a *recitatio* in a theatre (Gell. 18. 5. 2 and 5). The *anagnostes* also took part in grammatical instruction. J. W. D.

ANAHITA (*Anaitis*, Ἀναΐτις), Persian goddess of the fertilizing waters (*Zend-Avesta*, Yašt 5). Artaxerxes II (404–358 B.C.) introduced the use of cult-images (Berossus ap. Clem. Alex. *Protr.* 5. 65. 3), and the cult spread to Armenia, Cappadocia, Pontus, and especially to Lydia. In Armenia sacred prostitution (q.v.) was practised (Strabo 532–3), and in Pontus Anahita possessed many *hierodouloi* (q.v.). In Lydia she was assimilated to Cybele and to Artemis Ephesia, and hence called Mater Anahita or Artemis Anahita, but Iranian traditions, notably the fire-cult, also persisted (Paus. 5. 27. 5–6). She was often called the Persian Artemis. *See* ANATOLIAN DEITIES.

Nilsson. *GGR* ii,² 672 ff. (with references to the earlier literature); S. Wikander, *Feuerpriester in Kleinasien und Iran* (1946). F. R. W.

ANAKES (Ἄνακες), old by-form of ἄνακτες, hence 'kings', 'lords'. A title especially of the Dioscuri (q.v., and see LSJ, s.v.), but also of the Tritopatores (?, q.v.), (Cic. *Nat.* D. 3. 53), and perhaps certain deities at Amphissa (Paus. 10. 38. 7, where MSS. have Ἄνακτες). H. J. R.

ANALOGIA, DE, Caesar's lost treatise inspired by the teaching of Antonius Gnipho (q.v.), written on a journey across the Alps (55 or 54 B.C.) and dedicated to Cicero. It defended the principle of Analogy (q.v.) and a reformed *elegantia* founded on the *sermo cotidianus*. Gellius (1. 10. 4) quotes from its first book the famous advice 'ut tamquam scopulum sic fugias inauditum atque insolens uerbum' (see H. Dahlmann, *Rh. Mus.* 1935, 258 ff.) J. W. D.

ANALOGY and **ANOMALY** were the watchwords of two opposing schools of thought about linguistic phenomena. In particular, the analogists held that nouns and verbs were capable of classification into orderly declensions and conjugations on the basis of similarity of form (ἀναλογία), whereas the anomalists were impressed by the many manifestations of irregularity (ἀνωμαλία) which actual usage sanctioned. Neither party viewed language in a true perspective or effected any appreciable change in living speech; but the discussion was not entirely barren in so far as it stimulated grammatical studies. The analogist at least had a standard he could apply in cases of genuine doubt; the strength of the anomalist's position lay in his readiness to accept language as he found it. Underlying the controversy was the question (already discussed in Plato's *Cratylus*; cf. Lucr. 5. 1028–90) whether language was a natural growth or an arbitrary convention; and though matters of style did not at first enter into the argument, the analogists tended to be allied with purists in their condemnation of barbarisms and solecisms, and anomalists with those who claimed a place for new coinages and modes of expression. Amongst the Greeks, the quarrel was most keenly pursued on the side of analogy by the grammarians of Alexandria (e.g. Aristophanes of Byzantium, Aristarchus, Dionysius Thrax), and on the side of anomaly by the Stoics (e.g. Chrysippus, who wrote four books *Περὶ ἀνωμαλίας*) and the scholars of Pergamum (e.g. Crates of Mallos). At Rome the Scipionic circle in their pursuit of *Latinitas* and *purus sermo* inclined to favour the analogical view (cf. Lucil. 964). Varro (*Ling.* bks. 8–10) gives both sides of the controversy but leans towards the analogists, as did Caesar (*See* ANALOGIA, DE) and 'Atticists' like Calvus. Cicero (e.g. *Orat.* 155–62), Horace (*Ars P.* 70–72), and Quintilian (1. 6) give greater weight to the claims of *consuetudo*.

Norden, *Ant. Kunst.* i. 184 ff.; J. E. Sandys, *Hist. of Class. Scholarship* i (1921) (*passim*); G. L. Hendrickson, *CPhil.* 1906, 97; F. H. Colson, *CQ* 1919, 24. J. F. M.

