

## ***Greek philosophy up to Aristotle***

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### ***Introductory.***

1. It is generally thought that Greek “philosophy” began in Ionia, on the eastern shores of the Aegean Sea, with Thales of Miletus c 585 BC. (All dates hereafter will be before the Common Era except where stated as CE, and with references to modern studies, eg “(So-and-so 1985: 10)”, where the second number denotes the page). Philosophy means simply ‘love of wisdom’ and Thales was certainly not the first Greek to love ‘wisdom’. Several definitions can be given to ‘wisdom’ (as we shall see hereafter) but one of them must include the discovery, or the search for knowledge, of the ways in which the whole human organism functions at its best and of the conditions in the natural and man-made environment where men can live in comfort and happiness; and this implies an understanding of the highest causes, of the origin and purpose of human life and of its relation to the rest of the world. Now at Miletus, on many islands and the mainland, long before Thales, Greeks had made good use of their natural environment transforming parts of it so that they could live comfortably in their city-states: they were cultivating many plants for food, decoration and medicines and had domesticated animals for their milk, flesh and hide and also for transport; they used wheeled vehicles and ships for transport on land and on water (and for fishing); they exchanged goods and services among themselves and traded with other city-states and large empires like Lydia on Asia Minor (modern Turkey) or Egypt, where they had established a commercial centre at Naucratis on the Nile delta; they had sent numerous colonists to settle along the shores of the Black Sea, in Southern Italy and further west (Boardman 1980); they also had religion, ethical codes and laws, which regulated the relations among citizens and also relations with the invisible Powers they believed in and called “gods”. Such achievements meet any requirements of “philosophy” and “science”, however these terms be defined.

We can go back c 1000 years before Thales and find that c 1500 the Mycenaeans on the Peloponnese and in Boeotia had, in fact, similar achievements in these fields – agriculture, architecture, commerce, metallurgy, etc, including literacy. The centuries from c 1200 to c 800 are usually designated by proto-historians as “Dark Ages” and, no doubt, there was some “darkness” since there was absence of literacy and corresponding records. But the “darkness” must be in part in our own eyes as well. For there is, otherwise, ample evidence of continuity in many areas of life. Most striking is the re-emergence of several names of deities like Zeus, Hera, Athena, Artemis, etc. Such retentions reveal the existence of a strong oral tradition. Undoubtedly not only the Greek alphabet but many other forms of knowledge in the arts, crafts and sciences came in successive waves to Greece from cultures flourishing in the Near East constituting “orientalizing revolutions”, as they are now called (Dalley 1998: 86; Burkert 1992). These influences were interwoven with the native traditions eventually acquiring the distinctive colours and character of the Greek culture. But the Mycenaean culture itself was not unmixed. The Mycenaeans were Indo-Europeans who immigrated or invaded into what was later known as “Hellas” (=Greece). The Indo-European heritage they brought with them (language, aspects of religion and other customs) was inevitably mingled with local traditions and customs (Kazanas 2001a) many of which belonged to the Minoan civilization. This earlier civilization, which flourished on Crete and itself had interactions with Near Eastern cultures (Dietrich 1974; Burkert 1992), exhibited practically all the conditions listed above that imply, for their inception, realization, maintenance and development, a certain “love of wisdom”.

2. So when Aristotle in Bk 1 of his *Metaphysics* gives a short account of early Greek thought and considers Thales “the founder of natural philosophy”, we must wonder at this. We must also wonder why, despite some criticisms of this opinion of Aristotle, most modern scholars tend to follow it. Aristotle’s account is informed by his main interest in explanatory schemes exposing causes through observation, analysis, induction, inference and so on; such schemes are supposed to be systematic, based on defined sets of terms and methods and having no “appeal to arbitrary intervention” from

external mysterious forces (Barnes 2001: xix). But this is by no means the case with Thales, Anaximander and the other Pre-Socratics, i.e. the thinkers who lived in the centuries before Socrates. The gravest difficulty is that, in many cases, we now have only few fragments of their thought, preserved by writers who lived many centuries after them. A second difficulty is that these fragments are often obscure and/or capable of differing interpretations. Even if we accept all these fragments as genuine and can overcome the obscurity, we cannot reconstruct a complete system. But then, even where we find a near-complete system of thought, as with Parmenides and Empedocles, we observe that this is a jumble of, on the one hand, attempts at rational explanations of natural phenomena and, on the other, references to “arbitrary intervention” by the deities of (sectarian or mainstream) mythology together with various ethical and/or political observations. Certainly, there is much more rational explanation based on empirical observation in Thales and his successors, as distinct from Hesiod’s mythology but, although the ‘miraculous’ pervades myths, some myths exhibit much rationality in their use of symbols.

3. I think Aristotle and modern scholars regard the Presocratics as the first philosophers because of a much simpler and more pedestrian reason: Thales and his successors in Ionia and in southern Italy are the first thinkers about whom we have some definite information. Certainly they enquired into many natural phenomena and “the nature of the world”, the ultimate stuff from which are made all things and the causes and features of the changes observable in the variety of the world, and attempted to picture an ordered Cosmos in the multiplicity of phenomena and processes of the world: thus they paved the way for the so-called “scientific method”, which is so popular in our times. But all this was done also by earlier generations who developed agriculture, divided the year into seasons, discovered therapeutic powers in plants and minerals, gave names to the constellations and so on. If we had similar definite information about the people who, in earlier periods, developed the techniques of erecting the megalithic structures at Mycenae and elsewhere, or the Minoan palaces at Knossos and elsewhere, or about those who formulated the thought that the dead go to Hades or the Elysian Fields, we would regard them as the first “philosophers” or “scientists”. It is a great pity that we have little information about the Presocratics and no information at all about those that preceded them. Aristotle says that the very ancient tradition of gods representing in myth celestial bodies [natural forces, rather] is a relic of an older art and philosophy repeatedly developed and lost (*Met* XII, 8, 19-21). Modern studies like that of R. Rudgley, *Lost Civilizations of the Stone Age* (1998), present much startling evidence about the practical knowledge those very ancient people had in tool-production, agriculture, fire-techniques, metallurgy, medicine and so on, showing that “natural philosophy” was well advanced in the Old Stone Age.

4. The period under consideration in the pages that follow ends with the thought of Aristotle and a very curious paradox. In *Odyssey* X we read about the transformation of some human beings, Odysseus’s followers, into animals and their transformation back into their human form. Then, in other passages in Homer we find that humans upon death go and dwell in Hades in a ghostly form. Homer and Hesiod take for granted such astonishing transformations and do not speculate about them. Elsewhere these poets say that the gods cause a large variety of phenomena in the world, that they create mankind and shape men’s progress in life and death. We call such statements “mythology” or “primitive religious beliefs”. But they surely indicate ontological and metaphysical considerations. They also imply a belief in a hidden reality and in causes behind observable natural phenomena. This in turn implies an awareness of the uniformity and regularity of nature. Several centuries later, despite all his remarkable observations, his analytics and his rational thinking, Aristotle draws a cosmological picture in which an unknown god exists outside the Universe doing nothing but contemplate himself yet being the Prime Mover, while just below him (in a hierarchy of beings and powers) some obscure “intelligences” move the spheres of the “fixed” stars, of the sun, the planets and the moon and thus, presumably, govern the fates of all sublunary creatures. Although this broad cosmological picture (in

the form of the Ptolemaic geocentric astronomy/astrology) governed the thought of pagan and Christian Europe for almost 20 centuries, it proved utterly untrue. Aristotle's theory, mixing fact and fiction, reasoning and imagination, the material world and an imagined "intelligible" one, was no more "scientific" and no less fantastic than the Hades and gods of Homer. Aristotle himself says that the ancient thinkers spoke with divine inspiration in supposing the celestial bodies to be gods (Met XII, 9-21).

The mystery of the origin and nature of the world persists. In fact, despite so many centuries of research and speculation, the mystery of birth, life, death and beyond, and the attainment of happiness, still remains. Plato wrote that the search for wisdom begins with awe and wonder (*Theat* 155D). Now let us see how the Presocratics attempted to penetrate the mystery.

### **Precursors.**

5. The first cosmologies and cosmogonies are 'mythological', recorded incidentally and briefly by **Homer** and more systematically by **Hesiod** and the Orphic poets. Some at least of these beliefs as aspects of religion are much older than these works since the worship of several important deities – e.g. Zeus, Hera, Poseidon – are attested in the Mycenaean Documents of c 15th century (Ventris & Chadwick 1973).

In *Kratulos 402B* Plato writes: "Again, Homer says, 'Okeanos [=Ocean] [is the] begetter of gods and mother Tethys'; also Hesiod, I think. Orpheus too says somewhere – 'Fair-flowing Okeanos first began the marriages wedding Tethys, his sister by the same mother'." He repeats the Homeric verse in *Theaitētos 152E* – but in *Timaios 40D* he presents Okeanos and Tethys as children of *Gē* Earth and *Ouranos* Sky. Homer's verse is spoken by Hera in *Iliad 14, 200*. In a later passage, *Iliad 14, 244*, Sleep says that he could subdue even the streams of Okeanos who has begotten all – but not Zeus unless he himself asked for sleep. Homer also has Hephaistos, the divine blacksmith, place the Ocean at the outer rim of Achilles's shield (*Iliad 18, 607*) showing that it surrounds the earth. However, the Orphic passage and that from *Timaios* say that Okeanos and Tethys are themselves offspring of other gods. These statements together with that of Hupnos (=Sleep), saying he can put Okeanos to sleep, show that Okeanos as a mighty Begetter was already receding with the rise of new gods like Zeus.

Many hellenists (e.g. West 1971) believe that this idea of the Ocean as a cosmogonic power came from the Near East where in several cultures the manifest world emerged out of water (see *VME*, §§33, 48, 110). As most of them know next to nothing about Indo-European comparative studies and the Vedic tradition, they don't quite realize that this idea may be one the Greeks brought with them. Precisely as in Homer above (also *Iliad 21, 14; Her II, 21 and IV, 8, 16*), in *RVX*, 89, 4 the Earth *pr̥thivī* is said to be round like a wheel and in *AVXII*, 1, 8, to be floating upon the ocean-flood *am̥ava*; since many hymns in the *RV* (eg I, 164, 25; VII, 6, 7; IX, 113, 8) mention a celestial ocean, the Earth, whether a flat disc or a sphere, is surrounded by ocean-waters.<sup>1</sup> Moreover, both Homer (*Iliad 14, 244*) and Hesiod (*Theog 775-792*) speak of the streams of the Ocean, a notion that we find also in the *RV*, particularly the celestial streams (e.g. VII, 101, 4). In *BU III*, 3, 2 the ocean is twice as wide as the earth and surrounds it fully.

6. In Hesiod's *Theogony* Okeanos loses any preeminence he had and is an offspring of Earth (131f). In this work Hesiod gathers together many different strands of beliefs and attempts to weave them into a coherent system, but not without inconsistencies. "First of all, truly, Chaos *χάος* came to be and then *Gaia* Earth... Tartaros [=a pit below Earth]... and Eros [=love, desire]" (116-20). Chaos here has been taken to be 'disordered matter; place; what-is-poured (< *cheō*, *cheesthai*), fluid substance, water; chasm (< *cha-* 'gape'); splitting, division; expansion' etc (KRS 1999: 36-41 settle for

1 Almost all translators of the Creation Hymn, *RVX*, 129, give "water" for *ambhas* in stanza 1, but this is wrong since nothing at all existed then; *ambhas* means 'potency' or 'potential' (*VME* §11).

‘vast gap’; similarly West 1998: 70 ‘chasm’; but Barnes 2001: 3-4 ‘expanse’.)<sup>2</sup> Undoubtedly *Chaos* is a primal cosmogonic stage or element. However, *Il* 807-814 speak at once of the ‘sources’ or ‘beginnings’ (*pēgai*, πηγαι, pl) and ‘limits’ (*peirata* πείρατα pl) of Earth, Tartaros, Sea and Sky, (suggesting a point of issuing or convergence), and of gleaming gates and a brazen immovable threshold and of a place far from all the gods, where the Titans live, beyond murky *Chaos*: thus there seems to be something indeterminate but more primal than *Chaos*.

Then follows the union of Earth and Sky and the birth of Kronos (131-8). Sky torments Earth by hiding their other children and Kronos castrates him whereupon Ouranos-Sky vanishes from the scene (even though starry sky is still there). From the blood-drops that fell on the Earth sprang the Erinyes, the avenging punishers and some great Giants, while from the genitals that fell in the sea rose Aphrodite, the foam-born goddess of love (183-206). Subsequently, after the account of many genealogies, Rhea bears to Kronos Hestia (=goddess of the hearth), Hera, Demeter, Hades (=god of the Underworld) and mighty Zeus who, in turn, dethrones his father and eventually, after dispatching the Titans into Tartaros, becomes king of the gods on mount Olympus.

Here also several motifs are thought to come from the Near East – especially that of castration which is very similar to the Hurrian-Hittite myth of Kumarbi castrating and supplanting Anu (Penglase 1997: 185-6 with full bibliography). But even this motif may be in part inherited since castration may be involved in Indra’s hacking *Vṛtra* to pieces (*RV* I, 32, 7; I, 16, 6 and 12; VIII, 6, 13) and Indra himself gets emasculated as a result of Gautama’s curse (*Rāmāyana* I, 47-8, developing the theme from *Satapatha Brāhmana* III, 3, 4, 18 and XII, 7, 1, 10f).<sup>3</sup> Then, we have the Greek - Vedic cognations *Hest-ia* (Roman *Vesta*), *vāst-os-pati* (*RV* VII, 55); *Ouranos Varuṇa*; *Zeus Dyaus*; *Eōs* ‘dawn’, *Uṣas*; etc. The conflict between older and younger gods (or gods and demons) is also IE, not exclusively near-eastern: in Hesiod, we find Gods and Titans; Scandinavian lore has *Aesir* and *Vanir*; the (later) Veda, *devas* and *asuras*. And so is the theme “god/hero slays dragon/serpent”: Zeus vs Typhoeus (*Theog* 820ff); Thor vs Midgard-serpent in Scandinavia; Stormgod vs dragon in Slavic and Hittite legends; Indra vs *Vṛtra* in the *RV*.

In *Works and Days* Hesiod presents two interesting myths to explain how evil appeared in the world: that of Pandora and her box with its plagues and Hope (*Il* 59-105) and the Five Races of men (109 ff) golden, silver, bronze, heroic (all past) and iron (present). He also gives technical advice, on agriculture, trade and sea-faring (ostensibly to his brother Perses), and many ethical precepts on how to improve one’s daily affairs and conduct. Thus ethical concerns and technical information went hand in hand with ontological and metaphysical considerations found in religions beliefs that were expressed in what we call ‘myths’. Here, the creation of Pandora certainly comes from Mesopotamian originals (see also Dalley 1991:15-16). The metallic frame of the Five Races comes probably from Zoroastrian Scriptures in Persia, but, otherwise, the Races correspond with the Four Yugas (*kṛta*, *tretā*, *dvāpara* and *kali*) of the Vedic tradition, which express the gradual worsening of man’s spiritual condition; the Greek heroic Race corresponds to the *kṣatriya* class who were annihilated in the transitional period, *sandhi*, of the *dvāpara* and *kali* yugas.

As for the dead, they go mostly to *hades* ᾗδης (=underworld) which is similar to the Mesopotamian *kurnugi* ‘land of no return’. But the heroes go to the Isles of the Blest, somewhere in the western ocean, (and, in later texts, some become stars in heaven – a belief found in Egypt and in the Veda: see *VME* §§13, 63).

2 The arguments advanced by KRS (following Cornford) that *chaos* denotes the gap between Earth and Ouranos-Sky are rather lame. *Theog* nowhere implies that Earth and Sky were united. On the contrary, it states that Earth (no mention of Sky) came straight after *Chaos* and that she begot *egeinato* Sky (126) and then (same verb, 129) mountains and the Deep-Sea *Pontos*: she begot Sky “equal to herself” so that she be fully covered. So Sky did not come forth as a result of a separation or division. Misconceptions almost always arise when we rely on other or later sources and not the text itself.

3 For a full discussion of this see Kazanas 2001a: 31-2.

Another interesting statement is that a god who commits perjury by swearing falsely by the water of Styx “lies breathless until a full year is completed” (*Theog* 795). Then, after being “spiritless and voiceless for a great year” (797) he stays exiled from the gods for nine years (803). This could be a vague memory of some reincarnation doctrine. Hesiod lived in Boeotia in Central Greece and Homer (probably) in Ionia (or some eastern Aegean island). It is very probable that in these regions the Greeks lost ideas like reincarnation that were preserved in Orphism.<sup>4</sup>

7. Although Homer and Hesiod do not mention **Orphism**, this religious movement may well be older. There is ample textual and iconographic evidence from the early 6th century (KRS, 21; West 1998); this usually implies an earlier history of several decades, if not centuries.

