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the need to create a national pantheon from a multitude of local cults. Weather-gods and sun-gods head the pantheons, followed by such figures as the grain-god, the stag- (hunting-) god, etc., ending with natural phenomena such as mountains and rivers, etc. Male deities are provided with female consorts, listed separately and not strongly characterized except for an Ištar figure, who may also appear in the male list.

The end of the Hittite kingdom removes this documentation which is only partially replaced by the inscriptions of the Neo-Hittite states of SE Anatolia and north Syria (*c.*1100–700 BC). Details of cult are lacking. The Hurro-Hittite weather-god and his consort continue to be worshipped, and the stag-god becomes more prominent, as do Kubaba from Carchemish and the moon-god from Harran. At this period, limited evidence may be drawn from the *Phrygian monuments and inscriptions, principally relating to 'mother Kubile' (Kubaba), represented on stone monuments as a figure in a *polos* ('cylindrical head-dress') and long robe, standing in a small shrine or *naiskos* (see CYBELE).

O. R. Gurney, *Some Aspects of Hittite Religion*, Schweich Lectures, 1976 (1977); M. N. van Loon, *Anatolia in the Second Millennium* BC; *Anatolia in the Earlier First Millennium* BC Iconography of Religions 15, pts. 12 and 13 (1985–90); V. Haas, *Geschichte der hethitischen Religion* (1994); M. Popko, *Religions of Asia Minor* (1995); B. H. L. van Gessel, *Onomasticon of the Hittite Pantheon*, pts. 1–2 (1998), pt. 3 (2001). JDHa

Anatolian languages In the course of the 20th cent. new evidence emerged for a family of closely related languages attested in Anatolia (Turkey) from the 16th cent. BC and indirectly known two or three centuries earlier; the evidence for the group spans two millennia and ends with the Roman empire. The best attested language is Hittite, which was spoken by a dynasty which moved from Neša (= Kaneš = mod. Kültepe in central Anatolia, north-east of Kayseri) to *Hattuša, modern Boğazköy or Boğazkale (east of Ankara), the future capital of the Hittite empire, which eventually dominated most of Anatolia and part of Syria (see HITTITES). The word *nešili*, literally 'in the language of Neša', means 'in Hittite', while Hittite (our term is based on a biblical form) was originally derived from the name of the previous non-Indo-European inhabitants of the area, the Hatti. The Boğazköy archives yielded a very large number of *cuneiform tablets with texts (historical, religious, etc.) which we can now classify as Old Hittite (*c.*1570–1450) or Middle Hittite (*c.*1450–1380) or Neo-Hittite (*c.*1380–1220); after B. Hrozný in 1915 argued that Hittite was *Indo-European, the grammar and lexicon have become quite well known and we now understand most texts. The same archives also provided cuneiform evidence for two other related languages, introduced in the Hittite texts by the words *palaumnili* 'in Palaic' and *luwili* 'in Luwian'. Palaic is the language of the Pāla territory, located in north-western Anatolia. Probably it died before the Neo-Hittite period; there are only a few imperfectly understood texts, but the affiliation of the language is not in doubt. Cuneiform Luwian, also attested on clay tablets mostly of religious nature, is slightly better known and was probably the language of the southern and western part of Anatolia. It survived longer than Palaic and had strong influence on Hittite, especially in the later period, as shown by the numerous lexical borrowings. In the first millennium the family is best represented by Hieroglyphic Luwian (also called Hieroglyphic Hittite), a Luwian dialect, written in a special syllabic script, rich in logograms, which was developed in the second millennium, possibly for monumental purposes. Most of the inscriptions were set up by the kings of the small states of south Anatolia and Syria which in the first millennium BC survived the collapse of the Hittite empire, until at the end of the 8th cent. they were defeated by the Assyrians. The youngest known members of the Anatolian family are *Lycian and *Lydian, two languages written in an alphabet derived from Greek, mostly in the 5th and 4th cent. BC. In addition three poorly attested languages, all written alphabetically, probably belong to the family: Carian (see CARIA) has recently been deciphered and has a slightly higher number of texts from both Caria and Egypt dating from the 7th to the 4th cent. BC; Sidetic (named from *Side) is documented by a very few inscriptions from *Pamphylia (3rd cent. BC), and Pisidian has some inscriptions (mostly names) from the 3rd cent. AD. (See PISIDIA.)

The languages listed above, all of which must derive from a non-attested Proto-Anatolian, show regular correspondences with the ancient Indo-European languages. Part of the lexicon (here exemplified from Hittite) can be easily etymologized: cf. *watar* 'water' (Gr. *ὕδωρ*), *genu* 'knee' (Lat. *genu*), *newa-* 'new' (Gr. *νέϝος*), *wett-* 'year' (Gr. *ϝέτος*), *ed-* 'eat' (Lat. *edō*), and see also paradigms like *ešmi* 'I am' *ešši* 'you are (sing.)', *ešzi* 'he/she/it is' vs. Greek *εἰμί* (<†*esmi*), *ἐσσί*, *ἐστί* or Skt. *ásmi*, *ási*, *ásti*, etc. Hittite, Palaic, and Cuneiform Luwian have *a* where reconstructed Indo-European has *o* and use *-ḫ-* or *-ḫḫ-* in correspondence with one or two of the Indo-European 'laryngeals', which were later lost in all Indo-European languages. It is now clear that the original Anatolian language had an accent distribution similar to that of Indo-European. Morphologically the most striking features are the conservativism of the case system (seven or perhaps eight cases in Old Hittite), but also the absence of a contrast between masculine and feminine (there is a neuter and a common gender) and the organization of the verbal system based on two conjugations with contrasts of past and present marked by different sets of endings. There are only two tenses (no imperfect and future, no aspectual distinction of aorist and perfect) and two moods (indicative and imperative, but no subjunctive and optative). The syntax is characterized by long chains of enclitic particles which follow the first word of the sentence and by the final position of the verb. The problem arises whether Proto-Anatolian is simply a branch, however early, of the Indo-European family which has lost some of the original categories, or is a sister rather than a daughter of Indo-European. This last view was supported by the American scholar Edgar Sturtevant, who spoke of an Indo-Hittite protolanguage; his demonstration is no longer accepted, but recent contributions are moving in the same direction though more on the basis of morphology and syntax than on that of phonology.

O. R. Gurney, *The Hittites*, 2nd edn. (1990); T. Bryce, *The Kingdom of the Hittites* (2005); A. Kammenhuber, *Hethitisch, Palaisch, Luwisch und Hieroglyphenluwisch*, in B. Spüler (ed.), *Handbuch der Orientalistik* 1/2. 1–2. 2: *Altkleinasiatische Sprachen* (1969), 119–357; H. C. Melchert, *Anatolian Phonology* (1995); H. C. Melchert (ed.), *The Luwians* (2003); H. A. Hoffner and H. C. Melchert, *A Grammar of the Hittite Language* (2008); H. G. Güterbock and H. A. Hoffner (eds.), *The Hittite Dictionary of the Oriental Institute of the University of Chicago* (1980-); J. Puhvel, *Hittite Etymological Dictionary* (1984–); A. Kloekhorst, *Etymological Dictionary of the Hittite Inherited Lexicon* (2008). AMDa

anatomy and physiology

I The examination of the parts of the body, their forms, location, nature, function, and interrelations (to adapt the list provided by A. *Cornelius Celsus in the proem to book 1 of the *De medicina*)—whether through dissection (*ἀνατομία*, the title of several ancient medical works, and of a lost work by *Aristotle) or as part of more abstract speculation about natural causes (*φυσιολογία*)—was a concern not only for doctors. Physiology did not have the restricted range it has today; in antiquity it covered all kinds of speculative investigation into nature—in areas ranging from the search for the *soul and its physical location in the body to the explanation of organic processes in animals and plants. This means that ancient medical writers often paid close attention to the work of those whom we might regard today as having quite different concerns. Much early Greek cosmology, for example, was concerned (directly or indirectly) with problems surrounding the nature and origins of life, and the relations between the

elective magistracies open to senators: those of *quaestor, held at 30 from *Sulla's legislation onwards, but five years younger under the Principate; of *aedile; of *praetor, held at 39 under the late Republic, but by some at 30 under the Principate; and of *consul, held at 42 after Sulla (cf. the career of *Cicero), by patricians at 33 under the Principate, and by new men (see NOVUS HOMO) at 38 or later (cf. the career of Cn. *Iulius Agricola). Successful election to these posts depended on birth and achievement (cf. Tac. *Ann.* 4. 4: high birth, military distinction, and outstanding gifts in civil life, i.e. forensic or political oratory, knowledge of the law: note the order). Success might be achieved not only in the magistracy that preceded but in preliminary offices civil and military (as one of the **vigintisexviri* or **tribuni militum*), and in positions held at Rome, in Italy, or the provinces, under the republic often involving command of troops, that normally followed the praetorship and consulship (pro-praetorships, -consulships, allocated by seniority and the lot, see PRO CONSULE, PRO PRAETORE); or that were devised under the Principate to get previously neglected work done (e.g. curatorships of roads in Italy; see CURA(TIO)). After AD 14 elections were effectively conducted in the senate and a man's success depended on the verdict of his peers or on his ability to strike bargains with his rivals' supporters; but Augustus' *lex Iulia de maritandis ordinibus* (see MARRIAGE LAW, ROMAN) provided speedier advancement for men married with children, while the opinion of the emperor, known or surmised, was of great and increasing weight (cf. *ILS* 244. 4; Pliny, *Pan.* 66), hence too the favour of his advisers. Some posts, notably legionary commands and governorships of regions that were part of his 'province' (e.g. *Syria, *Gaul (Transalpine) outside Narbonensis), were in his direct gift, though the senate ratified such appointments (both types of officer were 'legates (**legati*) of Augustus'). The influence exercised by the emperor has given rise to the view that there was a special type of career 'in the Emperor's service' regularly involving particularly speedy advancement (especially between praetorship and consulship) enjoyed by 'military men' (*viri militares*). A more cautious hypothesis is that men advanced themselves using what gifts they had; those who took to army life necessarily were the appointees of the emperor. Each appointment was ad hoc and might depend on a number of factors, e.g. current needs, a man's availability, experience, record, current effectiveness of his supporters, but precedent was also relevant.

The word 'career' is often applied to the posts offered by the emperor to men of equestrian and lower status, whether in official positions (e.g. **praefectus praetorio* = prefect of the praetorian guard, or *procuratores Augusti* in his provinces, supervising tax collecting) or as his private agents (also *procuratores*) managing his private estates (see PROCURATOR). But although such posts mostly had their distinctive standing, and were normally preceded by up to three military posts, and although (because of this) recognizable patterns of advancement developed (cf. the two Trajanic 'careers' *ILS* 1350 and 1352), appointments were again ad hoc, *ad hominem* (cf. *AE* 1962, 183), intermittent, and accepted on a basis of mutual goodwill, with character rather than professionalism the overt criterion. Imperial freedmen and even slaves who held subordinate positions in the organizations enjoyed lower standing, but their continuous service over long periods of time justifies the application of the term 'career' to their activities (see FREEDMEN; slavery).

In the army below the rank of tribune it is legitimate to speak of a career, since the minimum period of service outside the praetorian guard was 20 years. Men frequently record their advance through minor posts of privilege (e.g. *tesserarius*, OC watchword) to (e.g.) one of the 60 centurionates of a legion, or upwards through legionary centurionates (e.g. *ILS* 2653) (see CENTURIO).

Elsewhere the word is inappropriate; outside the limited state apparatus the ancient world lacked the great organizations that now provide methodical advancement in business and industry.

Senators: A. Astin *Latomus* 1958, 49 ff. (pre-Sullan rules); J. Morris, *Listy Filologické* 1964, 316 ff. (Principate); E. Birley, *Proc. Brit. Acad.* 1953, 197 ff. ('Emperor's service'); cf. B. Campbell, *JRS* 1975, 11 ff. *Equites*: H.-G. Pflaum, *Carrières procuratoriennes* (1960–1). Soldiers: G. R. Watson, *The Roman Soldier*[3] (1983), 75 ff. Slaves: P. R. C. Weaver, *Familia Caesaris* (1972). BML

Caria, mountainous region inhabited by Carians in SW Asia Minor south of the *Maeander, with Greek cities (*Cnidus and *Halicarnassus) occupying the salient peninsulas and mixed communities on the shores of the gulfs. Until the 4th cent. BC the pastoral Carians lived mainly in hilltop villages grouped under native dynasties (some of which paid tribute to the Athenian empire in the 5th cent.) and organized round sanctuaries, the principal seat being *Mylasa. The Carians claimed to be indigenous; but in Greek tradition they came from the islands, and the interior of Caria is in fact lacking in prehistoric sites. They preserved their language until Hellenistic times. We have some inscriptions (mostly from *Egypt) written in an alphabet, partly of Greek origin, which has recently been deciphered (see next entry); the language seems to be *Indo-European and belong to the Anatolian group. (See ANATOLIAN LANGUAGES; CARIAN LANGUAGE.)

Carians were early associated with *Ionians in mercenary service (especially under the Pharaohs; Carians continued to live in Egypt even after the Persian take-over in 525 BC: Hdt. 2. 61 and archaeological evidence). Subjected by *Croesus and then by Persia, they joined in the *Ionian Revolt and ambushed a Persian army. The coastal communities joined the *Delian League at the time of the Eurymedon campaign. Under the rule of the Hecatomnids (c.395–after 334), and especially of *Mausolus, Carian Hellenism was intensively furthered, there was much building activity, and modern cities were planned to promote the Greek way of life but the Hecatomnids also promoted the local element, in an active and simultaneous policy of 'Carianization'. Thus the Hecatomnids put up *Greek* dedications at *Labraunda, *Amyzon, and *Sinuri, but made no big splash at the more famous panhellenic sanctuaries, preferring to patronize these Carian places. The Hellenizing influence of nearby *Rhodes must also be remembered, especially in Hellenistic times, when the Rhodian **peraea* in Caria was extensive (and larger than was formerly believed). But the 4th cent. seems to have been the period of greatest activity and innovation. See also APHRODISIAS.

Strabo 14. 651 ff.; L. and J. (J. and L.) Robert, *La Carie* 2 (1954), and *Fouilles d'Amyzon* (1983); G. Bean, *Turkey Beyond the Maeander*, 2nd edn. (1980); S. Hornblower, *Mausolus* (1982), and *CAH* 6[2] (1994), ch. 8a; T. Linders and P. Hellström (eds.), *Architecture and Society in Hecatomnid Caria* (1989); N. Demand, *Urban Relocation in Archaic and Classical Greece* (1990), chs. 10–11; M. Mellink, *CAH* 3[2]/2 (1991), 662 ff.; S. Ruzicka, *Politics of a Persian Dynasty: The Hecatomnids in the Fourth Century BC* (1992); *IACP* nos. 1108–37; P. Debord, *L'Asie Mineure au iv[e] siècle* (1999; Eng. tr. forthcoming); K. Rumscheid (ed.), *Die Karer und die Anderen* (2009); R. van Bremen and J.-M. Carbon (eds.), *Hellenistic Karia* (2010). JMC/AMDa/SH

Carian language Direct evidence for the Carian language (see CARIA) is limited to approximately 30 inscriptions from Caria proper and well above 200 inscriptions (some still unedited) written by Carian speakers in Egypt (from the 7th cent. BC). There are also miscellaneous short texts from other sites and two short texts from Greece (6th and 5th cent. BC). The alphabet, which in Caria shows a great deal of variation, is clearly derived from the Greek alphabet with some additions but a number of letters have different values from those of the equivalent Greek letters. The brilliant decipherment started by the English Egyptologist John Ray in the 1980s and then completed by the Spanish scholar Ignacio Adiego and the German scholar Diether Schürr

from the 1990s has shown that all earlier readings (partly based on the assumption that the script was half syllabic, half alphabetic) were misguided.The recent discovery of a short Greek–Carian bilingual from Kaunos (late 4th cent. BC) has confirmed the new values. We still know little about the language, since the texts are short and fragmentary and largely consist of names, but it is now clear that it belongs to the Anatolian group of Indo-European and it is close to Luwian and Lycian (nominative sing. with no ending; accusative sing in *–n*; genitive sing. in *–ś*; accusative plur. in *–s*, cf. Cun. Luw. *–nz(a)*; *ted* 'father', cf. Cun. Luw. *tātiš* vs. Hitt. *attaš*). The puzzle of why some of the letters which are recognizably Greek in appearance have such different values remains unsolved though various suggestions have been made. All the evidence is admirably collected in Adiego's book quoted below.

M. E. Giannotta and others (eds.), *La decifrazione del cario* (1994); I. J. Adiego, *The Carian Language* (2007). AMDa

Carinus, Marcus Aurelius, elder son of M. Aurelius *Carus, left by him as Caesar in the west, when he marched against Persia (AD 282). Made Augustus before his father's death, Carinus succeeded him as colleague of his brother *Numerianus and crushed the rebel '*corrector Venetiae', Iulianus, in battle near *Verona. Early in 285 Diocletian, appointed emperor to succeed Numerianus, ended a difficult campaign at the battle of the Margus in Moesia.

*PIR*² A 1473; M. Peachin, *Roman Imperial Titulature and Chronology, AD 235–284* (1990), 98 ff. HM

Caristia (*cara cognatio*), Roman family festival on 22 February. Ovid (*Fast.* 2. 617–38) makes it a reunion of surviving family members after the *Parentalia's rites to the departed (February 13–21), and the presence of the ancestral spirits (*Lares: *Fast.* 2. 631–4) supports that. Valerius Maximus (2. 1. 8) adds that no outsiders were admitted and family quarrels were settled. It appears under the date in the calendars of Filocalus and Polemius Silvius, under February in the *Menologia rustica*.

Inscr. Ital. 13. 2. 414; Latte, *RR* 274 n. 3, 339 n. 2; F. Schneider, *ARW* 1920/1, 385–9. CRP

carmen, from *cano* (?), 'something chanted', a formulaic or structured utterance, not necessarily in verse. In early Latin the word was used especially for religious utterances such as spells and charms: the laws of the *Twelve Tables contained provisions against anyone who chanted a *malum carmen*, 'evil spell' (Plin. *HN* 28. 2. 18). *Carmen* became the standard Latin term for song, and hence poem (sometimes especially lyric and related genres: cf. C. O. Brink on Hor. *Epist.* 2. 2. 25, 59–60, 91), but the possibilities of danger and enchantment inherent in the broader sense continued to be relevant, and there is often play on the different senses (see e.g. Ov. *Met.* 7. 167).

