§ 57. The specific peculiarities of consonants constitute the most remarkable distinctive feature of the Germanic linguistic group. Comparison with other languages within the IE family reveals regular correspondences between Germanic and non-Germanic consonants. Thus we regularly find [f] in Germanic where other IE languages have [p]; cf. e.g., E *full*, R *полный*, Fr *plein*; wherever Germanic has [p], cognate words in non-Germanic languages have [b] (cf. E *pool*, R *болото*). The consonants in Germanic look 'shifted' as compared with the consonants of non-Germanic languages. The alterations of the consonants took place in PG, and the resulting sounds were inherited by the languages of the Germanic group.

The changes of consonants in PG were first formulated in terms of a phonetic law by Jacob Grimm in the early 19th c. and are often called Grimm's Law. It is also known as the *First* or *Proto-Germanic consonant shift* (to be distinguished from the 2nd shift which took place in OHG in the 9th c.).

By the terms of Grimm's Law voiceless plosives developed in PG into voiceless fricatives (Act I); IE voiced plosives were shifted to voiceless plosives (Act II) and IE voiced aspirated plosives were reflected (See Note 1 to Table 3) either as voiced fricatives or as pure voiced plosives (Act III).

Table 3

Consonant Shift in Proto-Germanic (Grimm's Law)

Correspondence illustrated		Examples		
		Non-Germanic	Germanic	
			Old	Modern
PIE	**PG**			
ACT I				
p	f	*L* pes, pedis	*Gt* fōtus, *O Icel* fótr, *OE* fōt	Sw *fot*, NE *foot* G *Fuß*
		R пена	*OE* fām	G *Feim*, NE *foam*
		L piscis, *R* пескарь	*Gt* fisks, *OE* fisc	G *Fisch*, NE *fish*
t	θ	*L* tres, *R* три	*Gt* þreis, *O Icel* þrír, *OE* þrēo	Sw *tre*, G *drei*, NE *three*
		L tu, *Fr* tu, *R* ты	*Gt* þu, *OE* þū	G Sw *du*, NE *thou*
k	x	*L* cor, cordis, *Fr* coeur, *R* сердце	*Gt* haírto, *O Icel* hjarta, *OE* heort	G *Herz*, NE *heart*
		L canis	*Gt* hunds, *OE* hund	G *Hund*, NE *hound*
		R колода	*OE* holt	G *Holz*, NE *holt*
ACT II				
b	p	*Lith* balà, *R* болото	*OHG* pfuol, *OE* pōl	G *Pfuhl*, NE *pool*
		L labare, *R* слабый	*Gt* slepan, *OE* slǣpan	G *schlafen*, NE *sleep*
d	t	*L* decem, *Fr* dix, *R* десять	*Gt* taíhun, *O Icel* tíu, *OE* tīen	Sw *tio*, G *zehn*, NE *ten*
		Fr deux, *R* два	*OE* twā	NE *two*
		L edere, *R* еда	*Gt* itan, *OE* etan	Sw *äta*, NE *eat*
		L vidēre, *R* ведать, видеть	*OE* witan	G *wissen*, NE *wit*
g	k	*L* genu, *Fr* genou	*OE* cnēo, *Gt* kniu	NE *knee*, G *Knie*
		L ager	*Gt* akrs, *O Icel* akr, *OE* æcer	Sw *aker*, NE *acre*
		L iugum, *R* иго	*Gt* juk, *O Icel* ok, *OE* ȝeoc	Sw *ok*, NE *yoke*

Correspondence illustrated		Examples		
		Non-Germanic	Germanic	
			Old	Modern
ACT III				
bh[1]	v (*or* b)	*O Ind* bhrāta, *L* frater, *R* брат	*Gt* broþar, *O Icel* bróðir, *OE* brōþor	Sw *broder*, G *Bruder*, NE *brother*
		L ferre, *R* беру	*Gt* baíran, *OE* beran	G *gebären*, NE *bear*
		Fr future, *R* быть	*OHG* bin, bíst, *OE* bēon	G *bin*, *bist*, NE *be*
dh	ð (*or* d)	*O Ind* rudhira, *R* рдеть	*Gt* rauþs, *O Icel* rauðr, *OE* rēad	G *rot*, Sw *röd*, NE *red*
		O Ind mádhyas, *L* medius	*Gt* midjis [ð], *OE* middel	G *Mittel*, NE *middle*
		R делать	*Gt* gadeþs, *OE* dǣd, dōn	NE *deed*, *do*
gh	γ (or g)	*L* hostis, *R* гость	*Gt* gasts, *O Icel* gestr, *OE* giest	Sw *gäst*, G *Gast*, NE *guest*
		L (leg-) lectus, *R* залегать	*Gt* ligan [γ], *O Icel* liggja, *OE* licʒan	G *liegen*, NE *lie*
		O Ind vaha, *L* via, *R* везти	*Gt* wiga [γ], *O Icel* vegr, *OE* weʒ	Sw *väg*, G *Weg*, NE way

