

2 THE PLACE OF ENGLISH IN GERMANIC AND INDO-EUROPEAN

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2.1 Language change and historical linguistics

Greek philosophers were aware of the fact that human language is subject to change in the course of time. But only from the nineteenth century onwards did scholars develop a truly scientific approach to language change and its description. During the Middle Ages various suggestions had been put forward with regard to language development, but religious prejudices frequently stood in the way of a correct understanding of historical processes; thus one widespread view was that all languages somehow descended from Hebrew. Then in his justly famous Anniversary Discourse of 2 February 1786 (published in *Asiatick Researches* 1.415–431 (1788)) Sir William Jones brought basic features of Sanskrit to the attention of western scholars. He contended that Sanskrit, Greek and Latin stem from a 'common source, which, perhaps, no longer exists' and surmised that Germanic and Celtic derive from the same source 'though blended with a very different idiom'. The first quarter of the nineteenth century then saw the development of a reliable methodology in genetic linguistics. The main point concerning language relationship can be phrased as follows: two or more languages are genetically related if they stem from a common ancestor; the fact and the degree of the relationship are established on the basis of deep-cutting structural agreements which cannot be due to chance. Sanskrit, Greek, Latin, Germanic, Celtic and a few other languages stem from a common proto-language, which is usually termed 'Indo-European' (in German *indogermanisch*). The aim of historical linguistics consists in following up the development of a given language through its history. This involves the study of texts in as far as records are available.

A good deal of what will be said in the following paragraphs is

speculation. Linguistic reconstruction can hardly ever be 'proved'; only very rarely do further discoveries confirm the reconstructions at which scholars arrived on theoretical grounds. The variety of reconstructions and reconstruction systems available and currently used in Indo-European linguistics is quite baffling. It must nevertheless be stressed that the surface differences mainly result from differing interpretations of the material, whereas the underlying methodology of reconstruction is basically agreed upon. It is the purpose of the following pages to explain this common methodology.

The main concepts which underlie historical linguistics are the regularity of sound change and the systematic character of diachronic change in general. Once the genetic relationship obtaining between certain languages has been clarified, the common underlying language, which we term a proto-language, can be reconstructed. It is perhaps best to illustrate the methodology here with reference to one concrete example. A noun meaning 'father' is found in surprisingly similar shape in a number of languages: Old English *fæder*, Old Frisian *feder*, Old Saxon *fadar*, Old High German *fater*, Gothic *fadar*, Old Icelandic *faðir*. If we omit further details for the moment it should be quite clear that the similarity of these forms can hardly be due to chance. Rather the similarity is the result of the words stemming from one common ancestor. The ancestral form was used in a language not attested but reconstructed on the basis of such correspondences. This ancestral language is termed 'Germanic', also 'Proto-Germanic'. The Germanic form for 'father' can be assumed to have exhibited initial *f*; further details of the word's form will be dealt with below. We can then confront this form with correspondences in other languages: Latin *pater*, Greek *πατήρ*, Sanskrit *pitár*. These cognate forms show that the Germanic languages exhibit initial *f* where other related languages have initial *p*. We can assume that there is a sound rule according to which initial *p* of the ancestral language of Germanic, Latin, Greek and Sanskrit became *f* in Germanic.

The systematic investigation of cognate forms and the reconstruction of common ancestral forms culminated in the work of the 'first' generation of Indo-Europeanists, the outstanding scholars being Rasmus Rask (1787–1832), Franz Bopp (1791–1867) and Jacob Grimm (1785–1863). A major revolution in Indo-European studies occurred in the 1870s. One of the principles of the 'Neogrammarians' was the *Ausnahmslosigkeit der Lautgesetze* (sound laws do not suffer exceptions). Modern Indo-European studies still largely build on the foundations

laid by scholars like Karl Brugmann (1849–1919), Hermann Osthoff (1847–1909), Eduard Sievers (1850–1932), Hermann Hirt (1865–1936) and Wilhelm Streitberg (1864–1925). As a result of the work of such towering figures as Jerzy Kuryłowicz (1895–1978) and Emile Benveniste (1902–77) the reconstruction of Indo-European has undergone major changes in this century. Yet no general reconstruction system is accepted by all specialists. It is the purpose of the following sections to point out what may be considered as reasonably safe and at least widely agreed upon.

2.2 The Germanic languages

The term 'Germanic' is used to describe a group of closely related languages which were spoken in southern Scandinavia and northern Germany in the first millennium before Christ. Major migrations in the course of the first centuries of our era brought about a considerable spread of these languages. This section will first give some information about the documentation available for the various Germanic languages; then an attempt at characterising the linguistic structure of Germanic will be made.

Our earliest Germanic material is available in the writings of classical authors. It goes without saying that stray onomastic elements and terms for special weapons or other tools found in Greek or, mainly, Latin authors are generally difficult to interpret and do not reveal much about the linguistic structure of Germanic. A second and very important source of information about early Germanic is provided by borrowings into Finnish, a non-Indo-European language. Apparently Finnish has changed little phonetically since that time, so that a form like *rengas* 'ring' is nowadays quite close to the Proto-Germanic form, from which it was borrowed; we reconstruct the form as Gmc **xrengaz* > **xringaz* (cf. OE *bring* 'ring'). But by far the most important source for reconstructing Proto-Germanic is available in the textual attestations of the individual Germanic languages, among which the early documentation claims our major attention. The individual Germanic languages will be enumerated here in a roughly chronological sequence according to their earliest attestations (see Figure 2.1).

It is likely that at the time of our earliest runic inscriptions all the Scandinavian languages, which in historical times clearly fall into two groups (West Norse and East Norse), were rather similar. The oldest runic inscriptions may date back to somewhere round the year AD 200,

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Gothic																				
Runic(Scand.)																				
O Ic.																				
OE																				
O Fr.																				
O Sax.																				
O HG																				

(the Arabic numerals refer to the centuries AD, 2=200, 3=300, etc.)

Figure 2.1 The Germanic languages and their documentation

but the texts are short and in many cases unclear. Extensive documentation in the separate Scandinavian languages is available from the eleventh century onwards, especially in Old Icelandic; 'Old Norse' is often, but incorrectly, used to refer to material from Old Icelandic. The most comprehensive corpus of material from the first half of the first millennium is the Gothic translation of parts of the Old and New Testaments. The translation was carried out in the second half of the fourth century under Bishop Wulfila (bishop of the Visigoths from 341–381/382/383). Gothic will mostly be quoted below as being reasonably close to Proto-Germanic. Crimean Gothic is attested in a vocabulary of eighty-six words written down by the Flemish diplomat Ogier Gislain of Busbecq in 1560–2.

The remaining Germanic languages, which are amply attested from the period before or around 1000, are usually grouped together as West Germanic. West Germanic is put into contrast with East Germanic (= Gothic) and North Germanic (= Scandinavian). In the early centuries of our era the differences between East Germanic, North Germanic and West Germanic were certainly quite clear. It is, however, a highly disputed question whether the threefold distinction among the Germanic languages is genetically justified, since both East Germanic and North Germanic and North Germanic and West Germanic show some agreements which render it likely that originally Germanic fell into just two groups, and one of these two groups underwent further splitting.

The main members of West Germanic are the following:

German divides up into a number of dialects; the earliest texts of Old High German are available from the eighth century.

Low German is available in texts from the ninth century (*Heliand* and *Genesis*) and somewhat earlier.

Old Frisian is available from the twelfth century onwards only and is

thus contemporaneous with Middle English; Frisian is the closest cognate of English.

English is often grouped together with Frisian as Ingvaenic on the assumption that both represent a special linguistic group within West Germanic. The earliest Old English texts date from around the year 700; runic inscriptions are somewhat earlier.

Since linguistic subgrouping can be carried out only on the basis of shared innovations, some of the traits which are peculiarly characteristic of Germanic and set Germanic off from all the related languages must be listed here. It is probably true to say that none of these characteristics is limited to Germanic; but the sum total of the traits to be mentioned is peculiar to Germanic. In the absence of any clear geographic or ethnic definition of what 'Germanic' means we must use linguistic means in this context. The aim of the following lines is to provide a general idea of what 'Proto-Germanic' was like.

Within the sound system it can be pointed out that the Germanic obstruents and spirants differ considerably from those of the closely related languages. Thus we find /f-/ in the initial position of the word for 'father', where Latin and Greek exhibit /p-/: Gmc **fader-* (> OE *fæder*, Go. *fadar*, OHG *fater*), Lat. *pater*, Gk *πατήρ*. It will be shown below that the opposition of Gmc **f-* to **p-* in the majority of the Indo-European languages is not an isolated phenomenon. By the side of Gmc **f-*: IE **p-* we also find Gmc **þ-*: IE **t-* and Gmc **x-*: IE **k-*, so that the Germanic consonantism can be said to represent a structurally coherent development of voiceless stops > voiceless spirants. A structural peculiarity of this type clearly sets Germanic off from the remaining Indo-European languages with regard to the consonantism. A further feature typical of the Germanic sound system is presented by the accent, which was generally on the first syllable of words, whilst in Indo-European the accent could theoretically occur on any syllable of a given word. This retraction of the accent onto the first syllable had considerable further consequences. The vowels of non-initial syllables, which were unstressed henceforth, were weakened and could be lost; the first syllable of a word was given special prominence.

Whereas the system of the Germanic noun can be said to exhibit the same basic categories as the Indo-European noun, the adjective developed a twofold inflexional pattern in Proto-Germanic, which is usually called the 'strong' and the 'weak' adjective. The morphological difference between 'strong' and 'weak' adjectives carried a semantic distinction. A number of striking innovations occurred in the verbal

system. The Indo-European verb had a three-way formal contrast of present – aorist – perfect, whose precise functions are hard to define. The Germanic verb, however, above all indicates 'tense', and the German rendering of 'verb' as 'Zeitwort' is therefore quite meaningful. In the Germanic verbal system two tenses are expressed, which may be termed the 'present' and the 'preterite'. The verbs of Germanic are split up into two major groups, called 'strong' and 'weak' verbs, and the criterion for this arrangement is provided by the formation of the preterite. 'Strong' verbs form their preterite by a change in the root vocalism; this change in the vocalism is termed 'ablaut'. The process is found down to the present period in examples like *sing: sang, ride: rode, get: got*. The basis for the 'strong' preterite is the Indo-European perfect (with perhaps some forms from the aorist system blended in). 'Weak' verbs attach a dental suffix to the unchanged root or stem found in the present. This process remains vigorous today. Thus the preterite of *knock* is *knocked*, by the side of *love* we find *loved*, and for *greet* we use *greeted*. The weak preterite is certainly an innovation of Germanic, whose precise origin is hardly clear.

Proto-Germanic also has a number of special lexical items. But the lexicon is usually less reliable in establishing linguistic relationship than phonology and morphology.

2.3 · The Indo-European languages

That Latin was somehow related to Greek was a common assumption already in antiquity. But the usual view then was that Latin 'descended' from Greek. Only in the course of the nineteenth century was the correct relationship established: Latin and Greek are genetically related because they both descend from a common ancestor, namely Indo-European. There is no reason whatsoever for positing any particularly close relationship between Latin and Greek. Since Latin and Greek are the two Indo-European languages most widely known in European tradition, the examples in the following presentation will often be drawn from them. Nineteenth century scholarship was based on material from the following Indo-European languages: Indic (Sanskrit), Iranian, Armenian, Greek, Italic (Latin and the remaining Italic dialects, of which Oscan and Umbrian are the best known), Celtic, Germanic, Baltic, Slavic and Albanian. The authoritative account of Indo-European comparative grammar as developed in the nineteenth century is Brugmann's *Grundriss* (Brugmann 1897–1916).

At the beginning of the twentieth century two further languages (or language groups) became available to Indo-Europeanists, namely Anatolian and Tocharian. Of these two, Anatolian, whose most important member in this context is Hittite, had a particularly deep influence on Indo-European studies. Whereas nineteenth century Indo-Europeanists drew on material that did not stem from a period earlier than 1000 BC (at the utmost), Anatolian documents can be dated back to somewhere around 1800 BC. Surprisingly, Anatolian did not confirm many of the reconstructions that had been established on the basis of the Indo-Iranian and Greek material; on the contrary, Anatolian presented strong deviations in various respects. This gave rise to a new theory concerning the split-up of the proto-language. A number of scholars favoured the view that Anatolian (Hittite) was not a daughter language of Indo-European, but rather a sister in the sense that both Anatolian and Indo-European descended from one common language, which was termed Indo-Hittite. The debate is still going on. Subgrouping in general is a controversial subject in Indo-European studies. Whereas most authorities agree that Indic and Iranian go back to a special subgroup called 'Aryan', none of the other assumed proto-languages between Indo-European and the individual Indo-European languages has been widely agreed upon; Figure 2.2 gives a schematic representation of some of the possible arrangements of the Indo-European languages within the system of genetic trees.