O. Hey, *TLL* 'carmen'; J. Quasten, *RAC* 'carmen'; B. Neumeyr, in O. Hiltbrunner (ed.), *Bibliographie zur lateinischen Wortforschung* 3 (1988), 261–71; C. Thulin, *Italische sakrale Poesie und Prosa* (1906); E. Norden, *Ant. Kunstpr.* (1909), 160–1, and *Aus altrömischen Priesterbüchern* (1939). PGF/DPF

Carmen arvale, hymn sung during the sacrifice to *Dea Dia by the **fratres arvales* (arval brethren). Although only recorded in an inscriptional copy of AD 218 (A. Gordon, *Album of Dated Latin Inscriptions* (1958), 44 no. 276) and marred by errors of transcription, this hymn is of great interest, because it dates from the 4th cent. BC at the latest (*Lases* for *Lares*). Norden believed that it revealed the influence of Greek poetry. In spite of the problems that it poses, the hymn is understandable. It is addressed to the *Lares, Semones (see SEMO SANCUS DIUS FIDIUS), and *Mars. The first two groups of deities are invoked three times one after the other, Mars three times thrice. The *carmen* culminates in a quintuple cry of triumph (*triumpe*). In the context of the sacrifice to Dea Dia, these divinities are requested to guarantee the integrity of the land and the harvest, so that Dea Dia can exercise her office there.

E. Norden, *Aus altrömischen Priesterbüchern* (1939); J. Scheid, *Romulus et ses frères: Le collège des frères arvales, modèle du culte publique dans la Rome des empereurs* (1990), 616 ff; C. Guittard, *Carmen et prophéties à Rome* (2007); J. Scheid, in Y. Lehmann (ed.), *L'hymne antique et son public* (2007), 439–50. JSch

Carmen de bello Aegyptiaco (or **Actiaco**) is the title given to a poem of which 52 more or less complete hexameters in eight columns and a number of fragments survive on *PHerc.* 817, published in 1809 by Ciampitti and attributed by him and many since for weak reasons to C. *Rabirius (2); it might be part of the *Res Romanae* of *Cornelius Severus. It deals with Octavian's Egyptian campaign after Actium and *Cleopatra VII's preparations for suicide.

Editions G. Ferrara (1908), G. Garuti (1958). On the papyrus see R. Seider, *Paläographie der Lat. Papyri* 2. 1 (1978), 4; E. O. Wingo, *Latin Punctuation* (1972), 54. See Courtney, *FLP* 334, 523. BC

Carmen de figuris, anonymous Latin poem (*c.*AD 400), dedicated to *Arusianus Messius, and describing figures of speech in 186 hexameters. Three lines are devoted to each figure, defining it and giving one or two examples. The material is taken from *Rutilius Lupus and *Alexander (12). The prosody is late, but aphaeresis of final *s* and ancient forms (e.g. *indupetravi*) imitate preclassical poetry.

U. Schindel, *Die Rezeption der hellenistischen Theorie der rhetorischen Figuren bei den Römern* (2001), 9–68, 173–201 (with new edn). OS/MW

Carmen de ponderibus et mensuris (perhaps *c.*AD 400), a Latin didactic poem in 208 hexameter verses, once ascribed to *Priscian, but now attributed to one Rem(m)ius Favinus (or Flav [in]us), sets out the several systems of *weights and *measures adopted in ancient Greece and Rome. It includes two interesting technical accounts: (1) a hydrometer for measuring the specific gravity of liquids (ll. 103–21), similar to the instruments attributed elsewhere to the Alexandrians *Menelaus (3), *Pappus, and *Hypatia; and (2) a method used by *Archimedes for solving the problem of the crown (to distinguish an alloy from pure gold or silver) by means of a hydrostatic balance (ll. 125–62), much like the instrument attributed to Archimedes by Menelaus.

F. Hultsch, *Metrologicorum scriptorum reliquiae* 2 (1866), 24–31, 88–98; M. Clagett, *Science of Mechanics in the Middle Ages* (1964), 85–93; W. R. Knorr, *Ancient Sources of the Medieval Tradition of Mechanics* (1982), 123–5; D. K. Raïos, *Archimède, Ménélaos d'Alexandrie et le 'Carmen de Ponderibus et Mensuris'* (1989); K. Geus (ed.), *Gedicht über Gewichts- und Maßeinheiten* (2007), with comm. WRK/SCu

Carmen Nelei See NELEI CARMEN.

Carmen Priami ('The Song of Priam'), a poem in *Saturnian verse, of which *Varro, *Ling.* 7. 28 quotes one line; an archaizing composition, apparently written after and in reaction to *Ennius' *Annals*.

Courtney, *FLP* 44; Herzog–Schmidt 1. 285–6. PGMB

Carmen Saliare or ***Carmina Saliaria***, the ancient hymn(s) of the *Salii in *Saturnian verse, unintelligible (Hor. *Epist.* 2. 1. 85–6; Quint. *Inst.* 1. 6. 40) despite commentaries by L. *Aelius and others; the few fragments, already corrupt in antiquity, mostly illustrate obsolete diction (e.g. intervocalic *s* [z] = classical *r*). As transmitted, they include (fr. 1) the syncopated imperative *cante* 'sing' (= *canite*) and the title *diuom deo* 'god of gods' for Janus, (fr. 2) the unchanged Indo-European form *tremonti* '(they) tremble' (= *tremunt*, cf. Doric Greek *-ovτι*) and the name *Leucesios* (or *Lucetius*: Macrob. *Sat.* 1. 15. 14) '(god) of light' for Jupiter; but text and interpretation remain speculative and controversial (one theory derives them from a misunderstood commentary).

Aristotle's standard method of proceeding from 'what appears' (*ta phainomena*) or from 'that which is better known to us' (*gnōrimōteron hēmin*). Training in dialectic includes mastery of debating skills, of complex definitional theory, of rules of inference, and (as covered in his *On Sophistical Refutations*) of the solution of fallacies.

The Dialectical school (see MEGARIAN SCHOOL), influential in the later 4th and early 3rd cents. BC, was a Socratic movement which made dialectical virtuosity its focal concern, perhaps influenced by Socrates' description of dialectical activity as the greatest human good (Pl. *Ap.* 38a). In the Hellenistic age the Stoics (see STOICISM) treated dialectic as a broad division of philosophy, embracing logic, grammar, definition and division, and the study of sophisms, but excluding rhetoric (Diog. Laert. 7. 41–83). The Stoic sage is said to be the only true dialectician, and to possess 'dialectical virtue'. The Epicureans rejected the whole of dialectic as superfluous. The Academics, as critics of all doctrinal stances, were leading practitioners of dialectic, yet also sought to undermine it by attacking its foundational axioms, such as the law of bivalence (Cic. *Acad.* 2. 91–8).

R. Robinson, *Plato's Earlier Dialectic* (1953); G. E. L. Owen (ed.), *Aristotle on Dialectic* (1968); A. A. Long, in J. M. Rist (ed.), *The Stoics* (1978), 101–24. DNS

dialects, Greek (prehistory) In the first half of the first millennium BC each Greek region and indeed each Greek city spoke and sometimes wrote its own dialect (see GREEK LANGUAGE). The Greeks themselves mentioned four ethnic groups, Athenians, Ionians, *Dorians, and Aeolians (see AEOLIS), characterized by different dialects, though other classifications were also in use. On the basis of shared linguistic features modern scholars classify the dialects into five groups: Attic-Ionic (in Attica, the Ionic islands of the Aegean, and Asia Minor), Doric (in the Peloponnese, the Doric islands of the Aegean, and Asia Minor), North-West Greek (in the northern part of mainland Greece), Aeolic (in *Boeotia, *Thessaly, and part of Asia Minor including *Lesbos) and Arcado-Cypriot (in *Arcadia and *Cyprus, with possible links to *Pamphylia). It is disputed whether the *Mycenaean language, attested in the second millennium BC, belongs to any of these groups, though it has close links with Arcado-Cypriot. Further spreading of the dialects into the west Mediterranean area was caused by later colonization. The geographic separation of closely related dialects requires historical explanation and attempts have been made to reconstruct the original distribution of the dialects and their speakers in the second millennium BC. It is normally accepted, for instance, that in the last part of the second millennium BC the ancestors of the Arcadians and the Cypriots lived in the Peloponnese until some of them took refuge in the central part of the Peloponnese and others migrated to Cyprus. Similarly an early colonization from mainland Greece brought the various dialects to Asia Minor. But we must also account for the differences between the original groups. Until relatively recently it was widely accepted that the future Greeks arrived in Greece in at least three waves: first the ancestors of the Ionians and the Athenians, then those of the Aeolians and perhaps of the Arcado-Cypriots. The last to arrive would have been the ancestors of the Dorians and north-west Greeks, who pushed their way into Peloponnese and Crete dispersing the previous populations; the classical tradition spoke of the return of the *Heraclidae. However the linguistic evidence by itself is not sufficient to support the three-wave theory and no other reliable evidence is available. More recently it has been argued that the dialect distinctions arose in Greece itself in the second millennium BC, though the details are not clear and we do not know, for instance, how many groups we must postulate for the Mycenaean period. The Mycenaean places of the second millennium like *Pylos, *Mycenae, and *Cnossus were later inhabited by Dorians, but the language of the Mycenaean tablets shows no specifically Doric features and is linguistically more innovative than that of the Dorians. This supports the view that the Dorians moved into the *Peloponnese and *Crete (probably from northern Greece) after the end of the Mycenaean period. Yet it has also been suggested (by John Chadwick) that the Dorians represent the continuation of a class of Mycenaean servants who spoke a dialect that was different from, and more conservative than, that of their masters; this is not generally accepted.

J. Chadwick, *CAH* 2^2/1 (1963), ch. 39; L. R. Palmer, *The Greek Language* (1980), 53 ff.; E. Risch, *Kl. Schr.* (1981), 269–89; J. Chadwick, in D. Musti (ed.), *Le origini dei Greci* (1985), 3–12. AMDa

dialects, Italic See ITALY, LANGUAGES OF.

dialogue

Greek As a special literary–philosophical form of writing, dialogue has its origin in Socrates' philosophical activity; *Aristotle's description of written philosophical dialogues as 'Socratic *logoi*' (*Poet.* 1447^b11) reflects the association of the form with representations of Socratic conversations, often written by members of Socrates' circle (like *Plato (1)), in which he is himself often the, or a, main speaker. A typical 'Socratic' conversation, or *dialogos*, will be one in which question-and-answer plays a leading role. As the genre develops in antiquity, this element gradually declines in importance, being replaced by long speeches either exclusively by the main speaker with short interjections by others, or more often by different speakers. The beginnings of such developments are already visible in the Platonic corpus, although there they are partly the result of experimentation with the genre.

*Diogenes (6) Laertius (3. 48) says that some people claimed that *Zeno (1) of Elea was the first writer of dialogues, and that Aristotle (fr. 72 Rose) gave this role to one Alexamenus (otherwise unknown); but it is Diogenes' view that in any case it was Plato who closely defined the form, and that it was his dialogues which 'would justly win first prize for their beauty and invention'. Plato is supposed to have been much influenced by the (now lost) prose 'mimes' of *Sophron (which he is said, probably unreliably, to have kept under his pillow); other more obvious influences would have been dramatic dialogue, and debates between speakers in *Herodotus (e.g. 3. 80–2) and *Thucydides (2) (5. 85–113).

*Aristotle's own early works, now lost except for fragments, included some dialogues. According to Cicero *Epistulae ad Atticum* 13. 19. 4, he appeared as a character in (? some of) them, as Plato never did, but as *Cicero does in his dialogues; Aristotle also apparently subordinated other roles to his own. The same letter (which refers to 'many' dialogues by another pupil of Plato's, *Heraclides (1) Ponticus) gives some general insight into the thinking behind, and the models for, Cicero's dialogues. The writing of dialogues in Greek was revived by *Plutarch in the 1st and 2nd cents. AD, and a little later by *Lucian. Plutarch's dialogues (e.g. *De genio Socratis*) are modelled especially on Plato's, but are lighter in content, while *Lucian's stance is more usually that of satirist than of philosopher; his range is greater even than Plato's, and shows the influence not only of *Sōkratikoi logoi* but, rather more obviously, of New *comedy and other later literary developments.

R. Hirzel, *Der Dialog* (1895; repr. 1963); *Oxford Studies in Ancient Philosophy*, suppl. vol. 1992; C. Rowe, *Plato and the Art of Philosophical Writing* (2007); S. Goldhill (ed.), *The End of Dialogue in Antiquity* (2008). CJR

Latin Dialogue in the general sense occurs in Latin literature not only in drama but also occasionally in the written versions of speeches, where a passage of dialogue between an orator and his opponent is called an *altercatio*, and notably in Roman *satire. The first Roman known to have written in the specific genre of the literary prose dialogue, in the manner of *Plato (1) and his successors, was M. Iunius Brutus (praetor *c.*140 BC), who com-

(date: T. Barnes, *JRA* 1989, 252–3), in spite of causing local hardship (*IG* 4^2. 80–1 = Sherk, *Hadrian* 73), won him some Greek approval. Under Trajan the recruitment of Roman senators from Athens and Sparta advanced Greek political integration; writing at the time, *Plutarch (*Praec. ger. reip.*) counselled resigned acceptance of Roman dominion. *Hadrian conferred benefaction throughout the province; his foundation of the *Panhellenion (131/2) promoted an influx of easterners to Greece, among them the travel-writer *Pausanias (3). In the later 2nd and early 3rd cents. Greece flourished as a cultural centre (see AGŌNES; SECOND SOPHISTIC). Levels of prosperity varied regionally; ancient writers stress depopulation in Roman Greece, but the archaeological evidence for an emptied countryside down to 200 (Alcock, see bibliog. below), rather than merely confirming this picture, may point as well to greater nucleation (i.e. rural villages and migration to urban centres); certainly some cities now prospered, as could a small place like *Acdepsus; *tourism was probably a significant source of wealth. The *Heruli (267) damaged Athens, prompting Athenian self-defence (see HERENNIUS DEXIPPUS, 8). In the 4th cent. gradual Christianization wound down traditional cults, although the *Panathenaea were still being celebrated *c.*410 (*IG* 2^2. 3818 with *PLRE* 2 'Plutarchus' 2). In 396 *Alaric sacked Corinth, *Argos (1), and Sparta, prompting a wave of defensive building throughout the province. Recent archaeology shows a previously unsuspected prosperity in the 5th–6th cents., down to the Slav invasions (from 582); many basilical *churches were built, and the countryside was densely populated.

S. Alcock, *Graecia Capta* (1993); R. Kallet-Marx, *Hegemony to Empire* (1995). AJSS

Greek language

1. Introduction In the Classical period Greek was spoken in mainland Greece (including the Peloponnese), in the islands of the Aegean (including Crete, Rhodes, and Cyprus), and in the Greek colonies in Asia, Africa, and Italy. It is the European (and Indo-European) language with the longest attested history; the first documents belong to the second half of the second millennium BC and there is no real break between ancient Greek and the modern language of Greece. Most of the evidence from the 8th cent. BC until now is written in the Greek *alphabet, but at an early stage two syllabic scripts were also in use: Linear B in the second half of the second millennium rendered the Greek spoken by the exponents of Mycenaean civilization (see MYCENAEAN LANGUAGE; PRE-ALPHABETIC SCRIPTS (GREECE)) while during the first millennium BC a distantly related script, syllabic Cypriot, was used for the local dialect of Cyprus and remained in use until the 3rd cent. The language changed in time: conventionally we distinguish an ancient period which goes from the first attestation of Mycenaean Greek (in Linear B) to the end of Hellenistic Greek (roughly in AD 300), a Byzantine and medieval period (until *c.*1650), and a modern period. Here we concentrate on the central period of ancient Greek in the 5th and 4th cents. BC. After a general account of its development we give a very brief discussion of the main features of the language.

2. Origins Greek is related to language groups such as Italic, Germanic, Indo-Iranian, Celtic, Slavic, Anatolian, Armenian, Albanian, etc., all of which descend from an unattested parent language (conventionally called Indo-European or IE), which we partially reconstruct through comparison (see LINGUISTICS, HISTORICAL AND COMPARATIVE). It is not possible to establish whether Greek belongs to a wider subgroup of IE; the old theory that it was closely related to Latin or Italic has long since been exploded. It shares a number of features with Armenian and Indo-Iranian, but they are not sufficient to define specific subgroups. The ancient belief that the language was autochthonous cannot be accepted; Indo-European speakers must have reached Greece from elsewhere, though the language may have acquired its main characteristics in Greece itself. Some specific features which distinguish ancient Greek from the Indo-European parent language are listed below.

3. Dialects When we speak of Greek we often mean Attic, i.e. the dialect of Athens. Yet from the Mycenaean period until the late Hellenistic period there was no standard Greek language and all cities or regions had different forms of speech, which they transmitted to their colonies. Even Mycenaean is only one of the varieties of second-millennium Greek. These local 'dialects' had equal or similar status and presumably most of them were mutually intelligible. Until the late 4th cent. BC (and often much later) they were used in normal oral intercourse and for written documents, laws, letters, etc. The contemporary inscriptions provide the best evidence for the differences, which encompass phonology, morphology, syntax, and lexicon (e.g. Lesbian *παισᾶς* 'of all' (fem. sing.), Attic *πάσης*; Lesbian *ἔμμεναι* 'to be', Attic *εἶναι*; Thessalian *αἰ μά κε κις*, Arcadian *εἴ δ' ἀν τις*, Ionic-Attic *ἐὰν δέ τις* 'but if anyone' with a different order of the indefinite pronoun and the potential particle *κε* /*κα*/ *ἀν* from e.g. Phocian *αἰ δέ τις κα*; West Greek *λε(ϝ)ω* 'I want', Attic *θέλω*). On the basis of shared features modern scholars classify the various forms of Greek (partly on the model of the ancient grammarians, see GRAMMAR, GREEK) into groups: Ionic-Attic, Arcado-Cypriot, Aeolic (which includes Lesbian, Boeotian, and Thessalian), Doric (which includes dialects like Laconian, Argolic, etc.), and North-West Greek (see DIALECTS, GREEK (PREHISTORY)).

