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History of Ancient Philosophy

Greece and Rome

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ИСТОРИЯ ДРЕВНЕЙ ФИЛОСОФИИ. ГРЕЦИЯ. РИМ

На английском языке

CONTENTS

Publishers' Note

This book is primarily intended for students of the humanities, but will also be found helpful in self-education.

It consists of three parts, each serving the common purpose of providing a systematic exposition of ancient philosophers' teachings.

Part I outlines the history of the early period of Greek philosophy. Part II familiarises the reader with its classical period, Part III gives a brief survey of the Hellenic-Roman philosophy.

The founders of Marxism have repeatedly pointed out the outstanding historical role of ancient culture in general and ancient philosophy in particular. "The Greeks will for ever remain our teachers..."[1] "Recent philosophy has only continued the work begun by Heraclitus and Aristotle."[2] Marx and Engels continually underlined the creative originality of ancient Greek philosophy which had been the first to rise to the level of the rational world outlook. The main fervour of its materialist trend was invariably directed towards explaining nature from nature itself, from the laws inherent in matter.

The historical importance of Greek philosophy also derives from its unique contribution to the development of dialectics. The first naive form of materialism was simultaneously a spontaneous dialectical concept of the world.

The Greeks' own history of philosophical ideas illustrates the profound revolutionary role of materialism. This history which has provided classical examples of antagonism between

[1] Karl Marx, "Notebooks on Epicurean Philosophy", in: Karl Marx, Frederick Engels, *Collected Works*, Progress Publishers, Moscow, Vol. 1, 1976, p. 500.

[2] Karl Marx, "The Leading Article in No. 179 of the *Kölnische Zeitung*", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 1, p. 201.

materialism and idealism clearly revealed the inevitability of the split of all philosophers in a class society into two big camps. Speaking of the age-old struggle between the two philosophical lines and underlining a class, partisan character of the ideological battles in Greek philosophy Lenin asked: "Could the struggle between materialism and idealism, the struggle between the tendencies or lines of Plato and Democritus in philosophy ... have become antiquated during the two thousand years of the development of philosophy?"[1]

Greek philosophy is a grand monument of human culture. Its manifold forms, wrote Engels, "contain in embryo, in the nascent state, almost all later modes of outlook on the world."[2]

[1] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works*, Progress Publishers, Moscow, Vol. 14, 1977, p. 130.

[2] Frederick Engels, *Dialectics of Nature*, Progress Publishers, Moscow, 1982, p. 46.

EARLY GREEK PHILOSOPHY

Chapter 1

First Philosophical Doctrines

1. History of Philosophy: Its Subject-Matter and Method

The subject-matter of the history of philosophy is philosophy in its historical development. Ancient philosophy traversed a long and difficult path from "physics" or a doctrine of nature in the specific sense of the word to a system of theoretical sciences including, alongside physics, also logic and ethics. Concrete analysis shows that the structure of philosophical knowledge in individual systems turns out to be even more complex. We shall therefore try to give a general and abstract definition of philosophy which would make the idea of this science more accurate and specific and thereby help sift the material to be studied.

Philosophy as a product of historical development belongs to the sphere of human culture and is closely connected with its different fields. It is born of their interaction and their internal contradictions and, in turn, exerts a reciprocal influence upon them. By culture we mean the dynamic totality of the results of human activity aimed at mastering the world and represented in different forms, from material production to art. According to materialist philosophy—and this book is intended to expound the viewpoint of historical and dialectical materialism—material production is the most important form of human activity, whereas all other forms, including artistic, religious and theoretical, are secondary and subordinate to it. That does not mean, of course, that they merely reflect man's material, practical activity. Arising from practice, they themselves become part and parcel of objective reality and make a powerful impact on all aspects of social life tending to hamper or stimulate its progress and thus merging in a single flow of cultural development.

Marx distinguished between material-practical (productive) and practical-spiritual (artistic and religious) appro-

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priation (Aneignung) of the world on the one hand and its theoretical comprehension, on the other. The object of the theoretical comprehension of the world, of a theoretical attitude to it "remains outside the intellect and independent of it", whereas it must "always be envisaged ... as the pre-condition of comprehension." The subject of a theoretical attitude to the world is essentially a cognising individual for whom "the comprehended world as such is the only real world."[1] Philosophy emerged as the first historical form of the theoretical comprehension of the world within the framework of which human thinking appropriated the objective world and reproduced it as "spiritually concrete" in concept, in thought and in word.

The difference between theoretical and practical attitudes to the world is relative. It arises in the process of social development and is eliminated in the same process when philosophy, once contemplative, turns into an important spiritual tool for transforming the world. "The philosophers have only *interpreted* the world in various ways; the point is to *change* it," stated Marx in the eleventh thesis on Feuerbach.[2] Identified traditionally with the theoretical contemplation of the world and representing a world outlook, philosophy has always been potentially an instrument for the practical transformation of society and man. This is only too natural in view of its intellectual function — to express man's understanding of the world, of his own place in it and of himself. Claiming to speak on behalf of humanity, the philosopher in fact represents but the culture of his time, his people, his class. The world outlook he expounds includes of necessity not only cognitive, but also axiological, and therefore ideological, attitude to reality in the form of social, political, aesthetic and ethic sympathies or antipathies. He approves or disapproves, justifies or denounces — but always from the position of reason, theoretical thought. The history of philosophy is not the land of wisdom flowers — rather, it is a battleground where different trends and schools cross their principles. Being a theoretical world outlook, philosophy does not view its subject-matter, i.e. man's natural and social world, in quantitative terms. Even if it is not infinite, it is too large for thought to encompass it and account for

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[1] Karl Marx, *A Contribution to the Critique of Political Economy*, Progress Publishers, Moscow, 1977, pp. 206-207.

[2] Karl Marx. "Theses on Feuerbach", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 5, 1976, p. 5.

all its forms and qualities. Philosophy, therefore, has only one path to follow—to try to comprehend this world not in the diversity of its phenomena, but in the unity of its essence, in principle.

For theoretical thinking, this task presents itself in the form of one crucial choice: to recognise the man's world as the reflection of some objective reality existing outside and independent of man's mind, or to identify it with the already existing world of ideas constructed by theoretical thinking itself. Put it another way, every thinker finds himself confronted with the *great basic question of philosophy*, that of the relation of thinking and being, of the primacy of matter or spirit.

This question which assumed different forms and acquired ever greater significance in the history of philosophy became a watershed between *materialism* and *idealism.* "The answers which the philosophers gave to this question," wrote Engels, "split them into two great camps. Those who asserted the primacy of spirit to nature ... comprised the camp of idealism. The others, who regarded nature as primary, belong to the various schools of materialism."[1] It is only the materialist solution of the basic question of philosophy that accords with the nature of theoretical cognition in which the subject opposes himself to the world and reproduces it in a system of concepts as independent of his consciousness and of the process of cognition.

Yet the weak spot, the heel of Achilles of materialism had always been, till the evolution of its highest dialectical form, the problem of the origin of theoretical consciousness and, for that matter, consciousness in general. Idealism has in fact discarded this problem as non-existent. From its viewpoint, the world of concepts evolved by the mind is the only real world created by Objective Spirit (the Absolute, God, Creator, etc.) prior to any physical objects.

This approach relates philosophical idealism with religion and accounts for their common epistemological roots and very similar social and ideological functions.

Now, positing the primacy of thought and absolute reason, the idealist has to account for the origin of the material world and explain why the reason created nature, i.e. something low-

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[1] Frederick Engels, "Ludwig Feuerbach and the End of Classical German Philosophy", in: Karl Marx and Frederick Engels, *Selected Works* in 3 volumes, Vol. 3, Progress Publishers, Moscow, 1976, p. 346.

er and less rational than itself. The idealist here has only one way open to him — to transpose the problem onto the plane of human relations and to plead creation as an act of human activity which, divorced from the universal chain of causal relations, starts with thought and leads to an action and its result. The essence of idealism is thus anthropomorphism, ascription of human characteristics to all that exists.

The history of philosophy pivots on the struggle between materialism and idealism which is waged not only between, but also within the antagonistic trends. This uncompromising struggle, however, is a highly creative process which constitutes the motive force of progress in philosophy and accounts for the specificity of historico-philosophical research and exposition.

The study of the history of philosophy calls for a harmonious combination of historical inquiry intended to reproduce, wherever possible, the real development of thought in all its richness and multiformity, with logical investigation aimed at disclosing its laws. The former is necessary in order not to schematise history by presenting consecutive philosophical systems as imperfect embodiments of a single absolutely true system, allegedly their common ideal, and the latter derives from the very nature of historico-philosophical investigation. Indeed, whereas reducing the historico-philosophical process to logic would deprive philosophical thought of its specific historically conditioned inquiries, conflicts, errors and findings which alone make it unique and constitute the external chance prerequisites for the internal necessity of law, failure to view the process in the light of a single philosophical doctrine would reduce it to a heap of irrelevant conceptions and theories. In point of fact, the history of philosophy is the only philosophical discipline studying all philosophical problems that have ever been raised and it cannot undertake the examination of these problems on a purely empirical basis without a certain guiding principle derived from the very history of philosophy itself.

There is yet another aspect to the historicity of philosophy as a form of intellectual culture and an expression of man's theoretical mastery of the world: the very subject of philosophy, men and society, also undergoes constant change. Marxist historians usually define five basic stages of the development of society, called socio-economic formations: primitive communal, slave, feudal, capitalist and communist. Each for-

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mation develops its own world view which reflects, in the final analysis, the social being and the social consciousness of the epoch. The world view of primitive communal society was mainly represented by mythology; philosophy comes into being in slave-owning society.

The methodology of historico-philosophical research taking account of the development of philosophy and intellectual culture at large derives from a twofold dependence of philosophy on society, namely, on the level of social development which makes philosophy, according to Hegel, an epoch conceived in thought, and on the level of this epoch's self-consciousness, i.e. on its knowledge of the world and of itself. This twofold determination of philosophy calls for a simultaneous analysis of its social (class) and epistemological roots.

The methodology of the history of philosophy based on materialist dialectics demands that philosophy as the ultimate expression of intellectual culture and its theoretical nucleus should be treated, first, as a product of society's entire cultural development, second, as a unity of internal contradictions (opposite views) which constitute the motive force of its development and, third, as a creative process of qualitative changes including negation, the negation of negation, and breaks in continuity during transition from one system of views to another. In terms of methodology this approach calls, first, for historicity, i.e. the investigation of each philosophical system in connection with the concrete conditions of its emergence and existence as a unique phenomenon constituting at the same time a link in the general chain of cause-effect relations and, second, for partisanship which demands of a historian of philosophy to occupy a clear-cut social and philosophical position in assessing every phenomenon under investigation in the light of struggle between materialism and idealism.

The history of philosophy in Ancient Greece and Rome which is outlined in this book covers the period from the late part of the seventh century B.C. till the beginning (the first third) of the sixth century A.D. Proceeding from the historical division of the slave formation which is the socio-economic foundation of ancient philosophy we distinguish three main periods in its development: early Greek philosophy (the seventh-fifth centuries B.C.), classical Greek philosophy (the fourth century) and Greco-Roman philosophy. This pattern somewhat departs from the generally adopted classifi-

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subjective = in philosophy, having to do with any of the elements of apprehension or apperception, derived from the limitations of the mind rather than from reality, independent of the mind.

cation in which the philosophy of antiquity is treated under the headings "Pre-Socratics", "Plato and Aristotle", "Post-Aristotelian philosophy" and "Hellenic philosophy". In contrast with the traditional view, we are inclined to think that Socrates cannot be regarded as marking the end of the infancy and the beginning of the maturity of philosophy in Ancient Greece, as his thought fell within the framework of the early period and was but a stepping stone to this maturity. On the other hand, it was none other than Democritus, commonly ranked among the pre-Socratics, who created a complete and consistent doctrine of atomistic materialism, a classical system which can well compare, in terms of maturity, with the systems of Plato and Aristotle. Chronologically, too, the lifetime of Socrates falls within the fifth century, whereas Democritus's activity extends well beyond it. Finally, the very term pre-Socratics coined in the nineteenth century suggests something transitory, auxiliary and insignificant, thus inducing various authors merely to skim through this theoretically important period in their handbooks of philosophy.

It should also be noted that the Greco-Roman period, the longest in the history of ancient philosophy, is also not infrequently underestimated and treated as the "decline" of ancient thought. By contrast, Marx wrote in his theses for a Doctor's degree: "It seems to me that though the earlier systems are more significant and interesting for the content, the post-Aristotelean ones, and primarily the cycle of the Epicurean, Stoic and Sceptic schools, are more significant and interesting for the subjective form, the character of Greek philosophy. But it is precisely the subjective form, the spiritual carrier of the philosophical systems, which has until now been almost entirely ignored (in favour of their metaphysical characteristics."[1]

2. Birth of Philosophy: Social Background

The first steps of philosophy in Ancient Greece pose a number of complex scientific problems controversial till nowadays. Their complexity is traceable to three main reasons. First, it appears impossible to establish the exact time of philosophy's birth, though its emergence brought about a radical

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[1] Karl Marx, "Difference Between the Democritean and Epicurean Philosophy of Nature", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 1, p. 36.

change in the history of thought and was a real spiritual revolution. The early philosophical teachings are not easy to distinguish from non-philosophical products of human intellect—mythological, religious, artistic, scientific—containing world-outlook elements. In view of their obvious continuity the researchers are often inclined to deny any lines of demarcation between them. Second, the matter is complicated by the almost complete loss of early philosophers' works. The surviving fragments torn out of the original logical context give grounds for endless controversies regarding their interpretation and assessment as philosophical or otherwise. Third, the different stands taken by historians of philosophy are partly accountable for by their different understanding of the subject-matter of philosophy.

The first world-view systems which may be termed philosophical emerged almost simultaneously in three centres—Ancient Greece in the late seventh-early sixth centuries B.C., India in the sixth century B.C., and China in the sixth-fifth centuries B.C.[1] This chronological coincidence, notable as it is, recedes to a secondary plan as compared to the "social simultaneity" of the inception of philosophy. Both the West and the East were passing at that time from early slave-owning society, distinguished by the presence of strong social and economic survivals of the old gentile organisation and permeated through with its ideology, to a developed slave-owning society. It was a transition from the patriarchal system of slavery providing the slave-owners with the means of bare subsistence to a system based on the production of surplus value. The entire social structure was undergoing radical transformation: cities were rapidly turning into centres of economic and political activity, trade was flourishing and the metal money born of its needs exercised a powerful influence towards its further expansion, the private property in land and mortgage bonds were all becoming characteristic features of ancient society. All these changes made for the spread of slavery and heightened the struggle between landed aristocracy and warlords on the one hand, and the free population of cities, on the other.

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[1] The prominent Indian scientist, S. Radhakrishnan, dates the birth and early development of Indian philosophy to the period of 600 B.C.-200 A.D. The commonly recognised founder of Chinese philosophy, Confucius, lived between 551 and 479 B.C. (See S. Radhakrishnan, *Indian Philosophy*, Vol. V, George Allen & Unwin Ltd., London, 1948, p. 57.)

The fundamental contradiction underlying all social developments, however, was the class antagonism between the slave-owners and the slaves.

Such was the background for the emergence of philosophy, a long and complex process extending over the sixth-fifth centuries B.C. in Greece, sixth-third centuries B.C. in India and China (incidentally, sources attest to very similar social and ideological conditions in Mexico just on the eve of the Spanish conquest). All these facts testify against current concepts of a strong influence allegedly exerted by Ancient Greece on India or even China or, on the contrary, of these countries' influence on Greece. Such concepts based on obvious similarities between the so-called Western and Eastern teachings have long been circulated in historico-philosophical literature by the champions of the so-called Eurocentric or Asiacentric origin of philosophy. The truth is that real contacts between Greece and India started in the much later Hellenic period as is attested to by the Buddhist *Milinda Pañha* (Milinda's Questions), a philosophical monument describing a talk between preacher Nagasena and Greek king Menander (Milinda) ruling over one of the regions of North-West Italy between approximately 125-95 B.C.

Controversy over the impact of Middle Eastern teachings on early Greek philosophy has flourished for many centuries. In the Hellenic period it was commonly believed that the Greeks had borrowed their philosophy either from the Egyptians or from the Hebrews. This view was traceable to the Alexandrian scientists who had carried out a comparative study of Greek and Egyptian cultures, as well as of the corresponding interpretation of ancient Egyptian myths and the Hebrew Old Testament. Numenius (the second century A.D.), for one, contended that Pythagoras and Plato had extensively borrowed from the brahmins, magi, Egyptians and Hebrews, and called Plato a "Moses speaking Attic". Similar concepts, though somewhat toned down, are also current in our days. Special emphasis is being placed on Persian mythology (the "gift of the magi"), as, for instance, by British philologist and historian of philosophy M. West who has devoted a special work to this problem.[1] However, the factual material at his disposal intended to prove "active Iranian influence" is very

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[1] See M. L. West, *Early Greek Philosophy and the Orient*, Clarendon Press, Oxford, 1971.

scanty and his arguments in fact do not amount to anything more than statements of probability.

Historians of philosophy coming out in defence of the originality of Greek thought have already adduced language difficulties: it is hard to imagine any exchange of opinions on complex world-view problems through an interpreter, and there is no evidence to prove that any Greek philosopher in the pre-Hellenic period knew languages spoken in the Middle East, or that Middle-Eastern priests knew Greek. The mere fact that the Greeks borrowed some of their mathematical, astronomical and other concepts from the Middle East cannot be regarded as proof of the oriental origin of their philosophy.

The argument from the language, significant as it is, should be viewed, however, as secondary to a far more important consideration of general conceptual character. Like any other philosophy, Greek philosophy is essentially different from mythology, no matter what the traces of oriental influence. Mythological reminiscences are included here in a new context which is so unique that they completely lose their original meaning and become integrated in an entirely different train of thought. Our task is to explain this phenomenon proceeding from the Greeks' own intellectual history. We are by no means trying to belittle the importance of Eastern culture—such accusations are often levelled against the defenders of the originality of Greek philosophy, sometimes not without good reason. Yet it is our firm conviction that the emergence and development of ideologies cannot be understood in terms of "borrowing", as ideology is rooted in the material and spiritual life of the people which developed it, whatever the interaction of cultures.

Ancient philosophy is the philosophy of slave-owning society. The pivotal contradiction of this society is one between domination and slavery, the slave-owner and the slave. It is an expression of man's alienation, since slave is reduced to a thing. According to Marx, one part of this society, the slave-owners, treats the other part as a means of production and of its own-reproduction. The slave is in no way related to the objective conditions of his labour being ranked with other natural forces, such as livestock.[1]

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[1] K. Marx, *Grundrisse der Kritik der politischen Ökonomie (Rohentwurf)*, *1857-1858*, Verlag für fremdsprachige Literatur, Moskau, 1939, S. 389.

Significantly, the degree to which slave labour accounts for social production or the share of slaves in the total number of the population does not play a decisive role in determining the make-up of slave-owning society. The slave-master relation permeates through the entire life of society and cannot but tell on the relations between its free members. In principle, any of them can lose his personality and turn into a slave—a "thing", "body", "speaking tool": he can be taken prisoner, go bankrupt and find himself in bondage, fall in poverty and become a defenceless, though "free", hired labourer who can be easily turned into a slave by any influential member of the community. Even the immortal gods are not immune from such a fate. Recall, for instance, how Neptune reminds Apollo of the time when on Zeus's orders they both served the Troyan king Laomedon:

> *"...the ruffian king refused*
> *The promised wages, and dismissed us both*
> *With menaces; to bind thee hand and foot*
> *He threatened, and to sell thee as a slave*
> *In distant isles, and to cut off the ears*
> *Of both of us..."*
>
> (*The Iliad of Homer*, Houghton, Mifflin
> and Company, Boston, 1870, pp. 250, 251)

That means that man has no inalienable rights or any special non-natural properties: he is an integral part of nature. Conversely, nature proves animate and even humane. Much water had flown under the bridges before man understood his principal distinction from the rest of nature. This new viewpoint found its expression, on the one hand, in the separation of soul from body, the latter being understood as the former's prison, and on the other hand, in the antithesis of nature and law (prescription, art) as representing different modes of existence of nature, society and man.

The seventh-fifth centuries B.C. were marked by a radical change in the life of society. The development of productive forces opened up a possibility for a transition to a new type of slave labour—from household slavery intended to serve directly the needs of the slave-owner's family, to slave labour as a means of profit extraction. This brought about an essential shift in social relations and, even to a greater extent, in ideology. Early slave-owning society is still characterised by numerous remnants of the primitive

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communal system. Aristotle's *Politica* testifies to the fact
that in the seventh century B.C. the agricultural commune
was still the basic structural unit in Attica. However, it
was rapidly deteriorating owing to the growing concentration
of land in the hands of the gentile aristocracy—the eupa-
trids. Their lands were cultivated by poor sharecroppers,
whose rent evidently amounted to five sixths of the crop
and who automatically turned into slaves if they failed to
pay it. The debtor or his family members could also fall
into bondage or be sold into slavery if they failed to repay
a loan. Between the eupatrids on the one hand and the depend-
ent sharecroppers and slaves, on the other, ranked small
peasants (geomores) and handicraftsmen (demiurges) who
were gradually losing their connection with land. A special
place in society was occupied by newcomers or aliens (me-
teks) who were personally free, but did not enjoy any political
rights. Their property rights were curtailed too: for instance,
they could neither have any land in Attica nor buy a house in
Athens.

The transformation of social relations, as attested by
Aristotle, was characterised by several tendencies. The *first
tendency* consisted in the growing stratification of the "free"
population which undermined the traditional communal sys-
tem and led to the aggravation of contradictions between the
classes emerging within this system. The class struggle un-
thinkable in the old gentile organisation now slowed down,
now accelerated this process of stratification. As a result
of general unrest and popular uprising, Solon who was elected
archon (chief magistrate) of Athens in 594 B.C. carried out
an important reform. According to Aristotle, Solon freed the
people and prohibited personal bondage as security for a
loan. Then he issued laws and cancelled all debts (Arist.
Athen. Polit. IV. 6, 1). The Athenians who had fallen into
slavery through debts were ransomed by the state.

These measures, however, could not prevent the growth
of contradictions within the "free" Athenian society, stim-
ulating at the same time what was the *second tendency*—the
development of slavery. In contrast with patriarchal slavery
which satisfied internal household needs[1] and enabled the

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[1] Domestic slave labour included the hardest chores: corn threshing and
grinding, oil squeezing, attending to livestock, making dairy products,
cooking, procurement of firewood and water, spinning and weaving, care of
children, etc.

master to apply himself to more honourable and important ag-
ricultural jobs calling for greater personal interest, de-
veloped slavery expanded the sphere of application of slave
labour. The number of slaves in handicrafts, mining industry,
construction, and later in agriculture was steadily growing.
Free wealthy citizens no longer forced to take part in prod-
uction processes turned to politics, trade, art, science,
ideology, and this could not but lower the prestige of physi-
cal labour. On the other hand, the importance of intellectual
qualities was constantly rising in popular esteem and know-
ledge was beginning to play an ever increasing role in social
production and social relations.

The *third tendency* consisted in the change of the slaves'
social position. The slave had started bringing profit
and was therefore turning into a material value which was to
be used to advantage. As a result, the slaves' living condi-
tions were somewhat improved, particularly in Attica. This
improvement, however, did not extend to all slaves, since
those working in mines and quarries had to suffer far greater
hardships than other categories. In Athens cruel treatment of
slaves was condemned and the murder of a slave was pun-
ishable by law. It became current practice to free slaves for a
ransom, or make their emancipation conditional on the fulfil-
ment of certain onerous duties. All this brought about a cer-
tain change in the attitude of society to the slaves who had be-
come the main source of their masters' welfare and, which was
even more important, raised their own self-appraisal. His-
torical sources are full of complaints about the slaves' "arro-
gance" which was the result of their increasing independence
from their masters.

The transition to developed slavery led to important
changes in the life of society and, first and foremost,
emancipated the individual to a degree unthinkable under
the early slave-owning system. These changes were particu-
larly manifest in colonies. Colonisation was carried out by
the most active elements of Greek polises, often by those
who were dissatisfied with the conservative order in the
metropoly. Greek colony-cities, particularly those in Asia
Minor (Ephesus, Miletus, Clazomenae, Colophon and others)
were notable for the rapid development of various handicrafts,
seafaring and trade which, in turn, stimulated shipbuilding
and metallurgy. As regards the colonies in Greece itself
and in Italy, the main branch of their economy was agricul-

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ture, its produce being intended for export. The development of handicrafts and trade calling for greater specialisation and division of labour contributed to the establishment of closer relations with neighbouring peoples, expanded the ancient Greeks' geographic and social horizons and loosened the set stereotypes of culture, behaviour, social relations and thinking. The constitutions of new colonies no longer followed the old pattern—tradition gave way to conscious approach. Old standards were replaced by new ones in the process of sharp struggle causing conflicts in all spheres of social life.

All these transformations dealt a death blow to the already outdated illusions of the "naturalness" of traditional society based on the gentile organisation. Greek civilisation was the product of glaring contradictions. It "has accomplished things with which the old gentile society was totally unable to cope. But it accomplished them by playing on the most sordid instincts and passions of man, and by developing them at the expense of all his other faculties. Naked greed has been the moving spirit of civilisation from the first day of its existence to the present time; wealth, more wealth and wealth again; wealth, not of society, but of this shabby individual was its sole and determining aim."[1] The development of Greek civilisation was bound to be promptly reflected in social consciousness, representing the views of different strata of Greek society. Ancient literature abounds in reflections on changing times and morals, on calamities and vicissitudes of fate, wealth and poverty, domination and slavery, war and political events.

Economic, political, social and legal changes call for ideological interpretation—justification or criticism, legitimisation or condemnation. The struggle of these opposite tendencies representing the interests of different social strata and classes constitutes the background of the development of philosophy as rational comprehension of the new world, dynamic and internally contradictory. Hence the non-uniformity and contradictoriness of philosophical thinking itself. The ambivalence of philosophy symbolised by the images of "weeping" Heraclitus and "laughing" Democritus

[1] Frederick Engels, "The Origin of the Family, Private Property and the State", in: Karl Marx and Frederick Engels, *Selected Works* in three volumes. Vol. 3, pp. 332-333.

represents the scientist's primary desire "to hear both sides", evolve a comprehensive logical theory and provide a rational substantiation for a definite stand in matters both earthly and heavenly.

Social development provides the necessary conditions for the emergence of a new, rational ideology in general and philosophy in particular, setting the task of the legitimation of social relations, their materialisation and consolidation in the shape of various social and state institutions. Unlike early slave-owning society which sanctified such institutions mainly by tracing the genealogy of aristocratic "noble" families directly to gods and heroes, the developed system of slavery legitimised them ideologically: first, by alleging their "natural" origin, then by deducing them from "law" and "custom".

The substance of emerging philosophy was largely determined by the existing thought material. This prehistoric substance was not only assimilated and preserved, but also given a new, different interpretation.

3. Prephilosophic Forms of Consciousness and Philosophy

Historical science maintains that mythology was the original form of social consciousness, the ideology of gentile and early slave-owning society. The birth of science and philosophy understood as a single, integral form of the theoretical comprehension of the world is usually expressed by the formula: "from myth to Logos."[1] Important and valuable as it is, this formula, however, suggests a certain "linearity" of the process under consideration concealing the *dialectics* of early philosophical development. In other words, it leaves in the shade the contradictory tendencies, the "struggle of the opposites" in the comprehension of the universe. Though the consciousness of mature slave-owning society was indeed developing from myth to Logos, i.e. to theoretical thinking (reason), we propose a different formula for this process. According to this formula, *philosophy comes into being as a resolution of the contradiction between myth on the one hand, and the initial empirical knowledge of nature and society, scientific knowledge in its first historical form, on the other hand.*

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[1] See W. Nestle, *Vom Mythos zum Logos. Die Selbstentfaltung des griechischen Denkens*, 2. Auflage, Stuttgart, 1975.

During the inception of philosophy and in its early period, social consciousness was dominated by myth. Being the product of the primitive communal organisation with its spontaneous, unconscious collectivism, myth extended the "natural" relations of the gentile community and tended to treat society as a specific consanguine family of fantastic creatures, each having definite cosmic, social and productive functions to perform. Reality as represented in myth is taken by man for granted, without any criticism, no matter how improbable it may be. Myth is, for him, the real world, perhaps even more real than the physical reality he deals with in everyday life. Yet at the same time it is an alienated world estranged from reality. It is simultaneously something tangible, sensually given—and magic, miraculous, fantastic. It is both individually concrete and abstract, sensuously authentic, real and transcendental. The main function of myth is to regulate social life; it is life itself, with all its social, productive, ideological and even physiological aspects.[1] In other words, mythology is a form of practical-spiritual assimilation of the world which "subdues, controls and fashions the forces of nature in the imagination and through imagination; it disappears therefore when real control over these forces is established."[2]

Even now, in the epoch of breath-taking achievements of science and technology, we cannot speak of man's real control over the elements. It is not surprising, therefore, that mythology never completely lost its grip on the ancient mind—in point of fact, it continues to exist in our days, though in different forms. It develops, changes and passes into other forms of social consciousness. This process which was particularly manifest in Ancient Greece started from epos—heroic in Homer, didactic in Hesiod's *Work and Days* and *Theogony*, and also in fragments of other authors dealing with the genealogy of the gods. The general traits of Greek mythology are well known. The universe, i.e. the earth, the heaven and the sea, is controlled by the Olympian gods under the direct oversight of Zeus. It is the third generation of gods descending, according to Homer, from Oceanos and his wife Tethys or, according to Hesiod, from Chaos. Ocean is the

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[1] It is only this complete fusion of different aspects and components of mythological consciousness that accounts for the so-called magic influence of various rites on primitive man, e.g. for the lethal effect of some taboos described in numerous ethnographic works.

[2] Karl Marx, *A Contribution to the Critique of Political Economy,* p. 216.

personified cause, "father of the gods." Chaos is the non-personified cause; it is a yawning abyss between heaven and earth. Unlike Homer who does not give an orderly picture of the theogonic process, Hesiod presents it in a systematic form. The first to emerge was Chaos, then came (but not from Chaos) Gaia (Earth), dreary Tartaros (the underground kingdom) and Eros (Love), "the fairest of the gods." After that Gaia and her son and simultaneously husband Uranus (Heaven) begot the Titans with Cronus at the head. Having overthrown Uranus, Cronus and his wife Rheia begot the Olympian gods. Zeus, one of them, overthrew Cronus and became their chief. Alongside the anthropomorphic gods, the theogonic process produces monsters—the hundred-handed Hecatonhaires, Typhoes and Echidna, Gorgons, Sirens, Scylla and Charybdis, etc., as well as various deities directly embodying certain biological and social functions. Such are, for instance, Thanatos (natural death), Moros (violent death), Hypnos (sleep), goddesses of fate Ker and Moirai, goddess of vengeance Nemesis personifying retributive justice, and others. Liaisons between gods and goddesses on the one hand and the mortals on the other produced the heroes.

In the *Works and Days,* Hesiod describes human society as passing through four epochs: golden, silver, copper, and iron. The first generation of people living in each epoch is created by god (Cronus in the golden epoch, Zeus in the others), whereas the last generation is "covered with earth," i.e. perishes. The causes of the destruction of the people who lived in the golden epoch are not known. The silver epoch came to an end because people did not worship the gods, nor did they "sacrifice on the sacred altars of the blessed ones," whereas the people of the copper epoch perished in the intestine war. As regards the present iron epoch, it is the time of anxiety and discord, envy and violence...

The characteristic features of this mythology immediately preceding the emergence of philosophy can be summed up as follows.

First, it is an orderly semantic system providing a specific framework for the accumulation and storage of practical experience in the sphere of production and social life, as well as for causal explanations of all natural and social phenomena

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[1] *The Iliad of Homer.* Translated by William Cullen Bryant, Houghton, Mifflin and Company, Boston, 1870, Vol. II, p. 46, Book IV, pp. 242-243.

attributed to the activity of fantastic omnipotent creatures. Relying on their assistance which can be secured by the corresponding rituals, invocations and prayers, man hopes to achieve his aims in all his undertakings. For instance, the success in a military expedition depends on the help from Ares, in farming—from Demeter, etc.

Second, this mythology is presented in the epic form and is a literary production, a work of art. Hence the figurativeness which causes the reader—and not only the contemporary one—to identify, for instance, young radiant "pink-fingered" goddess Eos with morning dawn. Significantly, the relations between the gods are treated in mythology so much like the most ordinary, even trivial relations between the mortals that the ancients sometimes felt it necessary to sublimate their myths, i.e. to give a special refined interpretation of certain scenes that are incompatible with the gods' dignity. Suffice it to recall, for instance, the pages in the *Odyssey* devoted to poet Demodokos's story and the subsequent scandal on Olympus:

"...Demodokos struck the lyre and began singing well the story about the love of Ares and sweet garlanded Aphrodite, how they first lay together in the house of Hephaistos secretly, he gave her much and fouled the marriage and bed of the lord Hephaistos; to him there came as messenger Helios, the sun, who had seen them lying in love together."[1]

Third, the formal orderliness of later mythology that reached a high degree of perfection in epos and theogonies, testifies to the fact that the days of the primordial myth with its universal "determinism" (anything may come from anything) were over. With the increasing regimentation of the Olympus and ever stricter regulation of the gods' functions and mutual relations the spontaneous pluralism of early mythology gives way to a relatively monistic hierarchy of divinities. Pallas Athena, for instance, who was formerly assigned any functions, becomes the goddess of war, the arts, the industries of peace and well organised patriarchal community. She is no longer an owl or a serpent, both now becoming her attributes. Zeus, too, is no longer a mere thunderbolt with lightning. He is a guardian of the heroic legal order, the thunderbolt and lightning being his symbols. Epic poems contain a wealth of material pertaining to prod-

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[1] *The Odyssey of Homer*. Translated by Richmond Lattimore, Harper & Row. New York, Evanston, and London, 1967, p. 128.

Allegory = a story in which people, things, happenings, have a different meaning [?] and explaining; allegories are useful for teaching and explaining.

uction, war, trade, piracy and ever increasing knowledge of physiology, medicine, geography, history and other disciplines. Homer's poems, for one, mention only once the magic formulae used to stop bleeding—in all other cases they give quite rational recommendations for wound treatment. The description of Troias' topography by Homer which called for considerable skill enabled Heinrich Schliemann to find the place where the city had been situated. The plough making technology described in the *Works and Days* could have been found quite up to date even in the nineteenth century A.D. Examples of this kind can be continued.

One cannot help noting, however, that the empirical material, technological processes and production techniques described in Hesiod's poem seem to be in perfect agreement with magic practices and prayers; their natural, matter-of-fact merger[1] creates the impression of a very unstable equilibrium which is bound to collapse. Indeed, the eighth-sixth centuries B.C. witness the process of myth disintegration as attested to by numerous literary sources. The authors of written fiction that originated in that period treat mythological material as plots unfolding them with the help of special methods—allegory, metaphor, typisation. The broad use of allegory, for instance, permits presenting a myth as a figurative story, the events described being symbolic and having, in fact, a different meaning. Allegory was born as a peculiar method of literary criticism aimed at defending one or another poet against various charges. Tradition ascribes its invention to Theagenes of Rhegium (the early sixth century B.C.). Seeking to justify Homer accused of using obscene language in relation to gods and heroes, Theagenes pre-

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[1] Hesiod says:
"Make your prayers to Zeus of the ground
and holy Demeter
that the sacred yield of Demeter may grow complete,
and be heavy.
Do this when you begin your first planting, when,
gripping the handle
in one hand, you come down hard with the goad
on the backs of your oxen
as they lean into the pin of the straps.
Have a small boy helping you
by following and making hard work for the birds
with a mattock covering the seed over..."
(Hesiod, *The Works and Days*, 465-471, The University of Michigan Press, 1959, pp. 73-75.)

sents Homer's gods as the embodiment of opposite elements or mental qualities. In his opinion, by Apollo, Helios and Hephaestus Homer meant fire, by Poseidon and Scamader — water, by Artemis — the moon, by Hera — air, etc. Similarly, he sometimes gave the names of gods to mental qualities — the name of Athena to reason, of Ares to recklessness, of Aphrodite to passion, of Hermes to speech (DK 8 A 2).

What was with Theagenes a method of investigation and defence of Homer's works turns in historical and philosophical literature into the rationalistic interpretation of myths as stories of real historical events (for instance, the mythical king Geryon, whose cows were allegedly stolen by Heracles, was regarded by later commentators as the Ambrakian king who had been conquered by Heracles with the help of the Aegean army). This process of myth "rationalisation" terminated in euhemerism — the theory held by Euhemerus (the fourth-century B.C.) according to which the gods of mythology were but deified political leaders and the mythological stories were distorted descriptions of real events that had occurred in their lifetime.

Though this interpretation stripped the myths of all their poetic charm and replaced the original verve by quite prosaic and largely arbitrary stories, the new trend testified to the break-up of the old world outlook and helped clear the way for a new system of views.

Symbolic interpretation of myth opened up yet another path to philosophy. Symbol is more than a simple allegory that substitutes an abstract notion for a mythological name or event, e.g. recklessness for Ares, and far more than rationa- lisation whereby a myth is reduced to the so-called real event. Symbol in art and religion is a unity of image and meaning, but it is unity that has a new reference. In religion it denotes things preternatural and represents extralimital, "transcen- dent" reality. In Ancient Greece where the complete merger of mythology and religion was only characteristic of a few esoteric cults, religious communities and local mysteries, an important role belonged to a trend called orphism after the legendary poet and musician Orpheus. This trend dating presumably from the seventh to sixth centuries B.C., but known from later sources, was notable for broad symbolic interpretation of myth. For instance, in orphic tradition Zeus is identified with life (*zoe*), Kronos with Chronos (time), Pan is understood as the symbol of everything (*to pan*), and

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Demeter, as the "mother of earth" (*gē meter-Dēmēter*) This is not the allegorisation mentioned above. Zeus is not a metaphorical name for life, but life itself, a symbol of the unity of living process and its divine principle—the beginning, the end and the middle of all that exists. "One Zeus only, one Helios, one Dionisus, one god in everything. How should we call each one separately?" asks an orphic (OF, fr. 239b). This is no longer a simple claim to interpret the divine name, but a fundamental transformation of the entire mythological heritage based on the *faith* in the suprasensuous world and, consequently, on the contrast between the believer and the object of his faith, absolutely alien to mythology.

Various orphic theogonies and cosmogonies are mainly traceable to Hesiod, but also include other elements that may have originated in the Middle East. Here is one of the variants of such a theocosmogony known from Athenagoras: The beginning of the Whole was Water; from Water came Mud, and from both came a Serpent, Heracles or Time (according to another version of the same theogony, Water and Earth produced a Serpent having the heads of a bull and a lion with the face of a god in between; it had wings and was called Ageless Time or Unchanging Heracles). This Heracles produced a huge Egg, which, overfilled with the strength of the one who produced it, split into two because of friction. Its upper part became Ouranos (Heaven), and the lower part, Ge (Earth). Simultaneously he produced a god without body. Heaven united with Earth and produced the female Fates and male Giants and Cyclopes. Upon learning that he would be deprived of power by his children, Ouranos, i.e. Heaven, shackled the males and flung them into Tartarus, whereat Earth in anger produced the Titans.[1]

A similar, though somewhat different in details, theocosmogonic picture is presented by Pherecydes of Syros believed to be Pythagoras's teacher. According to Diogenes Laertius (I. 119), a book surviving from Pherecydes of Syros began with these words: "Zas (Zeus) and Time existed always, and Chthonie; but Chthonie acquired the name Ge, since Zas gives earth to her as a gift of honour"[2] (the end of this fragment is a play on words: *ge* means earth, *geras* means

[1] *Ancilla to the Pre-Socratic Philosophers*. A complete translation of the Fragments in Diels, *Fragmente der Vorsokratiker* by Kathleen Freeman. Harvard University Press, Cambridge, Massachusetts, 1948, p. 3.

[2] *Ibid.*, pp. 13-14.

gift). Expounding further Pherecydes's teaching, Damascius says that Chronos produced fire, wind and water from his own seed (air, breathing). These distributed by Chronos among five nooks (*mychoi*) in the bowels of the earth produced new generations of gods. The book also included a story about the marriage of Zeus and Chthonie and told of war of Kronos (Chronos) and his forces against serpent Ophioneus and his brood. Their struggle was likened to the war of the gods against the titans and giants in Greek mythology, or of Hera against Seth, in Egyptian mythology.

Both Pherecydes and the orphics recognised the immortality of soul and believed in its wanderings in the next world. Though we do not know if Pherecydes was connected with any existing cult (this possibility cannot be excluded as there did exist a temple of Zeus, Kronos and Ge, Pherecydes's principal trio), his narrative provides a good example of a religious concept with personified deities representing the primary cause of all that exists. This concept is simultaneously a specific prephilosophic doctrine attesting to the process of transition to philosophy proper.

The eighth-fifth centuries B.C. notable for the transformations of myth witnessed the emergence of *science* as a relatively independent sphere of knowledge. It is commonly believed that scientific knowledge, primarily mathematics, was borrowed by the Greeks from the Middle East. Yet mathematics in the Middle East of that period was of a markedly utilitarian character and took the form of practical rules of thumb for various calculations. These rules were expounded in a dogmatic manner without any substantiation and served, for instance, for determining the quantity of corn or beer in a vessel, the number of bricks, the area of a crop field, the earnings or the share to be inherited from a deceased by each member of his family, etc. Such rules were known in Greece as "logistics" and they indeed may have been borrowed ready-made. The Greeks, however, were the first to turn them into an abstract science that concentrated on regular relationships between various mathematical propositions and provided a theoretical basis for transition from one proposition to another in the form of a system of proofs.

As regards the theoretical (speculative) science of nature, the ancients developed it within the framework of philosophy (the first Greek philosophers were called "physics" or "physiologers"). This science was not based on the observation

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of natural phenomena, though it did contain certain notions regarding natural processes and the workings of nature's mechanisms. It should be noted in this connection that the current concept of early Greek thinkers' philosophy ("physics") as initial undivided scientific knowledge can hardly be considered tenable. We have good reason to regard the science of antiquity, limited and historically immature though it was, as independent of philosophy inasmuch as it took the shape of concrete knowledge based on experience and observation and enabled man to solve certain typical problems of practical life. This knowledge can well be distinguished both from myth and from philosophy, as it no longer invoked preternatural forces for explanation of natural phenomena and did not offer any non-empirical generalisations of the world-view character.

Early scientific notions, even when they are interspersed among philosophical world-view teachings are relatively independent if they are based on structural descriptions and causal explanations that can be confirmed by direct observation and supported by obvious analogies, and yet do not deal with the ultimate nature of the world. This is precisely where we have the line of demarcation between science and fanciful imagination or myth on the one hand, and philosophy, on the other. In contrast with philosophical notions, scientific propositions derive from concrete facts and relationships and leave alone ultimate constituents of reality. Very illustrative in this respect are the examples of ancient medicine and historical science. The Hippocratic accounts reflecting the condition of medicine in the fifth-fourth centuries B.C. reveal two approaches to health and illness. One which can be termed philosophical regards man as a "microcosm" (small world) with interacting elemental forces and invokes a disturbed balance between them as a cause of illness. The other approach, the scientific one, demands that illnesses be traced to directly observable cause and that treatment be based on experience. Practical medicine rejects the assertions of natural philosophy that man is air, or fire, or water, or earth or something else that does not appear as self-evident (Hipp. De nat. hom. I, I). It maintains that in explaining an illness and prescribing a treatment it is necessary to proceed from the physical nature of man revealed in the body's components—blood, mucus and bile (white and black). This reliance on practical experience, observation

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of visible symptoms and tested methods treatment (blood-letting, bile-expelling, etc.) is a characteristic feature of an empirical physician distinguishing him from a natural philosopher. Hence the proud conviction of the author of treatise *On Ancient Medicine* that this science possesses everything necessary to achieve its aims: it has found both the source and the method, made many important discoveries and assured success for those already skilled in the art who are willing to apply themselves to research (Hipp. De vet. med. 1).

No less independent in Ancient Greece was historical science. In the sixth-fourth centuries B.C. it was more and more turning into a rational investigation. The authors were making increasing use of such historical documents as the lists of various officials, priests and priestesses, winners of Olympian games and other contests, records and verbal stories of travellers, merchants, participants in military expeditions. Events were recorded in a chronological order. Hecataeus of Miletus, Charon of Lampsacus, Hellanicus of Mytilene developed the genres of historical chronicles and historico-ethnographic description. The *Lampsacus Tables* of Charon, *Atthides* (Chronicles of Attic History), *Lesbiaka*, *Persika* and *Scythica* of Hellanicus paved the way for the *History* of Herodotus.

Herodotus (between 485-425 B.C.) was called the "father of history" even in ancient times. Using the forms and methods of historical narration developed by his predecessors he collected and recorded various historical data "so that the events of the past were not buried in oblivion and that the great and astonishing deeds of the Hellenes and the barbarians did not remain unknown, particularly why they waged wars against each other" (Herod. I. 1). The historian's mission, according to Herodotus, was to record the testimony of those who were impartial in their attitude to historical personages and events (I. 95). To be sure, Herodotus had many weaknesses. For one, he took historical sources for granted and paid no attention even to obvious contradictions. striving at best to reconcile the data they contained with common sense. Yet his writings already rested on a scientific foundation.

The principal feature of ancient historiography was the etiological approach, the attempt to give a causal explanation to historical events. The etiological function of my-

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thology is obvious. Yet the explanation it provides is basically untenable since the invocation of a deity as the cause of events in interest is in fact a tautology which does not go beyond the semantic framework of the myth. By contrast, scientific explanation breaks the vicious circle and leads to reality, to objective observable phenomena and processes. Here empirical certainty takes the place of the "certainty" of myth rooted in tradition. The emancipation of the Greek mind from the mythological fetters was facilitated owing to the fact that Greece had no special cast of priests as the social carrier of tradition, nor a system of unified dogmata. For a Greek of that period, even a religious one, the object of faith had to be plausible—he could no longer accept fantastic mythological stories.

The spirit of empiricism which clearly manifested itself in medicine and history already in the fifth century B.C. but had undoubtedly crept into Greek thought much earlier was incompatible with the entire pattern of mythological thinking. It called for real knowledge that accorded with everyday experience, was open to layman, lent itself to verification and causal explanation and had nothing to do with fanciful hypotheses. Yet the fragmentary scientific knowledge of the early Greek thinkers who sought to give concrete explanations to concrete phenomena could not provide a basis for the world view. This function could no longer be performed by myth either, as it had already lost its sway over people's minds. *The resulting ideological vacuum was filled by philosophy which bridged the gap between mythology and early science and provided a dialectical synthesis of the general world outlook with the rational explanation of observable phenomena.*

Besides myth or divine revelation and science or human knowledge there existed yet another form of the intellectual comprehension of social reality—folk wisdom. In Ancient Greece it was represented by the apophthegms of the "Seven Sages". Historical sources, however, mention seventeen names of which constant references are made to only four: Thales of Miletus, Bias of Priene, Pittacus and Solon. Here is an example of the most current apophthegms, as attested to by Diogenes Laertius:

...Moderation is best—Cleobulus of Lindus
...Rashness has its perils—Periander the *son of*
<div align="right">*Cypselus*, born at Corinth</div>

...Know *thine* opportunity... "What is agreeable?"
"Time"—Pittacus of Mitylene...
...*Most men are bad*—Bias of Priene...
...To Thales (of Miletus) belongs the proverb "Know
thyself"...
...Be led by reason... "Nothing too much"
—Solon, born *at Salamis*[1]

The apophthegms ascribed by tradition to "the Seven"
provided a basis for numerous tales, poems, proverbs and say-
ings. Representing the wisdom of the masses, they became, as
it were, part of Greeks' popular philosophy. Its viability,
common sense and the rationalistic interpretation of the
motives of human conduct are irresistible. What is more, it
was not "divine" wisdom coming from myth, but wisdom by
and for the people. Nevertheless, the moral maxims, political
precepts and the down-to-earth wisdom of the man of the
world did not become a comprehensive theoretical system with
the Greeks. The only exception was, evidently, Thales who
was not by chance ranked simultaneously among the "Seven
Sages" and the first philosophers: he is justly credited with
having enormously expanded the Greeks' intellectual horizon
by linking their practical wisdom with cosmological problems.