Orpheus is a legendary figure of sexual purity, musical talent and prophetic power, who might have come from Thrace, north-eastern Greece. He is known as a hero who took part in the Argonautic expedition with Jason, Hercules and others, who descended into Hades to rescue his wife Eurydike and who got torn apart by the maenad women of Dionysiac orgiastic celebrations – but whose severed head continued to sing and prophesy.<sup>5</sup> In §5 above, we saw an Orphic passage cited by Plato (thus placed at the latest in the 5th cent; see also Euripides *Hippolytus* 953-4 on Orphic writings from early 5th cent.), but the *Orphic Rhapsodies* were composed in late Hellenistic and Roman times while some doxographic accounts are even later. However, the discoveries of gold leaves and plates in tombs in South Italy and Greece, and the Derveni Papyrus from a grave in North Greece, all from c 400 (KRS, 29; Laks & Most 1997), contain material that confirms many of the ideas in the later literature. Many poems were ascribed to Orpheus and with him are connected many other poets of the early period – Musaeus, Epimenides, Abaris et al. Various ‘Orphic’ works are supposed to have been collected and edited at the same time as those of Homer, c 550 (Her VII, 6; West 1998: 250). But certain astronomical references in later works indicate dates of the middle 2nd millennium (Kaktos 2003: vol 1, 33-4; Papathanasiou 1978: 105-108) and so does the fact that god Dionysos is attested in Mycenaean times (Ventris & Chadwick 1973). So Orphism may well be pre-Homeric.

8. Orphism revolved round Orpheus, of course, and the mysteries of god Dionysos Zagraios. It also combined ritualistic elements from the cult of Apollo, ‘hyperborean’ (=beyond North Greece) and

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4 In my ‘Archaic Greece and the Veda’ (2001a) I did not think to examine Orphism confining my study to Homer and Hesiod. Reincarnation is an IndoEuropean idea since it is found in the Vedic Tradition and among the ancient Celts (Caesar, *De Bello Gallico* VI, 14-15; Kazanas 2001b: 284 and n15) but nowhere in the Near East.

5 Many scholars regard Orpheus as a shaman (West 1998: 4-5; Eliade 1974: 391f); in the 20th century it became quite fashionable to describe many ancient figures as “shamanist” and thereby explain their unusual deeds and conduct. In Orpheus and his cult I find nothing “shamanist”, at least nothing like the shamanism discovered c 1900 CE, as presented by Eliade in his classic study (1974). Nor do I find anything remotely indicating that Orphism came from outside the larger area of Greece, i.e. from places like the Pontic steppes and the Scythian tribes. The Thracian Zalmoxis (Her IV, 95) is often cited as preaching reincarnation but a careful reading of the relevant passage shows that he spoke of the immortality of the soul. Agreeing with A. Daniélou (1964) Th. McEvilley thinks that Orphic doctrines came to Greece with “Jaina missionaries” (2002: ch 7). Both scholars ignore the hard chronological facts that (disregarding the archaeoastronomical references in Orphic texts) the Orphic cult is attested at the latest c 600-580 whereas Jainism appeared in India c550. Even if missionaries (or Mahāvira himself) set off at once, it would have taken several years, and decades, before they reached Greece and spread their doctrines among enough Greeks, linking them to *Orpheus/ῥbhu*, so that a cult should emerge. So all such theories must be discarded. For other views see Tsopanis 2003 with references. But here, as with many other publications on Orphism, we do not find a judicious evaluation of the reliability of ancient sources and modern opinions.

'purifier' *Katharsios*, from beliefs in reincarnation and the soul's return to a divine state, and various cosmogonic/theogonic accounts. The Orphic cosmogonies have survived in different versions but all contain certain common elements: *chronos* χρόνος (=time) as the Progenitor, chaos, the cosmic egg and Phanes (=manifest) who generates the gods and creates the cosmos (KRS 22-5; West 1998). Some variants have Night as the first generative principle (KRS 17-19; West 1998: 118). Night is given great importance in one passage in *Iliad* 14, 258f where Zeus is said to be in awe of her, "who is subduer of gods and men", and does not want to displease her. In Hesiod Night seems to be Progenitor of all (*Works and Days* 17), the outermost limit of the known worlds enveloping all (*Theog* 744f). In subsequent stages of development these theogonies/cosmogonies do not move significantly out of the Hesiodic frame.

Greater interest have the few fragments about reincarnation and the soul's purification. On some of the gold plates (found in graves) are inscribed instructions for the soul. One of them advises the soul not to drink from the spring by the white cypress but from the water flowing out of the lake of Mnēmosunē Μνημοσύνη (= Memory) and, when questioned to reply "I am offspring of Earth and starry heaven... Give me water from the lake of Memory"; when it has drunk, it will follow the holy way on which other famous initiates and bacchants went. On yet another plate the soul should say: "I too claim to be of your blessed race / But fate overcame me and the hurler of the lightning-bolt. / But I have paid the penalty for unrighteous deeds, / I have flown out of the circle of heavy grief / and stepped swift-footed on the circle of joy." Upon that, it receives the assurance, "Blessed and fortunate one! Thou shalt be god, not mortal" (Tsakalis 1999: 393ff; Zuntz 1971). These passages imply clearly the belief in the reincarnation of the soul, release from re-embodiments if purified, and self-knowledge that is recollection of its true nature which is divine.

In this area again scholars see influences from the Near East. This may well be so, but we must also consider one simple fact: there is no trace of reincarnation and self-knowledge in the Mesopotamian, Egyptian, Judaic and Iranian cultures. On the other hand, all the Orphic elements discussed above are found in the Vedic tradition, from the Hymns to the Upanishads (*VME* §§ 3-28). First, the name 'Orpheus' is cognate with the Vedic *ṛbhu*, the three brothers who after their miraculous works became gods in the mansion of the Sungod (Kazanas 2001b: 275). Then the singing/prophesying severed head is an undoubted Indo-European motif found in Ireland with Hendigeidfran's head, in Scandinavia with Mimir's head and in India with Dadhyañc's head (*RV* I, 84, 13-14; I, 116, 12; etc; *BU* II, 5, 16-19; etc), which involves this sage and his teaching, the Asvins and Indra (Kazanas 2001b: 282): this also is not found in the Near East. Then Time (Gk *chronos*) as a progenitor is celebrated in the hymns to *Kāla* (=Time) in *Atharva Veda* XIX 53 and 54. The Night, who with her abysmal darkness envelops or generates all, has an equivalent in *tamas* (=darkness, inertia) which concealed everything before manifestation (*RV* X, 129, 3). The cosmic egg<sup>6</sup> out of which sprang creator-god Phanes has a parallel in the *mārtāṇḍa* 'the dead egg' from which emerged the Sun (*X*, 72, 8-9); also in *hiraṇyagarbha* 'the golden seed' whence emerged "the gods' one spirit" *devānām āsuḥ* (*RV* X, 121); and in *Chāndogya Upaniṣad* III, 19, 1-4 where the cosmic egg divides, the lower silver half being the Earth, the upper golden half being the sky. Finally, reincarnation, self-knowledge and divinization (or Self-realization) are common themes in the Upanishads.

Together with ethical considerations, this eminently spiritual theme of self-knowledge and divinization will reappear frequently in parallel with the intellectual 'scientific' enquiry into Nature and becomes pronounced in the works of many subsequent thinkers: it will acquire major proportions in Pythagoras and Empedocles and, of course, Plato. It is unnecessary to assume a foreign origin for all these elements in Orphism, since they are all demonstrably Indo-European and were most probably brought and developed by the Greeks themselves.

M. West (1971) describes at length how **Pherekydes** of Syros (early 6th cent) also borrowed from

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6 The egg is also mentioned in Aristophanes *The Birds* 695; it is also found in the Egyptian Scriptures and out of it comes Shu, god of light and air. (See *VME* §114).

the Near East and wrote a theogony/cosmogony about Zeus and Chthonie (=Earth). No doubt there is some truth in this, but as all the reports are from about five centuries after Pherekydes, I ignore them. In any case, apart from the supremacy of Zeus, they differ only in details from the corresponding works of Hesiod and the Orphics. (See also KRS, 50ff.)

### **The Ionians**

**9. Thales** flourished in the first half of the 6th century. According to Herodotus (I, 170, 3) Thales's family originally came from Phoenicia; according to others it was thoroughly Greek (DL I, 22). According to different ancient sources, Thales was astronomer, engineer, politician and businessman. He was also one of the Seven Sages.<sup>7</sup> It is said that he travelled in Egypt and brought geometry. He may have written books, including the *Nautical Star-Guide*, as some reported, but nothing has survived. Thus all our information is second-hand.

He may have predicted the sun-eclipse in 585, as Herodotus reports (I, 74, 2); he is also said to have discovered the solstice-periods and the little Bear. In Geometry he is credited with the discovery that a circle is bisected by its diameter, that the two angles at the base of the isosceles triangle are equal, and that when two straight lines intersect one another, the angles at the vertex are equal. In engineering he diverted the current of the river Halys in Asia Minor and thus enabled the armies of Croesus to advance (Her, I, 75, 3-5). He succeeded in business by foreseeing a large olive-crop whereupon he hired all the olive-presses in Miletus and Chios in winter, when no one else was interested, and, when later the crop was ready and others wanted the presses, he hired them out and so made a large profit (Ar *Pol* 1259a 5-6). In politics he advised the Ionians to establish a single council-chamber at Teos, in the middle of Ionia, and treat the other cities as though they were cantons (Her I, 170, 3).

According to Aristotle, it was said<sup>8</sup> that Thales thought the earth rests on water (*Heav* 294a 28) and water is the one material principle (*hulēs archē* ὕλης ἀρχή) or natural substance (*phusis*) φύσις from which all things come and into which they dissolve; for, Aristotle conjectures, he saw the nourishment of all things and their seeds to be moist (*Met* 983b; 6-11). Aristotle reports also that Thales, as is said, thought the soul to cause motion – if indeed he said that the [magnesian] stone has soul since it moves iron (*Soul* 405a 19-21). Furthermore, “Some say that the [soul] is intermixed in everything from which, perhaps, Thales thought that all things are full of gods” (*Soul* 411a 7-8).

Some sayings attributed to Thales: – Search out a single wisdom; choose a single good. Of existing things the most ancient is God, for he is ungenerated; the greatest is space, for it contains all; the swiftest is mind, for it runs through everything; the mightiest is Necessity, for it prevails over all; the wisest is Time, for it reveals all. It is difficult to know oneself; it is easy to advise another. We can live best and most justly by not doing the things we blame in others. He is happy [= *eudaimōn* εὐδαιμόνων ‘having a good daimon’ and therefore ‘having wellbeing’] who has a healthy body, a resourceful soul and a cultivated nature. And, “know thyself”, though this maxim has been attributed to others as well. (All these in DL, I, 35-37, 40; for “know thyself”, Betz 1970.)

**10. Anaximander** is younger than Thales only by a few years and was thought to be Thales's successor in the latter's school. He too is thought to have written some books and to have drawn on a tablet the map of the known world but nothing survived. Otherwise little is known about his life.

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7 When the names of all the different lists of the Seven Sages are added up, the total is 17. Only four were common to all the lists: Thales, Bion, Pittacus and Solon.

8 Note here the uncertainty. Even Aristotle did not have original material but transmits secondary sources, books or rumours. Note also that no satisfying explanation emerges as to how water was the primary substance.

The main idea from Anaximander's thought that has survived through Aristotle and the later doxographers is that the primal generative principle of the world is the *apeiron* ἄπειρον 'infinite, limitless' – but not in any mathematical sense. In *Physics*, in discussing the nature of this *apeiron*, Aristotle writes that "it has no prior principle but seems itself to be the principle of all others, to encompass and to steer everything, as say those who postulate no other causes (like mind or love) but the limitless; and this is the divine, for it is immortal and imperishable, as Anaximander says and most *phusiologoi* 'physicists'" (203b 7). Without beginning or end in time or space, this *apeiron* is the grand source and primal cause of everything. Later doxographers repeat more or less Aristotle's view adding that from this *apeiron* the heavens separate off as well as all the innumerable beings [=worlds, elements, creatures] and this process of generation from, and dissolution into, it repeats in cycles through the ages due to necessity [*chreōn* χρεῶν 'obligation, indebtedness'] for they pay penalties and retribution to one another for their injustice according to the assessment of Time (KRS 106-8). Here the texts cannot refer only to the elements fire, air, water and earth that separate and one prevails over the others, as some think (KRS 128-130) but all beings. Consequently here are some important ideas found also in the Vedic philosophy: the Absolute *brahman* or its Unmanifest Nature being *ananta* 'endless', *aja* 'ungenerated' and *akṣara* 'imperishable'; the worlds and all the beings manifesting then merging back in repeated cycles through the ages, and all this, because of unfulfilled *karma* 'duty' which is a kind of injustice.

Anaximander's cosmogony is simple. At the generation of the world something productive of hot and cold separated off from the Eternal and from this a sphere of flame surrounded the air round the earth; when this in turn burst and was confined in some circles, then sun, moon and stars were formed. The circle of the sun is highest, those of the fixed stars lower. The earth is aloft, held up by nothing; it is cylindrical like a drum or a column. In the heavenly spheres, which we shall meet repeatedly in subsequent thinkers, there are vents at which the heavenly bodies appear; when the vents are blocked eclipses occur and the moon waxes and wanes accordingly. All meteorological phenomena are caused by the wind which arises because of subsolar exhalations and finer vapours of air that go up. Animals were at first born in moisture enclosed in thorny barks, then they moved onto dry land and broke out of their bark; originally men came into being within fish (or fishlike creatures) and only when they grew and were able to fend for themselves came out and took to land.

Anaximander seems to have thought about most aspects of the world, the origin of heaven and earth and man. Whether he retained the pantheism of Thales we do not know. But his notions on cosmogony and anthropogony survived in several doxographers because, presumably, they were original. With hindsight we can say that they foreshadowed the system of the celestial spheres (a system that would dominate European thought for almost 20 centuries) and, in a crude way, the modern theory of evolution of animals. But his basic idea of the *apeiron* 'Infinite' disappears from subsequent Greek philosophy (to emerge only briefly in the thought of Melissus: see §19).

**11. Anaximenes** flourished in the second half of the 6th century. He was Anaximander's younger associate and successor. The information about his thought is scanty. He seems to have abandoned Anaximander's indeterminate *apeiron* and substituted or, perhaps, identified it with air *aēr* ἀήρ. He restated Thales's view of the soul but identified it with air/breath. "Being air, our soul holds us together: breath [= *pneuma* πνεύμα] and air encompass the whole world" (KRS, 158). He seems to have developed further Anaximander's ideas about motion and heat-cold by using them to explain all change and the generation of natural phenomena through rarefaction and condensation. A passage from *Refutation of All Heresies* by bishop Hippolytus (c 200CE) sums up all the main ideas: –

"The principle is limitless air [= *aēr* ἀέρος] from which come to be the phenomena that are, have been and will be generated and gods and divine things; the rest come from these its products. The nature of air is this: when most uniform, it is invisible, but is revealed by the cold and hot, the damp and the moving. It is always in motion; for things changing would not change if it did not move.

As it gets condensed or rarified it appears different: when it is diffused into a finer state it becomes fire; winds are, again, air condensed; cloud is produced from air by compression; when air is more condensed it is water and, when more, it is earth; when condensed as far as possible it becomes stones. Thus the most dominant factors of generation are opposites – heat and cold. The heavenly bodies have come into being from earth because mist rises from it and is rarified generating fire.” (I, 7, 1-4)

Air appears as a cosmogonic principle in the Vedic tradition too. In the *RV* *vāta* and *vāyu* are gods but not cosmogonic. This aspect we find in *AV* XI, 4 where *prāṇa* ‘breath, air, vital power’ is presented as “the lord of all” (st 1), is identified with Prajāpati, the creator god (12) and with *rigvedic* Mātariśvan and Vāta (15). In *ChU* IV, 3, 1-3, *vāyu* is said to absorb fire and water, sun and moon (and, by implication to send them forth again) while *prāṇa* in man absorbs other functions like thought, speech, sight etc. However, Anaximenes’s concept is quite different and I see no cross influences.

**12. Pythagoras** remains a figure of mystery because the certain facts about him are very sparse but the legends very thick. One of the legends (from the 3rd cent CE and later) says that he was a disciple of Pherekydes of Syros, around whom also rumour had woven a web of legends (DL XI see §8 end).

Born on Samos island (southeastern Aegean) c 570, he emigrated to Croton, a Greek colony in South Italy. Greek colonies had been established much earlier in South Italy, Sicily and further west. In the 6th century, apart from any desire for adventure and change of environment, people would emigrate for two other reasons. One was political dissent, mainly against oppressive tyrannies, and the other the westward expansion of the Persians and their eventual conquest of Ionia. Later tradition has Pythagoras travel to Egypt and other regions in the Near East (Isocrates, *Busiris* 28-9; DL VIII, 3: not entirely improbable), but the known fact is that he went to Croton – at the age of about 40, when many of his ideas were mature. Some ancient sources (and the mainstream modern view) say he and his early followers left no writings, their teaching being transmitted orally; others (DL VIII, 6) that he did write some books. In the 5th century the school split in two, each part claiming true heirdom. In the late 4th century Pythagoreanism was closely connected with Platonism and (later also) with Orphism; in fact, already in the 5th century Herodotus had associated some Pythagorean practices with Orphic ones (II, 81) and many elements in the two teachings are very similar – reincarnation, purification, abstention from bloodshed, etc. Aristotle’s book on *The Pythagoreans* has not survived. Later accounts of Pythagorean philosophy are heavily contaminated with Platonic and other elements while many writings attributed to Pythagoras himself contain ideas of more recent ages.