In spite of the absence of a standard language, from the 5th cent. BC at the latest—but probably much earlier—the Greeks thought of themselves as speaking a common language; for Herodotus (8. 144) *τὸ Ἑλληνικόν* ('Hellenism') was based on shared blood, language, customs, and religion. See HELLENISM AND HELLENIZATION. Greek was not identified with any of the dialects, but by the early 3rd cent. the Athenians were reproached for behaving as if Greek and Attic were the same thing (*Posidippus (1), fr. 30 KA). In the same period we begin to find that in the local inscriptions the dialect is sometimes replaced by a form of language which is very close to Attic though not identical with it; it is the beginning of the so-called Ionic-Attic *κοινὴ διάλεκτος* (common language), which eventually prevailed and provided Greece with a standard language from which the later dialects developed. By the end of the 2nd cent. BC most local inscriptions were no longer in dialect; in contrast with the many dialects of the earlier colonies, the language brought to Asia and Africa by *Alexander (3) the Great and his Successors was a form of *koinē*. For a brief period other forms of common language, such as the so-called Doric *koina* of Peloponnese, prevailed in certain areas of mainland Greece, but in the end they were all replaced by the *koinē* (in the inscriptions at least).

4. Literary Greek Literary texts too were composed in different dialects but the dialect was mostly determined by the literary genre and its origin rather than by the author's origin. *Hesiod, who spoke Boeotian (an Aeolic dialect), composed hexameters in the same mixed dialect (based on Ionic) as Homer, while *Pindar, also a Boeotian, wrote choral poetry in a very different mixed dialect which included some Doric features. The iambic trimeters of Attic tragedy are written in a very literary Attic heavily influenced by Homer and by Ionic, but the choruses are written in Doric or rather in a literary form of Attic with superimposed Doric features (*μάτηρ* for Attic *μήτηρ* 'mother', etc.). Notice that for the literary dialects we tend to speak, as the grammarians did, of Aeolic, Ionic, and Doric rather than of Thessalian, Euboean, Cretan, and the like (Attic and Lesbian are exceptions), since the dialect used does not normally show features specific to a town or locality: it is more a generic colouring.

The history of literary Greek starts with *Homer, i.e. with a poetic language which, because of the various stages of its formu-

laic development, is remote from the language of normal conversation and under an Ionic patina includes both late and early features as well as features of different dialects: Mycenaean, Aeolic, Ionic. Because of its cultural importance and its wide diffusion epic poetry provided a common linguistic ground for a linguistically divided culture; in spite of its Ionic colouring the epic language is used for Tyrtaeus' elegiac poetry which exhorted the Doric Spartans to war and for the verses of the oracle at Delphi, a North-West Greek city. The risk was that the prestige and all-pervading influence of the epic language might have led to the fossilization of all literary language. Yet the dialects—and the way in which they were tied to different literary genres—provided a source for linguistic renewal. Elegiac poetry was composed in epic language but some forms of it were in a more or less purified form of Ionic. We have melic poetry in Lesbian (*Sappho and *Alcaeus (1)), Ionic (*Anacreon) and even Boeotian (*Corinna, though we are uncertain about the date); in these texts we observe not only the phonology and morphology of the various dialects but presumably also some new lexicon and the characteristics of a simpler style. Iambic and trochaic verses favoured Ionic and we find in Hipponax' poetry, for instance, a rich vocabulary full of colloquialisms and of foreign words; *Archilochus too comes much closer to the language of conversation than Homer. Comedy, which can be in Attic but also in Doric, allows colloquialisms not tolerated in tragedy. Yet the multiplicity of literary dialects also leads to new forms of artificiality. The language of choral poetry is a mixed language which is characterized by a 'Doric' (i.e. non-Attic-Ionic) patina, but in fact exploits elements of all forms of poetry. The result of so much mixture may be magnificent as in Pindar but may also sound baroque: *Aristophanes (1)'s parody of Pindar (*Av.* 941 ff.) makes this clear. Literary prose can, though need not, be closer to conversational language. Its first forms came from Ionia; even a Doric doctor like *Hippocrates (2) wrote of medicine in Ionic. Attic literary prose, which started in the 5th cent., shows clear signs of Ionic influence but eventually acquires linguistic forms and a style of its own. We have limited evidence for Doric prose.

In Hellenistic times the use of the literary dialects becomes more artificial; *Theocritus wrote his *Idylls* in epic language, in Doric, and in Aeolic (i.e. Lesbian), a *tour de force* which reflects the learned style of Alexandrian poetry. At a later stage we find deliberate attempts to spurn the *koinē* and to prefer an accurate imitation of Attic. At the same time a prose text like the New Testament shows both Semitic influences and a higher level of colloquial simplicity.

5. Development The presence of dialects effectively prevents us from treating the development of Ancient Greek as a continuous process from Homer (or Mycenaean) to the *koinē*. Yet some changes seem to be widely attested in the Greek-speaking area either because of similar structural forces or because of mutual influences between dialects. In the official or literary language the complexity of sentences increases and the simpler patterns are reserved for the colloquial style or specific rhetorical effects. The article, which is absent from Mycenaean and still vestigial in Homer, is generalized in all dialects and is used to nominalize adjectives, participles, infinitives, and whole sentences. A new abstract and technical vocabulary is created through the use of suffixation (*-ικος, -ισμος, -μα*, etc.) or of composition. Greek is the one European language in which we can follow the independent creation of an abstract or technical vocabulary; the other languages, Latin included, directly or indirectly exploited Greek as a model or as a source of loan words.

6. Linguistic features We list here some of the main features of ancient Greek, with special reference to classical Attic.

Phonology

The phonological system of Classical Attic is relatively well known (see PRONUNCIATION, GREEK). In the Classical period the vocalic system had five short vowels ([a, e, o, i, y]) written *α, ε, ο, ι, υ* and seven long vowels ([a:, ɛ:, e:, ɔ:, o:, i:, y:]), written *α, η, ει, ω, ου, ι, υ* (the letters in square brackets [ ] are phonetic symbols, with the colon indicating length). Four diphthongs were relatively frequent: [ai, au, eu, oi], written *αι, οι, αυ, ευ*. The so-called long diphthongs ([a:i, ɛ:i, ɔ:i], i.e. *αι* (or *ᾳ*), *ηι* (or *ῃ*), *ωι* (or *ῳ*), were rarer and tended either to merge with the short diphthongs or to lose the second element.

The consonantal system included the dental fricative [s], the glottal fricative [h] (the rough breathing) which had a very limited distribution, and four sonorants: the two liquids [l, r] and the two nasals [n, m]. The nine stops were organized according to three modes of articulation (voiceless, voiceless aspirate, and voiced) and three places of articulation: labial ([p, p^h, b]), dental ([t, t^h, d]), velar ([k, k^h, g]). Unlike the modern language Ancient Greek had geminate consonants such as [pp, ll, mm] etc.

Some dialects have five long vowels (a:, e:, o:, u:, i:), instead of seven, and in most dialects we find a [u, u:] pronunciation of *υ*. The distribution of vowels also differs. Attic and Ionic changed the inherited [a:], which is preserved in all other dialects, into [ɛ:], written *η*, though in Attic this change was never completed and after [e], [i], [r] the sound reverted to [a:]. Hence Doric and Aeolic *μάτηρ* vs. Attic-Ionic *μήτηρ* and Attic *χώρᾱ* vs. Ionic *χώρη*. The tendency to monophthongize dipthhongs, which is typical of later Greek, is implemented earlier in dialects like Boeotian.

The consonantal system is relatively stable in all varieties of Greek, but some dialects still preserve [w] (written with *ϝ*, the so-called digamma), which was lost in Attic. Other dialects tend to change the aspirated stops into fricatives at an early stage or to lose the (secondary) intervocalic [s] which is found elsewhere. Hence Laconian *σιός* 'god' for Attic *θεός*, where *σ-* may well indicate a dental fricative [θ] (cf. English *th*) and Laconian *ἐνίκαhε* 'won' corresponding to Attic *ἐνίκησε*.

For the accentual system of Greek and the major phonological changes which mark the shift from classical to Byzantine Greek, see PRONUNCIATION, GREEK.

The system just described contrasts with that reconstructed for Indo-European (see LINGUISTICS, HISTORICAL AND COMPARATIVE). The Indo-European 'laryngeal' consonants were lost; the voiced aspirate stops (†b^h, etc.) yielded voiceless aspirates; the vocalic resonants †*r̥*, †*l̥*, †*m̥*, †*n̥* were replaced by vowels or combinations of consonant and vowel, while the consonantal variants [j, w] of *i* and *u* tended to disappear; the inherited labiovelar stops (†k^w, g^w, g^{wh}) merged with velars, dentals, or labials, depending on the environment. Indo-European *s* changed to *h* word-initially before a vowel and internally between vowels, where it was eventually lost; all word-final stops were lost and final *-m* changed to *-n*. Not all of these changes are pre-Mycenaean, but those concerning the aspirates, the vocalic resonants, †*s*, probably final †*-m*, and the final stops are. Other changes involved sound clusters and differed in the various dialects; in Mycenaean, Arcado-Cypriot, Ionic-Attic, and Lesbian, but not in Doric and North-West Greek, *-ti* became *-si* (cf. Att. *δίδωσι* 'gives' and Dor. *δίδωτι*); in most dialects (including Ionic) *[kj, tj] became [ss], but in Attic and Boeotian we find [tt] (cf. Ion. *θάλασσα*, Att. *θάλαττα*).

Morphology and syntax

Greek is a heavily inflected fusional language where the different grammatical categories are mostly marked by suffixes (nominal and verbal endings) or, far less frequently, by prefixes (e.g. the verbal augment or the reduplication). Infixation in verbs like *λαμβάνω* 'I take' vs. *ἔ-λαβ-ον* 'I took') is at best marginal. Note that one unsegmentable morpheme fulfils various functions: [o:], written *-ου* in *πολίτου* 'of the citizen' marks genitive, singular, and masculine. Suffixation and composition are the two most productive means of word-formation.

Nouns and adjectives are classified into inflexional classes (declensions) according to their phonological shape (*o*-stems, *a*-stems, consonantal stems). In the Classical period the nominal inflexion distinguished five cases (nominative, vocative, accusative, genitive, dative), three numbers (singular, dual, plural) and three genders (masculine, feminine, and neuter). Later developments led to the loss of the dual (which in some dialects is absent from the earliest attestations) and even later ones to that of the dative. Gender was determined by agreement patterns rather than by semantic factors or the phonological shape of the word (*ἵππος* 'horse/mare' can be masculine or feminine without any difference in inflexion). It was normal (though not compulsory) to use masculine and feminine for males and females but words for inanimate objects could be masculine, feminine, or neuter. In progress of time inflexional classes came to be tied to gender as is the case in Modern Greek. At the same time in Hellenistic Greek we witness a drastic simplification of the earlier inflexional variety.

Verbal morphology is highly complicated. A first distinction is between finite and non-finite forms; the former are characterized by personal endings for the singular, dual, and plural (there is not a full complement of dual endings and they too tend to disappear). The latter include participles, verbal adjectives, and infinitives, which are marked by special suffixes and share some of the syntactical, and in some instances morphological, properties of the noun.

In the finite verb the main grammatical categories are aspect, which indicates the way in which action etc. is envisaged (durative or imperfective, punctual or aoristic, stative or perfective), time (present, past, future), mood (indicative, subjunctive, optative, and imperative), voice (active, middle, passive), person (first, second, and third singular, dual or plural). Most verbs have three main stems (distinguished by vocalic alternation or affixation or more rarely by different roots) which indicate different aspects: durative/imperfective (e.g. *πειθ-* with the present *πείθω* 'I persuade, am persuading' and the imperfect *ἔπειθον* 'I was persuading'), or punctual/aoristic (e.g. *πεισ-* with the aorist *ἔπεισα* 'I persuaded'), or stative/perfective (e.g. *πεποιθ-* with the perfect *πέποιθα* 'I am persuaded' and the pluperfect *ἐπεπείθειν* 'I was persuaded'). Except for the future the so-called tenses (present, imperfect, aorist, perfect, pluperfect, future, future perfect) in the non-indicative moods and the non-finite forms mark primarily contrasts of aspect, while the indicative forms indicate both time and aspect distinctions: Xen. *Cyr.* 5. 5. 22 *ἐλθὼν οὖν ἔπειθον αὐτούς, καὶ οὓς ἔπεισα τούτους ἔχων ἐπορευόμην σοῦ ἐπιτρέψαντος*, 'I went (part. aorist) and I tried to persuade them (imperfect) and keeping (part. present) with me those whom I persuaded (ind. aorist) I continued on my expedition (imperfect), since you allowed it (part. aorist).' The perfect is a special case; it starts indicating a state (*πέποιθα* 'I am convinced') and then develops a resultative use often accompanied by new forms (5th cent.: *πέπεικα* 'I have persuaded'), which makes it very similar to the aorist. Eventually it is lost and replaced by periphrastic forms. Contrasts of voice and person are marked by the endings. The middle voice emphasizes the participation or the involvement of the subject: active *δικάζω* 'I sit/am sitting in judgement', middle *δικάζομαι* 'I go/am going to law (on my own behalf)'. There are a few forms marked by suffixes which are exclusively passive, but otherwise the middle has also passive value, a pattern which will eventually prevail.

Word order is relatively free. The verb may precede or follow the object; similarly the subject may precede or follow the verb. Clitic particles tend in the early stages to occupy the second position in the clause (Xen. *Hell.* 3. 1. 11 *ὁ ἀνὴρ σοί ὁ ἐμὸς καὶ τἆλλα φίλος ἦν* . . . , 'my husband was devoted to you in other things too . . . '), but they often gravitate towards the word with which they have the closest semantic links. In Homer we still find preverbs separated from verbs in so-called tmesis (*ἐπὶ . . . ἔτελλε*), but there too and in Classical prose 'preverbs' are either compounded with verbs (cf. *ἐπέτελλε* 'enjoined') or serve as prepositions which 'govern' an inflected noun. The simple sentence may be limited to a verb without expressed subject (*ὕει* 'it rains'). In longer sentences grammatical agreement is regular: the verb normally agrees in number with the subject; the adjective agrees in number, gender, and case with the noun to which it refers. Attic, however, preserves the inherited rule by which a subject in the neuter plural can agree with a verb in the singular: *τὰ ζῷα τρέχει*, 'the animals run'. Nominal sentences composed of subject and predicate without any finite verb are frequent: Thuc. 2. 43. 3 *ἀνδρῶν γὰρ ἐπιφανῶν πᾶσα γῆ τάφος*, 'for of famous men the whole earth [is] a memorial'. Attic prose develops complex forms of subordination; dependent clauses with finite verbs are normally introduced by conjunctions or relative pronouns, while verbs of saying and other verbs may be followed by 'accusative with infinitive' constructions: Xen. *Hell.* 2. 2. 10 *ἐνόμιζον δὲ οὐδεμίαν εἶναι σωτηρίαν* . . . , 'they believed that there was no escape'.

Dialects show considerable morphological differences, partly determined by their different phonological development, partly by separate analogical processes (cf. e.g. the Aeol. dat. plur. of the type *πόδεσσι* 'to the feet', with a new ending *-εσσι*, vs. Att.*-σι* in *ποσί*). They do not, however, differ substantially in their morpho-syntactic categories. Some syntactic differences are well known (e.g. Arcadian and Cyprian construe prepositions like *ἐς* (Att. *ἐκ*) and *ἀπύ* (Att. *ἀπό*) with the dative instead of the genitive found in Attic; Elean uses the optative in commands, etc.); others may not have been detected. Even so, there is remarkable similarity in the whole of the Greek-speaking area. If contrasted with IE, Greek has lost some case distinctions: the IE ablative and genitive have merged into the Greek genitive, and similarly the instrumental, locative, and dative into the Greek dative. The extensive use of prepositions is new. The complex arrangement of the verbal system is largely inherited and shows remarkable similarities with that of Indo-Iranian (Vedic and Greek are the only languages to preserve the distinction between optative and subjunctive). Greek has introduced new regularities—the creation of a contrast between middle and active perfect and of a resultative perfect; the pluperfect (to match the imperfect), the future, a separate passive, etc. Later developments show a preference for analytic rather than synthetic forms. It is still disputed how far IE allowed subordination, but the complex patterns found in Greek prose are certainly due to innovation. Perhaps the most important development is the creation of the article. In Homer *ὁ, ἡ, τό* still largely function as demonstrative or relative pronouns but in Classical prose they are used as articles. The article allows the creation of nominal forms which would be impossible otherwise (e.g. *τὸ κακόν, τὸ εὖ, τὸ εἶναι*, lit. 'the bad', 'the well', 'the be') and also marks the distinction between attributive and predicative function as in *ὁ καλὸς παῖς* or *ὁ παῖς ὁ καλός* 'the handsome boy' as contrasted with *καλὸς ὁ παῖς* 'the boy (is) handsome'. The development of intellectual language owes more to the article than to any other syntactical feature of Greek.

Lexicon

Though lexical differences between dialects are commonplace, if we allow for phonological differences, most of the basic vocabulary of Greek is shared by all dialects. The bulk of the early Greek lexicon is built on inherited Indo-European roots but numerous words cannot be etymologized and presumably belonged to pre-Greek populations. They include nouns and place names ending in *-ινθος* and *-σσος / -ττος* and a number of words for flora, fauna, etc. of Mediterranean origin (*σῦκον* 'fig', *μίνθη* 'mint', etc.). In addition even by Mycenaean times we find words of Semitic origin like *σήσαμον* 'sesame', *κύμινον* 'cummin', *χρυσός* 'gold', *χιτών* 'tunic', etc. In the Classical period it is noticeable that the cultural insularity of the Greeks and their reluctance to learn

foreign languages led to very few borrowings from the outside; by contrast the later contacts with the Romans produced a large crop of loanwords or calques. New vocabulary is normally built via suffixation and composition; both processes are productive all through the history of the language. Compounds are characteristic of literary language (where they may be new creations or may be taken from the epitheta of the religious language and the formulae of oral poetry), but also occur in everyday language: the flavour of Pindar's *μελησίμβροτος* 'which is an object of care to men' or of the comic *σαρκασμο-πιτυο-κάμπτης* 'sneering pine-bender' (Aristophanes) is different from that of the innumerable *-πωλης* compounds of Attic inscriptions (*κριθοπώλης* 'barley seller', *ἀρτοπώλης* 'bread seller', etc.) which have only practical overtones.