It appears that early philosophy represented a peculiar
combination of two very different elements: myth and science.
Gravitating on the whole towards the scientific explanation
of the world, it used myth in its interests as a source of
material for analysis and for subsequent reassessment of
reality, and also as a method of thinking sanctified by tra-
dition. Appealing to scientific knowledge which not infre-
quently he himself procured, the philosopher at the same
time denounced the one-sidedness of empirical science lack-
ing the integrity of true wisdom and turned to myth in order
to fill the gaps in his knowledge and form a complete pic-
ture of the universe. However, this alliance of myth and
science could only be but a temporary solution, as myth in
fact referred the unknown, which was subject to explanation,
to what was the unknowable in principle, namely to a deity
or deities, thereby imposing upon man a system of notions
entirely alien to reality. The progress of concrete scien-
tific knowledge deriving from practical experience of man

[1] Diogenes Laertius, *Lives and Opinions of Eminent Philosophers*,
The Loeb Classical Library, London, William Heinemann Ltd., Harvard
University Press MCMXXXVIII, Cambridge, Mass.

and therefore capable, in turn, of providing guidance to his practical activity was more and more calling in question the mythological world view and undermining its unity.

Under the conditions when mythology had already outlived itself and science was not yet in a position to take its place, philosophy served as a link between the unconscious tendency towards a comprehensive world view and the rationalistic approach to reality based on causal explanation, observation and analogy. In other words, philosophy provided the ideological foundation for social consciousness and gave the individual a general orientation rooted in the scientific rather than mythological attitude to the world.

Philosophy came into existence as a combination of "wisdom" and knowledge. Tradition presented its birth as follows: "The first to use the term [philosophy], and to call himself a philosopher or lover of wisdom, was Pythagoras; for, said he, no man is wise, but God alone... All too quickly the study was called wisdom and its professor a sage, to denote his attainment of mental perfection; while the student who took it up was a philosopher or lover of wisdom."[1]

The synthetic character of philosophy which was essentially different from myth and science, from the average Greek's everyday notions and religion, called for a radical transformation of thinking which could not but tell on the language too. The specific language of philosophy was formed by two different methods. First, the meanings of conventional words used in everyday life underwent subtle changes—words became *terms* and the philosophical language acquired logical precision and stability. From the viewpoint of philology it means that a word used in everyday language was placed in a different lexical environment and a different meaning was imparted to it. Viewed philosophically, this process consisted in that a philosophising Hellene explored the possibilities of a conventional word, revealed all its semantic richness and used it, by way of experimenting on the language, to express different shades of philosophical thought. Second, philosophy assimilated, transformed and gave a differend interpretation to the language of myth, religion and rites, even to the very names of the gods. We shall later see how the names of the gods were converted into allegories and symbols of elements and how the analysis of the semantics of

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[1] Diogenes Laertius, op. cit., Vol. 1, p. 13.

these names turns into a philosophical investigation of the elements themselves. At this point it will be sufficient to note that the semantic richness and diversity of the ancient Greek language was highly instrumental in achieving the flexibility, mobility and versatility of ancient *dialectical* thought.

This ferment of the language element reflecting the progress of philosophy and simultaneously exercising a retroactive influence upon it calls for special investigation which is beyond the scope of this work. One should be aware of the fact, however, that the linguistic changes led to considerable instability and ambiguity of terms in early Greek philosophy and, accordingly, to serious difficulties in the translation and interpretation of philosophical texts of that period. It is not to be wondered, for one, at the hypothetic nature, generally objectionable in a textbook, of many of the ancient philosophers' views discussed in this work. These difficulties also account for the need to cite occasionally the original terms used by one or another thinker in the fragments referred to.

Ionic Philosophy

4. General

By Ionic philosophy is meant a group of specific phi-
losophical teachings that came into being in Ionia, a region
on the West Coast of Asia Minor inhabited by Greek
tribes. In the seventh-sixth centuries B.C. Ionia was the
richest and most advanced region of the Greek world in terms
of culture and socio-economic relations. Mild climate and
fertile soil created excellent conditions for the development
of agriculture, whereas the geographic position of the country
situated on the great land and sea routes stimulated
the growth of commerce and handicrafts. The proximity to
ancient civilisations of the Near East, too, was an important
factor in the rapid intellectual advancement of talented
Greek population. The general cultural atmosphere in Ionia
proved highly conducive to the development of not only heroic
epos, lyrical poetry (Archilochus, Mimnermus, Callinus,
Hipponax, Anacreon) and the prose of "logographs," but
also of philosophy. The Ionian thinkers did not confine
their activity to Ionia alone: Xenophanes of Colophon was
travelling over Greece, Italy and Sicily; Pythagoras of
Samos founded his school at Croton, in Magna Graecia;
Archelaus of Miletus and Anaxagoras of Clazomenae became
famous in Athens... However, the Ionian school proper is
traditionally associated with the three philosophers of
Miletus—Thales, Anaximander and Anaximenes, Heraclitus
of Ephesus, and the late Ionians—Hipponax of Regia, Idaeus
of Himera and Diogenes of Apollonia.

Ionic philosophy was born in a difficult and troubled
period of the country's history. Torn by internal contradic-
tions and acute struggle between aristocracy and democracy
with its constant tendency towards tyranny, Ionian society
was simultaneously threatened with foreign invasion.

This threat came first from Lydia, and then from Persia which conquered Lydia in 546 B.C. The subsequent conquest of Ionian cities by Persia undermined to a considerable extent their commerce and handicrafts, since mediatory trade was almost completely monopolised by the Phoenicians who enjoyed Persia's patronage, and the Greeks' own trade with Egypt and their economic links with cities on the Black Sea coast were weakened. The popular uprising against Persia which broke out in 499 ended in failure after a few years of bitter struggle: the insurgents were defeated by Persia's superior forces. In 494 B.C. Miletus fell and was destroyed, its inhabitants were partly killed and partly driven into slavery. By the summer of 493 B.C. the Persians had seized the last insurgent cities. Ionia's prosperity came to an end and, though the country was later liberated as a result of the Greco-Persian wars (500-449 B.C.), it could not recover its previous position and never again played an important political or cultural role in the Greek world.

It was the turbulent sixth century that marked the rise of Ionic philosophy. The Ionian thinkers went down in history under the name of *physici* or *physiologi*, i.e. people who wrote "of nature" (*peri physeōs*). According to Aristotle, "of the first philosophers, then, most thought the principles which were of the nature of matter were the only principles of all things. That of which all things that are consist, the first from which they come to be, the last into which they are resolved (the substance remaining, but changing in its modifications) this they say is the element and this the principle of things, and therefore they think nothing is either generated or destroyed..."[1] Of course, it would be rash to infer from this that these early philosophers professed materialism: first, in characterising their views Aristotle uses his own terminology and his concept of matter has a peculiar "Aristotelian" meaning; second, the views of Aristotle's predecessors from Thales to Anaxagoras and Empedocles were not identical and underwent essential transformations from one thinker to another. Yet in the main Aristotle was right: the "principle" of all things with the early philosophers was not a deity, nor was a deity derived from it. Moreover, their approach was fun-

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[1] *The Basic Works of Aristotle*, Ed. by Richard Mc Keon, Random House, New York, 1941, pp. 693-694.

damentally different from the mythological mode of thought: the beings that came from Chaos did not "consist" of it and, naturally enough, did not "resolve" into it upon completion of their cycle. Gaia, Tartaros and Eros, the descendants of Gaia and Uranus and other immortals could not be conceived as coming from, consisting of and resolving into Chaos.

The very understanding of gods by the earliest philosophers shows a radical departure from the traditional mythological views: the gods are regarded in the naturalistic terms, associated with the physical world and are, in fact, relegated to a secondary plan. Moreover, in contrast to the mythologist who speaks on behalf of the gods and pretends to divine wisdom and absolute truth, the philosopher speaks of the love of wisdom and quest for knowledge. As distinct from utilitarian knowledge aimed at achieving direct results such as human welfare or personal fame, philosophy was believed to spring from curiosity and represent disinterested knowledge untarnished by any practical considerations. Illusory as it was, this view reflected the objective position of a thinker in a society where mental work had just started singling out as an independent kind of human activity opposed to other forms of socially useful labour. Having come into existence, philosophy began to develop its own methods—"dialectics" as the art of dispute and debate aimed at establishing the truth, and "theory" (*theōria)* as disinterested contemplation of the truth leading to "contemplative life" (*bios theōretikos*) which purportedly distinguished a philosopher from ordinary people.

As has been pointed out, the earliest philosophers' interest focused on "nature" (*physis*). Coming from the verb *phȳō* which means to produce, to grow, and the like, this word and its derivatives, as well as the expressions in which they are used have a dual meaning, denoting both a process (birth, generation) and its results (properties, external appearance, "breed"). Thus in Homer, Theognis and Pindar the words *phya* and *phȳē* denote noble appearance, stature and beauty usually associated with noble birth. This meaning of *physis* reflects the mythological mode of thinking. By contrast, in those fields of concrete knowledge which, unlike ancient speculative physiology, gravitate to observation and experimental investigation by *physis* is usually meant the structure or composition of a body as the observable result of its genesis.

As regards philosophy, *physis* as the object of phi-
losophical investigation was conceived in antiquity as a unity
of two approaches: the investigation into the origin
of things, their ultimate substance, inducing the philosopher
to go beyond the bounds of observable objects, and the
investigation of phenomena accessible to senses. The
first philosophers viewing *physis* in terms of the "nature
of things" had to overstep the bounds of these things.
Under the conditions of undivided sway of mythological
and religious ideology in ancient society it was tantamount
to an appeal to the "divine" properties of nature, to the
"eternal and everlasting" in it. Yet the very nature of
philosophy relying on human reason for explanation of the
visible world demanded that it should abandon mythological
solutions and effect a logical transition, if only in principle,
from the universal to the particular and the individual,
providing an "empirical" explication of the general world
view principle.

This accounts for the fact that the concept of *physis*
or nature was bound to become an arena of acute
ideological struggle. The first philosophers regarded nature
as a universal dynamic self-moving whole spontaneously
producing its component parts or individual things. The
idea of "matter" as the ultimate substance of all things
is organically united in this concept with the idea of genesis,
development. For the Greek philosophers, matter was
therefore a living self-sufficient entity, causa sui, which
did not need any external forces for its explanation. It
was, according to Engels, a "primitive, naive but intrinsically
correct conception of the world".[1] However, being the
result of direct contemplation, this spontaneous, intuitive
outlook on the world was obviously inadequate for explaining
particulars as was clearly revealed in the course of subsequent
philosophical development.

This inadequacy of the general world outlook contained in
embryo the possibility of philosophy's splitting into
opposite trends. Analysing the teachings of his predecessors,
Plato wrote that the exponents of their views
considered fire, water, earth and air to be the cause of all
things and called them nature (Leges, X, p. 891). These
elements were not simply the "material" of things, but also

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[1] Frederick Engels, *Anti-Dühring*, Progress Publishers, Moscow, 1978.
p. 30.

the active creative forces, the cause of their emergence and dissolution. To this concept Plato counterposed the concept of the primacy of soul (ibid., p. 892). Hence, it was Plato who clearly defined the world outlook of the early philosophers as materialistic and ranked them with the trend that considered material substance, matter to be the primary cause of the world.

The analysis of the ancient concept of "nature" thus brings us to the fundamental problem of philosophy. The direct result of its evolution was the emergence of two schools associated with the names of Democritus and Plato and representing, for the first time in the history of philosophy, materialism and idealism as such. As regards nascent philosophy which was making but its first steps, we can only speak of tendencies which could be predominantly materialist or idealist. With the "physicists" who regarded "nature" as a living and self-developing whole generating and destroying its own component parts the materialist tendency was undoubtedly prevalent.

5. The Milesian School

Under this heading come three thinkers from Miletus: Thales, his pupil Anaximander and Anaximander's pupil Anaximenes. The term "school" is traditionally applied to them not only because schools or corporations uniting physicians (the Asclepiades, then the rival schools at Cos and Cnides), singers, painters, philosophers (the Milesians, the Pythagoreans, the Eleates), etc. on the basis of kinship or fellow-citizenship were common in Ancient Greece. Far more important was an affinity of views which in the case of the Milesian philosophers manifested itself in their interest in "physicos" and natural studies.

(1) *Thales*. Thales of Miletus, son of Examyas and Cleobulina was evidently of Phoenician descent. According to most evidence, he lived between the 35th and 58th Olympiads, i.e. between 640 and 545 B.C. Tradition assumes 625-547 B.C. as the most likely dates for his life. Thales was known to have travelled in Egypt, probably on business, and become acquainted there with mathematics. He was also credited with expert knowledge of Babylonian astronomy which he may have learnt through Phoenicia, the native land of his ancestors, as well as through Lydia. According to credible testimony of Herodotus (I, 74) and a number of other authors,

Thales made an exact prediction of a full solar eclipse of 585 B.C. To Thales was also ascribed the calculation of the time of solstices and equinoxes, the discovery of the annual movement of the Sun against the background of the stars, the establishment of the year length at 365 days, etc. Thales shares with Pythagoras the fame of the founder of scientific mathematics: he was believed to be the first to inscribe a triangle into a circle, to establish the equality of the opposite angles and the angles at the base of an isosceles triangle, to define the parts of a circle divided by its diameter, etc. Thales the geographer explained the floods of the Nile by the trade-winds opposing in summer the river flow. He enjoyed a reputation for practical statesmanship and sources give him the credit for wise advice that he gave the Milesians on two occasions: to set up a common centre of government in Teos in order to coordinate the efforts of the Ionian cities in the face of the Persian threat and to refrain from anti-Persian alliance with Croesus. His advice was accepted and, according to Diogenes Laertius (I, 35), "saved the city."

It is not surprising that all these exploits brought Thales the fame of a "sage," even the foremost of the glorious "seven." Tradition credits him with many dicta that went down in history. Some of them do not differ from those ascribed to other sages, yet there are several aphorisms among them that have a truly unique character. Here they are, in Plutarch's rendition: "Which is the oldest? – God, because he was not born. Which is the largest? — Space, because it encompasses the whole world with all things. Which is the finest? — The world, because all that is fine is part of it. Which is the wisest? — Time: it has already produced one and will produce another. Which is common to all? — Hope: it is available even to those who have nothing else. Which is the most useful? — Virtue, because everything else can find an application and become useful through it. Which is the most harmful? — Vice, because almost everything rots in its presence. Which is the strongest? — Necessity, because it is irresistible. Which is the easiest? — That which corresponds to nature, because even enjoyment often wearies" (Plut. Sept. sapient. conv. 9, 153 cd).

These utterances show a clear transition from ordinary practical wisdom to fundamental and profound world views with a marked vein of rationalist approach to problems — no wonder they are ascribed to Thales. Tradition also holds him

to be the author of some doctrines which can already be rated as philosophical in the proper sense of the word. Regrettably, we do not possess any writings from the pen of Thales himself. Though he is credited with several treatises, including the philosophical one entitled "On First Principles" (and referred to by Seneca, Plutarch and Galen), the evidence is far from being reliable. As regards the style of the excerpts quoted by different authors, it betrays a much later origin of the treatise which cannot have been composed before the beginning of the Christian era. Nevertheless, we possess sufficiently credible testimony from Aristotle and, perhaps, Hippias, regarding Thales's philosophical views. According to this testimony, Thales was the author of two fundamental ideas: one regarding water as the first principle of all things, and the other regarding the "soul complex".

Having characterised the views of the earliest philosophers on the principles of all things, Aristotle adds: "Yet they do not all agree as to the number and the nature of these principles. Thales, the founder of this type of philosophy, says the principle is water (for which reason he declared that the earth rests on water)."[1] Striving to reproduce the reasoning of Thales, Aristotle continues: "His supposition may have arisen from the observation that the nourishment of all creatures is moist, and that warmth itself is generated from moisture and lives by it; and that from which all things come to be is their principle. Besides this, another reason for his supposition would be that the semina of all things have a moist nature, and water is for moist things the origin of their nature."[2]

The brevity of this excerpt, quoted also in other sources, opens the possibility for a broad spectrum of interpretations. Indisputable, however, is the naturalistic tendency of the philosopher seeking to trace all things to natural causes and draw clear analogies between the world of nature and the life of animals. If the semina and the nourishment of all things have a moist nature, if they cannot live without water and dry up after death, if warmth itself is the "animal heat" of the warm-blooded, and the fire of heavenly bodies and of the Sun feeds on water vapour (see Aëtius, DD, 276), it is only too natural to suppose that moisture (water) is the "principle" of all being and the "element" of all things.

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[1] *The Basic Works...*, p. 694.
[2] Ibid., p. 983.

The idea that the earth rests on water noted by Aristotle as characteristic of Thales's views is evidently traceable to the Egyptian mythology in which the Earth was likened to a flat dish floating on water, whereas the Sun was described as floating across the sky in a boat. In all probability, it was not only and not so much a myth as a common, everyday notion of the Egyptians. It must have been also quite accessible to an alien familiarising himself with the country's customs, particularly if that alien came from such a seafaring people as the Ionians. At this point, however, another problem arises. As we saw, Aristotle ascribes to all "physiologers" the idea that all things and, consequently, all elements (elemental forces) came from one primary substance. Are we to infer from this that Thales derived air, fire and earth from water? Aristotle does not assert that Thales held this particular view, but in later doxographer Hippolytus we find: "He [Thales] said that water is the beginning and the end of everything, as through thickening and evaporation it makes up and maintains everything with resultant vacillation of earth, vortices and movement of luminaries, so that everything is carried along and flows in accordance with the nature of the ultimate substance of all things" (DD, 555).

This testimony deriving from Theophrastus deserves credibility. In any case, we have sufficient grounds to presume that Thales was the first to develop a doctrine, by way of conjecture not yet raised to the level of a general principle, of the emergence of all things and elemental forces from a primary substance and of their subsequent dissolution into it. These passages, however, may also be construed as representing a different, more primitive view: the earth emerges from water in the sense that it was originally covered by it and then comes out as the primordial moisture (sea) evaporates. This latter view was not infrequently expressed by later philosophers (Anaximander, Diogenes of Apollonia).

The second idea associated with the name of Thales is the "soul complex". Here again we have two different opinions. On the one hand, "Aristotle and Hippias affirm that, arguing from the magnet and from amber, he [Thales] attributed a soul or life even to inanimate objects..." (Diog. L. I, 24).

Indeed, in Aristotle we read: "...Thales, too, to judge from what is recorded about him, seems to have held soul to be

a motive force, since he said that the magnet has a soul in it because it moves the iron."[1]

On the other hand, none other than Aristotle writes: "Certain thinkers say that soul is intermingled in the whole universe, and it is perhaps for that reason that Thales came to the opinion, that all things are full of gods."[2]

Hence, the world appeared to Thales as animated, full of life. It was typical hylozoism ($hyl\bar{e}$—matter, $zo\bar{e}$—life) rooted in mythology. In Thales, however, it acquired a new meaning, essentially different from mythological. Nature as a single and living whole possesses, according to Thales, an inner principle of motion, a "motive element" which he denoted by the habitual terms "soul" and "gods." This concept represented a step towards naturalistic pantheism which dissolves god in nature and makes him but a principle of its spontaneous motion.

Thales's teaching viewed as a whole clearly reveals two sources, two different trends merging in a single world outlook—myth and science. Their synthesis, i.e. the radical restructuring of mythological stories on the basis of initial scientific knowledge and rational thinking produced the first philosophical doctrine in the history of ancient philosophy. The next step on this path was made by Thales's followers.

(2) *Anaximander.* Anaximander (c. 610—546 B.C.), the son of Praxiades of Miletus, was a pupil, a follower and, according to some evidence, a relative of Thales. He wrote in prose a philosophical treatise *On Nature* one of the excerpts of which has come down to us in the rendition of Theophrastus. The account of Anaximander's views given by Simplicius, in large part from Theophrastus (Phys. 24. 13, DK, A 9 and B 1), runs as follows: "Anaximander named the arche and element of existing things 'the boundless', being the first to introduce this name for the arche. He says that it is neither water nor any other of the so-called elements, but a different substance which is boundless, from which there come into being all the heavens and the worlds within them. Things perish into those things out of which they have their being, as is due; for they make just recompense to one another for their injustice according to the ordinance of time—so he puts it in somewhat poetical terms. It is clear that when he observed how the four elements change into each other,

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[1] *The Basic Works...*, p. 541.
[2] Ibid., p. 553.

he did not think it reasonable to conceive of one of these as underlying the rest, but posited something else. Moreover he does not account for genesis by a qualitative alteration of the element, but by a separation of the opposites caused by the eternal motion." (DK 12 A 9, B 1).

This passage from Theophrastus quoted by Simplicius in his commentary to Aristotle's *Physics* and containing an authentic sentence from Anaximander's work has given rise to much controversy among philologists and philosophers regarding the true meaning of the author's words. However, even if we proceed from what is generally recognised as Theophrastus's representation of Anaximander's actual clause — "for they make just recompense to one another for their injustice according to the ordinance of time," and regard the first sentence of the above extract as Aristotle's standard description of physiologers' philosophical views, we are bound to admit that Theophrastus gave us very valuable information, namely:

(1) Anaximander recognises "the primary substance (arche) and element" as something single and boundless (infinite, indefinite), i.e. as "apeiron." He may have introduced the word himself, though a possibility cannot be excluded that it was coined later by Anaximander's doxographers.[1]

(2) The clause "things perish into those things out of which they have their being, as is due" is undoubtedly authentic, representing Anaximander's genuine idea, if not his wording. Theophrastus, rating Anaximander among the monists would have written "that thing" instead of "those things" (*ex hon ... eis tayta*). The subsequent explanation shows that the plural refers to the "opposites."

(3) Anaximander's reference to "the boundless" is interesting in that *to apeiron* can be understood both as indefinite in a qualitative sense and as infinite in a quantitative sense. We have conflicting evidence regarding Thales. Thus in one of the extracts Simplicius says that Thales considered his primary substance, water, as finite (*peperasmenon*), whereas in another fragment he writes that those who made one element the primary substance regarded

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[1] *To apeiron* is a substantivised neuter adjective, its antonyms being *peperasmenon* (limited, definite, finite) and *to peras* (limit, end, border, edge, fulfilment and even purpose). As we see, the word is polysemantic and therefore very difficult to translate.

it as the one infinite body like Thales regarded water (see DK 11 A 13). Aristotle, for his part, contended that "none of the physicists made fire or earth the one infinite body, but either water or air or what is intermedite between them..." (Phys. III. 5, 205a). Hence, in his first testimony Simplicius speaks about the definiteness of Thales's "principle" in the qualitative sense, and in the second testimony, about its quantitative infiniteness, which is just what the doxographer says. As regards Anaximander, his *apeiron* is both qualitatively indefinite and quantitatively infinite. The emergence of things from it is their qualitative determination and quantitative limitation.

(4) The "boundless" is sometimes identified with mythological Chaos. Such an understanding, however, does not consort with Anaximander's recognition of the temporal orderliness of both genesis and destruction, this orderliness being essentially necessary.

According to another opinion, Anaximander's "boundless" is boundless in general, resulting from the abstraction of everything that is concrete. However, Aristotle specially indicated that it was not so. The notion of the limitless or infinite as such was characteristic of the Pythagoreans and Plato, whereas "the physicists, ... all of them, always regard the infinite as an attribute to a substance which is different from it and belongs to the class of the so-called elements — water or air or what is intermediate between them" (Phys. III. 4, 203a). This evidently applies to Anaximander too and the "substance" that has the infinite as its attribute must be somehow specified. Regarding the meaning of *apeiron*, the most common opinions are as follows: first, *apeiron* is indeterminate nature which does not lend itself to any qualitative determination in principle; second, it is what Plato and Aristotle later called "matter" (*hyle*) encompassing all things in a potential state; third, it is a mechanical mixture of all things or elements from which things separate; fourth, it is something intermediate between them (*metaxy*).

Each of these notions resting on certain testimony has its weak points. The notion of indeterminacy provides no solution at all as it is purely negative. It does not accord, as we shall see later, with Anaximander's specific determinations of the substance of the boundless. The same applies to "matter" as understood by Plato and Aristotle who characterised it as non-being or pure possibility. By contrast, Anaximander's

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boundless is an active, creative force, the closest to which is Plato's idea or Aristotle's form. The notion of "mixture" with regard to the ultimate substance is traceable to the fifth-century physiologers, in particular, to Anaxagoras. However, even if primary mixture is understood as a homogeneous indistinguishable mass, it cannot by any means be conceived as a living organic whole, as the "nature" of the early Greek philosophers. The fourth notion is perhaps the closest approximation to what Anaximander meant by his *apeiron*, but even here evidence is by no means conclusive. Aristotle, for one, characterising the views of various thinkers and not infrequently referring to the *apeiron* as something intermediate between fire and air or air and water, never mentions the author (authors) by name. Though in all such cases the context is suggestive of Anaximander, it seems to be rather a shaky ground for a definite conclusion and the question remains open.

Nevertheless, there are certain "properties" of Anaximander's primary substance which can be considered well authenticated. As Aristotle writes in' his *Physics,* the "boundless" does not come into existence, nor can it be destroyed; "there is no principle of this, but it is this which is held to be the principle of other things, and *to encompass all and to steer all,* as those assert, who do not recognise, alongside the infinite, other causes, such as Mind and Friendship. Further they identify it with the Divine, for it is '*deathless and imperishable*' as Anaximander says, with the majority of the physicists."[1] According to Hippolytus who gives a slightly different wording, the non-limited "is everlasting and ageless."[2] Plutarch, for his part, wrote that Anaximander, the friend of Thales's, regarded the boundless as the cause of universal genesis and destruction. The passage from Plutarch reads as follows: "He says that at the birth of this cosmos a germ of hot and cold was separated off from the eternal substance, and out of this a sphere of flame grew out, the vapour surrounding the earth like the bark around the tree. When this was torn away and shut off in certain rings, the sun, moon and stars came into existence" (DK 12 A 10).

Proceeding from this evidence we can conceive of the following process by which the "boundless" produces all things: the everlasting, ageless and indestructible nature,

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[1] *The Basic Works...,* p. 259.
[2] DK 12 A 11. *Ancilla...,* p. 19.

the *apeiron*, separates out a "germ" (genimon) of the opposites—the hot and the cold, the dry and the wet which, in turn, produce all things. Regrettably, we can only make guesses at the relationship between the opposites described by Anaximander in terms of "injustice" and "recompense,"[1] though it clearly points to the conflict of the opposites, the dialectics of their struggle which was to be later unfolded by Heraclitus.

Analysis of Anaximander's philosophical teaching shows that he defined the most important features of the primary substance or *arche* (the term may have been introduced by Anaximander himself, though the validity of Theophrastus's testimony is now called in question): its universal, creative and generative character; its immortality and indestructibility as opposed to finite, emerging and perishing things and "worlds"; its boundlessness in time and space, as well as its eternal motion; its inherent necessity and self-sufficiency; consequently, its divinity as the highest axiological characteristic. Finally, though the *apeiron* in Anaximander can hardly be conceived as constituting the substance of all things, it is indisputable that "all come into being from it and into it all perish." Hence, Anaximander departs from myth even farther than Thales and makes yet another step towards a scientific cosmology. His world view was largely a result of his concrete natural studies.

Anaximander is said to have invented a sun dial with upright rod, drawn up the first geographical map in the Greek world and given a systematic account of geometrical knowledge. Far more important, however, were his cosmology and cosmogony as they emerge from the evidence of ancient doxographers. *those who pointed his d.*

Anaximander's picture of the world can roughly be presented as follows. The earth is cylindrical in shape like the drum of a column with a depth three times its breadth. It hangs freely in the centre of the world "owing to its equal distance from everything" (A 11). It is not clear whether the earth evolved from the boundless or existed

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[1] This obscure phrase has evoked much controversy the interpretations ranging from mythological (the "injustice" consists in an encroachment of elements belonging to definite deities and distributed among different realms upon one another) to meteorological (change of cold and wet winter into dry and warm summer) and even sociological (the conflict of the opposites as the reflection and metaphoric description of rivalry between gentes and the restoration of justice).

at all times. During the formation of heaven there appeared water and air shells, and then a shell of fire enclosing the space round the earth like bark round a tree. The sphere of fire breaks into several rings or circles encased in tubes of mist or dense air. The apertures in the surrounding envelopes of the ring of fire appear to us as heavenly bodies. The sun eclipses and the phases of the moon are due to alternate contracting and opening of the apertures in the tubes of mist. The circle of the sun is situated highest of all, next comes the circle of the moon, and beneath them the rings of the stars. This unusual order of heavenly bodies coincides with what we find in the Persian mythology of the Avesta, the sacred books of the ancient Zoroastrian religion. The worlds are innumerable, yet it is not clear from the extant evidence if they replace one another in their eternal rotation or exist simultaneously.

According to Anaximander, the earth was originally covered with water. It gradually evaporated and that which remained in low places on the earth surface formed a sea. Drying up from excess heat or getting soaked as a result of heavy rains the earth cracks up and air penetrating into the crevices causes it to displace—hence the earthquakes. The first living creatures arose from the moist element (the sea) and were covered with thorny scale. When they grew older, they began to come out ashore and finally gave rise to land animals and men.

Like in all early philosophical teachings, Anaximander's cosmology is a curious combination of fantastic notions borrowed from mythology with a rationalist approach to the world, representing an attempt to account for the universe in naturalistic, even mathematical, terms. The worldview resulting from this synthesis is a unique intellectual product which cannot be reduced to any of its original components.

(3). *Anaximenes*. Anaximenes, known as Anaximander's friend and pupil, lived in the most critical period of Miletus's history. It is evidently for this reason that our knowledge of him is very meagre. The dates of his life are assumed 588-525 B.C., but he may have lived long enough to witness the fall of Miletus in 494. His book written, according to Diogenes Laertius, in a "simple and economical style" was treated by time no better than that of his teacher, but Anaximenes's views have come down to us in far

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more detail. Here is an evidence of Simplicius which goes back to Theophrastus: "Anaximenes of Miletus, son of Eurustratus, the companion of Anaximander, also posits a single infinite underlying substance of things, not, however, indefinite in character like Anaximander's but determinate, for he calls it air and says that it differs in rarity and density according to the different substances. Rarefied, it becomes fire; condensed, it becomes first wind, then cloud, and when condensed still further water, then earth and stones. Everything else is made of these. He too postulated eternal motion, which is indeed the cause of the change" (DK 13 A 5).

Why did Anaximenes go back from his teacher's conception of *apeiron*, the boundless, to an apparently cruder idea of air as primary substance, one of the familiar forms of matter? This retrogression was evidently a result of the Milesian philosophical tradition seeking to explain the world order in terms of natural causes known from experience. Anaximander's notion of the boundless as that from which all things come into being and into which all perish must have appeared too abstract for the Milesian thought as it could not account for the subsequent generation of things except by a purely imaginary process of the separation of opposites. Anaximenes's choice of air as the ultimate substance brought his doctrine in line with the traditional conceptions of his time and enabled him to invoke the empirically verifiable process of condensation and rarefaction for explanation of change in the world.

Identifying the transformation of matter with the change of air from one state to another, Anaximenes emphasises the universal mutability of his primary substance. Indeed, isn't wind but condensed air and the cloud that follows in its wake but condensed wind? And aren't the opposites of the warm and the cold the result of a change in the state of air? In his account of Anaximenes's teaching Plutarch wrote: "What is compacted and condensed, he says, is cold, but what is rare and loose ... is hot. Hence, he said, there is something in the saying that a man blows both hot and cold with his mouth, for the breath is cooled when the lips press and condense it, but when it issues from an open mouth it is rarefied and becomes warm" (DK 13 A 1). It would not be correct to think that Anaximenes conceived air as the physical substance we breathe. Though the available evidence is not completely unanimous, we have

good reason to believe that he identified it with soul and considered a creative vital principle that animates all things.

It is not to be wondered that Anaximenes equated air we breathe with life itself since his general naïve materialistic conception of the universe was rooted in the ancient mythological idea of breath-soul as a specific principle of living and thinking bodies. "As our soul," he says, "being air, holds us together, so do breath and air surround the whole universe" (DK 13 B 2). Anaximenes clearly derives the "soul" from "air" regarding it, together with Anaximander, Anaxagoras and Archelaus, as being "air-like." Moreover, on the evidence of St. Augustine Anaximenes contended that the gods too had their origin from air (A 10). According to Cicero and Aëtius who evidently expressed this idea in a more adequate form, Anaximenes held that the air is god and that divine forces are present in elements or in bodies. The latter statement attested to by Aëtius seems to suggest that the Milesian thinker formulated the central idea of pantheism—the identity of god with nature or, in that particular case, with "air" which is the nature of all that exists. However another of his statements, vouched for by Cicero, namely that gods and divine things came from air, warrants a more cautious appraisal of Anaximenes's views. Evidently, he showed but a tendency towards the pantheistic identification of god with being and applied the descriptive attribute "divine" to air, like Anaximander to the boundless, merely by way of qualifying the primary substance as immortal and indestructible.

Anaximenes's cosmology was relatively simple and in some ways even primitive as compared with Anaximander's broad vision of the universe marked by great power of reasoning and bold imagination. Considering the earth to be flat, Anaximenes held that it is riding upon the air like the sun, the moon and the planets. As distinct from the immovable earth, heavenly bodies are actuated by the cosmic wind, whereas the stars are attached to a crystalline heavenly dome which turns around the earth. The sun's and moon's eclipses, as well as the moon's phases were accounted for by the fact that the heavenly bodies turn to the earth alternately with their light and dark sides. Following Thales, he believed the heavenly bodies to have originated from the earth. Some of them came from evaporating moisture which

rarefied into fire, others (by which he may have meant the planets) "enclose certain earthy bodies also which revolve together with them and are not seen" (A 14). Anaximenes somewhat improved on Anaximander by abandoning the latter's views traceable to the Persian sources that the stars are nearer to the earth than are the moon and the sun.

Anaximenes's choice of air as the primary substance accounts for his special interest in meteorological phenomena, such as rain, hail, snow, etc. Hail for him is frozen water falling from clouds, admixture of air in water results in the formation of lighter snow, rain falls from condensed air, lightning and thunder are the effect of wind splitting a cloud, the rainbow is the effect of the sun's (sometimes moon's) rays falling on a compacted cloud so that one part of it becomes heated and the other remains dark, etc. Like Anaximander, he accounts for earthquakes by earth cracking in droughts or falling apart in heavy rains.

The philosophical teaching of Anaximenes represents a consistent embodiment of the central idea of the "physiologers": that out of which all existing things come to be is what they all perish into after completing their cycle. It was the culmination of the Milesians' spontaneous sensual materialism and the highest expression of their conception of eternal motion of living and breathing air that permeates the entire universe.

(4) *Later "physiologers."* The Milesian school had exhausted its possibilities for explaining the world by the end of the fifth century B.C. Its closing period is associated with several names of no great fame and indeed far less original than their predecessors. Nevertheless, it would hardly be correct to pass over in silence the last Milesian thinkers if only for the fact that the theories they professed reflected the philosophical thought of their period.

Hippon of Samos is known from a play by Cratinus, his contemporary, who died in 422 B.C. The dates of the philosopher's life cannot be fixed exactly. Sources say that he posited water (also called "the cold") and fire ("the hot") as two primary elements. Water produced fire which then overmastered its parent to form the cosmos. Hippon identified the soul with the brain which was also called water or moisture. The brain comes from the semen or marrow (DK 38 A 3). Hence, the natural moisture or water is, according to Hippon, the primary substance and the source of

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life and sensations: "When this moisture is in its proper condition, the living creature is healthy, but when the moisture dries up, it loses sense and dies. This is the reason why old men are dry and enfeebled in their senses, namely that they are without moisture" (A 11).

Hippon is said to have been labelled an "atheist" as he did not consider his primary substance to be of divine character. The single fragment of Hippon's writing that we possess is related to natural science and says that sweet water comes from the sea. The ancient evidence for Hippon's teaching is largely confined to his physiological views (the nature of semen, fecundation, the formation and development of the foetus, etc.) and seems to show that he mainly concerned himself with concrete scientific problems and did not specify their relationship to the concept of primary substance.

Among Anaximenes's followers who shared his views concerning a single determinate element were Idaeus of Himera and Diogenes of Apollonia, Anaxagoras's younger contemporary. Here is a fragment from the latter's book *On Nature*: "And it seems to me that that which has Intelligence is that which is called Air by mankind; and further, that by this all creatures are guided, and that it rules everything; for this in itself seems to me to be God and to reach everywhere and to arrange everything and to be in everything. And there is nothing which has no share of it; but the share of each thing is not the same as that of any other, but on the contrary there are many forms both of the Air itself and of Intelligence; for it is manifold in form: hotter and colder and dryer and wetter and more stationary or having a swifter motion... Also in all animals the Soul is the same thing (namely) Air, warmer than that outside in which we are, but much colder than that nearer the sun. This degree of warmth is not the same in any of the animals (and indeed, it is not the same among different human beings), but it differs not greatly, but so as to be similar... Since therefore change is manifold, animals also are manifold and many, and not like one another either in form or in way of life or in intelligence, because of the large number of (the results of) changes. Nevertheless, all things live, see and hear by the same thing (Air), and all have the rest of Intelligence also from the same" (DK 64 B 5).

This passage, as well as many others show that Diogenes took a different course from Hippon: having posited air as the ultimate substance, he then set out to demonstrate that the universe owes its orderliness to Intelligence inherent in this substance: "Such a distribution would not have been possible without Intelligence, (namely) that all things should have their measure: winter and summer and night and day and rains and winds and periods of fine weather; other things also, if one will study them closely, will be found to have the best possible arrangement" (B 3). Diogenes, therefore, should be regarded as a philosopher whose views marked a turn from spontaneous materialist "physiology" to the idealistic conception of universal Intelligence. In his teaching the naive materialism of the Milesian school gives way to a rising idealist tendency.

6. Heraclitus

Heraclitus of Ephesus, the son of Blosson, was born c. 544 B.C. and died c. 483 B.C. The obscurity of his style caused him to be designated in antiquity as Heraclitus the Obscure, whereas his reputation for melancholy earned him the title of the Weeping Philosopher: he was said to weep each time he went out of his home and saw around him so many people living in misery and dying in anguish (DK 68 A 21). He is believed to have written a book called *The Muses* or *On Various Ways of Life*. Its traditional title was *On Nature*. It is very likely, however, that the book had no title at all. According to Diogenes Laertius (IX, 5), Heraclitus's work "is divided into discourses, one on the universe, another on politics, and the third on theology." According to Diels-Kranz, we possess 145 fragments of Heraclitus (those after fragment 126 are disputable), but it is commonly held now that more than 35 of them should be excluded completely or partially either as later counterfeits or as unsatisfactory paraphrases of Heraclitus's genuine statements.

The fragments that came down to us leave one with a very peculiar impression: whereas some of them are indeed obscure and hard to grasp owing to their aphoristic and often oracular form, others are distinguished by brilliant clarity. The difficulties involved in the interpretation of the few extant passages are also aggravated by the corrupting effect of the doxographic tradition, particularly the stoic influences which not infrequently distorted the

fragments themselves or the context in which they are used. Not the least in importance is the dialectical style of Heraclitus who regards every phenomenon as a unity of contradictions and treats it in terms of self-negation.

The reconstruction of Heraclitus's teaching calls for a detailed analysis of his remains, their classification into several groups on the subject principle and a subsequent synthesis into a single doctrine. These main groups are Heraclitus's statements on fire as primary element, on logos or law, on opposites (dialectics), on the soul, on the gods ("theology"), on ethics and on politics.

Heraclitus's cosmological views are presented in a nutshell in fragment DK 22 B 30: "This ordered universe (cosmos), which is the same for all, was not created by any one of the gods or of mankind, but it was ever and is and shall be ever-living Fire, kindled in measure and quenched in measure." This is a clearly stated central idea of mature Ionian philosophy: the universe represents manifestations of the single primary substance altering its forms in a regular manner. Heraclitus's principle is "ever-living Fire", something not unlike the universal equivalent in commodity exchange: "all things for Fire and Fire for all things, like goods for gold and gold for goods" (B 90). This sociomorphic statement, seemingly an echo of mythological concepts, is in fact free in this case from any mythological background representing only an analogy to the natural and social processes.

Like in other Ionians, the alterations of the primary substance in Heraclitus are not disorderly. Describing his views, Diogenes Laertius wrote: "Change he called a pathway up and down, and this determines the birth of the world. For fire by contracting turns into moisture, and by condensing turns into water; water again when congealed turns into earth. This process he calls the downward path. Then again earth is liquefied, and thus gives rise to water, and from water the rest of the series is derived. He reduces nearly everything to exhalation from the sea. This process is the upward path" (IX, 8-9). Fire as conceived by Heraclitus is characterised by its own Logos. This idea shared by Heraclitus with the Milesians is expressed in fragment 66: "Fire, having come upon them, will judge and seize upon (condemn) all things." Heraclitus also identified fire with reason and said that it was the cause of

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the world order: "The thunderbolt (i.e. Fire) steers the universe" (fragment 64). Fragment 65 says that Heraclitus called fire "need and satiety," i.e. the renewal and the conflagration of the world.

Here we clearly have the principle of cosmic circulation. The eternal world process is divided into cycles or periods by universal conflagrations, during which the world is destroyed and then brought into being again. The length of each period is 10,800 years (A 13). The universe "kindled in measure and quenched in measure" is eternal, i.e. infinite in time but evidently limited in space (see A 5).

The law underlying the world process is referred to by Heraclitus as Logos. Although this Logos exists forever, "men are always incapable of understanding it, both before they hear it and when they have heard it for the first time. For though all things come into being in accordance with this Law, men seem as if they had never met with it, when they meet with words (theories) and actions (processes) such as I expound, separating each thing according to its nature and explaining how it is made. As for the rest of mankind, they are unaware of what they are doing after they wake, just as they forget what they did while asleep" (B I). Believing himself to have come into possession of an absolute truth, Heraclitus feels contempt for most people who are incapable of grasping the central idea of his teaching, namely, that the world is ordered by the Logos which is universal and all-pervading. The Logos speaks, as it were, to man revealing itself in words and deeds, in phenomena perceived by senses and comprehended by mind. However, "though men associate with it (the Logos) most closely, yet they are separated from it, and those things which they encounter daily seem to them strange" (B 72).

Now the word Logos currently used in the time of Heraclitus was polysemantic, i.e. covered a broad range of notions which were closely linked in the Greek's mind, and therefore needs different words to be translated into modern English depending on the context in which it is used. For instance, Logos can mean "word," "speech," "story," "narration," "argument," "teaching," "count," "calculation," "relationship," "proportion," etc. The philosophical meaning of Logos as used by Heraclitus and other ancients can best be expressed by the word "law" understood as an inner essential connection of things and phenomena. It is not fortuitous

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that Logos as the law of being is related to the social sphere: "If we speak with intelligence, we must base our strength on that which is common to all [i.e. Logos], as the city on the Law (nomos), and even more strongly. For all human laws are nourished by one, which is divine. For it governs as far as it will, and is sufficient for all, and more than enough... Therefore one must follow the universal Law, namely that which is common to all. But although the Law is universal, the majority live as if they had understanding peculiar to themselves" (B 114, B 2). Heraclitus's "fire—gold" and "logos—city law" similes clearly show that he understood fire and Logos as two different aspects of reality: fire represents its qualitative and variable nature, Logos, its structural stability, the former stands for exchange, the latter, for its proportion (though not yet expressed quantitatively).

As we see, the Logos in Heraclitus is the rational necessity of being (fire) which is, in fact, identical with it. At the same time it is Fate, but in an entirely new guise. In contrast with the blind irrational force or chance personified by goddess Tyche (Fortuna in Rome), the Logos in Heraclitus is intelligence, nature's "word" addressed to man, though he may be too stupid to understand it. But what does nature say? "When you have listened, not to me but to the Law (Logos), it is wise to agree, that all things are one" (B 50). The unity of nature with all its diverse manifestations does not lie on the surface ["Nature likes to hide" (B 123)], but it is there.

Heraclitus makes an important advance on the Milesians in differentiating two aspects of reality: the outward appearance of things and their true nature. The relationship of these aspects is expressed in the conception of harmony, even two harmonies—the hidden and the visible ones. Moreover, "the hidden harmony is stronger than the visible" (B 54). Harmony, however, is always the unity of opposites—it is the sphere of dialectics.

The very fact that the largest group of Heraclitus's pronouncements deals with opposites testifies to the pivotal character of this problem in his teaching. Being is conceived by Heraclitus as dynamic harmony, as unity and struggle of opposites. This unity of opposites Heraclitus, as is evidenced from his fragments, was never weary of tracing out. Nature produces organic life not of the combina-

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tion of likes, but of the male and female elements, art imitating nature creates harmonious effects by the contrast of colours, musical harmony is the mixture of different voices. Heraclitus says: "Joints: whole and not whole, connected—separate, consonant—dissonant" (B 10). Apparent harmony, according to Heraclitus, is a precarious balance of contrary forces: "harmony consists of opposing tension, like that of the bow and the lyre" (B 51). The same idea is expressed in fragment 8 which is commonly believed now to be a paraphrase of fragment 51, but with an important addition: "everything comes into being by way of strife."

Heraclitus's assertion of the identity of opposites was regarded by his ancient interpreters as an enigmatic one and, for that matter, continues to appear as such to many modern commentators. This profound dialectical idea was indeed difficult to grasp despite the numerous illustrations given by Heraclitus to make it more digestible. The identity of good and bad is illustrated by Heraclitus in these words: "For instance, physicians, who cut and burn, demand payment of a fee, though undeserving, since they produce the same (pains as the disease)" (B 58). In other fragments of this type he says: "The way up and down is one and the same" (B 60); "And what is in us is the same thing: living and dead, awake and sleeping, as well as young and old; for the latter (of each pair of opposites) having changed becomes the former, and this again having changed becomes the latter" (B 88). All these utterances reveal the remarkable flexibility of Heraclitus's thought, the "fluid" character and richness of his spontaneous dialectical notions. Characteristic of Heraclitus's mode of thinking was the untiring search for opposites as constituting the essence of every phenomenon. The obvious consequence of this conception of reality was his doctrine of struggle or war as the source, motive power and "instigator" (aitia) of any world process: "War is both king of all and father of all, and it has revealed some as gods, others as men; some it has made slaves, others free" (B 53).