ANATOLIAN DEITIES. The outstanding characteristic of Anatolian religion is the worship of a mother goddess and her youthful male consort, embodiments of the fertility principle, who reappear constantly under a diversity of local, differentiating names, epithets, and forms. There is some evidence (J. Keil, *ÖJAI.* xviii. 1915) for a divine triad of mother, father, son, but this is a less constant feature. The apparent diversity which masks the basic similarity of the great pair is due in part to the strength of localism and to local differentiation and development, in part to the complex racial background of Asia Minor, and in part to identification with various Hellenic divinities, each of whom might fitly be thought to represent one facet of the native god's complex personality. Thus the male god, as supreme, might be called Zeus; as giver of oracles, Apollo; and as healer, Asclepius. Generally the goddess predominated in Asiatic cities, while in Hellenic foundations the god was accorded higher rank. The native names, such as Cybele (q.v.), Attis (q.v.), Ma, Wanax, seldom or never appear in Asia Minor on Greek inscriptions (though local epithets do), and are known chiefly from Neo-Phrygian documents or from outside Anatolia. According to Calder (*CR* 1927, 161–3) this shows that while speakers of the native languages used the old names, speakers of Greek did not, except in the Mysteries (cf. the mystic formula in Dem. *De Cor.* 260). Of the Mysteries themselves we know little, and that chiefly from non-Asiatic sources. *See* AGDISTIS; ANAHITA; ATTIS; CYBELE; EUNUCHS, RELIGIOUS; HIERODOULOI; METRAGYRTES; PROSTITUTION, SACRED; SABAZIUS.

The inscriptions are our chief source of material: see especially the series *Monumenta Asiae Minoris Antiqua* (1928–), and numerous articles in *Anatolian Studies presented to Sir Wm. Ramsay* (1923), *Anatolian Studies presented to W. H. Buckler* (1939), and L. Robert, *Études anatoliennes* (1937). A valuable synthesis in Cumont, *Rel. or.* ch. 3. F. R. W.

ANATOMY AND PHYSIOLOGY. The earliest records of true anatomical observations are in fragments of Alcmaeon (q.v. 2; *c.* 500 B.C.) of Croton. There can be no doubt that he actually dissected animals, discerning the optic nerves and the tubes between the nose and ear cavities now known as 'Eustachian'. He even extended his researches to embryology, describing the head of the foetus as the first part to develop—a justifiable interpretation of the appearances. His followers investigated especially the blood-vessels.

2. The theory of Empedocles (q.v.; *c.* 492–432 B.C.) of Acragas of four elements was to control medical thought for two millennia, but more immediately influential was his view taken from folk-belief that the blood is the seat of the innate heat (*θερμὸν ἔμφυτον*)—'the blood is the life'. This led to the consideration of the heart as centre of the vascular system and chief organ of the *pneuma* which was distributed by the blood-vessels. *Pneuma* was identified, in accord with certain philosophical tendencies, with both air and breath. These views of Empedocles were rejected by the important Coan Medical School, then becoming prominent, but were widely accepted elsewhere. Notably Diogenes of Apollonia, a contemporary of Hippocrates of Cos, was led to investigate the blood-vessels, and his account of the vascular system is the earliest that is intelligible.

3. Early members of the so-called 'Hippocratic Collection' (*see* HIPPOCRATES 2) are the treatises *On the sacred disease* of about 400 B.C. and *On the nature of man* which

is but little later. The author of the former opened the skulls of goats and found the brain to resemble that of men in being cleft into symmetrical halves by a vertical membrane. The large veins of the neck are intelligibly described. The arteries are said to contain air, an idea gained from their emptiness in dead animals. *On the nature of man*, ascribed by Aristotle to Polybus, son-in-law of Hippocrates, contains the doctrine of the four humours. These—Blood, Phlegm (*pituita*), Black Bile (*melancholia*), and Yellow Bile (*cholē*)—make up the living body as the four elements make up non-living matter. This doctrine persisted till quite modern times and has left definite traces in the anatomical and, indeed, psychological nomenclature of our own day.