It is possible that Pythagoras travelled in the Near East and acquired knowledge, though it is difficult to say what. Judging from the ‘esoteric’ character of his school, it is possible that he was taught by priest-healers (*iatromantis* ἱατρομάντις) from the cults of Orpheus, Apollo and Persephone, which were widely established in Ionia and the islands (from Lesbos in the north to Kos in the south). In these centres there were sacred caves (or temple-basements) which were called “lairs” (*phōleia* φωλεία), in which, under the supervision of the *iatromantis*, people remained for hours, and sometimes for days, undergoing “incubation”, a kind of yogic practice or meditation or quietude (= *hēsuchia* ἡσυχία), for therapeutic, purificatory or other spiritual purposes.<sup>9</sup> This is thought to be symbolised in the descent of Orpheus to Hades and his return with new knowledge and power; Hades is, of course

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9 Another common word is *phōleos* φωλέος ‘den, lair’. Incubation is connected with shamanist practices and is sometimes called “suspended animation”. Cults of Dionysos, Orpheus, Apollo and Persephone were interconnected. See Bolton 1962 (153-6); Burkert 1972 (151-161, 283-4); Deubner 1900 (32-8, 55-56); Diels 1897 (13-22); Eliade 1972 (387 ff); Farnell 1921; Kingsley 1995 (230-2, 247-8, 282-8); Lewy 1978; Sherwin-White 1978; Strabo 14, 1, 14; de Vogel 1966; Zuntz 1971.

the realm of goddess Persephone. The sun (=Apollo) is also thought to descend into darkness (=Night= goddess under dark earth=Persephone) and arise with fresh light.

It is probable that, as Plato writes, Pythagoras was much loved by his disciples and bequeathed “a way of life” that made them stand out (*Rep* 600AB); that he, as is said by Xenophanes, stopped someone from beating a dog because he recognised a friend’s soul in the animal (DL VIII, 36); that Ion of Chios thought him to be wise and have the knowledge of all men (DL I, 120) – in which case the opinion of Heraclitus (also in DL VIII, 6 and IX 1) that he was learned but fraudulent is either spurious or wrong. Porphyry sums the matter simply: “What he said to his associates no one can say with any certainty; for they preserved no ordinary silence. But it became very well known to everyone that he said, first, that the soul is immortal; then, that it changes into other kinds of animals; further, that at fixed intervals whatever has happened happens again, there being nothing absolutely new; and that all living things should be considered as belonging to the same kind. Pythagoras seems to have been the first to introduce these doctrines into Greece.” (*Life of Pythagoras*, 19). To all this we might add concern with music (*Ar Heav* 290b 12) and mathematics (*Ar Met* 985b 24). But we don’t know for certain. The affinities here with Vedic ideas have been discussed in earlier sections.

In his *Lives...* (Lycurgus IV, 6) Plutarch writes that legendary Lycurgus of Sparta (who lived at least one century before Pythagoras) travelled to India. This sounds improbable, but it is not impossible. If Lycurgus travelled that early then it is possible that Pythagoras also made a similar trip and brought “these doctrines to Greece”.

**12. Heraclitus** lived in Ephesus (also Ionia), flourished before the end of the 6th cent and died c 480. His book *On Nature* has not survived except for some 130 brief passages in subsequent writers. Socrates found the parts of the book that he understood to be splendid and supposed the rest to be equally so, but the reader needed the ability of an expert Delian diver, he said (DL II, 22). Others also had similar difficulties. So Heraclitus was called ‘enigmatic’ *ainiktēs ἀνικτήης* and ‘obscure’ *skoteinos σκοτεινός*. If the ancients who had the entire book had difficulties, it is hardly likely that we can reach any high degree of understanding with mere fragments and not knowing the order in which they were organised (even if they were pithy sayings, as some scholars hold) within the book. However certain ideas seem to be clear enough and we shall concentrate on these.

Hippolytus among many others preserves this saying: “Listening not to me but to the *logos* it is wise to agree that all things are one” (*Refutation* X, 9, 1).<sup>10</sup> “*lógos*” λόγος means of course ‘word, speech, account’ and many translate it as ‘account’ but this certainly does not fit here with the contradiction between “me” and “logos”. Here it could not yet have the Christian sense ‘Word’ (which Hippolytus extracted); so it must have the other common meaning ‘measure, proportion’ and by extension perhaps ‘reason, cause’. So the sense is – “Listening not to my words but to true measure (or reason)...” This is possible because *logos* is in all men: “Although *logos* is common [to all men], many live as if they have a private understanding of their own”. But “all things come about in accordance with this *logos*”.

With their private understanding men do not see the measure, the unseen connexion and harmony that unites the disparate fluctuating phenomena. Men are deceived in their knowledge of what is apparent. Indeed, *polemos πόλεμος* ‘war, strife’ is the father and king of all revealing some as gods, some as men, some slaves, some free. In this flux, as Plato reports, all things are moving and nothing stays still and you cannot step twice into the same water of a river (*Kratulos* 402a). The living dies, the awake sleeps, the young becomes old and these change round again (Fr 88). And the sea is drinkable and wholesome to fish but deleterious for humans. However all this flux and relativity is deceptive because Nature loves to hide itself (Fr 123): for unapparent harmony is better/stronger than

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10 Hereafter all sayings that have no reference are from Hippolytus. Fragments (=Fr) are numbered as in Diels & Kranz 1952.

the apparent one. And Aristotle cites the saying that “what is adverse concurs and the noblest harmony arises from things that differ” (EN 1155b5). Finally, God is all things: he is day and dusk, winter and summer, war and peace, satiety and famine.

**13.** Heraclitus writes also of fire as a governing principle. “This cosmos, the same for all<sup>11</sup> – neither any god nor any man made; but it always was and is and will be fire everliving, flaring up in measure and dying down in measure” (Fr 30). Thus all things are an exchange for fire and fire for all things – as goods for gold and gold for goods (Fr 90). Fire has turnings/transformations *tropai τροπαί*: first, sea; then of sea, half is earth, half lightning-flash (Fr 31). Indeed, the lightning bolt steers all things. The sun also is important in these measured changes: it is overseer and guardian, defining and arbitrating, illuminating and revealing the changes and the seasons which bring all things (Fr 100). But in the order of the cosmos even the sun will not overstep its measures, otherwise the Erinyes, ministers of justice, will find out (Fr 94).

Here we note that “justice” *dikē δίκη*, cosmic order *taxis τάξις* or necessity *anankē ανάγκη*, is an unobtrusive but very real Power that will not be gainsaid; this will be referred to by many subsequent thinkers (Parmenides, Plato) but will nowhere be defined clearly. Here justice as cosmic order or necessity reminds us of *ṛta* in the *RV*, where gods respect it and will not transgress it. Then, the lightning bolt steering all things reminds of the upraised bolt through awe of which the whole world moves on (*Kathā U II*, 3, 2 - 3) and of the truth being in the lightning flash (*Kaṣītaki U IV*, 2). Although, unlike Water or Air, Fire is never a primal cosmogonic element in the Vedic tradition, in the *RV* it mediates between men and gods abiding on earth as ordinary fire, in the midspace *antarikṣa* as lightning and in heaven as the sun; also, chiefly as Apām Napāt, it is closely associated with waters.<sup>12</sup> The sun *sūrya/savitṛ* also is an overseer, protector, etc.

**14.** Heraclitus seems not to have liked book-learning, for, rightly as wrongly, he criticizes scornfully thinkers who were reputedly learned, like Hesiod, Pythagoras, Xenophanes and Hekataeus (Fr 40). He also repudiated sacrifices, purificatory rites and other rituals (Frs 5,15, 128) and regarded the masses absent-minded and uncomprehending (34): it was as if, to clear the mud from their persons, they washed with mud (5). Although an aristocrat, he renounced his own archonship and devoted himself entirely to philosophy ‘love of wisdom’. His way to wisdom was through self-knowledge: he sought to know himself (Fr 101). But it is not known what methods he followed. He may have been taught – this is speculation on my part – by the priest-healers of some cult (Apollo, Persephone, Artemis) and have undergone “incubation” (see §12 and n 9). Whatever methods he may have followed he arrived at some startling conclusions reconciling phenomena that ordinarily seem irreconcilable. Thus he says “We are and are not” (Fr 49a) and “Immortals are mortal, mortals immortal” (Fr 62), thus annulling ordinary logic. Wisdom is to gain understanding how all things are steered through all (41). As regards selfknowledge, he writes, “One would not find the limits of the soul even by travelling the whole and every way - so deep is its measure (*logos*: Fr 45); the soul has its own self-increasing measure. All men can know themselves and control themselves (116); thinking is common to all (113). To be self-controlled is the greatest excellence; wisdom is speaking the truth and acting with knowledge in accord with Nature (112).

I think Heraclitus had, like Nietzsche, unusual experiences and insights but did not formulate a

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<sup>11</sup> KRS (p 198) think this phrase to be an interpolation.

<sup>12</sup> Mc Evilly attempts to connect the Heraclitean fire with that of the Upanishads and cites three passages (2002: 38-41). But in *BU III*, 2, 10 and *ChU VI*, 2, 3-4 fire is an intermediary not a primal generator and he misreads *Muṇḍaka II*, 1, 1 seeing fire “as the source and goal of all things”; he misses or ignores the correlatives *yathā...tathā* which give a simile: “As from fire spring sparks...so beings issue from the Immutable...”. I find neither correspondence nor cross-influence.

coherent system (hence ‘obscure’ and ‘enigmatic’). I have tried here to give a reasonable and systematic interpretation of the Fragments. I am sure an unsympathetic scholiast could examine the Fragments in a different order and show this philosopher to be paranoid. We now leave Ionia and move to South Italy.

### **South Italy**

**15. Xenophanes** (c570-475) was older than Heraclitus but I place him after the Ephesian because he travelled about and is reported by Plato (*Soph* 242D) and Aristotle (*Met* 986b 18) to be the founder of the Eleatic tradition at Velia (Greek *Elea*) in South Italy. Aristotle writes (ibid) that he was the first to speak of the One (*enizein* ‘one-izing’), but, as we saw (§§10,11), Anaximander had postulated one *apeiron* ‘infinite’ and Anaximenes the “air” as a single first principle.

Xenophanes certainly spoke of One God, regulator of everything. He did not think that ordinary humans were capable of knowing the truth about the gods, because the gods have not revealed all things from the start. On the other hand, those who sought earnestly could find out more. He himself made many observations about the physical world saying that all things that grow are earth and water. He criticized Homer and Hesiod for presenting the gods as immoral and rejected the anthropomorphic concepts of the deities. His own concept of the One is found in four fragments : “ One god, greatest among gods and men, similar to mortals neither in form nor in thought ; he sees as a whole, thinks as a whole, hears as a whole ; he remains in the same [state/place] not moving at all ; without effort he governs everything by power of mind” (Frs 23-26).

This philosopher’s One God also is similar to the upanishadic Absolute, particularly the aspect of the Witness, seer, hearer, knower of all, as Yājñavalkya puts it to Gargī (*BU* III, 8, 8-11).

**16. Parmenides** may have been a pupil of Xenophanes and, more probably, an associate of the Pythagorean Ameinias whom in the end he followed and “was led to stillness” by him (DL IX, 21). This “stillness” or quietude *hēsuchia ἡσυχία* was indeed , as we saw (§ 12), characteristic of the Pythagoreans ; so Parmenides was connected with them. He lived in Elea (=Velia), flourished in the first half of the 5th century and framed laws for the city which were preserved for a long time (Plutarch *Against Colotes* 1126AB ; DL IX, 23). His poem *On Nature*, written in ungainly hexameters, falls into three sections: the first is a prologue, the second deals with *the way of truth* and the last *with the way of opinion*. The prologue and most of *the way of truth* have been preserved but only fragments of *the way of opinion*.

The way of truth (the first part of the poem proper) speaks of the One Being (or Entity) *eon* (= *on* ἔον/ὄν ‘being’) which is discovered by, and related to, *nous νοῦς* ‘mind, intelligence’. Now, this Being, which is the Reality, has certain attributes (=predicates): it is one, holding in itself all that is/are; it is ever present; it is full, complete, all inclusive; it is unmoving, indivisible, homogeneous; it is uncreated, changeless and imperishable. It is perfect – like a sphere. So Being *eon/on* is related to and apprehended by mind *nous*. However, as many scholars appreciate (eg KRS 253), a sphere implies limits and a limited form, however perfect, implies the existence of something other than itself, so that Reality is not one. Indeed, Parmenides says explicitly that Reality/Being is bound within limits (*peirasi desmōn πείρασι δεσμῶν*) by Necessity (*anankē*). The only solution is to see the bonds of necessity as some kind of determinacy implying that Reality is what is and could not be otherwise; but the form of the sphere remains bothersome.

The way of opinion *doxa δόξα* belongs to the senses of mortals and deals with what appears to be, not what is. Motion, change and multiplicity belong to *doxa*. This motion and change is thought of as ‘coming to be’ and this is utterly wrong since “to-be” has no precedent, itself being always. So the senses are deceptive. Sensory perceptions are composed of opposites and change and perish like the things themselves. All changes are just names which men give to things.

Thus Parmenides uses terms that will become customary and fundamental in subsequent philosophical enquiries by dealing with ontology (=being) and suggesting the division between the intelligible and the sensible more clearly than anyone before him.

**17.** However, there is another side to Parmenides. Plato writes that Socrates, when very young, met him and was impressed by his “depth which was absolutely noble” and thereafter revered him above all other thinkers (*Theat* 183E). He was connected with Pythagoreanism, as we saw in §16, but also Orphism and the worship of Persephone, goddess of the Underworld, and Apollo Oulios (‘destroyer who heals’) or Apollo of the incubation<sup>13</sup> *Phōleuterios* Φωλευτήριος – and it should be noted that one myth has Orpheus serve as priest of Apollo (Graves 28) while another has Apollo mate with Persephone (Kingsley 1999: 102). The prelude of Parmenides’s poem contains several not obvious allusions to these cults. For instance, the poet is escorted by the Daughters of the Sun (=Apollo) who had left the mansions of the Night (=Persephone) and now lead him to the gates of the paths of Night and Day which are blocked by giant doors with bronze axles and a lintel and a stone threshold and which open back to a gaping chasm whereat the Goddess receives him kindly. This location reminds of the Hesiodic picture of the extremity of the world where are the sources of Earth, Tartaros etc (§6 above) and beyond, in the West, the outermost limit is Night (§8, above). The “goddess” who receives the poet is given no name and this usually indicates Persephone. Parmenides is describing a descent into Hades/Tartaros (like that of Orpheus) so that true knowledge might be obtained. There has been found epigraphic evidence that he was a doctor-priest *iatromantis*, leader of a sect in Elea that practised incubation (*pholarchos* φώλαρχος), or something similar, aiming at higher states of consciousness, or divinization (Kingsley 1999)<sup>14</sup>.

**18. Zeno** succeeded Parmenides as the head of the Eleatic school in the mid-fifth century. “These are his views. There are worlds but no empty [space]. The nature/substance of all things has come from hot and cold and dry and moist – which change into one another. Man’s generation comes from earth; the soul exists as a mixture of the aforesaid where no element predominates” (DL IX, 29).

Zeno is better known for his ‘dialectic’ method whereby he takes a thesis, accepted in general or by his opponents, and then shows that its consequences are self-contradictory. This is exemplified in his two *aporiai* ἀπορίαι ‘perplexing problems’ that purport to show that motion is impossible. In one, Achilles, though a fast runner, will never reach the slow tortoise, which has a head start, because in order to cover the distance AB he has to reach the intermediate point C, then the intermediate point D and so on ad infinitum; thus he never catches up. But, of course, if there is no motion, then neither Achilles runs nor the tortoise has a head start; furthermore the example assumes infinity in a very finite situation. The other *aporia* is about the flight of the arrow which carries with it the space that it occupies and therefore does not move in space (and, again, moves through intermediate points ad infinitum) and therefore never reaches the target. Here we have similar fallacies (see Aristotle, *Phys* 233a21f and 239b5f).

These *aporiai* obviously do not mean that Zeno actually believed in such physical events. His concern was to vindicate the doctrine of his teacher Parmenides that being is one and motion impossible.

The aspect of Zeno’s adoption as a son by Parmenides is interesting. It is yet another instance of a

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13 The practice of incubation spread to the colonies of the Phocaeans and Carians (both Ionians), like Apollonia and Istria on the Black Sea, Velia in South Italy and South France. For details of the practice see §12 and n 9.