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Gregory (1) **I**, the Great, pope AD 590–604, of senatorial and papal family; probable prefect of Rome *c.*573; subsequently monk; deacon, 578; *apocrisiarius* (lit. 'delegate', a church official) at Constantinople, 579–585/6 (despite his poor Greek); then adviser to Pope Pelagius II. When pope, despite ill-health, he valiantly administered a Rome stricken by flood, plague, and famine, shrunken in population and isolated and threatened by Arian (see ARIANISM) and pagan *Lombards. He reorganized papal estates for Rome's supply, centralizing their administration through appointments, paid imperial troops, appointed officers, and negotiated with the Lombards. He devotedly served the Byzantine empire as the 'holy commonwealth', but sometimes acted independently of emperor and exarchs. Warfare and political fragmentation limited his powers, but expectation of the Day of Judgement sharpened his sense of spiritual responsibility for the world. As churchman, he upheld ecclesiastical discipline in Italy and Dalmatia, maintained authority in the vicariate of Illyricum, restructured the dioceses of his dwindling patriarchate, and laboured to convert Jews and *pagan rustics. He urged Church reform on the Merovingians, reviving the vicariate of Arles at their request. He struggled (against imperial opposition) to end the Three Chapters schism in Venetia and Istria, and (with small success, and perhaps small need) to suppress African *Donatism. He worked to convert the Lombards through queen Theodelinda, and organized a mission to the Anglo-Saxons (596). In the east, he maintained papal appellate jurisdiction, and was friendly with the patriarchs of *Alexandria (1) and *Antioch (1). With Constantinople, he quarrelled over its patriarch's title Oecumenical, wrongly seen as challenging Rome's primacy. Generally, though, he was sensitive to local religious traditions.

A contemplative at heart, he saw episcopal duties as a necessary, but uncongenial extension of his monastic vocation into the secular world. His diaconal appointments favoured monks, alienating Rome's secular clergy. No original theologian, he was an eloquent moralizer and mystic, striving to make sense of his beleaguered world, and transmitting much patristic thought to the Middle Ages. His *Moralia in Iob* proved enormously popular; his *Cura pastoralis* remains a mirror for priest and bishop. His *Dialogues* (whose authenticity has been challenged) inspiringly portrayed the Italian Church as ascetic, preaching, thaumaturgic, but episcopally controlled. His *Homiliae in Ezechielem*, preached to the besieged city, movingly lament Rome's decay. He defended sacred art, reformed the Roman liturgy, and perhaps established a choir school. He conventionally condemned bishop Desiderius of Vienne for inappropriately teaching classical culture, and suspected its influence on potential monks, but conventionally acknowledged its utility in biblical studies; his straightforward, rhythmically skilful prose shows rhetorical training. (Many letters, though, are chancery-drafted.) A chief founder of the papal states, and of papal prestige in the post-Roman west, his leadership, and vigorous sense of Rome's political and Christian traditions, justified his epitaph as 'God's consul'.

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Gregory (2) **of Nazianzus** (AD 329–89), educated at Athens with *Basil of Caesarea, remained much more committed than his friend to the value of traditional *paideia*, a commitment powerfully expressed in his counterblast to the emperor Julian's cultural politics (*Orations* 4-5).

Son of a bishop, he faced great difficulties in reconciling his ascetic ambitions with the career reserved for him in the local church establishment. He caused much embarrassment for his father when he ordained him presbyter, and for Basil when he

both languages well, and acquainted with the grammar-book of Dionysius in its initial state. Following his studies under the Stoic philosopher Stilo Praeconinus (see AELIUS, L.), he understood both the Stoic and the Alexandrian views on language and applied these to Latin in his book *On the Latin Language* (*De lingua Latina*.). This is not a grammar of Latin, but a lengthy discussion about the language, its structure, vocabulary, and, so far as he could trace it, its history.

Varro was the most original thinker about language that we know of in the Latin world. In addition to his application of Stoic semantics to the Latin verb he made an extensive study of word formation and inflexion, drawing on the principle of regularity ('analogy'), but recognizing existing irregularities as well. In his books he began the process of grouping Latin case forms together, leading to the later establishment of the traditional five declensions. These five were set out by the late Latin grammarians such as *Priscian (*c.*AD 500) several centuries before a comparable simplified account was applied to Greek, probably under Latin influence, at the end of the Byzantine age, and this must be laid to the credit of Varro's early insights.

Three main differences between Latin and Greek had to be noticed by Varro and others: (a) The Latin ablative case, not found in Greek and recognized by Varro as the 'sixth' or 'Latin' case. The term *ablative* was created later by reference to one of its major functions, 'taking away from'. (b) The absence of a definite article in Latin. The word-classes were maintained at eight when *Remmius Palaemon (1st cent. AD) made the interjection, which the Greeks treated as a subclass of adverbs, a class in its own right. (c) The conflation in Latin of the present completive ('have done') with the plain past ('did'), having differential verb forms in Greek (*pepoiēka, epoiēsa*) but a single form in Latin (*feci*). This was duly noted by Priscian.

7. A number of Greek grammarians are known to have been working on syntax in the 1st cent. BC and after, but the first grammarian dealing exclusively with it, whose work is, in part, extant, is *Apollonius (13) Dyscolus, writing in Alexandria and in the Alexandrian tradition around AD 200. He was regarded by Priscian as his principal authority, and later Byzantine grammarians in the main wrote summaries and commentaries on the basis of Apollonius' books. The work of these Byzantine Greek grammarians between 500 and 1500 was the main vehicle for the reintroduction of Greek studies in the western Renaissance.

8. A considerable number of late Latin grammarians are known and their work is extant; the most prominent among them are *Donatus (1) (4th cent.) and Priscian (writing in Constantinople around 500), who became authorities for the later medieval grammarians, both practical and theoretical. Donatus wrote two short grammars of Latin; Priscian wrote at great length, and his principal work, *Institutiones grammaticae* ("The Principles of Grammar") runs to 974 printed pages. The work is divided into eighteen books, the last two being wholly devoted to syntax and drawn largely from Apollonius. Priscian's work recapitulates the entire achievement of the Graeco-Roman grammatical tradition, to which the debt of today's language studies can hardly be exaggerated. See GRAMMAR AND GRAMMARIANS, GREEK and LATIN.

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linguistics, historical and comparative (Indo-European)

1. Introduction Historical linguistics studies how language develops in time; comparative linguistics (or comparative philology) uses linguistic comparison to establish that two or more languages are genetically related and descend from an earlier language which may or may not be attested. We know that the Romance languages (French, Italian, Spanish, etc.) are related and descend from a form of Latin, but we can also show that languages like Latin, Greek, Sanskrit, Armenian, English, etc. descend from an unattested parent language. We can reconstruct the main features of this language which we call conventionally Proto-Indo-European (PIE) or simply *Indo-European (IE), and which must have been spoken before writing was developed. Similar techniques allow us to reconstruct Proto-*Semitic, the parent language of Hebrew, Arabic, *Akkadian, etc. or Proto-Algonquian from which a number of Amerindian languages in NE and central North America derive, etc. The question whether all languages descend from one language or many remains open. Within each family we can also establish different degrees of relationship. Greek, Latin, French, English, German are all Indo-European, but Greek and Latin belong to separate branches, English and German to the same branch (Germanic), while French descends from Latin. In general, comparative linguistics may provide evidence for prehistoric events such as the origin or movement of peoples but it also lengthens the history of the languages studied and throws light onto their features. We should not confuse this comparative linguistics, which aims at identifying genetic relationship, with the homonymous discipline which compares different languages (mostly unrelated) in order to establish language types and general features of language.

General principles

The comparative and historical study of language requires familiarity with the principles of general linguistics (see LINGUISTICS) which have largely emerged from the study of living languages. In its turn, the general study of language change has much to contribute to the theoretical study of language and has developed as a discipline in its own right (cf. McMahon; Campbell; Hock and Joseph, Joseph and Janda: see bibliog. below). The questions investigated concern the causes and modalities of language change in general and of specific instances of language change. It is now clear that sociolinguistic factors are partly responsible for the occurrence and modalities of language change (prestige forms of language are imitated) and that language variety is much more pervasive than the number of named dialects implies. Ideally all historical studies should take into account the various layers of each language (registers, dialects, etc.) and their correlation with socio-historical factors, but often the necessary data is not available and we can only speculate.

Good methodology demands that comparison is based on the earliest phases of the languages considered. History must come before comparison; in languages, like Greek and Latin, for which we have a long and uninterrupted documentation, we can use internal evidence to establish what forms are the earliest. Attic forms as, for example, *γένη, φιλῶν* are shown by Homeric Greek (see HOMER) to be from *γένεα, φιλέων*, while *τιμῶν* is from *τιμάων*, and Attic *τιμῶσι* is from an earlier *τιμάονσι*, which derives from †*τιμάοντι*. This last form is reconstructed through dialect comparison and here the dagger indicates that it is not attested (elsewhere an asterisk is used).

Modern linguistic studies

The ancient Greek and Roman scholars were only interested in describing their own languages (as also were the Indian grammarians); linguistic history and comparison were ignored. Yet one attempt, not entirely free from political overtones, led to the (false) derivation of Latin from Greek in the 1st cent. BC.

Modern historical and comparative linguistics owes its beginnings to a closer study of Sanskrit, the literary and scholarly language of India, and to the encounter with the sophisticated Sanskrit tradition of grammatical analysis. After some earlier tentative statements, and especially after Sir William Jones's

paper (1786) asserting the affinity of Sanskrit to the classical languages, it was Franz Bopp who in his work on the *Verbal Inflection of Sanskrit Compared with Greek, Latin, Persian and Germanic* (1816, re-edited in English in 1820) proved by a close comparison of the various verbal forms that the languages mentioned inherited their system from a common ancestor. From then almost to the end of the last century research concentrated on comparison, with Indo-European having the pride of place, and, after a revolutionary upheaval initiated in the late 1870s, found its codification in the monumental grammar of the IE languages by Brugmann and Delbrück (1893–1916). As a result it was established that the IE group embraced Indian and Iranian (the Aryan subgroup) and Armenian in Asia, *Greek, Italic (*Latin with Oscan and Umbrian (see SABELLIC LANGUAGES) etc. (see also ITALY, LANGUAGES OF)), *Celtic, *Germanic, Balto-Slavic, and Albanian in Europe; poorly known members are *Phrygian, Thracian, Illyrian, *Messapic, and *Venetic. The 20th cent. brought to light two further groups, previously unknown: *Anatolian, the first attested member of the family (from *c.*1600 BC), in Asia Minor, and Tokharian in central Asia (cf. Meillet; Szemerényi; Cowgill and Mayrhofer; Meier-Brügger; Fortson; Clackson) The detailed study of all these languages has led to spectacular results in all fields; the following survey attempts to outline the variety of problems encountered, with special regard to the classical languages (cf. GREEK LANGUAGE; LATIN LANGUAGE).

2. *Phonology* The study of the phonological development of ancient languages necessarily starts from written texts, but linguists are mostly concerned with the developments of sounds rather than of letters. Specific techniques allow them to move from spelling to pronunciation (see PRONUNCIATION, GREEK and LATIN). It is now clear that phonological development shows an unexpected form of regularity, which has become the cornerstone of all historical and comparative study and has provided a solid basis for the previously discredited study of etymology. If in a given period a sound changes in one word, then, as a rule, if enough time is allowed, it changes in the same way in all the words in which it appears, provided that the phonological environment (the sounds by which it is surrounded) is the same. Old English (OE) word-initial [kn] (square brackets indicate phonetic transcription) in which the [k] was actually pronounced, becomes [n] not only in *knight* (now pronounced in the same way as *night*) but also in *knot*: cf. OE *cniht* and *cnotta*. We state this observation in the form of a 'sound law': OE *kn-*>ME *n-* (>stands for 'becomes'; ME = Middle English), while again noticing that we are interested in the change of sounds and not of letters. 'Sound laws are without exceptions' was the slogan of the 1870s, and, in spite of the great theoretical and practical misgivings voiced ever since, the thesis has been found indispensable, although the conditions must be stated very carefully. Thus Classical Greek [ph] (written *φ*) regularly becomes [f] in modern Greek, while [au] regularly becomes [af] before voiceless stop ([p]. [t], etc.) and [av] before voiced consonant ([ō], [γ], etc.). It follows that not only the correspondences between an attested or reconstructed protolanguage and the daughter languages, but also those between cognate languages show regularity; indeed it is the regularity of phonological correspondences that demonstrates that two or more languages are related. If the initial [f] of Vulgar Latin is continued in most environments by [f-] in Italian and [h-] in early Spanish we expect a regular correspondence between Italian [f] and early Spanish [h], which we do indeed find in forms like It. *figlio*, Sp. *hijo* (from Lat. *filius* 'son'), It. *farina*, Sp. *harina* (from Lat. *farina* 'flour'). Modern Spanish has a conservative spelling and initial *h-* is still written but no longer pronounced. If so, a word like Sp. *filial* 'filial' must be a learned borrowing from Latin. It is also this regularity which allows us to reconstruct the sound system of unattested parent languages. The regular correspondences between Gr. *p*, Lat. *p*, Skt. *p*, OE *f* (but *p* after *s*), point to an original IE †*p* and to rules like IE †*p*>Gr. *p* or IE †*p*>OE *f*: 'father' is the direct descendant of IE †*pətēr*, but 'paternal' is a borrowing from Latin.

We may also reconstruct for a protolanguage sounds not attested or scarcely attested in the daughter languages. In addition to liquids, nasals, a sibilant (†*r*, †*l*, †*n*, †*m*, †*s*), and the regular series of voiceless and voiced stops *p*, (*b*), *t*, *d*, *k*, k^w, *g*, g^w, IE also had the so called voiced aspirated stops *bh*, *dh*, *gh*, g^wh. An IE *bh* is preserved in Sanskrit but appears in Greek as *φ* (i.e. p^h, an aspirated *p* in the Classical period), while in Latin in initial position we find *f-* but internally *-b-*. Cf. Skt. *bhrātar-* 'brother': Gk. *φράτηρ* : Lat. *frāter*, but Skt. *lubh-yati* 'desires' : Lat. *lubet*. Even more complex is the development of IE *dh* : Greek always presents *θ* (= aspirated t^h) while Latin has initially *f-* but internally *-d-* and *-b-*, the latter before or after an *r*, after *u*, and before *l*. Cf. Skt. *dhūma-* 'smoke' : Gk. *θυμός* : Lat. *fūmus*; Skt. *madhyas* 'middle' : Lat. *medius*; but Gk. *ἐρυθρός* 'red': Lat. *ruber*; Skt. *ūdhar* 'udder' : Lat. *ūber*, etc. We also reconstruct a series of so-called labiovelars (velar sounds of the English *k g* type with lip-rounding; cf. Eng. *qu-*) : k^w, g^w, g^wh. In historical Greek they merged with labial, dental, and velar sounds, but in the Linear B script they still have distinct signs, so that the development must have taken place after the Mycenaean period. To take a simple case, Latin *quis quid* obviously corresponds to Gk. *τίς τί*, that is to say, while Latin preserves an IE k^w as *qu*, Greek changed it to *τ*. But this occurred only before *i* or *e* (cf. Lat. *-que*: Gk. *τε*). Before *a* or *o* Gk. shows *π*; cf. the interrogative forms *πόθεν πότε πότερος*, etc., from IE †k^wo-. This explains the connection between *τίνω* 'I pay' and *ποινή* 'fine, payment', so obvious semantically, and so disconcerting when the sounds are compared; *τι-*/*ποι-* represent the regular developments from IE †k^wi- and †k^woi-.

It used to be believed that vowel changes were too erratic to present any regularity. In fact, vowels develop as regularly as the other sounds. The basic vowels of late IE (*a e i o u*, short and long) are fairly faithfully preserved in the classical languages (though in Latin this is only true for the first syllable of the word). Cf.:

a IE	†*agō*	'I drive'	Gk.	*ἄγω*	Lat. *agō*
ā	†*mātēr*	'mother'		*μάτηρ*	*māter*
e	†*bherō*	'I carry'		*φέρω*	*ferō*
ē	†*plē-*	'full'		*πλή-ρης*	*plē-nus*
o	†*oktō*	'eight'		*ὀκτώ*	*octō*
ō	†*dō-*	'give'		*δῶ-ρον*	*dō-num*, etc.

Some apparent exceptions to these rules are explained through the reconstruction for IE of semivowels (approximants) which between consonants function as the nucleus of a syllable (like vowels) but between vowels function as consonants. Thus next to consonantal [j, w] (cf. Eng. *y* and *w*), we have vocalic *i* and *u*; next to consonantal *l*, *r*, *m*, *n*, we have vocalic *l̥*, *r̥*, *m̥*, *n̥* (the last four symbols indicate vocalic sounds like those indicated by *-le* in *bubble* and *-on* in *button*). The IE vocalic liquids are preserved in one language, Sanskrit, where we often find syllabic *r* (transcribed as *r̥*); cf. *mr̥ta-* 'dead', *kr̥p-* 'body', etc. In the classical languages the vocalic liquids of IE (*l̥ r̥*) always develop a vowel, either before the liquid (Lat. *ul ur* or *ol or*; Gk. *αλ αρ*) or after it (Gk. *λα ρα*). Thus Skt. *r̥kṣa-* 'bear' corresponds to Gk. *ἄρκτος* but Lat. *ur(c)sus*. The vocalic nasals are preserved in no language. Greek alternations like that of *τείνω* (*τεν-*) 'I stretch' : *τα-τός* 'stretched', *κτείνω* (*κτεν-*) 'I kill' : *ἔ-κτα-το* 'he killed', etc., are frequent, but at first sight unexplainable; Sanskrit offers similar problems: *tan-* 'stretch': *ta-tás* 'stretched', *han-* 'kill' : *ha-tás* 'killed', etc. Brugmann pointed out that the relation of *εἶ-μι*: (*πρόσ*)*-ι-τος*, *φευγ-* : *φυκ-τός*, showed that the verbal adjective was formed from the root in its 'weak' form, i.e. without *e* (nil-grade); that *τεν- κτεν-* were therefore expected to form †*tn-tos*, †*ktn-tos*, with a vocalic nasal (*n̥*) which obviously developed into *a* in Greek (and Sanskrit) but *en* in Latin (cf. *tentus*

'stretched'). This at once explained why the aorist of *πενθ-* 'suffer' was *ἔ-παθ-ον* (cf. *ἔφυγον*). Similarly, the aorist of *δέρκομαι* was *ἔδρακον* (from †*-dr̥k-*), that of *πέρθω*, *ἔπραθον* (from †*-pr̥th-*), etc. In IE, the accusative sing. had the ending *-m*, cf. Latin *rosa-m*. But after a consonantal stem, *-m* had to become syllabic (*-m̥*) which in Greek gave *-a*, in Latin *-em*; hence, *πόδ-α*, but *ped-em*, in contrast to *νόμο-ν* with *-ν* from *-m* and *eru-m*. The same applies to *δέκ-α* : *dec-em*, *ἑπτ-ά* : *sept-em*, etc.