4. An interesting Athenian practitioner of the middle and late fourth century B.C. was Diocles (q.v. 3) of Carystus. He drew his opinions from many sources, adopting the humours of Polybus and the innate heat of Empedocles, regarding with Aristotle the heart as seat of the intelligence but accepting also Sicilian pneumatism. His observations on the early human foetus are the first recorded. His work *On anatomy*, based to some extent on human material, has disappeared and we have no general early treatise on the subject. Our best representative of the anatomy of the fourth century is the tract in the Hippocratic Collection *On the heart*, of about 340 B.C. We cannot be sure that it is based on human dissection, but it discusses the anatomical similarities of man to animals. It places the innate heat in the heart. Air enters direct into the left ventricle, where takes place some subtle change of blood into spirit, and where too the intellect resides. The heart valves are described and experiments are suggested for testing their competence. The startlingly false statement that in drinking some of the fluid passes into the lungs may indeed, as the author of the tract claims, have been 'verified' by experiment: a coloured fluid was found to have stained the inside of the windpipe of a pig whose throat was cut while it was drinking the fluid. This experiment may well have been performed; and the fluid may have entered the windpipe as the animal was squealing. The view that drink passes into the lungs is also found in Plato's *Timaeus* and in other writings; it was opposed by, amongst others, Aristotle.

5. The direct contributions of Aristotle to human anatomy and physiology are unimportant and he did *not* dissect the human body (though he may have dissected a human embryo). The text of his account of the heart is corrupt and incomprehensible, but it was in any event very inadequate, nor did he make any proper distinction between arteries and veins, though he gave fair descriptions of several of these vessels. On the other hand, he gave excellent accounts of certain organs from the standpoint of comparative anatomy. Some were illustrated by drawings, the first anatomical figures recorded. We can confidently restore certain of them, for example, that of the organs of generation. His nomenclature of the uterine organs is still partially retained.

6. Among the noteworthy errors of Aristotle is his refusal to attach importance to the brain. Intelligence he placed in the heart. This was contrary to the views of some of his medical contemporaries, contrary to the popular view, and contrary to the doctrine of the *Timaeus*. Aristotle must have known all these, and it is conjectured that, having found the brain to be devoid of sensation, he concluded that it could not be associated with it. The function of the brain was to prevent the heart from overheating the blood. This was effected by the cold Phlegm (*pituita*) secreted in the nose, supposedly by the brain, an idea preserved in our anatomical term 'pituitary body'.

7. After Aristotle's time Alexandria became the chief medical centre. Herophilus (q.v.; *c.* 300 B.C.) of Chalcedon, of the earliest Alexandrian scientific generation, adhered to the humoral theory. He was the first to dissect the body publicly and investigated the anatomy of the eye, the brain, the nervous system, the vascular system, and the organs of reproduction. He recognized the brain as the central organ of the nervous system and the seat of intelligence; distinguished the cerebrum from the cerebellum; described the fourth ventricle of the brain and even its 'calamus scriptorius', which he named (*ἀνάγλυφος κάλαμος*); and described the meninges and the 'wine-press' (torcular, *ληνός*), a confluence of veins which modern anatomists, following Galen, still name after him. He was the first to grasp the nature of nerves other than those of the special senses, and he distinguished motor from sensory nerves. The modern anatomical terms 'prostate' (*ἀδενοειδεῖς προστάται*) and 'duodenum' (*δωδεκαδάκτυλον*) are derived, through Galen, from him. We owe to him also the first description of the lacteals and the first clear differentiation of arteries from veins. Pulsation was for him an active arterial process. He wrote an anatomy for midwives and is the first medical teacher recorded—perhaps apocryphally—to have had a woman pupil.