The idea of universal conflict had already been expressed by the Milesians and constituted, for instance, an important element in Anaximander's doctrine. However, in contrast with Anaximander who regarded the struggle of opposites in terms of wrongdoing and retribution ("things

give justice and make just recompence to one another for their injustice"), Heraclitus taught: "One should know that war is general (universal) and jurisdiction is strife, and everything comes about by way of strife and necessity" (B 80). The last words of this pronouncement sound almost like a quotation from Anaximander's book.[1]

The doctrine of the universal character of strife leads to a conclusion that there is no permanence in the universe, everything moves on and is in a flux. The conception of the universality of change was accepted in antiquity as Heraclitus's credo and the image of the "fluid" thinker has always been associated in the history of philosophy with the catch phrase "Panta rhei" (everything is in a flux) though it was never found in his genuine fragments. His own words were: "It is not possible to step twice into the same river" (B 91). However, Heraclitus's teaching does not boil down to the conception of continuous motion and change, however important it may be. He is a dialectician and does not regard the process of change in an unregulated and disorderly way. In the changing and the fluid he sees the stable, in "exchange"—a proportion, in the relative—the absolute. The language resources in the time of Heraclitus were pathetically inadequate for expressing flexible notions in an abstract way and he was compelled to use polysemantic words, metaphoric expressions and symbols with various associations and implications. In many cases their meaning was irretrievably lost.

Heraclitus did not know the term "opposites" which was introduced later by Aristotle. Instead, he used such words as *diapheromenon, diapheronton* (B 51, B 8) which mean "diverging," and *to antizoyn* meaning "hostile," i.e. words of general descriptive character. Descriptive and image-bearing are also the words expressing such notions as movement (stream, flux), change (exchange, turn). Even the word "Logos" which is the central notion of his philosophy means not only law, but also fire, mind, unit... It is for this reason that Heraclitus's teaching is not an abstract theory, but a "revelation," a single doctrine of the world apprehended largely by intuition where concrete sensuous

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[1] An opinion has recently been voiced that 22 B 126 ("Cold things grow hot, hot things grow cold, the wet dries, the parched is moistened") is in fact a passage from Anaximander's treatise preceding the words "according to the arrangement of Time." (See W. Bröcker, *Heraklit zitiert Anaximander* In: *Um die Begriffswelt der Vorsokratiker*, Darmstadt, 1968, S. 88-94).

"living" opposites merge into one another. Though reminiscent of the mythological thought manipulating similar opposites, this doctrine represents a tremendous step forward in view of its rationalised, well considered and often clearly defined character.

No philosophy can avoid the problem of human consciousness and knowledge. Like the Milesians, Heraclitus links it with the activity of "soul," which, in turn, is connected with some natural element. Heraclitus taught that "souls... are vaporised from what is wet" (B 12). He said: "To souls, it is death to become water; to water, it is death to become earth. From earth comes water, and from water, soul" (B 36). Relevant to this is also fragment B 76 (1): "Fire lives the death of earth, and air lives the death of fire; water lives the death of air, earth—that of water." From these pronouncements we can gather that Heraclitus conceived soul as air or thin and movable vapour. The qualities of the soul depend on the extent to which it succumbs to the influence of moisture: "A dry (desiccated) soul is the wisest and best" (B 118), whereas "a man, when he gets drunk, is led stumbling along by an immature boy, not knowing where he is going, having his soul wet" (B 117).

On the evidence that we have, Heraclitus conceived the "airy" souls of men and animals as closely related to cosmic air which was in this connection called "divine reason." He taught that we inhale the Logos by breathing. When man is asleep, his reason departs, and when he wakes up it returns so that his soul is like coals or embers which glow brighter when brought near the fire and fade when removed from it. This affinity of the soul not only to evaporation, but also to the Logos and fire identified with life and knowledge is very characteristic. The soul is conceived as a modification of single living "nature." Drawing in, as it were, its Logos, the soul communicates with this "nature" and cognises it to the extent to which it assimilates to its Logos.

Knowledge is obtained through the agency of the senses and reason which are closely connected. Heraclitus is quoted as saying that he honoured most "those things of which there is sight, hearing, knowledge" (B 55), i.e. those that can be perceived by the senses and comprehended by the mind. It is presumably for this reason that he did not counterpose, contrary to the almost unanimous opinion of his com-

mentators, "learning" and "intelligence": though "much learning does not teach one to have intelligence" (B 40), "men who love wisdom must be inquirers into very many things indeed" (B 35). Learning and intelligence (wisdom, insight, sense) are two opposites making a harmonious whole. Heraclitus does not call in question the close relationship of the soul and body comparing them to a spider and cobweb: just like a spider feels where his thread is damaged and runs to the spot where a fly got entangled, so a man's soul rushes to where the body suffered an injury as if unable to bear it. At the same time the soul is not confined within the body: "You could not in your going find the end of the soul, though you travelled the whole way: so deep is its Law (Logos)" (B 45). As has already been indicated, the soul in Heraclitus is a part of the universe which is everlasting fire and Logos.

The interpretation of Heraclitus's teaching has always been under a strong influence of theological tradition that tended to use his utterances in support of the doctrine of immortality and even corporeal resurrection. However, unbiased approach to Heraclitus's extant fragments shows that his doctrine of god did not fall within the traditional religious-mythological scheme, but represented an early philosophical conception. The soul, according to Heraclitus, was not immortal. Life and death were conceived by him as natural opposites and he wrote that people "when they are born, they are willing to live and accept their fate (death); and they leave behind children to become victims of fate" (B 20). Though this clear statement seems to be overshadowed by mystifying fragment 27 ("there await men after they are dead things which they do not expect or imagine"), the most likely meaning of this obscure pronouncement is that the soul after death dissolves in the all-embracing living nature only to be reborn again.

Comparing "mortal" people with "immortal" gods, Heraclitus says: "Immortals are mortal, mortals are immortal: [each] lives the death of the other, and dies their life" (B 62). It is not easy to interpret such aphorisms, but this one is clearly indicative of a tendency to bridge the mythological gap between people and gods. Heraclitus rejects traditional polytheistic beliefs and takes a firm stand against sacrifice, religious processions and Bacchic rites. The only deity which he knows and recognises is the cosmos itself,

the everlasting living Logos-fire. It is ubiquitous and no one can hide from it. It steers everything and sways the destinies. "That which alone is wise is one; it is willing and unwilling to be called by the name of Zeus" (B 32). It is willing because the Logos-fire is no less omnipotent than Zeus, the source of life; it is not willing, because it reveals itself to man not in the anthropomorphic guise of the Thunderer, but in the struggle and war, in Truth and Strife, in the cosmic harmony of opposites.

Of course, it cannot be said that Heraclitus's teaching was free from mythological views as such. Besides Zeus, Heraclitus speaks of Hades the god of death and Dionysus the god of life—"Hades is the same as Dionysus, in whose honour they rave and perform the Bacchic revels" (B 15), the Erinyes—"The sun will not transgress his measures; otherwise the Furies (Erinyes), ministers of Justice, will find him out" (B 94), the Sibyl "with raving mouth, uttering her unlaughing, unadorned, unincensed words" (B 92) and "the lord whose oracle is that at Delphi" (B 93). All these quotations sound today very dark as the associations Heraclitus wanted to bring to his listeners' minds have been largely lost. The interpretations given by antique commentators of various periods are far-fetched allegories or symbols. It is very likely that the meaning of these phrases was indeed presented by Heraclitus in the form of allegories and metaphors which were used in a definite context and intended to elucidate his dicta; now, however, being the remnants of an extinct culture they can do nothing but obscure his thought.

Tradition presents Heraclitus as a solitary thinker, a nobleman by birth and manners who kept himself aloof from his fellow-citizens and held most of mankind in great contempt. According to Diogenes Laertius (IX, 3), "he was lofty-minded beyond all other men, and other meaning... Finally, he became a hater of his kind and wandered on the mountains, and there he continued to live, making his diet of grass and herbs." To support such opinions, the commentators usually adduced Heraclitus's own pronouncements purportedly showing the hatred and scorn of this gloomy bilious aristocrat for his countrymen. The fragments we possess indeed contain utterances which may give cause for accusations of this sort but, like many of Heraclitus's other statements, they are not single-valued and attest to the dialectical character of his thought: in the cosmos governed by the wise Logos,

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dead life and ignoble death await those who do not follow its prescriptions and boast of their ignorance. They are wilful and arrogant—and "one should quench arrogance rather than a conflagration" (B 43). On the other hand, "the thinking faculty is common to all" (B 113) and "all men have the capacity of knowing themselves and acting with moderation" (B 116). The Logos is "common" and everybody can grasp it and attain wisdom—however, according to fragment 2, "most men live as if they had a private understanding of their own."

The account of Heraclitus's ethical views presents a special problem, as the obscurity of his style combines in this field with the meagreness of unquestionably genuine passages. Fragment 119, which has been the object of much dispute, says: character (*ethos*) for man is destiny (*daimōn*). The difficulty in the interpretation of this passage stems largely from the ambiguity of the key words *ethos* and *daimōn* which had more than one use each. It is most likely that Heraclitus's statement is directed against the mythological belief in a *daimōn* supposed to look after an individual man in the manner of a guardian and emphasises man's own responsibility for his destiny. Commenting on this saying, Ephicarmus was later to paraphrase it as follows: "Character for man is good destiny—but for some men, bad also" (DK 23 B 17). Heraclitus left us in the dark as to whether *ethos* is innate or subject to change (for the worse or for the better), but we do know his categorical statement: "One man to me is [worth] ten thousand, if he is best" (DK 22 B 49). Given Heraclitus's pessimism about the ability of most people to grasp the Logos, one can only wonder why he should take pains to advance his principles, make speeches, preach against ignorance and wrongdoing and "weep" over wretched human life.

Heraclitus's fragments 85 ("It is hard to fight against impulse; whatever it wishes, it buys at the expense of the soul") and 110 ("It is not better for men to obtain all that they wish") seem to fall in line with the general ethical principles of his time and express advice to restrain one's desires and put the "soul" first.

Early Greek morality is directly linked with and merges into politics. Coming from a royal clan at Ephesus, Heraclitus was openly hostile to trade and industrial oligarchy that had come to power in his native city and established

a tyranny. Sources give us the name of the tyrant, Heracli-
tus's contemporary Melanchrus. Censuring the wilfulness of
the rich, Heraclitus contrasts it with human dignity which he
associates with noble descent, wisdom and moral integrity.
His denunciation of wealth ["may wealth not fail you men of
Ephesus, so that you may be convicted of your wickedness!"
(B 125a)] was combined with undisguised contempt for dem-
ocratic tendencies and egalitarian ideas after the fashion of
aristocratic poets Alcaeus and Theognis who furiously con-
demned wealth and all kinds of "novelties." At the same time
Heraclitus exalts law which should be defended by right-
minded people as "their city's walls" (B 44) so far as it is
in accord with the one divine law governing the world, the
Logos.

Heraclitus's universal "strife" was undoubtedly a reflec-
tion of the class struggle which unremittingly flares up and
subsides in an antagonistic society. The truth, according
to Heraclitus, is that peace and rest which seem to people a
desirable order of things are not based on a harmony of agree-
ment, but on an equilibrium of tension, on an incessant
struggle of opposing forces. This dialectical idea of universal
strife as the real harmony of the world, the conviction that
war is the father of all things and of the true peace is the
essence and the tragic fervour of Heraclitus's philosophy.

Heraclitus had no orthodox followers. Though ancient
sources often speak of the "Heracliteans," they usually mean
those who seized upon the Ephesian's doctrine of flux and
brought it into a one-sided prominence. Such philosophers
ironically referred to by Plato as "eternally flowing" held
that ever changing and contradictory reality does not lend
itself to any determination so that no statement regarding it
can be true. This conclusion carried the Heraclitean doctrine
of the flux of everything to an extreme and finally degraded
it to sophistry. According to Aristotle, "it was this belief
that blossomed into the most extreme of the views above
mentioned, that of the professed Heracliteans, such as was
held by Cratylus, who finally did not think it right to say any-
thing but only moved his finger, and criticised Heraclitus for
saying that it is impossible to step twice into the same river;
for he thought one could not do it even once" (Arist. Met. IV,
5, 1010a).

The profound influence of Heraclitus's teaching runs
through centuries and clearly shows up in the philosophical

works of different periods, e.g. in Parmenides's poem, Plato's dialogues, in the works of Aristotle, the stoics and the sceptics, in Christian theologians and the "fathers of the Church." According to Diogenes Laertius, "the commentators on his work are very numerous, including as they do Antisthenes and Heraclides of Pontus, Cleanthes and Sphaerus the Stoic and again Pausanias who was called the imitator of Heraclitus, Nicomedes, Dionysius, and, among the grammarians, Diodotus... Hieronymus tells us that Scythinus, the satirical poet, undertook to put the discourse of Heraclitus into verse" (IX, 15). The answers given by Heraclitus to the fundamental problems of philosophy two and a half millennia ago have not lost their significance in modern times and he is as popular nowadays as in antiquity. It would not be an exaggeration to say that of all early philosophers Heraclitus is the most deserving of the title of the founder of objective dialectics. Its essence, the doctrine of the struggle and unity of opposites will be forever linked with his name.

Italian Philosophy

7. Pythagoras and Pythagoreans: Science, Religion, Philosophy

Italian philosophy which includes the Pythagorean and Eleatic thought had its start some time after the emergence of the Ionian School and partly owed its existence to the Ionian influence. It originated in Magna Graecia, i.e. in the Greek colonies in South Italy round about the end of the sixth century B.C. The Greeks started planting their colonies in South Italy and Sicily in the late eighth and in the seventh centuries. Towards the end of the eighth century the Chalcidians, Megareans and Corinthians set up the cities of Naxos, Catana, Leontini on the eastern coast of Sicily. The Corinthians founded Syracuse which was to become later one of the richest cities of Sicily. The seventh century saw the foundation of Acragas (Agrigentum). In the late eighth century colonies were also planted in South Italy: Cumae on the western coast, Spartan colony Tarentum and Achaean colonies Sybaris and Croton, then Metapontum and Poseidonia (Pestum), in the east. Sybaris, Croton and their Achaean dependencies formed an Achaean confederation with Hera's sanctuary near Croton as their common religious centre. In the sixth century B.C. the Phocaeans who had earlier planted Massalia (Marseilles), Alalia in Corsica and other colonies began to settle on the western coast of Italy and set up Elea which became the centre of immigration from the Phocean cities after their fall before the Persians in 542 B.C. Croton, Acragas, Leontini, Metapontum and Elea became the motherland or the home of a whole galaxy of outstanding thinkers and left a profound trace in the history of philosophy.

Having arisen as agricultural colonies and possessing convenient harbours, these cities rapidly developed into large trade centres. Their prosperity depended on crop growing, animal

husbandry and export of agricultural produce (wheat, barley, spelt and other cereals, cattle and therefore meat and hides, wines, oil, etc.).

The sources we depend upon for our information on the political system of Greek colonies do not warrant its accurate assessment. They explicitly show, however, that there was no uniformity in the constitution of city states. For instance, the Spartan colonies tended to preserve the monarchical traditions of their mother-country. By contrast, the Achaean colonies gravitated towards slave-owning democracy and were the scene of acute struggle between aristocratic and democratic factions. The Ionian colonies continued developing the advanced social and economic relations of their metropolises. The history of Magna Graecia of that period was characterised by comparatively peaceful development and it was only in the fourth and third centuries B.C. that it was terminated by Roman expansion (the Naples fell in 327, Syracuse in 211). In the absence of any threat of foreign invasion the relations of Greek colonies were chiefly dominated by conflicts which flared up not only between the Dorian and Achaean (Tarentum and Sybaris) polises, but also between kindred city states, such as Croton and Sybaris. Of no small importance was also internal strife which often came to the forefront in the political life of Greek cities.

The predominantly agricultural character of Italian colonies, as well as the expanding contacts with culturally underdeveloped surrounding peoples accounted for the prevalence of religious cults, particularly the cult of Dionysus. Merging with the religious and mythological conceptions constituting the foundation of such cults, the incipient rational thought brought from Ionia produced peculiar philosophical doctrines reflecting the influence of religious and mythical outlook and gravitating towards idealism.

In other words, religious problems played a far more important role in the teachings of the Italian philosophers as compared with the Ionians, inducing the former to develop elaborate doctrines of god, soul, its mortality and immortality, and to define the relations between god and the world, god and the man. It was a new trend that advanced new philosophical problems, reassessed traditional ones and shifted the focus of attention from nature to man. The new path opened up by the Italian philosophers was circuitous and highly contradictory: a revival of the prerational mythological outlook was to be

combined with its sharp criticism. The Pythagoreans were the
first to embark on this path.

The history of Pythagoreanism can only be presented in the
form of a general outline. The Pythagorean theoretical doc-
trine as a religious, scientific and philosophical teaching took
shape at the end of the sixth century B.C. during the lifetime
of Pythagoras, the founder of the school, and his pupils.
The religious community founded by Pythagoras attained
great political influence and even ascended to power in
Croton, Metapontum and Tarentum. However, as a result of
a revolt which embraced the whole country the Pythagorean
brotherhood as a political organisation was smashed and its
members were either killed (according to ancient evidence,
they were usually burnt alive with the houses where they
gathered to discuss state affairs) or banished. In the second
half of the fifth century B.C. Pythagoreanism was mainly
represented by its philosophical teaching as expounded by
Philolaus. In the late fifth and early fourth centuries
B.C. Pythagorean philosophy grows into and merges with
Platonism in the activity of the ancient Academy. These
stages in the external history of the school are represented
respectively by early (the later third of the sixth and first
half of the fifth centuries), middle (the later decades of the
fifth century) and late Pythagoreanism. In view of the
predominantly Platonic character of late Pythagoreanism we
shall confine our survey of the Pythagorean thought to its
first two periods as best representing the spirit of this trend.

A. Pythagoras and early Pythagoreanism. Pythagoras, the
the son of Mnesarchus of Samos, is said to have studied in
Egypt and probably in Babylonia where he acquired the
knowledge of mathematics and astronomy. In about 532 B.C.,
Pythagoras left Samos to escape life under the tyranny of
Polycrates and settled in Croton where he established his
brotherhood. His life was surrounded by a haze of legend: he
was said to be a son of Apollo or Hermes, to have a golden
thigh and to retain memories of his soul's past transmigra-
tions. Stories were told that he had first been Hermes's son
Aethalides, then Euphorbus who was wounded by Menelaus,
then Hermotimus, Pyrrhus and finally was born as Pythago-
ras. In Croton, he preached a new way of life which, according
to Plato, was handed down by him to posterity so that his
followers "are to this day conspicuous among others by what
they term the Pythagorean way of life" (Platon. Resp.

X, 600b). Pythagoras's teaching was a great success and the rapidly growing numbers of his pupils and followers included politicians, scientists, physicians and ... women, which was in itself something quite out of the ordinary in that period.

Pythagoras did not hold any official positions but enjoyed the reputation of a wise counsellor. His political influence may be illustrated by the following fact. In about 510 B.C., Telys, the leader of the popular party at Sybaris, banished five hundred of its richest citizens who took refuge at Croton. When Telys demanded that they be given up Pythagoras intervened and persuaded the Crotonian assembly to protect them. As a result of the war that followed the Sybaritean army was defeated and the city itself was destroyed. This event must have given the Pythagoreans real political power which they held till the outburst of popular discontent at the end of the century as a result of which Pythagoras was compelled to leave Croton and take refuge at Metapontum where he soon died.

The Pythagorean community or brotherhood was an aristocratic political organisation which sought to concentrate power in the hands of the "best few." The aim of Pythagoras was not to reanimate the old landed aristocracy which had already lost its political and ideological influence, but to create a new "aristocracy of spirit" in the person of his pupils, "the best" from the viewpoint of ethics, i.e. religion, science and philosophy, who, according to Diogenes Laertius, governed the state so well "that its constitution was in effect a true aristocracy (government by the best)" (Diog. L. VIII, 3).

The Pythagorean way of life was described in detail by Aristotle's pupil Aristoxenus whose evidence merits a high degree of trust. According to Aristoxenus, it was based on the conviction that anarchy constituted the greatest evil for man as his well-being could not be attained with no authority above him (Jambl. V. P. 175). The supreme power belongs to god. Speaking of Pythagoras and his followers, Aristoxenus says: "Every distinction they lay down as to what should be done or not done aims at conformity with the divine. This is their starting-point; their whole life is ordered with a view to following God, and it is the governing principle of their philosophy" (ibid., 137). Supreme justice comes from the power of the gods which is not to be challenged by anyone. Next in authority after the gods are demons (creatures like Pythagoras), then come the rulers, the parents and the elders, as well

as the law. The Pythagorean way of life also laid down various rules of behaviour for different groups of people depending on their social status, gave medical and eugenic prescriptions, demanded the fulfilment of various physical and musical exercises, etc. The ancient sources offer no rational explanation of Pythagoras's moral code invariably invoking the will of the gods. The purpose of this code, however, seems to be clear enough — to subject man to the authority of divine rule and extol contemplative "theoretical" life free from any practical interests. Its injunctions, however, were in marked contrast with the actual participation of the Pythagoreans in the political life of Greek city states. Pythagoreanism appears to have been the first philosophical school to fix a gulf between theory and practice, the "book" and life which is so characteristic of a society based on the exploitation of man by man.

Despite the fact that the Pythagorean ethical ideal contains a number of moral injunctions of general human value, not to speak of the practical rules of everyday communal life, it clearly reveals the underlying flexible socio-political conception that could be used to advantage by various ruling sections of antique society. Based on divine authority and law, it demanded, according to Jamblichus, adherence to the traditional customs and laws, even if they were not perfect, as it did not befit a man to reject the existing laws in favour of dubious innovations (Jambl. V. P. 176).

The religious and philosophical teaching of early Pythagoreanism took two forms according to the natural talents of the disciples: *acusmata* or sayings and *mathemata* or knowledge proper. The philosophy of the first form consisted of undemonstrated sayings, without argument, which were intended to be preserved by the pupils as divine revelations. They included definitions allegedly disclosing the essence of things, and various moral precepts and recommendations, for instance: What are the islands of the blessed? — The Sun and the Moon. What is the Delphian Oracle? — The number four, i.e. the harmony of Sirens (the music of the spheres). What is the most just? — Making a sacrifice. What is the most beautiful? — Harmony. It was prescribed not to steer the fire with a knife, not to sit on a bushel-measure, to roll up one's bedclothes on rising and smooth out the imprint of the body, to rub out the mark of a pot in the ashes, not to eat the heart, to put on the right shoe first, to wash the left foot first, etc. All these curious precepts had a mythological ring

and were supposed to possess magic power. Despite the attempts of later interpreters to rationalise some of the injunctions (for instance, Diogenes Laertius says: "By not eating your heart he meant not wasting your life in troubles and pains" [Diog. L. VIII, 18]), they clearly reveal the primitive magical belief in universal kinship or sympathy which assumes, for instance, a close relationship between a man and the imprint of his body in a bed and implies a possibility of causing him harm by exerting evil influence on what is associated with him. Hence the numerous Pythagorean taboos intended to protect a man from witchcraft. Some of these ancient prescriptions, however, sound quite modern: for instance, on Aristotle's evidence the Pythagoreans demanded from their disciples not to hurt their wives who were dependent on them.

As regards knowledge proper, i.e. *mathemata*, Pythagoras is credited with important contributions to geometry, such as the famous theorem about the square of the hypotenuse of a right-angled triangle, the discovery of incommensurability, the theory of five correct bodies, and to arithmetics—the theory of even and odd numbers, the fundamentals of the geometric interpretation of numbers, the application of arithmetics to music, etc. There was evidently a close affinity between the doctrines of nature developed by the early Pythagoreans and the Ionians. On the evidence of Aetius, Heraclitus and Hippasus of Metapontum considered the universe to be one, in eternal motion and limited, its principle being fire (DK 18 A 7). A similar testimony, without any comment, is given by Aristotle (Met. 984a 7) and Simplicius who quotes Theophrastus (A 7). Our sources give us neither details nor substantiation of this doctrine.

We are definitely more lucky with the Pythagorean teaching of soul. Pythagoras must have adopted the orphic conception of the immortality and transmigration of souls. Mention has already been made of the incarnations of his own soul—Pythagoras purportedly remembered all of them: "...And then he told of the wanderings of his soul, how it migrated hither and thither, into how many plants and animals it had come, and all that it underwent in Hades, and all that the other souls there have to endure" (Diog. L. VIII, 4). Again, no details of this teaching are known to us. The extant fragments allegedly taken from some book by Hippasus come in fact from a later Neopythagorean treatise

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and represent an obvious modernisation of the philosopher's views. No more credible is the testimony of Neoplatonist Jamblichus according to which Hippasus linked soul with number and considered the latter to be the Creator's organ of thought and the first model of creation (A 11).

B. Middle Pythagoreanism. Describing the views of "those who are called Pythagoreans," Aristotle devoted special attention to their famous doctrine of opposites in its developed form associated with the name of Alcmaeon of Croton (listing the ten Pythagorean pairs of opposites, Aristotle notes: "Alcmaeon of Croton appears to have spoken in the same way, and either he took this doctrine from them or they from him; for as to his period, he lived in the old age of Pythagoras"). Both Plato in *Philebus* and Aristotle in *Metaphysics*, Book 1, refer to what appears the earliest version of this doctrine. According to Plato, "the ancients, who were our betters and nearer to gods than we are, handed down the tradition, that whatever things are said to be are composed of one and many, and have the finite and infinite implanted in them" (Phil. 16c). Aristotle's comment is slightly different: "Evidently, then, these thinkers also consider that number is the principle both as matter for things and as forming both their modifications and their permanent states, and hold that the elements of number are the even and the odd, and that of these the latter is limited, and the former unlimited, and that the One proceeds from both of these (for it is both even and odd), and number from the One; and that the whole heaven, as has been said, is numbers" (Arist. Met. 1.5.986a 17). Hence, the Pythagorean conception of the opposites whose relationships constitute the basis of all reality can be schematically presented as follows:

According to Plato	*According to Aristotle*
One — Plurality	Limit — Unlimited
Limit — Unlimited	Odd — Even
(their accretion or	Unit
mingling)	Number
Being	Numbers=Universe

Both versions of the Pythagorean conception, though slightly different in detail, represent one and the same scheme of the evolution of the world — the emergence of all things through the interaction of one and many, the limited and the unlimited. In other words, the Pythagorean conception,

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whether it originated in the early period of the school or is a product of two stages of middle Pythagoreanism, represents reality not as a simple totality of different combinations of the unlimited or "primary substance," but as a unity of the limited and the unlimited, as an orderly cosmos, a complete whole. In physical terms, the evolution of the world, i.e. the emergence of things is conceived as the "limitation of the unlimited": the endless, the incomplete is drawn, so to speak, into the process of world formation. Commenting on this conception, Aristotle wrote: "The Pythagoreans, too, held that void exists and that it enters the heaven itself, which as it were inhales it, from the infinite air. Further it is the void which distinguishes the natures of things, as if it were like what separates and distinguishes the terms of a series. This holds primarily in the numbers, for the void distinguishes their nature" (Arist. Phys. IV, 6, 213b).

The cosmology and cosmogony of the Pythagoreans are based on their conception of the limited as order and perfection. The universe as a unity of the limited and the unlimited is a sphere evolving in limitless void by breathing it in, expanding and differentiating. This is how cosmic space, celestial bodies, movement and time come into being. The centre of the universe is occupied by fire referred to, according to Philolaus, as Hestia (the goddess of the hearth), the home of Zeus, the sustainer and measure of nature. The nearest to the centre is the counter-earth, then come earth, moon, sun, the five planets, and lastly the sphere of the fixed stars. The counter-earth was invented to bring the number of celestial bodies up to ten. It was used to explain lunar eclipses. The celestial bodies arise from the central fire and revolve around it being fastened to crystal spheres. All planets, the earth including, revolve from west to east facing the central fire always with one and the same side which explains why we never see it. Our hemisphere is heated with the rays of the central fire reflected by the sun. There is yet another fire, presumably identified with unlimited breath which occupies the highest position and encompasses the universe.

The cosmology of the Pythagoreans which had much in common with the Milesian, particularly Anaximander's picture of the world was a remarkable step forward. The rejection by the Pythagoreans of the traditional geocentric views, the postulate of the spherical shape of the earth and its revolution about the central fire within a period of 24 hours,

the explanation of solar eclipses by the passage of the moon between the sun and the earth and of the change of seasons on the earth by the inclination of its orbit to that of the sun was a brilliant conjecture that anticipated the truth and contributed to the subsequent development of the heliocentric theory. The Pythagoreans also advanced a unique conception of the harmonious movement of heavenly spheres which caught the imagination of many succeeding generations of poets and philosophers: according to the Pythagoreans, the speeds of the heavenly bodies are in the ratios to musical intervals making up a complete octave so that the sound of the bodies as they revolve is concordant.

The Pythagoreans did not confine themselves to the elaboration of the physical picture of the world largely based on earlier philosophical notions. They went further and linked it with a definite *logical* system correlated, in turn, with ethical values. This aspect of the Pythagorean world outlook is represented in their teaching of opposites that has already been referred to. Immediately after the passage about the opposition of one and many, the limited and the unlimited Aristotle continues (Met. 986a 22): "Others of this same school say that there are ten principles, which they arrange in twin columns, namely:

limit — unlimited	at rest — moving
odd — even	straight — crooked
one — plurality	light — darkness
right — left	good — bad
male — female	square — oblong"

As is evidenced from this table, the Pythagoreans brought the limited and the unlimited in line with good and bad respectively. This in fact was the central idea of their ethical theory rooted in the wisdom of the "Seven Sages" and their prescriptions to observe measure and limit. Commenting on this theory, Aristotle wrote: "...Evil belongs to the class of the unlimited, as the Pythagoreans conjectured, and good to that of the limited" (Eth. Nic. B. 5, 1106b). It is significant, however, that the Pythagorean conception of opposites is very different from the Heraclitean one and is essentially metaphysical: the opposites are not mutually repellent and do not make a unity of identity and difference, but rather a unity of mixture. Characterising Pythagoras as a moral reformer, Jamblichus quoted him as saying: "no existing thing is pure, everything is mixed, earth with fire, fire with water, air with

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both and they with air, even the fair with the ugly and the just with the unjust" (Jambl. V. Pyth. 130). This integrated physical, ethic and aesthetic approach is highly characteristic of the Pythagorean moral theory and brings us to another important doctrine of the Pythagoreans—that of harmony.

Generally speaking, the doctrine of harmony is one of the key elements of Pythagoreanism underlying both its cosmology and the teaching of the soul. For one thing, according to the Pythagoreans, the whole cosmos owes its perfection to the harmony of numbers which constitute its ultimate elements. Sources quote Pythagoras and Philolaus as calling the soul a harmony and refer to Alcmaeon of Croton, a physician of the early fifth century B.C., as one of the expounders of this theory. Alcmaeon is said to have been specially interested in medicine and physiology and regarded all things, particularly the human body, as the product of the mixture of opposites, their harmonious combinations. According to Alcmaeon, "health is equality (*isonomia*) between the powers— moist and dry, cold and hot, bitter and sweet and the rest, and the prevalence (*monarchia*) of one of them produces disease, for the prevalence of either is destructive... Health on the other hand is the blending (*symmetra krasis*) of the qualities in proper measure" (DK 24 B 4). It was just this "blending in proper measure" that the Pythagoreans called "harmonia" and made one of the central notions of their teaching.

To describe the relationship between opposite forces in the human body Alcmaeon uses political terms *isonomia* (equality of rights) and *monarchia*. This terminology betrays his sociomorphic approach to nature and throws light on the source of his natural and social conceptions. In point of fact, Alcmaeon's teaching represents a clear tendency to spread social and ethical notions to the sphere of natural phenomena and thus to bolster up, in the face of growing class contradictions, the idea of social harmony by making it the basis of the world outlook.

The development of the Pythagorean thought in the middle period seems to have been summed up by Philolaus who was active in the second half of the fifth century. The anti-Pythagorean uprising caused him to emigrate to Thebes, then he returned to Italy and settled at Tarentum, probably his native city. Philolaus was the teacher of Archytas who later formed a lasting friendship with Plato and brought him into direct contact with Pythagoreanism. Philolaus, too, may have met Plato. Diogenes Laertius informs us, with re-

ference to Demetrius, that Philolaus "was the first to publish the Pythagorean treatises to which he gave the title *On Nature*" (Diog. L. VIII, 85). It means that Pythagoreanism by that time had already lost its character of a secret sect or community.[1] It is difficult to say if the book attributed to Philolaus represented a genuine Pythagorean treatise that had been kept secret, or was a commentary on conceptions taught orally. In all likelihood, it was his own work ascribed, according to tradition, to the Teacher. Philolaus is also credited with the authorship of *Bacchae, On the Soul* and *On Rhythm and Metre*. The extant fragments of these books are now believed to be forgeries.

It should be noted, that the authenticity of the treatise *On Nature* has also been called in question, partly or completely, on linguistic grounds, the main objection being their close affinity with Aristotle's works on the Pythagoreans. Though the arguments are serious enough, there is no reason to discard Philolaus as a source of valuable information on the logical tendencies of middle Pythagoreanism and its link with Archytas. Our chief aim being to reconstitute the logic of the Pythagorean development, the real authorship of Philolaus's fragments is of secondary importance to our purpose, since these fragments are indicative of the continuity of Pythagorean thought and contain a number of important ideas fully in line with its traditions. Among them, first and foremost, is the idea of synthesis of the limited and the unlimited which underlies the generation of things: "All existing things must necessarily be either Limiting, or Non-Limited, or both Limiting and Non-Limited... Clearly then the universe and its contents were fitted together from both the Limiting and the Non-Limited" (DK 44 B 2). A body cannot be only non-limited or only limiting: "There could not even be an object set before knowledge to begin with, if all things were Non-Limited" (B 3). We can add here that if all things were limiting they would have nothing to limit.

Accepting the view expressed in the cited passage from Plato's *Philebus*, Philolaus elaborates it further by adding the

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[1] Hippasus, an early Pythagorean, is said to have been heavily punished for revealing to the world some secrets of the Pythagorean teaching. According to Jamblichus, he was not only expelled from the brotherhood for divulging the nature of proportion and incommensurability to the uninitiated, but a tomb was raised to him as if dead (Jambl. V. P. 246).

idea of odd and even (the unlimited and the limited respectively) as two forms of number: "Actually, Number has two distinct forms, odd and even, and a third compounded of both, the even-odd; each of these two forms has many aspects, which each separate object demonstrates in itself" (B 5). Number, according to Philolaus, is what defines a thing and makes it cognisable: "Actually, everything that can be known has a number; for it is impossible to grasp anything with the mind or to recognise it with this" (B 4).

Now, the world and everything in it evolves as a mixture of opposites, yet such an evolution would be impossible without a harmony underlying it: "It would be impossible for a universe to be created with them unless a harmony was added, in which way this (harmony) did come into being. Now the things which were like and related needed no harmony; but the things which were unlike and unrelated and unequally arranged are necessarily fastened together by such a harmony, through which they are destined to endure in the universe" (B 6). In other words, things can only emerge if their constituent opposites are subjected to some external influence, namely, to the effect of a ratio, proportion which does not derive from them, but is imposed, as it were, from the outside in order to arrange, harmonise the dissimilar and the unrelated.

Here we come to the central doctrine of Pythagorean philosophy which is summed up in the statement that "things are numbers." The root of the doctrine was evidently a very concrete "material" notion of numbers as something extended in space, perceived by the senses and making up all objects of the sensuous world. They were conceived as the first principle of the universe in the Ionian sense. The geometrical interpretation of numbers leads to the understanding of the unity as a point; two points make a line and three points, a plane. Hence the notions of "triangular," "square" and "rectangular" numbers:

$$L1+2+3\ldots+n = \frac{n\,(n+1)}{2} - \text{triangular number (1)}$$

$$1+3+5\ldots+n-1 = n^2 - \text{square number (2)}$$
$$2+4+6\ldots+2n = n\,(n+1) - \text{rectangular number (3)}$$

Represented in the form of geometrical patterns which was regular Pythagorean practice these figures would look as follows:

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(1) (2) (3)
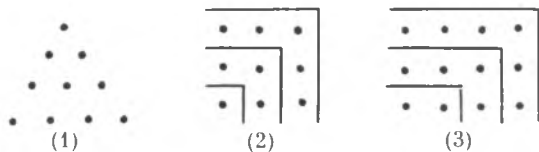
Patterns (2) and (3) are obtained with the help of a gno-
mon—an instrument which takes its name from the carpen-
ter's set square or the upright pointer on a sundial. Applying
a gnomon produces the same pattern, but of a larger size. The
application of gnomons made up of an odd number of units
gives a square, those of even numbers, a rectangle.

Triangles form pyramids, squares make cubes, etc. Subse-
quently the Pythagoreans related geometrical figures to ele-
ments: fire particles were supposed to be pyramidal in shape,
earth particles represented cubes, air particles—octahedrons,
and water particles—icosahedrons. This trend, however, was
already characteristic of late Pythagoreanism and may even
have taken its start from Plato who developed Pythagoreanism
along the lines of mathematical symbolism.

The conception according to which numbers were the ele-
ments of things and almost the material from which all things
are made constituted the basis of the teaching of Eurytus who
held that things were determined by the number of similar
pebbles which he arranged in the appropriate way to form the
outline of man, animal or plant. This theory derived from the
conviction that a body consists of a certain number of material
dots. As a result of devastating criticism by the Eleatics the
original formula "things are numbers" was changed to
"things imitate numbers," which they do by reproducing
their properties and relations. As regards numbers, they were
reduced in status to ideal models of things. According to
Archytas, magnitude and number are "the two primary forms
of being" (DK 47 B 1, 8).

Finishing up with the genesis of Pythagoreanism, we may
just add that Philolaus was credited with an elaborate theory
of the immortality of the soul. One of the sources ascribes to
him the following words: "The ancient theologians and seers
also bear witness that because of certain punishments the soul
is yoked to the body and buried in it as in a tomb" (DK 44
B 11). Aristotle considered, however, that the Pythagoreans
had at least four different conceptions of the soul. According
to one of them, "any soul could be clothed upon with any

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body" (De anima 1. 3, 407b), another held that it was a harmony of opposites in the body, a third one regarded it as a modification of number, whereas in the fourth variant some Pythagoreans declared the souls to be motes in the air, and others insisted that the soul was what moved them: "these motes were referred to because they are seen always in movement, even in a complete calm" (ibid., I. 2, 404a).

Viewed as a whole, the Pythagorean philosophy reflected the quantitative aspect of things that revealed itself to the astonished Italian thinkers—the spatial world of geometrical proportions, the orderly movement of celestial bodies governed by mathematical laws, the quantitative formulae of musical harmony and scores of other discoveries. However, in their excitement over the power of human reason they absolutised quantity and ignored entirely the qualitative aspect of things. Describing the Pythagorean method, Aristotle wrote: "Since, then, all other things seemed in their whole nature to be modelled on numbers, and numbers seemed to be the first things in the whole of nature, they supposed the elements of numbers to be the elements of all things, and the whole heaven to be a musical scale and a number. And all the properties of numbers and scales which they could show to agree with the attributes and parts and the whole arrangement of the heavens, they collected and fitted into their scheme; and if there was a gap anywhere, they readily made additions so as to make their whole theory coherent" (Arist. Met. I, 5, 985b).

In his comments on Pythagoreanism Aristotle confines himself to the analysis of its abstract philosophical doctrines. In real ideological life, however, the Pythagorean teaching represented an extremely complex, even grotesque combination of scientific notions sound even from the modern point of view, with religious prejudice, magic precepts and mysticism of numbers believed to be instruments of divine powers. The inadequacy of Pythagorean mathematical philosophy soon became obvious and compelled the Pythagoreans themselves, even the early ones, to turn to Ionian philosophy with its naturalist trend and emphasis on the qualitative aspect of reality. Hence the conceptions of fire and limitless air in Hippasus, his organic analogies in the understanding of cosmos. The problems of one and many, motion and harmony of opposites that loomed large before the Pythagoreans could not be solved on the basis of their theory of numbers. They

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called for a different approach, and it was offered by the Elea-
tic school.

8. Xenophanes of Colophon

Xenophanes, the son of Dexius or Orthomenes of the Ioni-
an city of Colophon, depicts in his poem a well-fed compla-
cent citizen who, lying on a soft couch by the fire-side in
the winter season, sipping sweet wine and nibbling peas in-
quires of a stranger: "Who are you among men, and where
from? How old are you, my good friend? What age were you
when the Mede came?" The answer is Xenophanes's own
story: "By now seven-and-sixty years have been tossing my
carefilled heart over the land of Hellas. From my birth till
then [that is, till his exile], there were twenty-five years
to be added to these if indeed I am able to tell correctly of
these matters" (DK 21 B 22, 8). Proceeding from this passage
and knowing that Persian conqueror Harpagus the Mede
seized Colophon approximately 540 B.C., we may put his birth
about 565 B.C. He is known to have been still alive at the age
of ninety-two, i.e. in 473. Having left Colophon, Xenophanes
lived first in Zancle (Messina) in Sicily, then in Catana and
Syracuse. He is known to have visited the islands of Paros
and Malta, as well as the Lipari Islands. He wrote an epic
poem called *The Settlement of a Colony at Elea in Italy*, yet
it is not known if it was devoted to the foundation of Elea
like his poem *The Founding of Colophon*, or described his own
settlement there during his wonderings "over the land of
Hellas." Xenophanes also wrote elegies and poems of mockery
(*silloi*) and is considered to be the founder of the satyrical
genre. He is also credited with a philosophical poem called
traditionally *On Nature* of which we have about 20 fragments.
The total number of the extant fragments of his poems runs to
about forty.

Tradition holds Xenophanes as a witty and caustic man
who loved freedom and hated tyranny and oppression. He
recommends speaking with a tyrant as little as possible or as
sweetly as possible, advises the Egyptians not to mourn over
Osiris, if he is an immortal god, and not to offer him sacrifice
if he is mortal, ridicules the exaggerated athleticism of the
day and cautions his countrymen against the preference of
muscle to brains as "wisdom is better than the strength of men
or of horses" (B 2), castigates vainglorious foppery, etc.

There is hardly a more resolute opponent of tradition,

primarily religious and mythological, in the history of ancient philosophy than Xenophanes. Homer was the basis of education in Greece in that period, yet, according to Xenophanes, "both Homer and Hesiod have attributed to the gods all things that are shameful and a reproach among mankind: theft, adultery, and mutual deception" (B 11). Indeed, Hermes's trickery exalted in one of Homer's hymns, gods' amorous adventures, the notorious love affair of Hephaestus's wife Aphrodite and Ares described in the eighth book of *Odyssey*, the stories of Chronos who emasculated his farther Ouranos and of Zeus who overthrew his farther Chronos, etc., cannot serve as examples to be followed. Yet Xenophanes was more than a moralising literary critic. The real target of his attacks on the old beliefs and dubious stories about the gods was the frank anthropomorphism of popular theology. Among the extant evidence are these fragments from his poems: "But mortals believe the gods to be created by birth, and to have their own (mortals') raiment, voice and body... Aethiopians have gods with snub noses and black hair, Thracians have gods with grey eyes and red hair... But if oxen (and horses) and lions had hands or could draw with hands and create works of art like those made by men, horses would draw pictures of gods like horses, and oxen of gods like oxen, and they would make the bodies (of their gods) in accordance with the form that each species itself possesses" (B 14, 16, 15).

These passages preserved by Clement of Alexandria not only disclose the main weakness of polytheism, but represent one of the most important arguments of atheism against any religion: the assertion that the true creators of gods are people who shape them in their own image, but not vice versa. This does not mean, however, that Xenophanes was an atheist. To popular polytheism he counterposed the philosophical conception of god which later became known as pantheism (Gr. *pan* meaning "all" and *theos* meaning "god").

Characterising Xenophanes's understanding of god, Aristotle wrote: "With reference to the whole material universe he says the One is God" (Met. 1 5 986 b). Xenophanes himself describes the nature of god as follows: "There is one god, among gods and men the greatest, not at all like mortals in body or in mind... And he always remains in the same place, not moving at all, nor is it fitting for him to change his position at different times... But without toil he sets everything in mo-

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tion, by the thought of his mind... He sees as a whole, thinks as a whole, and hears as a whole" (B 23, 26, 25, 24).

This understanding of god comes very near to the Ionian conception of living nature which is the cause of its own motion and change. In fact, Xenophanes identifies god not with the spirit, but with the world, i.e. his pantheism is naturalistic. His search for a single determinate substance was very much in the Ionian tradition, but the ancient evidence about its nature is conflicting. Aetius asserts that Xenophanes considered earth to be the source of everything: "For everything comes from earth and everything goes back to earth at last" (B 27). On the other hand, Sextus Empiricus, having cited a similar passage from Xenophanes, hastens to add another quotation from his poem: "We all have our origin from earth and water" (B 33; confer Sext. Adv. Mathem. X 314). That water played an important role in the cosmology of Xenophanes is also attested to by the fact that he derived all meteorological phenomena from water (sea): "The sea is the source of water, and the source of wind. ...The mighty main (sea) is the begetter of clouds and winds and rivers" (B 30). Xenophanes held that the sun and the heavenly bodies consist of luminous clouds and are renewed daily, being quenched in the daytime and rekindled at night. The moon is a felted cloud. The phenomenon of Dioscures known among the Greeks as St. Elmo's fire is "little clouds glimmering in virtue of the kind of motion that they have" (A 38-A 46).

Borrowing from the Ionians, Xenophanes did not identify himself with them. For all his adherence to "sea" and "water" as the originating cause of things, in contrast with Thales, he stressed the primacy of earth. He knew that it sometimes immerses in water as evidenced by shells found in mountains or imprints of fishes and seals discovered in the Syracuse quarry, etc., but his earth does not float on the surface of the sea like in Thales—it has no bounds: "This is the upper limit of the earth that we see at our feet, in contact with the air; but the part beneath goes down to infinity" (B 28). On the evidence of Macrobius, Xenophanes believed the soul to consist of earth and water (A 50). He was familiar with the orphico-Pythagorean theory of the transmigration of souls and clearly showed his attitude to it in this gibe at Pythagoras:

> "They say that, passing a belaboured whelp,
> He, full of pity, spake these words of dole:

'Stay, smile not: 'Tis a friend, a human soul;
I knew him straight whenas I heard him yelp'."

(Diog. L. VIII, 36).

Xenophanes was the first among the Greek philosophers to
cast doubt upon the possibilities of human knowledge. Having
discarded the anthropomorphic gods, he declared man's own
needs to be the guide to knowledge: "Truly the gods have not
revealed to mortals all things from the beginning but mortals
by long seeking discover what is better" (B 18). However,
one should not be too optimistic about man's ability to grasp
absolute truth: "And as for certain truth, no man has seen it
nor will there ever be a man who knows about the gods and
about all the things I mention. For if he succeeds to the full in
saying what is completely true, he himself is nevertheless
unaware of it; and Opinion (seeming) is fixed by fate upon
all things" (B 34). As distinct from Heraclitus who claimed to
speak on behalf of the Logos, Xenophanes must have extended
his scepticism to his own pronouncements: "Let these things
be stated as conjectural only, similar to the reality" (B 35).
It is not surprising, therefore, that the sceptics of later
periods regarded Xenophanes as one of the founders of their
philosophy.