3. Morphology The study of historical and comparative morphology depends to a certain extent on that of phonology. If we allow for the regular phonetic correspondences we are likely to find that cognate languages often show remarkable morphological and grammatical equivalences, though the degree of conservativism will depend on the type of language studied. Indeed the morphology is often a good indicator of the family to which a language belongs. The classical languages, which are heavily inflected, show considerable agreements between themselves and with their cognates. A simple comparison between nominative sing. Skt. *navas*, Gr. *νέος*, Lat. *novus*, accusative Skt. *navam*, Gr. *νέον*, Lat. *novum* leads to the reconstruction of the IE nom. and acc. masc. with †*-os*, †*-om* endings. The declension of *familia*, with the old genitive *familiās* (retained in *pater familiās*), closely corresponds to that of *οἰκία -ᾶν -ᾶς -ᾶι*. Equally close parallels can be observed in the other declensions, the pronouns, the verbal inflexions, etc.

Inflexional patterns also reveal another great force at work in the history of languages: the tendency to regularize or at least generalize pre-existing formal patterns even beyond their original locus (analogy). In English, past forms like *sped* tend to be replaced by *speeded*, etc. In Latin the old gen. sing. of *ā*-stems ended in *-ās*. But already in Old Latin, the norm is *-ā-ī* (later *-ai*, *-ae*), obviously on the model of the *o*-stem gen. *domin-ī*. Conversely, the original *o*-stem gen. plural in *-um* or *-om* which survives into classical times in the prosaic *triumuirum*, *liberum*, *talentum* and poetic *deum*, *diuom*, etc., was replaced on the analogy of the *ā*-stems by *-ōrum*: *deōrum*, *sociōrum* after *deārum*, etc. Sound change may disrupt the regularity of a paradigm, but analogy may well restore it, though we are not normally able to predict with certainty whether a specific instance of analogical change will happen or not. 'Speeded' is now in current use but 'readed' for 'read' is not. See GREEK LANGUAGE; LATIN LANGUAGE.

4. Syntax The study of historical syntax is at present in a state of flux because of profound changes in the way in which theoretical linguists envisage syntax in general; the same applies to comparative syntax. Our ability to reconstruct syntactical patterns for a non-attested language has been doubted and the most obvious successes of the comparative method concern phonology, morphology, and lexical reconstruction rather than syntax. Yet for a number of languages and especially for the classical languages a great deal of factual work has been done and some results are established; we have a view of the syntactical development in the attested phases and a more sketchy impression of what we can reconstruct for the parent language—more perhaps in the field of morpho-syntax (meaning and use of morphological categories) than elsewhere. The case-system of the classical languages represents a gradual reduction of an IE system of (at least) eight cases, found as such in Sanskrit (and in a somewhat different form in Old Hittite). Case merger (syncretism) led to a combination of functions; hence the variety of functions performed by, for example, the Latin ablative or the fact that after prepositions like Gr. *ἐκ*, Lat. *ex* 'from' Greek uses the genitive (which continues an ancient ablative) and Latin the ablative. Syncretism processes continue, of course, after the Classical period, when Greek loses the dative and the languages derived from Latin tend to lose all case distinctions. Similarly in the course of the development of the classical languages we witness a reorganization and simplification of the verbal system which in the late Indo-European phase at least must have been similar to that of Greek and Indo-Iranian (i.e. was based on the three fundamental categories of present, aorist, and perfect, which differed because of their aspect, and on four moods: indicative, subjunctive, optative, and imperative); the contrast of subjunctive and optative was lost in most languages but a future, which did not exist in IE, was independently created. Reconstruction explains some apparent oddities: the Greek rule that after a neuter plural subject the verb is in the singular (*τὰ ζῷα τρέχει* 'the animals run(s)') is inherited, since it occurs in early Indian and Iranian, and is based on the fact that the neuter plural was originally a collective singular. The so-called Wackernagel's law, a rule of IE word order, is still partly respected in the early phases of the IE languages (and is absolutely regular in Hittite): unaccented words (e.g. particles, pronouns) took second place in the sentence, whatever their meaning: cf. *σμίκρα μοι πάϊς ἔμμεν ἐφαίνεο* 'you seemed to me a small child' (Wackernagel (1), 1. 1 ff.). Similarly the so-called tmesis of Greek, where preverbs are separated from verbs, reflects an archaic IE pattern where preverbs had much greater autonomy; even in early Latin we find *sub vos placo* 'I beg you', where the pronoun *vos* 'you' (which occurs in second position according to Wackernagel's law) follows the independent preverb *sub*; the later formula is *vos supplico*.

The role of subordination in IE is not clear, but the elaborate sentence construction of the classical languages, in which hypotaxis (subordination) seems the dominant feature, are in many cases based on a shift of earlier paratactic (co-ordinating) constructions. Earlier juxtapositions such as *timeo—ne veniat* 'I am afraid—may he not come' were shifted in meaning 'I am afraid that he might not come'; the same explanation applies to *φοβοῦμαι μὴ (οὐκ) ἔλθῃ*.

Cf. Wackernagel (1) and (2); Clackson, 157–86.

5. Lexicon and etymology The meaning of words plays an important role both in historical and in comparative linguistics. When we study the history of a language we want to know not only what new words enter the language or what words are lost, but also what words change meaning, how, and why. We do not believe any longer that to establish the etymology of a word means to know its true meaning, but we are still interested in taking back form and meaning of a word to the earliest possible stage since history of the lexicon (which includes the history of lexical meaning) is an essential part of linguistic history. Semantics (the study of meaning) is also essential for comparative linguistics which depends on establishing correct word equivalences between related languages. While phonological rules give a firm grounding to etymology, what limits can we set to semantic divergence? Should we compare Skt. *yūs* 'broth' with Lat. *iūs* 'law'? The answer is negative since the correct comparison is with the homonymous Latin *iūs* 'broth', but decisions are not always easy. We do not any longer accept the old etymologies of the type *lucus a non lucendo* 'a wood is called *lucus* because there is no light (*lux*)' (see ETYMOLOGY), but we acknowledge that it is difficult to formulate general laws of semantic development. Nevertheless comparative studies have cleared up many problems which would have remained insoluble within Latin or Greek. The word *ποινή*, mentioned above, would hardly be analysable in Greek. Comparativists can show that it derives from IE †*k*^{w}*oi-nā*, represented also by Lithuanian *káina* 'price', Slavic *cěna* 'id.', Iranian *kaēnā-* 'punishment'; moreover they can also show that this noun derives from a verbal root †*K*^{w}*ei-* 'to pay' which survives in *τίνω* (cf. also the verb *ἀποτίνω* 'pay back' and the noun *ἄποινα* 'ransom, price' from †*ἀποποινα*). Lat. *poena* is a borrowing from Greek (just as Eng. *penal*, *penalty* are borrowed from Latin or Old French). Most of the old etymologies must be discarded but the research of a century has succeeded in amassing a vast corpus of firmly established etymologies, conveniently listed in etymological dictionaries (Walde–Hoffmann and Beekes for the classical

languages), some of which also study the way in which words change meaning in the historical period (Ernout–Meillet; Chantraine).

A great deal has also been done to reconstruct the IE lexicon; we have lists of IE roots (Pokorny; Rix; Wodtko) and an analysis of the vocabulary of the IE languages divided in semantic fields (Buck); there are also attempts at close semantic reconstruction (Benveniste). Much remains to be done; most of the old reference books do not yet incorporate the results of the recent analyses of the Anatolian languages, but recent work is more informative (Mallory and Adams (1), (2)).

6. Poetics In the middle of the 19th cent. A. Kuhn pointed out that Homeric Greek *κλέος ἄφθιτον* 'fame imperishable' matched exactly in meaning and etymology the Vedic Skt. *śráva(s) ... ákṣitam*. This opened the way to a series of comparative studies about formulae, metre, and, in the last resort, cultural features which the individual IE languages inherited from IE and preserved or developed in their literary and poetic traditions. The field is fraught with difficulties since similarity does not guarantee common origin, but is also rich in results. Comparison here operates in terms of sequences longer than the word and in so doing opens the way to a new methodology for the reconstruction of both syntactical and semantic features (cf. Campanile; Watkins (1), vol. 2; Watkins (2); West).

7. History of the language Languages do not evolve in a vacuum and their development is inextricably linked to the social and political events which affect the life of a community. On the one hand there are contacts with speakers from different linguistic backgrounds, on the other there are individuals who for literary or cultural reasons can impress their mark on the language. Next to the internal history of a language (which is close to its historical grammar) there is an external history which is at least as important. Under the first heading we may mention for e.g. Greek the change of *-τι* to *-σι* in Attic-Ionic or the loss of the dative in late Greek; under the second we shall speak of the expansion of Greek after *Alexander (3) the Great's conquest, of the foreign languages with which it came in contact, of the drastic simplification in its grammar, of the borrowings from Latin, etc., but we shall also discuss the cultural climate which favoured the preservation of some old features (from the case-system to the spelling), the prevailing Atticism, etc. Similar analyses are necessary for all languages. For the classical languages we have Meillet's masterly (and still unsurpassed) presentations of their history as well as a series of more up-to-date books which discuss equally history and prehistory (see GREEK LANGUAGE; LATIN LANGUAGE).

Historical And Comparative Linguistics A. McMahon, *Understanding Language Change* (1994); H. Hock and B. D. Joseph, *Language History, Language Change, and Language Relationship* (1996); L. Campbell, *Historical Linguistics: An Introduction*, 2nd edn. (2004); B. D. Joseph and R. D. Janda (eds.), *The Handbook of Historical Linguistics* (2004).

Introductions to Indo-European and Indo-European Grammars A. Meillet, *Introduction à l'étude comparative des langues indo-européennes*, 8th edn. (1937); O. J. L. Szemerényi, *Introduction to Indo-European Linguistics* (1996); M. Meier-Brügger, *Indogermanische Sprachwissenschaft*, 9th ed. (2010). B. Fortson IV, *Indo-European Language and Culture*, 2nd edn. (2009); J. Clackson, *Indo-European Linguistics. An introduction* (2007); K. Brugmann and B. Delbrück, *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen* (1893–1916); W. Cowgill and M. Mayrhofer, *Indogermanische Grammatik* 1. 1/2 (1986). J. Wackernagel, (1) *Kleine Schriften* 1–2 (1953), 3 (1979); J. Wackernagel, (2) *Lectures on Syntax*, ed. by D. R. Langslow (2009). Cf. Mallory and Adams (1) and (2) below.

Indo-European Dictionaries and Lexicon J. Pokorny, *Indogermanisches etymologisches Wörterbuch* (1951–1969); H. Rix and others (eds.), *Lexicon der indogermanischen Verben*, 2nd edn. (2001); D. Wodtko and others, *Nomina im indogermanischen Lexicon* (2008); C. D. Buck, *A Dictionary of Selected Synonyms in the Principal Indo-European Languages* (1949); J. P. Mallory and D. Q. Adams, (1) *The Oxford Introduction to Indo-European and the Proto-Indo-European World* (2006); H. Frisk, *Griechisches etymologisches Wörterbuch* (1954–1972); P. Chantraine, *Dictionnaire étymologique de la langue grecque: histoire des mots*, 2nd edn. (1999); R. Beekes, *Etymological Dictionary of Greek* (2010); A. Walde and J. B. Hofmann, *Lateinisches etymologisches Wörterbuch* 1–3 (1930–1956); M. de Vaan, *Etymological Dictionary of Latin and the other Italic languages* (2008); A. Ernout and A. Meillet, *Dictionnaire étymologique de la langue latine*, 4th edn. (1959).

Indo-European Poetics and Society J. P. Mallory and D. Q. Adams, (2) *Encyclopedia of Indo-European Culture* (1997); É. Benveniste, *Indo-European Language and Society* (1973, Fr. orig. 1969); C. Watkins, (1) *Selected Writings* 1–2 (1994), 3 (1998); (2) *How to Kill a Dragon; Aspects of Indo-European Poetics* (1995); M. L. West, *Indo-European Poetry and Myth* (2007).

OJLS/AMDa

Linus (*Λῖνος*), an old song sung either at the vintage as in *Il.* 18. 570, where it is performed by a boy accompanied by the lyre and by a cheerfully dancing and shouting group of young people, or a song of lament using the ritual cry *αἴλινον* ('alas for Linus'), which was interpreted as a mournful song in honour of Linus. Linus was also a mythical person for whom various *genealogies exist, e.g. son of *Apollo and Psamathe, a local princess of *Argos (1): after she exposed him, he was devoured by dogs and the city was plagued by Apollo till satisfaction was made (Paus. 1. 43. 7–8). He had strong connections with music: (a) he invented the *threnos* (Heraclid. Pont. in ps.-Plut. *De mus.* 3); (b) he was killed by Apollo in a music contest, because he had boasted that he was as good a singer as the god (Paus. 9. 29. 6 f.); (c) he was the music teacher of *Heracles and was killed by his pupil (Apollod. 2. 63); (d) he was generally considered a great composer and citharode (Plin. *HN* 7. 204). The Linus song was widely sung under different names in the near east (Hdt. 2. 79), cf. LITYERSES.

M. L. West, *The Orphic Poems* (1983), 56–67.

HJR/EKr

Liris, river of central Italy, now called Garigliano below *Interamna Lirenas. Rising near the *Fucinus Lacus it flows south-south-east to Sora, turns sharply south-south-west, cascades picturesquely at Isola del Liri, and enters the Tyrrhenian sea through marshy country at *Minturnae. Chief tributaries: Fibrenus (Cicero's natal stream: *Leg.* 2. 6), Trerus, Melpis, mod. Rapido; G. Ceraudo (ed.), *Ager Aquinas. Aerotopografia archeologica lungo la valle dell'antico Liris* (2004).

ETS/DWRR

literacy The number of people who could read and write in the ancient world is hard to determine. Without statistical evidence, we must rely mostly on chance information and inference: for example, the institution of *ostracism implies that most Athenian citizens could be expected to write a name. Our evidence (written) indicates the literate, not the illiterate, and especially the highly educated élite. The ancient habit of reading aloud meant that written texts could often be shared the more easily by others; the presence of inscriptions (see EPIGRAPHY, GREEK) does not itself imply that they were read by everyone, since their symbolic value added another dimension to their written contents. There are also many different levels of literacy, which complicate the picture, from the basic ability to figure out a short message, to functional literacy or 'craft literacy', to the skill required for reading a literary papyrus (reading and writing skills may also have been separate). However, certain broad generalizations are possible. The 'mass literacy' of modern industrial countries was never achieved in the ancient world (cf. Harris (see bibliog. below), who believes a maximum of 20–30 per cent literacy was achieved, and that in Hellenistic cities). Women, slaves, and the lower social levels would usually be less literate. Archaic Greece and particularly Archaic Rome have left fewer instances of writing (graffiti, inscriptions), implying sparse literacy, and Archaic Greek cities sometimes attempt to ensure an official's power over the written word was not abused. However, there were pockets and periods where a higher rate of basic literacy among the adult citizen-

*Tabularium (public archive) and dedicated the buildings in 69 with lavish games. (Cf. *ILLRP* 367–8.) During the 70s he defended the Sullan settlement, but finally acknowledged the corruption of senatorial juries and accepted its modification (70). He opposed the laws of A. *Gabinius (2) (67) and C. *Manilius (66)—Pompey had offended him in 77—and in 65, as censor, the attempts of his colleague M. *Licinius Crassus (1) to enfranchise the Transpadanes (see TRANSPADANA) and annex Egypt. In 63 he was ignominiously defeated by Caesar in an election for the chief pontificate (see PONTIFEX). He tried to throw suspicion on Caesar as involved in the conspiracy of *Catiline but failed, and his *auctoritas* now declined: in 61 he was asked to speak in the senate after two men much junior to him. He died soon after. He was a mediocre orator (Cic. *Brut.* 222) and never equalled his father's cultural interests. EB

Lutetia (Lutecia) (mod. Paris), *civitas*-capital of the Parisii. The original settlement, on a marshy island in the Seine, was destroyed in 52 BC. Under the empire a new town, built in the Roman fashion, developed on the island and the south bank, where remains of important public buildings still exist. After the invasions of the 3rd cent. AD, settlement was again confined to the island, defended by a wall of reused stones. Now called Parisii, it was a favourite residence of *Julian (proclaimed Augustus here in 360), but its real greatness did not begin until Clovis made it his capital.

P.-M. Duval, *Paris antique* (1961); *TIR M 31* (1975); D. Busson, *Paris, a Roman city* (2003). JPDr

Luwian or **Luvian** is a branch of the Anatolian family of Indo-European languages. The Hittite archives include clay tablets with rituals written in the so called cuneiform Luwian; the texts date from the 16th to the 13th cents. BC. It is also clear that the Hittite language was strongly influenced by Luwian. A different script, the so called Hieroglyphic Luwian, which is in fact a syllabic script rich in logograms, was devised in the second millennium BC for a closely related language or dialect. We have a few difficult inscriptions in the 14th and 13th cents., but most of the texts (rock inscriptions, stelae, lead letters, etc.) belong to the 10th-7th cents. BC and were written by the small states which survived the fall of the Hittite Empire in Central and South Anatolia. Cuneiform and Hieroglyphic Luwian are very close but not identical. It is often assumed that *Lycian belongs to the same group but this is not certain. It is also likely that at some stage Luwian was spoken on the south and west coast of Anatolia. See ANATOLIAN LANGUAGES.