Since the present chapter cannot deal with any of these controversies it was deemed best to explain the linguistic system of Old English within what has come to be called the Greco-Aryan model. This reconstruction model, although by no means uniformly accepted by all scholars, had gained a certain amount of adherence around the turn of the century, and it still remains the background for much creative work in Indo-European reconstruction. It is mainly based on the systematic agreements of the two oldest branches of Indo-European then available to scholars. Since a number of individual reconstructions of Indo-European forms will be given in the subsequent sections (above all in the section on historical phonology), it may be best to illustrate the various concepts scholars have had of Indo-European by quoting a piece of reconstructed text. The famous piece called 'eine Fabel in indogermanischer Ursprache' ('a fable in Indo-European') was published more than a century ago by August Schleicher and showed the main ideas scholars had concerning Indo-European around the middle of the nineteenth century. The fable was then 'up-dated' by Hirt in the

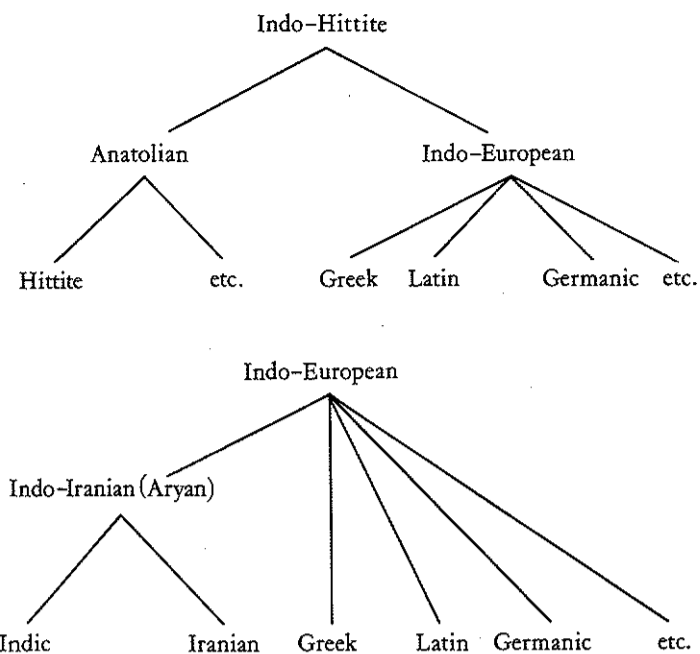


Figure 2.2 Schematic representation of the linguistic family tree

first half of our century, and a 'new version' was published by Lehmann and Zgusta in 1979. The title '(das) Schaf und (die) Rosse' (the sheep and the horses) and the concluding phrase 'Dies gehört-habend bog (entwich) [das] schaf [auf das] feld (es machte sich aus dem staube)' ('having heard this, the sheep took flight into the plain') appear as follows:

Schleicher (1868)	Hirt	Lehmann and Zgusta
<i>avis akvāsas ka</i>	<i>owis ek'wōses-k'e</i>	<i>owis ek'wōsk'e</i>
<i>tat kukerwants avis</i>	<i>tođ k'ek'ruwos</i>	<i>tođ k'ek'luwōs</i>
<i>agram ā bhugat</i>	<i>owis ađ'rom ebbuget</i>	<i>owis ađ'rom ebbuget</i>

2.4 Historical phonology

The reconstruction of the Indo-European phonemic system is perhaps the most controversial area in Indo-European studies at present. In Figure 2.3 a listing is offered of the phonemes of Indo-European that can be reached on the basis of equations of the type mentioned above: The agreement between Skt *pitár-*, Gk *πατερ-*, Lat. *pater-* leads us

p	t	k	k	k ^w
ph	th	kh	kh	k ^w h
b	d	g	g	g ^w
bh	dh	gh	gh	g ^w h
w	s	y		
m	n, ɾ,	l		
m̥	n̥, ɾ̥,	l̥		
				ū
ī	ē	ə	ō	
		ā		

Figure 2.3 The consonantal and vocalic phonemes of Indo-European

towards assuming that IE had a voiceless labial stop in the initial position of the word for 'father', a voiceless dental stop in medial position, and the stem ended in *-r-*. The main points of dispute concerning this system of consonants can be outlined as follows. The system is structurally 'unbalanced', because it has a very high number of stop consonants and only a single spirant (*s*). Within the system of the stop consonants it has been objected that the fourfold distinction of *t-th-d-dh* is actually found in Sanskrit only; we have thus no immediate evidence for ascribing the four series of stop consonants (voiceless: *t*, voiceless aspirate: *th*, voiced: *d*, voiced aspirate: *dh*) to the proto-language. But the reduction to *t-dh-d*, advocated by some scholars, is found objectionable on typological grounds, since a language that has the opposition *t:d* is likely to have a voiceless aspirate and not a voiced aspirate; typologically we would assume *t:th:d* rather than *t:dh:d*.

Perhaps the most deep-cutting innovations in twentieth century Indo-European studies centre around the concept of the 'laryngeal theory'. In its most widely accepted form the laryngeal theory states that Indo-European had three consonants, which may be represented as ϑ_1 , ϑ_2 and ϑ_3 . The phoneme represented by ϑ in Figure 2.3 would then have to disappear from the sound system of Indo-European. These consonants, ϑ_1 , ϑ_2 and ϑ_3 , should not be counted among the vowels. Since the laryngeals are assumed to have been consonants, a fairly widely adopted usage is to write b_1 , b_2 , b_3 . It seems, however, that the consonantal value of *b* had no direct effect in Germanic. The most important development of the laryngeal(s) occurred in interconsonantal position, where vocalisation took place. In Germanic the result of vocalic ϑ is uniformly *a*.

Apart from these major points of dispute, many minor issues are controversial. For the present purposes it seems best to stick to a rather traditional account, however. The sound system of Indo-European as presented in Figure 2.3 results from systematic comparison of cognate lexical items in the individual languages. Only a fraction of the material (with emphasis on Sanskrit, Greek and Latin) can be presented here; the main purpose of the following sections consists in establishing the relationship between Germanic phonemes and their Indo-European starting-points.

2.4.1 Consonants

Indo-European had five voiceless stops:

/p/: IE **pátēr-* 'father' (Skt *pítár-*, Av. *pítar-*, Arm. *hayr* (IE *p-* > *h-* in Armenian), Gk *πατήρ*, OIr. *athir* (initial *p-* was lost in Celtic), Gmc **fader-* (> Go. *fadar*, OE *fæder*, OSax. *fadar*, OHG *fater*))

/t/: IE **treyes* 'three' (Skt *tráyas*, Gk *τρεις*, Lat. *trēs* (< **treyes* with loss of intervocalic *-y-*), OIr. *tri*, Gmc **þrijiz* (> Go. *þreis*, OE *þrīe*))

/k/: IE **kṛtóm* 'hundred' (Skt *śatám* (IE *k* > Skt *ś*), Av. *satəm* (IE *k* > Av. *s*), Gk *ἐκατόν* (*é-* is due to a secondary innovation), Lat. *centum*, OIr. *cét*, Welsh *kant*, Lith. *šimtas* (IE *k* > Balt. *š*), OCS *sŭto* (IE *k* > Slavic *s*, but the origin of *-ŭ-* is unclear), Gmc **hund-* (> Go. *hund*, OE *hund*))

/kʷ/: IE **krewā-* 'raw flesh' (Skt *krāvis*, Skt *krūrā-* 'bloody' = Av. *xrūra-* (from IE **kruā-* > **krū-*), Gk *κρέας*, Lat. *cruor*, Lith. *kraūjas* 'blood' (< **krewā-yo-* or **krowā-yo-*), Gmc **braw-a-* (> OHG *brō*, OS *brā*, OE *brēaw*, ON *brár*) < IE **krowā-o-*). Note: Some of the forms quoted here show an alternation in the root vocalism termed 'ablaut', which will be dealt with further on; it should be noted that the root consonantism is stable in ablauting forms.

/kʷ/: IE **kʷis*/**kʷey* 'who?', also **kʷo-* (Skt *ki-* (interrogative stem), Skt *kas* 'who?', Lat. *quis*, Osc. *pis*, *pid*, OIr. *cia* 'who?', *cid* 'what?', W *pwŷ* (IE **kʷ* became *p* in Oscan and British, but in Irish *k* resulted from **kʷ* with loss of the labial part), Lith. *kàs*, OCS *kŭto* 'who?', Gmc **hwaz* (> Go. *hwaz*, OHG *hwer*, OE *hwā*))

The evidence for five voiceless aspirated stops is uneven; the following examples may be offered:

/ph/: IE **phol-* 'fall' (It must be stressed that this root is quite uncertain, but the following points should be mentioned. Arm. *phlanim* 'I fall' cannot have had *p-* because IE **p-* > Arm. *h-* (cf. *hayr* 'father').

The remaining cognates, besides not being absolutely certain, may have had initial *p*-. Lith. *pūlti* 'fall' and Gmc **falla-* (> Go. *fallan*, OE *feallan*). Gmc **fall-* may also be connected with IE **pet-* 'fall', the immediate preform would be **pot-lo-* > Gmc **fadla-* > (assimilation) **falla-*. Other possible examples for IE *ph* have initial *s-* (*s* mobile), e.g. Skt *spḥūrjati* 'rumbles', Gk *σφαραγέομαι* 'rattle'.

/th/: IE **pantbēs-* 'way' (Skt *panthās* (gen. *pathas*), Av. *panthā* (gen. **paθō* < *paθas*), Gk *πόντος* 'sea', Arm. *hown* 'ford', Lat. *pons* 'bridge', OCS *puti* 'way'. The word is not directly inherited in Germanic, but Gmc **paþa-* (> OE *paþ* 'path') may represent a borrowing from Iranian.)

/kh/: IE **skhid-* 'cut up' (Gk *σχίζω* 'I cut up', Skt *chinatti* (< **khi-ne-d-ti*) 'he cuts'; the other languages show forms that may go back to *sk-*, e.g. Lat. *scindere* 'tear', Lith. *skiesti* 'separate', Gmc **skīt-a-* 'cacare' (> OE *scītan*.)

/kh/: IE **kākāhā* 'plough' (The reconstructed form **kākāhā* is perhaps indicated by Skt *śākāhā* 'branch' and Go. *hoha* 'plough'.)

Most of the voiced stops of Indo-European are attested by a number of excellent equations. On structural grounds we posit five voiced stops, but it must be pointed out that the material allowing the reconstruction of /b/ is extremely weak.

/b/: no clear evidence (A reasonably good case for the occurrence of /b/ can be seen in the present formation of the root for 'drink'. The root is to be posited as IE **pō-* (Skt [aorist] *á-pā-t*). The thematic present was formed by reduplication: **pi-b-e-ti* (reduplication (consisting of root-initial consonant *p-* + reduplicating vowel *-i-*) + root initial consonant *p*, which was voiced to *-b-*, + thematic vowel *-e-* + person marker for 3 sg.) is found in Skt *pībati*, OIr. *ibid* (*p-* was lost in Celtic) and Lat. *bibit* (initial *p-* was assimilated in voice to *-b-*). No matter how the intervocalic *-b-* in IE **pibeti* is ultimately explained, it must be secondary, since it is identical with the root-initial *p-*. In Germanic, the phoneme /p/, which would be the regular continuation of /b/ is quite frequent. A root **dheub-* (meaning 'deep, hollow') has been assumed to underlie the following words: Gaulish *dubno-* 'world' (cf. OIr. *domain* 'world') in *Dubno-rix* 'world-king', Lith. *dubūs* 'deep', Gmc *deupa-* (> OE *dēop* 'deep').)

/d/: IE **dékm̥(t)* 'ten' (Skt *dása*, Av. *dasa*, Gk *δέκα*, Lat. *decem*, OIr. *deich*, W *deg*, Gmc **tehun* (> Go. *taihun*))

/ǵ/: IE **ǵeus-* 'taste' (Skt *juṣáte* 'enjoys' (< IE **ǵus-e-toi*), Av. *ṣaoš-*, OPers. *daus-* (IE *ǵ-* > Skt *j-*, Av. *ṣ-*, OPers. *d-*), Gk *γεύομαι* 'I enjoy', Lat.

gustus 'tasting', Gmc **keus-a-* (> Go. *kiusan* 'examine', OE *cēosan* 'choose'))

/g/: IE **yugóm* 'yoke' (Skt *yugá-*, Gk *ζυγόν*, Lat. *iugum*, Gmc **juk-a-* (> Go. *juke*, OE *geoc*))

/g^w/: IE **g^wem-* 'go, come' (Skt (aorist) *agan* 'he went' (< IE **e-g^wem-t*), Gk *βάσκε* 'go' (imperative of present **g^wm-skē-*), Lat. *venīre* 'come' (IE **g^w-* > Lat. *v-*), Gmc **kwem-* (> Go. *qiman*, OE *cuman* 'come'))

Indo-European had five voiced aspirated stops. They are unitary phonemes, just as the voiceless aspirated stops /ph/, /th/ etc. are unitary phonemes. The transliteration as *b^h*, *d^h*, etc. widely used nowadays has therefore a good deal to recommend itself, above all since it allows the distinction between the sequence **-d + -h-* (= consonant + laryngeal) and the unitary phonemes **d^h*, etc. But the traditional representation as *bh*, *dh*, *gh*, *ǵh* and *g^wh* is kept here.