What is then the true significance of Xenophanes's philo-
sophical heritage? Are we to regard him as a pantheist or a
sceptic, a monist convinced that God is One, or a dualist in-
sisting that everything derives from earth and water? Did he
believe in the progress of human knowledge or consider it
unable to overstep the bounds of opinion? The conclusion that
suggests itself after studying the ancient evidence for his
views is that it would not be correct to treat his conflicting
statements as elaborate conceptions and to attempt a flat
answer to these questions. Xenophanes's utterances testify
to the embryonic state of his philosophy, plastic and ambiva-
lent like any nascent system. Its potentialities were realised
in the fifth century B.C. by the Eleatic school and in the
fourth-third centuries B.C. by the scepticism of Pyrrho and
Timon of Phlius.

A similar attitude should evidently be adopted to attempts
to affiliate him with a definite trend of thought and choose
between the Ionian "physiologers" writing on nature in the
Milesian tradition or the "dialecticians" who launched the
investigation into the contradictory nature of logical notions.

We have already shown his affinity with the former. On the other hand, ancient sources provide convincing evidence that he was one of the founders of subjective dialectics, the teaching of thinking or logic.

Aristotle is known to have written a treatise *On Xenophanes* which was later lost. Instead, we have a small treatise *On Xenophanes, Zeno and Gorgias* which, as the philological investigation in the eighteenth-nineteenth centuries showed should be called *On Melissus, Xenophanes and Gorgias.* Its author was an unknown peripatetic commentator of the first century A.D. who may have used Aristotle's genuine work when writing the section on Xenophanes. Though this section can by no means be relied upon for accurate exposition of Xenophanes's arguments, it gives certain valuable information which is worth quoting. According to its author, Xenophanes maintained that the one eternal, uniform and spherical god, the cosmos, could be neither unlimited nor limited, neither moving nor motionless. Indeed, the One Being must be either unlimited, infinite, or limited, finite. If it is unlimited, it does not exist, since in order to exist it must be determined by something, i.e. limited. If it is finite and limited, it cannot be One (single), as it must have something which limits it, which is Other. So, being is not One but Many. The problem of motion is treated in a similar manner. The motionless is in fact identical with the non-existent, since neither anything can come to it, nor can it come to anything. On the other hand, if anything moves, it must move relative to something else which implies plurality, many — as a result, the unity of being, its singleness is lost again. The conclusion is that the One is neither at rest, nor moving, as it is neither non-being nor Many (De MXG III 977b 16; cf. DK 21 A 28).

How does this conception agree with Xenophanes's pantheism mentioned above? There may be two ways to explain this apparent contradiction. First, one may proceed from the assumption that Xenophanes attempted to give a logical analysis of the conception of the one all-embracing being identified by him with god. In that case the treatise *On Melissus, Xenophanes and Gorgias* should be regarded as a collection of aporias or logical paradoxes connected with the problem of *One Being* that were outlined by Xenophanes, modernised in the spirit of late Plato's dialectics and expounded in terms of the Aristotelian logic. Second, the treatise may be viewed as an exposition of Xenophanes's later doctrine evolved by him under the

influence of Parmenides and indicative of a strong tendency towards scepticism. On the evidence that we have the first explanation appears more convincing.

However that may be, Xenophanes was the first philosopher to advance the conception of One Being which was to become central to the Eleatic school.

9. The Eleatic School from Parmenides to Melissus

(1) *Parmenides*. Parmenides, a native of Elea, son of Pyres, came from an aristocratic family and took an active part in the political life of his city. His floruit (the age of 40) is put either at 500, or (by Plato) at 475 B.C. He is said to have been a legislator and given Elea some of its laws. Later, under the influence of Pythagorean Ameinias, he abandoned political activity and devoted his life to contemplation. According to Aristotle and Theophrastus, he was the pupil of Xenophanes but tradition holds that he did not become his follower (see Diog. L.IX, 21). Nevertheless, a close affinity between their views is obvious: Parmenides, like Xenophanes, focused on the relationship of One Being and the plurality of existing things. Parmenides is known to have written a poem called traditionally *On Nature,* large extracts of which came down to us from Sextus Empiricus, Simplicius and some other doxographers. The extreme complexity of the extant fragments, particularly the allegoric prologue to his poem, as well as the glaring discrepancies between different manuscripts account for great divergence of opinion regarding the true meaning of Parmenides's views. In point of fact, the interpretations of his philosophy range between a religious revelation and a purely deductive logical scheme.

The most ancient doxographic tradition is expressed by Theophrastus in his *Physical Opinions*, Book I. It claims that Parmenides asserted the eternity of the universe and at the same time sought to explain how it came into being. He maintained that only the One exists, immutable, immovable and spherical, but, catering of the opinions of the mob that believes in change accounted for it by adopting "two principles, fire and earth, one serving as matter, the other as cause and maker" (DK 28 A 7). This passage from Theophrastus quoted by Alexander Aphrodisiensis gives us a glimpse into the problem of two ways of inquiry brought up by Parmenides: one true, and the other false. The first way leads to the apprehension of the one eternal self complete

being, the second, to what seems to ignorant mortals.

The way to truth, according to Parmenides, is "the one that it is and that it is impossible for it not to be" (DK 28 B 2, 9). Here we have in fact the first statement of the logical law of identity in its ontological interpretation. Indeed, having discovered or, rather, guessed a logical law according to which the thought-content of a notion must not change in the course of reasoning. Parmenides draws from it an ontological conclusion. His argument runs as follows: (1) What is, is. (2) What is not, is not. (3) What is cannot come into being from what is not, nor can it perish into what is not as the latter does not exist. (4) Space (void) and time (distinction between past and present) are non-existent. (5) Being is full. (6) Being has no parts, it is indivisible. (7) Being is one, as there is nothing apart from it. (8) Being is complete (hence finite) and perfect. (9) Motion does not exist as there is nowhere for being to move.

As is evidenced from this abstract scheme of reasoning which claims to solve the philosophical problem of true being, Parmenides conceives "being" as fullness of everything, something like mass filling the universe. Being neither evolves nor dissolves, it is indivisible, continuous, immovable and self-complete. It is like a round ball beyond which there is pure nothingness. This is ostensibly very close to the materialist world outlook and Parmenides's philosophy was sometimes construed as a kind of materialist or its prototype on the grounds that he understood reality as primary motionless corporeal substance extended in space and therefore "material," with nothing existing apart from it.[1]

Such a view, however, can hardly be accepted. Parmenides contends that "to think is the same as the thought that it is; for you will not find thinking without Being" (B 8, 34) or, even more plainly, that "it is the same thing to think and to be" (B 3). That means that thinking is conceived by him not as a criterion of being, but as being itself. The starting point for Parmenides, the axiom he considered impossible to reject, was not the material world, but the thought of it which he identified with being. The idealist trend in Parmenides's heritage was therefore at least as much pronounced as the mate-

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[1] See J. Burnet, *Early Greek Philosophy*, London, A. & C. Black, 1975, p. 182.

rialist one. The Eleatic school in its genesis paved the way both for Democritus and Plato.

Contrasting the "way of opinion" to the "way of truth," Parmenides writes:

"The one, that it is and that it is impossible for it not to be is the path of Persuasion... The other, that it is not, and that it must necessarily not be, that I declare a wholly indiscernible track; for thou couldst not know what is not—that is impossible—nor declare it, for it is the same thing that can be thought and can be... What can be spoken and thought of must be, for it is possible for it to be, but impossible for nothing to be. This I bid thee consider, for this way of inquiry is the first from which I (hold thee back). But also from this one, on which mortals, knowing nothing, wander two-headed; for helplessness in their own breasts guides their erring mind. They are borne along, both deaf and blind, mazed, hordes with no judgement, who believe that to be and not to be are the same and not the same, and the path of everything is one that turns back upon itself" (B 2, 3-6; B 6).

Analysis of these quotations shows that Parmenides, in fact, describes three ways: (1) "the way of truth," i.e. the conviction that "it is"; (2) a false way leading nowhere, i.e. the denial of being and the assertion that only non-being exists; (3) a confusion between being and non-being both of which are believed to exist. The third way, in turn, admits of three variants of the relationship of being and non-being: first, being and non-being are the same; this variant is practically equivalent to the second way and can be identified with the "nihilistic" position of Gorgias of Leontini, Parmenides's younger contemporary; second, being and non-being are the same and not the same; the reference to the "two-headed mortals" who believe that things come into being and perish and that the "path of everything is one that turns back upon itself" clearly points to Heraclitus. Third, there are being and non-being as independent and opposite entities which do not pass into each other. This is the doctrine of the Pythagoreans which underlies the opinion of "ignorant mortals." All other ways are dismissed as unacceptable.

Proceeding to the world of appearance, Parmenides preserves only one pair of Pythagorean opposites—"light—night (darkness)." To this, however, he adds contraries borrowed from Anaximenes, namely, the "rare—dense" and the "warm—cold." The antithesis of "warm—cold" cannot but

remind one of Alcmaeon. Aristotle says that Parmenides posited hot and cold meaning fire and earth, the former corresponding to being and the latter, to non-being. In his account of appearances Parmenides fully conscious of the impassable gulf between true being and the false world of opinion, puts aside the logical incompatibility of being and non-being and brings back the real opposites well known from Ionian physiology. The world of opinion, i.e. of sense experience, is contradictory, but Parmenides does not flinch from it. The way of seeming, false as it is, is the one followed by common mortals who cannot but conceive reality in terms of plurality, changefulness, generation and perishing of things. These properties of the sensuous world can be explained in physical terms, with the help of the above contraries and their combinations, but they can also be dismissed altogether if we embark on the true way of inquiry and go beyond the bounds of sense perceptions to the world conceived only by reason.

It is worth noting that Parmenides does not follow Xenophanes who regards this world of absolute knowledge as god. Parmenides leaves no room for god in his conception of being and the goddess in the prologue to his poem who instructs him in the ways of scientific inquiry is a literary personage, a tribute to tradition, rather than a deity in the proper sense of the word. As regards the sensuous world as described by Parmenides, the nearest to his understanding of it comes the Hegelian conception of "objective appearance" implying the need for the seeming, the appearance, since essence can only be grasped by man to the extent to which it reveals itself in phenomena.

Parmenides did not evidently concern himself with the problem of transition from the world of opinion to the world of truth. This problem was to be formulated and solved at a later stage of philosophical development. It was not Parmenides who discovered the distinction between sensuous and rational knowledge, yet he was the first to realise the full import of contradictions between the evidence of senses and reason and to show that reason can sometimes grasp the truth in defiance of sensual experience.

Parmenides's faith in reason and its superiority over senses was so great that he in fact "ontologised" thought and identified it with being regardless of sense data. He rejected unstable, vague and constantly changing evidence of senses as

the world of "appearance," "opinion" in favour of the true world of eternal and motionless being which can only be conceived in thought. It was the first step towards objective idealism.

The cosmological views of Parmenides expounded by him in accordance with the opinions of mortals do not lend themselves to reconstruction within an orderly "physiological" system. The central idea of his cosmology described in detail by Aetius (A 37) consists in the generation of the sensuous world from a mixture of "light" (fire) and "night" (darkness or earth). This description is partly confirmed by fragment B 12. The single world is encompassed by ether beneath which "is ranged that fiery part which we call heaven," then comes what surrounds the earth—a number of circular rings or bands, one inside the other. Some bands are fiery, others are dark, and those between them are filled with fire but partly. "And in the centre of these is the goddess who guides everything; for throughout she rules over cruel Birth and Mating, sending the female to mate with the male, and conversely again the male with the female" (B 12). According to Aetius, Parmenides also called her "steering goddess and keyholder and Justice and Necessity."

Parmenides's "circular bands" are highly reminiscent of the "rings" of Anaximander, particularly when we learn that "the sun and the circle of the Milky Way are exhalations of fire," his central fire reveals a close affinity to Pythagorean Hestia or the goddess of hearth, etc. The origin of life, as well as sensation and thinking, was evidently attributed by Parmenides to the interaction of earth and fire (cold and hot): "Thought varies according to whether the hot or the cold prevails, but that which is due to the hot is better and purer" (A 46). Sensation is caused by the similar (A 46). Speaking of the propagation of animals and human beings, Parmenides maintains that women are warmer (evidently, they are better and purer, though he is not quite explicit about the matter) than men; the birth of a male or female depends on which of the parents prevails and on the location of the foetus in the womb: "on the right, boys, on the left, girls..." (B 17).

(2) *Zeno of Elea*. Zeno, son of Teleutagoras, was adopted by Parmenides. According to Plato, he was some twenty-five years younger than his foster-father and Apollodorus increases this difference to about forty years. Tradition holds him as a courageous political leader who fell victim in the

struggle against an Elean tyrant (the name of the tyrant varies). According to one story, the philosopher who headed a conspiracy against tyranny was seized and put to the torture. However, he did not give away his friends, but defamed the tyrant's confidants. Being unable to endure the torture, he said he would whisper their names into the tyrant's ear and, when the tyrant bent to him, Zeno dug his teeth into his enemy's ear and was killed by his servants. In another version, he bit off his own tongue and spat it into the tyrant's face, whereupon he was thrown into a large mortar and ground to death.

According to Diogenes Laertius (IX, 29), "his views are as follows. There are worlds, but there is no empty space. The substance of all things came from hot and cold, and dry and moist, which change into one another. The generation of man proceeds from earth, and the soul is formed by a union of all the foregoing, so blended that no one element predominates." If Diogenes did not confuse Zeno with somebody else, we have reason to believe that the Elean deemed it necessary to expound not only the "truth," but also the "opinion," as was the case with his teacher Parmenides. Zeno is mainly known through his acute attempts to substantiate Parmenides's doctrine by the dialectical refutation of his opponents. The method he used was based on the rule of contraries and consisted in adopting his opponent's position as a premise and showing that it leads to absurdity. Ancient sources ascribe to Zeno forty arguments "against plurality," i.e. in defence of the conception of one being, and five arguments "against motion," in defence of the immobility of reality. These arguments are called "aporias" or insoluble problems. Among the aporias that came down to us some are directed against motion and four against plurality, dealing with the numerical and spatial aspects. They were aimed simultaneously against sensuous knowledge in general.

In his aporias Zeno investigates the logical structure of the "world of opinion" which is dominated by number and motion and demonstrates by inductive inferences that these concepts are contradictory and should therefore be rejected. In other words, the very fact that the basic conceptions of ancient philosophy, mathematics and everyday consciousness turn out to be contradictory so that contrary conclusions can be drawn from identical premises is regarded by Zeno as sufficient reason for eliminating them from the realm of

true knowledge. Zeno's "negative dialectics" is in fact based on the application of the laws of formal logic to the concept of the unity of reality. We cannot say with certainty who formulated these laws and in what form they were used by the Eleatics, yet there is no doubt that Parmenides consciously applied the laws of identity and non-contradiction, and Zeno also used the law of the excluded middle. His aporias clearly proceed from the assumption that if we have simultaneously A and non-A and if non-A proves contradictory, it is bound to be false and A is bound to be true in accordance with the law of the excluded middle. Such is the logical structure of all Zeno's aporias irrespective of their content.

Aporias against the idea of plurality. "If things are Many, they must be both small and great: so small as to have no size, so large as to be infinite" (DK 29 B 1). This conclusion, revealing the self-contradictory nature of the notion of plurality was apparently aimed at the Pythagorean conception of things as consisting of a number of corporeal elements (dots). Zeno's argument runs like this (Lee, 9 and 10, DK, fragments 1 and 2):

(a) Infinitely large. If a thing has size and depth, one part of it must be separate from another. [Obviously the parts cannot occupy the same space.] Now one part of it must be the outer surface, which limits it, and lies beyond the inner part. If it is merely a geometrical surface (i.e. with no depth), it is not a part of a solid body at all, in fact it is nothing, and the object has no limiting surface; but if it has depth (i.e. is a solid body itself), then it too must have an outer part or surface and an inner part, and so on ad infinitum.

(b) Infinitely small. The only alternative is that the parts of each thing have no magnitude: but an infinite number of parts of no magnitude can never add up to a magnitude.

Viewed from the quantitative aspect, the same argument runs as follows (Lee, 11; DK, fragment 3): if there is a plurality, it must contain a finite number of components, because they must be neither more nor less than they are; on the other hand, it must contain an infinite number of components, because if they are separate at all, then, however close together they are, there will always be others between them, and yet others between those, and so on ad infinitum. In other words, a plurality must contain both

a finite and an infinite number of components which is absurd.

Aporias against space and sense perceptions. To dispose of the notion of space, Zeno puts forward the following argument: if a thing occupies a space, this space must be enclosed in another space, and so on ad infinitum. Yet an infinite plurality of spaces is absurd, therefore space does not exist at all.

To discredit sensation, Zeno uses a somewhat different argument which deals with the relation of part to whole and is known as the "millet seed." Zeno asks his opponent if a single seed makes a sound in falling. If the opponent replies in the affirmative, Zeno asks whether half a seed makes a sound, and so on. To the negative reply he rejoins that there will be no such thing as sound since a sum of zeroes is still zero. In this way he supports Parmenides's view that senses are not to be trusted (Lee, 37 and 38; DK A 29).

The aporias against the notion of plurality testified to a crisis of ancient theoretical knowledge, the first of its kind. Its resolution in mathematics called for a substantive system of general axioms developed by Euclides. In philosophy the problem of being which turned out to be fraught with paradoxes was solved by ancient atomism.

Aporias against the idea of motion. Zeno's general argument is very simple: if a thing moves it must move either in the place where it is or in the place where it is not. The latter is impossible (nothing can act or be acted upon where it isn't), and where a thing is, it must be at rest. Hence, "that which moves, moves neither in the place in which it is, nor in that in which it is not" (B 4). His second paradox known as "The dichotomy" says that an object which moves from one point to another will never reach its destination: it must first pass through half the distance, but before it can do this, it must traverse the half of the half, and so on ad infinitum. It means that motion can neither end nor begin. According to the third aporia known as "Achilles and the tortoise" the fleet-footed Achilles will never overtake a tortoise, because, while he is reaching what in any moment is the tortoise's starting point, the tortoise will have moved further. As Achilles always must reach first the position previously occupied by the tortoise, he will never be able to catch up with it. In the fourth aporia known as "The flying arrow" Zeno argues that an arrow which appears to be flying

is really stationary because at any moment of its flight it must occupy a space equal to itself: it can move neither in its place nor in the place where it is not. The fifth aporia called "The stadium" is as follows. In the stadium there are three rows, each containing an equal number of equal-sized objects arranged initially as follows:

$$\text{(a) } AAAA$$
$$BBBB \rightarrow$$
$$CCCC$$

The A row is stationary, the B and C rows begin to move in opposite directions with equal velocity until all three rows are opposite each other:

$$\text{(b) } AAAA$$
$$BBBB$$
$$CCCC$$

The B row has passed half the A row, while the C row has passed the whole of the B row. Now, rows moving with equal velocity must take the same time to pass an equal distance. All the rows are equal, but it takes row C as much time to pass row B, as it takes row B to pass only one half of row A. Hence, half a given time is equal to the whole, which is absurd. This, according to Zeno, again shows that motion is unreal (DK A 28).

Analysing these puzzles, a modern reader will have no difficulty in solving them. Indeed, the aporias against the notion of plurality are based on the fallacious axiom of the ancients that a sum of an infinite number of magnitudes is bound to be infinite. It is well known to us that there exist infinite convergent series. We can accurately calculate when and in what point of the path Achilles will catch up with the tortoise. Suffice it to recall the elementary psychological notion of the threshold of perception and we shall stop mulling over the "millet seed." Again, the author of the "stadium" puzzle appears very naïve indeed in the light of the rule of the composition of velocities... Nevertheless, Zeno's arguments continue exercising the minds of philosophers, logicians and mathematicians even in our days. Their historical significance consists in that they revealed the difficulties of the formation of scientific concepts of space, time and motion rooted in their dialectical nature and posed the problem of expressing their objective contradictoriness in logical forms.

It is this contradictoriness alone that Zeno is interested

in: he proceeds from the assumption that what is contradictory cannot be thinkable and, consequently, cannot exist. The conclusion is that being can only be conceived as one motionless and immutable reality. The untenability of Zeno's conclusion is obvious. First, he does not see that the concept of one immutable being involves no less contradictory consequences as was already shown by Plato. Second, Zeno is not aware of the fact that thinking itself is subject to change and genesis, and that therefore what we cannot express in to-day's concepts will make no problem for the logic of to-morrow. Third, he is still unable to accept the idea of the objective contradictoriness of reality—contradictoriness to him is incompatible with being. Nevertheless, Zeno's arguments emphasised, though in the negative form, the dialectical nature of motion. The real question that was posed before scientific thought was not whether there is motion, but how to express it in the logic of concepts.[1]

(3) *Melissus.* Melissus of Samos, son of Ithaegenes is known to have been elected admiral during the war with Athens and to have defeated the Athenian fleet in 441 B.C. Later, however, Pericles won a victory over the Samians and took the city after a nine-month seige. He rased the city walls, seized the ships and imposed a heavy indemnity on the citizens. Ancient sources give us no information on Melissus's further fate.

As a philosopher, Melissus remained firmly in the Eleatic tradition and was called a follower of Parmenides. We possess ten fragments of his book *On Nature or What Is*, two of which being of considerable length. What with the extensive commentaries of the doxographers and the exposition of his teaching in the treatise *On Melissus, Xenophanes and Gorgias* (MXG) mentioned earlier, we can form a fairly accurate idea of his views. Melissus elaborated the arguments of Parmenides

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[1] The problem of the dialectics of motion has given rise to enormous literature. The classical solution of this problem in Marxist philosophy was given by Engels: "Motion itself is a contradiction: even simple mechanical change of position can only come about through a body being at one and the same moment of time both ... in one and the same place and also not in it" (Frederick Engels, *Anti-Dühring*, p. 148). This quotation boils down to a statement that motion cannot be expressed non-contradictorily in static notions describing a moving body as occupying a series of time-space positions. See also A.S. Bogomolov. "Dialectical Contradiction and Its Solution", in: *Philosophy in the USSR. Problems of Dialectical Materialism,* Progress Publishers, Moscow, 1977.

and Zeno in the light of the problems of ancient physiology and the doctrines of his contemporary Empedocles and possibly Leucippus. A characteristic feature of his arguments consists in that he applied the Parmenidean thesis "what is, is" not only to being as a whole, but also to individual things. Denying plurality and all sensible objects and properties, Melissus asserts that if they existed, each would be such as it appeared to us at first, and not change nor become different, but each must always be as it is. However, "it seems to us that the hot becomes cold and the cold hot, and the hard soft and the soft hard, and that the living thing dies and comes into being from what is not living, and that all things change, and that what was and what now is are not at all the same, but iron which is hard is worn away by contact with the finger, and gold and stone and whatever seems to be entirely strong (is worn away); and that from water, earth and stone come into being. So that it comes about that we neither see nor know existing things" (B 8 [3]).

The extension of the law of identity beyond the sphere of abstract being and its application to individual things reveals at once the fallacy of the reasoning whereby the properties of sensible objects are derived from the notions of them, i.e. from thinking. Indeed, so long as we regard the speculative "essence" as something lying beyond "phenomena," we may still attempt to maintain a theory of its basic difference from appearance and contend that essence can only be discerned by reason owing to their contiguity. Yet as soon as we pass to sensible objects and declare them essentially immutable, we challenge elementary common sense and clearly reveal the untenability of the "physical" interpretation of being as motionless and changeless.

For all his adherence to the Eleatic tradition, Melissus does not blindly follow all its tenets and makes a number of important improvements to the basic conception of being. First, he defines being as infinite (*apeiron*) both in space and time because it is eternal and immutable and therefore cannot have either beginning or end. Second, he considers being and its parts (individual objects) motionless in space because there is no emptiness ("for the Empty is Nothing; and so that which is Nothing cannot be" [DK 30 B 7]) and they have nowhere to withdraw to. This argument was evidently directed against the atomistic doctrine which was based on the assumption of void. Melissus thus links reality with space

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thereby emphasising its material character. Third, Melissus deprives being of anthropomorphic characteristics asserting that it feels neither pain nor grief, and, contrary to Xenophanes, does not see, hear or think... The term God used by Melissus as a synonym of reality has nothing in common with the traditional idea of God in Greek mythology. It is in fact the god of philosophy, the universal concept of the world. Finally, Melissus substantiates and elaborates Parmenides's implicit principle *Ex nihilo nihil fit* (out of nothing comes nothing) which placed an extremely important part in Greek philosophy.

The general trend of Melissus's thought confined within the framework of Eleaticism suggests an obvious inclination towards materialism. The extant fragments of his book give no evidence for his adherence to the idea of identity of thought and being. His recognition of infinite reality gave Aristotle cause to assert that Melissus, in contrast to Parmenides, spoke of one reality "in relation to matter" (Met. I, 5, 986b), but not in relation to notion. This view was evidently shared by Galen (A 6).

It is interesting that Melissus attacking the idea of plurality opens the way to atomism: "If Things were Many, they would have to be of the same kind as I say the One is" (B 8, 6). Yet this is precisely what the atomists averred: the world consists of a plurality of atoms, each possessing the properties of the Eleatics's Being—it is one, indivisible, ungenerated and unperishable...

* * *

To conclude, the Eleatics made an important step forward in the philosophical cognition of the world by focusing on reason and thinking. They opened new horizons in philosophy and turned it from cosmological speculations to an examination of the logic of thought. The Eleatics advanced the problem of distinction, even contrast, between being and appearance, essence and phenomena, truth and arbitrary opinion of the mortals. Parmenides and his followers in the fifth century B.C. made a great advance upon the Ionian concept of "existing things" and rose to a much higher level of philosophical generalisation, yet they were still unable to develop a full-fledged abstract notion of being as such in the Platonian sense.

Eleaticism was an important stage in the self-determination of philosophy and had profound and highly contradictory consequences. First, it exploded the initial unity of Greek thought naïve in its pristine simplicity but representing the royal road of philosophical development. Second, it put an end to the unity of the ancient world outlook, as much naive and based on direct contemplation. On turning into "Being" nature as unity in diversity became One as opposed to Many: "physis" was divorced from "metaphysis." Third, the living and changing dialectical reality gave way to immutable and motionless metaphysical "being," supranatural and antidialectical, while intuitive comprehension, immediately valid, pictorial and contradictory was superseded by discursive and conclusive reasoning.

This latter circumstance was of enormous importance for philosophical progress. The Eleatics revealed a new world, the world of concepts and ideas, and laid it open for exploration. The paradoxes of ancient thought discovered by them induced the philosophers to focus on their origin—in mathematics, logic, epistemology—and to look more closely into man's position in the world and society and his attitude to the gods. Contradictions in thought could not be tolerated and the Eleatics' negative dialectics was bound to bring about a positive dialectics in the shape of the logic and epistemology of Greek classical philosophy. The impact of the Eleatic school, however, was not confined to the field of logic—its doctrines led, on the one hand, to a revival of "physiology" or natural science and, on the other, to the problem of man and society.

The "Physiologers" of the Fifth Century

The Eleatic conception of being was based on a hypothetical statement: if being is one, no motion is possible. It never occurred to the Eleatic philosophers to call in question the premise itself, and this is precisely what was done by the "physiologers" of the fifth century B.C., Empedocles, Anaxagoras and Archelaus. Taking motion for granted as a self-evident fact and following the Eleatics' logic which they considered infallible, these thinkers rejected the unity of the world as expounded by Parmenides, Melissus, the Milesians and Heraclitus and arrived at a concept of plurality of primary entities or elements.

The "pluralists" as they were hailed by the contemporary historians of ancient philosophy averred that reality is Many, and not One. Echoing the Eleatics, they professed the ultimate permanence of the world and agreed that nothing could come out of nothing, yet they were also keenly aware of universal change and mobility of being. To reconcile both factors, they attributed permanence to the elements themselves, and change to their varying relations. Their great problem was to account for motion and show how generation and change were possible. They could no longer confine themselves to a mere postulate of motion—it was necessary to explain its nature, reveal its sources and indicate the necessary conditions.

10. Empedocles's Cosmic Cycle

Empedocles (c. 490-430 B.C.) of Acragas (Sicily) came of a wealthy and prominent family. His father Meton enjoyed the reputation of a champion of democracy and his grandfather was known to have won a horse-race in the 71st Olympiad. Tradition describes him at once as poet and philosopher,

democratic reformer and mystic, physician and wonder-worker. He is said to, have thwarted an oligarchic conspiracy aiming to restore tyranny in Acragas, persuaded his fellow-citizens to abandon party strife and cultivate political equality, and for his own part to have refused the offer of a kingship.

Stories of Empedocles are illustrative of his fame as a wonder-worker. One of them tells of an epidemic in the city of Selinus caused by pollution of the nearby river. The plague was stopped by Empedocles, who diverted two neighbouring streams into the river and cleared its waters. According to another story, he kept a woman alive for thirty days without breath or pulse and brought her back to normal. It did not come down to us what reanimation techniques he had used, but the accounts of his feats caused him to be regarded by his superstitious contemporaries as a possessor of almost supernatural powers. His death is shrouded in mystery. According to one of the tales, he leapt into Etna in the midst of the celebration of his victory over plague when the grateful Selinuntines were paying his divine honours as he wanted them to believe in his ascension to Heaven and forever worship him as a god. According to another story, he made this sacrifice after the woman's revival, but the volcano did not accept it and threw back his sandal... This latter version has a strong flavour of malicious slander likely to be circulated by Empedocles's political opponents, the more so as other sources give a very plausible cause of his death: on the way to some public festival in Messina he fell, broke his thigh and the complication proved fatal. His tomb is in Megaris (Diog. L. VIII, 67-73).

The essence of Empedocles's teaching, according to Diogenes Laertius, consists in the following: "there are four elements, fire, water, earth, and air, besides friendship by which these are united, and strife by which they are separated" (Diog. L. VIII, 76). Empedocles wrote two poems entitled *On Nature* and *Purifications*. The first one was in two books (rolls) and comprised about 2000 lines, and the latter, religious in content and purpose, was in one. The surviving portions of both poems are very small, amounting to about 340 and 100 lines respectively. Some sources also ascribe to Empedocles a poem called *The Invasion of Xerxes*, a *Hymn to Apollo*, and some other writings but they are of secondary importance from the philosophical viewpoint.

The starting point of Empedocles's reasoning is the recognition of motion and multiplicity in the world as attested to by senses and reason. Here he disagrees with Parmenides whom he may have heard together with Zeno. Yet he accepts Parmenides's proof of the non-existence of emptiness or not-being. This leaves him only one possibility to account for motion, generation and perishing, on the one hand, and for the plurality of the sensible world, on the other: the parts of reality might conceivably change their position with reference to one another, and plurality might be conceived as varying combinations of the four mingled elements.

Hence, the difference between things derives from the correlation of elements that can be expressed in terms of mathematical proportions. As regards the One of Parmenides, it remains intact as one of the stages of the world process.

Announcing the new order, based on four elements or "roots"—fire, earth, air, and water—Empedocles gives them divine names: "shining Zeus and life-bringing Hera, Aidoneus and Nestis, who lets flow from her tears the source of mortal life" (DK 31 B 6). They fill the universe and are in constant motion mingling with and separating from one another. They are eternal and immutable. The notion of these deities is not prompted by the anthropomorphic tradition: the elements precede gods and are gods themselves (A 40). In other words, the divine names are purely allegorical and do not in the least attest to mythological thinking.

It is significant that Empedocles conceives the elements as immovable entities. Despite biomorphism which manifests itself in the very term "roots" and suggests the emergence of things in the manner of plants growing out of their roots, he understands genesis "like the putting together of a wall out of bricks and stones" (A 43). Hence another important consequence: nature (*physis*) is no longer regarded as the source of all things. In point of fact, Empedocles rejects the very idea of generation and destruction. "There is no coming into being of aught that perishes, nor any end for it in woeful death, but only mingling, and separation of what has been mingled." "When the elements have been mingled..., then men say that (things) come into being; and when they are separated, they call that, as is the custom, woeful death" (B 8).

True, Empedocles's discourse is not entirely free from biological analogies. He says, for instance: "At a certain time

One alone grew out of Many, and at another it grew apart to be Many out of One" (B 26); "...Thus in that they have learned to grow one from many, and as the one is divided turn into many again..." (B 17, 1-2). On the whole, however, the idea of "mingling" predominates and it is only by way of "complying with custom" that the philosopher uses the words "birth" and "death." Things are conceived by Empedocles as combinations of elements mixed in definite proportions and he goes on to explain that flesh and blood contain equal quantities of all elements. bone is made up of two parts of water, two parts of earth and four parts of fire, etc.

Having discarded the Ionian doctrine of hylosoism or universally animated matter and facing the problem of motion, Empedocles is led to postulate, in addition to his four elements, two contrary forces, Love and Strife, as motive causes. These movers are also understood as material agents possessing physical properties. Love, for instance, is "equal in length and breadth" to the elements and pervades the universe, i.e. is regarded as extended in space. Speaking of "cementing Love" and "baneful Strife," Empedocles associates them respectively with moisture and fire, i.e. physical elements. On the other hand, however, they are anthropo- and sociomorphic forces, Love being also referred to as Amity, Harmony or Aphrodite, Strife, as hatred, war, or Ares. Empedocles thus brought together, as it were, the Italian and Ionian Muses — Heraclitean Strife and Pythagorean harmony. The result was that the living harmony of opposites, the union of contrasts inherent in reality gave way to a cyclic change in time.

The cosmic process described by Empedocles in terms of mixing and separation is an endless alternation of two opposite movements. When Love rules unopposed, all elements are fused into a unity and make a sphere, whereas Strife is held at its periphery. Then Strife enters the Sphere and begins to drive Love to the centre and separate the elements until it takes full possession. After this the reverse movement begins, Love reasserts itself and brings the separated elements together, restoring the sphere. This succession goes on for ever. Empedocles describes it in the following words: "I shall tell of a double (process); at one time it increased so as to be a single One out of Many; at another time again it grew apart so as to be Many out of One. There is a double creation of mortals and a double decline; the union of all things

causes the birth and destruction of the one (race of mortals), the other is reared as the elements grow apart, and then flies asunder..." (DK 31 B 17).

The nature of the process is thus contradictory: Love not only unites, but also separates and destroys, just like Strife which kills things by rearing them.

Empedocles's depiction of the cosmic cycle reveals a weak point in his concept of genesis. If nothing can come out of nothing, how can we explain the emergence of bone and flesh, wood and stone from the "roots"? His reference to definite proportions in the combinations of elements does not account for the fundamental difference between a mechanical aggregate of components and their structural combination in which components undergo qualitative changes and the "mixture" itself cannot be reduced to the sum of its ingredients. Aristotle who attached great importance to this distinction pointed out that the real principle was something "higher" than a simple mixture or even a harmonious mingling of elements in accordance with a certain law. He called it "entity," "nature," "form," "idea" and contrasted it to matter and its combinations.

Following other physiologers, Empedocles explained the emergence of the sun, the moon and other cosmic bodies by the operation of mechanical forces. He saw the cause of eclipses in that the light from one celestial body is obscured by another, e.g. the sun is eclipsed when the moon passes beneath it, and accounted for thunder and lightning by the collision of clouds.

Of special interest is Empedocles's unique theory of animal life. The Sicilian thinker distinguishes four stages of this process on the earth. In the first stage marked by the advance of Love "many foreheads without necks sprang forth, and arms wandered unattached, bereft of shoulders, and eyes strayed about alone, needing brows" (B 57). In the second stage when Love was triumphant the limbs and organs combined at random to give rise to all sorts of monsters—"oxen with heads of men and men with heads of oxen." They were unable to survive and produce viable posterity and therefore perished. The third stage resulting from the tidal reversal of the cosmic forces brought about "whole-natured" creatures without limbs, organs or distinction of sex. The fourth stage, the one we live in, is characterised by the continuing advance of Strife and growing discrimination. It is the familiar world of self-reproducing male and

female creatures divided into fishes, birds and land animals.

Describing Empedocles's conception of an organic evolution, Aristotle writes: "Wherever then all the parts came about just what they would have been if they had come to be for an end, such things survived, being organized spontaneously in a fitting way; whereas those which grew otherwise perished and continue to perish as Empedocles says his 'man-faced ox-progeny' did..." (Arist. Phys. II, 8, 198b).

For all the fancifulness of this conception which bears a very superficial resemblance to Darwin's theory of evolution, it reveals a clear naturalistic trend. The Sicilian philosopher was the first to try to account for the purposeful constitution of living creatures without resorting to supernatural powers and divine providence.

Empedocles's doctrine combines with attempts to give a scientific explanation of psychic processes taking place in a living organism. Understanding "soul" as a harmonious and proportional constitution, Empedocles compares breathing to the operation of a clepsydra (a device for lifting liquid from one vessel and releasing it into another), the inspired air corresponding to the water in the clepsydra, and the blood to the retreating air (B 100). Sensation, too, is explained as a purely physical process: the effluences which issue from all things enter pores in human bodies and are perceived by like: "For by earth, he says, we see earth, by water water, by ether godlike ether, by fire wasting fire, love by love, and strife by gloomy strife..." (Arist. Met. III, 4, 1000b).

In contrast with those who sang the praises of infallible reason, Empedocles gives priority to senses: "Use whatever way of perception makes each thing clear..." (B 3 12). Yet he does not shut his eyes to the difficulties confronting man on the path to knowledge and is well aware of the "miseries that blunt thought," the fallibility of senses, the brevity of human life, the inadequacy of experience, etc. According to Sextus Empiricus, Empedocles believed the truth to be attainable so far as the reason of man could reach and maintained that "the thing perceived by each sense is trustworthy, as the reason is in control of them..." (Sext. Adv. math. VII, 124).

The main problem in the interpretation of Empedocles's heritage consists in the apparently glaring inconsistencies between his two poems. The one that we have been considering so far (*On Nature*) presents a scientific picture of

reality and aims at a rational explanation of the world, whereas the other called *Purifications* treats of the immortality and transmigration of souls, describes the wanderings of the spirit banished for its sins from the realm of the blessed and doomed by gods to undergo a cycle of woeful incarnations in various forms of earthly life, speaks of prophecies and purification by magic rites, abstention from meat, etc. What is more, in the second poem the author himself turns into an immortal god and, conscious of his superiority, addresses common mortals with lofty arrogance. Of course, one might try to account for this transformation by an inconsistency of an ambitious philosopher proud of the awe and reverence he inspires in common folk: "I go about you an immortal god, no more a mortal, so honoured of all, as is meet, crowned with fillets and flowery garlands. Straightway as soon as I enter with these, men and women, into flourishing towns, I am reverenced and tens of thousands follow, to learn where is the path which leads to welfare, some desirous of oracles, others suffering from all kinds of disease, desiring to hear a message of healing" (Diog. L. VII, 62).

Such an explanation, however, hardly seems convincing. Nor can we accept the opinion (e.g. Zeller's) that the two poems were written quite independently of each other or that they represented different periods of philosopher's life, as there is no evidence for any chronological conclusion. We are rather inclined to agree with Jaeger in that the understanding of Empedocles's philosophy requires an insight into the intellectual world of a Sicilian Greek of the fifth century B.C. In Jaeger's opinion, it clearly revealed the internal heterogeneity resulting from different cultural influences in Sicily and Magna Graecia, and at the same time showed the affinity of the two neighbouring centres of Western Greek colonisation. The spirit of this geographical region manifested itself in the dualism of Empedocles's philosophy.[1] Empedocles synthesised, as it were, the naturalistic "enlightenment" coming from Ionia and first represented by Xenophanes with the local Orphic tradition. His "physics" which has very little in common with science in the modern sense of the word is in fact a philosophical system aimed at explaining the world and man in naturalistic terms, predominantly by allegorising the traditional polytheistic religion, and based

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[1] W. Jaeger, *Die Theologie der frühen griechischen Denker*, Kohlhammer, Stuttgart; 1964, S. 151.

on the concept of an all-embracing spherical deity very much after the fashion of the One God of Xenophanes: "For he is not equipped with a human head on his body, nor from his back do two branches start; [he has] no feet, no swift knees, no hairy genital organs; but he is Mind, holy and ineffable, and only Mind, which darts through the whole universe with its swift thoughts" (B 134). As distinct from the poem *On Nature* concerned with the outside physical world and the physiology of living beings, the *Purifications* concentrates on man's intellectual and ethical world and treats the subject predominantly from the idealistic and religious viewpoint. The problems of conduct and morality, for one, are intimately bound up by Empedocles with religious ideas and practices, though Jaeger, in our opinion, somewhat overestimates the general importance of Orphic mysticism and religious ethics in Empedocles's philosophy as a whole.

The religious doctrine expounded in the *Purifications* is complementary to Empedocles's "physical" conceptions expressing his philosophical views in the language of traditional beliefs and images. Though the surviving portion of the *Purifications* is too small to reproduce its logic, it clearly reveals important parallels between the two poems attesting to their affinity and interdependence. One of the many examples of their close relationship is the cosmic era of Love or divine Sphere in the poem *On Nature* which is echoed in the *Purifications* describing the initial state of human society as the reign of Cypris of Love: "...There was no god Ares, nor Battle-Din, nor Zeus the King, nor Cronos nor Poseidon, but only Cypris the Queen. These men sought to please her with pious gifts..." (B 128).

It should be noted, however, that this "adaptation" of philosophical ideas to contemporary mentality had to be paid dearly for, as it opened the door wide to unrestrained religious imagination and gave occasion to later commentators to interpret the doctrine of the *Purifications* in terms of original sin, fall and expiation.[1] Such interpretations, however, can hardly be considered tenable in view of their obvious arbitrariness.

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[1] Cf. G. S. Kirk, J. E. Raven, *The Presocratic Philosophers*, pp. 348-355.

Anaxagoras of Clazomenae (c. 500-428 B.C.) came from a wealthy and influential family, but showed no interest in practical matters, gave up his inheritance and devoted himself exclusively to the contemplation of nature. He taught philosophy, astronomy, geometry and was known as an interpreter of Homer. According to Diogenes Laertius, he declared that the sun was not a god but a mass of red hot metal, that the moon was similar to the earth and there were dwellings, hills and ravines on it. He also taught that comets were a conjunction of planets emitting flames and shooting stars were a sort of sparks thrown off by the air, that thunder was a clashing together of the clouds, lightning their violent friction, and insisted that the whole firmament was made of stones, the rapidity of rotation caused it to cohere and that if this were relaxed it would fall.[1]

Anaxagoras was the first to start teaching philosophy in Athens and the first to be prosecuted and condemned for it. According to one of the accounts ascribed to the fourth century B.C. historian Ephorus, at the beginning of the Peloponnesian War (c. 431 B.C.) well-known religious fanatic Diopeithes introduced a bill against those who did not acknowledge divine things or who gave instruction about celestial phenomena, with the particular aim of discrediting Pericles through Anaxagoras. Fearing for Anaxagoras, Pericles arranged for his friend's flight from Athens (DK 59 A 17). Other accounts tell us that the philosopher was tried and sentenced to a fine of five talents and to exile. Some sources give a third version in which Anaxagoras was sentenced to death in his absence. Be that as it may, his persecution was undoubtedly due to ideological and political reasons and led to his exile. Anaxagoras ended his days at Lampsacus, a trade city on the shore of Hellespont.

Among Anaxagoras's pupils tradition lists Pericles, Euripides, philosophers Archelaus of Athens and Metrodorus of Lampsacus. He wrote as least one treatise which was widely known in Athens and, as Socrates says in the *Apology*, anybody could buy his works in the book market for one drachma at most (Platon. Apol. 26e).

We possess 23 fragments of Anaxagoras's treatise which were widely commented on. Despite considerable difficulties

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[1] Diogenes Laertius, op. cit.. Vol. 1, pp. 137-143.

involved in the interpretation of the philosopher's doctrine, the extant quotations make it possible to reconstruct his views with a fair degree of authenticity.

It will not be sinning against the truth to say that Anaxagoras's philosophy centred around the problem of becoming. The surrounding world gives us irrefutable evidence of constant change: things come into being and perish, change their shape and colour, temperature and taste, density and smell. On the other hand, there is no doubt that becoming and perishing are impossible and "nothing can come from nothing." Anaxagoras presents the problem in this concrete form: "How can hair come from not-hair, and flesh from not-flesh?" (B 10). For the Ionian philosophers the answer was clear: everlasting and living nature is endowed with unlimited productive power and all things are brought to birth and again dissolved into it. The Eleatics held that becoming and perishing, motion and change simply do not exist in the world of truth. Birth and death for Empedocles were "only mixture and separation of what has been mixed," yet the problem remains open as it is not clear how bone and flesh, wood and hair can come from water and earth, air and fire. Clearly, they were not contained in the "roots" and could not come into being out of "what is not"...

Anaxagoras gives the following answer: all things come from like, i.e. from particles of a definite quality or "seeds." The quality of a thing as a whole depends on the quantitative predominance of particles of one or another kind. At the same time "there is a portion of everything in everything," but the particles present in a smaller quantity are not perceived by the senses and a thing is named after the quality that is the most conspicuous. Anaxagoras, in fact, distinguishes here between the quantitative and qualitative aspects of reality identifying qualitative definiteness with the quantitative prevalence of qualitative particles of one or another kind. This conception, however crude and contradictory, as will be shown later, represents the first attempt to tackle the problem of dialectical unity of quantity and quality.

The interpretation of Anaxagoras's theory of genesis has given rise to much controversy. According to Aristotle, Anaxagoras constructs a world by separation from a mixture which includes "the homoeomers[1] and the opposites" as

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[1] The word meaning "things of like parts" was introduced by Aristotle as synonymous with Anaxagoras's "seeds." Though the term "homoeomer"

elements (Arist. Phys. I, 4, 187a). The extant fragments from Anaxagoras's treatise describing the components of the original mixture seem to be rather ambiguous. On the one hand, Anaxagoras speaks of substances infinite in number and smallness, as well as of universally dominating aether and air (and, probably, other elements which are not mentioned in the fragment cited), on the other hand, he refers to seeds which are also infinite in number and not at all like one another, and names such constituents of the mixture as "moist and dry, hot and cold, bright and dark," as well as "a great quantity of earth" (DK 59 B 1 and DK 59 B 4, respectively).

This evidence prompted a conclusion that Anaxagoras, contrary to his own premises, conceived the elements (aether, air, water, earth, and fire) not as essentially combinations of various seeds (*panspermia*), but as "quality-things," direct combinations of qualities, and that the specificity of each separate element was determined by the quantitative predominance of some of these qualities over their opposites, whereas seeds floated, as it were, among the elements combining into things.

This interpretation which has gained wide currency in the relevant literature meets with one serious objection: how can elements evolve from opposites, i.e. not-elements? How can aether come from not-aether, and fire from not-fire? What is more, it is contradicted by other doxographic evidence with a sufficiently ancient tradition behind it. For instance, describing Anaxagoras's theory and evidently relying on Theophrastus, Lucretius quotes Anaxagoras as saying that fire comes from fire and moisture from moisture (1.835), i.e. that elements are built up from their seeds. This testimony is borne out by Simplicius ascribing to Anaxagoras these words: "...all homoeomers as, for instance, water or fire or gold..." (A 41).