H. C. Melchert (ed.), *The Luwians* (2003); H. C. Melchert, in R. Woodard (ed.), *The Cambridge Encyclopedia of the World's Ancient Languages* (2004), 576–84. AMDa

Luxorius or **Luxurius**, of Carthage (5th–6th cent. AD), author of some 90 short poems, in various metres and on various subjects, which afford an insight into the Vandal society of North Africa in which they were written. His identification with an obscure grammarian, Lisorius, is a matter of doubt. In inspiration his poems owe most to the epigrams of *Martial. He apparently held the titles of rank *vir clarissimus* and *spectabilis*.

Texts *Anth. Lat.*; M. Rosenblum (1961), with trans. and comm.; H. Happ (1986), with comm.

Literature D. R. Shackleton Bailey, *Towards a Text of the Anthologia Latina* (1979), 42–56; *PLRE* 2. 695. JHDS

luxury, laws against See under SUMPTUARY LEGISLATION.

lycanthropy (or werewolves) Those who ate human flesh at the human sacrifice offered on Mt. Lycaeon in *Arcadia were believed to be changed into wolves (see Plato, *Resp.* 8. 565d; ps.-Pl. *Minos* 315c; Theophrastus in Porph. *Abst.* 2. 27. 2). Here *Lycaon (3) would have been the first to be thus changed, as punishment for his sacrilegious human sacrifice. Various stories speak of athletes who lived as wolves for nine years but regained their human form after abstaining from human flesh during this period and subsequently were victorious in contests: thus Demaenetus (Plin. *HN* 8. 82) and Damarchus of Parrhasia (Paus. 6. 8. 2). A comparable episode is given by *Pliny (1) (*HN* 8. 81) and *Augustine (*De civ. D.* 18. 17). But the best-known literary werewolf is probably that of *Petronius Arbiter, *Satyricon* 61–2. Modern scholars suggest that the phenomenon might indicate the existence of a group of 'wolfmen' devoted to the worship of a wolf-god, a rite of passage like the Spartan **kryptcia*, or a transgressive act evoking a regression to an animal state.

Burkert, *HN* 84–90; M. Jost, *Sanctuaires et cultes d'Arcadie* (1985), 258–67; R. Buxton, in J. Bremmer (ed.), *Interpretations of Greek Mythology* (1987), 60–79; D. D. Hughes, *Human Sacrifice in Ancient Greece* (1991); P. Bonnechere, *Le sacrifice humain en Grèce* (*Kernos* suppl. 3, 1994), 85–96; M. Jost, *Kernos* 18 (2005), 347–70. MJ

Lycaon, mythological characters whose name seems to include the Greek word for wolf, λύκος. (1) Son of *Priam and Laothoe, killed by *Achilles (*Il.* 21. 34–135). (2) Father of *Pandarus (*Il.* 2. 826–7). (3) Son of *Pelasgus and king of *Arcadia. According to *Apollodorus (6) (3. 96–9) he had 50 sons; *Pausanias (3) (8. 3. 1–5) gives the names of 28 of them, all of whom except Nyctimus and Oenotrus founded settlements in Arcadia. Some of his actions depict Lycaon as a *culture-bringer and pious ruler: he founded *Lycosura, and gave *Zeus his epithet Lycaeus, instituting the festival Lycaia in his honour (Paus. 8. 2. 1–7). But his sacrifice to Zeus Lycaeus of a newborn child shows him in a different light. For Pausanias (ibid.) the act appears to be a simple, though horrific, sacrifice, in punishment for which Lycaon was changed into a wolf (see LYCANTHROPY); other sources compound Lycaon's impiety by having him entertain Zeus to a feast and offer the god human flesh to test his divinity (cf. already Hesiod, fr. 164 M–W). Sometimes the responsibility for the feast is attributed to Lycaon's sons (Apollod. 3. 8. 1). Zeus punished the transgressors with a thunderbolt, or sent a flood, or changed Lycaon into a wolf.

G. Piccaluga, *Lykaon, un tema mitico* (1968); J. Roy, *BSA* 1968, 287–92; P. Wathelet, in R. Julien and M. Limet (eds.), *Les Rites d'initiation* (1986), 285–97; P. M. C. Irving, *Metatmorphosis in Greek Myths* (1990), 90–5, 216–8; M. Jost, *Kernos* 18 (2005), 347–70. MJ

Lycaonia was the name given to the country round Laranda, the region's metropolis during the Roman empire, covering the northern foothills of the Anatolian *Taurus and the southern part of the central Anatolian plateau. The Lycaonians were first mentioned by *Xenophon (1). The area stretched north as far as Iconium, which was generally reckoned to be the last city of *Phrygia, east to *Cappadocia, and adjoined the genuine highland region of *Isauria on the south-west. Since it lay astride the overland route from western Anatolia to the Cilician Gates and Syria, the successive rulers of Asia Minor—*Persian, *Macedonian, *Seleucid, and Attalid (see PERGAMUM)—attempted to control the region and it was part of the Roman province of Asia by 100 BC, before being assigned to the new province of *Cilicia around 80 BC. After the dissolution of Cilicia the area of Derbe and Laranda was controlled by the dynast Antipater (of Macedonian stock, *c.* 50–36), while Iconium and the region adjoining Cilicia was assigned by Antony (M. *Antonius (2)) first to *Polemon (1) I from 39 to 36 and then to the Galatian *Amyntas (2). All of Lycaonia was included in the province of *Galatia after Amyntas' death in 25 BC, although the mountainous eastern approaches were ruled by client kings (*Archelaus (5) of Cappadocia, his son Archelaus II, *Antiochus (9) IV of Commagene) until the time of *Vespasian. Under *Antoninus Pius it was part of the Triple Province with Isauria and Cilicia, and the southern cities around Karadağ (excluding Iconium and other communities further north) formed a *koinon* (confederacy) and issued bronze coinage, mostly for the first and only time. In the mid-1st cent. AD St *Paul was addressed by the people of Lystra in the Lycaonian language

*Aegae (mod. Vergina), situated above the cemetery, and thereafter gained control of the coastal plain as far as the Axius. The Persian occupation of Macedonia 512–479 BC was beneficial. *Xerxes gave to *Alexander (1) I the rule over western Upper Macedonia, which was peopled by Epirotic tribes with their own dialect of Greek; and after Xerxes' flight Alexander gained territory west of the Strymon. His claim to be a Temenid, descended from *Heracles and related to the royal house of *Argos (1) in the Peloponnese, was recognized at *Olympia; he issued a fine royal coinage and profited from the export of ship-timber.

The potentiality of the Macedonian kingdom was realized by *Philip (1) II. By defeating the northern barbarians and incorporating the Greek-speaking Upper Macedonians he created a superb army (see ARMIES, GREEK), which was supported economically by other peoples who were brought by conquest into the enlarged kingdom: Illyrii, Paeonians, and Thracians—with their own non-Greek languages—and Chalcidians (see CHALCIDICE) and Bottiaeans, both predominantly Greek-speaking. 'He created a united kingdom from many tribes and nations' (Just. *Epit.* 8. 6. 2) by a policy of tolerance and assimilation. His son *Alexander (3) the Great, inheriting the strongest state in eastern Europe, carried his conquests to the borders of Afghanistan and Pakistan. Later the conquered territories split up into kingdoms ruled mainly by Macedonian royal families, which fought against one another and contended for the original Macedonian kingdom (see ANTIGONUS (1–3); DEMETRIUS (4) and (6); PTOLEMY (1); SELEUCIDS). In 167 BC Rome defeated Macedonia and split it into four republics; and in 146 BC it was constituted a Roman province. Thereafter its history merged with that of the Roman empire.

From Philip II onwards the Macedonian court was a leading centre of Greek culture, and the policies of Alexander and his Successors (*Diadochi) spread the Greek-based 'Hellenistic' culture in the east, which continued to flourish for centuries after the collapse of Macedonian power. See COLONIZATION, HELLENISTIC; HELLENISM AND HELLENIZATION.

W. A. Heurtley, *Prehistoric Macedonia* (1939); M. Sakellariou (ed.), *Macedonia: 4,000 Years of Greek History and Civilization* (1983); N. G. L. Hammond, *A History of Macedonia* 1–3 (vol. 2 with G. T. Griffith, vol. 3 with F. W. Walbank) (1972–88), *The Macedonian State* (1989), and *The Miracle that Was Macedonia* (1991); E. N. Borza, *In the Shadow of Olympus* (1990). R. Errington, *History of Macedonia* (1986; Eng. trans. 1990); R. Billows, *Kings and Colonists: Aspects of Macedonian Imperialism* (1995); *IACP* pp. 794–809. NGLH

Macedonia, cults Nowadays historians generally agree that the Macedonians form part of the Greek *ethnos* (see ETHNICITY; MACEDONIAN LANGUAGE); hence they also shared in the common religious and cultural features of the Hellenic world. Consequently most of the gods worshipped in Greece can also be found in Macedonia. However, regional characteristics have to be noted. Especially in the areas bordering on *Thrace and among the Paeonians in the north—though these had early contacts with the Macedonians in the centre—local deviants in cult and religion have been attested.

The cult of *Zeus was one of the most important cults in Macedonia. Its places of worship on *Olympus (1), at the foot of the mountain at Dion, and at *Aegae (Vergina) were extremely popular. As father of Makedon he was the Macedonians' eponymous ancestor. The cult of *Artemis was widely practised. Although most of the evidence dates to Roman times one may assume the existence of older religious practices. In the areas in contact with Thrace it was influenced by the Thracian cult of Artemis and the worship of *Bendis, probably themselves types of a deity of fertility and vegetation. Herodotus (4. 33) says that women in Thrace and Paeonia always brought wheat-straw in their offerings to Artemis Basileia. In central Macedonia Enodia is attested, on horseback and holding a torch. She has frequently been associated with Artemis. By comparison the cult of *Apollo is not as widespread. Here too local deviants can be found. In Thessalonica, where *Pythian Games were held in honour of Apollo Pythius, the cult of Apollo is even connected with the *Cabiri.

The cult of *Dionysus, whom the Paeonians called Dyalus, was especially popular. However, the sites are unevenly distributed. On the basis of the borders of the later Macedonian provinces there are fewer monuments for Dionysus in the south-west, while one of the cult centres was in the area of the Pangaeus—a region admittedly also settled in by the Thracians.

Zeus, Apollo, *Heracles, Dionysus, *Athena, and other such gods appear on coins of the 5th and 4th cents. BC. This evidence, however, ought not to be overestimated since these gods were depicted chiefly in order to demonstrate the close links with the Greek world. Especially important was Heracles not only as the ancestor of the Macedonian royal family, but also fulfilling manifold other functions, e.g. as the patron of *hunting. Other cults of not inconsiderable importance were those of *Helios, among the Paeonians worshipped as a disc, *Selene, the *Dioscuri, healing deities—represented by *Asclepius and *Hygieia—*river-gods, *nymphs, the Pierian *Muses, and a strange *snake. Alongside the cult of Dionysus and the Samothracian *mysteries (see SAMOTHRACE), *Orphism too was not unknown (Derveni papyrus *c.*330 BC, see ORPHIC LITERATURE).

The so-called Thracian Rider (see RIDER-GODS) is attested on votive tablets in north and east Macedonia. However, in contrast to Thrace the *Heros Equitans* is frequently depicted on Macedonian tombstones. The numerous deifications of the dead as e.g. *Aphrodite, Artemis, Athena, Dionysus, *Eros, *Hermes, and Heracles belong in this context. These monuments, as well as most of the rider-statues and the votive reliefs depicting various deities, generally date to the second half of the 2nd and the first half of the 3rd cent. AD.

W. Baege, *De Macedonum sacris* (1913); C. Edson, *Harv. Theol. Rev.* 1948, 181 ff.; S. Duell, *Die Götterkulte Nordmakedoniens in römischer Zeit* (1977), and *Ancient Macedonia* 3 (1983), 77–87; D. K. Samsaris, *Ereunes sten historia, ten topographia kai tes latreies ton romaikon eparchion Makedonias kai Thrakes* (1984); M. Hatzopoulos, *Cultes et rites de passage en Macédoine* (1994). MO/NMD

Macedonian language The problem of the nature and origin of the Macedonian language is still disputed by modern scholars, but does not seem to have been raised among the ancients. We have a rare adverb *μακεδονιστί* (important passages in *Plutarch, *Alex.* 51 and *Eum.* 14), but the meaning of this form is ambiguous. The adverb cannot tell us whether Plutarch had in mind a language different from Greek (cf. *φοινικιστί*, 'in Phoenician'), or a dialect (cf. *μεγαριστί*, 'in Megarian'), or a way of speaking (cf. *ἀττικιστί*). We have some 'Macedonian' glosses, particularly in *Hesychius' lexicon, but they are mostly disputed and some were corrupted in the transmission. Thus *ἀβροῦτες*, 'eyebrows' probably must be read as *ἀβροῦρες* (with *τ* which renders a digamma). If so, it is a Greek dialect form; yet others (e.g. A. Meillet) see the dental as authentic and think that the word belongs to an *Indo-European language different from Greek.

After more than a century we recognize among linguists two schools of thought. Those who reject the Greek affiliation of Macedonian prefer to treat it as an Indo-European language of the Balkans, located geographically and linguistically between *Illyrian in the west and Thracian in the east. Some, like G. Bonfante (1987), look towards Illyrian; others, like I. I. Russu (1938), towards 'Thraco-Phrygian' (at the cost, sometimes, of unwarranted segmentations such as that of *Ἀλέξανδρος* into †*ἀλε-* and †*ξανδ-*). Those who favour a purely Greek nature of Macedonian as a northern Greek dialect are numerous and include early scholars like A. Fick (1874) and O. Hoffmann (1906). The Greek

scholars, like G. Hatzidakis (1897, etc.) and above all J. Kalléris (1954 and 1976), have turned this assumption into a real dogma, with at times nationalistic overtones. This should not prevent us, however, from inclining towards this view.

For a long while Macedonian onomastics, which we know relatively well thanks to history, literary authors, and epigraphy, has played a considerable role in the discussion. See NAMES, PERSONAL, GREEK. In our view the Greek character of most names is obvious and it is difficult to think of a Hellenization (see HELLENISM) due to wholesale borrowing. *Πτολεμαῖος* is attested as early as *Homer, *Ἀλέξανδρος* occurs next to the Mycenaean feminine *a-re-ka-sa-da-ra* (*Alexandrā*), *Ἀδαγος*, then *Λᾶγος*, matches the Cyprian *Lawagos*, etc. The small minority of names which do not look Greek, like *Ἀρριδαῖος* or *Σαβαττάρας*, may be due to substratum or adstratum influence (as elsewhere in Greece). Macedonian may then be seen as a Greek dialect, characterized by its marginal position and by local pronunciations. The main problem is posed by names like *Βερενίκα* for *Φερενίκα* with a first element which is clearly Indo-European but which shows an apparent [b] treatment of Indo-European †*bh* in contrast with Greek [ph] (†*bher-* 'to carry' becomes Greek [pher-]). If the phenomenon is prehistoric, we may think in terms of a non-Greek Indo-European language which influenced Macedonian (Brixhe and Panayotou; Brixhe refers to the so-called Briges/Brukes), but it is also possible to argue, with Hatzopoulos, that we witness a later change from [ph] to [f] to [v] or [β] written *β*, since late forms like *βεφαίως* for *βεβαίως* or *Βίλιστα* for *Φίλιστα*, which are clearly Greek, point to an exchange between [v] written *φ* and [f] written *θ* in the local dialect (and in some parts of Thessaly). The discovery at *Pella of a curse tablet (4th cent. BC) which may well be the first 'Macedonian' text attested reveals a number of features which link Macedonian to North-West Greek (Locrian, Aetolian, Phocian, Epirote), including the adverb *ὀπτόκα* which cannot be Thessalian (*SEG* 43.434). Nevertheless there may be Thessalian features in our texts, such as the patronymic adjectives in *-ειος/ -εια*. We must wait for new discoveries, but we may tentatively conclude that Macedonian is a dialect related to North-West Greek with some Thessalian features. See GREEK LANGUAGE; DIALECTS, GREEK (PREHISTORY).

A. Fick, 'Zum makedonischen dialecte' *Zeitschrift für vergleichende Sprachforschung* 1874, 193–235; O. Hoffmann, *Die Makedonen* (1906; repr. 1974); I. I. Russu, *Macedonica = Ephemeris Dacoromana* 1938, 105–232; J. Kalléris, *Les anciens Macédoniens* 1 (1954), 2/1 (1976) [no more published; repr. 1988]; G. Bonfante, *Rend. Linc.* 1987, 83–5; C. Brixhe and A. Panayotou, in F. Bader (ed.), *Les langues indo-européennes* (1994), 205–20; C. Brixhe, in A. C. Cassio (ed.), *KATÀ DIÁLEKTON. Atti del III. Colloquio int. di Dialettologia Greca* (1999), 35–71; M. Hatzopoulos, in S. Hornblower and E. Matthews (eds.), *Greek Personal Names. Their Value as Evidence* (2000), 99–117; M. Hatzopoulos, in I. Hajnal (ed.), *Die Altgriechischen Dialekte. Wesen und Werden. Akten des Kolloquiums Freie Universität Berlin 19–22. September 2001* (2007), 157–76.

OMa/AMDa

macellum See MARKETS AND FAIRS, *Rome*.

Machaon and **Podalirius,** sons of *Asclepius and physicians already in *Homer, but sons of *Poseidon in the *Iliu Persis* (see EPIC CYCLE). In *Il.* 2. 731–3, they lead the contingent from Tricca in *Thessaly (focus of the later cult of Asclepius), *Ithome, and Oechalia. Their names have an epic ring, *Μαχάων* being 'Warrior', *Ποδα-λείριος* apparently 'Lily-foot'. Machaon tends *Menelaus (*Il.* 4. 200–19), but is also active as a fighter and is wounded by *Paris (*Il.* 11. 505–20); Podalirius is too busy in the battle to tend *Eurypylus (*Il.* 11. 836). Their further feats at Troy consist mostly of healing or fighting: they heal *Philoctetes (Soph. *Phil.* 1333 f.; other sources name only one of them), Machaon is killed by Eurypylus (*Little Iliad* fr. 30 Bernabé), Podalirius survives the war and settles in one of several places, especially in *Caria or southern *Italy. They had a cult, both separately (Machaon at Gerenia in *Messenia, Paus. 3. 26. 9; Podalirius an *oracle in Daunia (see DAUNIANS), on Monte Gargano, Lycoph. *Alex.* 1047) and together, generally with their father.