14 Here, I disagree with some of Kingsley’s other interpretations. For this whole paragraph see further Boardman 1980; Brewster 1993; Burkert 1972; Collins and Fishbane 1995; Guthrie 1965, vol 2; Langlotz 1966; Solomon 1994. Also writers in note 9, earlier.

fairly wide practice whereby a teacher passed all his knowledge and authority onto a favourite student who thus became, in effect, a son-inheritor. Master-craftsmen, physicians, diviners and those engaged in priestly functions or 'esoteric' pursuits, did the same. We find a similar practice in India (exemplified in *ChU* III, 11, 5, IV, 8f, VI, 14, 2 and *Tait UI*, 9, 1f).

**19. Melissus** was a Samian admiral who defeated the Athenian fleet in 441 – though Athens won the war in the end; this is the only fact known about him. He may have known Parmenides' doctrine about the One Being, for he discusses this in similar terms but he transcends every notion of limit and of the sphere in very rigorous deductive reasoning.

Whatever was always was and always will be. For if it was generated, then necessarily before it was generated it was nothing. Now, if [it] was nothing, in no way could anything have come to be from nothing. Since, then, it was not generated but is, it always was and always will be; and it has no beginning nor end but is limitless. For if it was generated, it would have a beginning (having begun at some time) and an end (ending at some time). Since it neither began nor ended, [and] always was and always will be, it has no beginning and no end. For what is not wholly cannot be always. But just as it is always so too in magnitude it must always be limitless. Nothing that has a beginning and an end is either eternal or limitless.

If it were <limitless> it would be one; for if there were two, they could not be limitless but would have limits against one another (Fr 6). Being one, it is wholly homogeneous (*homoion ὁμοιον*); for if it were non-homogeneous, being plural it would no longer be one but many (KRS 35). Thus, then, it is eternal, limitless, single and wholly homogeneous. It would not lose anything nor grow larger nor be rearranged nor suffer pain or anguish; for if it underwent any of these, it would no longer be one. For if it alters, necessarily what-is will not be homogeneous but what-previously-was perishes while what-[previously]-was-not comes into being. Indeed, if it became altered by one hair in ten thousand years, it will all perish in the whole of time. Nor can it be rearranged; for the earlier arrangement (*kosmos*) does not perish nor a non-existing one will come into being. And since nothing is added or destroyed or alters, how could anything that is be rearranged? For it would be rearranged if it altered in any way. Nor does it suffer pain; for it would not be whole if it had pain, since a thing in pain could not be always nor have equal power with what is healthy. Nor would it be homogeneous if it were in pain since it would have pain by the loss or addition of something and would no longer be homogeneous. Nor could what is healthy suffer pain; for then what-is [i.e. the health] would perish and what-is-not [i.e. non-health] would come into being. (...) Nor is it empty in any respect; for what is empty is nothing and this nothing could not exist. Nor does it move; for it cannot retreat at any point but is full... (Fr 7). This Being is incorporeal since if it had solidity it would have parts and would not be One (Fr 9).

Melissus was far clearer in his reasoning than other metaphysicians. With the same clarity he pointed out that, given the nature of Reality as described, sense perception with its multiplicity and incessant change must be false; and if many things exist, then they must be of the same nature as the One. Some think that the atomists later based their approach on this last argument (KRS 401) but while the atomists would postulate the reality of multiple "atoms" Melissus shows that the One is infinite and full and thereby excludes every notion of plurality. Melissus's Reality comes in this respect closer than any other Greek concept to the Upanishadic Absolute which is beyond the reach of the senses.

**20. Empedocles** (c495-35) came from Acragas in Sicily and flourished in the middle decades of the 5th cent. Many regarded him a charlatan but even more considered him a prophet, diviner, healer, magician etc, and his influence extended beyond the Greek culture into the Arab civilization (Kingsley 1995). As with Pythagoras, many legends were woven into his life, but we have some definite facts about him. He too was associated with Pythagoreans and Orphics and left us two works

– *On Nature and Purifications* (*Katharmoi* Καθαρμοί) now extant in fragments only.

For Empedocles the Cosmos is the Parmenidean sphere. Within this the one becomes many and the many one in a cyclical movement. This is accomplished at one level by means of duality – Love *philotēs* φιλότις and Strife *neikos* νεῖκος; then, under their influence, at the material level the four elements (or ‘roots’ *rhizoma* ρίζωμα), fire, air, water and earth, undergo changes with separations and mixtures. Thus between unity and multiplicity, Empedocles interposes two forces and four elements. The Sphere is unified but compounded. Under the influence of Strife the elements, which are eternal and have the qualities of hot, cold, dry and moist, separate and gradually our familiar world of multiplicity is formed, as various mixtures take place; at the same time Love, “innate also in mortal bodies”, acts bringing about unions and good thoughts and deeds (Fr 17). Eventually the elements separate completely into four concentric spheres; but this structure gets dissolved and under the increasing influence of Love all is fused back into the Sphere with Love at the centre and Strife banished to the surface. This is the cosmic cycle that repeats without beginning or end. (Frs 27, 29, 30, 31, 35, 38.) However, necessity (or chance) also play a causal role in all this, but, as with other thinkers, it is not presented succinctly.

Any one Cycle has four stages or generations. First (or last) is the unity of the Sphere, a kind of golden age where Love rules. Then Strife begins to assert its power and the elements separate, while, at the same time various unions and mixtures take place. Bizarre phenomena and monstrous creatures appear as Strife comes to dominate: “first, whole-natured forms arose from the earth having a portion of water and heat” (Fr 62), then separate members of creatures like neckless heads and shoulderless arms (57) and even man-faced cattle and ox-headed men and hermaphrodite creatures (61). Then come the second and third generations, where from the various creatures only those survive which by a self-acting (*automatos* αὐτόματος) process are suitably compounded (an early version of the survival of the fittest!). Then, always under the influence of Love, emerges the fourth generation which is our own familiar world, a race of mortals living with groans in a “roofed cave” (120, 124), in the darkness on the meadows of ruination where are slaughter and rage (121) and where rule opposites like discord and harmony, ugliness and beauty, sleep and wakefulness (122-3).

**21.** It is quite evident that Empedocles has no high regard for the ordinary life of men, “distracted by cruel evils” and “wretched pains” (145). Humans have been exiled from the gods “trusting in mad Strife” (115) and, in utter delusion, think that they get born and die whereas it is simply the constant movement, intermingling and separation of the elements that produce forms and then dissolve them (Frs 8, 9, 11, 15). They disobey the oracle of Necessity, “an ancient decree of the gods” and thus err and defile themselves, swearing false oaths; so over a long span of time, “thrice ten thousand seasons” (115), they change from one embodiment to another in plants and beasts and men (117, 126, 127), and in their delusion parents kill their children and vice versa (136-7). Consequently they move on “changing from one hard path of life to another”; the souls are chased by the ether [=air] to the sea which spits them onto the earth; thence they are cast into sun-rays and then into the whirls of ether. Each element receives them but all abhor them (115).

However, the situation is not entirely hopeless. Although few “can find the Whole” yet men can learn from a teacher like Empedocles himself (Fr 2) or Pythagoras, “man of immense knowledge... a master of every kind of wise deed” (129) and so “gain the wealth of divine thoughts” and, purified, being at last born in the form of prophets, bards, healers and princes (146-7) return to their godly state. Empedocles described himself as being at first “an exile from the gods and a wanderer” (115) but then, “an immortal god, no longer mortal” (112). He claimed to have powers to control the weather, to prophesize, to cure diseases with “a healing word” and even restore life (111-2). But he does not divulge the practical methods needed to reach such a level of being and power: all he says is – good deeds, good thoughts, abstention from shedding blood and from evil; but, obviously, he must have used techniques and practices common to the Orphics, Pythagoreans and Eleatics.

With Empedocles we have explicit mention of “supernatural” powers. In Indic texts these are termed *siddhis* and are said to be obtained usually through yogic practices *sādhanas*. Such powers are met in the *RV* also as with the *Kesins* who ride the wind (X, 136) or with seers performing wondrous deeds, like Visvāmitra commanding the rivers to stop flowing (III, 33). The “healing word” may correspond to holy *mantras* used by the Indic yogins.

### **Mainland Greece and Attica**

**22. Anaxagoras** (c500-428) came from Clazomenae in larger Ionia but spent much of his life in Athens where he had as pupils the dramatist Euripides and the politician Perikles. At c430 he was tried for impiety and condemned, but fled to Lampsacus. He died in 428. In his *Phaidōn* (97B-98C) Plato has Socrates say that he was delighted to discover Anaxagoras who postulated that Mind (= *nous* ‘intelligence’) was the cause of all things and that therefore they would be formed and arranged in the best possible way and to the best possible end; but as he read on he was disappointed because Anaxagoras made no use of *Nous* in the ordering of things but stated as causes air and ether and other irrelevancies. Aristotle classed Anaxagoras among the physicists who shared the view that nothing comes into being from not-being since he postulated infinite primary substances as initially existing in one whole (*Phys* 187a23).

According to Anaxagoras, indeed, all things were together, infinite in number and smallness, none being clearly visible because of their smallness (Fr 1). All were held in the dominion of air and ether which also were infinite (Fr 1). All were together including the opposites, wet-dry, hot-cold etc, and some earth, all being the seeds of things infinite in quantity and unlike one another (4). The separation came about through the revolution of heaven, stars, sun and moon – a movement arranged by Mind. Mind itself is limitless and self-ruled, unmixed, alone by itself, unlike other things which contain a portion of everything else; being finest and purest, it has knowledge of, and power over, all things that have soul and the revolution (12-3). Thus Anaxagoras pictures a twofold world - one intelligible (=Mind), which is always (14), and one perceptible, which is changing as things separate, starting with ether and air, then, through condensation, water and earth (2, 15, 16). It is air that holds all the seeds and these, descending with rains, give rise to plants while animals initially come from moisture, but later from one another (KRS 382). Some passages suggest a belief in other parallel worlds but this is uncertain (Fr4; KRS 369, 379). As for perception itself, he thought that men cannot judge the truth due to the weakness of the senses (21).

Anaxagoras had a pupil called Archelaus, who continued in much the same line of teaching. Archelaus is regarded as the first Athenian philosopher. Some ancient sources say that he also touched upon ethics and “philosophised about laws and about the noble and the just” (DL II, 16). Socrates was a pupil of his.

**23. Leukippus and Democritus** flourished probably in the 2nd half of the 5th century and are known as “the atomists”. Of Leukippus very little is known but Democritus (from Abdera, North Greece) is supposed to have learnt from him as also from Anaxagoras and the Pythagorean Philolaus and (DL VII, 34) “certain Magicians and Chaldeans”. Democritus wrote several books (all lost to us) on Ethics, on Physics (but *the Great World-ordering* was also said to have been written by Leukippus), on Mathematics, Medicine, Agriculture, Poetry, and others: only fragments have been preserved in later doxographers. He was not mentioned by Plato but was held in regard by Aristotle, and his thought had a wider effect indirectly through the Epicureans of the 4th century.

Modern scholars are interested most in Democritus’s atomism. This thinker literally pulverized the Parmenidian One Being into minute indivisible entities, atoms (literally “uncuttable” *ἄτομο-*), which cannot be broken down further, have different forms and properties dependent on their form but retain the attributes of the Parmenidean Being. These atoms move in a whirl and unite in various

ways producing all existent things; by separating they cause disintegration. (Aristotle complains here that no explanation is given of how motion itself is produced.) The atoms exist, move, unite and separate in the void (*kenon κενόν* = empty). This void is not absolute Non-Being (*ouk on, οὐκ ὄν*) but relative in that it has *spatial* being. Even the soul or mind and the fire are composed from spherical atoms because these are most mobile and the soul is fiery.<sup>15</sup> Perception too depends on atoms in that each sense receives from objects images (*eidōlon εἰδῶλον*, hence 'idol') composed of subtle atoms. There is a genuine form of knowledge and a dark one belonging to the senses (but no explanation survives about the genuine one). Otherwise man is separated from reality and knows nothing about anything; only by convention is something sweet or bitter, hot or cold: the truth is that there are atoms and void.<sup>16</sup>

In antiquity there was, it seems, greater interest in Democritus's ethical teaching, for more material on this aspect has survived. In his moral ideas begins to emerge more clearly the image of the *sophos σοφός* 'sage, wise man'. Medicine heals the diseases of the body, wisdom frees the soul of passions (Fr 31). Refrain from crimes not through fear but through duty (41). The foolish acquire good sense through misfortune (54). Many erudite men have no intelligence (64). Accept no pleasure unless it is beneficial (74). Generous is the man who looks not for a return (96). Rather discover one cause than gain the Kingdom of Persia (118). It is not time that teaches good sense but appropriate upbringing and nature (183). The fragments cover a wide range of subjects – child rearing, education, good spirits, fortune, prudence, politics and so on. However, the ascription to Democritus of many of these fragments is highly dubious. Most of them aim at maintaining cheerfulness in daily life as illustrated by this one: "Consider the lives of those in distress reflecting on their intense suffering so that your own possessions and condition may seem great and enviable; thus you yourself may cease to suffer by desiring more" (191).

The atomic theory was known in Ancient India from early times. Although very little survives from the early doctrines of the Cārvakas/ Lokā-yatas, it is believed they had one, as also the Jainas. Its best known formulation is in the *Vaiśeṣika* system, where the atoms have no size and only three of them together form a perceptible unit. An atomic triad of earth has smell, taste, colour and touch (=texture); of water has taste, colour and touch; of fire has only the last two; of air has only touch (*Vaiśeṣika Sūtra* I, 1, 1-4).

**24. Pythagoreanism** surfaces more clearly in the late 5th century. Many Pythagoreans are known by name, like Hippasus and Ion of Chios, the best known being Philolaus of Croton (S. Italy) who retired to Greece and spent some time at Thebes. The silence maintained by the Pythagoreans about their doctrines was at this period broken: Hippasus was said to be the first, and others followed including Philolaus who wrote a book, fragments of which are extant.

A kind of communism was practised in that friends' possessions were held in common. Other practices included various rituals like sacrifices to gods, purificatory rites and burial customs. Specialization produced two currents – the Akousmatikoi or Aphorists who studied the esoteric, divine doctrines and regarded themselves as genuine followers of the Master, and the Mathematicians or 'scientists' who turned to the sciences. The idea of harmony was paramount – expressed in the *Tetraktys*, which gives the *decad* and incorporates the *monad*, *dyad* and *triad* as numbers transformed into metaphysical entities.

Nature is a harmony from what-is-unlimited and what-limits. The soul itself is a harmony, a blend

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15 *Met* 985b4 and 1009b7, *Soul*, 403b28ff ; DL IX, 31 ; Hippolytus *Refutations* I, 13, 2; Simplicius *On Heavens* 294, 30ff and *On Physics* 28, 15 and 327, 23.

16 *Met* 1009b7-15; DL IX, 72; Plutarch *Against Colotes* 1108Fff; Sextus Empiricus *Against Mathematicians* VII 136-140; Theophrastus *On Senses* 49-67. For this paragraph and sources see also Barnes 2001: 203-226 and KRS 406-428.

of contraries, and immortal. The heavenly bodies produce a concord as they move – the music of the spheres. Music is closely linked to number. Everything has its own number. The basic principles are 10 (pairs of opposites) – limit-limitless, odd-even, one-plurality, etc – but it is not explained, Aristotle complains, how they have been brought together (*Met* 986a22). The universe is One and multiplicity comes from its breath and the void which keeps things separate. Fire is at the centre and the earth is one of the stars [=planets, rather], creating night and day by its rotation about the centre<sup>17</sup>. Thus it was known even then that the earth moves.

**25. The Sophists** appear at about this period. Unlike the physicists we examined so far, they were itinerant teachers who instructed young men for a fee. Their basic skill was rhetoric and they claimed they could teach anything. Some of them were highly intelligent and had great influence on Greek life – e.g. Protagoras from Abdera who taught that “Man is the measure of all things” and Gorgias from Leontini (Sicily) who was a great orator and taught that the One Being was unknowable and, in any event, such knowledge would be incommunicable. On the whole, the sophists were not concerned with truth: they taught both a thesis and its antithesis. Young men were eager to learn and fit into the changing model of the good citizen moving away from the gifted, well-educated aristocrat, the sagacious leader of men or the brave warrior, to the clever disputant and all-knowing socialite.<sup>18</sup> The concern was not to think well but to “speak well” (*eu legein* εὖ λέγειν). “Sophistry is wisdom in appearance only” (*Ar Met* 1004b 19). Thus philosophy got lost in soap-bubbles of rhetoric.