/bh/: IE **bber-* 'carry' (Skt *bhāratī* 'he carries', Av. *baraiti*, Gk *φέρω*, Lat. *ferō*, OIr. *biru*, Gmc **ber-a-* (> Go. *bairan*, OE *beran*))

/dh/: IE **dhē-* 'place' (Skt *dādhāti* 'he places', Av. *dadāiti* < IE **dhe-dhē-ti* (reduplicating present; in words with two succeeding aspirates in syllable initial position the first loses aspiration by dissimilation: **dh-dh-* > *d-dh-* (Grassmann's law)), Gk *τίθημι* (both Aryan and Greek have a reduplicating present, but in Greek the reduplicating vowel is *-i-*; in **dhi-dhē-mi* a breath dissimilation similar to the one found in Skt *dādhāti* occurred, but it took place after the peculiarly Greek change of *dh* > *th*), Lat. *faciō*, *fēcī* (IE *dh* > Lat. *f-*; both present *faciō* < **dhā-k-* and perfect *fēcī* exhibit an extension in *-k-*), Lith. *dėti* 'put', OCS *děti*, Gmc **dē-* (in nominal formations, e.g. **dē-di* (> OE *dād* 'deed', OHG *tāt*), **dō-* (in the verb OE *dōn* 'do', OHG *tuon*))

/ǵh/: IE **weǵh-* 'move' (Skt *vahati*, Av. *vazaiti*, Gk (Pamphylian) *Feχέρω* 'let him bring', Lat. *vehō*, OIr. *fēn* 'cart' (< **weǵh-no-*), Gmc **weg-a-* (> Go. *ga-wigan*, ON *vega* 'move', OE *wegan*))

/gh/: IE **steigh-* 'go' (Skt *stighnōti* 'goes', Gk *στέλλω*, OIr. *tiagu* 'I go', Gmc **stīg-a-* (> Go. *steigan*, OE, OHG *stīgan*))

/g^wh/: IE **g^when-* 'beat' (Hitt. *kuenzi* 'he kills' (root present **g^when-ti*), Skt *hānti*, Av. *jainti*, Gk *θείνω* (< **g^when-yō*), OIr. *gonim* 'I kill', Lith. *genū giūti* 'drive cattle', OCS *ženg gunati*, Gmc **gw(e)n-* (reflexes of this root can be found in Go. **gunþ-* 'battle' > OE *gūþ*, but perhaps also in **ban-an-* 'murderer' > OE *bana*; the reflexes of **g^wh* in Germanic pose problems))

If the consonantal phonemes reconstructed in the preceding para-

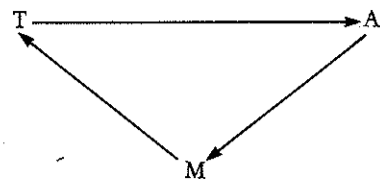


Figure 2.4 Schematic representation of the consonant shift in Pre-Germanic

graphs had the phonetic values of the corresponding Sanskrit phonemes, then the consonantal system of Indo-European underwent considerable change in the course of its development into Germanic. If the phonetic properties of the Indo-European phonemes differed, then the description of the development from Indo-European to Germanic would have to be revised. The traditional account assumes a shift in the consonantism, often termed Grimm's Law. The mechanism of this consonant shift can be described as follows. The voiceless stop consonants become voiceless spirants: $p > f$, $t > \beta$, $k > h$, $k^w > hw$. The voiceless aspirated stop consonants fell together with the voiceless stops and became voiceless spirants; from the point of view of Germanic, the two series cannot be distinguished. The voiced stop consonants became voiceless: $b > p$, $d > t$, $g > k$, $g^w > kw$. The voiced aspirated consonants first became voiced spirants. At least in some positions they became the corresponding voiced stop consonants. The following rules can tentatively be set up: $bb > \beta > b$, $db > \delta > d$, $gb > \gamma > g$, $g^wb > \gamma w > g, w$ ($b \neq \beta$). In Figure 2.4 a simplified picture is drawn up to show the mechanism of the Germanic consonant shift.

T stands for tenuis (= voiceless stops, but these include also the voiceless aspirated stops), **A** stands for aspirated (the assumption is that the tenuis were first aspirated and then became spirants, but **A** also means aspirated stops of the type IE bh , and these are the precursors of the Germanic voiced stops at least in some cases), **M** stands for media (and means in this context voiced stops). The complicated process of the Germanic consonant shift can be visualized as follows:

- IE **T** (e.g. t) > Gmc **A** (β)
- IE **A** (e.g. dh) > Gmc **M** (d)
- IE **M** (e.g. d) > Gmc **T** (f)

The basic correspondences of Germanic consonants as outlined above were known to scholars throughout the nineteenth century. But a surprisingly high number of exceptions caused considerable dif-

ficulties. Thus the word for 'brother' can be assumed to have had $-t-$ in intervocalic position on the basis of clear correspondences like Lat. *frāter*, Skt *bhrātar-*, and Gk *φράτηρ*; the voiceless spirant found in Go. *broþar* (voicing of intervocalic β in OE *brōþor* is secondary) is consequently quite regular. But the words for 'father' and 'mother' clearly also exhibited $-t-$ (cf. Skt *pitār-*, Gk *πατήρ*, Lat. *pater*, Skt *mātār-*, Gk *μήτηρ*, Lat. *māter*), and yet the Germanic cognates have $-d-$ in medial position (OE *faeder*, *mōdor* ($-t-$ in OHG *fater*, *muoter* is due to a secondary development of $-d- > -t-$). This baffling discrepancy was explained by Karl Verner in a famous paper published in 1877. The regulation has ever since been referred to as Verner's Law. According to Verner's Law voiceless stops of Indo-European, which regularly yielded voiceless spirants in Germanic, became voiced if the accent in Indo-European was not on the immediately preceding syllable. Thus $-t-$ in IE **patēr-* appeared as δ in Germanic in contrast to $-t-$ in IE **bhrāter-*, which led to $-þ-$.

The only spirant which is assumed for the consonantal system of Indo-European is $/s/$. The spirant $/s/$ is basically kept unchanged in Proto-Germanic. But it took part in the voicing process ruled by Verner's Law. Thus we find an alternation of $/s/ : /z/$ in Germanic, which reflects the original position of the accent. Gmc $/z/$ yielded $/r/$ in intervocalic position in Old English (rhotacism, for the process compare Lat. *flōs/flōris* 'flower'), but in final position it is generally lost. The paradigm of the verb for 'choose' has the following stem forms in Old English: *cēosan*, *cēas*, *curon*, *coren*, which go back to Gmc **keus- : *kaus- : *kuz-*. The underlying root is IE **gēus-*, which is reflected in Gmc **keus-*, whereas Gmc **kaus-* goes back to the ablauting form IE **gōus-* (with o -grade), and Gmc **kuz-* represents yet another ablaut grade, namely the zero-grade IE **gus-* (with unstressed root).

The sound correspondences described so far provide an excellent example for the regularity of sound change. One major set of apparent exceptions was eliminated by the discovery of Verner's Law, and a few minor details may also be mentioned. The voiceless stop consonants (together with the voiceless aspirated stop consonants) undergo no change in the course of their development into Germanic when they are preceded by $s-$, thus $sp-$, $st-$, and $sk-$ remain unchanged: **standan-*, the Germanic verb for 'stand' (OE *standan*), exhibits the initial group $st-$ found in Lat. *stāre*. Furthermore it must be noted that in a sequence of two stop consonants only the first is shifted and the second remains. This phenomenon can mostly be observed in medial position: a form

corresponding to Lat. *captus* (formation in *-to-* from root *kap-*) is found in Gmc **hafta-* (> OE *hæft* 'captive'). Clearly only the first consonant in the group *-p-t-* is shifted. Finally it has to be pointed out that a group of two dentals always yields *-ss-* in Germanic; thus the *to-* formation belonging to the root **sed-* 'sit' can be posited as IE **sed-to-* > **setto-* and led to Gmc **sessa-* > OE *sess* 'seat, bench'. Loanwords, which entered the language only after the respective sound change was over, do not show the effects. Thus Gmc **paþa-* 'path' is probably ultimately due to borrowing from Iranian *paþ-*, and the initial consonant is not shifted.

2.4.2 Resonants and semivowels

In addition to the stop consonants and the spirant /s/, Indo-European had six further consonants, which have closely related vocalic correspondences. They are termed resonants and semivowels: *m*, *n*, *r*, *l*, *j*, *w* function as consonants, whereas *ṃ*, *ṅ*, *ṛ*, *ḷ*, *i*, *u* function as vowels. Furthermore there was at least one sound which was similar to the spirants and tended to vocalisation; this sound will be termed 'laryngeal'. This section will illustrate the consonantal value of these phonemes, their vocalic realisation will be dealt with subsequently.

The six consonants *m*, *n*, *r*, *l*, *j* and *w* can be exemplified as follows:

/m/: IE **māter-* 'mother' (Skt *mātár-* 'mother', Av. *mātar-*, Arm. *mayr*, Gk *μήτηρ*, Lat. *māter*, OIr. *máthair*, Gmc **mōder-* (> OE *mōdor*, OHG *muoter*))

/n/: IE **nomn-* 'name' (Skt *nāma* 'name', Av. *nāma*, Arm. *anun*, Gk *ὄνομα*, Lat. *nōmen*, OIr. *ainm*, Gmc **naman-* (> Go. *namo*, OE *nama*))

/r/: IE **rēg-s* 'king' (Skt *rāj-* 'king' (*rāj-an-* is extended by *-an-*), Lat. *rēx* (< **rēg-s*), OIr. *rí* (< **rēg-s* (IE *ē* yielded *ī* in Celtic); the Germanic stem **rīk-* in Go. *reiks* 'ruler', OE *rīce* 'kingdom' has often been explained as due to borrowing from Celtic **rīg-* with substitution of Gmc *-k-* for *-g-*))

/l/: IE **leudb-* 'grow' (Skt *ródbati* 'grows, rises' (Skt *r* continues IE *l*), Av. *raodaiti*, Gk *ἐλεύθερος* 'free' (adjectival formation in *-ero-* from root **leudb-*, the prothetic vowel *e-* is due to a specially Greek development), Lat. *liberī* 'children', Gmc **leud-a-* (> Go. *liudan*, OHG *liotan* 'grow'))

/j/: IE **jugóm* 'yoke' (cf. above under /g/)

/w/: IE **wīró-* 'man' (Skt *vīrá-* 'man', Av. *vīra-*, and Lith. *výras* point back to a proto-form **wīró-*, whereas Lat. *vir*, OIr. *fer*, and Gmc **wer-a-* (> Go. *wair*, OE *wer*) indicate a starting-point **wiro-* with short

-i-. The noun **wiro-* is probably to be analysed as a *ro-* formation from a root (zero-grade) **wī-*.)

The most controversial phoneme in the Indo-European sound system as offered in Figure 2.3, is *ə*; this phoneme was formerly assumed to be a vowel. The underlying reasoning can be briefly summed up as follows. If we confront Skt *pitár-* with Lat. *pater*, it is immediately clear that the vowel following upon /p-/ cannot have been /i-/ in Indo-European since /i/ was kept unchanged in Latin, nor can it have been /a-/ because /a/ was kept unchanged in Sanskrit. Consequently it was assumed that the phoneme following /p-/ in the Indo-European word for 'father' was yet another vowel, which was represented by *ə* and referred to as 'schwa' (the term 'schwa' is taken from Hebrew grammar). In the course of the twentieth century the position and interpretation of 'ə' has stood in the centre of prolonged research and discussion. The main points of dispute can be outlined as follows. There are strong indications that 'ə' originally had consonantal value(s). For historical reasons the term 'laryngeal(s)' is used to describe these sounds. It was furthermore argued that the comparative material points to the existence of more than one 'ə', although no agreement as to the precise number of these phonemes was reached. The most influential scholars in Indo-European, however, tend towards positing three laryngeals. As a result of the prolonged dispute, different transcription systems are now in use. Thus the laryngeal(s) can be represented as *ʔ*₁, *ʔ*₂, *ʔ*₃, or *h*₁, *h*₂, *h*₃ or *h̄*₁, *h̄*₂, *h̄*₃. For the present purposes some simplification may be justified in view of the complexity of the question. Furthermore Germanic does not offer any strong evidence in favour of the view that the distinction between three (or more) laryngeals was phonemically relevant in its prehistory. There is no support for the view that the consonantal value of the laryngeal(s) was kept in Germanic. Therefore it is reasonable to use the traditional sign 'ə' in our reconstructions. In as far as *ə* was kept during the development into Germanic it became vocalised and fell together with the reflexes of IE /a/ and /o/.