8. Erasistratus (q.v.) of Chios, a younger Alexandrian contemporary of Herophilus, abandoned the humoral doctrine and was the first to set forth a complete physiological scheme. Accepting the atomism of Democritus and its consequent 'materialism' he described the body as a mechanism, combining this with a pneumatic theory. Observing that every organ is equipped with a threefold system of branching vessels—veins, arteries, and nerves—he concluded that the minute divisions of these, plaited together, compose the tissues. Blood and two kinds of pneuma are the sources of nourishment and movement. Blood is carried by the veins, which take it to the heart. Air is taken in by the lungs and passing thence to the heart becomes changed into the first pneuma, the *vital spirit* (*πνεῦμα ζωτικόν*) which is sent to the parts of the body by the arteries. Carried by these to the brain it is there changed to the second pneuma, the *animal spirit* (*πνεῦμα ψυχικόν*), and distributed to the parts through the nerves, which are hollow. The so-called Anonymus Londinensis ascribes to Erasistratus an experiment designed to demonstrate *quantitative* changes associated with animal metabolism.

9. The view of Erasistratus that the heart is the centre and source not only of the arterial system but also of the venous system was ahead of all opinion until Harvey (1628). Perceiving that arteries though empty in dead bodies, yet when incised in the living contain blood, he sought to explain the presence of the blood in them as due to the escape of pneuma through the wound leading to a vacuum by which blood was sucked into the arteries from the veins through fine intercommunications between artery and vein. The view that arteries contain air was experimentally disproved by Galen 450 years later, but Erasistratus, having realized that the two systems communicate at their periphery, was not very far from the conception of a circulation.

10. Erasistratus advanced on Herophilus' knowledge of the nervous system, giving detailed descriptions of the cerebral ventricles, which he regarded as filled with animal spirit. He observed the cerebral convolutions, noting their greater elaboration in man than in animals, associated, as he thought, with man's higher intelligence. He made experiments on the brain and meninges, traced the cranial nerves into the brain itself, and distinguished cranial sensory from cranial motor nerves. He also attained a clear view of the action of muscles in producing movement, regarding their shortening as due to distension by animal spirit.

11. After Erasistratus anatomy and physiology declined at Alexandria. The schools that arose at Pergamum, Smyrna, Corinth, and elsewhere were poor substitutes. The human body ceased to be dissected and when Galen began his studies about A.D. 145 it was difficult to find even a skeleton in these schools. Nevertheless, two Ephesians of the first Christian century produced noteworthy anatomical works. Of these Rufus gave to many parts of the eye the names by which they are still known, and in his book on the pulse claimed that the heart strikes the chest-wall during contraction. Had this critical observation been known to Galen it should have led him to modify his physiological scheme, perhaps in the direction of a circulation. Soranus of Ephesus wrote a book on pregnancy with figures of the uterus. Indirect medieval copies of these are the first surviving anatomical drawings exhibiting details ascertainable only by human dissection.

12. Anatomical and physiological science in antiquity reached both its climax and its end with Galen (q.v.; A.D. 129–99), who spent his early years gleaning in many schools the traditions of his predecessors. Though he was an eclecticist and a dogmatist (thus he taught the humoral theory which had been abandoned by Erasistratus and others) he engaged in dissection and vivisection (of animals) and in carefully planned experiments, such as his famous experiment designed to demonstrate the irreversibility of the flow from the kidney to the bladder. His active professional life was passed at Rome, where he gave public demonstrations. He never dissected a human body, but made numerous accurate anatomical and physiological studies on a variety of animals, among them the Barbary ape, the structure of which is not very different from that of man. He also experimented on dogs, bears, cattle, and pigs, being struck with the resemblance of the latter to human beings.

13. Galen elaborated a complete physiological scheme which was generally accepted until modern times. It involves three kinds of pneuma or spirit in addition to air. The basic principle of life was drawn from the world-pneuma of air by breathing. Entering the body through the windpipe it passes to the lung and thence to the left ventricle, where it encounters the blood. His view as to the changes that then take place in the blood was most ingenious, and the errors that it involved remained current till the seventeenth century.

14. Galen believed that chyle, brought from the digestive system by the portal vessel, reaches the liver, and that that organ has the power of enduing it with a pneuma, innate in all living substance, which came to be called the *natural spirit* (*πνεῦμα φυσικόν*). It then became venous blood. This is distributed by the liver through the venous system, ebbing and flowing in the veins.