Anaxagoras's views, complex as they are, should not be overcomplicated. He firmly adhered to the principle that all substances and all things came from like, i.e. from infinitely divisible particles or seeds.[1] However, to maintain this fundamental principle which amounts, in fact, to the *ex*

was not used by Anaxagoras himself, it aptly conveys the "mechanistic" essence of his doctrine: when homoeomers are "sorted out," like combines with like.

[1] As regards the opposites or contraries mentioned in the fragments and often commented on by doxographers, they are evidently traceable to the Ionian philosophical legacy where they played an important constructive role. Anaxagoras's understanding of opposites (dry and moist, bright and

nihilo nihil (nothing from nothing) formula throughout his doctrine, Anaxagoras was compelled to introduce two more postulates: "there is a portion of everything in everything" and "everything comes from everything."

Indeed, describing the initial state of the universe, Anaxagoras says: "All Things were together, infinite in number and in smallness. For the Small also was infinite. And since all were together, nothing was distinguishable because of its smallness. For Air and Aether dominated all things, both of them being infinite. For these are the most important (Elements) in the total mixture, both in number and in size" (B 1).[1] Here the principle of "everything in everything" is formulated in its "weaker" sense, i.e. in relation to the total mixture or the initial state of the world. Fragment B 6 gives the definition of the principle in the "stronger" sense, because everything has a portion of everything: "...And since there are equal (quantitative) parts of Great and Small, so too similarly in everything there must be everything. It is not possible [for them] to exist apart, but all things contain a portion of everything. Since it is not possible for the Least to exist, it cannot be isolated, nor come into being by itself; but as it was in the beginning, so now all things are together. In all things there are many things, and of the things separated off, there are equal numbers in [the categories] Great and Small" (B 6).[2]

Anaxagoras's argument in this fragment can be put thus: (1) everything is not only infinitely divisible, but also is actually divided, therefore it is not possible for the Least to exist; (2) particles of matter, even infinitesimally small, cannot be regarded as having no magnitude at all, since in this case they would be "not-being" which is impossible; (3) insofar as things are actually divided, the large and the small have equal number of components; (4) in view of the above, things cannot be increased or decreased in relation to the number of their parts; (5) since there is no "smallest," particles of matter can penetrate into any space however small it may be, i.e. into other particles.

dark, etc.) is indicative of a transition from the concept of "things" which may "separate-off" from the total mixture to the concept of qualities inherent in the combination of seeds, i.e. "things." At any rate, Aristotle who considered the evolution of elements from the opposites to be the basic world building process (see De gen. et corr. II. 3) never ascribed this conception to Anaxagoras.

[1] *Ancilla...*, DK 59 Bl., p. 83.
[2] Ibid., p. 84.

It is significant that Anaxagoras's and Zeno's arguments seem to represent the same train of thought echoing one another. Compare, for instance, the following statements:

Anaxagoras:

Zeno:

Each thing is to itself both great and small (B 3) These things being thus separated off, one must understand that all things are in no wise less or more (for it is not possible for them to be more than All), but all things are forever equal (in quantity) (B 5)

If Things are Many, they must be both small and great: so small as to have no size, so large as to be infinite (DK 29 B 1) If Things are Many, they must be as many as they are and neither more nor less than this. But if they are as many as they are, they must be finite (in number). If Things are Many, they are infinite in number (DK 29 B 3)

The polemical resonance of these statements is unmistakable and we seem to have better reason to suppose that Zeno was challenging Anaxagoras than the other way round, since the latter's argument appears to be too paradoxical to be opposed to Zeno's reasoning ostensibly based on common sense but leading, nevertheless, to absurdities. It is obvious that if Zeno's logic proves correct, Anaxagoras's argument based on the principle "everything contains everything" is to be rejected, and vice versa. Now let us express Anaxagoras's assertions in a mathematical form:

$$[a,\ b,\ c,\ d,\ e,\ f] + a = [a,\ b,\ c,\ d,\ e,\ f];$$
$$A + A = A;$$
$$M - A = M = M + A,$$

where [ ] is the set symbol; a, b, c, d etc. are set members; A is the derived set and M is the infinite set. Once we do so it becomes clear that Anaxagoras's statements are in accord with the set theory, whereas Zeno's reasoning reflects the notions of ancient arithmetics based on the assumption that the sum of an infinite number of magnitudes is infinitely large. Indeed, B 3 formulates a well-known property of infinite sets — equipotence of a whole and its part (e.g. of a point set of line segment and its portion, of natural number series and even number series), whereas B 5 expresses the principle of the composition of sets: if a set is defined as "all", e.g. a set of

mammals living at present on the earth, we cannot increase it by adding one more mammal as it has already been taken into account by the set definition. Nor can we "subtract" anything from an infinite set, i.e. diminish it in number.

Of course, Anaxagoras's idea of the infinitesimal, paradoxical as it was from the viewpoint of ancient mathematics, did not amount to the formulation of the set theory. Nevertheless, it opened up new prospects for the development of mathematics and served as an important instrument for the substantiation of his "physical" system.

It should be noted that Anaxagoras's doctrine of matter had certain weak points which were evident even to ancient thinkers. Indeed, if a body is made up of "seeds" or homoeomers, it is nothing but an aggregate which can be divided into an infinite number of parts and these (or their like) can be again put together. Now suppose we try to divide a ... human being. The man will be inevitably destroyed even if we "divide" him in only two parts, say, the head and the body, not to speak of dividing him into thousands of parts as was the case with Zeno who is said to have been crushed in a mortar. No matter how hard we may subsequently try to join his parts again, we shall never succeed in restoring him to the initial condition. To do so, it is necessary not only to join the particles of matter, but also impart to them the human "form" which alone, 'according to Aristotle, can fuse them into a single object and give them the unity of the organism.

Another weakness of the doctrine consisted in the following: if a hair cannot come from a not-hair, and flesh cannot come from not-flesh, how can we account, for instance, for the genesis of a raven from a not-raven (raven's flesh and bones)? To be consistent, we would have to conceive "seeds" not only as minute particles of bone, flesh, etc., but also as minute ravens, human beings, etc. This would bring us right to the preformationist theory which dominated biology in the seventeenth century and maintained that the embryo of an animal or a plant was completely like the mature organism except that it was very small...

Though Anaxagoras himself did not arrive at such a conclusion, his principle of "everything in everything" clearly leads to a mechanistic conception of the whole and to a denial of the dialectical unity of the whole and its parts.

If there is a portion of everything in everything, everything may evolve from everything. The principle of "everything

from everything" is a characteristic feature of the mythological mode of thinking according to which anything can turn into anything else and acquire any properties and qualities. Anaxagoras, however, gives an entirely different interpretation to this principle. "Everything from everything" in his doctrine, being just a paraphrase of the "everything in everything" principle, is an inference from a rational scientific proposition which has nothing to do with mythology. At the same time it is directed against the Ionian philosophers whose doctrines centered around a primary substance, "the principle and the element," out of which all things come and into which they all perish. Anaxagoras, according to Simplicius, "saw that everything comes to be out of everything, if not directly then serially (as air from fire, water from air, earth from water, stone from earth, and fire again from stone)" and explained it in this way: "...Before these things were separated off, all things were together" (A 45).

Though the principle "everything from everything" is indeed universal (what is, for instance,"fire again from stone"? Just strike a stone with a piece of iron or another stone and see...), its main sphere of application is cosmogony. At first, all things were "together," i.e. matter was a uniform mass. Since this mass contains predominating quantities of aether (fire) and air, and also because its component parts are infinitely small, the aether-air mixture appears to be qualitatively indefinite, though in fact each of its particles represents a certain quality.

By contrast with the primary substance of the Ionians who did not know immovable "matter," the main characteristic feature of the original mixture or world's initial state in Anaxagoras's system is immobility. The nearest to his conception is the One of the Eleatics or the Sphere of Empedocles. Yet unlike the former which remains motionless, and the latter which differentiates under the effect of Strife, the initial mixture in Anaxagoras is set in motion by Mind or *Nous* (*Noys*). Anaxagoras's understanding of Mind caused lengthy debates among his commentators: some held he conceived it as intelligence, others, as some kind of matter. However, such a separation was alien to Anaxagoras himself who could not yet counterpose matter and immaterial spirit and still viewed nature as a whole in accordance with the ancient conception of the world. This opposition was a product of the later philosophical development and did not exer-

cise the philosophers' minds till at least Plato. The problem that faced Anaxagoras was different: could the "natural" factors account for all phenomena in the world and for the cosmic process at large, or was it necessary to seek for some immaterial agency to explain harmony and order in the universe? This problem could not in fact arise before Parmenides and the Eleatics, as the all-generating "nature" (*physis*) of the ancients did not need any supernatural agents. Parmenides's abstraction of the one immutable and motionless being had one important consequence: those who wished to account for motion after him needed an outside source that had things moving.

According to Aristotle, the conception of Mind was a tremendous step forward: "...When one man said, then, that reason was present—as in animals, so throughout nature—as the cause of order and of all arrangement, he seemed like a sober man in contrast with the random talk of his predecessors. We know that Anaxagoras certainly adopted these views" (Arist. Met. I, 3, 984 b).[1] Analysis of extant fragments shows that Anaxagoras conceived *Nous* as having all knowledge of everything, greatest power, ability to steer all things and "purity" in the physical (and, probably, moral) sense: "Other things all contain a part of everything, but Mind is infinite and self-ruling, and is mixed with no Thing, but is alone by itself. If it were not by itself, but were mixed with anything else, it would have had a share of all Things, if it were mixed with anything; for in everything there is a portion of everything, as I have said before. And the things mixed (with Mind) would have prevented it, so that it could not rule over any Thing in the same way as it can being alone by itself. For it is the finest of all Things, and the purest, and has complete understanding of everything, and has the greatest power. All things which have life, both the greater and the less, are ruled by Mind"(B 12).[2]

Having thus endowed *Nous* with every imaginable divine quality, Anaxagoras seems to have stopped at a loss not knowing what to do with it. According to Alexander of Aphrodisias, a well-known commentator of Aristotle in later antiquity, Anaxagoras conceived Mind only as the cause of motion, since "when Mind began the motion, there was a separating-off from all that was being moved; and all that Mind set

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[1] *The Basic Works...*, pp. 695-696.
[2] *Ancilla...*, p. 84, DK 4 59 B 12.

in motion was separated (internally); and as things were moving and separating off (internally), the revolution greatly increased this (internal) separation" (B 13). In other words, Anaxagoras confined the action of Mind to setting in motion the original inert mass and explained the rest of the process by a vortex which separates all substances from one another and divides them into smaller fractions before combining them in whole things in an orderly manner. Just as Xenophanes is the first pantheist in the history of Greek philosophy, so Anaxagoras is the first *deist* who allowed cosmic Mind to give the world the "initial push" and then let it take care of itself as best it could following natural laws.

As regards generation and perishing, Anaxagoras's views are very similar to those of Empedocles: "The Greeks have an incorrect belief concerning Coming into Being and Passing Away. No Thing comes into being or passes away, but it is mixed together or separated from existing Things. Thus they would be correct if they called coming into being 'mixing,' and passing away 'separation-off'..." (B 17). Unfortunately, we have no description of the mechanism whereby "seeds" joined into bodies. In all likelihood, Anaxagoras understood the process as essentially a mechanical combination of minute particles of matter into orderly things, a sort of "docking" of "seeds." On the other hand, the infinite divisibility of seeds suggests a more intimate process and leads one to suppose that the philosopher conceived it as a real fusion. The particles of matter or seeds combining in a body and forming its individual organs and tissues penetrate, as if by diffusion (in accordance with the "everything in everything" principle), all other organs and tissues and the body itself is connected in a similar manner with the entire universe.

Anaxagoras's doctrine viewed as a whole reveals a glaring contradiction. On the one hand, he introduced Mind (*Nous*) to account for the order in the universe. On the other, he restricted the function of Mind to the act of the initiating motion in primary substance and made no use of it to explain the causes of particular events and phenomena. Speaking of Anaxagoras's conception of Mind, Plato wrote: "I found my philosopher altogether forsaking mind and making no appeal to any other principle of order, but having recourse to air, and ether, and water and many other eccentricities (Platon, Phaed. 98b). Echoing Plato, Aristotle caustically remarked that "Anaxagoras uses reason as a deus ex machina for the making

of the world, and when he is at a loss to tell from what cause something necessarily is, then he drags reason in, but in all other cases ascribes events to anything rather than to reason" (Met. I. 4, 985a). This opinion was on the whole correct. Anaxagoras indeed resorted to *Nous* only in those cases when the natural factors, such as separation off and division, combination and disintegration, movement and speed did not work. In point of fact, his *idealism* stepped in to fill the gaps in his crude reductionist explanations which were regarded as the most consistent expression of *materialism*.

It should be noted at this point that Anaxagoras evidently placed Mind in a special relation to the organic world and allowed it to retain there some form of control even after the prime impulse. Thus, in fragment 12 he says: "All things which have life, both the greater and the less, are ruled by Mind. Mind took command of the universal revolution, so as to make [things] revolve at the outset" (DK 59 B 12). The philosopher is compelled to appeal to Intellection for help in his attempt to explain harmony and order in the world. *Nous* after all is the moving cause separated from matter moved, it is the principle of cosmic order separated from cosmos itself. The split of a single "nature" indivisible, homogeneous and everlasting, into the prime cause and the inert matter was pure idealism and a step back from the real world, yet it was at the same time a prerequisite for the study of Mind that made possible the science of *logic*.

Anaxagoras's doctrine which was the first philosophical teaching in Attica and reflected conflicting tendencies in the development of Greek thought had a tremendous impact on the subsequent intellectual history of the Hellenic world. It mainly manifested itself in the all-round growth of scientific and philosophical knowledge, glorification of reason and decline of old beliefs and traditions. The influence of Anaxagoras's philosophical conceptions as such was less conspicuous: in times when the intellectual life of society centred upon humanistic problems, "physics" was inevitably relegated to a secondary plan. Ethical problems did not fall within the sphere of Anaxagoras's interests, though it cannot be said that he ignored them altogether.[1] In some of his dicta Anaxagoras

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[1] Something of an exception is fragment 4 with its rather obscure reference to another world inhabited by people similar to those living on the earth, having similar cities, and moon and sun and celestial bodies, the earth growing all sorts of produce for them. It is hard to say if the fragment speaks of the multitude of inhabited worlds or just of a peculiar microworld similar

exalted the life of contemplation and learning which opens the way to freedom. Anaxagoras did not associate happiness with wealth and power saying that a blissful man would look ridiculous to the crowd. When asked why to be born was better than not to be born, be replied that a man would choose to be born "in order to study the heavens and the whole universe" (A 30).

Ethical matters, the problems of man and society received much greater prominence in the works of Anaxagoras's pupil Archelaus who was called the last of the physical philosophers of the fifth century in Athens. Our knowledge of his teaching is very meagre and fragmentary. According to Diogenes Laertius (II, 16), "he philosophised about laws and things fair and just." Suda (DK 60 A 2) adds that in his opinion "what is just and what is base depends not upon nature but upon convention." However, the antithesis between nature and convention was common to numerous ethical theories of the late fifth century and we can only guess if Archelaus was its originator. In his "physics" he combines Anaxagoras's theory of "seeds" with the teachings of Anaximenes and Diogenes of Apollonia about air as the primary substance of things. He appears to have shared the latter's view that air possesses reason and therefore performs the function of the Prime Mover. However, according to Hippolytus, Archelaus believed that movement started with the separation out of the hot and the cold from the original mixture, the hot moving and the cold staying still (A 18). The only fragment that came down to us from Archelaus, "coldness is the bond [*desmos*] of the earth," survived in a corrupt theological context.

In contrast with Anaxagoras, Archelaus understood mind as a mixture of special "seeds." His conception of the origin of life was also different from that of Anaxagoras: animals' seeds did not fall on the earth with rain as was stated by his teacher, but the animals were born from the earth when it was warm, and it sent up an ooze resembling milk to serve as nourishment, and it was only later on that they were engendered from one another. The cosmologies of both philosophers, naturally, were different in details.

Archelaus terminated the early stage in the development of ancient "physics." Now natural philosophy takes up its place in the same rank with other philosophical disciplines, next to logic and ethics.

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to ours. It is also possible that Anaxagoras here ventures a hypothesis that a world like ours can emerge in any part of the universe given the corresponding conditions.

Chapter 5

Philosophical Ferment in the Second Half of the Fifth Century. The Sophists, Socrates and Socratic Schools

12. Sophistic philosophy

In the second half of the fifth century B.C. Ancient Greece was at the height of its fame and power. The Persian wars ended in the magnificent victory of joined Greek forces over their formidable enemy and the Hellenic polises united in two military coalitions under Athens and Sparta held undivided sway over the Mediterranean. The threat of foreign invasion was averted and the Greek world was consolidating its positions vigorously planting new colonies. The thriving handicrafts and agriculture, profitable both in Central Greece due to the proximity to densely populated urban areas and on fertile colonial lands, the expanding trade linking Greek polises with one another and Hellas with other countries of the Mediterranean and the Black Sea, as well as the extensive construction activities in cities stimulated economic growth and provided jobs for rapidly increasing population. Yet this apparent prosperity did not bring peace to the country. Greek city states had widely diverse political systems and occupied different positions in the hierarchical structures of the two belligerent coalitions—the Athenian alliance and the Peloponnesian league headed by Sparta. The sharpening rivalry between them culminated in devastating Peloponnesian wars.

Social and political turmoil could not but affect every aspect of the Greek citizen's life. Borning issues were carried to the city square, sharp controversies flared up in the assembly and law-courts. The assembly had to hold frequent sessions and engage in protracted debate, the courts were jampacked with suits for high treason and embezzlement, nonpayment of

debts and corruption, larceny and blasphemy... To recapture the spirit of the epoch, one only needs to read Aristophanes's comedy *The Wasps* which gives a vivid picture of the Athenian society of that time, with all its bustle, everyday cares and conflicting tendencies.

Social and political changes called for new skills and abilities. Anyone aspiring for a political career needed an insight into the psychology of individuals and the crowd so as to be able to use to advantage people's traditional beliefs and weaknesses. The indispensable qualification of a politician was the ability to speak persuasively in public, to evoke sympathy with himself and stir hostility or even hatred for his opponent, to seize upon any loophole in laws and decrees. The social and political conditions in the fifth century, the collapse of traditional morals based on unthinking custom proved highly favourable for the emergence of such personages as professional informers and professional defenders, ready to take any side and denounce or justify any action with equal success. No wonder that the fifth century saw the birth of rhetoric and sophistics as the arts of citizenship. Rhetoric, according to Aristotle, was necessary for everybody, as "all men attempt to discuss statements and to maintain them, to defend themselves and to attack others. Ordinary people do this either at random or through practice and from acquired habit" (Arist. Rhet. I, 1, 1354a).

The fundamentals of rhetoric were expounded by sophists, professional "teachers of wisdom" who trained their pupils for fees in the art of clear thinking and eloquence. Till the middle of the fifth century the word "sophist" was synonymous with "sage," but later it degenerated in popular use and even became a term of opprobrium. This change is traceable to a number of reasons, not least of which being the propaganda campaign against the sophists waged by their opponents and rivals, Socrates, Xenophon, Plato, Aristophanes. The latter's attitude was in fact an expression of the slave society's characteristic scorn for paid labour, the more bitter as this labour was intellectual. According to Xenophon, Socrates considered it below his dignity to accept money for his talks as he wanted to be free to enjoy the society of anyone he liked and called the sophists public prostitutes as selling one's mind was not better than selling one's body (Xenoph. Memorab. I, 6, 13).

There was yet another, a more fundamental reason for the

Athenian public's hostility towards the sophists. They taught the art of thinking and strove to develop in their pupils the habit to rely on reason and their own judgement instead of tradition and old customs. The entire system of new education associated with the sophistic movement was regarded as an apparent menace to public security. The leader of Athenian democracy Cleon held that education breads conceit and gives men wild notions undermining the foundation of democracy: "...Ordinary men usually manage public affairs better than their more gifted fellows. The latter are always wanting to appear wiser than the laws, and to overrule every proposition brought forward, thinking that they can find no more important field for their intelligence, and by such behaviour too often ruin their country..."[1] The conservative upholder of tradition Aristophanes, for his part, refers to the sophistic art under the allegorical name of "Unjust Discourse" making it boast in this way: "If I am called the Weaker Reasoning in the schools, 'tis precisely because I was the first before all others to discover the means to confute the laws and the decrees of justice. To invoke solely the weaker arguments and yet triumph is a talent worth more than a hundred thousand drachmae..."[2]

In modern historico-philosophical literature the sophists are commonly regarded as representatives of the Age of Enlightenment in Ancient Greece—a movement in thought directed towards freeing man from the grip of dead customs and traditions and opening the way for intellectual progress. The programme of this movement was freedom in religion and morals, politics and science, the arts and culture proclaimed on behalf of reason. It was an outgrowth of the social and political conditions of the latter half of the fifth century and could well have taken as its motto Euripides's proud words: "The god is our reason in each one of us" (fr. 1018). Understandably, the ideas of Greek enlightenment were far from universal as they did not go beyond a narrow circle of free citizens capable of paying stiff fees for their education. As regards the enlightener himself, he either had to barter his freedom for livelihood or to drag out a miserable existence. Hence a glaring contradiction: enlightenment as a sociopolitical trend was a product of Greek democracy that could

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[1] Thucydides, *The History of Peloponnesian War,* Book III, fr. 37. Oxford University Press. London, New York, Toronto, 1946, p. 160.

[2] Aristophanes, *The Eleven Comedies*, Horace Liveright, New York, 1932, pp. 353–354.

only be used by the wealthy and was therefore objectively detrimental to the political system that had engendered it. What is more, the aristocrats, the moneybags and the poor were all unanimous in their dislike of the sophists, though for different reasons: some of them envied their fees (not infrequently rather fat), others scorned their modest status (most of the sophists were foreigners who came to Athens from provincial cities), still others resented their mental superiority.

The ideology of Greek enlighteners who had to adjust themselves to the existing political system and customs was characterised by inconsistency, vacillation between different social tendencies and shapelessness—very much in the manner of clouds made by Aristophanes the symbol of the sophistic movement. It was permeated with scepticism in relation to traditional beliefs, narrow rationalism and individualism so typical in any enlightenment, the more so as it came into being as a result of the crisis of ancient philosophical thought lost in the tangle of cosmological speculations. The physiologers' brilliant hypotheses might look quite convincing when considered separately. However, contradicting one another, they testified to their fallacy and, presumably, to the inability of human reason to penetrate the mysteries of being. The natural consequence was all-round scepticism.

Not least in importance was also the Greeks' acquaintance with different social systems and customs in "barbarian" lands. The new experience tended to undermine faith in the traditional foundations of society, called in question the divine origin of law and justice and stimulated interest in human nature and society as the chief object of philosophical inquiry. The quest for knowledge for its own sake was not the sophists' aim, they regarded it rather as a means for self-assertion and for achieving practical ends. Their theoretical interests centred around the process of reasoning and persuasion, the logic of argument and methods of proof.

The history of the sophistic movement is usually divided into two periods covering, respectively, the activity of "older sophists"—Protagoras of Abdera (c. 481-411), Gorgias of Leontini (c. 483-375), Hippias of Elis, Prodicus of Ceos, Antiphon; and "younger sophists"—Gorgias's pupils Alcidamas, Lycophron and Polus, Thrasymacus of Chalcedon, Athenian Critias, and others. The sophists' attention was mainly focused on the problems of society and cognition.

(1) *Society.* The problems of society came to the foreground in the Sophistic age as a natural product of the Greek world's historical development. The nature of human society, its foundations and destinies, the principles of man's conduct in general and its moral canons in particular came to be regarded in terms of one general antithesis — nature and convention.

The history of this antithesis dates from the time of Hesiod when Greek poets and philosophers concentrated on the relation of *physis* to *nomos*, i.e. the natural to the human, the natural order of things to the artificial curbs imposed on man and society. As time went by, this antithesis acquired new aspects and new shades of meaning, but the basic opposition remained unchanged — *nomos* was always identified with convention that was not part of the immutable order of things and could be altered, be it law, custom, opinion or the like. Gradually new terms came into use and nature was contrasted first with *thesis* (something that is adopted by way of convention), and then with *techne* (art) which, however, remained within the framework of the original distinction. Its essence was well expounded by sophist Antiphon who, according to Aristotle, "points out that if you planted a bed and the rotting wood acquired the power of sending up a shoot, it would not be a bed that would come up, but wood — which shows that the arrangement in accordance with the rules of the art is merely an incidental attribute, whereas the real nature is the other" (Arist. Phys. II, 1, 193a), i.e. the real nature of a bed is tree, which exists by *physis*.

The *physis-nomos* antithesis covers three fields: language, cognition and human society, the latter both in the political and physical sense. In his dialogue *Protagoras* Plato ascribes the doctrine of the artificial origin of language to Protagoras (322a). In the *Cratylus* it is expounded by Protagoras's pupil Hermogenes. This view was evidently shared by Prodicus who paid much attention to synonymics and different shades of words' meanings. Antiphon, too, regarded names (words) as products of human creative activity. According to the sophists, the artificial origin of language is attested to by such linguistic phenomena as synonymy (words having the same or nearly the same meaning), homonymy (words having the same pronunciation but different in meaning), existence of different languages, change of names, etc. The sophistic conception of language was subjected to criticism by Plato who maintained that "things have names

by nature, and that not every man is an artificer of names, but he only who looks to the name which each thing by nature has, and is able to express this name in letters and syllables" (Platon. Crat. 390e).

The sophists' views regarding cognition will be given special consideration later in this chapter, and here we shall briefly discuss their attitude to society. Plato describes the sophistic conception of the state and legislation in the following words: "they say that politics co-operates with nature, but very slightly, and has more of art; and so that legislation is entirely a work of art, and is based on assumptions which are not true" (Laws. X, 889d). The universal antithesis of "physis" and "art" or convention in the sphere of society is treated by the sophists from three angles: the emergence of society and the state; legislation; faith in gods and religion.

According to Plato describing Protagoras's teaching of society in one of his dialogues, the sophist narrated the following myth to show how it came into being. Epimetheus who had been charged to distribute among the animals all the qualities necessary for life forgot about man and left him unprovided— "man was naked and shoeless, and had neither bed nor arms of defence. The appointed hour was approaching when man in his turn was to emerge from earth into the light of day." Seeing his helplessness, Prometheus "stole the mechanical parts of Hephaestus and Athene, and fire with them ... and gave them to man" thereby causing people to honour gods, invent articulate speech and names, construct houses and clothes and shoes and beds, and draw sustenance from the earth. Fighting against the wild beasts, people began to unite and help one another. Yet they had no art of government and "were again in process of dispersion and destruction." Fearing that the entire race would be exterminated, Zeus "sent Hermes to them, bearing reverence and justice to be the ordering principle of cities and the bonds of friendship and conciliation" (see Platon. Protag. 320c-322d).

In his "myth" Protagoras combines two different convictions: on the one hand, he maintains that art is a "divine" gift distinguishing man from other beasts; on the other, art itself is capable of transforming people's life. This peculiar compromise between the "divine" (natural) and the "artificial" was used by Protagoras to justify the principle underlying Athenian democracy as a system under which the citizens lend an attentive ear to the advice of experts on matters requiring

special skill, as for instance carpentry. "But when they meet to deliberate about political virtue, which proceeds only by way of justice and wisdom, they are patient enough of any man who speaks of them, as is also natural, because they think that every man ought to share in this sort of virtue, and that states could not exist if this were otherwise" (Protag. 323a). However, Protagoras's conviction that we cannot know anything about the gods reduces his story to mere fiction and brings to nought the would-be compromise. His story in fact boils down to the distinction, characteristic of the sophists, between the technical and craftsman's arts on the one hand, and the art of politics, on the other. Unlike the former which are acquired by training and restricted to selected individuals, the latter, i.e. justice and reverence, are shared by all; life can be conducted on a principle of division of labour with one being a doctor, another a musician, etc., but, according to Protagoras, there could never be cities if only a few shared in political virtues.

A different and more consistent viewpoint was advanced by Antiphon. Agreeing with Protagoras that social life is a product of a political art, he was far from idealising laws which were always contrary to "human nature." Justice, in his opinion, "is not to transgress that which is the law of the city in which one is a citizen. A man therefore can best conduct himself in harmony with justice, if when in the company of witnesses he upholds the laws, and when alone without witnesses he upholds the edicts of nature. For the edicts of the laws are imposed artificially, but those of nature are compulsory. And the edicts of the laws are arrived at by consent, not by natural growth, whereas those of nature are not a matter of consent" (DK 87 B 44, fr. A, col. 1).

Only a superficial observer might infer from this passage that Antiphon was preaching immorality and hypocrisy. His true thought consisted in that the current politics and common moral principles rest on legal prescriptions basically hostile to human nature: "the advantages laid down by the laws are chains upon nature, but those laid down by nature are free" (ibid., col. 4). The laws run counter to real justice which consists in inflicting no injury on another unless first injured oneself. Therefore, bearing witness about one another which is considered just by law is in fact not just, since the witness, even if truthful, inflicts injury on the man against whom he testifies, though that man has not injured him, and incurs his

hatred in return. The conclusion is that obedience to law involves wrong on both sides and preference therefore should be given to the "natural" unity of thought based on a mutual agreement of equally thinking individuals neither to inflict nor to suffer injury.

This is, of course, a utopian idea reflecting the realisation of existing social injustice and the quest for "natural," and therefore universal, justice and morality. Here again we see an essential difference between Protagoras and Antiphon. The former believes that justice derives from the common opinion of citizens: "whatever appears to each state to be just and fair, so long as it is regarded as such, is just and fair to it" (Platon. Theaet. 167c). Justice is law expressing the city's opinion — this is the thesis of Protagoras idealising and defending Athenian democracy of the Periclean age. By contrast, Antiphon witnessing the crisis of this democracy after the lost Peloponnesian war identifies justice with "nature" and "natural" interests of man, with what is useful for him. Since, however, people's needs and interests are identical "by nature," the obvious conclusion is that "we are all by nature born the same in every way, both barbarians and Hellenes" (DK 87 B 44, fr. B, col. 2). This thought was further developed by Lycophron who was notable for his challenge to aristocracy and disparagement of noble birth. Hippias, according to Plato, declared that all men were "kinsmen and friends and fellow citizens, by nature and not by law; for nature like is akin to like, whereas law is the tyrant of mankind, and often compels us to do many things which are against nature" (Platon. Protag. 337a).

Thrasymachus used similar arguments to prove the opposite thesis. According to Plato, he defined justice as the right of the stronger. His view was shared by Callicles who contended that the better is "by nature" superior to the worse, and the more powerful to the less powerful. Levelling his shafts against democracy, Callicles declares that the laws are established by the weaker, that is, the majority, in order to thwart the purpose of nature that the strong man should prevail.

However one chooses to understand natural justice — be it equality or otherwise — the principle of the opposition of nature and convention ("arts") leads inevitably to one conclusion: if laws are established by convention, they can be changed. Thrasymachus says: "The different forms of government make laws democratical, aristocratical, tyrannical, with a view of their several interests; and thereby

proclaim that what is advantageous to themselves is justice for those ruled; and him who transgresses this principle they punish as a breaker of the law, and unjust." "In all states there is the same principle of justice, which is the interest of the established government" (Platon. Rep., I, 338e).

Here we have true dialectics of social life: starting with the "law of nature," one ends up with the law of the tyrant. It was precisely this dialectics that served as a basis for the sophists' doctrine of the relativity of any knowledge.

The attack on religion was another aspect of the sophistic enlightenment that evoked resentment of the reactionary upholders of tradition. The atheistic views of the sophists can well be exemplified by Critias's tragedy *Sisyphus* where he presents a vivid picture of the emergence of religion.

According to Sisyphus, the main character of the play, there was a time when the life of man was disorderly and beastlike. Then men laid down laws, but these could only prevent open deeds of violence and men continued to commit them in secret. A way out was found by a shrewd and subtle legislator who "introduced the Divine (religion), saying that there is a God flourishing with immortal life, hearing and seeing with his mind, and thinking of everything and caring about these things, and having divine nature, who will hear everything said among mortals, and will be able to see all that is done. And even if you plan anything evil in secret, you will not escape the gods in this" (DK 88 B 25, 16-24). Hence, religious belief is depicted as a deliberate imposture intended to ensure the good behaviour of citizens by fear of punishment. The clever legislator gave the gods the heaven for a dwelling — the place whence, as he knew, mortals expect retribution and help.

The theory of the "artificial" origin of gods was also professed by Prodicus who wrote that "things from which benefits to human life have been derived have come to be considered deities, such as Demeter and Dionysus" (DK 84 B 5).

As we see, the antithesis of nature and convention (custom, law, the arts) provides a basis for the doctrine of the mutability of social institutions, laws, customs, and, consequently, for the justification of their change. The same antithesis, however, also underlies the concept of relativity of human knowledge.

(2) *Cognition.* Hegel wrote that sophistic had embarked on

the path of free thinking which was to lead it beyond the bounds of existing morals and naïve religious faith.[1] It was the road of criticism and doubt described by Protagoras who "was the first to maintain that there are two sides to every question, opposed to each other" (Diog. L. IX, 51). This thesis which amounts to saying that contradictory statements about the same thing are simultaneously true and that it is impossible to contradict appeared absurd to Plato who commented upon it thus: "I have always thought it an amazing doctrine, suicidal as well as destructive" (Platon. Euthyd. 286b). Aristotle unequivocally rejected this thesis as incompatible with the law of contradiction. Conflicting testimonies make it impossible to restore Protagoras's authentic words, but we can recapture the meaning of his principle from context. Our purpose can best be served by well-known sophism *Euathlus*.

According to Diogenes Laertius, Protagoras made a deal with his disciple Euathlus whereby the latter was to pay him the fee after winning his first case in a law court. The disciple, however, was in no hurry to get a case and the teacher threatened to sue him. Puzzled Euathlus replied that he had not won a case yet and had received no fee. "Nay," said Protagoras, "if I win this case against you, I must have the fee, for winning it; if you win, I must have it, because *you* win it" (Diog. L. IX, 56). The sophist's worthy pupil retorted: "If I lose, I shall not pay because I shall be the loser; if I win, I shall not pay either, as I shall be the winner" (see Gell. V, 10).

Here we have a genuine paradox: Protagoras must receive his fee only if he is not entitled to it; on the other hand, Euathlus must pay his teacher only if he is not due to pay. This contradiction could only be eliminated if it were prohibited to apply the terms of the contract between Protagoras and Euathlus to a fee case involving both of them. Yet the grounds for such a restriction are not obvious and it takes a serious logical investigation to trace the contradiction to its source. Such investigations were only undertaken in the late nineteenth-early twentieth centuries in connection with the logical analysis of the foundations of mathematics. As regards the sophists, the paradoxes of this kind were an excellent means to confuse an issue, "to make

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[1] See Hegel, *Vorlesungen über die Geschichte der Philosophie,* Band I, Verlag Philipp Reclam jun., Leipzig, 1971, S. 536.

the weaker argument the stronger" and vice versa. It was not fortuitous therefore that Protagoras maintained the thesis of the impossibility of contradiction and contended that there are two opposite, but equally tenable arguments on every subject. From this it followed that there was no other criterion of truth than *man* himself.

This view is aptly expressed in Protagoras's famous phrase "Man is the measure of all things" (DK 80 B 1). Historico-philosophical tradition traceable to Plato's *Theaetetus* regards this thesis as an expression of sensualism and relativism. Plato in fact interpreted Protagoras's thesis as the contention that knowledge is perception. The phrase "Man is the measure of all things" means that what seems to me is for me, and what seems to you is for you: if the wind is cold to me who feels it cold, and is warm to you who feels it warm, we cannot say that it is cold or warm in itself.

Such arguments, of course, sound to us quite naive. We can measure the ambient temperature and get its objective charac-teristic independent of subjective perceptions. Yet in time when the warm and the cold, the dry and the moist, the bitter and the sweet were regarded as objective qualities of things or even peculiar "things" themselves, it was no small achieve-ment to emphasise a close relationship between sensually perceived qualities and the perceiving individual. Protagoras comes to a conclusion that being is mutable and that men "apprehend different things at different times owing to their differing dispositions; for he who is in a natural state apprehends those things subsisting in matter which are able to appear to those in a natural state, and those who are in a non-natural state the things which can appear to those in a non-natural state" (Sext. Pyrrh. I, 218).

On the evidence of Sextus Protagoras accepted dogmatic-ally the doctrine that matter is in flux and relied upon it to account for subjective appearance of things. Hence, his relativism was limited and did not amount to scepticism. Moreover, the founder of sophistic in fact contended that sensation cannot be at fault. If food appears bitter to a sick man and sweet to a man in good health, if a man wearing rags feels cold and another one in warm clothes feels warm, it does not mean at all that one of them is right, and the other is wrong. It simply means that "one state requires to be changed into the other, the worse into the better" (Platon. Theaet. 167a). Protagoras, as we see, abandons the

standard of truth in favour of the pragmatic standard of better or worse: "some appearances are better than others, though none is truer" (ibid., 167b). Being warm is better than being cold, health is better than ailment—hence, help the freezing man to get warm and heel the sick one. Such is the prescription of the sophist.

I would not be correct to regard Protagoras as a pure sensualist and relativist. His attempt to link the problem of truth with man's practical activity was an important step towards a consistent materialist theory of cognition considering practice the criterion of truth. Understandably, it was only one of the first steps on a long and thorny path. This path may also bring one to pragmatism identifying truth with what "works" now and here, i.e. appears practically useful for a given purpose and a given individual.

There has been much dispute over Protagoras's conception of man in his famous man-measure statement, the opinions dividing between man as an individual and man as mankind. The former view seems to be predominant and Protagoras is qualified by most historians as an extreme individualist. It appears, however, that "man" in Protagoras can be both an individual, like in the case of the cold and the warm, and a corporate body, e.g. a city assembly called upon to decide on what is good and bad for the citizens. The choice is determined by concrete circumstances, depending on whether the issue concerns one or many. In Protagoras's doctrine truth, as it were, is "democratised," being no longer the sage's monopoly.

Protagoras's general line of thought was this: if things are subject to constant change and it is only the transient that can be apprehended, the true form of being is *relativity* and all opinions varying with the change of state of both matter and man cannot but be relative, fluid and mutable. This apparently extreme relativism is modified by Protagoras's distinction between the "better" and the "worse," i.e. between what conforms to and conflicts with the dictates of nature

The doctrine of the relativity of knowledge interpreted in a subjectivist manner lies at the root of sophistry as the art of false reasoning. In the heat of an argument the disputants seeking to corner their opponent not infrequently resort to sophisms, i.e. to the subjective application of objectively flexible and contradictory notions. Protagoras seems to have been well aware of the difference between the subjective and

objective use of notions, as Plato puts into his mouth the following statement: "Injustice it is when one does not converse differently in disputation and in serious discussion: the disputer may trip up his opponent as often as he likes, and make fun; but the dialectician will be in earnest and only correct his interlocutor when necessary" (Theaet. 167e).

Proceeding from the doctrine of relativity and subjectivism some of the sophists, for instance, Xeniades and Gorgias, carried Protagoras's arguments to extremes and landed up in absolute scepticism. As distinct from Protagoras who contended that "it is impossible to contradict" and everything is therefore possible, sophist Xeniades made himself famous by his assertion that "all things are false, and every impression and opinion is false... The fact that all things are false and therefore inapprehensible is proved by disparagement of the senses" (Sext. Adv. math. VII, 53-54). He bolstered his thesis by this argument: "All that becomes becomes out of the non-existent, and all that perishes perishes into the non-existent" (ibid., 53). Hence, the Eleatic absolute immutable being based on the denial of any change in the world and its reduction to pure illusion is eliminated by Xeniades in favour of absolute non-being.

Gorgias, a native of Sicily, develops his doctrine along similar lines. His main treatise *On the Non-Existent, or on Nature* has not survived, but we possess a fairly detailed paraphrase of its arguments in Sextus Empiricus and in the work *On Melissus, Xenophanes and Gorgias* traditionally ascribed to Aristotle. His other remains are two speeches *Encomium on Helen* and *Defence of Palamedes* and about thirty fragments of his works. Both speeches, though corrupt and incomplete, are a good illustration of sophistic argument.

In his treatise Gorgias sought to prove, first, that nothing exists, second, that if anything exists it cannot be known or thought of by man, and, finally, that even if it can be apprehended, it cannot be communicated to anyone else. Parodying the Eleatics' reasoning, Gorgias shows with mock solemnity that the non-existent does not exist, then he takes up the same line with regard to the existent and proceeds thus: if the existent exists, it must be either eternal or generated or both; it cannot be eternal since if it were it would have to be infinite which it is not (here his argument is based on the deliberate confusion of temporal and spatial infinity); it cannot be generated since if it were, it would

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have had to be generated either from what is or from what is not; however, both are impossible: the existent already exists and cannot generate itself, i.e. being, and the non-existent (not-being) cannot generate anything. Hence, the existent does not exist.

Similar logic is used to disprove the plurality of being: it cannot be either many (as was argued by Zeno), or one. Gorgias shows that the Eleatics' uncritical conception of eternal, immutable and single being is no less contradictory than its opposite—the conception of being which is generated, mutable and multitudinous. This conclusion was an important step towards Plato's dialectics of being developed in the *Parmenides* and expressed in the following statement: "whether one is or is not, one and the others in relation to themselves and one another, all of them, in every way, are and are not, and appear to be and appear not to be" (Platon. Parm. 166c).

Maintaining his second thesis, i.e. incognizability of being, Gorgias points out that thought is not identical with being: we can think of things both real and unreal, as, for instance, chariots crossing the sea or flying men. Since what we think does not necessarily exist and we have no means of distinguishing real things from unreal ones (senses being deceitful and reason unreliable), the conclusion is that the existent is not thought, i.e. is not known. Gorgias's argument is clearly directed against Parmenides's identification of thought with its object.

The proof of the thesis rests on the contention that knowledge is expressed in words and communicated in speech which is not identical with external objects: "Speech is not the real and existent things; therefore we do not indicate to our neighbours the existent things but speech, which is other than the existing realities" (Sext. Adv. math. VII, 84). Conversely, what exists cannot become our speech, and without becoming speech it cannot be communicated to another.

Gorgias's idea of cognition is, so to speak, the negative of Protagoras's: everything is false for the former and true for the latter. The relativism of Protagoras and the nihilism of Gorgias were the culmination of the one-sided, subjectivist approach to the flexibility, fluidity and internal contradictoriness of notions reflecting the changing and contradictory objective world. In contrast with the early sophists expressing the enlightened thought of Greek slave-owning democracy

and having to their credit a number of interesting observations and important achievements in logic, rhetoric and linguistics, their successors not infrequently turned real logical problems into a means of tripping and disparaging their opponents in an argument. For instance, unlike Protagoras who emphasised the difference between an argument and a serious philosophical discussion, Gorgias instructed his pupils: "One must destroy one's adversaries' seriousness with laughter, and their laughter with seriousness" (DK 82 B 12).

The degeneration of the sophistic movement can well be illustrated by an anonymous essay *Twofold Arguments* written after the end of the Peloponnesian war (c. 400 B.C.) and designed to show that there are two contrary but equally maintainable arguments on every subject. The author sets out two opposite views about good and evil, or justice and injustice, fair and foul, truth and falsehood, takes one view himself and argues that they are either the same or different as the case may be (DK 90 I 17). The final word of sophistic enlightenment was the doctrine of absolute relativism. What is good for one man is bad for another, what appears beautiful for one looks ugly to another, truth when stated by one man becomes falsehood when stated by another. This doctrine was resolutely opposed by Socrates who undertook to show "by deed if not by word" the difference between justice and injustice (see Xenoph. Memorab. IV, 4, 10).

13. Socrates

Socrates (469-399) is one of the most enigmatic characters in the history of philosophy. He is said to have been the son of Athenian sculptor or stone-mason Sophroniscus and midwife Phaenarete. His primary education consisted in the traditional lessons of music, philology (reading, writing, learning by heart and interpreting classical texts), arithmetics and the foundations of geometry. Physical fitness enabled him to take part in several military campaigns and he earned a reputation for coolness, bravery and remarkable powers of endurance. He was active in public life and not once refused to be intimidated into acting contrary to his convictions in the city Assembly and law-court in the face of popular clamour. Such behaviour took a great deal of courage and Socrates accounted for his disagreement with the majority by respect for law and devotion to justice. In 399 B.C. he was brought

to trial on charges of impiety and corruption of the youth. The indictment read: "Socrates is guilty of refusing to recognise the gods recognised by the state, and of introducing other new divinities. He is also guilty of corrupting the youth. The penalty demanded is death" (Diog. L. II, 40). Out of 500 judges 361 voted for the death penalty and Socrates drank his cup of hemlock.

The three most important historical sources of our information on Socrates—Aristophanes's *Clouds*, Xenophon's *Memorabilia* and Plato's dialogues present three entirely different individuals with widely diverging, even opposing views. This may be due to the fact that they reflect three stages of his philosophical development, or that so diverse writers could not but interpret Socrates's teaching differently (the latter is particularly true of Xenophon and Plato). The historicity of Socrates, however, can hardly be called in question if only for the fact that his thought has brought to life and inspired a number of philosophical schools traditionally known as "Socratic".

Socrates never put down his views in writing expounding them in talks with his friends and disputes with his opponents. According to Aristophanes who ridiculed the intellectual vogue of his contemporaries—sophistic enlightenment and education, sophistic rhetoric and art of persuasion, Socrates was a sophist, an astrologer and a "physic." Owning a "thinking shop," he "traverses the air and contemplates the sun "lying" suspended up in a basket, and "mingles the subtle essence of his mind with this air, which is of the like nature, in order to clearly penetrate the things of heaven" (Aristophanes, The Clouds, p. 311). Xenophon's account of Socrates presents a very prosaic, even somewhat mediocre character notable for his loyalty to the state, faith in the traditional values of Athenian society and salutary influence on the interlocutors. In reading his *Memorabilia*, one cannot escape the impression that the writer was often simply incapable of grasping the profound philosophical thought of his contemporary. Plato, by contrast, creates the image of a brilliant polemicist, an ideal philosopher and a profound thinker expounding ... Plato's own ideas. If anything, the logical conclusions from Socrates's arguments as reproduced in Plato's dialogues could hardly be known to Socrates himself.

Despite the obvious difficulties that face the historians in

reconstructing the genuine views of Socrates we may safely credit him with two important contributions to philosophy. The first is the development and elaboration of dialectics as a method of inquiry. Though Socrates was not the author of this method and gave no theoretical exposition of dialectics, he followed a clear-cut pattern of dialectical reasoning and laid bare his logic for later philosophers to formalise. The second is that Socrates placed dialectics at the service of ethics and undertook to give a general definition of virtue as a basis for the rational transformation of morals.