**26. Socrates** (470-399) seems to oppose and refute the sophists above all but his real concern is to direct thought to true knowledge and, through self-knowledge and practical application of ethics, to gain self-control and a better life. Son of a sculptor and a midwife he led a life that was noble and courageous in peace and war. The Delphic oracle declared him to be the wisest of men but he himself was baffled by this, claiming that he knew nothing. To demonstrate this he roamed in the streets and squares of the city asking (intellectuals and simple artisans) questions like: What is justice, friendship, virtue, bravery? and the like. He had two aims in using this method of enquiry, which he named after his mother’s art *maieutikē* μαϊευτική ‘midwifery’. He made people look into themselves and elicit from their own resources whatever knowledge they had, thus demonstrating that knowledge or wisdom is innate in man. He also made them wonder, not about the origins and structure of the world, but about the purpose of man’s life and how best to fulfill it. He was aided in this by his *daimonion* δαιμόνιον ‘guardian spirit’ which, being the voice of God in him, restrained him from inappropriate action; also by meditation or quietude of mind which he practised for long periods (Plato’s *Symposium* 270C); with this he rested in the pure and changeless Being of himself calling this “wisdom” (*Phai* 79D). Thus, he taught, self-knowledge leads to and is wisdom – “the science of sciences” (*Charmides* 169D-E).<sup>19</sup>

Although the word *philosophia* and its cognates may have been used before (by Pythagoras and Heraclitus, both uncertain: see GEL and Kazanas 2003b), Socrates gave it an ethical and psychological meaning. His enquiries and teaching turned away not only from the practices of the sophists but also from the earlier *phusikoi* or *phusiologoi* who were concerned with the origin and structure of the world. His main concern was the discovery of who or what man truly is and the realization of one’s divine nature (§29).

Socrates roused much hostility with his method of questioning and eventually was tried for

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17 *Ar Phys* 213b22, *Heav* 290b12, *Soul* 407b27, *Met* 985b23ff; DL VIII, 10, 85; Iamblichus *Life of Pythagoras* XVIII, 81-7; Burkert 1972 passim; Huffmann 1993; KRS 322-350; Barnes 2001: 162-181.

18 For the historical background here, see Field 1930; Ehrenberg 1968; Austin & Vidal-Naquet 1977; Kerferd 1981.

19 See also Xenophon’s *Memorabilia* III, 7, 9 and, moreso, IV, 2, 24ff, where Socrates stresses the need for self-knowledge.

impiety and for corrupting the youth and was condemned to death. Although his followers made arrangements to get him out of prison and send him abroad (Plato's *Kritōn and Phai*) he refused. But he also gained a circle of devoted followers – Alkibiades, Xenophon and Aischinēs (who also left some fragments on Socrates), then Phaidon, Eukleidēs, Antisthenes and Aristippos, all of whom founded philosophical schools, and, most famous of all, Plato, who established his Academy and developed his Master's teaching much further. Two generations after Socrates, Aristotle wrote that he “disregarded the physical universe and confined his study to ethical issues” but also that he was the first seriously to employ “inductive reasoning and general definition” (*Met* 978b1, 1078b3-5); he also remarked regretfully that just when Democritus began to understand the notion of “essence” in the material world, Socrates diverted attention to politics and ethics (*Pts A* 642a28-31). Obviously, Aristotle was not much interested in the Socratic teaching about self-knowledge.

**27. Plato** (427-347) was an aristocrat claiming descent from king Kodrus through his father and from Solon through his mother. At 20 he met Socrates and was so impressed by the old philosopher that he burned his poems and tragedies and devoted himself to philosophy. The death of Socrates in 399 left a deep impression. Afterwards he took part in the Corinthian war (395-4). He never married and travelled as far as Egypt in the Near East. He also went three times to Sicily trying to persuade Dionysius of Syracuse to apply his political philosophy, but without success. There he met and was influenced by the Pythagoreans and the Eleatics. In 387, at the age of 41 he founded his school just outside Athens at a sacred grove of Acadēmos (whence the name ‘Academia’) so that the study of philosophy might be pursued in a regular and disciplined manner. In the organisation of life in his Academy he probably followed the model of the Pythagoreans starting lessons early in the morning. The students were both Athenians and foreigners who graduated not only as philosophers and mathematicians and other scientists but also politicians and generals; women are also said to have attended – again as was the Pythagorean practice. Plato died at 81 in 347; the Academy lasted almost 900 years until it was closed down by Emperor Justinian in 529 CE.

**28.** As the lectures and discussions in the Academy have not been preserved, Plato's Dialogues form our only guide to his teaching. Even ancient commentators discerned four influences in Plato's thought: a minor one from Heraclitus; two important ones from the (Orphic-)Pythagoreans and the Eleatics; and, of course, Socrates. These four currents plus Plato's own genius produced the first complete philosophical system that has survived from Ancient Greece. Its development covers roughly four phases.

a) The first is the period when Plato is very much under the influence of the Socratic teaching as shown in the early Dialogues<sup>20</sup>: *Lachēs*, *Charmidēs*, *Euthuphrōn*, all exploring the true meaning of ‘temperance/moderation’ *sōphrosunē* σωφροσύνη and ‘piety’ *eusebeia* εὐσέβεια; *Protagoras* (on virtue and whether it can be taught), *Hippias Meizōn* (on beauty) and *Hippias Elattōn* (on falsehood), all three starting polemics against the sophists; then, *Iōn*, a short attack on poets; finally the *Apology* and *Kritōn* which present a defence and moral vindication of Socrates.

b) In the second, the transitional period, the Socratic influence is still present but Plato seems to extend his exploration further afield. *Lysis* opens a discussion on *philia* φιλία ‘friendship, love’ (which will be concluded in the *Symposion*). *Euthudēmos* denigrates the methods and tricks of the new sophists. *Kratulos* examines language, with some to us amusing etymologies. *Menexenos* attacks ornate but hollow rhetoric. So does *Gorgias*, which also sets up against the doctrine “might is right”

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<sup>20</sup> The order of the Dialogues is a much vexed issue and scholars differ. My own view is not dogmatic but I omit the doubtful ones like *Lovers*, *Epinomis* etc. I give the titles in straight transliteration from the Greek and not the unnecessary Latinized names, e.g. *Phaidōn* rather than *Phaedo*. I keep *Republic* for *Politeia* and *Laws* for *Nomoi* since they are meaningful current names that translate well the originals.

the philosopher's adherence to justice and the moral good even at the cost of his life; teaches that the sick soul must be cured through philosophy and punishment and that incurably bad souls go to Tartaros while the virtuous go to the Isles of the Blest; and presents tentatively the theory of Ideas (497E, 503E, 506C-D), which are often translated as 'forms' – existing eternally and immutably in their own non-material world (§30).

c) The Dialogues of the mature period still have Socrates as the main interlocutor but they present new ideas not found in the decidedly early dialogues. *Menōn* re-examines the question of virtue and whether it can be taught and now says that all learning is in fact recollection of innate knowledge acquired by the immortal soul in previous existences (81ff). In the *Phaidōn* the theory of Ideas makes a grand entry (74ff) and is closely woven with the themes of the soul's immortality (69E-72E), recollection (72E-74), re-incarnation (81E-82C), purification through philosophy and return to its divine state (82D-84C). The *Symposium* applies the theory of Ideas to Beauty and Love (Eros) showing that earthly beauties are illusory images (*eidola εἰδῶλα*) of the divine beauty (210-212). The *Republic* deals with many earthly matters in establishing the ideal community but even before the parable of the cave (514ff) brings in the Ideas and the duality between the intelligible and the visible/sensible (476ff) and later reiterates the (Orphic-Pythagorean) fate of the soul in another myth (614Bff) as in the *Phaidōn*. *Phaidros* again connects the theory of Ideas with metempsychosis and, like the *Republic* (435Cff; 439Cff), presents the soul as tripartite (intellect, emotion, appetite: 246 A-C, 253Dff).

d) In his last phase Plato restates and clarifies old recurrent ideas and explores some new areas. In the first part of the *Parmenides* he meets various objections against the theory of Ideas and in the second part clarifies with eight hypotheses about the One his own relation to the Eleatic tradition thus establishing duality (the One, which is One in every case, and the Other which is Many). The *Theaitētos* attempts to define 'knowledge' *epistēmē ἐπιστήμη*, rejects three definitions (knowledge is perception 151E, is true opinion 187C, is true opinion with reason 201C), refutes the Protagorean doctrine "Man is the measure of all things" (152A; 161C) and restates the theme of catharsis and return to the godly state (176A). The *Sophistēs* seems to continue the discussion in *Theaitētos* but develops into a wholesale attack on sophistry and, in contrast, mentions briefly the philosopher (253E) bringing in the ontological aspect that Being contains "motion, life, soul and intelligence" (248E). The *Politikos* (=Statesman) examines good and practicable government by a monarch, by the few and by the many, and bridges the passage from the ideal State of the *Republic* to the more pragmatic one in the late *Laws* (and incidentally brings in the notion that virtue and art are best expressed in the absolute mean, 283C-285C). The *Philēbos* examines the nature of the 'good' *agathon ἀγαθόν* concluding that the most desirable life demands a mixture of knowledge and pleasure and, arguing on the (Pythagorean) principle of Limit and Unlimited (26A), that the pleasure of wisdom and of knowledge-of-oneself is the highest (63B). The *Timaios*, alone of all the Dialogues, deals with physics in presenting the genesis of the cosmos and of man and in so doing restates the theory of Ideas and the basic concept of dualism (28-29B, 30A, 31B). The *Critias* with its tantalizing myth of Atlantis (found nowhere in pre-Platonic texts: see §34) was left unfinished, a mere fragment. Finally, in the *Laws* the concern is, again, with Ethics and Politics: Books 1, 2, 3, and large sections of 5 and 7 discuss human nature, stressing the importance of temperance (635E, 647B, 696C), of obedience to the laws (715C) and of the soul as man's most divine possession (726A, 966D); education should direct towards the Good (809A) and the guardians themselves should never lose sight of that. The conditions of the ideal State of the Republic have become more pragmatic but the Nocturnal Synod of law-guardians are wise but also rather conservative and theocratic old men.

**29.** Plato's main interest was man's return to his divine state, 'divinization': man should strive to be like god (*Rep* 613A-B; *Theat* 176A-B). Hundreds of studies have examined Plato's theory of Ideas, theory of knowledge, his One-Many resolution, cosmology, and so on. All these are secondary themes subordinated to his chief concern. This concern is evinced even in the early Dialogues which probably

express the Socratic teaching. In seeking definitions for the “good” or “beautiful”, for “temperance” or “friendship”, he stressed the need to turn to virtue which is knowledge or wisdom (manifesting as justice, temperance, courage and so on), and its application in daily life (moral conduct): only this brings a man to real happiness which is his highest good. Since this is innate in man’s nature, then man can reach it through self-knowledge; all he needs is to have it awakened and brought forth through “dialectic”, the process of rigorous question-and-answer. In the very early *Charmides* self-knowledge is said to be “the science of sciences” (*epistēmē epistēmēs* ἐπιστήμη ἐπιστήμης: 169D-E).

This whole system alone is ‘philosophy’ for (Socrates and) Plato. In the later Dialogues it is articulated more precisely. Divinization (=return to one’s divine nature) through self-knowledge is the ultimate object of philosophy. In the *Timaios*, of course, philosophy is given a different origin: “The vision of day and night, of months and circling years has produced the art of number; it has given us the concept of time and also the means of studying the nature of the universe – from which has risen philosophy in all its ranges” (47B). This is not really different from the view expressed in *Theaitētos* 155D (seconded by Aristotle) that love of wisdom begins with awe and wonder. The *Timaios* was written largely to explain in terms of the grand cosmic background why man could and should pursue divinization, which was the end of wisdom. True wisdom belongs to God alone but whoever pursues it with *philosophia* may be called a philosopher (*Phdr* 278D). Although the Delphic Oracle had declared Socrates to be the wisest of Greeks, he himself claimed that he knew nothing since he did not know himself; his wisdom, he thought, consisted in his awareness that he knew nothing. “It seems to me ludicrous, when I do not yet know [myself] to study irrelevant things... I investigate not [physics etc] but myself – to know whether I am a monstrous, complicated creature... or a simpler being by nature partaking of a divine, undeluded character” (ibid 169D-E). The reply to this is given repeatedly: “Every soul is immortal” (ibid 245C; *Politikos* 309C; *Laws* 726A). Thus, once the soul is purified, it reaches after death that which is most like itself, divine, immortal, wise, and lives in bliss and truth with the gods eternally (*Phai* 80E-81A). Indeed, in the *Phaidros* the soul – in the famous image of the chariot with the winged horses – flies to the celestial limit with the gods and gazes at True Being (= *ontos on ὄντος ὄν*: 247C ff).

Divinization takes place in life, in this world, and is achieved through education which should not be compulsory (*Rep* 536D-E) and has three broad aspects. First, apart from the wide range of subjects and disciplines given in the *Republic* and the *Laws*, the coping stone is the Dialectic which constrains rather than persuades and through which one arrives at the true knowledge that is innate. This does not consist in putting anything in the student’s mind anymore than inserting sight into blind eyes (*Rep* 518C). It is based on Plato’s doctrine that knowledge is truly memory or recollection, since the soul knows both things divine and mundane having come embodied into this world from heaven and passed through many re-incarnations (*Menōn* 81ff; *Phai* 72-84B; etc). All this knowledge is covered over at birth and all learning is its uncovering: *máthēsis oudé allo ti ē anámnēsis* μάθησις οὐδέ ἄλλο τι ἢ ἀνάμνησις ‘learning is nought else but recollection’ (*Phaid* 72E). Second is the practical aspect. The aim is to protect man from evil and promote the cultivation of virtue in action (*Tim* 87D) attaining temperance and perfection through restraining desires (*Laws* 647D) and being directed towards the true (ibid 730B-C) and the good (ibid 809A). This process is elsewhere called *kátharsis* κάθαρσις ‘purification’, which frees man from the bondage of the material world (*Phai* 67C). The third aspect is a kind of meditation. This is either played down or totally omitted from learned studies on the Platonic teaching. Yet this is described clearly in *Phaidon* 79D: usually the soul is turned outwards through senses and body to the material world of change behaving as though drunk; but there is an inward turn when the soul withdraws from the body and senses, reaches the everlasting, changeless Being (ὄν *aí* ὄν *ἀεί*) and rests in communion with that – “and this state of the soul is called wisdom”. And only the philosopher tastes the delight arising from the contemplation of true being (*Rep* 582C). Alkibiades gives a good example when he says that Socrates stayed for hours in contemplation (*Sump* 220C).

The meditational practice may be connected with the regulation of energy in the form of the seminal fluid passing up and down through the spinal channel between the brain (= *enképhalos*), the

seat of reason or higher soul, and the sex-organ. Plato himself was a celibate. Some students may have practised regulated abstinence, though this is not certain. The regulation would be used for advancement in the effort towards divinization otherwise the energy would be dissipated in sexual enjoyment. This regulation of the energy is implicit in Plato's detailed description of the physiological process in *Timaios* 73Bff which includes the two veins that run along either side of the spine (*Tim* 77ff) and cross at the level of the throat. This sounds like the yogic system of the *kuṇḍalinī* or Serpent Power in the (later) Vedic Tradition and the three channels *Iḍā*, *Piṅgalā* and *Suṣumnā*; the last one may have corresponded to what was known in Greece as the central "holy tube" (Onians 1989: 208). It is possible that Plato borrowed (aspects of) this physiology from the Pythagoreans in Sicily. But it is unnecessary to hypothesize (McEvelley, ch 8) that it was brought to Croton in the late 6th cent by the physician Demokedes from the Persian Court when there is not the slightest indication of its presence there. On the contrary, aspects of this doctrine were (as McEvelley notes) known in Greece long before Demokedes. First, the serpent was a cosmogonic element in Orphism and, moreover, as a symbol of the soul, it was already present in the Minoan-Mycenaean culture (Nilsson 1964; Dietrich 1974). Then, the spinal marrow was associated with *aiōn* 'life/life-span' in Pindar and Orphism (see GEL) where *Aiōn* was another name for Dionysos (West 1971: 151ff). Finally, Hesiod and Homer knew of the seminal fluid as a conductor of the life-force flowing in the spine (Onians 1989: 110) and *Odyssey* 5, 160 mentions "the sweet *aiōn* flowing down". A similar doctrine was known in Egypt in connexion with Osiris (*VME* §§ 58, 64) but the Osirian *djed* column (symbolizing spine, phallus, tree-trunk) does not appear in any identifiable form in the Greek iconography even if the doctrine came to Greece sometime before, say 700 (and there is no evidence for such a transmission). In any event, even if it came from Mesopotamia in the 2nd millennium (McEvelley, p 287), for which transmission, again, there is no proof (other than the similarity of the two entwined serpents on the caduceus or staff of Hermes), the physiological doctrine and the associated spiritual/occult practice was thoroughly hellenized by Plato's time.

In describing the creation of the Universe by the Demiurge and man's genesis at the level of the gods in heaven, the *Timaios* presents summarily the whole process, i.e. man's descent on earth and his return to his godly state (41 Dff, 90E ff).