15. One great branch of the venous system, a mere extension of a great trunk direct from the liver, was the cavity that we now call the right ventricle. The venous blood that entered this had two possible fates. Most of it, remaining awhile in the ventricle, left it to ebb back into the liver, having parted with its fumes or impurities, which were carried off to the lung and thence exhaled—hence the poisonous character of re-breathed air. A small fraction of the blood in the right ventricle, however, trickling through minute channels in the heart-substance, dripped slowly into the left ventricle. There, encountering the air brought through the lung, these drops of dark blood, charged with natural spirit, are elaborated into the higher *vital spirit*, which is the active principle of the bright arterial blood.

16. The arterial blood charged with vital spirits is distributed through the arteries to all parts of the body. Some passes to the so-called 'rete mirabile' (*πλέγμα μέγιστον θαῦμα*) at the base of the brain, and becomes charged with yet a third pneuma, the *animal spirit* derived from the brain. This is distributed by the nerves. The 'rete mirabile', absent in man, is well developed in cattle. It was from experiments and observations on them that this remarkable system was derived.

17. Of Galen's positive anatomical knowledge the best presentation is his great work *On anatomical procedure* in sixteen books, of which nine survive in Greek while the remainder have been recovered in modern times in Arabic translation. His treatise *On the uses of the parts of the body of man* was the most popular of his general anatomical works. *On anatomical operations* is a superb experimental study. *On the anatomy of muscles* is an accurate and remarkable pioneer survey. *On bones, for beginners* is his only work based on human material and has influenced modern nomenclature. Among his terms current in modern anatomy are apophysis, epiphysis, trochanter, diarthrosis, and synarthrosis.

18. In pure anatomy Galen's best work was on the muscles, and his writings contain frequent references to the form and function of muscles of various animals. Thus the dissection of the muscles of the orbit and larynx was performed on the ox, while those of the tongue are described from the ape. Occasionally he indicates that he is aware of the difference between the muscles he is describing and those of man. His famous and intensely teleological description of the structure and functions of the hand was derived from that of the Barbary ape. There is perhaps in all literature no passage that is more confident as to the exact details of the divine intentions.

19. Galen's anatomical and physiological writings are both voluminous and detailed. They are, however, ill arranged, and, since he has no adequate technical nomenclature and is very argumentative, his meaning is often obscure. Though his account of the brain and of its related nerves is difficult, yet his classification and description of the cranial nerves remained in vogue until quite modern times, and part of his nomenclature of them survives even in current anatomy.

20. Perhaps Galen's most remarkable achievement was his experimental investigation of the spinal cord, the continuity of which at different levels was, he showed, necessary for the maintenance of certain functions. Injury between the first and second vertebrae caused instantaneous death. Section between the third and fourth produced arrest of respiration. Below the sixth it gave rise to paralysis of thoracic muscles, respiration being carried on only by the diaphragm. If the lesion were yet lower the paralysis was confined to the lower limbs, bladder, and intestines. Galen's knowledge of the functions of the spinal cord was not developed and indeed was not adequately appreciated until well into the nineteenth century.

21. Galen's scientific works are among the most influential of all time. Nevertheless he established no school and he had neither disciples nor followers. On his death in 199 the prosecution of original anatomical and physiological inquiry ceased abruptly. Medical writers after Galen, on the whole, restrict themselves to summarizing and commenting upon the views of their predecessors. Galen's influence and reputation in the Middle Ages are, at least in large part, to be accounted for by the fact that his strongly teleological views were, like those of Aristotle, congenial to medieval thinkers.