Farnell, *Hero-Cults*; E. J. and L. Edelstein, *Asclepius: A Collection and Interpretation of the Testimonies* (1945).

HJR/FG

Machon, New Comedy poet and raconteur, born at *Corinth or *Sicyon but resident in *Alexandria (1), where he staged his comedies about the middle of the 3rd cent. BC. From his epitaph by *Dioscorides (1) (Ath. 6. 241 f., *Anth. Pal.* 7. 708 = 24 Gow–Page, *HE*)—'O city of Cecrops, sometimes on the banks of the Nile too the pungent thyme has grown in the garden of the Muses'—it has been inferred ('city of *Cecrops' is Athens) that Machon revived the keen invective of Old Comedy in Alexandria (cf. fr. 21 Gow), but the two surviving comic fragments belong rather to the style of Middle or New Comedy, which was not devoid of pungency. See COMEDY (GREEK), OLD; MIDDLE; NEW.

Machon also composed in iambic trimeters a book of anecdotes (*χρεῖαι*: see CHREIA) about the remarks and behaviour of notorious Athenian courtesans, *parasites, etc. (462 lines, mainly scurrilous, preserved in Ath. 13).

All the fragments have been edited with introduction and commentary by A. S. F. Gow (1965); comic fragments in *PCG* 5. 623–5. See also Meineke, *FCG* 1. 478 ff.; A. Körte, *RE* 14/1 (1928), 158 f.; I. Gallo, *Teatro ellenistico minore* (1981), 141 ff; M. C. Capone, *Kleos* 2 (1997), 407–38; F. Cairns, *ZPE* 130 (2000), 9–11; J. Hordern, *ZPE* 133 (2000), 42; R. Tosi, *Studi ... in memoria di Aristide Colonna* (2004), 799–806; and on the *Chreiai*; L. Kurke, *PCPS* 48 (2002), 20–65.

WGA

Macrianus See FULVIUS IUNIUS MACRIANUS, T.

Macrinus See OPELLIUS MACRINUS, M.

Macro See SUTORIUS MACRO, Q. NAEVIUS CORDUS.

Macrobius (*RE* 7), **Ambrosius Theodosius**, wrote (1) *De verborum Graeci et Latini differentiis vel societatibus*, (2) *Commentarii in Somnium Scipionis*, (3) *Saturnalia*; in MSS of (2) and (3) styled *vir clarissimus et illustris* (the highest grade of senator); in the dedications of (1) and of *Avianus' fables simply 'Theodosius' (the correct short form) and hence identical with Theodosius, praetorian prefect of Italy in AD 430 (Cameron, see bibliog. below), rather than with Macrobius, proconsul of Africa in 410 (Flamant); father of Fl. Macrobius Plotinus Eustathius, city prefect *c.*461, dedicatee of (2) and (3); grandfather of Macrobius Plotinus Eudoxius, who corrected a text of (2).

(1) *De differentiis*. This treatise, addressed to a Symmachus (? the orator *Symmachus (2)'s grandson, consul 446), comparing the Greek verb with the Latin, survives in extracts made at Bobbio and more extensively by Eriugena; it uses *Apollonius (13) Dyscolus and may have been used by *Priscian. Another Bobbio fragment (*De verbo*), addressed to a scholar called Severus, comparing the Latin verb with the Greek, is not Macrobius' work, though possibly based on it.

(2) *Commentarii*. Having discussed how Cicero's *Republic* differs from *Plato (1)'s, and what *dreams are, Macrobius expounds the *Somnium* philosophically, discoursing on number-mysticism, oracles, moral virtue, astronomy, music, geography, and the *soul (vindicating Plato against *Aristotle); he praises P. *Cornelius Scipio Aemilianus for uniting all the virtues, and the *Somnium* for uniting all the branches of philosophy. The main source is *Porphyry, in particular his commentary on *Timaeus*; but direct knowledge of *Plotinus has been established. Despite frequent inconsistencies and misapprehensions, the work was a principal transmitter of ancient science and Neoplatonic thought to the western Middle Ages. See NEOPLATONISM.

(3) *Saturnalia*. This work is cast in the form of dialogues on the evening before the Saturnalia (16 December, see SATURNUS, SATURNALIA) of AD 383 (?) and during the holiday proper. The guests

(1) *invocation*. The god is addressed with his (cult) name(s), patronymic, habitual residence, functions, and qualities. This part serves both to identify and to glorify the god. (2) The *argument* (in older literature called *pars epica*), consisting of considerations that might persuade a god to help, e.g. a reminder of the praying person's acts of piety, or a reference to the god's earlier benefactions or his natural inclination to help people. This part often expanded into a eulogy with narrative aspects, especially in *hymns. (3) The *prayer* proper, the petition. For the great majority of both private and public prayers contain a wish. There is a large variation in 'egoistic' motifs ('Gebetsegoismus'). Drought, epidemics, or hail, for instance, can be prayed away (*ἀποπομπή*), but also passed on to enemies or neighbours (*ἐπιπομπή*). This comes very close to the *curse, which, too, may contain elements of prayer: the term *ἀρά* (*ara*) denoted both prayer and curse. Although feelings of gratitude were not lacking, the prayer of gratitude was extremely rare. It did exist but instead of terms for gratitude (*χάρις, gratia*) expressions of honour (*τιμή, ἔπαινός, laus*) were generally employed, glorification being the most common expression of gratitude, as in human communication. Private prayer often lacked these formal aspects, but in public cultic prayer too very simple invocations occurred, as e.g. in the famous Eleusinian prayer (see ELEUSIS): *ὖε κύε* ('rain, conceive' Hippol. *Haer.* 5. 7. 34. 87 Wendland). There were also linguistically meaningless sounds which accompanied certain dances and processions and which could be interpreted as invocations of the god, such as *ololuge, thriambe, euhoi, paian*. They could even develop into the name of a god: the cry *iakche* became the divine name *Iacchus. Most of our evidence for Roman prayer is late, preserved in Augustan (particularly Livy) and later writers.

Although Greek influence is noticeable, especially with respect to the formal aspects, Roman, and generally Italic, prayers (*preces*) distinguished themselves by their elaborate accuracy. In order to summon the correct deity knowledge of divine names and use of precise language were crucial. Hence prayer books with traditional prayers were available for public ceremonies. If the precise identity of a god could not be ascertained, precautionary formulas such as *quocumque nomine* (by whatever name) or *sive deus sive dea* (whether god or goddess) had to bring help. The latter formula is so stereotyped that the expression *sive deus, sive dea* on a series of cippi (Degrassi, *ILLRP* I 291–3) and in the Acta Fratrum Arvalium (J. Scheid, *Commentarii Fratrum Arvalium qui supersunt*. Roma Antica 4 (1998) index s.v. *sive*) even seems to amalgamate into a new name of one deity, which should be written with a capital: *Sivedeussivedea*. Doubt deified. Prayers for individual use were often equally formulaic (cf. Cato, *Agr.* 132. 2), but both officially and privately less elaborate prayers occurred as well, e.g. *Mars vigila* ('Mars, wake up', Serv. at *Aen.* 8. 3).

Ancient prayer used to be spoken aloud. Silent or whispered prayer was reserved for offensive, indecent, erotic, or magical uses, but was later adopted as the normal rule in Christian practice. Kneeling down, though not unknown, was unusual, the gesture of entreaty being outstretched arms, with the hands directed to the god invoked (or his cult-statue).

G. Appel, *De Romanorum Precationibus* (1909); A. Corlu, *Recherches sur les mots relatifs à l'idée de prière d'Homère aux tragiques* (1966); E. von Severus, *RAC* 8 (1972), 1135–52; O. Michel, *RAC* 9 (1976), 11–13; H. S. Versnel, in *Faith, Hope and Worship* (1981), 1–64; D. Aubriot-Sévin, *Prière et conceptions religieuses en Grèce ancienne jusqu'à la fin du V^e siècle av. J.-C.* (1992); F. V. Hickson, *Roman Prayer Language: Livy and the Aeneid of Vergil* (1993); S. Pulleyn, *Prayer in Greek Religion* (1997); F. Graf, New *Pauly* 4 (1998), 830–7; C. Guittard, *Revue des Études Latines* 76 (1998), 71–92; C. A. Faraone and C. Newlands, in S. I. Johnston (ed.), *Religions of the Ancient World: A Guide* (2004), 363–8; *ThesCRA*. 3 (2005), 106–79. HSV

pre-alphabetic scripts (Greece) Writing in the Aegean area appears to be a native growth, although no doubt inspired by earlier scripts used in Anatolia and Egypt. Apart from an isolated case, it seems that all pre-alphabetic Aegean scripts are related, probably originate from Crete, and are syllabic. Except for Linear B and Classical Cypriot they are undeciphered and the names are purely conventional.

The so-called *hieroglyphic* script was used in Crete mostly on seals and sealings but also on vases, clay tablets, and stone dating from the 18th and 17th cents. BC. Isolated seals were found in *Cythera and *Samothracia. There are some 350 (very short) documents; the script has between 90 and 100 different syllabic signs and a number of ideographic signs. The Arkhanes seals which date from 2100–1900 BC may belong here or with Linear A.

The *Linear A* script is related but we do not know whether it derives from Hieroglyphic Cretan or a common source; it was widely used in Crete from the 19th to the 14th cents. BC and has been found in Minoan settlements in the islands of *Thera, *Melos, *Ceos, Cythera, Samothrace and most recently at *Miletus on the coast of Asia Minor (other find-places are controversial). The inscriptions in Linear A are of three kinds: (1) clay tablets, which from their use of numerals and ideographic signs can be identified as accounts and are archive documents; (2) short inscriptions on movable objects, many of which appear to be dedicatory in character; (3) a small number of ill-preserved graffiti. The script is plainly of the same type as Linear B, but so far it has proved impossible to identify the language (or languages); it has syllabic signs, ideograms, and signs for numerals and fractions.

Linear B is a later form of the script which was employed to write the Greek language (see MYCENAEAN LANGUAGE). It was used to keep records of personnel and produce on tablets of unbaked clay at the main centres with palatial buildings: *Mycenae, *Tiryns, *Thebes (1), and *Pylos on the mainland, *Cnossus and Khaniá (ancient Cydonia) in *Crete (see MYCENAEAN CIVILIZATION). Most of the documents date to the 13th cent. BC, though some of the Cnossus tablets may go back to the 14th cent. Storage jars with Linear B inscriptions have been found at a number of sites both in Crete and the mainland; analysis of the clay, as well as some of the inscriptions, suggests that they were made in western Crete.

The script, which runs uniformly from left to right, is composed of signs of three types. (1) Commodities, including people and animals, are noted by special signs called ideograms or logograms, in origin pictorial, but often developing into unrecognizable patterns. These stand before numbers to show what is being counted. There are signs of this class to denote the smaller fractions of major units of volume and weight. (2) The numeral signs are decimal-based, signs for 1, 10, 100, 1,000, and 10,000 being repeated up to nine times. (3) The syllabic signs (fewer than 90), usually noting a consonant followed by a vowel, are used to spell out names and vocabulary words. There are signs for the five vowels, but length is not indicated. There are also a small number of signs with the value: consonant+semivowel+vowel (e.g. *nwa, dwo, rja*, perhaps to be read as *rra*). As in all syllabic scripts there are conventions meant to keep the number of signs to a reasonable level. One series of signs has to do duty for plain, aspirated, and voiced stops (e.g. *ka* can be read as *κα, χα*, or *γα*), though in the dental series special signs are used for the voiced sounds. The two liquids are not distinguished (*ra* can be read as *ρα* or *λα*). Clusters of consonants can be spelled out by adding extra vowels or, in certain cases, omitting the first; final consonants are not written. Thus *a-re-ku-tu-ru-wo* is the man's name *Ἀλεκτρύω(ν)*, *ko-no-so* = *Κνωσό(ς)*, *pe-ma* = *(σ)πέ(ρ)μα*, *ko-wa* = *κό(ρ)ϝα* (Att. *κόρη*). Words are divided, but monosyllables are treated as part of the following or preceding word (e.g. *da-mo-de-mi* = *δᾶμό(ς) δέ μι(ν)*). The system would rarely cause a speaker of the Mycenaean language any trouble, but offers major difficulties for the modern investigator. There is an internationally agreed system of transcription; the commodity signs are represented by the mean-

ing, where known, expressed with a Latin word or its abbreviation (e.g. VIR, MUL(ier), EQU(us), HORD(eum), FIC(us)).

Cypro-Minoan is the name given to a related script from bronze age *Cyprus. We distinguish various forms ranging from the 16th to the 12th centuries BC and possibly later (see below); a variant is also known from *Ugarit on the coast of *Syria, but we do not know whether the various forms correspond to different languages. The *Classical Cypriot* script, which was in use for writing the local dialect of Greek from the 8th to the 3rd cents. BC, is clearly derived from Cypro-Minoan. An isolated example giving a single Greek name is dated to the 11th cent. BC or somewhat later, but it is likely that the script is Cypro-Minoan, even if the name is Greek. Some of the simpler signs are identical, or almost so, with Linear B signs with the same value. Ideograms are not used, but the syllabic signs are of the same basic type: vowel or consonant+vowel. Final consonants are always written by using the sign for the consonant+e (e.g. *pa-si-le-u-se* = *βασιλεύς*). The liquids are distinguished by separate signs. The script was also used for a native language (or languages), conventionally called Eteo-Cyprian, but we have only a very few inscriptions which we do not understand.

The *Phaestus Disk* is an isolated document found in a Middle Minoan context at Phaestus in Crete. It is almost certainly written in a syllabic script from right to left, but its place of origin is uncertain, and its relationship to the Minoan scripts doubtful. Any attempt at decipherment of such a small sample is bound to fail. See GREEK LANGUAGE, and the next entry.

J. Chadwick, *Linear B and Related Scripts* (1989); J.-P. Olivier, in R. Treuil, *Les Civilisations Égéennes* (1989); J.-P. Olivier and L. Godart, *Corpus hieroglyphicarum inscriptionum Cretae* (1996); L. Godart and J.-P. Olivier, *Recueil des inscriptions en Linéaire A*, 5 vols. (1976–85); J.-P.Olivier, *Édition holistique des texts chypro-minoens* (2007); Y. Duhoux and A. Morpurgo-Davies *A Companion to Linear B*. 2 vols. (2008, 2011). JC/AMDa

Precatio terrae, Precatio omnium herbarum, two short anonymous prayers of uncertain date to Mother Earth and to all herbs; the second may show Christian influence. Attempts to read these texts as iambic senarii have resulted in much misguided conjecture.

Texts *Anth. Lat.* 4–5 Shackleton Bailey; with trans., Duff, *Minor Lat. Poets* JHDS

pre-Greek languages The Greek language is known to have been well established in mainland Greece and *Crete by the 13th cent. BC. But the presence of an earlier language in this area can be inferred from the classical place names, the majority of which are without meaning in Greek. In a few cases the resemblance to a Greek word may be fortuitous or the result of deliberate adaptation (e.g. *Σπάρτη, Ῥόδος, Ναυπλία*); most inhabited sites with Greek names are foundations of historical date (e.g. *Ναύπακτος, Μεγαλόπολις*). The elements used in the pre-Greek names can only be reliably identified if of sufficient length. The best examples are: (1) *-ινθος, -υνθος* as in *Κόρινθος, Ζάκυνθος*); since this suffix is absent from Asia Minor, but *-ανδα* is common there, it has been suggested that these have a common origin, but this cannot be proved. (2) *-σσος* (Attic and Boeotian *-ττος*) as *Παρνασσός, Ἁλικαρνασσός* (*Λυκαβηττός, Γαργηττός*); this should be distinguished from *-σος* (which is also Attic) as in *Κηφισός, Πάμισος*, often river names, but in Crete settlements such as *Κνωσός, Ἀμνισός, Τυλισός*. (3) *-ᾱνᾱ, -ᾶναι* (*-ηνη, -ηναι*) as in *Παλλήνη, Μεσσήνη, Ἀθῆναι, Μυκῆναι*; these may be connected with the ethnic names in *-ᾶνες, -ηνες*, as in *Ἀκαρνᾶνες* and surprisingly *Ἕλληνες*. This conclusion is supported by the presence of a large number of words in the Greek vocabulary without known etymology, which may well be loan-words from an earlier language of the region. Many of them are the names of plants and animals native to the Mediterranean area, but they include artefacts. Some of these show the same suffixes as the place names. (1) appears in e.g. *τερέβινθος*/*τέρμινθος* 'turpentine-tree', *ἐρέβινθος* 'chick-pea', *ἄψινθος* 'wormwood', *ἀσάμινθος* 'bath' (Mycenaean *a-sa-mi-to*), *λαβύρινθος* 'labyrinth' (Mycenaean *da-pu$_2$-ri-to*); (2) in *κυπάρισσος* (Attic *κυπάριττος*) 'cypress', *νάρκισσος* 'narcissus', *κολοσσός* 'statue', *πεσσός* 'piece used in games', *ὀσσός* 'javelin'; (3) in *τενθρήνη* 'kind of wasp', *ἀπήνη* 'cart', *σαγήνη* 'dragnet'.

Greek tradition knew of a pre-Greek people called *Pelasgians (*Πελασγοί*), but *Herodotus (1) (1. 57) declared himself unable to say what language they spoke. The name has in modern times been used for a hypothetical *Indo-European language reconstructed from these place names and loan-words, but this theory has not been generally accepted. Two theories are often mentioned though they cannot be demonstrated. First, it is suggested that some words which refer to plants, animals, etc. of the Mediterranean area like *οἶνος* 'wine' (Mycenaean *wo-no*), *ἐλαία* 'olive' (Mycenaean *e-ra-wa*), *κυπάρισσος* 'cypress', and are often found in more than one ancient language, may belong to a so-called Mediterranean substratum, i.e. to a non-Indo-European language which has left no direct evidence, but was widely spoken in the area. Second, it has been argued that there was an Anatolian (or Luwian) substratum in Greece since the *-σσος, -νθος*, and *-ανδα* suffixes of Greek match productive Anatolian suffixes in *-(a)šša-* and *-anda-* and there are even whole matching names: the Anatolian place name *Parnašša-* is close to Greek *Παρνασσός*, but, while in Greek the word has no etymology, in Anatolian (or Luwian) *parn-* means 'house' or 'temple' and *-(a)šša-* indicates belonging.