**30. The Ideas** constitute for Plato an eternal, immutable reality, the one and only reality, apprehended only by mind or intelligence, *nous*. This reality, the True Being, is in the supra-celestial region (*hyperouranios topos* ὑπερουράνιος τόπος: *Phdr* 247Cf). Plato uses two words – *idea* ἰδέα and *eidos* εἶδος, both meaning much the same, "aspect, species, type" and are translated as "idea" or "form"; however, "form" strictly translates *morphē* μορφή, a term used in this sense by Aristotle not Plato. All mundane phenomena, all things and processes that are ever changing in the ordinary world of becoming (the *gignomenon aei* γιγνόμενον ἀεί: *Tim* 28A), are apprehended by the senses and are passing, unreal "shadows" of the Ideas – as expressed vividly in the famous parable of the cave (*Rep* 514ff): they are real and exist only in so far as they partake of the Ideas. As man comes into contact with the sensible phenomena of the ordinary world, which change constantly and perish and thus cannot be truly known, he can remember the Ideas which his soul had known in his pre-existence. Thus the Ideas have ontological significance in that they are the real essences of all things (*Phai* 65D, 78D, 100D; *Symp* 211A) and are the unity and immutability in contrast to the multiplicity of things (the one ideal circle or horse and many imperfect circles or horses in the world). They also have logical significance since they enable us to find order and unity in the rather chaotic multiplicity of the mundane phenomena (*Thet* 185A-186E). Finally, they have teleological significance in that everything, including human action, has a purpose which is the realization of an ideal (form or quality) present in the realm of Ideas or Intelligence (*Rep* 550E, 596B) so that the Ideas are also causes (*Rep* 508E, 517B; *Soph* 247E f). Since everybody and everything aim at the "good", even when to an outsider the end may seem evil, the Good is the Idea of Ideas (*Phai* 99Dff; *Rep* 504Dff) and akin to God (*Tim* 29-30A).

Here we may note parenthetically the similarity of thinking in some upanishadic formulations, such as 'the truth of truth(s)', *satyasya satyam* (*BU* II, 1, 20: see *VME* §26). This philosophical thinking in the Vedic Tradition goes even further back to its early beginnings found in the *Rgveda* (III, 55 refrain) 'Single is the great power of the gods' *mahād devānām asuratvām ékam* (*VME* §8).

**31.** However, some aspects in Plato's ontology, metaphysics and cosmogony are left obscure. First of all, the exact relation of the Good to the Ideas is not as clear as one would like; nor whether it is the ultimate and absolute Unity of Being, as some maintain more by way of wishful thought than actual demonstration. Nor is it clear how in the *Timaios* various kinds of Motion (34A) come before the creation of Soul, since Soul is defined in *Phaidros* 245C and *Laws* 897A as self-moving and cause of all motion. Just as unclear is the precise relation of Reason (*logos, nous*) to Soul in general and (in *Timaios*) to the Demiurge in particular: in *Republic* 435E<sup>ff</sup> Reason is part of the soul, but in *Theaitētos* 185E reason is the soul functioning "in and by itself", while in the *Timaios*, the Demiurge seems to be the highest Reason creating the Soul and the World with the eternal Ideas as his prototype. Then, the substrate upon and in which the Ideas are imprinted (*Tim* 48E<sup>ff</sup>) is described as "receptacle" *hypodochē ὑποδοχή* (49A) but its constitution is not defined; yet, if it is empty space, as some maintain, it would have been very easy for Plato to say so. The substrate is closely linked with the elements: in *Timaios* 31B<sup>ff</sup> the Body of the Cosmos is compounded of the four (Empedoclean) elements, "the four roots of all things", but in 53C<sup>ff</sup> we find that these are not simple basic substances but solid compounds of basic triangles and have corporeal qualities; here the basic triangles remind us of the solid atoms of Democritus.

I personally like to think that Plato was at heart a monist and that the Unity of Being was his ultimate fundamental concept. Certainly, many arguments have been adduced in favour of this interpretation. It may be, as Aristotle reported (*Phys* 209b14), that Plato did not present fully in the Dialogues what he taught orally in the Academy. Plato himself stated (*Phdr* 275C<sup>ff</sup>; *Seventh Epistle* 341C<sup>ff</sup>) that he had little regard for written doctrines and that his real philosophy was given orally, in private – much as Socrates and the Pythagoreans had done. Perhaps his oral teaching contained an explicit doctrine of monism (see n 21 below). But in his Dialogues it is duality that clearly predominates.

**32.** Dualism emerges from almost every corner in Plato's writings. The first main division is between the realm of immutable Ideas and the world of mutable things. As it is put in *Timaios* 27E<sup>ff</sup>, there is that which-is-always (*on aei*) and has no genesis or becoming and that which-is-becoming-always but never actually-is. In *Republic* 509D<sup>ff</sup> the division is between the intelligible *noēton νοητόν* and the visible *horaton ὁρατόν* or sensible, *aisthēton αἰσθητόν*: the first is the realm of Ideas (and mathematical entities) which are changeless, apprehended by reasoning and intelligence or nous, and the second is the world of appearance with its ever-changing things and images and shadows apprehended by the senses and opinion *doxa δόξα* expressed in beliefs and conjectures. This occurs just before the world-famous parable of the Cave (514<sup>ff</sup>) which presents the common human situation – wherein people are fettered and see only the shadows of things projected and moving on the wall before them and will not generally believe anyone who tells them that the real world is in the sunlight outside the cave: the shadows represent the sensible world which is unreal and transient while the sunlight symbolizes the intelligible which is real and eternal. Then, the common duality of soul-body appears everywhere. In the *Timaios* we have on one side the Demiurge and the Ideas and on the other the substratum *hypodochē* (§31) or "whatever was visible ...and being in disordered notion" (30A).

What above all militates against any alleged monism in Plato is the genesis of man and man's relation to the Demiurge in the *Timaios*. Man does not issue directly from the Demiurge or His substance, and after death, even when completely purified, does not merge with Him –as happens in

other truly monist systems like the upanishadic teaching or Hermeticism or Gnosticism. The Demiurge fashions human souls in the form of stars and equal in number to them out of the residue of the material used for the creation of the gods but now shaken and mixed to a second and third degree of grossness, while the gods (themselves created earlier) fashion the physical bodies in which the souls will be incarnated (41Dff). The end of man is analogous. The embodied souls return (after *katharsis* in reincarnations) to the star-zone and there remain in eternal felicity as immortal luminaries, *but apart from God* (90E<sup>ff</sup>)<sup>21</sup>

However, Plato uses also a concept of triplicity. Thus in the creation of the World-Soul three materials are involved: there is uncompounded and indivisible substance *ousia* οὐσία, which remains the same, then the material which is changing and divisible into bodies and thirdly a blend of the two. The human soul is therefore tripartite and, consequently, the City-state reflects this triplicity.

**33.** Man and City (= *polis* > *politeia* πολιτεία ‘city-state’) are closely connected since the latter cannot exist without the former.

Man’s essence is the tripartite soul which governs the physical body, exists before birth and survives death; the soul’s most important part is Reason. In the *Phaidros* the image of the chariot represents the soul: the charioteer drives a pair of winged horses, one white, noble and obedient, the other dark, heavy and unruly (246A ff, 253D ff). The *Republic* analyses extensively the constitution of the soul (435C ff) and describes each part (439C ff): there is that which reasons (corresponding to the driver) and should, but does not always, command, and is called *logistikon* λογιστικόν ‘rational’; then, that which feels anger and other emotions like shame (corresponding to the white horse) and is called *thumoeides* θυμοειδής ‘emotional, high spirited’; finally, that which has appetites (corresponding to the unruly horse) and is called *epithumētikon* ἐπιθυμητικόν ‘appetitive, covetous’ or *alogiston* ἀλόγιστον ‘reasonless’. The noble white horse (=the *thumoeides*) at times sides with the driver (= *logistikon*) and at others with the dark horse of desires. If the driver is weak, the dark horse will drag the whole chariot downwards and so the soul will incarnate in a gross body on earth. Consequently, there are three human types: one in whom preponderates reason, another in whom predominates emotion and a third in whom prevail the gross appetites. To each type corresponds a particular (aspect of) virtue: the rational type should exercise ‘wisdom’ *sophia* σοφία or *phronēsis* φρόνησις; the spirited one ‘courage, fortitude’ *andreia* ἀνδρεία; the man with appetites ‘temperance, moderation’ *sōphrosune* σωφροσύνη. When a man exercises all three as occasion requires, he has inner balance or harmony which is expressed in ‘justice’ *dikaioṣunē* δικαιοσύνη.

This Platonic concept of natural morality is applied to the body politic, the City. This has three social classes: the producers-farmers, artisans, traders (having appetites and exercising temperance); the guardians-soldiers and policemen (having emotions and exercising fortitude); the rulers-philosophers (having reason and exercising wisdom). Thus there is an exact correlation between the soul and the Politeia. Justice is at first defined as “giving to all what is due” (*Rep* 331 E) and on further discussion this is shown to mean that each man and each class perform their due function and do not

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21 For a fuller discussion see Kazanas 2003, section III. Mc Evilly finds monism and the upanishadic teaching in Plato but ignores completely the *Timaios* passages on man. Instead he cites various statements from other Greek philosophers and even the Upanishads and Buddhist texts (2002:165-6) unaware that these have not the slightest bearing on Plato himself! I am not hereby denying that there are many and close similarities between the Platonic and upanishadic teachings (see Kazanas 2003), but generalities about “monism” are not very helpful.

It might be more correct to connect Plato’s system not with monist Vedānta but the dualist Sāṅkhya which admits a plurality of selves (*puruṣas* or *ātman*s) and has next to the conscious Puruṣa the coeval, insentient Prakṛti with her three *guṇas* which, ever in motion, generate all the phenomena of the world(s) and dissolve them back into her primordial substance (Raju 1971: 159ff; Kar 2003: 54-6, 68).

take on other people's activities (ibid 433B-E): only in this way will justice prevail in society. This is a later development from an early ideal community with simple agriculture, animal-husbandry, trade and crafts, feeding on barley-bread and bulbs, drinking wine in moderation and singing hymns to the gods (ibid 370C ff). In the developed social organization the rulers supervise the legislation and education and, as wise men, they do so for the benefit of all. The guardians protect the social order from enemies within and without. The producers subserve the other two classes and sustain them economically, so that they exercise their function full-time.

The classes are not fixed or hereditary: the wise rulers place the youngsters into the class that is most appropriate to their individual abilities. The two higher classes have communal possession of property and even of women and children, all of whom belong to the State; thus, having no private interests, they devote themselves wholly to the service of society. Only the producers may have private property and family.

A remarkable feature of the *Republic* is Plato's analytical description of the gradual descent from the aristocratic constitution to tyranny through oligarchy, timocracy and democracy (546B ff). This is brilliantly interwoven with the psychology of the different types that represent all these different forms of government: the constitution of a politeia reflects in large that of the predominant human type in it.

In the *Laws* several of the extreme conditions are abandoned (but not the prohibition of popular poetry). However, the general purpose remains the same. Education, being the same for women as for men, proceeds in stages – lower and higher, which is more arduous (*Rep* 498B ff; *Laws* 807E ff, 967E; also §29 above). Those with little ability receive elementary instruction and join the class of producers; those with more natural gifts move on until, with a new selection, the less gifted join the guardians, while the others, after further preparation, enter the class of philosophers. Obviously the final aim is divinization but only those in whom the ardent love for beauty, goodness and truth is naturally kindled (*Sump* 203E ff) can go forward. Thus, again, all receive their natural due! In the *Laws* this principle is extended to cover the physical environment so that the natural oecological cycles are not disturbed. Plato postulates respect for the land (*Laws* 737E-740A) and the natural resources (842E-845E). Thus justice (=giving to all their due) is the principle which regulates culture or civilization implying that men live in harmony not only with themselves and others but also with their natural environment.

**34.** It is worth noting in conclusion that Plato (and others) seemed to have knowledge that disappeared in subsequent centuries (§3, end).

a) Writing of Atlantis, he says that it was located beyond the “pillars of Hercules” (Gibraltar strait) and it was possible from there to travel to the other islands in the ocean and from them to cross over to “the whole continent over and opposite them” (τὴν καταντικρὺ πᾶσαν ἡπειρον: *Tim* 24E). Here it is obviously known that there was a continent beyond Gibraltar and the Atlantic ocean. (But note incidentally that the Atlantis myth which has fascinated the imagination of many ancient and modern writers and has been the cause of numberless publications, is not found in any Greek source before Plato. Although Plato says it was brought to Greece by Solon from Egypt, it is not found in any Egyptian texts either.)

b) G. Sarton, a modern historian of science, acknowledges Plato's belief that the earth rotates around its axis but rejects it because it contradicts various passages in Plato's writings (1952: vol I, 451). He cites of course Aristotle's *On Heaven* 293b30 and Plutarch's *Platonic Questions* VIII, which in turn cites Theophrastus who was first a student of Plato and later the head of Aristotle's school. Since both Aristotle and Theophrastus were Plato's students and very close to him in time, and since Plato had known and was influenced by the Pythagoreans who held this view (§24, end), it is strange to reject Plato's belief. Plato himself describes earth as “rotating about the pole that stretches through the whole [world]” and as being “guardian and maker of night and day” (*Tim* 40B-C). The key word here is *heillogenē* εἰλλομένη, the root of which is *heil(l)-ō* εἰλ(λ)-ω. One meaning of this is ‘shut (in)’

and Plato has this usage in *Timaios* 86E; but it is very difficult to see how here the earth creates night and day by being “shut in about (*peri περι*) the pole...” (!!) Plato uses the word also in *Kratulos* 409A where the sun is going around the earth. Theophrastus (in the Plutarch citation) says that Plato in his old age repented of having placed the earth “at the centre of the universe, to which it had no right”: in other words, late in life, when he was writing the *Timaios*, Plato believed that the earth was rotating round its axis. For a full and amusing discussion of the issue see P. James (1996: 116-8).

Aristotle rejected this knowledge placing firmly a motionless earth at the centre and thus established a wrong world-picture that prevailed for almost 20 centuries.

**35. Aristotle** (384-322) came from Stagira (North Greece) and was the son of Nicomachos, physician to Amyntas II of Macedonia. It was traditional that Asklepiad families<sup>22</sup> trained their sons from early age in dissecting to succeed their fathers. At 18 (in 367) he joined Plato’s Academy in Athens until 348 when he left and went to Assos (Troad). Here he married Pythias who bore him a daughter. In 344 Philip of Macedonia invited him to Pella to be tutor to young Alexander. Philip was assassinated in 336. In 335-4 after Alexander set off on his campaign, the Stagirite philosopher went back to Athens and founded his own school, the Lykeion (=Lyceum), known as Peripatetic, due to Aristotle’s habit of discussing philosophy with his students while walking in the gardens. When his wife died, he formed a permanent but unlegalized relationship with a Stagirite, Herpyllis, and had by her a son, Nicomachos (hence *Nicomachean Ethics*). With Alexander’s death (323) the anti-Macedonian feeling flared up in Athens and, leaving the school to Theophrastus, he withdrew to Chalkis where he died in the following year.

Modern scholars think Aristotle left the Academy because, after Plato’s death, Speusippus, the new head, was turning philosophy into mathematics (see *Met* 992a32); they also adduce the anti-Macedonian feeling prevalent at the time after the destruction of the Greek Confederacy. However, such views go against the one recorded tradition (Hermippus, cited by DL, V, 2) that Aristotle left before Plato’s death and that the latter said “He kicked at us as young calves kick at their mother”. Plato called him “the *Nous* ‘mind’ of the school” and *Anagnōstes* ‘reader’, since he learnt by reading as well as by listening. Thus it may be he felt that he ought to succeed Plato as the Head –something he would not readily confess to others. Moreover, it is obvious from his writings that his natural bent and undoubted brilliance found expression in the biological and physical sciences. There is little evidence in his works that he had much interest in man’s inner transformation which was Plato’s chief concern (§29, above). I suspect that Aristotle was not interested in this aspect of Plato’s teaching, and perhaps did not understand it fully, and so the Master appointed Speusippus as his successor –not only because he was his nephew but also because he “adhered to Plato’s very doctrines” (DL IV, 1).

**36.** That Aristotle was influenced enormously by Plato is undoubted. He rejected Plato’s doctrine of reincarnation and the realm of Ideas as an independent non-material one, but retained the immortality of the soul and the Ideas themselves plus the independent non-material reason/intelligence, akin, if not quite identical, to his transcendent God. Opinions about this issue were divided from early times. Some Neoplatonists, like Plotinus and Philoponus, wrote refutations; others like Porphyry and Iamblichus “platonized” his thought (Niarchos 1991; Sorabji 1987; Wallis 1972). This division continued right through the Middle Ages and the Renaissance. In the 20th century, again, some scholars argued that Aristotle had early objections but on the whole accepted Plato’s teaching and later broke away (Jäger 1923); others claimed that he remained a Platonist from start to finish –but that his successor Theophrastus introduced the anti-Platonic empiricism (Zürcher 1952). Such

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22 The Asklepiads were medical families. The name derives from Asklepios, son of Apollo and god-protector of Medicine. It was expected that the son would be trained from an early age and succeed his father in the profession. See above, §18, end.

approaches are in no way helpful but, doubtless, will keep (re-)appearing.