Remains of fifth-century anatomists in Diels, *Vorsokr.*[10] (1960). E. Krause, *Diogenes von Apollonia* (1908–9). M. Wellmann, *Die Fragmente der Sikelischen Aerzte, Akron, Philistion und des Diokles von Karystos* (1901). W. Jaeger, *Diokles v. Karystos* (1938). Aristotle's anatomy mostly in *Historia animalium*, trans. by D'Arcy W. Thompson (1910). The fragments of Herophilus and Erasistratus collected and translated by J. F. Dobson, *Proc. of Roy. Soc. of Med., Historical Section*, 1924 and 1927. J. Ilberg, *Die Ueberlieferung der Gynäkologie des Soranos von Ephesos* (1910). Soranus, *Gynecology*, transl. O. Temkin (1956). Ch. Daremberg, *Œuvres anatomiques physiologiques et médicales de Galien* (2 vols. 1854). Max Simon, *Sieben Bücher Anatomie des Galen* (2 vols. 1906). J. S. Prendergast on Galen in *Proc. of Roy. Soc. of Med., Historical Section* 1926 and 1928. Very little of Galen is translated into English; there is, however, A. J. Brock, *Galen on the Natural Faculties* (Loeb, 1916); Galen, *On Anatomical Procedures*, transl. by C. Singer (1956); and a very good rendering of the famous passage *On the hand* by T. Bellott (1840). G. Senn, *Die Entwicklung der biologischen Forschungsmethode in der Antike* (1933). Survey by Charles Singer and C. Rabin, *A Prelude to Science* (1940); M. R. Cohen and I. E. Drabkin, *A Source Book in Greek Science*[2] (1958); Miriam Drabkin, 'A Select Bibliography of Greek and Roman Medicine', *Bull. of the Hist. of Medicine* 1942, 399 ff.; H. E. Sigerist, *A History of Medicine*, ii (1961). C. S.; A. W.

ANAXAGORAS (*c.* 500–*c.* 428 B.C.; Apollodorus ap. Diog. Laert. 2. 7), son of Hegesibulus, a native of Clazomenae, the first philosopher to reside in Athens. He came in 480, probably with Xerxes' army, and 'began to philosophize at Athens in the archonship of Callias (Calliades) at the age of 20, where he is said to have remained 30 years' (Demetrius of Phalerum ap. D.L. ibid.). The teacher and friend of Pericles, he was indicted by the latter's enemies on charges of impiety and medism; but with Pericles' aid he escaped to Lampsacus, where he founded a school and died in general honour and esteem. Accounts of the trial vary: the probable date is 450, not 432 (as Ephorus ap. Diod. 12. 38 f. and Plut. *Vit. Per.* 32 state). Anaxagoras' astronomical views, the main ground of the charge, were influenced by the fall of the meteorite at Aegospotami in 468–467. Only one work is ascribed to him: from bk. 1 a score of fragments is preserved by Simplicius.

Conflicting testimonies make modern reconstructions of Anaxagoras' system problematic. He accepts, like Empedocles, the Eleatic denial of 'becoming' and void, but unlike Empedocles presses this denial to the point of holding that in the beginning the world was a 'mixture' containing 'seeds' (*σπέρματα*) of every qualitatively distinct natural substance, organic and inorganic: these (flesh, blood, bone, gold, etc.) are infinitely divisible into parts like each other and the whole—hence Aristotle's name for them, 'homoeomeries' (*ὁμοιομερῆ*)—and are Anaxagoras' 'elements'. His theory thus conflicts both with atomism and with Empedocles' less drastic pluralism. Seeds take their quality from their prevailing component (fr. 12); but actually, at every stage of division, imperceptible portions of *every* other 'qualitied' thing remain, for (fr. 11) 'in everything there is a portion of everything except mind (*νοῦς*)'. This last Anaxagoras introduces as initiator of cosmic motion and animating principle of plants and animals. Mind, because itself separate and unmixed, can move other things.

Anaxagoras thus explains growth and nutrition without assuming qualitative change (cf. fr. 10): the characters which 'emerge' must have been present, imperceptibly, in the germ of food, and rendered apparent by regrouping. But much is obscure, e.g. the place of the 'opposites' (such as hot and cold, wet and dry) in Anaxagoras' scheme. Tannery, followed by Burnet and others, took these to be the basic ingredients of the 'seeds'. Cornford, identifying them with the things of which Anaxagoras says that there is a portion in everything (frs. 4, 6, 11, 12), used this dictum to explain only the qualitative differences in the seeds and not, as did Aristotle and the ancient commentators, all natural change. But this view, as well as discounting the ancient tradition, imported a gross ambiguity into Anaxagoras' words 'a portion of everything in everything'; and later writers have tried to save the literal sense of the dictum and at the same time save Anaxagoras from the vicious regress that seems to come from combining it with his other thesis that the characters which anything exhibits are those which predominate among its ingredients, e.g. that gold is the stuff in which gold predominates.