On the formal side, Socrates's dialectics consists of irony and maieutics or intellectual midwifery, and on the substantive side, of induction and definition. His irony which consists in asking questions in sham ignorance and refuting all answers is in fact identical with the sophistic method of argument intended to disclose contradictions in the opponent's statements or views. Yet in contrast with Gorgias who seeks to prove that knowledge is impossible in principle, Socrates only comes out against false knowledge. Demonstrating confusion in his interlocutor's mind, Socrates confesses his own inaptitude and invites him to join in a common search for truth. The ultimate goal of Socrates's irony is to expose false claims to wisdom and lay bare human ignorance so as to clear the way for true knowledge which is expressed in the formula: "Know thyself." According to Socrates, there is no point in studying the physical world as man's power of cognition is far too limited to penetrate the design of the gods. The true subject of philosophy is the knowledge of man's own nature. Here knowledge is not only possible, but necessary. His irony is therefore closely linked with induction which consists in the analysis of different notions of a subject with the aim of arriving at its true definition. Helping his pupils in their intellectual birth-pangs, Socrates likens himself to a midwife (a transparent allusion to the maieutic skill inherited by him from his mother: as a result of their discussion his interlocutor must give birth to wisdom.

Xenophon and Plato give numerous examples of Socrates's dialectics. Inducing his companion Aristippus to bring out a general definition of duty, Socrates says: "...The same thing may be both good and evil; for I can easily suppose, that which is good in the case of hunger, may be evil in a fever; since what would prove a cure for the one, will certainly increase the malignity of the other; and in the same manner will beauty

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in the wrestler change to deformity in him who runneth. For whatsoever is suited to the end intended, with respect to that end it is good and fair; and contrariwise, must be deemed evil and deformed, when it defeats the purpose it was designed to promote... The same disposition of the body which is beautiful in him who runs, is not beautiful in the wrestler; and while the beauty of the shield is to cover him well who wears it, that of the dart is to be swift and piercing" (Xenoph. Memorab. III, 8).

This reasoning as rendered by Xenophon appears to be very similar to sophistic arguments intended to prove the relativity of our concerts and, in this particular case, to identify the beautiful with the useful. Actually, however, the conclusion to which Socrates leads his interlocutors is entirely different: the beautiful as such is not fiction, it does exist, yet it should not be sought among material things. On Aristotle's evidence, "Socrates did not make the universals or the definitions exist apart..." (Arist. Met. XIII, 4, 1078b), therefore there is good reason to suppose that he did not find the objective status of the beautiful as such or, for that matter, any other definitions of ethical notions. Indeed, all his attempts to determine beauty, virtue and courage came to nought and the definitions Socrates gives do not go beyond superficial platitudes. Thus justice, according to Xenophon, is defined by Socrates as what agrees with the laws, and beautiful is identified with useful and suitable for a given purpose. Plato's Socrates states that it is difficult to define the beautiful and, discussing with Crito the possibility of violating an unjust verdict, says: "It is enough then, Crito. Let us fulfil the will of God, and follow whither He leads" (Platon. Crito. 54e).

It should be noted that there is a pronounced strain of mysticism in Socrates's conversations. Frequent appeals to the gods and allusions to various occult forces come natural in his discourse and represent Socrates's profound religious convictions. The gods' will cannot be unravelled through man's intellectual endeavour, it reveals itself in prophetic signs after much praying and appropriate sacrifice. Socrates takes his cue from the Delphic oracle[1] and priestess Diotime en-

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[1] According to Plato's *Apology*, the Delphic oracle announced Socrates the wisest of mankind. Since Delphi was one of the centres of political reac-

lightens him in the same way as he enlightens his listeners. Yet it is far more than mere irrationalism and tribute to the orphic tradition. Socrates's "demon" or the inner voice that speaks to him now and then and guides him in his course of conduct is in fact the manifestation of the intense and continuous labour of his thought. As regards Socrates's references to Eros, man's best guide in his aspiration for beauty as such (cf. Plato's *Symposium*), or to the immortal soul's reminiscences of the once contemplated ultimate truth of all being (*Meno*), they can well be construed as an anticipation in a religious form of the Platonic theory of ideas.

Coming back to the dialectical method of Socrates, we may characterise its positive content on the formal side as a crystallisation of sophistic arguments, ancient rhetoric and the oratory of the law-courts. This method was still lacking a theoretical foundation and Socrates applied it primarily to ethical problems. It set off, as it were, an avalanche of epistemological doctrines and had a powerful impact on the subsequent development of Greek philosophy. On the substantive side, Socratic dialectics showed that a general concept could only be arrived at as a result of hard intellectual labour and that the path of knowledge leading to definitions was not an easy one. Alongside this, the conviction that universals are only open to the mind caused Socrates to regard them as products of thought and to concentrate on man's inner world. This was the epistemological aspect of his famous dictum "know thyself."

The dialectical method was mainly applied by Socrates to moral problems and he is traditionally regarded as the founder of scientific ethics. Since no moral assessment seemed to be possible without a reliable criterion, Socrates focused his attention on the general notion of virtue and defined it as knowledge. He taught that it consisted in knowing what is good and acting in accordance with this knowledge. For instance, bravery presupposes the knowledge of how to face danger, justice the knowledge of what to do in relation to the indi-

tion in Greece in Socrates's days, this circumstance seems to be pointing to his political sympathies. No less important is the fact that Pythia's prophecies were passed by Socrates for divine wisdom as opposed to the feebleness of human mind: "But the truth is, O men of Athens, that God only is wise; and by his answer he intends to show that the wisdom of men is worth little or nothing; although speaking of Socrates, he is only using my name by way of illustrations, as if he said. He, O men, is the wisest, who, like Socrates, knows that his wisdom is in truth worth nothing..." (Platon. Apol. 23ab).

viduals and the state, piety, the knowledge of how to behave towards the gods, etc.

Here we come to the crucial question: what is this knowledge and how must one act in order to be brave, just, etc.? According to Xenophon, Socrates taught that goodness and justice consist in obedience to the laws; to be just is to observe the law. By contrast, Plato's Socrates is convinced that the good derives from unconditional universal divine intelligence and that human reason must be in full agreement with it. The human laws are based on the divine law, but may deviate from their ultimate purpose owing to the imperfection of human beings. Therefore the divine law is superior to the human law: a violation of the latter is not always and not necessarily punishable, whereas any break of the former results in inevitable retribution. By violating the divine law of goodness we give ourselves up to evil and incur God's punishment.

Socrates evidently did not make a clear distinction between these two ways and never pressed his argument to a logical conclusion on either of them. The first way was clearly a conformist one and if Socrates had really chosen it (as Xenophon strove to make out), his views would have hardly endangered the existing social system. The second way invoking divine intelligence led to the justification of the philosopher's own stand: traditional institutions can and must be brought before the judgement-seat of reason to justify their existence. Socrates did not oppose the existing forms of social life: he recognised the importance of social institutions, stressed the need for citizens to participate in the affairs of the state, demanded that they should do their duties to the fatherland and the gods of tradition, taught that justice consisted in abiding by the law, etc. However, he appealed to reason as the supreme judge of everything and this was tantamount to calling in question all the customary forms of social life and worship. Reason and tradition never get along together, and the chief cause of Socrates's conflict with Athenian slave-owning democracy was not so much his philosophical convictions, as the political implications of his teaching.

Socrates's ethical doctrine owes its great attraction to the belief in the power of reason, to the underlying faith in the possibility and even necessity of the harmony of knowledge and conduct. Socrates is convinced that one cannot be evil-minded if he knows the good. His delusion stems not only and not so much from the sheer disregard of everyday human

experience attesting to the opposite (which Aristotle was quick to note), as from the idealistic assumption that the ills of society could be cured by the spread of knowledge and the dissemination of the ideas of goodness and justice. History shows that any society divided into antagonistic classes abounds in ethical paradoxes. A moral action in such a society often produces an immoral result which explodes the very conception of morality. Such paradoxes are insoluble within the bounds of pure knowledge—their solution calls for restructuring the social relations that bring them into being. Socrates in fact contented himself with a call for the self-perfection of an individual reducing at that this perfection to the knowledge of what is good. Moreover, regarding the knowledge of goodness as the necessary and sufficient condition of being virtuous, Socrates not only ignored, according to Aristotle, man's "non-thinking" part, his weaknesses and inclinations, customs and habits—he seems to have been totally unaware of the fact that he himself did not possess the knowledge of goodness he was talking about and was even unable to give its definition.

One might argue that the notions of virtues preached by Socrates, such as temperance, courage, justice and others are sufficiently lucid and can be grasped intuitively. However, Socrates's own "irony" has shown that it is far from being the case: these notions do not lend themselves to a simple definition. Socrates did not open a new epoch either in logic or in ethics. He went down in the history of philosophy as a profound thinker who took great pains to dispel the false notions of his contemporaries, gave a powerful impetus to further philosophical inquiry but offered no positive answers on the plea of ignorance. Though Socrates's philosophy was mainly confined to ethics and his concrete solutions were often one-sided and even reactionary, he left a deep mark in the history of human thought. The appeal of his personality lies in its striking integrity, the unity of teaching and behaviour, knowledge and convictions, words and deeds.

14. Socratic Schools

Under this heading traditionally come four more or less distinct philosophical schools which arose after the death of Socrates and traced to him their origin: the Cynics, Cyrenaics, Megarians and Elians-Eritreans (the latter being very close

to the Megarians). They were influential during the whole of the fourth century B.C. figuring prominently in the controversy between Plato and Aristotle, continued well into the Hellenistic period and played an important part in the formation of stoicism and scepticism. The logic of their philosophical reasoning, however, had so much in common with sophistics on the one hand and Socraticism on the other that it can hardly be understood without them. Viewed in a broad historico-philosophical perspective, Socraticism was a dialectical negation of sophistics, superseding and preserving it as a moment of "irony" within the framework of a broader docrine of absolute ethical truth. Striving to define the ideal "good" and thus indicate the purpose of human life which their teacher himself failed to do, the Socratics synthesised, as it were, Socraticism and sophistics. Terminating the logical development of ancient Greek Enlightenment, they proposed sophistic solutions to Socratic problems and developed whimsical one-sided theories overemphasising and exaggerating various aspects of the process of cognition, man's nature and morality.

(1) *The Cynics.* The school was founded by Antisthenes (c. 444-368 B.C.) who was a pupil of Gorgias and later became an ardent admirer of Socrates. Being the son of an Athenian and a Thracian slave, he was not entitled to Athenian citizenship. After death of Socrates he founded a school in the gymnasium of Cynosarges which was supposed to be under the patronage of Heracles. Antisthenes's most prominent pupil and follower was Diogenes of Sinope, a wandering preacher of cynicism, later a slave pedagogue. The date of his birth is not known, but he died in Corinth in approximately 323. His followers were Crates of Thebes and his wife Hipparchia. In the third century B.C. the Cynic teaching exercised a strong influence on Menedemus, Bion of Boristhenes and Teles. In the second and first centuries B.C. cynicism gradually merged into stoicism with its very similar ethical views, but in the first-third centuries A.D. it went through a period of temporary revival. The influence of the Cynics is traceable in a number of philosophical teachings: in Epictetus's stoicism, in the *Letters of the Cynics* and other ancient literary sources, in Dion of Chrysostomus, etc.

The central idea of the Cynics consisted in that philosophy is worldly wisdom which has no use for abstract thought. Underscoring the primacy of sense perceptions in knowledge and the changefulness of all existing things, they saw

the function of reason in registering "what was or is" (Mullachus II, Antisth. fr. 48). This resulted in the one-sided sensualism and empiricism of the Cynics reducing knowledge to description of things. Aristotle wrote that according to the followers of Antisthenes it was impossible to determine the essence of a thing—one could only say what it looked like. For instance, it is actually impossible to explain what silver is, but it is possible to say that it is like tin (see Arist. Met. VIII, 3, 1043b). Hence the rejection of logic as "useless". On these grounds the Cynics sharply criticised Plato's theory of ideas contending that they could see a man or a horse, but not manness or horseness (Mullachus, II, fr. 44). They taught that a general notion has no objective content and that each thing must have its own name denoting this thing alone.

This shows, first, that the Cynics regarded experience and sense perceptions as the only source of knowledge. It is hard to say if their views were akin to materialism which also regards sense perceptions and experience as the starting point of cognition, but the anti-idealist trend of the Cynic school is obvious enough. Second, the Cynics showed a strong tendency to relativism. Following Protagoras, the adherents of Antisthenes contended that "there could be no contradiction, and almost there could be no error" (Arist. Met. IV, 29. 1024b). Third, they were opposed to applying a general notion to any individual thing as it allegedly led to a logical contradiction. In their opinion, it was wrong to say "the man is kind," since kindness is kindness and man is man... This clearly demonstrates the narrowness of Cynic sensationalism which denies the meaningfulness of general concepts and is incapable of grasping the unity of the general, the particular, and the individual.

It is not hard to see that these views underlay the ethical doctrine of cynicism which was primarily a moral philosophy: if the true essence of a thing is represented by "its own name," the true goodness is the "own goodness" of every separate individual. This was the central idea of the Cynic school which led to far-reaching consequences.

All writers on cynicism agree that its representatives belonged to the lower strata of society by birth or by force of circumstances. Antisthenes was an illegitimate, Diogenes was exiled from Sinope for coining false money, Crates exchanged his wealth for poverty "impregnable to fate," Hipparchia rejected her dandy suitors in favour of Crates and

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left her rich house, Bion, the son of a freedman and a prostitute, was sold into slavery together with his family and got freedom by sheer luck: his owner made him heir before death. All of them saw their task in castigating vice and preaching virtue. Yet in a society where social classes have antagonistic interests the concepts of virtue and vice are always ambivalent. "Morality has always been class morality; it has either justified the domination and the interests of the ruling class, or, ever since the oppressed class became powerful enough, it has represented its indignation against this domination and the future interests of the oppressed."[1]

The Cynics, in fact, expressed the indignation of the oppressed and downtrodden, but could not propose any ways to improve their position as there was no future for them in slave society.

In its ethical teaching the Cynic school contended that man's "own good," his happiness consists in the maximum possible independence from the chances of the outer world constantly threatening his property, health, freedom and life itself. Man's true goodness is inner freedom and self-sufficiency which can only be attained by suppressing desires and becoming indifferent to sufferings. Together with the sophists the Cynics contrasted "nature" to law and custom. They taught that all social institutions are artificial and conventional, opinions are false and lead away from true happiness, virtue and vice in the conventional sense are but empty words. Nature has defined man's true needs and his life can only be virtuous if he satisfies them and strips off all his social qualities. The Cynics resolutely came out against wealth, luxury and extravagance, preaching simple living and moderate toil conducive to the peace of mind and to the strength of body and soul, and honest poverty. They equally rejected the traditional religious teachings and asserted the existence of only one god, the world's mind, regarding all other gods as the product of "custom."

However, the Cynics pressed their appeal to "nature" too far. Together with extravagance and artificial wants detrimental to both body and soul they also threw overboard man's real needs distinguishing him as a civilised member of society and attesting to historical progress of mankind, and even tried to rid themselves of all social bonds whatsoever, common

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[1] Frederick Engels, *Anti-Dühring*, p. 117.

decency inclusive. Diogenes ("the Dog") was not shy of relieving nature in sight of a crowd and, according to Diogenes Laertius, had a "habit to do everything in public, the works of Demeter and of Aphrodite alike" (Diog. L. VI, 69). Crates and Hipparchia scandalised their fellow-citizens by openly making love in the city square. The Cynics took pride in their freedom from society and contempt of all conventions, held a sharp tongue in high esteem and were not slow to resort to foul language and cast abuse at anybody—the reason why the word "cynic" has acquired a definitely negative meaning in all European languages. Yet the same Diogenes bitterly resented the existing social order under which people competed in pushing one another into a ditch instead of competing in goodness and kindness. He ridiculed noble descent and glory calling them a cover of vice. He sacrificed to the gods a louse—the only benefit he received from them... He was a tender, considerate and tactful tutor of the children in his charge who returned him great love and affection. Crates was said to be a "kind soul" and an "opener of all doors," enjoyed the reputation of a "philanthropist," a lover of people.

To account for these seemingly incompatible qualities, we must take into consideration the social standing of the Cynics and bear in mind that cynicism was essentially the philosophy of the lower strata of society. The Cynic was in fact an outcast who had no place in society and, for his part, turned his back on it. The fruits of civilisation and enlightenment were not for him. He made a virtue of necessity and returned to a state of nature, living like a savage or an animal. The Cynics had no future and the sum total of their life was universal nihilism. In this connection one cannot but draw a parallel between cynicism and certain ideological trends of the twentieth century brought to the surface by the crisis of modern capitalism. Indeed, the past few decades provided a number of striking illustrations to the stock phrase "extremes meet": righteous indignation against bourgeois civilisation has not infrequently assumed outrageous forms, such as vagrancy, parasitism, debauchery, addiction to drugs, terrorism, and become no less destructive and anti-humanistic, than the evils of capitalism it is directed against. There may well be new Diogeneses, Crateses and Hipparchias among the modern extremists... Their fervours lead nowhere and are as sterile as the ostentations bravado of the ancient Cynics.

The Cynic school came into being in the epoch when it was

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still impossible to overstep the bounds of slave-owning society. A slave regaining his freedom, be it even through a successful uprising, could only become a slave-owner; by a stroke of ill luck a free man could always become a slave, as was the case with Diogenes, captured by the pirates. There was no way out of this vicious circle except in the realm of the spirit. Yet under the contemporary social conditions intellectual freedom could not but turn into clowning pauperism. In point of fact, the universal nihilism of the Cynics made it very easy for all sorts of vulgarisers to pass from lofty ideals to sordid profligacy, from inner freedom to the freedom from social duties and human bonds in general, from the contempt of laws and customs to unrestricted animal individualism.

Nevertheless, the philosophy of Cynicism had a strong and lasting appeal to the oppressed classes of the Hellenic states and of the Roman Empire.

(2) *The Cyrenaics.* The Cyrenaic school got its name from Cyrene in North Africa, the native town of its founder Aristippus (born c. 435 B.C.) and his followers. Like the Cynics, the Cyrenaics denied the need for theoretical knowledge, but in their practical philosophy they proceeded from the principle of pleasure or *hedone* (whence the term hedonism). The Cyrenaic school was represented, besides Aristippus, by his pupil Antipater, Aristippus's daughter Arete and her son Aristippus junior, as well as by Antipater's pupils Hegesias and Anniceris, and Aristippus junior's pupil Theodorus the Atheist.

The Cyrenaics were active in the fourth and third centuries B.C. It is practically impossible to determine the contribution of individual philosophers to the general doctrine of the school, yet there is good reason to believe that cyrenaicism owes to Aristippus the idea that men, like the citizens of a besieged city, are constantly harassed by their sensations of affections which only reflect man's inner states, but not external objects. According to Sextus Empiricus, the Cyrenaics asserted that the affections alone were apprehended and were infallible, but of the things that had caused the affections none was apprehensible or infallible—"just as the sufferer from vertigo of jaundice receives a yellowish impression from everything, and the sufferer from ophthalmia sees things red, and he who pushes his eye sideways gets as it were a double impression... And in this way, whereas we are all unerring about our own affections, as regards the external real

object we all err; and whereas the former are apprehensible, the latter is non-apprehensible, the soul being far too week to discern it" (Adv. Math. VII, 190-195).

Later, however, the Cyrenaics modified this view and linked sensations with the inner motion of the one who experiences them: even and calm motion gives pleasure, jerky and rough motion causes suffering, whereas the absence of any motion or very slow motion gives neither pleasure, nor pain. Men seek pleasure and strive to avoid suffering—this is the criterion of their behaviour. However, the Cyrenaics did not consider the pursuit of pleasure to be the goal of man's life, as this would turn man into a slave of his own desires. The state of true happiness can only be attained by a wise man who does not let himself be swept away by the rush of his passion and knows how to control it. Wisdom thus consists in winning pleasures while standing above enjoyment as its master. According to Diogenes Laertius, Aristippus "enjoyed the favours of Lais... To those who censured him his defence was, I have Lais, not she me; and it is not abstinence from pleasures that is best, but mastery over them without ever being worsted..." (Diog. L. II, 75). A wise man should thus take the world as he finds it, taking up such pleasures as come across and enjoying good things in life, but never being at their mercy. Diogenes Laertius wrote that Aristippus "bore with Dionysus when he spat on him, and to one who took him to task he replied. If the fishermen let themselves to be drenched with sea-water in order to catch a gudgeon, ought I not to endure to be wetted with negus in order to take a blenny?" (Diog. L. II, 67).

As we see, Cyrenaic liberty, "equally remote from sovereignty and servitude" and exalted as "the surest road to happiness" (Xenoph. Memor. II, 1, 11) turns out to be a road of opportunist wisdom leading to open conformism and acceptance of any powers that be and any conditions of life. The later Cyrenaics elaborating the doctrine of pleasure arrived at very different conclusions. Theodorus the Atheist, for instance, taught that the basis of moral behaviour is not the enjoyment of individual pleasures, but a stable feeling of gladness: the good and the evil are not pleasure and suffering, but joy and sorrow. Joy is brought about by wisdom, and sorrow by lack of judgement. Pleasures and sufferings as such are something indifferent. The joyful unscrupulousness of Aristippus gives way here to calculating sobermindedness with its rather dubious implications. Thus

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Theodorus was quoted as saying that all moral prescripts are based on common opinion which is nothing else than the consent of fools. There is nothing laudable or disgraceful as such: a wise man, according to Theodorus, may steal and commit adultery and sacrilege, if such acts are conducive to his joy. Here the Cyrenaic ethics comes very close to the moral theory of the Cynics. The atheism of Theodorus was evidently of the same grain and boiled down to rejecting traditional polytheism and ridiculing the believers.

The dialectics of hedonism brought the Cyrenaics to the direct negation of the initial postulate of their philosophy. Pressing the doctrine of pleasure to its logical conclusion, Hegesias denied life any value and ended up in open pessimism: since perfect happiness is unattainable as the body is given to suffering and the soul cannot but share it, life appears a good thing to a fool only; the wise man is indifferent to it. Hegesias concentrated on the attractions of painless death and earned himself the reputation of an advocate of suicide.

(3) *The Megarians.* The Megarian school was founded by Euclides of Megara, a friend and follower of Socrates. During the war between Athens and his native city the Megarians were prohibited to visit Athens on pain of death, and Euclides, disguised as a hetaera, would steal at night into the city to listen to Socrates. After the death of the teacher many of his Athenian disciples moved to Megara. The most prominent of Euclides's followers were Eubulides, Diodorus Cronus, and Stilpo. The Megarian school was active till the middle of the third century B.C. and gradually dissolved in scepticism.

The philosophical views of the Megarians were influenced not only by Socrates, but also by the Eleatics and sophist Gorgias. The Megarians were stigmatised as squabblers and dialecticians because of the fondness for eristic arguments. In their teaching they combined the Socratic demand for the knowledge of the general with the Eleatic contrast between the sensuous and the rational, the plurality of "opinion" and the unity and indivisibility of Being. Following Parmenides, Euclides held that being was one, ungenerated, unperishable and motionless. However, being a disciple of Socrates and focusing his attention on the nature of the good, Euclides identified the good with being and declared "that the good

was one, though called by many names, sometimes wisdom, sometimes God, and again mind (nous) and so on" (Diog. L. II, 106). Carrying on the spirit of Socrates's teaching, Euclides maintained that nothing existed besides the One Good and that evil opposed to it was non-existent.

As regards the plurality of names denoting the good, Euclides was opposed to the use of parallel concepts on the grounds that if they were similar it was better to deal with the original subject, the goodness, rather than with what resembled it, and if they were dissimilar, the comparison was altogether irrelevant and misleading. This particular instance exemplified the general negative attitude of Euclides to comparison as the argument from similarity (see Diog. L. II, 107).

The Megarians were famous in antiquity as the authors of numerous paradoxes. Some of them were essentially identical with Zeno's puzzles—such are the aporias against motion, the paradoxes of "The Heap" (one grain does not make a heap; adding one grain does not make it either—hence, a grain heap is impossible) and "The Bald Head" (pulling out a man's hair does not make him bald, so baldness is impossible). Others were rather cheap logical quibbles intended to deceive and confuse their opponents in a dispute, such as, for instance, the sophism "The Horned One": having accepted the premise that one possesses what one has not lost and having denied any loss of horns, a disputant is baffled by his opponent's conclusion that he is a horned one. The argument here is based on a deliberate distortion of the premise relating only to something already possessed. A number of ancient paradoxes are in fact examples of false reasoning violating the laws of logic.

Of far greater significance, however, are true logical puzzles, such as "The Liar" or "The Veiled Figure" credited to Eubulides: the first one requires a definite answer to the question whether the man who says "I am lying" is speaking the truth or not. A positive answer would contradict the meaning of the man's statement who confesses that he is lying. The negative answer would again be wrong since the man admitting that he is telling a lie is in fact speaking the truth. Hence, the puzzle appears to be insoluble. A similar difficulty arises in the second paradox. Electra knows her brother Orestes, but does not know that the veiled man in front of her is Orestes—so, she does not know what she

knows. Such logical or semantic puzzles reflecting hidden contradictions in the very pattern of human thought exercised the minds of many philosophers ever since the ancient times. The true investigation into their nature did not start till the end of the nineteenth and the beginning of the twentieth centuries when the set theory revealed antinomies which tended to undermine the very foundation of mathematics[1] and were similar to the "Megarian" paradoxes.

Speaking of the "sophisms" of ancient thinkers, we in fact mean three different kinds of statements:

(1) Dialectical contradictions in the concepts of motion, unity and multiplicity, indivisibility and divisibility expressed in the aporias of the Eleatic school and used by the sophists and the Megarians in argument.

(2) Logical and semantic paradoxes containing latent contradictions which are to be resolved. These paradoxes (antinomies) are inevitable in the development of any theory and their emergence calls for a serious revision of its principles and even rejection of some premises that seemed at first incontestable.

(3) Sophisms proper, i.e. subtle fallacies intended to deceive. In his treatise *On Sophistical Refutations* Aristotle showed that sophisms are based either on a wrong use of verbal expressions (homonyms, amphibologies, incorrect combination or separation of words, ambiguities in pronunciation and grammatical forms), or on the violation of the rules of logic (see Arist. De soph. elench. 180ab).

Sophistry in the broad sense, therefore, can be described as a deliberate manipulation of logically fallacious arguments, logical and semantic paradoxes and dialectical contradictions designed to force the opponent into adopting an obvious absurdity. Theoretically, it is based on a subjective, one-sided application of the dialectical flexibility of concepts. In the narrow sense, sophistry consists in the use of logically defective reasoning intended to confuse the opponent in a dispute and gain the upper hand over him by any means that seem suitable. Such disputes in ancient Greece were anything but academic and the resort to ridicule and crude jokes with a large grain of "Attic salt," often far from harmless, was common practice. Tradition holds, for

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[1] See A. Fraenkel, Y. Bar-Hillel, *Foundations of Set Theory*, North-Holland Publishing Company, Amsterdam, 1958, Ch. 1.

instance, that Diodorus Cronus died of frustration after being outargued by Stilpo and derided by the mob.

From the epistemological viewpoint sophistic arguments often perform the function of a peculiar logical experiment designed to test current concepts for soundness, reveal their weaknesses and stimulate their clarification and improvement. Referring to the concept of possibility which plays an important role in his system, Aristotle pointed out that the Megarians rejected this concept on the grounds that "a thing can act only when it is acting, and when it is not acting, it cannot act" (Met. IX, 3, 1046b). This quotation from Aristotle is in fact a paraphrase of the famous sophism of Diodorus Cronus which was intended to prove that nothing is ever possible except what actually happens.[1] By contrast, Philon of Megara identified possibility with the inner capability of a thing and completely disregarded the external conditions considering any development possible if it was in accord with the thing's potentialities.

Stilpo, the last prominent representative of the Megarian school showed close affinity wih Antiphon in his analysis of thought and also held that it was erroneous to predicate one thing of another. Hence, he considered it inadmissible to say "man is kind" or "the man is a general," but only "man is man," "kind is kind" and "general is general" (Plut. Adv. Colot. 23, 1119). However, contrary to the Cynic who rejected the general in favour of the individual, the Megarian asserted the general and denied the individual.

As regards the Elian-Eritreian school (Phaedon of Elis, Menedemus of Eritrea) and orthodox Socratics Xenophon and Aeschines (the former known as the historian and the author of such Socratic treatises as *Memorabilia* and *Apology of Socrates*) they were not distinguished for originality and made no significant contribution to the history of philosophy.

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The sophists, Socrates and the Socratics marked the end of the early period of Greek philosophy (the Socratics logically, if not chronologically). On the negative side of its achievements was the growing conviction of the inadequacy

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[1] See E. Zeller, *Die Philosophie der Griechen*, Vierte Auflage, II, 1, Leipzig, 1889, S. 270.

of the physiologers' "principles" of the universe as qualitatively determinate substances. The mistrust of such principles grew in proportion to their increasing number and diversity, so that both the philosophers and the public finally came to regard them as products of rich imagination very much in the manner of myths rather than as sound scientific notions. The prevailing attitude to the positive philosophical doctrines of the time was epitomised in Aristophanes's immortal comedy *Clouds*.

However, the scepticism that followed fifth-century enlightenment was not a blind alley, but a stepping stone to a new rise of philosophical thought. The problems facing philosophy could be tackled along two lines. One—the *materialist line*—was represented by Democritus who construed the world as an infinite multitude of atoms stripped of all qualitative characteristics and eternally moving in empty space. The other—the *idealistic line*—was represented by Plato who dialectically transcended the contradictions of the previous physical doctrines by introducing the concept of "idea" as the essence, principle and law of a class of similar sensuous objects. With Democritus and Plato we enter the period of classical Greek philosophy.

PART TWO
CLASSICAL GREEK PHILOSOPHY

In Lieu of Introduction

The heyday of Greek thought, its classical period justly regarded as one of the most glorious epochs in the entire history of philosophy falls on the fourth century B.C. which is marked by a profound crisis of the polis system and collapse of Greek political and social life. The end of the Peloponnesian war did not bring peace to Hellas. The country was drained of blood by endless military expeditions sent to subdue dissentient or simply disgruntled "allies" and devastated by the Corinthian, Elean, Social and Sacred wars. The relations between Hellas and foreign states were extremely unstable due to the participation of ten thousand Greek mercenaries in Cyrus's campaign and their subsequent retreat across Asia Minor, the expedition of Agesilaus, the Persian interference in Greek affairs resulting in the imposition of the King's Peace and a new subjugation of Greek colonies in Asia Minor. The formation and rapid dissolution of ever new leagues (Chalcidian, Boeotian, Thessalian, the Second Athenian Confederacy) attested to an increasing tendency towards unification which however proved unable to prevail over the separatism of individual polises. This internecine military, political and diplomatic "war of all against all" could not but end in a disaster for independent Greek states: in 337 the Macedonian king Philip established his hegemony over the Hellenic alliance.

No less significant was the internal strife in Greek city-states. Frequent changes of democratic and oligarchic governments resulting largely from the alternating predo-

minant influence of democratic Athens or oligarchic Sparta and depending on the geographic proximity of this or that state to these centres of attraction in the Greek world kept the cities under constant strain. The acute social conflicts culminating, as a rule, in the slaughter or banishment of political opponents unfolded against the background of the economic plight of the masses and not infrequently led to the establishment of a tyranny that became a typical form of government in the fourth century. Sicily was the first to succumb to the rule of tyrants who soon began to dominate the political scene in the whole of Greece. The tyranny of the fourth century known in history as "the Age of the Tyrants" was brought about by the disintegration of the polis system and the contradictions of mature slave-owning society: the propertied classes strove to use it in order to curb the poor and retain their wealth and privileged social position, whereas the poor looked forward to a strong man who would help them in the struggle against the rich for their economic and social rights. The tyrants, often professional soldiers, banked on the mercenaries and played on the contradictions between the leagues of city-states siding now with one of them, now with another or even resorting to the patronage of Persia or Macedon.

The tyrannies of Dionysius I and Dionysius II in Sicily, Jason of Pherae in Thessaly, the coups in Phocis and Locris, Euboea, Corinth and Sicyon, the tyranny of Plato's pupil Clearchus in Heraclea Pontica which was maintained by his descendants till 289 B.C. provided a vivid illustration to the corruption of traditional political forms in Greece, whereas the so-called barbarian monarchies in Cyprus and Caria in South-West Asia Minor foreshadowed in a way the later Hellenistic states in the ancient Near East.

The Peloponnesian war and the ensuing social and political unrest sharpened the internal contradictions of Greek slave-owning society and widened the gap between the rich and the poor. Attica was laid waste by the Peloponnesian war, Peloponnesus by the Corinthian war and expeditions of Epaminondas and Pelopidas, Boeotia was ravaged by numerous incursions of the Spartiates, etc. The peasants were ruined and the fields lay desolate. The situation was further aggravated by the return of former exiles and the flow of colonists banished from their lands by their political opponents and left without any livelihood. The position of free

artisans, too, was steadily deteriorating, as they were unable
to stand competition with large slave-owning enterprises that
began to emerge at the turn of the fourth century B.C.

The impoverishment of the peasants and handicraftsmen
and the decrease of the purchasing power of the masses went
side by side with the unprecedented accumulation of capital
in the hands of the wealthy—all kinds of suppliers and
contractors, arms manufacturers, ship-owners, state officials,
and the like. This process of wealth concentration was partly
attributable to the influx of precious metals that literally
flooded the Greek market: the Persian subsidies were said
to have amounted to an enormous sum of 5000 talents (about
180 tons of gold), the Athenian own resourses were about 6000
talents and the allies paid annually 1000 talents in taxes.
On top of that in 356 the Focians seized the countless
treasures of the temple of Apollo at Delphi and melted down
many of its valuables. Needless to say, all these funds
concentrated in the hands of a few and gave a powerful
impetus to slave, land and grain trade, banking and insurance
business, mortgaging, etc.

The continuous growth of productive forces which was only
retarded but not stopped by the raging wars called for
expansion of commercial and political ties between states
which felt more than ever before constricted by the narrow
confines of their territories. The Greek world was entering
the stage of developed slavery and showed a clear trend
towards larger and more powerful economic and political
alliances. Slave labour became the decisive factor in Greek
economy and slave-trade acquired enormous proportions.
Thousands upon thousands of skilled labourers from various
Greek cities were taken prisoner and sold into slavery during
internal strife. Together with the "barbarian" slaves (Carians,
Thracians, Scythians), they were used in handicrafts and
construction, worked in mines, etc. The "free", but poor
sections of the population had practically no choice in life:
the young able-bodied men joined the mercenary force and
left their homes in search of fortune, the aged ones and the
women hired themselves out in order not to starve. Appraising
the social conditions in Greek states of his epoch, Plato wrote:
"Each will contain not less than two divisions, one the city
of the poor, the other of the rich, each at war with one another;
and within each there are many smaller divisions..."
(Resp. 423a).

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Despite the constant wars and general economic and political instability the concentration of immense wealth in the hands of a few and the state provided a material base for the progress of Greek culture and is largely accountable for the flowering of the arts and philosophy. The fourth century known as the heyday of architecture was notable for the building of new and restoration of destroyed cities, e.g. Megalopolis with its famous Thersilion (assembly hall) for 10,000 people, Messene, Mantinea, the construction of stone theatres including the largest one in Epidaurus, the Mausoleum at Helicarnassus, the temple of Artemis (Diana) at Ephesus, etc. The rise of sculpture was connected with the names of Praxiteles, Scopas, Leucippus, painting gained a new dimension in the activity of the Athenian and Sicyonian schools. Greek drama at the beginning of the fourth century was represented by great ancient playwright Aristophanes, whose comedies *The Ecclesiazusae* (Women in Parliament) and *The Plutus* (Wealth) vividly reflected the contradictions of the epoch. The progress in literary prose was attested to by Xenophon's *Anabasis* mentioned earlier and historical novel *Cyropaedia* describing the career of Cyrus the Great of Persia, as well as by the oratory and political pamphlets of Lysis, Isocrates and Demosphenes. Yet the greatest contribution of Greek genius to world culture in the fourth century was perhaps in the field of thought. Indeed, Greek classical philosophy represented by Democritus, Plato and Aristotle not only testified to the intellectual achievements of that small but highly gifted people "whose universal talents and activity assured it a place in the history of human development that no other people can ever claim,"[1] but also for the first time clearly defined the two main trends in philosophy, idealism and materialism, referred to by Lenin as the "tendencies or lines of Plato and Democritus in philosophy."[2] Plato's clear-cut statement of the basic question of philosophy as that concerning the relation of the material and the spiritual, the primacy of nature to spirit or vice versa attested to the maturity of philosophy, whereas the comprehensive system of philosophical knowledge developed by Aristotle opened broad prospects for all-round development of human thought.

[1] Frederick Engels, *Dialectics of Nature, p. 46.*
[2] V. I. Lenin, "Materialism and Empirio-Criticism", *Collected Works,* Vol. 14, p. 130.

Ancient Atomism: from Leucippus to Nausiphanes

1. Historical Tradition and Sources

Atomism is one of the world's most congruent, consistent
and widely spread philosophical doctrines. Posidonius the
Stoic and the neo-Platonic Jamblichus refer to early Phoenici-
an philosopher Mochus who lived "before the Trojan War,"
i.e. in time immemorial, as the founder of this philosophy. The
atomistic theory of matter is known to be a component part
of the Vaisesika philosophical teaching in Ancient India.
For all its originality, the substantiation of the arguments ad-
vanced by the Greek atomists, and this circumstance, together
with the fact that the Vaisesika teaching is hardly older
than the third century B.C. is accountable for some scholars'
conception of their mutual influence. However, the ancient
evidence we possess is too slender to permit a definite
conclusion as to who borrowed from whom. Atomism as a
doctrine was accepted in the middle ages by some Arab
philosophical schools. In modern times it became a scientific
theory that took shape in the nineteenth century and
remains till nowadays, though in an updated form, an
important element of the scientific picture of the world.

Whatever the results of the debate about the foreign
sources of atomism, one can state incontrovertibly that the
atomism of the ancient Greeks was not only an original
product of Greek thought but also the culmination of a long-
standing philosophical tradition and a synthesis of a number
of typically Greek philosophical trends and intellectual pos-
tulates. In the atomistic doctrine we find the answers to

numerous questions posed at earlier stages. Its roots go deep into the Ionian physics and Pythagoreanism, as well as into the speculations of the Eleatic school and the physics of the fifth century. Atomism was concerned with the problems of being and void, existence and emergence, unity and diversity, divisibility and quality, i.e. all the problems raised by the previous schools. The synthetic nature of Democritus's atomism, not infrequently left out of account without any good reason, imperatively demands of the historians of philosophy to reassess the significance of the atomistic doctrine in the development of Greek thought and regard it as the first system of classical Greek philosophy.

Tradition credits the Greek theory of atomic elements to Leucippus and Democritus. However, already in the fourth century B.C. the works of these two philosophers came to be regarded as a single body and their differentiation presents now practically insuperable difficulties. We possess only one fragment of Leucippus's book *On Mind* which can be ascribed to him with certainty. All others are credited to both philosophers and the references to them in sources invariably begin with the words "According to Leucippus and Democritus...," "Democritus and Leucippus with their pupils taught...," and the like.

Leucippus, a contemporary of Empedocles and Anaxagoras, was a pupil of Zeno of Elea and the teacher of Democritus. The dates of his life cannot be fixed exactly and are roughly put at 500-440 B.C. His native city may have been Elea, Abdera or Miletus. We know practically nothing about his life. As regards Democritus of Abdera (c. 460-370), "he was a pupil of certain Magians and Chaldeans. For when King Xerxes was entertained by the father of Democritus he left men in charge ... and from these men, while still a boy, he learned theology and astronomy. Afterwards he met Leucippus" (Diog. L. IX, 34). On some evidence he travelled to Egypt, Persia and even to Ethiopia and India. After his return he led a modest and solitary life engaging in scientific studies and valuing them so highly that, according to extant evidence, he "would rather discover one cause than gain the kingdom of Persia" (L. LVIII). He died at an old age.

Numerous testimonies and legends describe Democritus as a "laughing" philosopher who refused to take seriously what was commonly believed to be serious (L. LXII). Ancient sources portray him as a man of great practical wisdom,

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learning and power of observation. Referring to bibliographer Thrasyllus, Diogenes Laertius gives the names of more than 60 works by Democritus, among them such important treatises as *Great World-Order* (sometimes credited to Leucippus), *Small World-Order*, and *On Logic* or *The Canon*. Of these only a few fragments survived, mixed at that, as was mentioned above, with the fragments and paraphrases of Leucippus. On the evidence of Diogenes Laertius, "Aristoxenus in his Historical Notes affirms that Plato wished to burn all the writings of Democritus that he could collect, but that Amyclas and Clinias the Pythagoreans prevented him, saying that there was no advantage in doing so, for already the books were widely circulated" (Diog. L. IX, 40).

On the face of it, the doctrine of atomic elements is very simple: the elements of all that exists are indivisible material particles or atoms moving in empty space. Nothing ever comes into being out of or perishes into the non-existent. Combination of atoms produces things, while their dissolution brings about the end of things. All things arise of necessity which in fact is a vortex bringing the atoms together. The vortex results from the random movements of the atoms oscillating in all directions. External objects emit thin shells (copies or images) of themselves which react on the senses. The soul is only a combination of particular atoms which are the tiniest and smoothest of all. Man's final goal is a welfare of soul, i.e. its peace and balance undisturbed by fear, prejudice or passion.

What lies behind this seeming simplicity? Why was the teaching of Democritus so vigorously opposed by Plato and his followers, not to speak of the later Christian theologicians?

2. Atomistics and the "World-Order"

The basic postulate of the atomists was that reality only consists of atoms and the void. An infinite multitude of indivisible particles of matter move eternally in infinite empty space, impinging on one another and coming together to form physical objects. The atoms differ from one another only in the shape, arrangement and position. These three modes of difference were illustrated by Aristotle with the examples of A and N, AN and NA, Z and N respectively. The question naturally arises: why did the atomists have to postulate indivisible particles and could not assume the infinite divisibility of matter?

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Being a pupil of Zeno, Leucippus must have been well aware of both the strong and weak points in his master's reasoning and pondered, like Democritus some time later, over the aporias against multitude: if a body is divided into an infinitely large number of parts, they will either have no size at all and their aggregate, i.e. the original body, will dwindle into nothingness, or, if they have any size, the body will be infinitely large. Hence, in both cases the postulation of infinite divisibility leads to absurdity. However, the atomists realised that the contradiction could be avoided by setting a limit to divisibility, i.e. by assuming minute indivisible particles or atoms (Gr. "indivisible"). This assumption had an additional advantage in that it tallied closely with everyday experience. Indeed, even simple observation provides convincing evidence that matter can be divided into parts so small as to escape our senses. Giving an account of the principles of atomism in Democritus, Aristotle quotes his comparison of the atoms to specks of dust dancing in a sunbeam.

The atomistic theory bridged the gap between the one immovable and indivisible Being of Parmenides and the real physical world of senses with its mutable and divisible objects. It offered at once the solution of two problems that harassed the Eleatics: those of one and many, and motion.

Indeed, any object could now be split into a finite number of particles and restored to its initial shape, and the existence of void alongside atoms accounted for their motion. The pattern of the Eleatic Being remained intact since the atoms were conceived as indivisible and unperishable entities, but many was substituted for One. The postulation of void made reality both pluralistic and movable and reconciled Eleatic logic with the senses.

Aristotle is known to have interpreted the atomistic theory as an answer to the Eleatic denial of change and movement. The atomists accepted the Eleatic proposition that without void motion is impossible. Yet contrary to the Eleatics who denied the existence of the void, the atomists maintained that not only being or the atoms, but also not-being or the void are real. Interpreting the atomists' arguments in favour of the existence of the void, Aristotle wrote: "...it is maintained that motion would seem not to exist, if there were no void, since what is full cannot contain anything more... They reason from the fact that some things are observed to contract and be compressed ... which implies that the compressed body

contracts into the voids present in it..." (Arist. Phys. IV, 6, 213 ab). The void is absolutely homogeneous and can exist irrespective of whether it is occupied by physical objects. It separates whole bodies and particles of composite bodies. Atoms alone contain no void and are therefore absolutely dense leaving no room for a blade that might cut or split them apart.

The admission of void also eliminated the difficulties facing the Pythagoreans and "saved" their doctrine of number as the principle of the universe. In point of fact, the Pythagoreans also spoke of void, but understood it in a crude way, identifying it with air. Aristotle was keen to note a certain affinity between the two teachings, since any material object is conceived by an atomist as a finite plurality of atoms and, therefore, as a definite number. Yet Leucippus and Democritus evidently showed no tendency to subscribe to so-called mathematical atomism in the manner of Pythagorean Eurytus and made no attempt to account for properties of things by the numbers of their atoms, the more so as Democritus allowed differences in the size of the atoms and even suggested the possibility of an atom as large as the cosmos (L. 207).

Democritus postulated an infinite multitude of atoms and, accordingly, an infinite vacuum, since a finite vacuum cannot accommodate an infinite number of atoms and an infinite number of worlds composed of atoms. It is hard to say which of the two assumptions was primary, since both stem from one and the same conception of infinity which also underlies Democritus's postulation of the infinite variety of atom shapes.

The infinity of the world in space presupposes its infinity in time, as well as the eternity (infinity) of motion. According to Aristotle, "Democritus of Abdera says that there is no beginning of the infinite, that a cause is an origin and what is everlasting is infinite; therefore to ask 'why' in a case like this is to look for an origin for the infinite" (Arist. De gen. anim. 742b). This is a very important statement and we shall later discuss it in more detail, but at this point it will be sufficient for our purpose to note that the universe, according to the atomists, is eternal and infinite in space, and that the number of the atoms and of the worlds composed of them is infinite. This fundamental materialist proposition was at once countered by the atomists' opponents with an argument that it postulated something more infinite than infinity (L. 141). Indeed, according to the atomistic doctrine, the number of the worlds is in-

finite and, as each of the worlds maintains a very large number of atoms, the number of atoms is larger than the number of the worlds, i.e. than infinity, which is absurd. None of the extant evidence throws light on how Democritus met this difficulty. The only way out open to him at that time appears to have been provided by Anaxagoras's theory that "in Great there is always a Greater. And it is equal in number to the small, but each thing is to itself both great and small" (DK 59 B 3). However, Democritus could not resort to this argument as it implied the infinite divisibility of matter. Modern mathematics has long since discarded this problem by showing that the infinite set of worlds, each consisting of a finite set of atoms, contains a countable (equal in power to a numerical series) set of atoms. As regards other paradoxes arising in the cosmology of innumerable worlds (such as photometric, gravitational, thermodynamic), they were still far ahead and did not trouble ancient science.

The atomistic concept of motion was countered by Zeno's paradoxes "against movement". There is good reason to believe that Leucippus and Democritus avoided these paradoxes by resorting to the notions of indivisible fractions of space, time and movement. These notions, incomprehensible from the viewpoint of ancient science, come very close to the modern concepts of quantised space, time and motion.

Democritus was bound to make some attempt to account for the differences of fire, air, water and earth in terms of their atomic composition, since the conception of the four "elements" was deeply rooted in Greek philosophical tradition. Describing the atomists' views, Aristotle wrote: "But they have never explained in detail the shapes of the various elements, except so far as to allot the sphere to fire. Air, water and the rest they distinguished by the relative size of the atom" (De Caelo, III. 4, 303a). According to other evidence, Democritus explained the mobility of the atoms of fire by their smallness and roundness. The atoms of air, water and earth are cubic in shape, their different sizes accounting for distinctions between the elements. The atoms do not turn into one another, but evolve from a large heterogeneous mass as separate elements, e.g. earth and air from water, giving the illusion of mutual transformations.