Aristotle's works were edited by Andronicus of Rhodes (early 1st cent BC) and the earliest list is that of Diogenes Laertius 300 years later: many works ascribed to him (e.g. 'On the World', 'On Colours', etc) are decidedly not by him; even a genuine work like *Metaphysics* contains, almost in every paragraph, early and late strata, which indicate repeated revision (Ross 1964:11-14). Given also Aristotle's several wrong observations about the Presocratics (Cherniss 1935:passim), several inconsistencies, contradictions, varying degrees of emphasis on different points and points of impenetrable obscurity (Ross 1964:passim), it is, I think, very difficult to present a rectilinear, historicogenetic development of Aristotle's thought. In the brief space here I shall list Aristotle's major works and present the main aspects of his thought.

The order that follows is by no mean chronological. It is a convenient arrangement according to subjects, although even this is not wholly satisfactory since, for example, topics on logic are found in the *Metaphysics*, especially the fourth book, while animal movement is examined also in the treatise *On the Soul* and the subject of causes is discussed in *Physics* II, 3 and 7, *Posterior Analytics* 71b9 and *Metaphysics* 963a24, 993b20 and 1013a24.

**37.** The *Categories*, *On Interpretation*, *Prior Analytics*, *Posterior Analytics*, *Topics* and *On Sophistical Refutations* are 6 treatises on Logic and came to be known (in Byzantine times) collectively as the "Organon" –the instrument whereby any scientific enquiry should be pursued (*Met* 995a15).

In the *Categories* are distinguished simple terms and composite statements (1a16); simple expressions denote (1a25) one or other class of things: substance (Man), quantity (2 measures), quality (white), relation (double), place (in the school), time (yesterday), posture (sitting), possession or state (has-shoes), action (cuts), affection or passivity (is cut). Aristotle is not consistent about the number and the last two are left out in his list in *Posterior Analytics* 83b15. It is not clear whether these eight or ten are ontological realities or purely verbal.<sup>23</sup> Moreover, "substance" can be of two types (*Categories* 2a11): primary, i.e. neither asserted nor present in a subject (e.g. particular men or horses) and secondary i.e. asserted but not present (e.g. species and genera in which the primary ones belong). Here genus and species are treated as derived substances but in *Metaphysics* they appear as primary (1028b33).

*On Interpretation* starts by distinguishing between noun and verb then treats of various propositions and judgements, existent and non-existent (19b14ff) and modal sentences like "It may be that..." (21b26). The *Prior Analytics* offers a different classification of judgements –universal, particular and indeterminate (24a17).

The *Prior Analytics* presents the development of Aristotle's syllogistic system. Its heart is the syllogism *sullogismos* συλλογισμός, which is defined as "an argument whereby from certain postulates something other than these necessarily follows without additional terms" (24b18).<sup>24</sup> An example should suffice:

A is true of B;	Every Greek is human;
B is true of C:	Every human is mortal:
Therefore A is true of C.	Therefore every Greek is mortal.

The advance from premises to conclusion is a truly logical progress of thought making explicit

23 Aristotle is generally content with only 6 categories. The Indic Nyāya-Vaiśeṣika tradition also gives a list of six *padārtha*: *dravya* substance, *guṇa* quality, *karma* action, *sāmānya* universal, *viśeṣa* particular, *samavāya* inherence (and, after Kaṇada, *abhāva* absence/negation). In the Mīmāṃsā tradition Prabhākara lists 8 omitting the 'particular' and adding 3 more – potency, similarity and quantity. Other traditions, like the Jaina, give their own lists. (Hiriyanna 1994: 231ff; Raju 80ff, 147ff.)

24 Συλλογισμός δέ ἐστὶ λόγος ἐν ᾧ τεθέντων τινῶν ἕτερόν τι τῶν κειμένων ἐξ ἀνάγκης συμβαίνει τῷ ταῦτα εἶναι.

what was implicit and actualizing the knowledge that was only potential (67a12).<sup>25</sup> There is another similar movement of thought but in the different direction from the particular to the universal, from the individual (*Top* 103b3) or species (*Top* 105a13) to genus (*Post An* 100b3): this is ‘induction’ *epagōgē* ἐπαγωγή (*Pr An* 68b35, *Post An* 72b29, etc). But this too, Aristotle argues, is basically syllogistic (*Pr An* 68b9), even though it has the character of direct insight.

The *Posterior Analytics* concentrates on true knowledge and the problems of ‘demonstration’ *apodeixis* ἀπόδειξις. Demonstration leads to definition *horismos* ὁρισμός and from this the properties and the essence are obtained. The premises of demonstration, axioms, must be true and intelligible, not in need of proof. Such are the laws of (non-)contradiction and of the excluded middle (72a11). These two are stated fully in the *Metaphysics*: a) “It is impossible for the same attribute at once to be and not to be in the same thing, in the same relation” (*Met* 1005b19); b) “There can be no intermediate between opposite statements, but of one entity we must assert or deny one thing, whatever it may be” (1011b23).<sup>26</sup> At the end of *Posterior Analytics* (II, 1) Aristotle explains that knowledge starts with direct perceptions which by repetition form memories, which become ‘experiences’ *empeiria* ἐμπειρία and so give us universals.

The *Topics* and *Sophistical Refutations* deal with the method of the dialectic and with arguments and fallacies. They are no longer regarded as highly significant.

**38.** Aristotle studies the physical world of Nature in several works. He divided the sciences into theoretical, i.e. contemplative and dealing with the highest cause(s), practical and poetic (= productive, creative). All three aim to know, but the first aim at knowledge for its own sake, the second aim at knowledge as a guide to conduct and the third for production of useful or beautiful things (*Met* 1025b 18ff). The theoretical sciences include theology (= metaphysics), physics and mathematics. Theology deals with substances (*ousia* οὐσία), that are immutable and free from any connection with matter (*hylē* ὕλη), the chief being the divine (*theion* θεῖον): it is the most honourable and preferable, the primary philosophy. Mathematics also deals with immutable entities but these are not separable from material things. Physics deals with things that are both inseparable from matter and mutable. Aristotle’s physical doctrines (philosophy of Nature) are discussed in the *Physics*, *On Heaven*, *On Generation and Corruption*, and *Meteorologica*. These principles appear also in his biological works - *History of Animals*, *Parts of Animals* and *Generation of Animals*, plus two briefer essays, *Movement of Animals* and *Progression of Animals*.

**39.** Believing in the eternity of the Cosmos and matter (*Heav* 279b12; *Meteor* 339b27; etc) despite periodic geological catastrophes and resurgences, Aristotle is not concerned with the genesis of the Cosmos but in its structure and its laws. Thus Physics is the study (not of form alone or of matter alone but) of form in matter (*Soul* 403 a 29) since every natural thing is the realization of its form through the medium of matter and this implies the motion of that which is potentially to that which is actually (*Phys* I, 8). Thus, Nature is a principle of motion and of rest in anything in which both these belong initially (*Phys* II, 1, 192 b 20); it is more fully defined as the source from which is induced the primary motion, or as the primary substance and form (= essence) of natural objects, or as “the essence of those things which have in themselves as such the source of motion” (*Met* 1014 b

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25 In India too the Nyāya has its syllogism with a major term *sādhya* ‘to be proved’, the minor term *pakṣa* ‘the subject discussed’, the middle *hetu/sādhana* ‘reason’ and the example *udāharaṇa*. Eg: 1) There is fire on the hill; 2) for it has smoke; 3a) whatever has smoke has also fire, as in a kitchen, 3b) and (negative *udāharaṇa*) not in a lake: 4) this hill has smoke (that arises from fire); 5) ∴ this hill has fire. (Hiriyanna 256-7; Raju 139ff).

26 a) τὸ γὰρ αὐτὸ ἅμα ὑπάρχειν τε καὶ μὴ ὑπάρχειν ἀδύνατον τῷ αὐτῷ καὶ κατὰ τὸ αὐτό... b) οὐδέ μεταξὺ ἀντιφάσεως ἐνδόχεται εἶναι οὐδέν, ἀλλ’ ἀνάγκη ἢ φάναι ἢ ἀποφάναι ἐν καθ’ ἑνός ὁποῦν.

15-19).<sup>27</sup>

**40.** Before considering the nature and kinds of movement, Aristotle examines the causes which operate in natural phenomena (*Phys* II, 3), since to know is to know the causes (*Post An* 7169 and 94 b 20). There are four : a) that material out of which something comes into being (like the bronze of a statue) ; b) the idea/form (= *eidos εἶδος*) or pattern (= *paradeigma παράδειγμα*), i.e. the essential formula/ratio/reason (= *logos, λόγος*) which characterizes the thing that is actualized – as the ratio 2:1 characterizes the octave; c) the immediate source of change/motion or rest; e.g. one who advises or plans and is thus the cause of the ensuing action, or the father who is the cause of the offspring; d) the end or aim in the sense that a man walks to regain or maintain his health. We should note that “material” in (a) is not generic matter as distinct from mind or spirit, but any materials from which something else comes to be, like two sounds producing a syllable, two or three syllables producing a word, words producing a premise and premises producing a conclusion : at each stage, the former is the material cause of the latter.

Here teleology and necessity are important considerations. Nature does nothing in vain<sup>28</sup> and behaves as if it foresees the future (*Heav* 291 b 13; *Gen A* 744 b 16). However, sometimes necessity opposes teleology as when a monstrous birth is due to defects in the material (*Gen A* 767 b 13) and sometimes the efficient and material causes can alone explain a phenomenon like the colour of the eyes which serves no end but is due to the circumstances of birth (*ibid*, 778 a 16).

**41.** Motion *kinēsis κίνησις* is discussed in *Physics* III, 1-3 and *Metaphysics* XI, 9ff (and sporadically in the biological writings). Dismissing those who denied the existence of change or movement (e.g. Empedocles, the Eleatics, Anaxagoras, the Atomists) or the continuity of movement (the Megaric school and Plato in *Parmenides* 150D), Aristotle asserts both the existence and continuity of movement. This is the passage of one state to another or the actualisation of what is potentially such: e.g. a finished house is now actual having been only potential in the architect’s plan, in the mortar, wood and other materials, and in the workers and tools assembled for the activity of building. Activity *energeia ἐνέργεια* is the actualisation of some potential from moment to moment whereas movement (or motion) is incomplete activity, as it were (also *Met* IX, 6, 7-10).

Motion is ultimately movement from positive to positive, even though there is also movement that is change from negative to positive and vice-versa as in generation and destruction (*Phys* III, 1, 200b32 – 201a16; for list of contraries, *Met* IV, 2, 21). Moreover, with regard to the categories (i.e. substance, quantity, etc: §36) there are only three kinds of motion, i.e. of quantity, quality and place. Locomotion is the most fundamental while qualitative change and generation-destruction are involved in change of size. Number (=quantity) has a minimum but not a maximum (*Phys* 207b 27ff) and time is potentially infinite with addition: only things that always exist are not in, nor measured by, time (222a5). For Aristotle, place is the boundary that immediately contains a thing; while everything in the universe is in place, the universe itself is not (212b20). And there is no void (regarded as “place” by some thinkers) since bodies can take one another’s places without the necessity of a vacuum (214a22ff). Locomotion is the primary kind of motion and of this the primary kind is circular motion continuous and infinite (260a20ff). All motion is caused by a “first mover” *to prōton kinoun τὸ πρῶτον κινούν*, itself unmoving, single and eternal (256a4ff).

27 ἡ οὐσία ἢ τῶν ἐχόντων ἀρχῶν κινήσεως ἐν αὐτοῖς ἢ αὐτά.

28 *Heav* 271a33: ὁ δὲ θεός καὶ ἡ φύσις οὐδὲν μάλιστα ποιοῦσιν ‘god and nature do nothing in vain’. The inclusion of “god” here is proverbial and figurative since God does nothing except contemplate Himself (*Met* 1072b19-24, 1074b22ff; *EN* 1154b27, 1178b10ff; *Heav* 292a22).

**42.** The general principles in the *Physics*, particularly movement and the “first mover” (from VIII, 5), are applied to heavenly and terrestrial bodies.

The Cosmos consists of concentric spheres. The outer shell, the first heaven, contains the “fixed stars” (*Heav* I, 5; II, 4). These move only with the rotation of the first heaven once in 24 hours (II, 6). All celestial bodies consist of the fifth element, ‘ether’ *aithēr* αἰθήρ (270B22), free from all change, and they are living beings (279a18) which are, presumably, inferior to the prime mover, but their actual relation to God and the mode whereby they impart movement are left unexplained.<sup>29</sup>

**43.** Movement or change appears in several forms: generation, corruption or destruction, alteration, growth. Generation from nothing is for Aristotle (and most previous thinkers) impossible. A substance comes into being only from what was potentially this substance (*G&C* I, 2-5; *Phys* 225a5ff). Generation of one substance is in fact the destruction of (part of) another which in the change appears as not-being: they are the two sides of a single transformation of substance into substance<sup>30</sup>.

Aristotle’s predecessors (Parmenides mainly) thought that what-is could not come out of what-is nor out of what-is-not. He argues that a thing comes into being from the elements that interchange themselves continuously. The actual final product contains two entities – the part of a substratum which persists through the change and the part replaced by its opposite. Thus there are three terms for the change: the material substratum, the privation/loss of one part and the form. The non-being involved in genesis is not absolute non-being but privation. (*Phys* 190a1ff; *G&C* 317a28ff, 323a1ff, 337a1ff.) Thus the Parmenidian knot was solved at the material level where change is observable. (But at the highest non-material level where substance is immutable, no change, of course, is possible. Parmenides and certainly Melissus were referring to this level.)

The material cause of generation is found in the elements (earth, water etc) which are ultimate but not immutable (*G&C* II, 1-3). The formal cause (also the final one here) is the ratio of the elements in a compound which defines it indicating the end aimed at by the particular formation (330b20). The immediately efficient cause is the eternal motion of the sun along the ecliptic which has two halves: in one it approaches, and in the other recedes from, any point on the earth thereby causing generation and passing away. This is seen in the seasonal alternations of heat and drought with cold and rain, in the growth of plants, in the development and decay of animals (II, 10; cf also *Meteor* I, 9). This is effected through the basic contraries in the qualities and combinations of the four elements, discussed earlier (*G&C* II, 3): fire is hot and dry; air is hot and fluid; water is cold and fluid; earth is cold and dry.

**44.** In the biological works, Aristotle mentions some 500 animals and seems to have dissected some 50 kinds making remarkable observations about the anatomy and character of the cetaceans (e.g. whales) and other specimens in the sea and on land (*Hist A* 489a34ff; 513a15ff). In this field he was unsurpassed (as in his *Analytics*) and it is only after the 16th cent CE that researches would break into new ground. Moreover, he observed the orderly arrangement and inter-connexion of all things, including plants and animals: “All things are ordered together in some way, but not in the same way – fishes, birds, plants; and the manner is not such that there is no relation between one and another, but

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29 We may note here the absurd remark that the Milky Way was an atmospheric, not an astronomical, phenomenon (*Meteor* 345-346b). For Aristotle’s cosmology, most pertinent is Koestler’s comment: “The Ionians had prised the world-oyster open, the Pythagoreans had set the earth-ball adrift in it, the Atomists dissolved its boundaries in the infinite. Aristotle closed the lid again, shoved earth back into the world’s centre and deprived it of motion” (1968: 61).

30 Substance is first, then generation: ἡ γὰρ γένεσις ἐνεκα τῆς οὐσίας ἐστίν, ἀλλ’ οὐχ ἡ οὐσία ἐνεκα τῆς γενέσεως ‘genesis is due to substance and not substance due to genesis’ (*Parts A* 640a1; almost identical formulation in *GenA* 778b1). See also *Physics* 225a15 ἡ δ’ ἐκ τοῦ μή ὄντος ἀπλῶς εἰς οὐσίαν γένεσις... ‘the genesis simple of (or into) a substance from what-it-was-not...’

there is a definite connexion” (*Met* 1075a16). He arranged his superb classification in a “natural ladder”,<sup>31</sup> based on several principles (discussed in various sections of *Hist A*, *Gen A* and *Parts A*) but chiefly on the mode of generation (*Gen A* 732a25ff): this scale has eleven general grades with man at the top and zoophytes at the bottom. And right through this runs Aristotle’s teleology: every organ in an animal has some use and the end of each species is internal to that species. It is summed up in his dictum that “god and nature do nothing in vain” (§39 and n26).

We may note here that *Ch UVI*, 3, 1 also categorizes creatures according to their mode of generation: thus it gives *añḍaja* ‘eggborn’, *jivaja* ‘germborn’, *udbhijja* ‘soilborn, sprouting’. The *Aitareya U III*, 3, adds a fourth, *svedaja* ‘sweat-/moisture-born’.