Anaxagoras' cosmology is a closely knit part of the theory. *Nous* starts a rotatory motion (*περιχώρησις*) which gradually spreads. Thus seeds are separated out, the dense, moist, cold, and dark (*ἀήρ*) going to the centre, their opposites (*αἰθήρ*)to the circumference. The heavenly bodies are stones, torn from the earth, which motion renders red-hot (cf. ASTRONOMY). Anaxagoras follows the Ionian tradition of a flat earth, but knows the cause of eclipses. Whether he assumes only *one* world (cf. Cornford against Burnet, *CQ* 1934) remains controversial. Sense-perception depends on the contrast of unlikes.

Anaxagoras' great reputation in antiquity is endorsed on the whole by Aristotle. He solves the problem raised by Parmenides more subtly, if less simply, than the Atomists. His failure to use mind as a teleological principle, which Plato and Aristotle deplore, was fortunate for science.

Diels[11], ch. 59. A useful survey of modern literature in D. E. Gershenson and D. A. Greenberg, *Anaxagoras and the Birth of Physics* (1964), to which should be added C. Strang, *Archiv für Gesch. der Philosophie* 1963. On A.'s use of physiological ideas: G. Vlastos, *Philosophical Review* 1950. A. J. D. P.

ANAXANDRIDES (4th c. B.C.), Middle Comedy poet, possibly of Rhodian birth (Ath. 374 b), won the first prize ten times (*Suda* s.v.), three times at the Lenaea (*IG* ii². 2325. 142). His first victory was in 376 (*Marm. Par.* 70), and he was active at least as late as 349 (*IG* xiv. 1098. 8). Forty-one titles have survived, and eighty citations; some of the titles look back to Old Comedy (e.g. *Cities*, *Huntsmen*), some forward to New Comedy (e.g. *Madman*, *Samia*), and many are mythological (e.g. *Anchises*, *Protesilaus*). The longer fragments reveal an elegant style and a moralizing strain which earned him a place in anthologies.

FCG iii. 161 ff.; *CAF* ii. 135 ff; *FAC* ii. 42 ff. K. J. D.

ANAXARCHUS (4th c. B.C.) of Abdera, a follower of Democritus, with Sceptical tendencies, was the teacher of Pyrrhon the Sceptic. His nickname *Εὐδαιμονικός* implies that he treated happiness as the *summum bonum*. He accompanied Alexander the Great on his Asiatic campaigns and was much esteemed by him. He is usually represented in antiquity as a flatterer of Alexander, but this may be due to Peripatetic prejudice. He was cruelly put to death by the Cypriot prince Nicocreon.

Testimonia and fragments in Diels, *Vorsokr.*[11] ii. 235 ff. W. D. R.

ANAXILAS (1), tyrant of Rhegium, 494–476 B.C. By collusion with Samian refugees he tried to seize Zancle, then part of the dominions of Hippocrates (q.v. 1), but the Samians made a compact with Hippocrates and were expelled by Anaxilas in 490/489, who settled there other Greek colonists, chiefly Messenians (*see* MESSANA). Anaxilas fortified the straits against the Etruscans but, antagonistic to Gelon (q.v.), supported Carthage in 480. Afterwards he made his peace with Syracuse, and married his daughter to Hieron I (q.v.). In 477 he threatened Locri, but Hieron intervened; he died the next year.

E. S. G. Robinson, *JHS* 1946, 13 ff.; Dunbabin, *Western Greeks*, chs. 13–14; G. Vallet, *Rhégion et Zancle* (1958), 335 ff. A. G. W.

ANAXILAS (2) (4th c. B.C.), Middle Comedy poet, can be dated to the middle of the fourth century B.C. by the fact that in three of his plays (Diog. Laert. iii. 28) he ridiculed Plato. We have nineteen titles and some forty citations, the longest of which (fr. 22, from *Νεοττίς*) characterizes well-known hetairai.

FCG iii. 341 ff.; *CAF* ii. 264 ff.; *FAC* ii. 332 ff. K. J. D.

ANAXIMANDER (*Ἀναξίμανδρος*) (*c.* 610–540 B.C.) of Miletus wrote the first philosophic prose treatise *c.* 546 B.C. He held that the origin (*ἀρχή*) of all things was the