As we see, in constructing the universe Democritus does not seem to need anything but atoms and motion. Moving atoms draw together, set up an eddy and begin to be sorted out in

void, like to like. As a result, they form a separate "world" enclosed within its separate "sky." Worlds and all objects are formed from atoms and dissolve into them. According to Hippolytus, Democritus taught that "there are innumerable worlds of different sizes. In some there is neither sun nor moon, in others they are larger than in ours and others have more than one. These worlds are at irregular distances, more in one direction and less in another, and some are flourishing, others declining. Here they come into being, there they die and they are destroyed by collision with one another. Some of the worlds have no animal or vegetable life nor any water" (L. 349). While reading these lines a modern reader may easily mistake them for an extract from some nineteenth-century popular book on astronomy...

3. Determinism: Necessity and Chance in Democritus's Philosophy

Democritus was the first in ancient Greek philosophy to introduce the concept of cause and to develop a system of determinism. For one thing, no one before him had used the word *aitia* with its purely anthropomorphic meaning "originator" or "instigator" in the broad sense of "cause".

The general statement of the principle of causality is credited to Leucippus who was quoted as saying: "Nothing occurs at random, but everything for a reason and by necessity" (L. 22). This utterance alone clearly shows the advance made by the atomists on the previous understanding of the relationship between the preceding and subsequent states of things. Prior to Democritus Greek philosophers in fact deemed it sufficient to indicate the primary substance from which all things came. This led to the Eleatic denial of genesis and change in general: if "nothing can come from nothing," generation of things becomes inexplicable and hence, in the eyes of the Eleatics, impossible. The way out proposed by Anaxagoras consisted in postulating qualitatively determinate and immutable seeds constituting the substance of all things and not differing qualitatively from their components. Leucippus and Democritus approached the problem of genesis from a different direction: by asserting that nothing can generate without cause, "at random." In other words, they preserved the conception of primary substance from which all things come into being, but distinguished from it the cause of their generation and change.

Since the works of Democritus and Leucippus have come down to us in fragments only, the reconstruction of their

determinism presents considerable difficulties. Indeed, what was their conception of the mechanism of causality? The most probable version comes from the pen of Aetius who quotes Democritus as referring to the "repercussion, motion and blow of matter" (L. 25). Aetius interprets it as a statement of "necessity," yet "cause" is the obvious connotation to it: Democritus clearly identifies cause with necessity, and this leads to several important consequences.

The first and the most significant of them is the denial by materialist determinism of any intelligence that moves the world. According to Aetius, all philosophers believed the world to be animate and governed by Providence, whereas Leucippus, Democritus, Epicurus and other adherents of the atomistic theory held that it was inanimate and governed by some blind force (L. 23). Despite the obvious inaccuracy of Aetius about the unanimous recognition of preternatural powers by all Democritus's predecessors, his testimony is very valuable: Democritus, as well as other atomists, contrasts determinism to the religious doctrine of divine reason governing the world. In other words, the determinism of the atomists is inseparably linked with atheism.

The second consequence was the denial of chance and the resulting fatalistic trend of ancient determinism. According to the atomists, the purpose of science was to reveal the cause of an event, i.e. to show its necessity. Since everything occurs by necessity, there is no such thing as chance in an objective sense, i.e. as something that has no cause. Chance is a subjective notion used merely to denote an event we do not know the cause of, i.e. nothing else than an expression of human ignorance.

Most commentators on the philosophy of Democritus centred upon the first consequence which became the primary object of their attacks against the atomistic doctrine. The main argument of its opponents was that this doctrine could not explain orderliness in the world. Denouncing determinism, Christian theologian and mystic philosopher Saint Augustine wrote: "One may concede to Democritus and Epicurus the existence of atoms, even their random collisions and the resulting movement by impact. But how can one accept the view that the atoms crowding together can create some object, change its shape and modify configuration, making it smooth, proportionate and adorning with colour?" The examples of such criticism can be multiplied, but all of them consciously or

unconsciously ignore the fact that Democritus did not recognise accidental movement of the atoms and their "random" combination into orderly objects, but held that they were subject to the law of attraction of like to like.

This conception was well known to the philosophical precursors of Democritus, but he gave it a new interpretation. On the evidence of Sextus Empiricus, Democritus taught that "living creatures consort with their kind, as doves with doves, and cranes with cranes, and similarly with the rest of the animal world. So it is with inanimate things, as one can see with the sieving of seeds and with the pebbles on beaches. In the former, through the circulation of the sieve, beans are separated and ranged with beans, barley-grains with barley, and wheat with wheat; in the latter, with the motion of the wave, oval pebbles are driven to the same place as oval, and round to round, as if the similarity in these things had a sort of power over them which had brought them together" (DK 68 B 164). Similar evidence for Democritus's views, if only not so colourful, we have from Theophrastus, Diogenes Laertius, Hippolytus and Alexander. As regards the formation of orderly inorganic bodies, Democritus was far ahead of his time and his doctrine might well have ranked with some mechanistic concepts of the nineteenth century, as, for instance, the "law of agregation" in Spencer's theory of evolution of which it is highly reminiscent.[1]

The picture of the universe painted by Democritus exemplifies a simple juxtaposition of necessity and chance: orderly bodies come about by necessity as a result of haphazard collisions and recoils of the atoms. If his vision of the world were to be described in terms of modern science, the law of statistical regularity would probably be the closest approximation. However, proceeding from his mechanistic theory of causality with its rigid alternative of chance or necessity, Democritus rejected the former in favour of the latter. Contrary to dialectical determinism with its conception of chance as a form of manifestation of necessity and as its complement, the one-sided and "wooden" determinism of Democritus absolutised necessity, thereby turning it into its opposite and reducing to the status of chance. Indeed, the universe at large is conceived by the atomists as having been produced by chance, whereas "our world" has no other explanation but the law of causality.

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[1] See H. Spencer, *First Principles*, Ch. XXI.

The rejection of chance and the identification of causality with necessity that created for Democritus serious problems in cosmology and cosmogony also led him to deny any freedom in human activity. The problem of freedom underlying any ethical theory lay at the root of disagreement between Democritus and his follower Epicurus who was to develop further the doctrine of atomistic determinism.

4. Soul and the Theory of Knowledge

The atomists gave a purely materialist account of soul and the process of cognition. Following the deeply rooted tradition of Greek philosophy, Democritus together with the Ionian philosophers attributed the mental activity of human beings to a specific life force present in the body and called soul or psyche and regarded it both as the source of motion and the seat of sensations and thought. As regards its first function, his reasoning was simple: what is motionless cannot impart movement to another body, therefore, in order to move the body, the soul must be corporeal and movable. Democritus maintained that the soul consists of spherical atoms and is like fire because, according to Aristotle, "shapes of this kind are best able to slip through anything and to move other things by their own movement" (Arist. De anima I, 3, 403b). The individual soul is mortal since its atoms are dispersed after death of the body. Yet all things, according to Democritus, "share in some sort of soul, even dead bodies, because they plainly retain some portion of warmth and sensitivity when most of it has been breathed out" (L. 448). Hence, Democritus's concept of soul in its primary function of imparting motive power is a combination of mechanistic atomism and the hylozoistic doctrine.

The second function of the soul, that of providing sensation and thought, was more difficult to account for on the principles of the atomistic theory. Sextus Empiricus quotes Democritus as saying: "By convention is sweet, by convention bitter, by convention hot, by convention cold, by convention colour; but by verity atoms and void" (Sext. Adv. math. VII, 135). This view expressed in modern terms amounts to an assertion of the subjective character of such sensible qualities as taste, heat and cold because all of them come only from the shape, arrangement and position of the atoms. Hence the general conclusion about the inadequacy of sensible knowledge incapable of grasping the truth for the simple reason that the atoms lie beyond the possibilities of the senses: "We in

reality comprehend nothing invariable, but what shifts about according to the disposition of the body and of the things which oppose it" (ibid. 136).

However, though the same object can produce different sensations depending on the state of man's body (honey tastes bitter to a man suffering from jaundice and sweet to a healthy one), they are secondary in relation to objective reality, namely, to the shape of the atoms. According to Democritus, heat is akin to fire because both are the effects of round and mobile atoms, white and black result respectively from smooth and rough atoms, sound comes from a condensed stream of atoms (the difference in the tones being evidently a function of condensation. The atoms producing bitterness are small, round and smooth but with irregularities; pungency, small with angles and bends; sweetness, round and large, etc. Much depends on the position of the atoms and on the angle of vision: thus, the sun-beam falling on the neck of a pigeon produces very different effects in accordance with the position of the observer's eye: some see the neck dark-green, others gold, still others black, etc. (L. 434).

Democritus taught that sensation involves direct physical contact between an external object and a sense organ. The interaction between the two was easy to account for in the case of auditory, tactile and gustatory sensations, but vision required a more sophisticated explanation. To overcome difficulties, Democritus elaborated the Empedoclean theory of effluences according to which external objects constantly cast off, as it were, films of atoms retaining the form of their surfaces. These "images" as they were called by Democritus enter the eye and produce the corresponding visual sensation.

According to ancient evidence, Democritus maintained that there are two forms of cognition, one through the senses or "bastard", and the other through the intellect or "genuine". "Whenever the bastard kind is unable any longer to see what has become too small, or to hear or smell or taste or perceive it by touch, [one must have recourse to] another and finer [instrument]" (Sext. Adv. Math. VII, 139).

As is seen from the above, Democritus assigned an important role to the senses and regarded sensible experience as a stepping stone to rational thought. Thus, in substantiating the atomistic doctrine he passes from the image of a particle to the conception of indivisibility of atoms. According to Democritus, rational cognition is impossible without

sensory experience. On the evidence of Galen, Democritus after denouncing the senses as giving but a false picture of reality makes them say to the mind: "Wretched mind, do you take your evidence from us and then throw us down? That throw is your overthrow" (L. 79-80).

Significant as it is, the idea of Democritus about the unity of sensory and rational knowledge was destined to remain but a conjecture, since we do not possess any of his logical writings devoted to theoretical investigation into the process of ascent from one level of cognition to the other (his treatise *On Logic* or *The Canon* is known to have been lost). Democritus widely used abstraction as a means of reflecting objective reality and, according to the testimony of Aristotle, was the first to tackle the problem of definition. There is good reason to believe that he gave a powerful impetus to the Epicureans in their further epistemological studies. Nevertheless, the foundation of formal logic as a science of correct thinking is justly credited by tradition to Aristotle.

For all its weak points, the theory of knowledge expounded by Democritus was an important advance on his predecessors. It contained a number of fruitful ideas anticipating in a way the future development of philosophical thought. Among the most important of them was the doctrine of the objective or "primary" (extension, size, shape, etc.) and the subjective or "secondary" (colour, taste, smell) qualities which occupied the minds of philosophers from Galileo's time till the nineteenth century and is still alive today, the teaching of effluence which was in fact a prototype of the corpuscular theory of light, and the idea of logical transition from phenomena to essence (from bastard to genuine knowledge) which provided the foundation for the development of inductive logic.

5. Man, Society, Ethics and Religion

Like all Greek philosophers, Democritus devoted much attention to the problems of origin of living beings. He taught that they came out of earth and moisture and did not owe their origin to any creator or intelligent purpose (L. 514). According to Democritus, the first men may also have arisen from earth, but it is also possible that they came from other animals as a result of natural changes and survived in the process of something like "natural selection." These views on the origin of living beings and mankind are not original and can be traced to earlier philosophical doctrines and even still older mythological notions.

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Far more realistic was the evolutionary conception of society credited to Democritus. According to Diodorus Siculus, Democritus maintained that the first men led a disorderly life like animals feeding on grass and fruits. Their life being in constant jeopardy from wild beasts, they learned to herd together in order to survive. They had no clothes and could not use fire or build houses. Lacking the habit of laying in food for the winter, they often died of starvation and cold. As time went by, they learned to take refuge in caves and lay aside fruits suitable for storage. Then they learned to produce fire by friction and the rudiments of the arts came into being. Galen quotes Democritus as saying that "experience and vicissitudes have taught men this, and it is from their wealth of experience that men have learned to perform the things they do."[1]

Other sources ascribe to Democritus the view that the arts were a result of simulation: "We are pupils of the animals in the most important things; the spider for spinning and mending, the swallow for building, and the songsters, swan and nightingale, for singing, by way of imitation" (L. 559).

Elaborating on the evolutionary conception of society. Democritus proceeded from the sophistic *nomos-physis* antithesis, i.e. the distinction between what was contrived artificially or came into being by human consent and what is natural (arose by necessity). He maintained that language is an artificial product of developing society: first, men uttered but confused sounds, then gradually they began to articulate words and agreed among themselves on expressions for every object thereby making communication possible. Each group of people composed its own words, and different languages arose in different places. In contrast to Pythagoras who was believed to profess the doctrine of the "natural" origin of words, Democritus maintained that names came into being by mutual consent, and adduced homonymy, polynomy, arbitrary change of names and differences in the methods of word coinage in support of his theory (see L. 563).

Similar views were held by Democritus regarding the state and the laws. According to Diogenes Laertius, Democritus asserted that the laws existed only by *nomos* (conventionally), whereas "in nature there is nothing but atoms and void"

[1] *Galen on Medical Experience,* First edition of the Arabic version with English introduction and notes, London, 1944, IX, 5, p. 145b.

(IX, 45). This is a very important statement leading directly to a conclusion that since the laws are established by men, men are entitled to change them: "The law wishes to benefit men's life; and it is able to do so, when they themselves wish to receive benefit; for it shows to those who obey it in their own particular virtue" (L. 608). Hence, justice is what conforms to nature and injustice is what contradicts it. Contrary to Antiphon, Democritus does not regard the laws as necessarily contradicting nature: "The laws would not prevent each man from living according to his inclination, unless individuals harmed each other" (L. 570).

As might be expected, the solution to the problem of freedom offered by Democritus is also closely linked with his understanding of the relationship between what exists "by nature" and what came about "by convention." The rigorous necessity of all natural phenomena advocated by Democritus was apparently incompatible with the conception of freedom of man's behaviour and ruled out any responsibility for his actions. The opponents of the atomistic theory sensed its fatalistic strain and came out in defence of chance as the foundation of the doctrine of freedom and free will advanced in the Hellenistic period and particularly in Christian literature. Taking exception to the Democritean view of absolute necessity, Aristotle wrote: "If ... all that is or takes place is the outcome of necessity, there would be no need to deliberate or to take trouble" (De interpr. IX, 18b). It should be noted, however, that the criticism of atomistic determinism was usually blatantly biassed and not infrequently wide of the mark.

Indeed, Democritus held that a conscious act was possible even if no such thing as chance existed. This, in fact, is the jist of his famous statement: "Men have fashioned an image of Chance as an excuse for their own stupidity. For chance rarely conflicts with Intelligence, and most things in life can be set in order by an intelligent sharp-sightedness" (L. 32). In other words, men speak of chance when they do not know the concatenation of events and thus deprive themselves of the possibility of acting reasonably. Reasonable conduct must be always based on knowledge.

In the light of this statement the notion of chance (*tyche*) acquires a new meaning. The ancient Greeks spoke of *tyche* mainly in connection with human acts using the word in the sense of fortune or misfortune as distinct from fate.

According to Democritus, reliance upon it was tantamount to dependence on chance (in the English sense of the word) instead of one's own conscious and free activity. Such activity is made possible not only by the events occurring "by nature," but also by the events resulting from "convention," i.e. the arts, customs, general agreement, etc., or, using the modern language, from social processes based on, but not reducible to, the laws of nature. When Democritus counterposes Intelligence to Chance understood as an excuse for man's stupidity he opens the way for the dialectical concept of necessity.

Dialectic defines freedom as "the capacity to make decisions with knowledge of the subject."[1] By "an intelligent sharp-sightedness" Democritus in fact means a man who understands necessity and knows how to use it. The philosopher is well aware of the fact that it is difficult to foresee everything, as even a good helmsman may be shipwrecked, and a valorous man may suffer a setback (L. 33). Yet even in this case knowledge and skill will help us: "for instance, deep water is useful for many purposes, and yet again harmful, for there is danger of being drowned. A technique has therefore been invented, instruction in swimming" (ibid.).

To be sure, Democritus is still far from conceiving freedom as recognised necessity. He only exhibits a trend towards the dialectical solution of the problem and his views on the role of reason in human life do not yet go beyond conjectures, common sense and general, sometimes trivial, considerations. Nevertheless, the Democritean conception of freedom paved the way for a more profound understanding of the nature of human activity and enabled the Epicureans to make another step in the investigation of the chance-necessity antithesis.

The naturalistic view of the origin of society and the refusal to accept the theory of divine ordinance led Democritus to a peculiar conception of religious beliefs. In his opinion, the gods were invented by men: "When the men of old time beheld the disasters in the heavens, such as thunderings and lightnings, and thunderbolts and collision between stars, and eclipses of sun and moon, they were affrighted, imagining the gods to be the causes of these things" (Sext. Adv. math. IX, 24). However, these false beliefs were not entirely

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[1] Frederick Engels, *Anti-Dühring*, p. 141.

groundless being caused by material images ("effluences").
On the evidence of Sextus Empiricus, "Democritus says
that certain images impinge on men, and of these some are
beneficent, others maleficent (whence also he prayed that
he might have 'propitious images'), and these images...signify
the future to men beforehand, as they are visible and utter
sounds. Hence the ancients, on receiving a presentation
of these images, supposed that God exists" (ibid., IX, 19).
The conception of images revealing the future and giving
rise to the belief in gods, rather vague in Democritus, was
to be later elaborated by Epicurus and Lucretius.

Democritus is credited with yet another explanation of
beliefs in gods based on the interpretation, in the manner of
the Euhemerus, of certain myths as traditional accounts
of historical events and human experience. For instance,
interpreting the myth about Athena "Tritogeneia" (born
thrice) Democritus maintained that the goddess was a
personification of wisdom with its three abilities, to think
well, to speak well and to act well (see L. 822). A similar
explanation was given by Democritus to the conception of
chance which, according to Aristotle, was viewed by him as
a cause obscure to human understanding and therefore divine
and miraculous (Phys. II, 4, 196b). Significantly, the Greek
pantheon is known to have included, among other deities,
the goddess of fortune Tyche.

Proceeding from his general philosophical convictions,
Democritus denied divine providence, the resuscitation of
the dead, posthumous retribution and requital, prophecy,
ghosts, etc. It is not surprising, therefore, that his views
on religion and gods were often distorted and misin-
terpreted. Among the examples are the identification of his
"images" with Christian angels and the fire atoms with
"God" allegedly worshipped by Democritus.

The problems of ethics are treated by Democritus in a
similar atheistic vein. Central to his moral prescriptions
that came down to us is the idea of humaneness in the rela-
tions among people. Needless to say, one would vainly seek
any direct link between his physical system and the moral
theory which obviously relates to what exists "by conven-
tion" and cannot be deduced from the atomistic doctrine.
However, the ethical thought of Democritus could spring
from no other source but his basic philosophical principles.
They are expounded, first and foremost, in his teaching

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of criteria as rendered by Sextus Empiricus: "According to Democritus there are three criteria—namely, the criterion of the apprehension of things non-evident, which is the things apparent; for, as Anaxagoras says (and Democritus commends him for it), the things apparent are the vision of the things non-evident; and the criterion of investigation, which is the conception ... and the criterion of choice and aversion, which is the affections—for that which we feel is congenial to us is choiceworthy, but that which we feel is alien is to be regarded with aversion" (Sext. Adv. math. VII, 140). The latter criterion determines the moral conduct of man, since pleasure in congenial to him, whereas suffering is alien. However, the hedonism of Democritus does not boil down to the preference of pleasures, since the goal of living is contentment (*eythymia*), "a state in which the soul continues calm and strong, undisturbed by any fear or superstition or any other emotion" (Diog. L. IX, 45). Contentment can only be achieved by moderation in enjoyment and observance of measure. Pleasures should be neither lacking nor excessive: "If one oversteps the due measure, the most pleasurable things become most unpleasant" (L. 739, 753). Observance of measure, according to Democritus, calls for balance between one's abilities and conduct and is impossible without knowledge and intelligence. The ethical theory of Democritus links hedonism with rationalism accounting for wrong-doing by lack of knowledge.

Democritus's chief contribution to ethics was the development of such moral categories as conscience understood as aversion to doing wrong, duty and justice. He is credited with well-known maxim "refrain from crimes not through fear but through duty" (L. 605, 789).

The ethical principles of Democritus do not make an elaborate reasoned system as they came down to us mainly in the form of separate maxims. There are grounds to believe that they are but corrupted fragments of lost writings where Democritus may have given a continuous exposition of his ethical theory. However that may be, these fragments throw additional light on his political teaching outlining the structure of an ideal democratic state: "The well-run State is the greatest protection, and contains all in itself; when this is safe, all is safe, when this is destroyed, all is destroyed" (L. 595). However, in public affairs, like in private life, Democritus remains true to his principle of

contentment or well-being and recommends avoiding the extremes—submission of individual to the needs of the state on the one hand and neglect of public affairs, on the other: "To good men, it is not advantageous that they should neglect their own affairs for other things; for their private affairs suffer. But if a man neglects public affairs, he is ill spoken of, even if he steals nothing and does no wrong" (L. 737). Consequently, the right way to achieve contentment is not to avoid participation in public or private affairs, but rather to observe measure and keep well within one's powers.

Living in turbulent times, Democritus regarded participation in public affairs, punishments, contradictions between the rich and the poor, the masters and the slaves as unavoidable evils and recommended dealing with them on the principle of the golden mean which he also considered applicable to such moral categories as friendship, mutual assistance, devotion, and the like. The Democritean ethical theory safely evades both the sophistic immorality and the Socratic absolutisation of moral prescriptions clearly demonstrating the most characteristic feature of all ancient philosophy, its contemplativeness. Exalting well-being and cheerfulness as the goal of living and seeking to keep emotional disturbance to a minimum, Democritus did not see in philosophy a means of changing the existing society—his aim was only to explain it.

6. The Democriteans

By tradition, most textbooks of philosophy proceed from Democritus directly to Epicurus ignoring the activity of the "Democriteans." In fact, Democritus was the founder of a whole philosophical school in the antique sense of a succession of philosophers of whom one was the disciple of the other. Though our knowledge of the Democriteans is rather limited, the very fact that they are constantly mentioned in ancient sources expounding the views of the founders of atomism testifies to the important role they played in the history of philosophy.

According to reliable sources, among the pupils of Democritus were Protagoras who later joined the sophists, and Nessas who taught Metrodorus of Chios (on some evidence the latter was a pupil of Democritus himself). Metrodorus taught Diogenes of Smyrna whose pupil Anaxarchus was the teacher of Pyrrho, the founder of the Sceptic school.

Pyrrho taught Nausiphanes who returned to the Democritean doctrine. Other Democriteans mentioned by early doxographers were Hecataeus of Abdera, Apollodorus of Cyzicus, Diotimus of Tyre and Bion of Abdera who "was the first to affirm that there are places where the night lasts for six months and the day for six months" (Diog. L. IV, 58).

The most prominent representative of the school of Democritus was Metrodorus. He accepted the basic thesis of his teacher about the atoms and void and taught that the universe is eternal as it could not come from nothing. On the evidence of Aetius, Metrodorus said that it was as unlikely that a single world should arise in infinite space as that one single ear of corn should grow on a large plain. That worlds are innumerable follows from the infinite number of causes of their origin. Indeed, if a single world is limited and the number of causes of its generation is unlimited, the number of worlds must be unlimited too, since an infinite number of causes, i.e. atoms or elements, bring about an infinite number of results (DK 70 A 6).

Metrodorus offered his own explanations of celestial phenomena, earthquakes, formation of clouds, trade-winds, bitterness of sea water, etc. Contrary to the principles from which he proceeded in these explanations, Metrodorus revised the theory of knowledge of Democritus strengthening its trend towards scepticism. For instance, Sextus Empiricus quotes as Metrodorus's own words this statement: "We know nothing, nor do we even know the very fact that we know nothing" (Sext. Adv. math VII, 88). This view proved to be the starting point of Pyrrho's doctrine of complete pessimism regarding the possibility of authentic knowledge.

Besides the treatise *On Natural Science* where Metrodorus expounded his "physical" and epistemological views, he also wrote *The Trojan War*, a kind of commentary on Homer, and *The History of Ionia*.

Anaxarchus of Abdera is known to have been a court philosopher and something like a jester of Alexander of Macedon. Owing to his status at the court he was not afraid of speaking the truth and is mainly known as a teller of risky anecdotes. Tradition says that Anaxarchus's eloquent and heartfelt description of innumerable worlds once drove his regal interlocutor to tears over his inability to conquer even one of them. On the evidence that we have, Anaxarchus did not stop

short at the mockery of Alexander the Great holding up to ridicule the attempts to deify him. When the king happened to fall ill and his physician prescribed some beverage with flour for his malady, Anaxarchus burst out laughing and said that his god's hope was in the cup with slops...

Anaxarchus evidently carried his scepticism to an extreme, as, on the evidence of Sextus Empiricus, he "likened existing things to a scene-painting and supposed them to resemble the impressions experienced in sleep or madness" (ibid.). His ethical views were essentially eudaemonistic as he recognised happiness or well-being to be the goal of living. However, his eudaemonism was closely linked with scepticism: happiness, according to Anaxarchus, could only be attained through complete indifference to life (apathy).

Hecataeus of Abdera is known for his commentaries on Homer and Hesiod, works on the Hyperboreans, a legendary people in the far north, and on the mythology of the Magi and Egyptians. His book *On the Philosophy of the Egyptians* came down to us in the rendition of Diogenes Laertius (I, 9-11) and Diodorus Siculus. Hecataeus held that the supreme goal in life is autarky, i.e. internal freedom and complacency of the individual. In this he differed from another follower of Democritus, Nausiphanes, who saw it in fearlessness. His *Tripod* devoted to the three faculties of wisdom (good thinking, good speaking, and good acting) is based on the belief in the priority of "physis" over "rhetoric". According to the testimony of Philodemus, a disciple of Epicurus, Nausiphanes was seriously engaged in the studies of logical problems and maintained that consistency and coherence in speech could only be achieved if the speaker proceeded from the knowledge of the whole and combined the "physical" study of objects inaccessible to senses (i.e. of their atomic structure) with the rational interpretation of obtained results, i.e. "calculation of the future from the known facts" (DK 75 B 2). This clearly points to the general trend of Nausiphanes's logical theory towards a synthesis of the inductive and deductive reasoning.

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The works of Democritus constituted an encyclopaedia of knowledge based on the atomistic hypothesis and well-reasoned epistemological principles. The materialist character

and enormous philosophical significance of his ideas are obvious. However, no less obvious was its challenge both to the traditional religious-mythological world-view and to developing idealism. The gauntlet was picked up by Plato whose system of objective idealism represented an immediate ideological reaction to the atomistic doctrine of Democritus. Though Plato never mentioned the great atomist by name, it was clear already to the ancients that the reason for this omission was not only the hostility of Plato towards materialism, but also the understanding that "he would have to match himself against the prince of philosophers" (Diog. L. IX, 40). Modern investigations show that Plato's main dialogues reflected his hidden polemic with Democritus and at the same time contained borrowings from his opponent's doctrines regarding secondary issues. This polemic which surfaced in the works of Aristotle marked the beginning of open struggle, conscious and uncompromising, between materialism and idealism, determinism and teleology, atheism and religion. Plato's philosophy to which we are now passing provided the theoretical foundation of idealism and became its banner in this struggle.

Plato

7. Life and Work

Plato was born about 427 B.C. in a prominent but not rich Athenian family that settled in Aegina. His father Ariston was of noble birth, tracing his descent from Attica's last king Codrus, and the family of his mother Perictione came from a kinsman and friend of Solon, the famous Athenian lawgiver. Plato's real name was Aristocles and he owed the name by which he went down in history to his athletic built (*platys* means broadshouldered or stout). His family and other Athenians were later driven out of Aegina by the Spartans and returned to Athens.

Plato's education, like any other noble Athenian's, was both physical and mental and included gymnastic, grammar and music. He is known to have made an early acquaintance of Heraclitean philosophy, presumably owing it to the influence of sophist Callicles whom he later made a character in one of his dialogues. He must have thoroughly studied the doctrines of Parmenides, Zeno and the Pythagoreans. There is good reason to believe that he had a thorough knowledge of the atomistic theory. Plato is also known to have devoted much time to poetry and is credited with numerous epical and lyrical works, as well as with tragedies and comedies. His literary heritage that came down to us also includes 25 miniature poems written in the form of epigrams. However, according to some ancient sources, his acquaintance with Socrates made such a profound impression on the young poet that he burned a tragedy he had written and gave himself up wholly to philosophy.

Plato first met Socrates about 407 and this meeting turned his life. For eight years he was one of the most devoted pupils of Socrates and left Athens after his master's execution. For about a year he lived in Megara and, after a short stay in his native city, made several trips abroad. In 389-387 Plato vi-

with Dion, a brother-in-law of Dionysus I, the famous tyrant of Syracuse. However, for an unknown reason the tyrant got so angry with the philosopher that sold him into slavery. Plato was brought to Aegina and bought by a Cyrenean Anniceris. When Plato's friends collected the necessary sum and offered it to Anniceris, the latter refused to take the ransom and let Plato free. Tradition holds that Plato used the money collected by his friends to buy a site with a grove of trees outside the walls of Athens and founded there his school, the famous Academy, called after Athenian hero Academus. Later, the name came to denote scientific institutions of high repute.

In 367, after the death of Dionysus I, Plato made another trip to Sicily on the invitation of the former ruler's son Dionysus II. Like on his first visit, the philosopher hoped to realise his ideal of enlightened ruler, but his hopes were again rudely shattered. In 361-360 Plato made his third trip to Italy and it also proved futile. According to ancient evidence, Dionysus showered him with gifts, but Plato rejected them. The relations between the tyrant and the philosopher became very strained and Plato had to leave the inhospitable island. His mishaps were partly attributable to friendship with Dion who strove to overthrow Dionysus II and establish an oligarchic government in Syracuse.

The philosopher died in 347 B.C.

Plato's heritage includes the *Apology of Socrates*, 23 genuine and 11 disputable dialogues, as well as 13 letters, some of them incontestably authentic. The dates of Plato's works cannot be fixed exactly. By and large, his creative activity can be roughly divided into four periods. The first or early period started after Plato had made the acquaintance of Socrates and ended with his trip to Sicily. It includes the *Apology of Socrates*, *Crito*, *Euthyphro*, *Laches*, *Lysis*, *Charmides*, *Protagoras* and the first book of his *Republic*. These dialogues are notable for a broad use of the Socratic method of analysis of concepts. The second or transitional period (the eighties of the fourth century) is keynoted by the emergence of the theory of ideas. It includes dialogues *Meno*, *Gorgias*, *Euthydemus*, *Cratylus*, *Lesser Hippias*, *Greater Hippias*, *Ion*, and *Menexenus* (the genuineness of the latter three is disputable). The third period of maturity (the seventies and the sixties) is represented by dialogues *Phaedo*, *Symposium*, *Phaedrus* and books II-X of the *Republic* where Plato develops the classical form of his

theory of ideas as the substance of reality, i.e. the idealist trend as such, as well as by dialogues *Theaetetus, Parmenides, Sophist, Statesman, Timaeus,* and *Critias* which reveal Plato's growing interest in the theory of knowledge and cosmology, on the one hand, and are indicative of his attempts to revise the early form of the theory of ideas, on the other. The fourth or late period includes *Laws,* a very long dialogue which is already free from any influence of Socratic ideas.

Besides the works listed above, as well as letters, Plato's collections traditionally include the *Epinomis,* probably written by his pupil Philippus of Opus, doubtful dialogues *Alcibiades* (first), *Hipparchus, Clitophon, Minos;* patently spurious dialogues *Demodocus, Sicyphus, Alcyon, Eryxias, On Justice, On Virtue;* a minor work *Horoi* (The Limits) which gives 185 definitions of ancient philosophical concepts, and the treatise *On the Soul of the Universe and Nature* which is in fact an exposition of Plato's *Timaeus* ascribed to Timaeus of Italian Locri, but actually belonging to the pen of an unknown writer. All these works classified as Platonean under a long-standing tradition are undoubtedly illuminating in the studies of Platonism, but need hardly be considered in a book of ancient philosophy like this one. Neither shall we go, for the same reason, into the problem of Plato's "unwritten doctrines."[1]

In assessing Plato's philosophy as a whole, one must never lose sight of its central objective—to provide a theoretical justification of the contemporary polis system of ancient Greece which was undergoing in his time a profound crisis. The Periclean age, the heyday of an independent city-state had gone never to return, and the fourth century bore witness to the growing might of coalitions tending towards the future Hellenic empires of the semi-oriental type. Yet the polis system was still alive and fought intense ideological battles for survi-

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[1] This problem is connected with attempts of some scholars to reconstruct, from the scattered remains of Plato's pupils and some hints in Aristotle, the content of Plato's oral teaching claimed, not unreasonably, to be essentially different from his written dialogues. In recent years the subject has come into prominence and given rise to extensive literature (see J.N. Findlay, *Plato. The Written and Unwritten Doctrines,* Routledge and Paul, London, 1974). We are inclined to think, though, that the importance of Plato's esoteric doctrine, even if he had one and revealed it only to his closest disciples in the Academy, need not be overestimated: being notable mainly for a trend towards mathematical presentation of philosophical concepts, it could hardly have departed from the basic principles of his philosophy explicitly stated in the dialogues.

val. The war of ideas at that time centred around the problems of religion and ethics.

The social system of ancient Greece was so closely linked with religion that the Hellenic mind could not but conceive them as a single whole. Religious holidays were events of state importance and the deities regarded as city protectors (e.g. Athena in Athens) were identified with the city itself — religion merged with patriotism. The city laws were enforced in the name of the patronising deity and the semi-divine law-giver was regarded as the mouthpiece of the gods. No less rigid were moral prescriptions sanctified by state and religion. With the growth of class contradictions in slave-owning society the religious dogmas and moral principles, as well as the once indisputable authority of the city law, became the objects of rational analysis and more and more frequently were called in question. The ideological advocates of the past (e.g. Aristophanes) openly came out against the attempts of contemporary "physiologers" to account for natural phenomena in naturalistic terms, even though they did not banish the gods from their systems. Far greater was the "sin" of Democritus and the sophists: the former in his atomistic theory dispensed with the gods altogether, whereas the latter reduced religion to a trick specially invented in order to dupe the believers and hold them in leash... In their eyes the laws were no longer the divine gift of Providence: being a human creation, they were subject to change by human beings.

Besides the openly atheistic doctrines, the orthodox spirit of the traditional city-state religion was seriously undermined by the spread of various individualistic religious teachings concerned with a concrete human soul rather than with the problems of the state.

The tragedy of Plato as man and philosopher consisted in a glaring contradiction between his philosophical and artistic genius on the one hand and the hopelessness of his attempts to revive the dead past, on the other. On the objective side, Plato's philosophical system, reactionary as it was, synthesised the dialectical achievements of previous Greek thought and represented an important stage in the development of ancient philosophy.

Speaking of the sources of Platonism, one should name the Heraclitean doctrine of constant flux and its sophistic interpretations, the Eleatic conception of One Being, the dialectics of Socrates, and Pythagoreanism. Plato accepts the Herac-

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litean view that all things are in a constant process of change, but regards it only applicable to the sensible world with its constant motion and instability. Since true knowledge can only be the knowledge of the stable and the universal, Plato turns his attention to the arguments of the Eleatic school which advanced the doctrine of being as the single, motionless and universal object of knowledge revealing itself to thought only and being thought itself. Socrates who set himself the task of evolving general concepts and was specifically concerned with universal ethical definitions and axiological determinations of being, such as Truth, Goodness, Beauty, gives Plato his "dialectics." Finally, Pythagoreanism enables Plato to bridge the gap between the general and the individual and to effect a passage, through the agency of numerical relationships, from universal definitions to the sensible world of Heraclitean flux.

Plato's philosophy should not be construed as a mechanical aggregate of his predecessors' doctrines. Even if we could trace every aspect of Platonism to previous and contemporary thought (which is far from being the case!), it would not detract from its originality. Platonism mainly owes its unique character and integrity to the theory of Ideas[1] whereby it is a classical doctrine of objective idealism.

8. From Criticism of Sensuous Knowledge to the Theory of Ideas

In his dialogue *Theaetetus* Plato asks, through the mouth of Socrates: What is knowledge? He points out that knowledge cannot be reduced to sensory experience as sensations are unstable, individual and subject to constant change thereby contradicting the very notion of knowledge always directed to the constant and the universal. Sensuous knowledge has no other criterion but the man himself who thus becomes "the measure of all things" like in Protagoras. Now why should it

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[1] The word "idea" in English denotes a subjective image which does not exist outside the mind, whereas in Ancient Greece its primary meaning was "appearance", even "external appearance", i.e. the visible image of an object, and it is in this sense that the related words *eidos* and *idea* were also used by Plato. Yet in his philosophical doctrine they have at least three different meanings: the external appearance, the essence of an object open to the mind only, and its teleological principle. These meanings can only coincide in a concrete notion as understood in dialectical logic which denotes it by the old term "idea". In the historico-philosophical literature of English-speaking countries the term "idea" is frequently replaced by the term "form", which has its advantages though may sometimes be misleading:

be a man and not a pig or a cynocephalus, a mythical creature
with the body of a man and the head of a dog? Besides, true
knowledge implies understanding which cannot be provided
by the senses: hearing a foreign language without understand-
ing it cannot be called knowledge.

The only way out appears to be the conclusion that true
knowledge can only be rational, i.e. obtainable by the mind
and related to intelligible objects. In other words, the
true objects of rational knowledge are not sensible things,
but ideas that represent true being.

The concept of ideas is expounded with utmost clarity
in *Greater Hippias*. Socrates asks sophist Hippias: Is it not
by justice that the just are just? Again, is it not by wisdom
that the wise are wise, and by goodness that all things are
good? Then aren't all beautiful things beautiful by beauty?
The simple-minded sophist unaware of the trap answers in
the affirmative. Then comes the next question: What is this
thing, beauty, whereby all beautiful things become beauti-
ful? Hippias answers by giving an example: a beautiful maid-
en is a beauty. Socrates retorts: Isn't a beautiful mare
a beauty? Must we not say that the mare, too, or at least a
beautiful one is a beauty? What about the beautiful pot?
Isn't that a beauty? Bringing thus in the problem of the
relativity of beauty, Socrates continues: "Sir, you do not
grasp the truth of Heraclitus saying that the most beauti-
ful of apes is ugly compared with the human race; and the
most beautiful of pots is ugly when grouped with maidens...
But if maidens are grouped with gods, will not the result
be the same as when pots were grouped with maidens? Will
not the most beautiful maiden appear ugly? Does not Heracl-
itus, whom we adduce, employ these very words, 'The wisest
of men, when compared to a god, will appear but an ape in
wisdom and beauty and all else?' Shall we admit, Hippias, that

"form" was usually employed by Aristotle who practically identified it
with *morphe*, whereas Plato usually abstained from using *morphe* in the sense
of "idea". Proceeding from this consideration and relying on the precedents,
we shall use the term "Idea" with capital "I" to indicate that it is to be
understood in the Platonean sense, the more so as it is not unfamiliar to the
English reader (cf. W.K.S. Guthrie, *The Greek Philosophers: From Thales
to Plato*, p. 89: "We say that we have an idea of goodness or equality,
which enables us to mean the same thing when we talk of good wine or
a good cricketer, equal triangles and equal chances, although there may
seem to be little shared in common between wine and cricketers, triangles
and chances").

the most beautiful maiden is ugly in comparison with the race of gods?"

Socrates demands an absolute definition of beauty and Hippias makes another attempt: "Beauty is nothing else but gold... For I suppose we all know that if anything has gold added to it, it will appear beautiful."

To this Socrates replies that "Pheidias ... did not give his Athena eyes of gold or use gold for the rest of her face ... he made them of ivory;" besides, if we are to choose between the two ladles, one of wood and the other of gold, we should undoubtedly prefer the former as more appropriate to the soup and the pot" (Hipp. Maj. 289d).

Hippias is unable to define beautiful as such and Socrates concludes the discussion in these words: "All that is beautiful is difficult" (ibid. 304 c, p. 595). Elsewhere Socrates states, "Nothing makes a thing beautiful but the presence or participation of beauty in whatever way or manner obtained... I stoutly contend that by beauty all beautiful things become beautiful. This appears to me to be the safest answer which I can give, either to myself or to another" (Phaedo, 100 d).

Plato's answer is indeed absolutely "safe", because it boils down to a simple tautology: things are beautiful because they are related to beauty as such. Plato in fact strives to explain the beautiful with the help of his theory of ideas which hypostatises or turns into a separate reality the most general concepts used by man and those grammatical forms that are needed to qualify them. The underlying principle of the naive theory of ideas consists in the assumption that the individual objects grasped by our senses must have their counterparts which can only be contemplated by the mind.

Hippias (like the interlocutors of Socrates in the *Theaetetus*) rashly accepts the premise that the source of the beautiful is beauty as such, whereupon he cannot escape the conclusions forced upon him by Plato. But is the premise really valid? Emphatically not! The world around us (all its objects and phenomena) is a unity of the individual, the particular and the universal, and it is only through abstraction that we can divorce them from one another. Beauty does not exist outside a beautiful maiden, a beautiful mare, pot, statue, etc. Yet it is not a mere sum total of these individual objects or the particulars, such as gold, ivory, etc. "The individual exists only in the connection that leads to the

universal. The universal exists only in the individual and through the individual. Every individual is (in one way or another) a universal. Every universal is (a fragment, or an aspect, or the essence of) an individual. Every universal only approximately embraces all the individual objects. Every individual enters incompletely into the universal, etc., etc. Every individual is connected by thousands of transitions with other *kinds* of individuals (things, phenomena, processes), etc."[1] The universal torn out of this dialectical unity becomes an "Idea" that has its existence in the extraempirical world.

The theory of cognition shows that the universal exists in the individual and the particular, the stable in the variable and mutable, the law in the diversity of phenomena. The universal (unity) can only be grasped as a result of abstraction, i.e. mental isolation of properties of the object or connections between its properties, though both the universal and the individual (diversity) are inherent in the objects and events of the real world representing objective aspects of reality. According to Lenin, "the dichotomy of human knowledge and the possibility of idealism (=religion) are given already *in the first, elementary abstraction* 'house' in general and particular houses."[2] The formation of an abstract notion is a complex act which includes in it the possibility of the flight of fantasy from life and, consequently, of the transformation of the abstract concept into a particular being. The world of Ideas thus turns into the realm of supra-sensuous objects which is regarded as primary in relation to the physical world.

The possibility of idealism is also rooted in language, as words, the "matter" of language, express only the universal. Primitive linguistics proceeds from the assumption that every word represents a definite object due to some mystic affinity between them, and being unable to find the analogues of abstract words in the physical world comes to the conclusion that they must exist elsewhere, in the world of universal concepts or "ideas".

It should be noted that modern analytical philosophy tends to regard the basic premise of Plato's theory of Ideas merely as a result of the confusion of the grammatical and

[1] V.I. Lenin, "On the Question of Dialectics", *Collected Works*, Vol. 38, 1980, p. 359.
[2] V.I. Lenin, "Conspectus of Aristotle's Book *Metaphysics*", ibid., p. 370.

ontological predication which can well be exemplified by the famous "ontological argument" for the existence of God (God is perfect, perfection entails existence as its predicate, hence, God exists). Indeed, "God" and "exists" being but the grammatical subject and predicate and pertaining only to thoughts, it is incorrect to predicate physical, objective existence of God. Similarly, such statements as "Unpunctuality is reprehensible" and "Virtue is its own reward" seemingly dealing with universals ("unpunctuality" and "virtue") do not imply their existence in the ontological sense.[1]

However, Plato would hardly rank among great philosophers if his idealism were but a fallacious doctrine based on an incorrect predication. Having abstracted the "world of Ideas" as a special object of philosophical investigation, Plato laid the foundation for the analysis of ideal and idealised objects, i.e. concepts as such, irrespective of how they were obtained and in what relation they stood to the objects of the physical world. This preliminary investigation was a stepping stone to the Aristotelian formal logic and Archimedean physico-mathematical description of objects isolated, as it were, from nature and treated in their ideal form free from any chance influences. Yet the "rational kernel" of Plato's theory of Ideas was not only overshadowed, but also distorted by his idealism. We shall later discuss this question in more detail and turn now to Plato's conception of knowledge and to the functions of Ideas in the world.

Since Ideas are conceived by Plato as specific objects of knowledge discernible only by reason and abiding in a transcendent world, learning can be nothing but their contemplation. This presupposes the soul's immortality and its ability, upon return to earth and incarnation as a man, to recollect the vision of true being. Such a doctrine inevitably leads to a religious world outlook, basically mythological and centring around the notions of deity and immortality of soul.

Plato is aware of the difficulties involved in the process of recollection (*anamnesis*). The soul is liable to forget realities and needs either to be reminded of them by a sage, or made to perform complex logical operations. The lat-

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[1] See Gilbert Ryle, "Systematically Misleading Expressions", in: *Logic and Language*, First Series, Blackwell, Oxford, 1968, pp. 11-22.

ter case is illustrated in *Meno* by the example of an ignorant slave boy who was made by Socrates to "recollect" some geometrical propositions he had never studied.

Commenting on the answers of the slave, Plato makes this conclusion through the mouth of Socrates: "There are always to be true notions in him, both while he is and while he is not a man, which only need to be awakened into knowledge by putting questions to him, his soul must remain always possessed of this knowledge; for he must always either be or not be a man" (Meno, 86a).

This statement is clearly untenable: even a most ignorant person possesses, in virtue of his humanity, certain mathematical knowledge and is capable of fomulating simple scientific propositions under expert guidance. The story of Socrates and an untutored slave is simply an example of a good teacher and a clever pupil, but not of soul's "recollection" of the world of eternal truth.

Plato's investigation of "Ideas" brought him face to face with the problems of logic and resulted in an exposition of the methods of rational thinking or "dialectic." Plato used the term in two different meanings: first, as the ability to ask and answer questions (Cratylus, 390c), i.e. in the Socratic sense in which it is widely represented in his dialogues, and, second, as the ability to divide concepts according to their kinds and embrace each one under a single idea. Dialectic in this sense is based on two logical procedures called collection and division: (a) "To take a synoptic view and bring widely scattered things under one idea, so that one may make clear by definition whatever it is that one wants to expound at the time", and (b) "To be able to cut it up at the natural joints, not hacking at any part like an incompetent butcher" (Phaedr. 265c-e).

Plato thus conceives dialectic as the ascent of the mind directly to the essence of things "by the light of reason only, and without any assistance of sense." As a result, the dialectician "finds himself at the end of the intellectual worlds, as in the case of sight at the end of the visible" (Rep. 532ab). Yet Plato's concept of dialectic extends beyond the process of cognition (*epistēmē*) and reasoning (*dianoia*), including also faith and analogy. The two latter faculties taken together constitute opinion (*doxa*), the two former ones, science or true knowledge (*epistēmē*) (Rep. 534a).

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The division of knowledge into science and opinion is of major significance in Plato's doctrine, since the former relates to Ideas and is the philosopher's prime concern, whereas the latter pertains to the senses. Science gives us the truth, whereas opinion does not go beyond the sensible world. Even mathematical sciences cannot grasp the whole truth as long as they adhere to their own principles and are incapable of apprehending them, i.e. linking them with the knowledge of Ideas. The only source of certitude is the knowledge of Ideas.

