from *$g^{w}hr$-, however, as the labial element of labiovelars is regularly lost in L before a consonant, and in other similar shapes voiced aspirates become voiced stops in L (so *glaber* 'smooth, bald' 158a), but there are no stronger competing etymologies. Furthermore, the same retention of a labial element in *$g^{w}hr$ is attested, more securely, in medial position in L *febris* 'fever' < PIE *$dheg^{w}h$- 'be hot' (164B.3).

164. REMARKS ON THE REFLEXES OF LABIOVELARS.

A. GREEK. Although most of the examples in 161-3 comply with the general rule given in the notes to the table in 154, there are a number of causes for deviation from the norm.

1. There is much leveling in favor of the labial reflexes. Thus the π of λείπω, ἔπομαι, ἔπος (= Ved. *vácas-*) regardless of the following vowel: λείπει, ἕπεται, ἕπεος. Interchange within an inflectional paradigm (as *λείτει next to λείπω) is unknown, the closest thing being in principal parts like θείνω aor. ἔπεφνον—though the principal parts of G verbs routinely are so chaotic (from the synchronic point of view) that the Greeks themselves were probably unaware of the true relation between these stems, as seems definitely to have been the case for groups like τίς/ποῦ, τῑμή/ποινή, θείνω/φόνος. (Even our modern dictionaries do not list ἔπεφνον as a form of θείνω, but accommodate it under the imaginary present stem ×φένω.)

Leveling does sometimes occur in groups of cognates when the semantics are transparent, as βέλος 'missile', βέλεμνον 'javelin' after βάλλω 'throw' (the regular δ before ε only in Arc. δελλω). For G νείφει 'it is snowing' the usual explanation won't quite do, since phonologically regular forms of the type νείφω, νείφομεν, νείφουσι 'I, we, they snow' can scarcely have existed; νείφει must therefore get its φ from another source, probably aor. ἔνιψε and fut. νείψει.

2. It is a notable characteristic of the Aeolic dialects that even before a front vowel the labial is found in some basic words, as Lesb., Thess. πεμπε = πέντε 'five'; Lesb. πέσυρες, Hom. πίσυρες, Boeot. πετταρες, all = τέσσερες 'four'; Lesb. πήλυι = Att. τηλοῦ (Hom. τῆλε) 'from afar'. But τίς 'who' and τε 'and' are the forms even in Aeol.

3. Contrariwise, there are some dialect forms with κ for usual π and τ in the pronouns: Ion. (Hdt.) κῶς = πῶς 'how'; Thess. κις = τίς 'whoever'.

4. In Att.-Ion. the normal development of *g^{w} and *$g^{w}h$ before *i*, as before α and *o*, is β and φ, as in βίος and ὄφις; the development to δ, θ is seen only before *$\bar{e}$. There is no obvious explanation for the discrepancy between the behavior of *k^{w} and the other two labiovelars. Dor. (Heracl.) perf. pple. ενδεδιωκοτα, if equivalent to standard ἐμβεβιωκότα, might show *$g^{w}i$ > δι (and is generally so interpreted), but might merely show a leveling which is the reverse of the Att. development, both starting from *(εν)δεβιω-.

B. LATIN. 1. Beside *qu* from *k^{w}, we should expect *gu* from *g^{w}, corres-

ponding to the parallelism in Sab. *p* : *b* or G π : β : φ. But *gu* remains only after a nasal, as in *unguen*, *ninguit*. Otherwise before a vowel the *g* is lost, hence *veniō*, *nivis*. Phonologically speaking, there is nothing remarkable about this: [gw] and [w] are closely related articulatorily, differing mainly in a very small adjustment of the height of the dorsum, and they readily interchange both diachronically and in the sound-substitutions connected with borrowing. PIE **w* regularly became W *gw*, as in PIE **weǵh-no-* 'conveyance' > W *gwain* (= OIr. *fén*; cf. OE *wægn*). Parallel to L *v* from **g*^{w}, PIE **g*^{w}*h* > PGmc. **w* rather than expected **gw*, as in **g*^{w}*hermo-* > OE *wearm*, NE *warm* (cf. 163). —In loan-words, Germanic *w* was adapted as [gw] in Romance, for example PRom. **guerra* 'war'.

2. In L the *w*-element of labiovelars was lost before all consonants. So from **k*^{w}, L *quīn(c)tus* 'fifth', *coctus* 'cooked' in contrast to G πέμπτος, πεπτός. The plain dorsal stop arising in this position was sometimes generalized. So from *vōx* not only in other case forms (*vōcis*, *vōcem*, and so on), but also in derivatives therefrom (*vocō*, *vōcālis*, and so on), such that there is no trace anywhere in L of a form with *qu*, in contrast to G ἔπος and εἶπον.

The appeal to leveling—from a single form—as an explanation for the absence of *qu* in this family of words is mildly troubling, as leveling rarely is quite so total. Conceivably the real explanation is a dissimilatory change of **k*^{w} to **k* after the **w*-, with phonologically regular **wōks* < **wōk*^{w}*s* playing only a supporting role.

3. In general accord with this principle, PIE **g*^{w}*r-* > L *gr-*, as in *gravis*, *grātus* (Osc. gen.sg. *brateis*); but the development of **g*^{w}*hr* unexpectedly retains a labial element, hence initially *frendō*, medially *febris* 'fever' < **dheg*^{w}*h-ri-* (163a).

4. The *w* element of the labiovelars was lost before *u* and *o*, though often restored by analogy (*sequor*, *linquunt*); cf. more or less isolated forms like *secundus* 'following', *cum* 'since', 183.

5. Some L forms are plainly loanwords from neighboring *P*-dialects (155). Native forms continue alongside some, like *coquīna* 'kitchen' and the given name *Quīnctius* next to borrowed *popīna* 'cookshop' and *Pontius* (O **púntiis**); some, like *bōs* 'cow', *lupus* 'wolf', are known only in the dialect form. —L *poena* 'penalty' (the basis of several derivatives) is thought to be a lw. from G ποινή.

LARYNGEALS

165. The laryngeals are the latest addition to the PIE inventory of sounds. Their reconstruction dates back to the suggestion by the Swiss linguist Ferdinand de Saussure in 1879[1] (a period when the system of recon-

[1] To be precise, he mooted the theory in larval form two years earlier. —It must be noted that Saussure's main thesis was the establishment of **a* and **o* (as we would now put it) as separate PIE vowels, and in this he was successful.