2.4.3 Vowels

In the early period of Indo-European studies it was thought that the vocalic system of Sanskrit was particularly close to that of the proto-language. Consequently the system of short vowels was reconstructed as having exhibited *i*, *a* and *u*. But by the second half of the nineteenth

century the Sanskrit system was shown to be due to secondary innovations in that IE *e*, *a* and *o* had merged in one phoneme /a/. The most direct testimony for the Indo-European vocalism can be found in Greek, where *ε*, *α* and *ο* frequently reflect the vowels *e*, *a* and *o* of the proto-language undisturbed. Apart from the equations to be given below, the fact that *e* and *o* were phonemically distinct in the proto-language can be deduced from ablaut relations. Thus the reduplicating perfect of the root **g^wem-* had the *o*-grade **g^wom-* preceded by the reduplicating syllable **g^we-* in the singular: **g^w-* of the basic form IE **g^we-g^wom-e* 'he has gone' is reflected as *-g-* before *-ā-* from IE *-o-*, but as *-j-* before *-a-* from IE *-e-* in Skt (perf.) *jagāma*, so that the difference of the vowels *e/o* can indirectly be inferred from the difference of the consonantal development. The following sections will present material for the short vowels, the long vowels, vocalic nasals and liquids, and diphthongs. Finally ablaut phenomena will be briefly dealt with.

The equations between the related lexical items evidence the following five short vowels for the proto-language: *i*, *e*, *a*, *o*, *u*. A sixth vowel is indicated for pre-Germanic; it arose from vocalisation of *ə*.

/i/: IE **wid-* 'know, see' (Skt *vid-mā* (1 pl. perf., without reduplication) 'we know', Gk *ἴδμεν*, (infinitive aorist) *ἰδεῖν* 'see', Lat. *videō* 'I see', OIr. (ro)*finnadar* 'gets to know, finds out' (< **wi-n-d-n-*), Gmc **wit-* (> Go., OE *witan*, OHG *wizzan*)).

/e/: IE **és-ti* 'he is' (Skt *ásti*, Gk *ἔστί*, Lat. *est*, Gmc **ist(i)* (> Go. *ist*, OE *is*))

/a/: IE **ág-e-ti* '(he) leads, drives' (3 sg. of thematic present of root **ag-*; **ág-e-ti* consists of root **ag-* + thematic vowel *-e-* + person marker *-ti* for 3 sg. present indicative) Skt *ájati* 'he drives', Av. *azaiti*, Gk *ἄγει*, Lat. *agit*, OIr. (ad-)*aig*, Gmc **ak-a-* (> ON *aka*))

/o/: IE **ówis* 'sheep' (Skt *avis*, Gk *ὄϊς*, Lat. *ovis*, Lith. *avìs*, OCS *ovica*, Gmc **awi-* (> OE *eowu*, OSax. *ewi*, OHG *ouwi*, cf. Go. *awistr* 'sheep pen')). Note: OE *eowu* has secondarily switched its declension class; the regularly expected form would be OE *ewe*. For the proto-form Luvian *hawì-* indicates an initial laryngeal: IE **howi-*.

/u/: IE **médhu* 'honey' (Skt *mádhu* 'sweet drink, honey', Gk *μέθυ*, OIr. *mid*, Lith. *medūs*, Gmc **medu-* (> ON *mjǫþr*, OE *me(o)du*, OHG *metu*)).

IE/ə/: IE **pátér-* (see above under /p/).

2.4.4 Vocalic resonants

The resonants which were enumerated above function as consonants in word-initial position. They also function as consonants in the sequence *TeRC*, where *e* is the vocalic kernel, *T* and *C* are any two stop consonants, and *R* stands for *m*, *n*, *r*, *l*. If by the process of ablaut *-e-* is absent in a root of the structure *TeRC*, then *-R-* in the sequence *TRC-* assumes vocalic function. *R* (*R* = *m*, *n*, *r*, *l*) represents the resonants in vocalic function. In the development to Germanic, *R* yielded *uR*, as can be seen from the following equations.

/m/: IE **kmtóm* 'hundred' (material above under *k*)

/n/: IE **tñ-* (zero-grade of **ten-* 'stretch') (Skt *tatá-* 'extended' (to-formation IE **tñ-tó-*), Gk *τατός*, Lat. *tentus* (IE **ñ* > Lat. *en*), OIr. *tét* 'string' (< IE **tñ-tā*), Gmc **þun-n-i* (> ON *þunnr* 'thin', OE *þynne*, OSax., OHG *thunni*))

/r/: IE **wrt-* (zero-grade of **wert-* 'turn') (Skt *wrtá-*, Lat. *vorsus*, *versus* (< IE **wrt-to-* (IE **-t-t-* > Lat. *-ss-*)), Gmc **wurd-* (weak alternant in perfect, e.g. OE *wurdon* 'we became'))

/l/: IE **wl^wos* 'wolf' (Skt *wl^was*, Gk *λύκος*, Lat. *lupus*, Gmc **wulfaz* (> Go. *wulfs*, ON *ulfr*, OE *wulf*, OHG *wolf*))

The phonemes traditionally posited as *ṛ*, *ṝ*, *ṛ̥*, *ṛ̌* can be viewed as *ṛə*, *ṛā*, *ṛa*, *ṝ* (= *m̄_{1,2,3}*, etc.) within the framework of the laryngeal theory. The reflexes of IE *m̄_{1,2,3}*, etc. are identical with those of IE *m*, etc. in Germanic.

2.4.5 Long vowels and diphthongs

The equations given below allow us to set up the following long vowels for the proto-language: *ī*, *ē*, *ā*, *ō*, *ū*. But the status of the individual long vowels within the morphological system of Indo-European differs a good deal.

/ī/: IE **-īno-* is a suffixal element found in Lat. *su-īna* (*caro*) 'pork' (derived from *sūs* 'swine') and recurs in Gmc **swīna-* (> Go. *swēin*, OSax., OHG, OE *swīn*)

/ē/: IE **rēg-s* 'king' (the comparative material was given above, see 'resonants and semi-vowels')

/ā/: IE **māter-* 'mother' (Skt *mātar-*, Gk *μήτηρ*, Lat. *māter*, OIr. *máthair*, Lith. *mótė* 'wife', OCS *māti* (stem *mater-*), Gmc **mōder-* (> OE *mōdor*, OHG *muoter*))

/ō/: IE **dō-* 'give' (Skt *dādāmi* (reduplicating present), Gk *δίδομι* (<

**di-dō-mi*, also reduplicating present, but *-i-* in reduplication), Lat. *dōnum* 'gift', Lith. *dūoti* 'give', OCS *dati* 'give', *darŭ* 'gift')

/ū/: IE **mūs* 'mouse' (Skt *mūs*-, Gk *μῦς*, Lat. *mūs*, Gmc **mūs*- (> OE, OHG, ON *mūs*))

The diphthongs of Indo-European can be interpreted as sequences of *e*, *a*, or *o+i* or *u*. Furthermore the sequences of *e*, *a*, *o+R* can also function as diphthongs. The following equations can be offered for the basic diphthongs *ei*, *ai*, *oi*, *eu*, *au*, *ou*.

/ei/: IE **bheid-* 'split' (Skt *bbedāmi* (aorist subjunctive < **bheid-o-*, the archaic present is formed by a nasal infix, Skt *bhinādmī* 'I split'), Gk *φειδομαι* 'I spare', Gmc **bīt-a-* (> Go. *beitan* 'bite', OE *bītan*, OHG *bīzzan*))

/ai/: IE **kaikos* 'one-eyed, squinting' (Skt *kekara-* 'squinting' (not certainly connected), Lat. *caecus* 'blind', OIr. *caech*, Gmc **haih-a-* (> Go. *haihs* 'one-eyed'))

/oi/: IE **le-loik^w-e* 'he has left' (perfect of root **leik^w-*) (Skt *rireca* (*i* in reduplication is due to an innovation), Gk *λέλοιπε*, Gmc (with loss of reduplication) **laihw* (> Go. *laihw*))

/eu/: IE **bhendh-* 'be aware' (Skt *bodhati* 'is aware', Av. *baodaitē*, Gk *πεύθομαι* 'notice', Gmc **bend-a-* (> Go. *ana-bindan* 'order', OE *bēodan*, OHG *biotan*))

/au/: IE **aug-* 'increase' (Skt (comparative) *ōjyas-* 'stronger', Lat. *augēo* 'increase', Gk *αὔξάνω*, Lith. *augti* 'grow', Gmc **auk-a-* (> Go. *aukan* 'increase', OE (past participle) *ēacen* 'pregnant'))

/ou/: IE **louk-o-* 'clearing' (**louk-o-* is a nominal formation from the root **leuk-* 'shine'; in this nominal formation the root appears in *o*-grade; Skt *loká-* 'free space, world', Lat. *lūcus* 'grove', Lith. *laukas* 'field', Gmc **laub-a-* (> OHG *lōb*)).

Although at a given point, the sequences *ei*, etc. probably consisted of *e+consonantal j*, the 'diphthongs' *ei*, *eu*, *ai*, *au*, *oi*, *ou* certainly had phonemic status in the period preceding the emergence of Germanic.

It will have been noticed that in Indo-European 'roots' the consonantal skeleton is stable, whereas alternation in the vocalism is found within certain morphologically describable limits. This alternation in the root vocalism is usually referred to as 'ablaut' (sometimes translated as 'apophony'). The precise reasons for the rise of ablaut are unknown, but at least partly ablaut is connected with the movement of the accent. Indo-European was a language with so-called 'free' accent, in other words the accent is not predictable in a given word. Thus the accent was on the second syllable in the word for 'father' (IE **pátēr-* >

Gk *πατήρ*, etc.), whereas the word for 'brother' had initial stress (IE **bhráter-* > Skt *bhrátar-*). In Germanic accent was uniformly retracted to the initial syllable of words, but Verner's Law still shows the effect of the original accent position. Of the two types of ablaut to be described in this subsection, quantitative ablaut may be connected with accent, but we still lack a reasonable explanation for the rise of qualitative ablaut.

The basic type of qualitative ablaut can be described as an alternation of *e* and *o*. The *e*-alternation is called the normal grade (also *e*-grade); *o* represents the qualitative ablaut in the sense that the vowel quality is changed. This is the type of ablaut most frequently encountered. Lat. *tegō* 'I cover' contains the verbal root **teg-* in the *e*-grade. The noun *toga* (a garment) exhibits the *o*-grade of the root **teg-* followed by a suffixal element *-ā*. The stem *tog-ā* (final *-ā* was shortened in Lat. *toga*) originally had abstract meaning ('a covering') but was then used in concrete sense referring to a garment. Apart from the *e/o*-ablaut, all other types of qualitative ablaut are less clear and of minor importance.

The most frequently encountered type of quantitative ablaut consists of the absence of the vowel *e* found in *e*-grade. A root of the type IE **leik^w-* appears in zero-grade **lik^w-*, and it is quite reasonable that the incidence of zero-grade is intimately linked to the absence of accent on the root. The *to*-formation IE **lik^w-tó-* (> Skt *rik-tá-*), which had a function comparable to the past participle, had the accent on *-ó-* and may thus have 'caused' the reduction of the diphthong *-ei-* in *e*-grade **leik^w-*. In roots exhibiting the structure *TeiC-*, the zero-grade regularly appears as *TiC-*. Roots of the structure *TeRC-* exhibit vocalization of *-R-* in the zero-grade *TṛC-*. Theoretically zero-grade would be expected to occur with all roots under corresponding morphological conditions. But in roots of the structure *TeC-* (*e*-grade vowel followed by a consonant which cannot assume vocalic function, i.e. a stop consonant or *s*), the regularly expected zero-grade *TC-* is found only rarely. A relevant example is the word for 'nest', which is to be reconstructed as IE **ni-sd-ó-* and contains the zero-grade of the root **sed-* 'sit' (a 'nest' is the place where a bird 'sits down'): IE **ni-sd-ó-* was phonetically realized as [nizdo-] and is found in Skt *nīḍa-* 'resting place' and Lat. *nīdus*; Gmc **nesta-* (> OE, OHG *nest*) is the regular continuation of IE **ni-sd-o-* [*nizdo-]. But apart from such isolated items, in which the zero-grade root occurred in word-medial position, the zero-grade of *TeC-* roots was generally replaced by *e*-grade through analogy. Thus the past participle of Gmc **set-ja-* 'sit' might be expected to exhibit zero-grade

of the root (cf. past participle Gmc **rid-ana-* > OE *ge-riden*, infinitive *rīdan*), but in fact we find Gmc **set-ana-* > OE *seten* (with *e*-grade). In a number of forms we find a lengthening of the basic vowel or of the qualitative ablaut of the basic vowel. Both *ē* and *ō* are found in certain categories of Indo-European nominal (and perhaps verbal) formations. The precise origin of this 'lengthened' grade is unclear in most cases. The root noun for 'foot' (root **ped-*) appears with *-ē-* in Lat. *pēs* (< **pēd-s*), but Germanic **fōt-* in all probability indicates a nominative IE **pōd-s* (cf. Skt *pād-*), which must also have occurred in this paradigm.

