File 10.13

Germanic Consonant Shifts

Proto-Indo-European had three series of stop consonants: a voiceless series, *p, *t, *k; a voiced series, *b, *d, *g; and a series of (so-called) voiced aspirates written *bʰ, *dʰ, *gʰ. In the transition from Proto-Indo-European to Proto-Germanic, these series of consonants underwent an organized set of changes, or **shifts**, as follows:

Proto-Indo-European:	*p	*t	*k	*b	*d	*g	*bʰ	*dʰ	*gʰ
	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓
Germanic:	f	θ	x	p	t	k	b	d	g

This change is known as **Grimm's Law** and is one of the changes that distinguishes the languages of the Germanic subgroup from all other Indo-European language groups. That is to say, every Germanic language will show a different set of developments in the Proto-Indo-European (PIE) sounds. Examples of words affected by Grimm's Law are listed below.

PIE	Non-Germanic	Germanic (English)
*pəter	pater (Latin)	father
*trei-	tres (Latin)	three
*kerd	kardia (Greek)	heart
*leb-	labium (Latin)	lip
*dekm	decem (Latin)	ten
*gʷena	gyne (Greek)	queen
*bhratēr	bhratar (Sanskrit)	brother
*dhe	facere (Latin)	do
*ghos-ti	hostis (Latin)	guest

Modern High German has undergone a second consonant shift similar to the first in nature; this **second Germanic consonant shift** differentiates the High German dialects from other Germanic dialects and languages. Thus, only High German will exhibit evidence of the shift.

The second consonant shift was a rather complicated change. The figures below captures the major changes but omits certain details.

Proto-German   **High German**

		After Vowels	Elsewhere
*p	>	f	pf
*t	>	s	ts
*k	>	x	k (but kx in some dialects)
*d	>	t	t

Consider the following examples of the correspondence between Modern English, which did not undergo the second shift, and Modern German, which, of course, did undergo the shift.

Modern English   **Modern German**

open   offen
path   pfad
bite   beissen
to   zu (z = [ts])
book   Buch (ch = [x])
come   kommen
ride   reiten
door   Tür

Based on the statement of the changes and the examples cited above, what sound in Modern German would correspond to the italicized Modern English sounds?

Modern English   **Modern German**

flood   Flu___
ship   Schi___
eat   e___en
reckon   re___nen
hate   Ha___

Now, given the italicized Modern German sounds, what would the corresponding sound be in Modern English?

Modern German   **Modern English**

Griff   gri___
Herz   hear___
Fuss   foo___
machen (ch = [x])   ma___e
waffenlos   wea___onless
Pflug   ___low

the first is the basic uninflected form and the second is the form to which the English word is more closely related.[4] To complete the last column, see exercise 4 below.

Indo-European[5]	Germanic	Old English	Modern English	Borrowing from Latin
*pisk-	*__iska-	__isc	__ish	_____
*ter-, *ter-sk- 'to rub, thresh'	*__ersk-	__erscan	__resh	_____
*kerd-, *kerd-en-	*__ertōn	__eorte	__eart	_____
*beu- 'to swell'	*__uk-	__yffan	__uff	_____
*dent-, *dont-	*__anthus	__ōþ	__ooth	_____
*gel- 'cold; to freeze'	*__ōl-	__ōl	__ool	_____
*bhreg-	*__rekan	__recan	__reak	_____
*dhē, *dhō- 'to set, put'	*__ōn	__ōn	__o	_____
*ghos-ti-	*__astiz	__estr[6]	__uest	_____
*ters-, *tr̥s-t- 'to dry'	*__urs-tu-	__urst	__irst	_____
*dhwer-, *dhur-	*__uram	__or	__oor	_____
*ker-, *kr̥-n-	*__urnaz	__orn	__orn	_____
*grə-no- 'grain'	*__ornam	__orn	__orn	_____
*kaput	*__aubidam	__ēafod	__ead	_____
*bher- 'to carry; to bear children'	*__eran	__eran	__ear	_____
*pleus- 'to pluck; feather, fleece'	*__liusaz	__lēos	__leece	_____
*bhedh- 'to dig'	*__adjam 'garden plot'	__edd	__ed	_____
*dekm̥	*__ehun	__īen	__en	_____
*ger- 'to cry hoarsely'	*__rē	__rāwe	__row	_____
*trei-	*__rijiz	__rīe	__ree	_____

[4]The source for the items in this exercise is the appendix entitled "Indo-European Roots" of *The American Heritage Dictionary of the English Language,* 4th ed. (New York: American Heritage Publishing Co. and Houghton Mifflin, 2000).

[5]The Indo-European roots given here without a gloss have at least one meaning the same as that of the Modern English form.

[6]This word is not a native Old English word but an Old Norse borrowing in Middle English.

Indo-European	Germanic	Old English	Modern English	Borrowing from Latin
*genə, *gn̥-yo- 'to give birth'	*__unjam 'family'	__ynn	__in	_____
*deik-, *deig- 'to show, pronounce'	*__aikjan	__ǣċan	__each	_____
*kel-, *kl̥-ni-	*__ulni-	__yll	__ill	_____
*teuə-, *tum- 'to swell'	*__ūmōn	__ūma 'thick finger'	__umb	_____
*pau-	*__awaz	__ēawe	__ew	_____
*bhlē-	*__lē-w	__lāwan	__low	_____
*ten-, *tn̥-u- 'stretched, thin'	*__unniz	__ynne	__in	_____
*ped-, *pōd	*__ōt-	__ōt	__oot	_____
*genu-, *gneu-	*__niwam	__nēo	__nee	_____

4. Although the Germanic part of what eventually became the English vocabulary underwent the First Sound Shift, thousands of words have entered the English language in the centuries afterwards. Borrowings from Latin illustrate clearly the effects of Grimm's Law by the changes that did *not* happen to them. Many of the Latin borrowings retain the original Indo-European consonants: [p], [t], and [k], for example, remained [p], [t], and [k] in Latin ([k] being spelled *c*), and [b], [d], and [g] remained [b], [d], and [g]. Indo-European [bh] and [dh] became Latin [f], and [gh] became [h]. The Latin words listed below are given with a gloss and, in boldface type, an English borrowing based on the Latin, either directly or through Romance languages. Match the borrowed words with the English words that derive ultimately from the same Indo-European root by writing the boldfaced Modern English borrowings in the last column of question 3, above.

dēns 'tooth': **dental**
caput 'head': **capital**
piscis 'fish': **Pisces**
facere 'to do, make': **fashion**
glaciēs 'ice': **glacial**
torrēre 'to dry, parch, burn': **torrid**
bucca '(inflated) cheek': **buccal**
frangere 'to break': **fracture**
pēs (stem *ped-*) 'foot': **pedal**
culmen 'top, summit': **culminate**
grāculus 'jackdaw': **grackle**
forās 'out of doors': **foreign**
tendere 'to stretch, extend': **extend**
plūma 'a feather': **plume**

grānum: **grain**
paucus 'little, few': **paucity**
dīcere 'to say, tell': **dictate**
cor 'heart': **cordial**
fodere 'to dig': **fossil**
trēs 'three': **trio**
genu 'knee': **genuflect**
terere 'to rub away, wear out': **trite**
decem 'ten': **decimal**
flare 'to blow': **inflate**
tumēre 'to swell': **tumescent**
cornū 'horn': **cornet**
genus 'race, kind': **genus**
ferre 'to carry': **fertile**
hostis 'enemy': **host**