Interpretation of the Proto-Germanic Consonant Shift

§ 60. The causes and mechanism of the PG consonant shift have been a matter of discussion ever since the shift was discovered.

When Jacob Grimm first formulated the law of the shift he ascribed it to the allegedly daring spirit of the Germanic tribes which manifested itself both in their great migrations and in radical linguistic innovations. His theory has long been rejected as naive and romantic.

Some philologists attributed the shift to the physiological peculiarities of the Teutons, namely the shape of their glottis: it differed from that of other IE tribes, and the pronunciation of consonants was modified. Other scholars maintained that the consonant shift was caused by a more energetic articulation of sounds brought about by the specifically Germanic force word stress. Another theory suggested that the articulation of consonants in Germanic was, on the contrary, marked by lack of energy and tension.

The theory of "linguistic substratum" which was popular with many 20th c. linguists, attributes the PG consonant changes — as well as other Germanic innovations — to the influence of the speech habits of pre-Germanic population in the areas of Germanic settlement. The language of those unknown tribes served as a sort of substratum ('under-layer') for the would-be Germanic tongues; it intermixed with the language of the Teutons and left certain traces in PG. This hypothesis can be neither confirmed nor disproved, since we possess no information about the language of pre-IE inhabitants of Western Europe.

According to recent theories the PG consonant shift could be caused by the internal requirements of the language system: the need for more precise phonemic distinction reliable in all phonetic conditions. Before the shift (according to J. Kurylowicz) the opposition of voiced and voiceless plosives was neutralised (that is, lost) in some positions, namely before the sound [s]; therefore new distinctive features arose in place of or in addition to sonority. [p, t, k] changed into [f, θ, x] and began to be contrasted to [b, d, g] not only through sonority but also through the manner of articulation as fricatives to plosives. This change led to further changes: since [f, θ, x] were now opposed to [b, d, g] through their fricative character, sonority became irrelevant for phonemic distinction and [b, d, g] were devoiced: they changed into [p, t, k], respectively. That is how the initial step stimulated further changes and the entire system was shifted. It is essential that throughout the shift the original pattern of the consonant system was preserved:

three rows of noise consonants were distinguished, though instead of opposition through sonority consonants were opposed as fricatives to plosives. (For a critical review of various theories see «Сравнительная грамматика германских языков», М., 1962, кн. II, ч. I, гл. 1, 7.1 — 8.5.)

Another explanation based on the structural approach to language interprets the role of the language system from a different angle. Every subsystem in language tends to preserve a balanced, symmetrical arrangement: if the balance is broken, it will soon be restored by means of new changes. After the replacement of [p, t, k] by [f, θ, k] the positions of the voiceless [p, t, k] in the consonant system were left vacant; to fill the vacuums and restore the equilibrium [b, d, g] were devoiced into [p, t, k]. In their turn the vacant positions of [b, d, g] were filled again in the succeeding set of changes, when [bh, dh, gh] lost their aspirated character. This theory, showing the shift as a chain of successive steps, fails to account for the initial push.

§ 61. The chronology of the shift and the relative order of the changes included in Grimm's Law and Verner's Law, has also aroused much interest and speculation. It is believed that the consonant shift was realised as a series of successive steps; it began first on part of Germanic territories and gradually spread over the whole area. The change of [p, t, k] into fricatives is unanimously regarded as the earliest step — the first act of Grimm's Law; it was followed, or, perhaps, accompanied by the voicing of fricatives (Verner's Law). Linguists of the 19th c. were inclined to refer the voicing of fricatives to a far later date than the first act of Grimm's Law. However, there are no grounds to think that the effect of word stress and intervocal position on sonority could have been much delayed. In all probability, the IE plosives split into voiced and voiceless sounds soon after they had acquired their fricative character or even during that process.

The order of the other two steps (or acts of Grimm's Law) varies in different descriptions of the shift.