The Germanic innovations in the vocalic system were hardly less deep-cutting than those concerning the consonantism. Some of the most important changes will be briefly enumerated here with, as far as possible, reference to the material as given above.

The accent was uniformly retracted to the first syllable of words. As a consequence of the then general initial stress unstressed syllables tended towards weakening. By the time of Old English, medial and final syllables had already undergone considerable reduction, in Modern English they are widely lost.

The vowels /a/ and /o/ fell together as /a/ in Germanic; IE /ə/, when vocalised, also yielded /a/ (IE **aǵ-* > Gmc **ak-*, IE **bowis* > Gmc **awiz*, IE **pōtēr-* > Gmc **fader-*).

The vowels /ā/ and /ō/ fell together as /ō/ in Germanic (IE **māter-* > Gmc **mōder-*, IE **dhō-* (*o*-grade of **dhē-*) > Gmc **dō-*).

A new long monophthong usually termed *ē*² arose in the early history of Germanic. This phoneme is found in some isolated lexical items like the adverb Gmc **hē²r* 'here' and in the preterite of a number of verbs of class VII. It is most likely that *ē*² is due to an innovation, but the precise origin of this phoneme is unclear.

The diphthong *ei* was monophthongized to *ī*, the other diphthongs remained unchanged (IE **bheid-* > Gmc **bī-*).

The short monophthongs /e/ and /i/ remained basically unchanged, but a good deal of overlapping occurred because /e/ merged with /i/ if /i/ followed in the next syllable, and /i/ was lowered to /e/ before /a/ of the following syllable (IE **ni-sd-o-* > Gmc **nesta-*); but /i/ and /e/ clearly had phonemic status in Germanic.

The inherited patterns of ablaut were kept and even elaborated in the verbal system; the preterite and past participle of strong verbs regularly exhibit ablaut.

2.5 Historical morphology

Morphology deals with the changes a given word undergoes when used in a concrete chain of speech. Morphology is subdivided into inflexion and derivation. Inflexion is subdivided into declension and conjugation. Conjugation deals with the changes verbal forms undergo in certain syntactic contexts, whereas declension analyses the changes exhibited by nouns, pronouns, numerals and adjectives. Derivation, also referred to as word-formation, describes the patterns according to which new lexical units can be created in a language on the basis of the existing lexical stock. In view of the enormous complexity found in the pronominal forms, the brief overview of historical morphology presented in the following lines will be concerned with the noun, the adjective and the verb only.

2.5.1 The noun

An Indo-European noun can be analysed as consisting of three constituent parts: the root element is followed by one or more stem-forming elements (\emptyset is also a possible stem-forming element), and the stem precedes the marker(s) for case and number. In theory we would expect the markers for case and number to be analysable into an element which indicates the number and another which indicates the case; in practice this distinction is carried through only rarely. The Germanic and hence the Old English nominal system is the regular continuation of the underlying Indo-European morphological patterns. For Indo-European we can postulate a noun **w₁k^w-o-s* 'wolf', which consists of a root element *w₁k^w-*, a stem-forming suffix **-o-*, and a marker **-s* for nominative singular. Lat. *lupus* is the continuation of the *o*-stem **w₁k^w-o-s*, but by classical times final **-os* had developed into Latin *-us*. Since IE **o* became **a* in Germanic, the reflex of IE **w₁k^w-o-s* is **wulf-a-z* (the reflex of IE **k^w-* is regularly Gmc **hw-*, but apparently *-hw-* in Gmc **wulhw-a-* became **-f-*); hence we speak of *a*-stems in Germanic.

The Indo-European nominal system may be reconstructed as having had three genders, three numbers and eight cases. The Modern English noun system with no grammatical gender, two cases (general case and possessive) and two numbers (singular and plural) exhibits extreme reduction of the original patterns. But the reduction was slow and gradual. The three genders of Indo-European were masculine, feminine and neuter. How this system arose is a controversial question. By no

means all individual noun forms are marked for gender. But a demonstrative pronoun (or an adjective) referring to a given noun takes special forms according to the gender of the noun. To put it the other way round: the gender of a noun is recognisable from the form of the pronoun or adjective which is in 'congruence' with it. Lat. *dominus* 'lord' and *agricola* 'farmer' are masculine, because an adjective referring to the nouns will take the 'masculine' form (*dominus, agricola bonus* 'good farmer'), whereas *domina* 'lady' and *fagus* 'beech tree' are feminine (*domina, fagus alta*). The three gender system of Indo-European was kept basically unchanged in Germanic. The three numbers of Indo-European were singular, dual and plural. As far as we can reconstruct backwards, the dual paradigm showed fewer distinctions than the plural, and the number of distinctions in the plural was lower than in the singular. The dual has been lost in many Indo-European daughter languages, and in Proto-Germanic it was on the verge of dying out. In Old English we find dual forms in the personal pronoun, and some nominal forms may perhaps be traced to fossilised duals. But in historical times, English has only two numbers, singular and plural, which remain fully alive to the present day. The system of eight cases is found in Indo-Iranian, and the case patterns of the remaining languages can generally be explained on the basis of eight cases.

The table on p. 49 is intended to illustrate the inflectional system of Indo-European. The word chosen for this purpose is the noun for 'wolf', which can be reconstructed as IE (nom. sg.) **wĺkʷos* on the basis of the forms from the individual languages. The reconstruction methodology will be illustrated with regard to a few case forms. Above all, the reconstruction of the Proto-Germanic paradigm has been simplified a good deal.

For the paradigm of the Indo-European *o*-stems (Germanic *a*-stems), which are also referred to as 'thematic stems', the following case forms can be reconstructed:

Nominative singular:

The marker *-s* occurred with so-called 'animate' nouns (masculine or feminine), e.g. **wĺkʷo-s* 'wolf'; in the neuters the nominative was identical with the accusative, e.g. IE **jug-ó-m* 'yoke' (> Skt *yugám*, Gk *ζυγόν*, Lat. *iugum*, Gmc **jukaⁿ* (> Go. *juk*, OE *geoc*). Since final *-s* became voiced in Germanic, the Indo-European thematic stems ended in *-as* (cf. Runic *-aR* and, with syncope of the thematic vowel and unvoicing of *-z*, Go. *-s* in *wulfs*) in Proto-Germanic, and *-as* was

The system of Indo-European nominal declension (*o*-stems)

	Sanskrit	Greek	Latin	Lithuanian	Gothic	Germanic	Indo-European
sg. nom.	<i>wĺkas</i>	<i>λύκος</i>	<i>lupus</i>	<i>wĺkas</i>	<i>wulfs</i>	<i>*wulfaz</i>	<i>*wĺkʷos</i>
voc.	<i>wĺka</i>	<i>λύκε</i>	<i>lupe</i>	<i>wĺkè</i>	<i>wulf</i>	<i>*wulfe</i>	<i>*wĺkʷe</i>
acc.	<i>wĺkam</i>	<i>λύκον</i>	<i>lupum</i>	<i>wĺkə</i>	<i>wulf</i>	<i>*wulfan</i>	<i>*wĺkʷom</i>
gen.	<i>wĺkasya</i>	<i>λύκοιο</i>	<i>lupī</i>		<i>wulfis</i>	<i>*wulfas(a)</i>	<i>*wĺkʷosyo</i>
abl.	<i>wĺkād</i>		<i>lupō(d)</i>	<i>wĺko</i>			<i>*wĺkʷōd</i>
dat.	<i>wĺkāya</i>	<i>λύκω</i>	<i>lupō(i)</i>	<i>wĺkai</i>		<i>*wulfai</i>	<i>*wĺkʷōi</i>
loc.	<i>wĺke</i>			<i>wĺkè</i>			<i>*wĺkʷei</i>
inst.	<i>wĺkā, -ēna</i>			<i>wĺkū</i>	<i>wulfā</i>	<i>*wulfē</i>	<i>*wĺkʷō, -ē</i>
pl. nom.	<i>wĺkās</i>	<i>λύκοι</i>	<i>lupī</i>	<i>wĺkai</i>	<i>wulfos</i>	<i>*wulfōs(iz)</i>	<i>*wĺkʷōs</i>
acc.	<i>wĺkāns</i>	<i>λύκους</i>	<i>lupōs</i>	<i>wĺkūs</i>	<i>wulfans</i>	<i>*wulfanz</i>	<i>*wĺkʷons</i>
gen.	<i>wĺkānām</i>	<i>λύκων</i>	<i>lupōrum</i>	<i>wĺkū</i>	<i>wulfē</i>	<i>*wulfōⁿ</i>	<i>*wĺkʷom</i>
dat.	<i>wĺkēbhyaś</i>			<i>wĺkāmś</i>	<i>wulfam</i>	<i>*wulfamiz</i>	<i>*wĺkʷobhyas</i>
abl.	<i>wĺkēbhyaś</i>						<i>*wĺkʷobhyas</i>
loc.	<i>wĺkēsu</i>	<i>λύκοισι</i>	<i>lupīs</i>	<i>wĺkuosē</i>			<i>*wĺkʷoisu</i>
inst.	<i>wĺkaiś</i>	<i>λύκοις</i>	<i>lupīs</i>	<i>wĺkaīs</i>		<i>*wulfamiz</i>	<i>*wĺkʷois</i>

dropped in the course of the development to Old English, so that the nominative is endless there (OE *wulf*).

Vocative singular:

The vocative singular lacked the distinctive marker **-s* for the nominative. In thematic stems, the vowel **-e* is found in the vocative. The vocative has a form distinct from the nominative in Gothic, but in West Germanic nominative and vocative became identical when both **-az* (nominative) and **-e* (vocative) were lost.

Genitive singular:

The reconstruction of the genitive singular of thematic stems is problematic. The form *godagas* found in Runic Norse would seem to indicate an ending **-as(a)* for the genitive singular, and early Old English forms like *domas*, which led to *domes* by weakening of *-æ-* in unstressed position, confirm this reconstruction. But Go. *dagis* cannot directly be derived from Gmc **dagas(a)*. The prehistory of Gmc **-as(a)* is also somewhat unclear. In the individual Indo-European languages we find a variety of forms for gen. sg. of thematic stems. By the side of **-osyo*, clearly indicated by Skt *-asya* and Gk *-οιο* (in Homer), which later became *-ov* (intervocalic *-s-* became *-b-* > *-θ-* in Greek), we may assume the existence of a form **-aso*, which could explain the Germanic ending

*-as. We would have to assume that the accent fell on the thematic vowel, so that Verner's Law did not affect -s- in *-ōso, and the final *o* was dropped in Germanic.

Dative singular:

The Gothic form *daga*, which functions as dative singular, is generally assumed to continue an instrumental. The dative singular would have ended in *-ai in Germanic, and the regular reflex of this form may occur in OE -æ, which later became -e. The regular continuation of IE *-ōi is *Gmc -ai, which may be due to contraction of the thematic vowel *o* with the marker -ei for dative singular.

Accusative singular:

In the accusative singular the marker *-m was attached to the stem. In the neuter paradigm the accusative functioned also as nominative.