**45.** Living beings have ‘soul’ *psuchē* ψυχή which is the life-principle, or the ‘formal cause’, animating the passive body: it brings into full ‘entelechy’ ἐντελέχεια, or realization, any natural organic body (*Soul II*, 1). There are three types of soul: the nutritive/vegetative, common to all living beings; the sensitive soul (lacking in plants) perceiving, sensing pleasure-pain and desiring; the rational soul peculiar to man (413a22ff). Soul neither transmigrates (407624) nor exists disembodied except for its highest element, reason/intelligence (*nous*), which is divine and enters from outside.<sup>32</sup>

However, exactly how soul and *nous* are related is not explained. Another thorny issue is the division of passive and what subsequent writers called “active” *nous*. The first is analogous to matter becoming all things (*Soul III*, 5). But that this “active” reason knows everything and is God, the prime mover, as some maintain, seems unfounded, even though a few stray remarks may be and have been interpreted this way. If this were the case, Aristotle would not have rejected Plato’s doctrines of the Ideas, of reincarnation and of knowledge as recollection.

**46.** Art, says Aristotle, has the double function to go beyond nature and to imitate it.<sup>33</sup> Rhetoric is an art but, since it is not a science, it has no specific subject-matter, no proper set of principles. It is connected with dialectic rather and deals with arguments (*Rhetoric* 1354a1). Its aim (final cause) is persuasion (1355b26). A speaker may use three modes of persuasion: the power of his own character (II, 1), the arousal of desired emotions in the hearers (II, 2ff) and proof or apparent proof. The last device consists of example, which is the rhetorical analogue to induction proper, and *enthumēma* ἐνθύμημα which differs from scientific syllogism by inferring from probable premises and from various signs (ibid 1357a 32; *Post An* 71a 9).

Unlike his *Rhetoric*, Aristotle’s *Poetics* still excites great interest. This belongs to the imitative arts but is different from the plastic arts; it imitates characters, emotions and actions (*Poetics* 1447a13-28). Epic poetry and tragedy agree in imitating grand subjects in verse but differ in that epic is in narrative of no fixed time-limit and of a single kind of verse while tragedy has dramatic form and tries to keep the action within a day (1449b9-12). And since poetic statements tend to be universal whereas historical ones are particulars, “poetry is more philosophic and significant than history” (1451b5)<sup>34</sup>. Here also we meet the famous definition of tragedy as a dramatic form imitating a serious action, complete in itself and of some magnitude, with pleasant varieties of language and incidents that arouse pity (*eleos* ἔλεος) and fear (*phobos* φόβος) effecting the *katharsis* of such emotions. Aristotle

31 Developed by later writers into the “great chain of being”: Lovejoy 1936, ch2.

32 See *G&C* 736b27: λείπεται δὲ τὸν νοῦν μόνον θύραθεν ἐπεισιέναι καὶ θεῖον εἶναι μόνον. ‘*nous* alone remains which enters from outside and is divine’. Despite Aristotle’s repeated rejection of idealism and his basic conception that soul and body, form/idea and matter, are one whole, separable only by the philosopher’s mind, here we have the dualism of *nous* and body, of divine/immortal and mortal, that is common in all Greek thought.

33 *Physics* 199a15: ὅλως δὲ ἡ τέχνη τὰ μὲν ἐπιτελεῖ, ἃ ἡ φύσις ἀδυνατεῖ ἀπεργάζεσθαι, τὰ δὲ μιμεῖται.

34 φιλοσοφικώτερον καὶ σπουδαιότερον ποιήσεις ἱστορίας ἐστίν.

speaks in the same way in the *Politics* about certain sacred types of music that cause healing and *katharsis* of pity, fear and enthusiasm (1342a1-16).<sup>35</sup>

**47.** Ethics is an aspect of Politics, according to Aristotle, and Politics is a practical science (§39) pursued as a means to conduct. Ethics is examined in *Ethics Nicomachean* and political science in the *Politics*.

The end of human life is *eudaimonia* εὐδαιμονία 'well-being' (*EN* 1095a14; see also §9, end), often translated as happiness. Putting aside aims such as pleasure (*hēdonē* ἡδονή), wealth and honour, Aristotle defines *eudaimonia* as an actual and active state of the rational aspect of the soul in accordance with the most perfect virtue and manifesting in life constantly (1098a13-20). Virtue again is a tendency of will which is a mean [between extremes], determined by reason and as a prudent man would define it (1106b36).<sup>36</sup> The mean is opposed to both excess and deficiency; thus the virtue 'courage' is the mean between the excess of 'rashness' and the deficiency of 'cowardice' (1107a8; 1115a4ff). Virtues are then distinguished between moral and intellectual ones. Moral virtues are courage, temperance, liberality etc. Intellectual virtues are those whereby reason reaches truth (1139a17-1141b8): exact knowledge *epistēmē* ἐπιστήμη demonstrating the necessary and eternal; art *technē* τέχνη making things aided by true rules; prudence or practical wisdom *phronēsis* φρόνησις, a disposition for good conduct aided by true rules; intuitive or innate intelligence *nous* grasping universal truths; wisdom *sophia* σοφία, the union of *epistēmē* and *nous* directed to the loftiest objects. However, a life of *sophia* or contemplation is too high for man, since he is compounded of body, irrational soul and reason (1177b25ff). Nonetheless, although this is proper to gods, men too, as far as they may (ἐνδέχεται ... κατὰ τὸ κράτιστον), can with the divine element in them lay hold on eternal life by living in accordance with reason, the best part of man and most truly himself: this is the happiest life (1178a1ff).

Although in the bulk of his works Aristotle does not manifest much interest in divinization as we find in Plato, he does not ignore it altogether. Evidently he thought this could be achieved through ethical behaviour and contemplation of the Eternal.

**48.** One would expect that the ideal state would be so constituted as to promote the "happiest life", and *Politics* deals with this in VII, 13, 1ff. Starting with the basic idea that man is naturally a political 'living-being' *zōon ζῶον* (=usually 'animal'), it develops the theory of the state distinguishing various types of constitution: kingship, aristocracy and *politeia* and their deviant forms, tyranny, oligarchy and democracy (*Pol* IV, 1, 1ff).<sup>37</sup> Here we note that contrary to the modern prizing of democratic rule, Aristotle, no less than Plato, regards it as a very low form of government where equality is sought without regard to differences in merit, and liberty becomes the licence to "do what one pleases" (1319a1).<sup>38</sup> A different analysis according to classes of men and function appears later (IV, 3, 9 and VII, 7, 3): food producers, artisans, traders, soldiers, judges, the rich who discharge costly public services, priests and serfs. An ideal state is only an aspiration (1289b1); in pragmatic conditions, happy is the state which has a large, strong middle class, the mean between the rich and the poor (IV, 9, 3ff). The nature and causes of instability and revolutions are also discussed (ch V).

35 For a detailed comparative study of the *Poetics* and *Nāṭyasāstra* see Gupt 1994.

36 ἕξις προαιρετικὴ ἐν τῇ μεσότητι οὕσα τῇ πρὸς ἡμᾶς, ὠρισμένη λόγῳ καὶ ὡς ἂν ὁ φρόνιμος ὀρίσειεν.

37 This classification may derive from Plato's *Politikos* 297Cff. The word 'politeia' generally means 'state, constitution' but in *Pol* 1289a29 it is used for want of a better term: it corresponds to 'timocracy' (*EN* 1160a36), a constitution based on a property qualification in which the middle classes rule.

38 πράττειν ὅτι ἂν ἐθέλη τις οὐ δύναται φυλάττειν τὸ ἐν ἐκάστῳ τῶν ἀνθρώπων φαῦλον 'doing what one pleases cannot restrain the tendency to wickedness in men'.

The *Politics* is incomplete and its text rather confused (Lekatsas no date; Ross 1964:235). Its final chapters VII and VIII deal mainly with education. This should start very early, even before birth (as with Plato). Every citizen belongs not to himself but to the state and every part of it must care for the whole (1337a30). Education is the same for all citizens and administered by the state: it is predominantly moral. The citizens will not need to earn a living (as in Plato: §33), so professional and technical training is unnecessary (1338a32): they need to be trained as good subjects and soldiers and, later, as good rulers, and, in all this, music is given a major role (VIII, 4, 3ff). Like Plato, presumably, Aristotle thought that with good education all else would fall in its proper place.

**49.** Aristotle's *Metaphysics* has been left last, but, in fact, most of its topics have already been discussed or mentioned. In this work are developed the ideas Aristotle calls "wisdom", "first philosophy" or "theology".

Bk 1 discusses causal explanations (see §40, "four causes") and earlier thinkers' views: in this survey we find much information about the Presocratics. Bk 2 examines briefly principles of science. Bk 3 presents several metaphysical puzzles, *aporiai*, and many are discussed more fully later. Bk 4 sets out Aristotle's "first philosophy" as the study of conditions of being<sup>39</sup> and the principles of (non-)contradiction and the excluded middle (§37). Bk 5 is a kind of lexicon where some 40 basic philosophical terms (*archē* ἀρχή 'principle', *aition* αἴτιον 'cause', *stoicheion* στοιχείον 'element', etc) are examined in different usages. Bk 6 returns to the topics of Bk 4. Bks 7-9 form a unity and, in Aristotle's most tortuous writing, examine the basic constituents of the Cosmos, the ideas of matter and form, substance and essence (§41), change and generation (§43), actuality and potentiality (§41): forms (εἶδος) are not independently and actually existing substances (as in Plato) but characteristics of substance since one substance cannot contain another (VII, 8, 13); thus substance is a kind of form, though not abstract, and form exists in a concrete, particular thing (this man, this bronze-sphere: VII, 8, 6-7). Bk 10 is on unity, continuity and related concepts. Bk 11 summarizes parts of the *Physics* and earlier parts of the *Metaphysics*; it seems to be spurious. Bk 12 investigates the necessary causes for the world and arrives at the conception of God, the prime mover. Bks 13 and 14 discuss critically (mainly against Plato) the nature of mathematical objects.

**50.** The existence of God is reached through two lines of reasoning.

a) The eternal *aidion* αἰδίων is prior in substance (τῆ οὐσίᾳ) to the perishable *phthartōn* φθαρτόν (1050b6ff). Since the potentiality of being is also potentiality of not-being and the eternal is substantially (κατ' οὐσίαν) and absolutely (*haplōs* ἀπλῶς 'singly, simply') being, it has no potentiality of not-being. So any and every primary entity (*prōton* πρῶτον 'first, primal'), from which others derive their perishable existence, is imperishable: such is the celestial region which is divine<sup>40</sup> – and by implication "the prime mover" that causes celestial entities to move eternally.

b) Substances are the first of all existing things (1069a20: ἡ οὐσία πρῶτον μέρος) causing eternal circular motion (1071b4). Such substances must be eternal and motionless (*akinēto-* ἀκίνητο-) and also immaterial (ἄνευ ὄλης: 1071b21). And here are included not only God, the prime mover (1072b25),

39 "Being *qua* being" (τό ὄν ᾗ ὄν), which term is used variously (λέγεται πολλαχῶς) but is "one" being (εἶν), one nature (φύσις), one principle (ἀρχή), one substance (οὐσία): *Met* 4, 1-2.

40 Here Aristotle faults previous 'physicists', e.g. Empedocles, who held that sun and stars are not eternal (cf also *Met* 1023a21 and *Heav* 284a24 and 295a16). But Empedocles was *right* and, as we know now, *all* celestial bodies are perishable. Ignoring his own principles and reasoning that all sensible, material things (and the celestial bodies *are* such since they are visible) are perishable, Aristotle ascribes to them eternity, imperishability and divinity making a special case for them (e.g. 1069a30 but cf 1069b2!) and confusing the physical with the symbolic or truly metaphysical. In denying the independence of the realm of Ideas in favour of the particular material entity, he has landed himself in worse difficulties.

but also the movers of the celestial spheres (as in 1074a15).

God is outside or beyond the first (or ultimate) celestial sphere and time. An ever-living and motionless Being, He causes movement being the first, final and efficient cause. His only activity is self-knowledge/contemplation (also *EN* 1158a35, 1178b10; *Heav* 292a22; *Pol* 1325b25). He causes movement, first in the highest heaven and then in the lower spheres (or the intelligences that rule them) by being the object of their thought and desire –the good which is the end to which their action/motion aspires (*Met* 1072a26-64). Otherwise, He is not a creator, since matter *is substance* (ἐστὶν οὐσία καὶ ἡ ὄλη 1042a32) and is ungenerated (1069b35) and eternal (§39) just as the intelligences seem to be uncreated. Thus there is an implicit scale of "being" and "intelligence" from God through the heavenly entities (where reason also abides) down to men and animals and plants (threefold soul §45).

**51.** In some of these bold concepts Aristotle shows yet again his brilliant analytical mind. At the same time we do not know what it is that runs through this and connects all the levels, other than "motion", nor how exactly motion is imparted from the intelligences to the spheres or how exactly the "active" reason in man's soul is connected to God, if at all. There is also "substance" – God's substance and the divine celestial substance (ether?) and "reason/ intelligence", which are eternal, and matter (of the material world) which also seems to be eternal. Thus we have again duality reminiscent of the Puruṣa and Prakṛti in the Indic Sāṅkhya system (§32, n21). To say, as some scholars claim, that all this is united in God, is to go against the Aristotelic texts. To say, as others claim, that all this is united in man is to ignore that for Aristotle there is no universal Man but only particular individuals and therefore a plurality.<sup>41</sup> Nor is it clear anywhere whether God's connexion with, and influence on, the lower spheres is spiritual (=non-material) or material: the adoption of either would produce problems in Aristotle's general scheme as we know it. That Aristotle may have had a fuller and clearer picture in his mind is possible but this is not evident in his writings.

**52. Concluding remarks.** Greek philosophy continued for many centuries after Aristotle –in the schools of the Stoics, the Cynics, the Epicureans and so on. Pythagoreanism and Platonism resurged with new vigour. But most of the work had been done. Greek religion continued in its polytheism unperturbed by the philosophers who sought with varied degrees of success to formulate a system that would explain the One and the Many and Man's place in the universe. Some, like the Pythagoreans and Plato, emphasized the inward turn into the world of spirit through self-knowledge and meditation. Others, like the Atomists and Aristotle, stressed the physical nature of reality without ignoring ethical principles or the best political conditions for man's happiness. All were earnest seekers of wisdom

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41 Another issue which Aristotle treats unsatisfactorily, or eschews, is the real origin of any creature. Thus he says that man and corn are potential in their seed but, in fact, are prior (and actual) to the seed, since the seed comes-to-be from an actual man and corn-plant because the man and the corn-plant already possess the actual perfect form, which the seed does not (*Met* IX, 8, 4-5; XII, 7, 10-11). But, now (ignoring as due to a redactor's or compiler's fault the contradiction between VIII, 4, 5, where the semen is the *efficient* cause and IX, 7, 1-3 where it is the *material* cause), what is the origin of the very first actual man?... It is no real answer that "these same things have always existed passing through a cycle or in another mode" (1072a8); nor that a learner already possesses something of the science he is learning (IX, 8, 6-8), which is very obvious. This is arguing in a horizontal interminable line, or a vicious circle, that explains nothing. But when Aristotle says that the Prime Mover causes the rotation of the first heaven, and this causes the motion of the others and so on (1073b2), and that God is the Best (*aristo-ἄριστος*: XII, 7, 9) and (against the Pythagoreans and Speusippus) that the Best and most beautiful and perfect is in the beginning (ἐν ἀρχῇ: XII, 7, 10), he is arguing in a descending, vertical line (although he does confuse the two lines again in 11). What is the origin and devolving process of man in this vertical, descending order?... On this there is silence.

practising what they preached. Indeed, they moved away from *mythos* μῦθος ‘myth’ to *logos* ‘reason’ seeking rational explanations; even Plato, who continued to create myths (e.g. that of Er the Pamphylian and the three daughters of Necessity in *Rep* 614Bff) to describe metaphysical phenomena. We cannot ignore here A. N. Whitehead’s famous remark on Plato: “The safest characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato. I do not mean the systematic scheme of thought which scholars have doubtfully extracted from his writings. I allude to the wealth of general ideas scattered through them” (1979: 63). By our standards, Aristotle’s physical and metaphysical system was not successful (indeed it became a hindrance in some respects)<sup>42</sup>, but his *Organon* remains unsurpassed and he opened new avenues of investigation in the physical world. Those thinkers touched on all the issues of philosophy ‘love of wisdom’. Because philosophy still combined the religious aspiration and the physical sciences, they created all the basic terms and founded all the branches of investigation with which subsequent European philosophy, science and politics would operate. Today, all these branches are fragmented and separate fields of theoretical specialization. Perhaps a return to that unified vision and practice of philosophy combining the principles of science, ethics and politics (and art), would renew our *nous*.

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42 Sir F. Bacon, the English empiricist philosopher (1561-1626 CE), made this most damning comment on Aristotle: “[His] philosophy, if carefully examined, will be found to advance certain points of view which are deliberately designed to cripple enterprise” (cited in Mason 1979: 146). However, it was not Aristotle’s fault that subsequent thinkers turned him into an authority that was not to be doubted on anything. He himself was a zealous investigator and stressed clearly that concern with the divine was the highest science, even though he preferred to indulge in physical researches.