We have direct evidence of a pre-Greek language or languages in Crete. The bronze age inscriptions in Hieroglyphic Cretan and Linear A (see PRE-ALPHABETIC SCRIPTS (GREECE)) are evidently not in Greek, but their language cannot yet be reliably identified. At a later date a few alphabetic inscriptions are known from eastern Crete in a non-Greek language conventionally called Eteocretan.

A famous stele from *Lemnos contains an early alphabetic inscription in a language which appears to have affinities with Etruscan (e.g. AFIZ = Etr. *avils* 'years'). This has been taken as confirmation of the story in Herodotus (1. 94) that the Etruscans (*Τυρσηνοί*) were an offshoot of the Lydians (see ETRUSCAN LANGUAGE). In *Cyprus there are 2nd millennium BC inscriptions in the undeciphered Cypro-Minoan script(s), which are not likely to be in Greek; in classical times there are syllabic inscriptions from *Amathus which are certainly not Greek. Their language is conventionally referred to as Eteo-Cyprian.

J. Chadwick, 'Greek and Pre-Greek', *Trans. Philol. Soc.* 1969, 80–98; J.-L. García-Ramón, *New Pauly* 11 (2007) 'Pre-Greek languages'. JC

prejudice See HOMOSEXUALITY; INTOLERANCE, INTELLECTUAL AND RELIGIOUS; RACE; SEMITISM (PAGAN), ANTI-; WOMEN.

Presocratic philosophers, thinkers who lived not later than *Socrates. See e.g. ANAXAGORAS; ANAXIMANDER; ANAXIMENES (1); ATOMISM; DEMOCRITUS; EMPEDOCLES; HERACLITUS (1); HIPPIAS (1); LEUCIPPUS (3); PROTAGORAS; PYTHAGORAS (1); SOPHISTS; THALES; XENOPHANES; ZENO (1).

Presocratic philosophy Philosophy before *Plato comprises (a) *Socrates; (b) the *Sophists (roughly contemporary with Socrates); (c) two centuries of thinkers from *Thales (early 6th cent. BC) to *Democritus (late 5th cent.), many of whom were enquiring into *nature. The period, ending with Socrates—although a few thinkers were younger than Socrates—is generally known as Presocratic philosophy.

The classification makes sense because many problems relating to the sources and texts are common to all the thinkers up to the time of Socrates. Some of them wrote little or nothing. Those who did compose in verse or prose may also have delivered the same or other teaching orally. All the written texts are lost and have been reconstructed (where possible) using quotations from

C. *Marius (1) in 107 BC set a precedent by enrolling *capite censi* volunteers, when there was no emergency, but conscription from those financially qualified remained the main source of the legions throughout the republic. Although in Ciceronian times the *proletarii* must have constituted a major part of the total population, they had virtually no strength in the *comitia centuriata*, being collected in a single century, which only voted if the decision was still open after the decision of the five propertied classes had been declared.

Mommsen, *Röm. Staatsr.* 3. 237 f.; E. Gabba, *Republican Rome: The Army and the Allies.* (1976), ch. 1; P. Brunt, *Fall of the Roman Republic* (1988), ch. 5. AWL

promagistrates See PRO CONSULE, PRO PRAETORE.

Prometheus, divine figure associated with the origin of *fire and with *Hephaestus, developed by *Hesiod into a figure of greater weight. The name, of unknown significance, was given the sense 'Forethought' by Hesiod, who added a contrasting figure Epimetheus ('Thinking after the event'). His father is *Iapetus.

Local Myth and Cult: (1) At Athens Prometheus and Hephaestus are worshipped by potters (because of the firing of clay?) and in the *Academy. A torch-race in honour of Prometheus probably formed part of a ritual renewal of fire (Deubner, *Attische Feste*, 211–12, cf. Nilsson, *Feste*, 173–4). (2) In *Thebes (1) (Paus. 9. 25. 6) one of the *Cabiri is named Prometheus and his son is Aetnaeus ('of Mt. Etna', where Hephaestus and the *Cyclopes worked as smiths). (3) *Deucalion is the son of Prometheus (Hes. fr. 2, Acusilaus *FGrH* 2 F 34, Pind. *Ol.* 9. 55) and after the flood first lived at Opus (just north of *Boeotia in *Locris). Prometheus has a memorial at Opus, as also at *Sicyon (Paus. 2. 19. 8). (4) At Panopeus (just west of Boeotia in *Phocis) a building housed a statue of Asclepius or possibly Prometheus (Paus. 10. 4. 4). The mythic inhabitants of Panopeus were the Phlegyes ('Blazing men'), etymologically identical with the Indian Bhṛgus, a priestly clan responsible for sacrificial fire received from a divine being Mātariśvan.

In the *Theogony* of the Boeotian Hesiod (506–616) Prometheus is bound to a pillar, his liver eaten daily by an eagle and nightly renewed until finally he is freed by *Heracles. This is traced back to a meal shared by men and gods where Prometheus tricks the gods into feasting on bones and fat, explaining the division of victims after *sacrifice and also the distance which now separates men and gods. *Zeus in anger removes fire from men, but Prometheus steals it and gives it to man, who is then further punished by Hephaestus' creation of woman, foolishly accepted by Epimetheus (see PANDORA). The portrait of Prometheus was developed by later authors: (Pseudo-?) *Aeschylus' *Prometheus Bound* makes him yet more of a *culture-bringer, responsible for man's skills and sciences (442–525). There is also a persistent tradition that Prometheus created man from clay (cf. Ar. *Av.* 686; Paus. 10. 4. 4; Hor. *Carm.* 1. 16. 13–16), as commonly in mythologies (Stith Thompson A1241), and this might lie behind Hephaestus' creation of woman in Hesiod.

Prometheus' defiance of the gods, of significance already in the Renaissance, captured the romantic imagination (for instance, Shelley's *Prometheus Unbound*) and has profoundly influenced most modern artistic and literary genres (see H. Hunger), notably because of the monumental nobility in the *Prometheus Bound* of Prometheus chained to the rock, hurling defiance at Zeus, and despising mere thunderbolts. The trickery with which Hesiod characterizes this culture-hero has attracted interest in the light of trickster heroes in other mythologies, notably North American. In any case, myths of the origin of fire and of man bring Greek myth closer than usual to world mythologies and folk-tale (Stith Thompson A1415).

His release by Heracles is depicted in art since archaic times; his theft of fire and creation of man are generally later and less frequent.

K. Bapp, in Roscher, *Lex.* 3. 2 (1909), 3032–110; L. Eckhart, *RE* 23. 1 (1957) 653–730; J. G. Frazer, 'The Origin of Fire' in Apollodorus (Loeb), vol. 2, Appendix 3; H. Hunger, *Lexikon der griechischen und römischen Mythologie* (1959), 353–6; L. Séchan, *Le Mythe de Prométhée* (1951); M. L. West, *Hesiod: Theogony* (1966); J.-P. Vernant, *Myth and Society in Ancient Greece* (1980), 168–85; *LIMC* 7. 1 (1994), 531–53; M. O'Neill, in D. Wu, *A Companion to Romanticism* (1998), ch. 25. KD

pronoia (foresight) see PROVIDENTIA.

pronunciation, Greek The main features of the pronunciation of ancient Greek may be established through the study of contemporary documents, literary texts, spelling mistakes, puns, grammarians' statements, etc. (see PRONUNCIATION, LATIN). In many points we may claim only approximate accuracy, but it is certain that the pronunciation of ancient Greek was different from that of Modern Greek and also differed from most modern scholarly pronunciations which inevitably show the influence of national traditions and the scholar's first language. What follows mostly refers to Classical (late 5th cent. BC) Attic written in the Ionic alphabet (see ALPHABET, GREEK) and offers a traditional view of Attic pronunciation different from that of those scholars like Theodorsson who believe that by the 4th cent. this had already advanced a great deal further in the Modern Greek direction.

A. Vowels and diphthongs Attic had five short and seven long vowels: [a, i, y, e, o, a:, i:, y:, ɛ:, e:, ɔ:, o:]. Square brackets and symbolism refer to phonetic transcriptions. Note that there are different conventions in transcription and e.g. short [a] may be indicated by [a] or [ă]; long [a] by [a:] or [ā]. Also, in what follows, [e:] = [ē], [ɛ:] = [ę̄], [o:] = [ō], [ɔ:] = [ǭ], [y] = [ü].

1. Three letters indicated both short and long vowels: *a*, *ι*, *υ*. Of these [a] and [a:], written *a*, were central or, more likely, slightly fronted vowels (for the quality cf. *a* in Italian or in Northern English *cat*); [i] and [i:], written *ι*, were high front vowels similar in quality to French *i* and to the vowel of Eng. *see*. In Attic, in part of Ionic, etc. *υ* represented [y] and [y:], i.e. front vowels with lip-rounding similar to French *u* or German *ü*. Other dialects used the same sign to indicate [u] and [u:], back vowels similar to German *u* and the vowel of Engl. *too*.

2. In Ionic and Attic there was a long open *e*-vowel [ɛ:] written *η* (cf. *aî* in French *maître*) as well as a closer counterpart [e:] (cf. French *été*). This was originally written *ε*, but by the end of the 5th cent. BC a digraph *ει* was used (see below). The letter *ω* indicated [ɔ:], a long open back vowel (cf. French *fort*), whose close counterpart [o:] (cf. French *beau*) was written first with *ο* and then with the digraph *ου*. Later on (*c.*350 BC ??) the pronunciation changed to [u:] still written *ου*. The equivalent short mid vowels were written *ε* and *ο*; the exact quality is uncertain—presumably higher than that of [ɛ:] [ɔ:] and lower than that of [e:] [o:].

3. In the history of Greek diphthongs tend to disappear. By the end of the 5th cent. BC Attic had changed the original diphthongs [ei] [ou], written *ει ου*, into long vowels [e:] [o:]; this explains the use of the digraphs for long vowels (see above). The diphthongs [ai] [oi] (as in Eng. *my* and *boy*), which were written *αι* and *οι*, survived longer but at a much later stage [ai] changed into [ɛ:] and still later [oi] into [y:]. Similar changes had occurred in Boeotian many centuries earlier. The [au] and [eu] diphtongs, written *αυ* and *ευ*, were preserved all through the Classical period; the second element was [u] and not [y]. The status of *υι* is not clear but in Attic it occurs before vowel only; before consonant it had been replaced by [y:], written *υ*.

4. The long diphthongs *αι*, *ωι*, *ηι*, *αυ*, *ωυ*, *ηυ* were probably pronounced with a later onset of the glide and were unstable. The *ι*-element was lost in pronunciation, if not in spelling, by the

second or first century BC. Spellings like *ᾳ, ῳ, ῃ* with *iota subscript* are a Byzantine innovation.

Later developments. In Modern Greek the significant distinctions of quantity have disappeared though stressed vowels tend to be long. *ι, η, υ, ει, οι, υι* are all pronounced [i]. The second element of the *u*-diphthongs turned into a fricative [f] or [v] according to the sound that followed. Most of these changes were probably complete by the early Byzantine period.

B. Consonants 1. The letters *π, τ, κ* and *β, δ, γ* indicated voiceless and voiced stops of the bilabial, dental, and velar series: [p t k b d g] as in French *p, t,* 'hard' *c, b, d,* 'hard' *g.* It is likely that [t, d] (and [n s]) were dental and not alveolar as English [t d n s]. A set of voiceless aspirates [p^h], [t^h], [k^h] were written with *φ, θ, χ*: cf. the southern English pronunciation of *p* in *pin* and such words as *top-hat.*

2. The labial and dental nasals [m, n] were indicated by *μ* and *ν* (cf. French *m* and *n*). A velar variant of the latter sound (cf. [ŋ] in Eng. *ink*) was found before velar sounds and was frequently, though not exclusively, indicated with *γ* (as in *συγγράφω*), which in this use was called *ἄγμα* by the grammarians. Greek [r], written *ρ*, was probably a voiced rolled tip-tongue sound, similar to Italian *r* or Scottish *r.* The initial variant (*ῥ*) was probably voiceless. *λ* indicated a dental lateral sound [l] as in English *leave* and *σ* a voiceless dental sibilant [s]; cf. French *son* and Eng. *see* where, however, [s] is alveolar. A voiced variant [z] was found before voiced consonants.

3. The rough breathing (᾽) indicated a breathed glottal fricative (like English *h*) found at the beginning of some words before vowel; the smooth breathing (᾽), first used by the Alexandrian grammarians, indicated its absence.

4. Three letters indicated consonantal clusters. The value of *ζ* is disputed and probably varied from dialect to dialect; in Classical Attic it indicated a [zd] cluster but at various stages it may have corresponded to an affricate [dz]. However as early as the 4th cent. BC Attic shows signs of a pronunciation [zz] or [z]. *ξ* and *ψ* represented the clusters [ks] and [ps] respectively.

5. Some dialects still knew the voiced semivowel [w], similar to English *w,* which was expressed by the letter *ϝ* (digamma) and which had disappeared in Attic. A voiceless variant of it may underlie the spelling *ϝh* found in some inscriptions.

6. The spellings *ππ, λλ, νν,* etc. indicated long or geminate stops and continuants [pp], [ll] etc., similar to those of modern Italian. In the case of Attic *ττ* corresponding to Ionic *σσ* the real pronunciation, at least for the early period, is disputed.

Later developments. We have evidence from an early period for the tendency of the voiced and aspirated stops to change into continuants; the full change, however, took place only in the imperial and early Byzantine period. *φ, θ, χ* came to indicate [f] (like English *f*), [θ] (like Eng. *th* in *thing*), [χ] (like *ch* in Scottish *loch*); *β* and *δ* indicated [v] and [ð] (like *th* in Eng. *other*); [g] (*γ*) was changed into [γ] (the voiced equivalent of [χ]) or [j] (cf. *y* in Eng. *yes*). The long geminate consonants were lost and replaced by the corresponding non-geminate consonants.

C. Syllables The ancients divided words into syllables and established rules for this division. From the point of view of metre what counts is the alternation of long (or heavy) and short (or light) syllables, but syllabic quantity should not be confused with vocalic quantity. All syllables which contain a long vowel or diphthong are long (*μή, αἱ*), but syllables are also long if they contain a short vowel and a final consonant, i.e. if the vowel is followed by more than one consonant (the first syllable of *ἀ|νήρ* is light, that of *ἀν|δρός* heavy, but in both forms [a] is short). In contrast with Latin, the distribution of the Greek accent is determined by the length of vowels, not of syllables.

D. Accent 1. Much of our information on the nature of the Greek accent comes, directly or indirectly, from the ancient grammarians. The early Greek accent was one of pitch, i.e. the prominence given within the word to the accented syllable was obtained through a rise of the pitch, followed by falling pitch; differences of stress, if present, were not a relevant factor and it has also been argued that stress had a distribution independent from that of high pitch (Allen). The date at which the 'musical' or pitch accent was replaced by an accent like that of Modern Greek where stress is a primary component is not easy to establish. The change may have developed for a long time, but probably was completed by the end of the 4th cent. AD. Most modern pronunciations follow Modern Greek in replacing high pitch with stress; the 'Henninian' pronunciation (still in use in England), which uses for Greek the same rules of accentuation as for Latin, ought to be rejected.

2. The Greek inscriptions did not normally indicate the word accent or even the division of words (see EPIGRAPHY, GREEK). For this and for the distinctions among the various kinds of accent we depend on the information provided by ancient authors, by some papyri, and by the late manuscripts in which the accents are marked. Most words had one main accent but some so-called enclitic and proclitic elements (mostly pronouns or particles like *τις, μοι, ὁ*) formed an accentual unit with the word which preceded or followed (the rules cannot be discussed here). The rise in pitch was followed by falling pitch mostly on the next syllable, though sometimes on the second *mora* (unit/element) of a long vowel. The usual signs were first introduced by the *Alexandrian grammarians (probably by *Aristophanes (2)), but the distinction between acute and grave is already mentioned in *Plato (1) (*Cra.* 399). Of the three types of accent the acute (*ὀξεῖα*) indicated a high pitch; according to one interpretation of a disputed passage by *Dionysius (7) of Halicarnassus (*De comp. verb.* 11), the range of voice in speaking from the highest to the lowest pitch was a fifth. The acute could rest on both short or long vowels or diphthongs; in the second case it is likely, though not generally accepted, that the higher pitch concerned only the second *mora* of the vowel (◌́ = ◌◌̋). In the ancient tradition all unaccented syllables were seen as bearing a grave accent (*βαρεῖα*), which therefore indicated a lack of accentuation. The fact that an acute resting on the last syllable of a word was changed into a grave within a phrase (*θεοί* but *θεοὶ ἄλλοι*) is variously interpreted: loss of accent, partial lowering of pitch, purely graphic convention, etc. Note, however, that this use of the grave is relatively late; the papyri prefer spellings like *κάλος ἀνήρ* (for *καλὸς ἀνήρ*), *περίκλυτος* (for *περικλυτός*), etc. The circumflex (*περισπωμένη*) is found only on long vowels or diphthongs and, as the original sign indicates, represents a high pitch on the first mora followed by a falling pitch on the second (◌̂ = ◌́◌̀); in other words it is a combination of an acute and a grave (*ἡ ὀξυβαρεῖα*, according to another terminology).

3. The Greek accent was different from Latin in that it was free, i.e. its position was not determined merely by phonological rules, but also by a number of different factors: grammatical, lexical, etc. Yet, as in Latin, the accent was limited to one of the last three syllable of a polysyllabic word. In Greek further limitations depended on the quantity of the vocalic element of the last syllable. If this was short, an acute could be found on any of the last three syllables; if the penultimate syllable was long and carried the accent in Attic this had to be a circumflex. If the last vocalic element was long, the accent had to rest on one of the last two syllables and if it was on the penultimate could only be an acute.

E. H. Sturtevant, *The Pronunciation of Greek and Latin*[2] (1940); M. Lejeune, *Phonétique historique du mycénien et du grec ancien* (1972); S.-T. Teodorsson, *The Phonemic System of the Attic Dialect 400–340 BC* (1974), *The Phonology of Ptolemaic Koine* (1977), and *The Phonology of Attic in the Hellenistic Period* (1978); W. S. Allen, *Accent and Rhythm* (1973), and *Vox Graeca*[3] (1978); A. M. Devine and L. D. Stephens, *The Prosody of Greek Speech* (1994); P. Probert, *A New Short Guide to the Accentuation of Ancient Greek* (2003).

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