Nominative plural:

The form for nominative plural ended in *-ōs in Indo-European. Since the marker *-es for nom. pl. is immediately recognisable in the class of the root nouns (IE *pód-es (> Gk πόδες 'feet') consists of the root *pod-* + the marker -es for nom. pl.), it is indeed most likely that *-ōs represents a contraction of the thematic vowel *o* and the marker -es for nom. pl. The same form functioned also as vocative plural. The reflex of *-ōs is expected as *-ōz in Germanic, and Go. *wulfos* and ON *ulfar* can be interpreted as the regular continuations of the inherited nominative plural. In West Germanic, *-z would have been lost. Hence the final -as of OE *wulfas* cannot be explained on the basis of IE *-ōs > Gmc *-ōz. It has been suggested that OE -as represents a preform IE *-ōs-es, in which the plural marker -es was attached to *-ōs (itself already a plural form). In ancient Aryan we find the nom. pl. of *a*-stems (Indo-European *o*-stems) ending in -āsas, and the ending -āsas can also be projected back to IE *-ōs-es. In the neuter paradigm we find Gmc *-ō going back to IE *-ā: Lat. *iuga* 'yokes' corresponds to Gmc **juk-ō* (> Go. *juka*, OE *geocu*).

Genitive plural:

The genitive plural originally had the marker *-om or *-ōm, which was attached to the stem. But numerous innovations occurred in this case form. In Gothic we find -e mostly (but not exclusively) in the genitive plural of masculine and neuter nouns, which must be due to an innovation, although the precise origin of -e remains obscure. The Old English ending for gen. pl. is -a in all declension classes.

Dative plural:

Whereas the majority of Indo-European languages exhibit forms characterised by suffix initial -bb- in the dative, instrumental, ablative plural (e.g. Skt -bhis (*padbhis*, instr. of *pad-* 'foot'), -bhyas (*padbhyás*, dat. abl. of *pad-*), Lat. *pedibus* (the dat./abl. of *o*-stems continues the historical locative and instrumental, therefore *lypīs* is entered for 'loc.' and 'inst.' in the table on p. 49), Germanic deviates considerably in that forms with suffix initial *m*- are used, and the closest correspondences of this case marker are found in Baltic and Slavic. Gmc *-miz, possibly also *-maz can be compared to Lith. -ams ((dat. abl. pl.) *vilkams*) and OCS -omŭ ((dat. abl. pl.) *vlikomŭ*). The dative plural for Gmc **wulf-a* can be posited as **wulf-a-miz* or **wulf-a-maz*.

Accusative plural:

The accusative plural of *a*-stems ends in -ans in Gothic, and the underlying Gmc *-anz can be interpreted as the regular continuation of IE *-ons (= thematic vowel + marker *-ns for accusative plural). It has been suggested that the marker *-ns for accusative plural consists ultimately of the marker *-m for accusative followed by the sign -s for plural: *-m-s > *-ns. In Old English the accusative plural adopted the form of the nominative plural.

The usual grammatical analysis distinguishes between vocalic and consonantal stems in Germanic. As one example for vocalic stems the *a*-stems (IE *o*-stems) have briefly been dealt with. The remaining stem classes will simply be enumerated here, since they will be dealt with in full in chapter 3. Beside the stems in Gmc *-a- the vocalic stem classes include the following types: *ō*-stems (Gmc **geb-ō* 'gift' (> Go. *giba*, OE *giefu*)), *i*-stems (Gmc **gasti* 'guest' (> Go. *gasts*, OE *giest*)), and *u*-stems (Gmc **sunu-* 'son' (> Go. *sunus*, OE *sunu*)). All Germanic *ō*-stems were feminine, the *i*- and *u*-stems were both masculine and feminine; a few neuters occurred in the *i*- and *u*-stems. Apart from the stems in Gmc *-ō-, *-i- and *-u-, which continue Indo-European stems in *-ā-, *-i- and *-u-, Germanic had also inherited a number of consonantal stems. The term 'consonantal' refers to the fact that in this class of noun stems the respective marker(s) for case and number followed upon a consonant, whereas in the vocalic stems the respective marker(s) followed upon a vowel. Since in the vocalic stems a number of contractions occurred, which tended to blur the boundary between the stem forming element and the respective case markers, consonantal stems usually are more transparent in this respect. Thus nom. pl. IE **pód-es* clearly has the

marker **-es*, whereas in **p/k^w-ōs* the long vowel **-ō-* is due to a contraction of the thematic vowel with the initial vowel of the plural marker.

The basic type of consonantal stems consists just of a 'root' to which the respective markers for case and number are directly attached. The noun for 'foot' is a case in point. The root here is IE **ped-/pod-*, and the various forms found in the individual languages clearly show that the noun originally had ablaut in the root: *e*-grade is found in Lat. (genitive) *ped-is*, whereas Gk (accusative) *πόδ-α* exhibits *o*-grade; in Germanic the lengthened grade, which originally occurred in the nom. sg. was carried through in the whole paradigm, but OE *fēt*, the plural of *fōt*, still shows clearly the effect of the plural marker IE **-es* > Gmc **-iz*, which caused *i*-umlaut of the root vowel. In Indo-European a number of suffixes were in use which ended in a consonant. But only one category of the consonantal stems with a clearly demarcable suffix became productive in Germanic, namely the stems in **-n-* of the type OE *guma* m. 'man', *tunge* f. 'tongue', *ēage* n. 'eye'. This class corresponds to nouns of the type *homo*, *hominis* 'man' in Latin, and it is worth noting that Lat. *homo*, *hominis* ultimately represents the same stem as Gmc **guman-* (> OE *guma*); the basic element for the *n*-stem IE **gh₁m-en-* is the word for 'earth' (cf. Lat. *hūmus*), and the derivative in **-en-* showed a full system of ablaut, the *o*-grade appearing in OE (accusative) *guman* (< Gmc **-an-* + case marker < IE **-on-* + case marker), whereas the *e*-grade is found in Go. (genitive) *gumins* (< Gmc **-en-* + case marker < IE **-en-* + case marker), and the zero-grade of the suffix **-en-*, namely IE **-n-*, may occur in OE (dat. pl.) *gumum* (< Gmc **-um(m)* < **-un-m(iz)* < IE **-n-* + case marker).

2.5.2 The adjective

A given 'adjectival' form of Indo-European probably lacked special morphological characteristics which would have set it off from a noun. In Latin, *bonus* has basically the same declension pattern as *dominus*, *bonum* follows the paradigm of *iugum*, and *bona* can be put in parallel with *toga*. But this example also shows one peculiarity of the adjective. A given adjective may take special forms in accordance with the noun to which it refers. The adjective and the demonstrative pronouns are the prime carriers of 'grammatical' gender. The development of the adjective is perhaps one of the most conspicuous innovations in Germanic morphology. In Germanic the adjective is not only sem-

antically delimited by generally expressing some 'quality' (cf. the German term 'Eigenschaftswort'), but it is also morphologically clearly definable. Also most of the Germanic adjectival forms differ from comparable substantival forms. For the following discussion the paradigms of Go. *blinds* 'blind', for both 'strong' and 'weak', will serve as a starting point.

Go. *blinds* 'blind' (strong paradigm)

		masculine	feminine	neutral
Sg.	nom.	<i>blinds</i>	<i>blinda</i>	<i>blind, -ata</i>
	acc.	<i>blindana</i>	<i>blinda</i>	<i>blind, -ata</i>
	gen.	<i>blindis</i>	<i>blindaizos</i>	<i>blindis</i>
	dat.	<i>blindamma</i>	<i>blindai</i>	<i>blindamma</i>
Pl.	nom.	<i>blindai</i>	<i>blindos</i>	<i>blinda</i>
	acc.	<i>blindans</i>	<i>blindos</i>	<i>blinda</i>
	gen.	<i>blindaize</i>	<i>blindaizo</i>	<i>blindaize</i>
	dat.	<i>blindaim</i>	<i>blindaim</i>	<i>blindaim</i>

Go. *blinds* 'blind' (weak paradigm)

		masculine	feminine	neutral
Sg.	nom.	<i>blinda</i>	<i>blindo</i>	<i>blindo</i>
	acc.	<i>blindan</i>	<i>blindon</i>	<i>blindo</i>
	gen.	<i>blindins</i>	<i>blindons</i>	<i>blindins</i>
	dat.	<i>blindin</i>	<i>blindon</i>	<i>blindin</i>
Pl.	nom.	<i>blindans</i>	<i>blindons</i>	<i>blindona</i>
	acc.	<i>blindans</i>	<i>blindons</i>	<i>blindona</i>
	gen.	<i>blindane</i>	<i>blindono</i>	<i>blindane</i>
	dat.	<i>blindam</i>	<i>blindom</i>	<i>blindam</i>

The major innovation in the Germanic adjectival system concerns the rise of a twofold declension, which is usually referred to as the strong and the weak adjective declension. The rise of the 'weak' adjective has been discussed extensively, but it must be pointed out that the paradigm of the 'strong' adjective is by no means without problems of its own.

The strong adjective can be projected back to the Indo-European stems in *o* (masculine and neuter) and *ā* (feminine); the *u*-stems also provided a considerable number of adjectives; there were probably fewer *i*-stems. In Germanic, the *u*-stems were still available in great number, but the *blinda-* type (*a/ō*-stem) was the most productive

category. There were also stems in $-(i)ja-$ / $-(i)jō$, which partly stem from the feminine formation corresponding to u -stem adjectives, partly they represent extensions of i -stems, and partly they continue genuine formations in IE $*-yo-$. Some forms of the strong adjectival inflexion are clearly influenced by the paradigm of the demonstrative pronoun. Thus dat. sg. Go. *blindamma* exhibits the same ending as the dat. sg. *þamma* of the demonstrative pronoun *sa* 'this'. Similarly the acc. sg. *blindana* was formed on the pattern of *þana*. Corresponding innovations can be found in the remaining Germanic languages. In the paradigms of Germanic adjectives it is customary to mark out those forms that are influenced by the pronominal inflexion; in the 'strong' paradigm given above, the so-called 'pronominal' forms of the adjective are in bold face.

The 'weak' adjective is a Germanic innovation. Morphologically $*blindan-$ / $blindōn-$ clearly follows the pattern of $*guman-$ / $tungōn-$, but it is anything but obvious how the duality of adjectival inflexions could have come about. The 'weak' adjective generally carries a nuance of 'definiteness'. This semantic shade can secondarily be observed in the fact that in German (as well as in Old English) the weak adjective is generally used when the noun is accompanied by the article (= demonstrative pronoun); cf. (strong adjective) *guter Mann* (OE *gōd mann*): (weak adjective) *der gute Mann* (OE *se gōda mann*).

The Germanic adjective can exhibit comparison. There are two degrees of comparison, the comparative and the superlative. The comparative has two suffixes, namely $*-izān-$ and $*-ōzān-$; the comparative always follows the paradigm of the 'weak' adjective. The suffix $*-izān-$ represents an extension in $-an-$ (< IE $*-on-$) of the zero-grade $-is-$ of the marker $*-yos-$. The origin of $*-ōzān-$ is somewhat unclear, but it seems likely that $ō$ may be identified with the lengthened grade $-yōs$ of the suffix $-yos$. The superlative is formed by $-ista-$. It may follow the strong or the weak declension. The suffix $-ista-$ can be projected back to IE $*-isto-$. IE $*-isto-$ represents a to -formation from the zero-grade $-is-$ of the suffix $-yos-$.

2.5.3 The verb

While clearly containing a number of features inherited from Indo-European, the Germanic verb at the same time exhibits considerable innovations. Germanic verbs have traditionally been classified according to the formation of their preterite. Every Germanic verb

opposes a specifically marked preterital form to the morphological system functioning in the present. Therefore the principle for describing the rise of the Germanic verbal system within the categories inherited from Indo-European must be the explanation of the present – preterite dichotomy. The Germanic verbal system distinguishes three moods in the present and two moods in the preterite: present indicative, present subjunctive, present imperative, preterite indicative and preterite subjunctive. Periphrastic forms were probably extremely rare in Germanic, if they occurred at all. The following account will be concerned with simple forms only.

The reconstruction of the Indo-European verbal system is controversial in more than one way. For the purposes of the following account, the Graeco-Aryan model will be adopted. This means that the agreements between Greek and Aryan in the verbal system will be assumed to be direct continuations of the Indo-European verbal system. Such difficult questions as to how the aberrant system of Anatolian can be explained will not be touched. The Indo-European verbal system is assumed to have exhibited the following categories:

- 1 aspect (it is quite doubtful whether this term may be used here): present, aorist, perfect
- 2 mood: indicative, subjunctive, optative, imperative, injunctive
- 3 voice: active and middle
- 4 person: three
- 5 number: three

A few brief indications will be provided towards defining these categories. It should be noted, however, that the definitions are as far as possible based on morphology, since functional definitions are extremely difficult.

The three 'aspects' (1) can be defined as follows:

A perfect form like IE $*le-loik^w-a$ > Gk $λέλοιπα$ consists of a reduplication, the root, and a person marker: $*-loik^w-$ is the o -grade of the root $*leik^w-$, the reduplication consists of the root initial consonant $l-$ followed by the vowel $-e-$, and $-a$ is the marker for first singular. Gk $λέλοιπα$ means 'I am left over'. The perfect has stative meaning. The o -grade root was used in the singular, the dual and plural exhibited the root in zero-grade.

The aorist can appear in more than one form. The most archaic (perhaps, originally, the only) form of aorist was the athematic root

aorist of the type Gk $\xi\sigma\tau\eta\nu$ 'I stood' = Skt $\acute{a}sth\bar{a}m$ < IE $*\acute{e}st\bar{a}-m$. This form consists of the root IE $*st\bar{a}-$, to which the person marker $-m$ for 1 sg. was attached. $*\acute{e}-$ is termed the 'augment', but it is found only in a limited number of Indo-European languages. The root aorist probably had ablaut originally in that the singular exhibited the respective root in full grade, whereas the root appeared in zero-grade in the dual and plural, but the full-grade of the root was largely levelled throughout the paradigm. The aorist had punctual value: $*\acute{e}st\bar{a}-m$ probably meant something like 'I stood' (without any emphasis on duration).

The present has polymorphism, i.e. a number of different formations can be encountered. A form like IE $*es-mi$ 'I am' (> Gmc $*ixm(i)$ > Go. im 'I am') is structurally comparable to $*(e-)st\bar{a}-m$ dealt with above. IE $*es-mi$ consists of the root $*es-$ 'be', to which the primary marker $*-mi$ for 1 sg. is attached. A present form may be preceded by the augment in those languages that use the augment; but in that case the 'secondary' set of person markers is used: IE $*e-es-m$ (the secondary marker for 1 sg. is $-m$, which becomes vocalic $-m$) > Skt $\acute{a}sam$ 'I was'. A form consisting of the root + the secondary person marker for 1 sg., $*es-m$, would be termed 'injunctive'. The augmentless aorist $*st\bar{a}-m$ is also to be classified as an injunctive. From the morphological point of view the only difference between a present injunctive and an aorist injunctive consists in the fact that the present injunctive can be turned into an indicative by the use of the primary ending ($*es-mi$ 'I am'), whereas the primary set of endings is excluded from the aorist system. The present usually expresses some durative action.

The formation and the function of the moods (2) in Indo-European can be described as follows:

The injunctive of present and aorist is augmentless and exhibits the secondary set of person markers: injunctive forms, which only can be distinguished in languages that regularly use the augment, serve to just 'mention' an action.

The indicative is characterised by the primary endings in the present. Those languages that lack the augment lack a difference between injunctive and indicative in the aorist. The indicative is the mood regularly used for statements.

The imperative expresses an order. Apart from a few special person markers, the imperative lacks formal characteristics that would set it off from other verbal categories.

The subjunctive is characterised by the presence of the 'thematic'

vowel. Verbal stems that were 'athematic' became so to speak 'thematic' in the subjunctive, whereas thematic stems added another thematic vowel, so that the thematic vowel became long. The subjunctive allows the use of the primary and secondary set of person markers: The subjunctive of the athematic present $*es-ti$ 'he is' appears as $*es-e-t(i)$, whereas the thematic present $*bher-e-ti$ 'he carries' forms $*bher-e-e-t(i)$ > $*bher\acute{e}t(i)$ in the subjunctive. The subjunctive expresses the 'will' of the speaker. It consequently often has reference to the 'future'.

The optative is marked by the ablauting suffix $-y\bar{e}-/-\bar{z}-$, which can be projected back to $*ye\bar{a}-/-y\bar{a}$ (e -grade/zero-grade). Athematic verbal stems attached the suffix to the weak stem, the e -grade of the suffix appeared in the singular, the zero-grade in the dual and plural. The optative exhibits the secondary set of person markers. The optative of $*es-ti$ 'he is' can be posited as IE $*s-y\bar{e}-/s-\bar{z}-$ (cf. Skt $sy\bar{a}m$, Lat. sim , $s\bar{is}$, $s\bar{it}$, in Old Latin $siet$). Thematic stems attach the zero-grade of the optative marker to the stem in $-o-$. The optative of $*bher-e-ti$ 'he carries' is to be posited as IE $*bher-o-\bar{z}-t$, $-\bar{z}-$ could be shortened to $-i-$ and contract with $-o-$ to form the diphthong $-oi-$: Gk $\phi\acute{e}ροι$ is the immediate continuation of $*bher-oi-(t)$. The optative expresses the wish of the speaker. Whereas the subjunctive often expresses a probability, the optative renders the nuance of the possibility.

In the present and aorist two diatheses (voices) were formally expressed, which are usually referred to as active and middle. The active and the middle were formally distinguished by special shapes of the person markers, as can be seen from the contrast of active $*bher-e-ti$ 'he carries' against middle $*sek^w-e-toi$ 'he follows' (> Gk $\acute{\epsilon}πειται$, Lat. $sequitur$ ($-r$ is a special feature of the middle paradigm found in some languages)). The perfect had only one set of person markers; a middle of the perfect was secondarily shaped in some languages.

The following subsections will provide some information on how the Germanic verbal system can be accounted for on the basis of the inherited structure of the Indo-European verb. Since from the point of view of Old English the dual is no longer relevant, only two numbers will be listed, namely the singular and the plural. The Indo-European verb distinguished three persons (speaker, person spoken to and person or thing spoken about), and these categories have remained alive down to the present.

The main categories of the Germanic verb can be exemplified with the following Gothic paradigm of the verb $niman$ 'take', which will be

quoted for the active. The middle paradigm Go. *nimada* 'I am taken' occurs in Old English only with the verb *hātan* 'call', OE *hātte* means 'I am called'; therefore the middle paradigm will not be quoted here. The dual forms will also be omitted.

Present

		Indicative	Subjunctive	Imperative
Sg.	1	<i>nima</i>	<i>nimau</i>	
	2	<i>nimis</i>	<i>nimais</i>	<i>nim</i>
	3	<i>nimiþ</i>	<i>nimai</i>	<i>nimadau</i>
Pl.	1	<i>nimam</i>	<i>nimaima</i>	<i>nimam</i>
	2	<i>nimiþ</i>	<i>nimaiþ</i>	<i>nimiþ</i>
	3	<i>nimand</i>	<i>nimaina</i>	<i>nimandau</i>

Preterite

		Indicative	Subjunctive
Sg.	1	<i>nam</i>	<i>nemjan</i>
	2	<i>namt</i>	<i>nemeis</i>
	3	<i>nam</i>	<i>nemei</i>
Pl.	1	<i>nemum</i>	<i>nemeima</i>
	2	<i>nemuþ</i>	<i>nemeiþ</i>
	3	<i>nemun</i>	<i>nemeina</i>

The following remarks can be offered on the comparative aspect of the above paradigm.

The indicative of the present basically goes back to the Indo-European present indicative. The verb chosen as an example is Gmc **nem-a-*, which consists of a root **nem-* and an alternating vowel Gmc **-e/-a-*, which goes back to IE **-e/-o-* and is termed the thematic vowel; the stem Gmc **nem-a-* precedes the respective markers for person and number. The thematic present formations of the type Gmc **nem-a-* correspond to the class found in Gk *φέρω* 'I carry', *φέρετε* 'you carry' (2 pl.). The thematic vowel is *-e-* in the second and third person singular and in the second person plural; the other persons use IE **-o-* > Gmc **-a-* as the thematic vowel. The subjunctive of Germanic continues the Indo-European optative, which in thematic verbs attached the marker *-i-* to the thematic vowel *-o-*; thus 2 sg. Gmc

**nem-ai-z* corresponds exactly to Gk *-ois* in *φέροις*. The imperative used the bare verbal stem in 2 sg.

The Germanic preterite of strong verbs basically goes back to the perfect of Indo-European. This derivation is particularly clear in the singular, since Gmc **nam-a* > Go. *nam* corresponds morphologically exactly to the type found in Gk *λέλοιπα*, but in Germanic preterites of this type reduplication has generally been lost. The plural of some strong verbs can readily be projected back to the Indo-European reduplicationless perfect. But the origin of preterites with long *-ē-* in the plural (Gmc **nēm-* > Go. *nem-*) is hardly clear. The weak preterite is an innovation of Germanic, whose origin is very controversial.

With regard to the person markers the following observations may be noted: in the first singular we find **-mi* in athematic present formations of the type IE **es-mi* 'I am' (> Gk *εἰμι*), but in thematic verbs **-ō* occurs. In 2 sg. and 3 sg. the markers **-si* and **-ti* respectively were used following the thematic vowel (cf. Skt *bhār-a-si* 'you carry' [2 sg.], *bhār-a-ti* 'he carries'), on the basis of which Gmc **-exi* and **-edi* are the regular phonological continuations. The marker for 1 pl. may have been of the shape IE **-mes*, whereas **-te* occurred in 2 pl. In 3 pl. the marker **-nti* followed upon the thematic vowel *-o-*. In the preterital system the singular endings clearly go back to the markers found in the Indo-European perfect: 1 sg. **-a* (cf. Gk *λέλοιπα*), 2 sg. **-tha*, 3 sg. **-e*. The endings **-a* and **-e* for 1 sg. and 3 sg. were lost in all Germanic languages. The ending **-t(a)* for 2 sg. is regularly found in Gothic and Norse; but in West Germanic only the preterite present verbs which go back to the Indo-European perfect preserve this marker (cf. OE *scealt* 'thou shalt', *þearft* 'thou mayest', etc.), whereas the strong preterite introduced a new ending **-i* (OHG *buti* 'you ordered', OE *bude*), which may have originated from the aorist system or from the optative.

2.6 Syntax

In theory the morphological system of a language can be described without having recourse to 'meaning', which in this case means rather the 'function' of the forms concerned. Dealing with the meaning of morphological elements is the domain of syntax. In contrast to the forms of a language which, after all, can be described rather objectively, an analysis of the function of these forms encounters considerable difficulties because a certain subjective element is hardly avoidable in this context. What one might call 'word-syntax' has occasionally

already been referred to. 'Word-syntax' is concerned with the function of precise forms; thus we would have to describe in detail the various functions covered by the accusative, we would have to explain the choice of tenses and moods, we would have to analyse the use of the 'strong' adjective in contrast to the 'weak' adjective, etc. In the absence of native speakers who could be asked whether a certain sequence of free and bound morphemes is 'meaningful', the discussion of prehistoric syntactic features must of necessity be rather incomplete. The following sections illustrate prehistoric syntax with regard to larger groups than the word. We will here be concerned with the arrangement of word groups.

The basic criterion for grouping languages from the point of view of syntax is the position of the verb. Although the distinction is rarely absolutely clear-cut, it can be stated that languages have a so-called 'regular' word-order pattern. If we take the predicate as the centre of reference, it becomes possible to classify languages according to whether the object precedes or follows the finite verb. If we represent the object with O and the finite verb with V, the following two basic patterns can be set up:

VO/OV

Whereas Modern English is clearly a VO-language, Old English was an OV language, and this characteristic was inherited from Germanic and Indo-European. In an OV-language like Indo-European it is by no means excluded that on occasion the finite verb may appear preceding the object, but the sequence OV is the so-called 'unmarked' order; a deviation from this basic arrangement serves to render some special emphasis. As illustration of the Germanic word-order sequence the runic inscription on the Gallehus horn may be quoted:

ek hlewagastiR holtijaR horna tawido

The object *horna* 'the horn' is found preceding the finite verb *tawido* 'I made'. The subject of the clause consists of three parts: *ek* 'I' is the personal pronoun for first singular, *hlewagastiR* is the person's name, and *holtijaR* (probably meaning 'from Holt') is used attributively with regard to the name. The text of the inscription can be translated as 'I HlewagastiR from Holt made the horn.'

The position of the finite verb after the object can be found in a high number of examples from the most varied Indo-European languages. Thus the beginning of the Aeneid may be quoted: *arma virumque*

cano... 'the weapons and the man I sing...', and the following more complex Hittite phrase exhibits the same word-order pattern: *man LUG[A]Lwas pīran seskanzi kuis haḫziḫzi nusse GESTIN-an akuwanna pianszi*, which means 'if someone shoots in front of the king [in a contest] then the one who hits the mark is given wine'. The following Vedic passage shows that the finite verb regularly appears in final position both in main and in subordinate clauses: *yébhyo mádhu pradháwati, táms cid eva ápi gacchatāt* 'those for whom the honey flows, those too it (the honey) shall join' (*Rig Veda* 10.154.1).

Languages with complex morphological systems certainly allow a greater freedom with regard to word-order than languages like English, where, because of the poverty of the morphological system, word-order is an essential constituent of the 'meaning' of a phrase. Whereas in German both *Der Vater sieht den Sohn* and *Den Sohn sieht der Vater* are acceptable and carry basically the same meaning (although with a difference in emphasis), in English *The father sees the son* is the only possible way of rendering the underlying notion, since *The son sees the father* would have a totally different meaning. It must be stressed, however, that, in spite of some surface variations, even in a language like German word-order follows closely knit patterns. Word-order is by no means free.

The word-order rules for prehistoric stages of Old English can to a certain extent be deduced from the consideration of Latin syntactic patterns. At first sight a passage from Horace like the following might indicate absolute freedom in word-order: *aequam memento rebus in arduis servare mentem* 'remember to keep an even mind in adverse conditions' (*Odes* II 3.1-2). Apart from poetic licence, which accounts for the 'corner' position of adjective *aequam* and noun *mentem*, it should be noted that the preposition *in* follows the noun *rebus* it governs and precedes the adjective *arduus* (in congruence with *rebus*). In Vedic we find adherence to rather strict word-order rules, and occasional deviations may have a number of different reasons. The following two passages are nearly identical, but in the second the finite verb *vocam* has shifted from the final position to the second position in the clause:

*prá te pūrvāni káranāni vocam
prá nūtanā maghavan yá cakārtha*

(5.31.6)

let me proclaim thy deeds of yore, and, too, the present deeds, which thou Maghavan (Indra) hast performed..

*préndrasya vocam prathamā kṛtāni
prā nūtanā maghāvā yā cakāra*

(7.98.5)

Let me proclaim Indra's deeds which he, Maghavan, hath performed.

Word-order definitely allowed some freedom in prehistoric stages of Old English, but there were certainly constraints. Some of these will be briefly analysed in the following sections.

Since verb final position was 'unmarked', a verb in initial position expressed a special nuance. The verb is usually in initial position in commands, and it is easy to imagine sentences in which only an imperative (without an object) is used; e.g. Gk ἴθι 'go' (< IE *i-dhi). It should be noted, however, that in a sequence of two imperatives we find the first in initial position whereas the second imperative tends toward clause final position. This rule can be illustrated with the following passage from the Iliad:

χαίρετε, κήρυκες... ἄσσον ἴτε

(Iliad I 334-5)

rejoice, o heralds, come closer (literally '... closer come').

A comparable case can be quoted from Beowulf:

*Bruc þisses beages, Beowulf leofa,
hyse, mid hæle, ond þisses brægles neot*

(Beo 1216-17)

enjoy this necklace, dear Beowulf, man, with prosperity, and make use of this mantle (literally '... and of this mantle make use').

A particularly difficult problem concerns the distinction between main and subordinate clauses. Although the view formerly widely held according to which originally only parataxis (i.e. sequential arrangement of main clauses) was in use cannot be upheld, it is nevertheless clear that the distinction between parataxis and hypotaxis (subordination of subclause to mainclause) is by no means clear-cut. This is particularly true of relative clauses. Whatever the Indo-European way of producing relative clauses may have been, Germanic evidently did not continue that formation pattern; in the Germanic languages new ways were found for shaping relative clauses. Whereas Gothic has a particle *-ei* attached to the demonstrative pronoun so that we find *saei* 'he who', etc., in Old English (apart from more elaborate ways of rendering the relative) an unchangeable particle *þe* may be used to introduce a relative

clause. The following passage from *The Wanderer* may illustrate the relative clause introduced by *þe*:

*Nis nu cwicra nan
þe ic him modsefan minne durre
sweotule asecgan*

(Wan 9-11)

there is now no one to whom I dare openly tell my thoughts.

2.7 The lexicon

Old English clearly inherited a basic stock of lexical items which ultimately go back to Indo-European. Some of these lexical items have already been mentioned because they are the basis for setting up the sound correspondences and hence for deducing the sound changes which led from Indo-European to Proto-Germanic and ultimately Old English. But delimiting precisely the Indo-European vocabulary is very difficult indeed, because new lexical items could at any time be created on the existing patterns. Down to the present day, English preserves a number of words which may well go back to very old stages of Indo-European. Among these items we should certainly include the basic terms for family relationship such as *father* (cf. Lat. *pater*, Gk *πατήρ*, etc.), *mother* (cf. Lat. *māter*, Gk *μήτηρ*, etc.), *brother* (cf. Lat. *frāter*, Skt *bhrātar-*, etc.), *sister* (cf. Lat. *soror*, Lith. *sesuō*, etc.), *son* (cf. Lith. *sūnūs*, Skt *sūnūs*, etc.), *daughter* (cf. Gk *θυγάτηρ*, Lith. *duktė*, etc.). Among the clearly inherited items which certainly have a long prehistory belong also the basic numerals such as *one* (cf. Lat. *ūnus*, Lith. *vienas*, etc.), *two* (cf. Lat. *duo*, Gk *δύο*, Lith. *dū, duì*, etc.), *three* (cf. Lat. *trēs*, Gk *τρεις*, Skt *trāyas*, etc.), *four* (cf. Lat. *quattuor*, Gk *τέσσαρες*, Skt *catvāras*, Lith. *keturi*, etc.), *five* (cf. Lat. *quinque*, Gk *πέντε*, Skt *pāñca*, etc.).

Some lexical items which can, with high probability, be attributed to Indo-European allow us some glimpses into the set-up of the culture and social set-up, although we are still far from agreement on where the original homeland (*Urheimat*) may have been. In a recent and authoritative work on Indo-European Cowgill (see Mayrhofer 1986) tended towards accepting the views of Maria Gimbutas according to whom the speakers of Indo-European may have settled in the North Caucasus and Lower Volga area in the fourth millennium BC. From the lexical agreements among the most ancient Indo-European languages we can deduce that those speakers of Indo-European engaged in warfare, had a fairly well-developed agricultural system and were

familiar with cattle, horses, sheep and swine. They probably knew how to build vehicles with wheels. The use of some metals may also have been available to them.

But details of the vocabulary beyond the most basic items are not readily retrievable. It must be borne in mind that even in the cases where we find perfectly agreeing forms in more than one Indo-European language we cannot be certain that the underlying common form was really used in the proto-language, because innovations could occur at any time on the pattern of existing forms. Thus Indo-European had a productive category of neuter stems with *e*-grade of the verbal root preceding an alternating suffix which ended in *-s*. One member of this formation class is probably found in the noun for 'ore', IE **ay-es*. This word is regularly continued in OE *ār*. Other *s*-stems could be easily created secondarily, however. Thus the agreement of Skt *janas-*, Gk *γένος* and Lat. *genus* would certainly seem to indicate the existence of a proto-form IE **gén(ə)-os*; and in spite of the fact that this may well be a 'correct' reconstruction in the sense that the word may actually have been in use, it should not be forgotten that **gén(ə)-os* could also have been shaped at any given time in the prehistory of the languages in which it is found.

Perhaps the most productive way of forming new words is by juxtaposing two items and gradually coalescing them into a new unit. The process is termed 'composition'. For Indo-European compounds can be defined morphologically as exhibiting an unchangeable first part, whereas the syntactically required changes occur in the second part only. In Indo-European only nouns could be compounded. It is usually assumed that the rise of composition dates from a period when the regular inflexion was not yet fully developed. Germanic certainly inherited the ability to form compounds, but compounding was definitely not as frequent as it is in Modern English. The types of compounds which can be assumed for Germanic can be briefly described as follows.

Determinative compounds originally consist of two nominal stems the first of which qualifies (= 'determines') the second. For Proto-Germanic we may assume a formation **brūdi-fadi-* (< IE **bhrūtīpoti-*) on the basis of Go. *bruþfaþs* 'bridegroom'. The nominal stem Gmc **faþi-* (< IE **póti-*) apparently fell out of use early, and the compound gradually lost its transparency. In Old English *brýdguma* another term for 'man', namely *guma*, was substituted. But OE *guma* was obsolete,

and so the compound became again opaque. It was rendered transparent by introducing the term *groom* as second element of the compound. *Bridegroom* is due to a popular etymology: *-guma* having dropped out of use was replaced by the similarly sounding but originally quite different noun *groom*.

Copulative compounds, which apparently were not numerous in Germanic, consist of two elements where the sum total of the two makes up the meaning of the compound. This type of compounding is found in numerals like *thirteen* (= 'three and ten'), *fourteen* (= 'four and ten'), etc. Old English had a compound *subtergefæderan* (found in *Beo* 1164), which means 'nephew (= brother's son) and (paternal) uncle'. But otherwise copulative compounds were rare.

A type of compounds that was clearly inherited usually consisted of adjective + noun, but the compound did not have the same reference as the noun (as was basically the case with determinative compounds); in this special type the whole compound basically functioned as an adjective and referred to somebody or something endowed with what the sequence adjective + noun expressed. These compounds are usually termed possessive compounds or, using an Indic example of the type, *bahuvrihi*-compounds. *Barefoot* is an example in point, since it means 'having bare feet'. The possessive compounds were above all frequently used in naming. The anonymous author of the Old English poem *Widsiþ* refers to himself as 'having (made) a wide journey'.

In many cases we can be reasonably certain that the second element of a compound was weakened, thereby lost its transparency and ultimately came to function as a suffix. In Modern English the suffix *-dom* can be attached to a number of nominal stems in order to form abstract nouns of the type *kingdom*. The suffix *-dom* is in origin identical with the noun *doom*, which may have meant something like 'judgement'. In Old English, nominal compounds of the type *cýne-dom* could regularly be formed. In a similar way *-ship* in *friendship* and *-hood* in *maidenhood*, *boyhood*, etc. were originally nominal stems that could occur both in isolation and as second elements of compounds: OE *hād*, the precursor of *-hood*, did in fact occur on its own, whereas the noun serving as second member of the compounds of the type *friendship* was also in Old English used in composition only.

But apart from the clearly inherited items and those formed from inherited material on existing patterns, we find a considerable group of lexical items in Germanic which so far defy satisfactory etymological

analysis. In some cases we may be concerned with borrowings (e.g. *path*). But in a number of cases we must also reckon with the possibility that the right cognates have simply not been found so far.

FURTHER READING

The subject matter dealt with in the preceding chapter is covered by an enormous number of publications. A good introductory account into the main concerns of Indo-European and Indo-European comparative grammar is provided by Baldi (1983). The best modern compendium of Indo-European grammar is Szemerényi (1980/1989). A very specialised account of Indo-European phonology (together with a general introduction to the various Indo-European languages) is available in Mayrhofer (1986); the book also offers up-to-date bibliography. The hotly debated issue as to how the system of stop consonants in Indo-European should be reconstructed is also dealt with in Mayrhofer's book. The views of Gamkrelidze are so far accessible through a number of specialised articles as well as in the Russian publication Gamkrelidze and Ivanov (1984); an English translation of that work is in preparation. The current work on Indo-European is listed in 'Indogermanische Chronik' published twice a year in the journal *Die Sprache*.

For comparative grammar of the Germanic languages the most widely used book is Prokosch (1939), which is stimulating but not always reliable. The 'state of the art' around the turn of the century is found in Streitberg 1896. Seebold 1970 gives an etymological account of the primary verbs of Germanic. The standard grammars of Old English (Campbell 1959 and Brunner 1965) also offer excellent material on the subject as well as rich bibliography. Questions of Germanic syntax have been dealt with by Hopper 1975. On a rather modest scale my textbooks (Bammesberger 1984a, 1984b, 1984c and 1989) may be mentioned.

With regard to the early period of comparative linguistics, there is a good account available in Robins 1987.

Richard M. Hogg

3.1 Introduction

Whatever their other achievements, the Anglo-Saxons could not lay claim to being outstanding grammarians. Indeed, to judge by the paucity of grammatical writing during the Old English period, where Ælfric's Latin Grammar (ca 1000) stands out because it is the exception that proves the rule, the Anglo-Saxons would not have wished to make such a claim, their intellectual interests lying in entirely different areas. This, of course, makes the task of reconstructing the nature of the Old English language that much more difficult. Thus, in the areas which are the concern of this chapter, we have no equivalent of the Icelandic First Grammarian, who, writing in the thirteenth century, gives a wealth of detail about the sound system of Old Icelandic (see Benediktsson 1972, Haugen 1950). At much the same time as the First Grammarian was writing, an East Midlands monk of Scandinavian origin, Orm, composed a lengthy verse work entitled *Ormmulum*, in which he employed a writing system of his own devising from which we can glean a considerable amount of information about his pronunciation (see Burchfield 1956, Sisam 1953b: 188-95 and vol. II, ch. 2 of this History). However, Orm's spelling system, valuable as it is, is not only ambiguous in its aims and effects, but also relates to a period when the English language had considerably altered in structure and system. For Old English itself we have no direct testamentary evidence from any contemporary or near-contemporary source.

Two questions arise from this. Firstly, how can we go about reconstructing the linguistic system of Old English? Secondly, how precisely can we hope to reconstruct that system? The methods of linguistic reconstruction have been dealt with in chapter 2 of this