Plato's logical doctrine is very contradictory. Unlike the method of "division" of a generic concept into specific ones which is presented with sufficient clarity, "collection" is vague, if not altogether mystic. The philosopher describes it as a "release" of the soul from something like "barbarian quagmire," as direct insight into the essence of being. "The soul views some things by herself" (Theaet. 185e) without the use of senses. In the *Symposium* Plato explains the ability of man to rise to the apprehension of the Idea by the power of Love (Eros) which leads him from the beauty in an individual body to the beauty of morals, institutions, and then to beauty as such. "He who has been instructed thus far in the things of love, and who has learned to see the beautiful in due order and succession, when he comes toward the end will suddenly perceive a nature of wondrous beauty ... a nature which in the first place is everlasting, knowing not birth or death, growth or decay; secondly, not fair in one point of view and foul in another ... but beauty absolute, separate, simple and everlasting, which is imparted to the ever growing and perishing beauties of all other beautiful things, without itself suffering diminution, or increase, or any change..." (Sympos. 210e-211ab).

This ascent to knowledge as described by Plato is not a rational process; the mind grasps the Idea by irrational intuition, direct insight into the nature of things. Mystic though it may seem, this conception represents the real course of human knowledge which begins with the living, sensory contemplation of reality. It is only on the basis of accumulated sense experience consolidated in social consciousness and social forms of practical activity, i.e. in production, technology, art and language, that man can advance more or less broad hypotheses which are tested, corrected and accepted or rejected thereby contributing to the progress of knowledge. This process of cognition or ascent to ever more pro-

found and comprehensive knowledge was intuitively grasped by Plato and represented by him in a mystified, distorted form.

Plato was the first thinker in the history of philosophy who consciously formulated the basic question of philosophy, the one of the relationship of thinking and being. Some philosophers, he wrote, "obstinately maintain that only the things which can be touched or handled have being, because they define being (reality) and body as one... Their opponents contend that true reality consists of certain intelligible and incorporeal Ideas" and assert that the bodies are "not being, but generation and motion. Between the two armies, ... there is always an endless conflict raging concerning these matters" (Soph. 246a-c). In the *Laws* Plato poses the same question in a slightly different form contrasting idealism to the materialism of the ancient "physiologers." The latter, according to Plato, "say that fire and water, and earth and air, all exist by nature and chance, and none of them by art" and that the soul derives from them, whereas their opponents hold the opposite view: "If the soul turns out to be the primordial element, and not fire and air, then in the truest sense and beyond other things the soul may be said to exist by nature" (ibid. 892c).

Plato asserts the primacy of the soul on the grounds that it was the first to come into being as self-moving and the cause of all other motion: "If, as most of these philosophers have the audacity to affirm, all things were at rest in one mass, which of the above-mentioned principles of motion must necessarily be the first to spring up among them? Clearly the self-moving" (ibid. 895a). According to Plato, the soul "directs all things in heaven, and earth, and sea by her movements, and these are described by the terms will, consideration, attention, deliberation, opinion true and false, joy and sorrow, confidence, fear, hatred, love, and other primary motions akin to these" (ibid. 897a). Owing to all these and other qualities, as well as to the divine mind she receives, the soul "disciples all things rightly to their happiness; but when she is in companion of folly, she does the very contrary of all this" (ibid. 897ab).

Here Plato's philosophical idealism openly links with religion and mythology reconstructed on a rational basis.

From the viewpoint of logic, Plato's reasoning is practically irreproachable. The fundamental fallacy of Platonism lies in the premises. The atomistic theory accepting eternal move-

ment as a given fact eliminates the problem of the first cause and rejects Plato's postulate of eternal soul as the principle of movement. Determinism explains the world from itself discarding the hypothesis of god as unnecessary and confusing.

9. From the Theory of Ideas to Cosmology

The eternal and immutable World of Ideas is no longer the One Being of Parmenides, but an orderly hierarchical structure with the Idea of good ranking the highest. Characterising this Idea, Plato writes: "Now, that which imparts truth to the known and the power of knowing to the knower is, as I would have you say, the Idea of good, and this Idea, which is the cause of science and of truth, you are to conceive as being apprehended by knowledge, and yet, fair as both truth and knowledge are, you will be right to esteem it is different from these and even fairer" (Rep. VI, 508e). Like the sun which "is not only the author of visibility in all visible things, but of generation and nourishment and growth, ... the good not only infuses the power of being known into all things known, but also bestows upon them their being and existence, and yet the good is not existence, but lies far beyond it in dignity and power" (ibid. 509b).

The Idea of good is difficult to grasp, but it reveals itself in Beauty and Truth: "If we are not able to hunt the good with one idea only, with three we may catch our prey; beauty, symmetry, truth are the three" (Phileb. 64e-65a). According to the original, "naive" theory of Ideas, they are ungenerated, everlasting and immutable. The relation between the Ideas and things is characterised by three notions: imitation (*mimesis*), participation (*metexis, koinonia*) and presence (*paroysia*). In other words, a thing comes into being (or is created by the gods) as the closest possible imitation of its Idea. Having emerged, the thing is related to or "participates" in the Idea. Finally, the Idea itself resides in a sensible thing, the latter resembling the Idea only because of this presence. Plato does not explain how it is possible.

Proceeding from Plato's conception of Idea we are bound to conclude that the number of Ideas must be equal to the number of classes of similar things, and that lands us on the rocks. Indeed, how are we to account, for instance, for the "participation" of one and the same thing in different "Ideas", say, Socrates in "man" and "Greek"? Again, Plato's Ideas relate to Goodness, Beauty, Truth, admitting of no imperfec-

tion. Yet how are we to explain, from his viewpoint, evil, ugly and false things? Clearly, they cannot exist without the corresponding ideas... It should be noted that Plato himself was not unaware of these difficulties and subsequently revised his doctrine, making an important step towards the dialectics of concepts. His new approach will be discussed later in the chapter.

As we see, Plato conceived Ideas as (1) models or paradigms; (2) universals, i.e. generic or specific characteristics of a class of similar things; (3) causes of things understood as their final purpose. It is this latter function of Ideas that lies at the root of the pronounced *teleological* strain in his system of objective idealism.

Plato's teleology was aimed directly against the determinism of the atomistic theory. In contrast with the atomists who recognised the efficient causes only, i.e. eternal motion and mutual collision of atoms, Plato conceived the relation between sensible things and Ideas as the tendency of the former to approximate to the latter. His teleology is essentially transcendent, i.e. external to the physical world, since the Ideas are separated from the things. As has been shown earlier, it stems from the anthropomorphic conception of the cosmos endowed with a "soul" that controls the physical world in the manner the human soul controls the body.

The problems of cosmology and cosmogony are treated by Plato in the *Timaeus* where he expounds his physical theory and makes an attempt to bridge the gap between the sensible world of change and the immutable eternal Ideas. Basic to Plato's physics in this dialogue is the notion of Reason as the demiurge or creator of the cosmos. This notion is a clear echo of Anaxagoras's *Nous* except that Anaxagoras regarded it only as the motive force of the primary elements of matter, whereas in Plato it is the creator of the world (not from nothing!) and its "Father." Their relations appear to be very complex and hard for the ancient mind to grasp. For one, the conception of god as the demiurge (and in Plato demiurge is nothing but god) implying the possibility of creation from nothing was entirely alien to Greek thought and it was not until much later that the Platonic doctrine, under the influence of Judaism and Christianity, received a monotheistic interpretation. Besides, the name of "demiurge," denoting in Greek a skillful artisan engaged in manual labour, did not tally with the notion of "father," since Plato described him as

the builder of the cosmos after the blueprints of Ideas in the manner of a carpenter building a house or a joiner making a bed[1] (this curious analogy clearly reveals the origin of the concept of God).

As Plato presents it in the *Timaeus*, the ultimates of the cosmos are the Ideas or the models of things, Matter or the unformed material from which they are made, and the Demiurge or God which shapes them in accordance with eternal Ideas. On the evidence of Plato himself, he had great difficulties in explaining his concept of matter. Indeed, he says (30a) that God found the whole visible sphere not at rest but moving in an irregular and disorderly fashion and "out of disorder he brought order," then (50a) he compares it to gold which a gold-smith fashions into many different shapes, and further (61a) he speaks of matter as being "invisible and shapeless, receiving all things, partaking in some most bewildering way of the intelligible," as "matter," "nurse" and "receptacle" of things produced in it by ideas. Sometimes he refers to the receptacle as space and sums up by stating that it existed, like being and generation, even before the world was born (52d).

The creation of the cosmos as presented by Plato in the *Timaeus* is a complex process. Out of a mixture of Ideas and Matter the Demiurge makes the world's soul and distributes it throughout the space assigned for the visible universe. The mixture is divided into four elements: fire, air, water, and earth. Having set it in rotary motion, the Demiurge fashions the cosmos into a sphere, the best of all shapes, and assigns orbits to planets and the heaven to stationary stars in accordance with harmonious mathematical relationships displaying due proportion and measure. So by God's providence the cosmos is created as a living being endowed with reason. It is unique since it resembles in every way its unique model, the Idea.

In order to be complete, the cosmos must contain other living creatures and the Demiurge makes them. They are the race of gods, the race of birds, the watery species, and the land creatures (40a). Plato does not take it upon himself to account for the birth of the gods and refers the reader for their geneal-

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[1] In the *Republic* (X 597b) Plato asserts that God is the creator of the Ideas themselves: "Beds, then are of three kinds, and there are three artists who superintend them: God, the maker of the bed, and the painter." This is yet another inconsistency of Plato's idealistic doctrine.

ogy to traditional Greek mythology in the manner of Hesiod. The Demiurge then makes a new soul-mixture from the ingredients he formerly mixed in creating the world's soul and divides it into separate souls in accordance with the number of the stationary stars. "Now of the divine he himself was the creator, but the creation of the mortal he committed to his offspring. And they imitating him, received from him the immortal principle of the soul; and around this they proceeded to fashion a mortal body" (69c). The souls of the mortals are implanted in bodies and, depending on their behaviour, either return to a blessed life on the appointed star (whence the link of Platonism with astrology), or become incarnated in another mortal body, first in a woman, then in a beast which is the nearest to the soul's vicious nature (42c). With an obvious touch of humour Plato explains that the souls of harmless smatterers who "thought it enough to study the heavens with eyes alone" transmigrate into birds, those of men subdued by their animal desires move into quadrupeds and reptiles, whereas fishes harbour the souls of the stupidest.

The idea of the transmigration of souls and of their emancipation from the endless chain of reincarnations may have been borrowed by Plato from Orphic religion. The fates of souls are described by Plato differently. In the *Timaeus* (41e) he writes that "their first birth would be one and the same for all — no one should suffer a disadvantage at his hands," whereas in the *Phaedrus* the imperfect soul is said to lose her wings while still in the heavens and fall onto earth where she cannot be incarnated in any living being during her first life.

Plato's description of creation is openly teleological. Man's head is made spherical as this shape is best suited for the divine part of his body; to save it from rolling on the ground with its hillocks and pits, it has been provided with a body and extremities; the eyes have a fiery (luminous) nature that they may see, etc. However, Plato cannot completely discard the notion of *necessity* and finds the way out in subjecting necessity to the mind: "for the creation of this world is the combined work of necessity and mind. Mind, the ruling power, persuaded necessity to bring the greater part of created things to perfection" (Tim. 48a). This synthesis enables Plato to use both causal and teleological explanations and creates a possibility for the integration of some naturalistic concepts into his essentially idealist system.

Unlike Plato's cosmological teachings dominated by mytho-

logical fancies, his doctrine of matter and laws of its motion, i.e. "physics," is based on a combination of Pythagoreanism and atomism. This might be expected, since the simplest way of accounting for the relationship between ideas and particular objects was to assume that the latter embody the mathematical structure of the former. Indeed, since the world is the creation of the mind, its ultimate elements must display measure and proportion represented in numbers. Plato therefore postulates the geometrical structure of matter which is based on regular bodies derived from triangles. In this scheme fire is presented as consisting of pyramids (tetrahedrons), the most mobile and sharpest of all regular solids, air as consisting of icosahedrons, water of octahedrons, and earth of cubes. The fifth regular solid, dodecahedron, represents the model of the cosmos or, according to the *Epinomis*, ether. The transition from one element to another is accounted for by Plato as the realisation of mathematical proportions representing the comparative volumes of regular solids: one octahedron is equal to two tetrahedrons, one icosahedron is equal to five tetrahedrons, two icosahedrons are equal to five octahedrons.

As we see, in his attempt to reveal mathematical relationships underlying the structure of substances Plato in fact reduced physics to geometry. This method which had far-reaching consequences was to play an extremely important role in the subsequent development of natural science, particularly in modern history. Besides, it enabled Plato to harness the Democritean atomistic doctrine and fit the idea of the eternal motion of atoms into his picture of the world. For instance, likening the process of the separation of the elements to the shaking and winnowing of grain (Tim. 52e–53a), Plato in fact gives a paraphrase of Democritus (L 316). However, in Plato's system the disorderly motion in the manner of Democritus was but a preliminary process preceding the creation of the world's soul which was, so to speak, to take over and put the matter in order through the agency of images and numbers.

Time, according to Plato, was created by the Demiurge together with the cosmos. Plato writes: "There were no days and nights and months and years before the heaven was created, but when he constructed the heaven he created them also" (37d). By introducing measure into chaotic motions, the Demiurge brought time into being, i.e. effected "a moving image

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of eternity," that which we call "time." Time is "moving" because it was identified with circular motions of heavenly bodies producing the recurrence of day and night—in order to create time god had to create the heavenly bodies and put them in their orbits. Time is also but an "image" because its archetype, the idea of time, is eternal and can be expressed in motion only inadequately. This typically mythological view is curiously combined by Plato with an entirely different concept of time understood as the duration of movement of heavenly bodies which revolve "according to a law of number" (38a).

The general picture of the world emerging from Plato's description is as follows. The one finite spherical cosmos with spherical earth in the centre is sensible God which is the image of supra-sensible God. The stars fastened to spheres and circling the earth along spiral orbits are also rational and blessed "visible deities." Their rotation determines the world's cycles: the return of the stars to their initial position marks the end of the "cosmic year," i.e. ten thousand terrestrial years.

Plato himself did not think much of his picture of the sensible world regarding it as merely plausible. The study of nature does not lead man to the understanding of real truth, on the contrary, it takes him away from it. According to Plato, "the instrument of knowledge can only by the movement of the whole soul be turned from the world of becoming to that of being, and learn by degrees to endure the sight of being" (Rep. 518c). This statement is tantamount to sheer obscurantism, since Plato not only rejects man's attempts to cognise nature as futile, but even qualifies them as harmful. However, Plato's *subjective* denial of the world of senses in favour of the "world of ideas" *objectively* opened new ways to scientific cognition. The disparagement of nature and concentration on numbers and mathematical relationships marked a new turn in philosophy and gave a powerful impetus to the theoretical investigation of the physical world, since numerical proportions were in fact nothing but the reflection of the *laws* of nature.

10. The Soul, the Ethical Ideal, the State

Plato's philosophy, like that of his teacher Socrates, centres upon moral problems which are treated on the basis of his theory of Ideas, as well as cosmological and psychological conceptions. Since virtue resides in the soul which communicates

with the world of Ideas. Plato prefaces his moral theory with the teaching of soul. We have earlier shown the role assigned by Plato to the world's and individual man's souls in the cosmos at large. Now let us look at the functions of man's soul in his life.

Plato starts philosophical discourse in the *Phaedo* with the assertion of the soul's immortality and develops a system of arguments to prove his thesis.

(1) *The argument from the alternation of opposites.* If death did not pass into life, life would ultimately cease. Since it is not the case, the soul must be assumed to survive the body.

(2) *The argument from recollection.* Men's inherent notions of beauty, goodness, justice, equality, etc. which cannot be obtained through senses testify to the fact that learning is nothing but the recollection of what the soul knew previously, i.e. acquired before birth.

(3) *The argument from the immutability of the soul.* Unlike individual objects, the soul is always equal to itself in view of its affinity with the divine and the eternal.

(4) *The argument from causality.* The soul is the true cause of all things, therefore it is the end in view, the idea or the life of the body. However, being the life of the body, it is incompatible with its death and, consequently, is immortal (Phaed. 70c-107b).

It is not difficult to prove that Plato's arguments are logically untenable. Indeed, argument (1) is based on the confusion of logical possibility which only exists in thought and actuality which relates to the physical world. The passing on of one opposite into the other may be possible logically, but its realisation is yet to be proved. In point of fact, Plato did not provide such proof. Moreover, his theory of creation backfires and can be used as an argument against the immortality of the soul. Argument (2) is a vicious circle, because the possibility of knowledge is derived from the pre-existence of the soul (in the *Meno*), whereas the pre-existence of the soul is derived from the possibility of knowledge (in the *Phaedo*). Besides, it is rooted in mythological notions which have no demonstrative value whatsoever. Argument (3) is also based on a myth and on the postulate of soul's eternal identity and immutability. Again, being the product of creation, an individual soul must be finite, i.e. mortal. Argument (4) is based on the assumption that the individual can be explained through the agency of the general, i.e. through the idea or the

end in view which belongs to the world of intelligence and cannot precede an individual object ontologically. So, all Plato's arguments rest on the shaky foundation of faith and sin against elementary logic.

The doctrine of soul's immortality is used by Plato as the foundation for his ethical theory. His reasoning is as follows: "If death had only been the end of all, dying would have been a godsend to the wicked... But now, inasmuch as the soul is manifestly immortal, there is for her no release or salvation from evil except the attainment of highest virtue and wisdom. For the soul when on her progress to the world below takes nothing with her but nurture and education; and these are said greatly to benefit or greatly to injure the departed, at the very beginning of his journey thither" (Phaedo 107cd). After a man's death his soul sets off, under the guidance of the "genius" assigned to her during the man's lifetime, to a place of judgement and then to her habitation. A corrupted soul wanders alone "in extremity of distress until certain times are fulfilled, and when they are fulfilled, she is borne irresistibly to her own fitting habitation; as every pure and just soul which has passed through life in the company and under the guidance of the gods has also her own proper home" (ibid. 108c).

In this way, threatening the wrongdoers with punishment in the next world and promising rewards for merits, Plato intends to force men into the ways of righteousness and sets out to develop the principles of moral behaviour, i.e. the doctrine of good. This doctrine did not remain unaffected by Plato's philosophical genesis. In the *Protagoras,* one of his earlier dialogues, Plato adhered to the principles of rational eudaemonism[1] and maintained that goodness was the unity of virtue and happiness, the beautiful and the useful, the morally good and the pleasant. Later (e.g. in the *Gorgias*) Plato advanced the principle of absolute morality opposing it to happiness, benefit and pleasure. In the *Theaetetus*, *Phaedo* and *Republic* (Books VI and VII) he already fixed an unbridgeable gulf between the ideal of absolute goodness on the one hand and man's sensuality and striving for pleasures and happiness, on the other. This evolution was evidently the result of Plato's growing disillusionment about the Athenian society and the increasing

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[1] A system of ethics that defines and enforces moral obligation by its relation to happiness or personal wellbeing. — *Tr.*

religious strain in his philosophy. Goodness being utterly alien to this world wallowing in sin, the only way of achieving the moral ideal appeared to be the rejection of all bodily pleasures. Hence the asceticism of Plato's teaching and his call for the purification of the soul.

The most important role in this purification is assigned by Plato to philosophy which is designed to free the soul from the tyranny of the body, to rid it of passions, base desires and vice. However, ultimate freedom can only be attained through death, therefore philosophy is conceived by Plato as preparation for death and as ability to die: "It is characteristic of the philosopher to despise the body; his soul runs away from his body and desires to be alone and by herself" (Phaedo 65d).

Later in the *Laws* Plato returns to his initial conception of morality and preaches a virtuous life as the most pleasant and happiest one in which the aspiration for supreme goodness can be combined with ordinary virtue. The individual soul, according to Plato, consists of three parts: rational (wherein wisdom resides), forceful (which is the seat of courage), and desirous (whose virtue is self-control or temperance). The common virtue of the soul harmonising, as it were, all the three faculties is what Plato calls justice. It consists in the right coordination of the soul's powers: the mind makes decisions and rules, the will fulfils its orders, and the desires comply with the rule of temperance and obey.

This scheme provides the basis for Plato's social philosophy and doctrine of the state which are mainly expounded in three dialogues: the *Politicus*, *Republic*, and *Laws*. In the *Politicus*, Plato gives a brief outline of the "history of society" starting with the "age of Cronus." To each tribe of animals, including mankind, God assigned a lower deity, kind of a herdsman, to supervise it personally. There were no states, no property, no need to toil as earth yielded food untilled. There was no marriage or begetting as all were born from the earth. When the fabled golden age ended and the earth-born tribe was annihilated, the cosmos settled down and assumed control over the new generations along the lines laid down by the Maker. However, due to the imperfections inherent in the corporeal world harmony was disturbed and disorder set in. Men became a prey to wild beasts and had no skills to get the sustenance they had formerly found free. They were saved from extinction by the divine gifts: fire from Prometheus, various arts from Hephaestus, seeds and plants from other gods. How-

ever, mankind was left to manage its own affairs without divine care as best it could and needed rulers (statesmen and kings) to fulfil the functions of the former "herdsmen."

Now, in contrast to God and divine shepherds kings are only human and therefore liable to err. Here lies the possibility of perversion and overall degradation of government. In general, there are three types of government based on law. Arranged in decreasing order of perfection, they are monarchy, aristocracy and democracy. To these correspond the forms based on lawlessness: tyranny, oligarchy and the lowest form which, according to Plato, has no special name. Plato's classification of the forms of government provided the foundation of his political theory and was later developed by Aristotle in his doctrine of the state.

In the *Republic* Plato makes an attempt to construct a new model of ideal society. The state (polis) arises due to the inability of individual men to satisfy their requirements without outside help. The need to procure food, build houses, make clothes and meet people's other vital requirements accounts for the existence of farmers, artisans, merchants, etc. They constitute the lower class of society and shoulder the burden of providing the material goods. The defence of the state against its internal and external enemies is the responsibility of the warrior class. Finally, there are the rulers whose function is to co-ordinate the activity of all the classes and govern the state. These are "philosophers" skilled in the "royal art," devoted to the ideals of justice and goodness, and possessed of wisdom.

This economic and political substantiation of the state structure is bolstered up by a psychological analogy between the classes of the state and the faculties of man's soul which must be in harmonious unity. Man's position and weight in the social hierarchy depend on the prevalence of one of his soul's virtues: wisdom, courage or temperance. The members of the lower class (which on the whole receives little attention from Plato) are allowed to have private property and individual families. These, however, tend to foster self-interest, jealousy and inequality. As a result, a special external force is required to keep the labourers under control. To prevent the extremes of wealth and poverty, the higher classes are denied the right to private property and family. The state's population is reproduced under the strict supervision of specially appointed officials who carefully select the mating cou-

ples. Children are taken away from their parents at birth, examined for physical fitness and disposed of if found imperfect. The survivors are subjected to a rigid system of state education under the supervision of guardians and special care is taken to ensure that the children and their parents do not know each other. Boys and girls are brought up under the same conditions and both sexes are equally capable of military and political activity.

It is worth noting that in some modern writings Plato is made out to be a precursor of socialism and the state system described by him in the *Republic* is dished out as "socialist" to scare gullible people. Actually, however, his utopia is nothing but an idealised picture of the archaic Spartan state, an obsolete and reactionary caste system with certain traits of primitive communism. A precursor he certainly is, but not of socialism: he may well be considered the ideologist of such feudal organisations as monastic societies and knightly fraternities.

Of all the dismal features of Plato's utopia that might repel the modern reader the most depressing is perhaps the complete subjugation of the individual by the state, the dissolution of the individual in the social whole. Proceeding from the conviction that men cannot be trusted to know their true interests and follow the dictates of reason, Plato viewed the state as an aggregate of impersonal beings, without individual needs, desires and aspirations, whose only purpose was to fulfil the social functions assigned to them. The true reason is embodied in the state; its claims must come first and everything must bow to what is supposed to be the good of the whole. Such a state does not recognise art or science, poetry, songs, fairy tales, games, or individual love... To put the finishing touch to this cheerless picture, Plato vividly describes the blood-curdling punishments awaiting disobedient subjects in the next world. Speaking through the mouth of Er, son of Armenius, who was killed in battle and came back to life twelve days later on the funeral pyre, the philosopher recounts the story of his soul's adventures and dwells with obvious relish on the tortures applied to the sinners. By contrast, his account of the exalted happiness of the virtuous is rather insipid and lacks inspiration... (Rep. X, 616b-620).

Of course, Plato understood that his ideal had but little chance of being translated into reality in the contemporary tumultous world. In the *Laws* he offered a more realistic project. This work, consisting of twelve books, begins with

an introductory discourse on legislation. According to Plato, man is something like a doll in God's hands and does not know if he is intended to be a mere plaything, or has a more important function to perform. Indeed, God's purpose is the good of the whole and man is nothing but a means to ultimate goodness.

However, man is endowed with a soul which is the principle of self-motion and has therefore a certain amount of freedom. Motivated by his passions, desires and inclinations, he strives for happiness. Man's desires stem from hunger, thirst and sexual urge, the instrument of self-reproduction, and therefore he loves himself the most: "The excessive love of self is in reality the source to each man of all offences" (Leges, 731e). Taking into account this complex psychological nature of man, Plato deemed it necessary to introduce the strictest possible regimentation of all social relations as a basis for new society. He conceived his state as a small agricultural polis, a community of 5040 households, each with its separate allotment of land. This amounted to 10,000-12,000 male citizens and a total citizenship of 40,000 to 48,000. In addition, there was to be 7,000-8,000 metics and about 30,000 slaves. Land was to be divided into holdings of equal value and each householder was to be granted two plots, one in or near the city and the other near the frontier. Landholdings could not be sold or otherwise disposed of outside the family. All were to live directly off the land, but the citizens were not supposed to do menial work: it was to be left to the slaves whose function consisted in providing their masters with everything necessary.

All population was to be divided into four property classes and no one was allowed to possess wealth exceeding four times the value of the plot. Private individuals were not to have any gold and silver which were to be replaced by a token currency. No citizen was to be allowed to engage in trade or handicrafts which were to be left in the hands of foreigners. The citizens found guilty of violating this prescription were to be punished. Any surplus was to be handed over to the state, and the necessity produce was to be divided into three parts. Two parts were to be consumed respectively by the free members of society and by the slaves, and the third part was to be exchanged for handicraft goods. The merchants' profits were to be limited by the state and each handicraftsman could ply only one craft.

Plato's ideal city was conceived as an aristocratic or, to be more precise, oligarchic republic. Its governing bodies, rec-

ruited by election, included an Areopagas of 37 members, a Council of 350 members, military leaders (strategists), temple trustees, priests and priestesses, market wardens, city magistrates and other officials supervising the state finances and agriculture. The courts, though also formed on an electoral basis, were to be watched over by a special board — the Nocturnal Council consisting of ten law guardians. The Council's business was to promote virtue and human excellence, oversee the observance of the laws and choose· younger members of outstanding natural gifts and powers of observation to act as "its eyes and ears" (961d).

Plato's *Republic* and particularly *Laws* show that he made a careful study of the constitutions of oligarchic states and was fully prepared to instruct the rulers in the use of various crafty methods devised to keep men under control and manipulate public opinion. Plato is firmly convinced that all means are good to preserve status quo: fraud "for the public weal," electoral qualifications, representation of poor sections by rich citizens, open ballot, forgery and bribery, political murder... Of special importance is the undivided ideological sway of the oligarchs. Performance of religious rites is absolutely mandatory. Atheism, i.e. the denial of god's existence or its influence on the lives of men, as well as the conviction that the gods can be propitiated by magic, is punishable by death or imprisonment. The arts are to be under strict supervision, all music and poetry are to be prohibited unless they exhibit a clear moral tendency in the Platonic sense, i.e. are aimed at subjugating man to the will of the state embodied in the immediate superior. According to Plato, "the great principle of all is that no one of either sex should be without a commander; nor should the mind of anyone be accustomed to do anything, either in jest or earnest, of his own motion, but in war and in peace he should look to and follow his leader, even in the least things being under his guidance.. And we ought in time of peace from youth upwards to practise this habit of commanding others, and of being commanded by others; anarchy should have no place in the life of man or of the beasts who are subject to man" (Leges XII, 942ac). This statement hardly needs any comment. The modern analogy to Plato's ideal state as described in the *Laws* is not socialism or communism, but fascism.

There is only one rational explanation of Plato's totalitarian ethic. He is determined to preserve at all costs the ancient po-

lis undergoing profound political and economic crisis and hopes to check its progressing deterioration which he identifies with "anarchy." Plato's ideal state based on unquestioning obedience, suppression of democracy, restriction of private property and meticulous regimentation of all human activity is in fact nothing else than a manifestation of his ultra-conservatism and grief for the "golden age" of Greek slave society.

11. Criticism of the "Naive" Theory of Ideas and the Doctrine of the One

As has been shown earlier, Plato's initial, 'naive" theory of Ideas proved vulnerable in many respects. This became clear to Plato himself and he subjected it to a fundamental reappraisal. His criticism was so uncompromising that many later commentators called in question the authenticity of his dialogue *Parmenides* where the arguments against the theory of Ideas were presented in the most explicit form. Plato indeed put his finger on practically all the weak spots of his earlier doctrine devoting special attention to what was its chief drawback, dualism—the impassable gulf between the true world of eternal, immutable and indivisible Ideas, and the sensible world of changeful multitudinous things. As a matter of fact, the main object of Plato's criticism was apparently the Megarian doctrine of being based on a dualistic interpretation of his theory of Ideas. Striving to dissociate himself from this doctrine Plato, naturally, could not pass over his own earlier views in silence.

The obvious absurdities ensuing from the "naive" theory of Ideas called for an entirely new approach, and it is expounded by Plato in the *Parmenides* and *Sophist*. Upon a thorough scrutiny of his former conceptions Plato comes to a conclusion that various determinations of being, i.e. what he understood as Ideas, are not absolute entities independent of one another. On the contrary, they presuppose one another and pass into one another. This was a major advance that gave a new turn to philosophical thought: ideas became a unity of opposites (one and many, being and not-being, rest and motion) constituting the source of any change and any motion. The theory of Ideas turned into a doctrine of idealist dialectic.

Alongside the dialectical doctrine of Ideas Plato develops further the conception of the One. Summing up the hitherto scattered views of the One as the supreme category of being,

he shapes them into an elaborate theory of the primary cause and the highest principle of reality that produces the world of Ideas and determines its structure.

In the *Parmenides*, speaking through the mouth of the Elean philosopher, Plato strives to combine the arguments of the Eleatics, identifying the One and being, with Gorgias's conviction that being is non-existent. The truth of this relationship is the movement of the corresponding notions. Plato contends that the assertion of one absolute being irrespective of anything else, "the other," is bound to lead to a conclusion that such being can neither exist nor be cognised. Indeed, it cannot be compared to or qualified by anything. Conceived as One, being passes into its opposite — not-being, or nothing.

However, if we posit one Being, i.e. assume that the One is or "exists," we shall see that besides the one Being there also exists "is," i.e. something different, other. Plato puts it thus: "Then the one will have being, but its being will not be the same with the one; for if the same, it would not be the being of the one; nor would the one have participated in being, for the proposition that one is would have been identical with the proposition that one is one; but our hypothesis is not 'If one is one, what will follow,' but 'If one is'..." (Parm. 142bc). Hence, the one and being are two, i.e. the one and something else. Following this line which is anything but straight Plato comes to the conclusion that the one implies many and can neither exist nor be comprehended in thought without it. Though the *Parmenides*, like many other dialogues, lacks clarity, Plato's thought is not difficult to grasp. It consists in that the concept of the one contains all the other determinations of being unfolded in the dialectical process of transition from one concept to another, its opposite: the one and other, being and not-being, identity and distinction, part and whole, eternity and temporal finitude, etc.

Expounding the dialectic of being and not-being in the *Sophist*, Plato treats the subject from a different angle (236c-259c). He criticises the sophistic thesis that everything is true and falsehood is impossible (Protagoras) or that everything is false (Gorgias). The sophists, according to Plato, do not distinguish between truth and falsehood or, which is the same, between their objects, being and not-being. They posit truth and falsehood, being and not-being as independent notions placing them, as it were, next to each other. Passing on to Parmenides's doctrine of one being, immutable, motionless

and spherical, Plato points out that if being and one are identical, we do not need two words for them. If they are different, they are two and, consequently, being cannot be one. Nor can it be indivisible, since a whole breaks up into parts of necessity, the more so as it is a sphere. The doctrine of one being proves logically untenable.

Now, being is inconceivable as motionless and immutable either, since if it were such it would be beyond the mind's grasp: "If knowing is a kind of action, it necessarily follows that being known is an affection. And on this view reality, in so far as it is known, is acted upon by knowledge, and is therefore a motion; for that which is in a state of rest cannot be acted upon, as we affirm... And, O heavens, can we ever be made to believe that motion and life and soul and mind are not present with perfect being? Can we imagine that being is devoid of life and mind, and exists in solemn unmeaningness and everlasting fixture?" (Soph. 249e). To be sure, the answer to this rhetorical question can only be in the negative.

Plato singles out five categories: being, rest, motion, then sameness (identity) and distinction "recognised as the greatest" (254c) and sets out to examine their interrelationship, i.e. their ability to combine or "mix" with one another. Strictly speaking, it is a question of logical association or compatibility of concepts. Plato says: "...we are agreed that some classes have a communion with one another, and others not, and some have communion with a few and others with many, and that there is no reason why some should not have universal communion with all" (ibid. 254c). Motion and rest will not mix, but being mixes with both, for both are (exist). Further, sameness and distinction are not compatible, but associate with the first three which share in both of them. For instance, mixing with being, motion becomes both identical with and different from it. The same applies to rest.

As is evidenced from the above, Plato no longer recognises rigid, immutable and single-valued concepts. His philosophical categories, for one, are conceived as flexible, changeful and essentially contradictory. They are involved in a complex system of mutual ambivalent relations combining with some and standing apart from others. Yet the most notable feature of Plato's new theory of Ideas was his special emphasis on the *unity of opposites*. Very characteristic in this respect are the closing lines of his *Parmenides:* "Whether one is or is not, one and the others in relation to themselves and one another, all of

them, in every way, are and are not, and appear to be and appear not to be" (166c). In other words, the analysis of any determination taken separately and in relation to other determinations shows that each of them passes into its opposite. Each higher concept splits into contraries which, in turn, exclude each other and resolve into a more general concept. In contrast to the sophists, Plato understands that the development of a concept is not an arbitrary transition from one determination to any other determination. Each of the opposites implies its own counterpart, its "other self:" being is inseparable from not-being, one from many, rest from motion, identity from distinction.

Groping after the laws of logic, Plato also came very near to what later was to be known as the *law of contradiction*. He in fact formulated this law in the *Phaedo* (103b) drawing a distinction between the opposites themselves and the things which possess them. The opposites cannot change into each other: "If change is between opposites or intermediate states... there must be a substratum which changes to the opposite condition, for the opposites do not change. And this substratum remains, but the opposite does not." As we have seen, later in the *Parmenides* Plato changed this view restricting the sphere of the law of contradiction. Probably, he believed it to be "inoperative" in relation to a notion and, ontologically, to an Idea which can change into its opposite. However it may be, neither in the *Parmenides,* nor in the *Sophist* Plato clarified his views on the status of the law of contradiction and its relation to the movement of concepts.

Here comes another important aspect of Platonism. The dialectic of the One and Other unfolded in the *Parmenides* is directly related to Plato's doctrine of Ideas as the true sources of individual objects. It is fundamentally different from the teaching of ancient philosophers about the ontological, existential generation of things from primary substance, as it is concerned with their ideal generation in the bosom of Idea. In his first variant of the theory of Ideas Plato, without specifying the relation of Ideas to individual objects, ventured a hypothesis that particulars might "share in" Ideas or Ideas might "be present in" or "associate with" particulars. Now the analysis of the Ideas themselves brought him to the conclusion that Ideas were also multiple and, consequently, needed some higher principle. This principle is the One (*to hen*).

In point of fact, most Plato's dialogues, particularly the

Republic, Phaedrus and *Phaedo* refer to the One as the supreme Idea. It is the foundation of all being. However, in contrast with the earlier dialogues in which the One is identified with Goodness, Beauty and Truth, i.e. is conceived in axiological terms, the later dialogues show an increasing tendency to focus on its logical and ontological significance. The One generates by a dialectical process all other categories and, on the ontological side, both of its hypostases or realms—the mind and the soul. This triad characteristic of all ancient cosmologies was later developed by neo-Platonism which presented the One, *Nous* (the Mind) and the Soul as the successive stages of the emanation of being.

To sum up then. Plato as the father of idealism occupies a unique place in the history of philosophy. His impact on the world's philosophical thought was enormous, yet it was by no means simple. Its ambivalence derives from the dual nature of his teaching. On the one hand, Plato's thought exemplifies untiring quest for truth and is sustained by an overmastering desire to improve the world. His philosophy comes from an irresistible drive towards beauty and perfection. On the other hand, all his efforts are directed towards restoring the hopelessly outdated communal system and inspired by the will-o'-the-wisp of the idealised Spartan aristocratic state in its contrast to corrupt Athenian slave-owning democracy. Plato's ideals came in tragic conflict with reality and this was bound to leave a mark of profound pessimism and foreboding of an impending catastrophe on his entire philosophy.

Plato's fundamental error consists in the conviction that reality can be changed with the help of ideas, be they conceived as human thoughts inspiring action, or transcendent Ideas allegedly shaping reality. "*Ideas* can never lead beyond an old world order but only beyond the ideas of the old world order. Ideas *cannot carry out anything* at all. In order to carry out ideas men are needed who can exert practical force."[1] Moreover, it is only the ideas reflecting the real progressive tendencies of social life that are worth materialising and are indeed materialised. Plato's ideas were not this kind. They formed a rigid immutable system of absolute values which, once translated into reality, would have emerged as a despotic and

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[1] Karl Marx and Frederick Engels, "The Holy Family", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 4, 1975, p. 119.

heartless social structure. We have got a glimpse of it in Plato's *Laws*.

In his Ideas Plato hypostatised the concepts of the dialectical mind and strove to array them in a complex system representing the model of the universe with all its diversity. Abstracted from the world, they became the object of a very thorough philosophical scrutiny. However, absolutised and divorced from reality, they were turned into independent intelligible entities of the divine kingdom and became the foundation of most reactionary religious and mythological world outlooks. The strength of Platonism went side by side with its weakness.

12. Plato's School: Ancient Academy

Plato founded his school in about 387 B.C. and remained in its charge till the end of his life. His successors were Speusippus who guided the school from 347 till 339 B.C., Xenocrates of Chalcedon (c. 339-315), Polemo and Crates. After the death of Crates, which occurred about 265 B.C., the Academy succumbed to the influence of scepticism. The period of the first century B.C.-second century A.D. was marked by persistent attempts to revive the doctrines of its founder along the lines of Stoicism and Aristotelianism. In the third-fifth centuries A.D. the school dissolved in neo-Platonism.

The extant remains of Plato's school, meagre and fragmentary as they are, show the first signs of the erosion' of Platonism that reflected the new social conditions of the oncoming Hellenistic age. Already *Speusippus* departed from the Platonic understanding of particular objects as mere reflections of ideas devoid of independent existence. He seems to have been quite sure that the sensible world was no less real than the world of ideas and that both of them could be the objects of scientific investigation, but required different means for their cognition. According to Sextus Empiricus, "Speusippus declared that, since some things are sensible, others intelligible, the cognitive reason is the criterion of things intelligible and the cognitive sense of things sensible. And cognitive sense he conceived as being that which shares in rational truth" (Sext. Adv. math. VII, 145-146). Speusippus believed that the art of scientific perception could be learned in the manner a flutist learns not only to extract various

sounds from his instrument but also to perceive and differentiate harmonious and discordant notes.

In contrast to Plato who posited only ideas and mathematical objects, Speusippus "made still more kinds of substances, beginning with the One, and assuming principles for each kind of substance, one for numbers, another for spatial magnitudes, and then another for the soul; and by going on in this way he multiplies the kinds of substance" (Arist. Meth. VII, 2, 1028b). As a result, Speusippus did not identify God with the One and the Good. On the evidence of Stobaeus, Speusippus maintained that God was different from both the One and the Good, "but of a nature peculiar to himself" (Mul. III, Speusippi fragmenta, 200).

Hence, in Speusippus the One and the Good are somewhat deprived of their divine connotation whereas the divine Mind turns into an independent principle approximating to the world's Soul of Plato. Following this line of thought, Speusippus in fact breaks off with the world of Ideas and the Platonic conception of Beauty and Goodness as the primary causes or principles of the universe.

Criticising such views from the standpoint of his teleological doctrine of being, Aristotle wrote: "Those who suppose, as the Pythagoreans and Speusippus do, that supreme beauty and goodness are not present in the beginning, because the beginnings both of plants and of animals are causes, but beauty and completeness are in the effects of these, are wrong in their opinion" (Arist. Met. XII, 7, 1072b).

Our sources indicate that Speusippus abandoned the Platonic Ideas replacing them with mathematical numbers. Aristotle and Jamblichus, for instance, quote him as saying that numbers are the only reality and that the One itself is their first principle or starting point.

Speusippus showed little interest in physics, and his contribution to it did not go beyond positing the fifth element, "ether." In ethics he mainly followed Plato but held that pleasure was just as bad as pain, both being contrasting evils (see Arist. Eth. Nicom. VII, 13, 1153b).

Xenocrates, the next head of the Academy, made important changes in the Platonic theory of knowledge. He posited three levels of cognition — thinking, sense perceptions, and opinion, and held them to correspond to three forms of being. According to Sextus Empiricus, "Xenocrates says that there are three forms of existence — the sensible, the intelligible,

and the composite and opinable; and of these the sensible is that which exists within the Heaven, and the intelligible that which belongs to all things outside the Heaven, and the opinable and composite, that of the Heaven itself; for it is visible by sense but intelligible by means of astronomy" (Sext. Adv. math. VII, 147). To these three forms of existence correspond three deities known from Hesiod as Fates: Atropos (Inevitable) for the intelligible, Lachesis (Chance) for the sensible and Klotho (Spinning) for the composite and opinable. Then come three kinds of living beings: gods, daemons and mortals. Philosophy, too, was to consist of three parts— logic, physics, and ethics (the standard division which came down to us from antiquity and evidently owes its origin to Xenocrates).

A characteristic feature of Xenocrates's teaching is a fusion of philosophy and mythology. Unlike Plato who resorted to mythology as a convenient instrument for expressing his philosophical notions, particularly in "physics," his pupil turned it into a separate object of philosophical inquiry. He starts with Zeus as the One, i.e. the first principle and the absolute form of all being. Next comes the world's soul, no longer the motive force of the sensible world but kind of Zeus's wife and Mother of the Gods and all things in the universe. Tending to view everything in mythological terms, Xenocrates devoted much attention to the origin of evil in the world. He relieved the gods of any responsibility for it and lay the blame exclusively on the bad daemons.

Xenocrates's conception of the Soul, both cosmic and human, reveals a strong influence of Pythagoreanism. Having accepted Plato's understanding of the Soul as a self-moving entity, he specified it as a self-moving number (Mul. III, Xenocrates, fr. 29). This definition is reiterated by numerous ancient authors, e.g. Aristotle, Plutarchus, Alexander of Aphrodisias, Philoponus, Themistus, Simplicius (fragments 30-46). The Soul's numerical structure accounts for its mental as well as motive powers though the Soul itself is incorporeal. This ensues both from its numerical character and from the fact that unlike any living being it does not need any sustenance (fr. 52).

The soul-body antithesis underlies the ethical theory of Xenocrates who believes that the goal of man's life is the emancipation of the soul from the fetters of the body. According to Xenocrates. the divine principle in man's soul

must overpower the titanic principle through the agency of right actions. On the evidence of Sextus Empiricus, Xenocrates classified everything as either good or bad or neither. This classification was to play a very important part in the subsequent development of Hellenistic philosophy, particularly Stoicism, laying the foundation of its doctrine of "indifferents."

Under the general head of "good" Xenocrates included the good of the soul, i.e. virtues (*arete*), the good of the body, i.e. pleasure, and external goods, such as wealth, power, honour, etc. Though virtue plays a decisive role in attaining a blissful life and securing the soul's emancipation, Xenocrates does not deny the importance of bodily pleasures and external goods for man's happiness. According to Aristotle, Xenocrates held that a happy life and a virtuous life are identical since both are given preference over all other modes of life (Top. VII, 1, 152a). Commenting on this statement, Aristotle points out the logical fallacy of Xenocrates's inference from preference to identity and contends that happiness should be subordinate to virtue. Concluding the review of Xenocrates's ethical teaching, it is perhaps worth mentioning his distinction between theoretical and practical wisdom: happiness can only be attained if the knowledge of first causes and intelligibles (theoretical wisdom) is complemented by the knowledge of practical matters (practical wisdom).

The works and pedagogical activity of *Polemo* and *Crantor* testify to the growing trend of the Academy towards ethical problems. On the evidence of Diogenes Laertius young Polemo was distinguished by unrestrained behaviour and wild temper: "One day, by agreement with his young friends, he burst into the school of Xenocrates quite drunk, with a garland on his head. Xenocrates, however, without being at all disturbed, went on with his discourse as before, the subject being temperance. The lad as he listened, by degrees was taken in the toils. He became so industrious as to surpass all the other scholars and rose to be himself head of the school in the 116th Olympiad" (IV, 16). Polemo is said to have advocated strict morals and "used to say that we should exercise ourselves with facts and not with mere logical speculations" (Diog. L. IV, 18).

Xenocrates's and Polemo's pupil Crantor went down in the history of philosophy as the author of a commentary to

Plato's *Timaeus*, one of the first works in this genre. He was also the founder of another philosophical genre, known as "consolations."[1] His contribution to ethics consisted in the assertion that we owe our passions to nature and therefore they are not to be suppressed, but only kept under control. Setting various goods of life against one another in an imaginary all-Hellenic contest, Crantor presents them in this hierarchical order: virtue (*aretē*), health, pleasure, wealth.

Tradition ranks with the Ancient Academy also *Heraclides of Pontus* and *Eudoxus of Cnidus*. In contrast with the Platonists proper, they paid much more attention to the study of nature. Heraclides's greatest contribution was to astronomy which owed him the hypothesis anticipating the heliocentric theory of Copernicus: according to Heraclides, the Earth rotates on its axis and Venus and Mercury revolve around the Sun. Contrary to Plato who regarded the stars as deities, Heraclides believed them to be heavenly bodies similar to the Earth — whence, perhaps, his conviction that the souls awaiting their incarnation on the Earth reside in the Milky Way. In physics, Heraclides professed a peculiar atomistic theory. He maintained that there exist fragments or "lumps" (*onkos*) not being particles of any element in particular but making up all things.[2] Presumably, he was opposed to the concept of a purposeless mechanical combination of lumps and believed them to merge with one another in the manner of separate musical tones making a single melody.

As regards Eudoxus, he restored Anaxagoras's teaching of homoeomers in physics and returned to the hedonism of Aristippus in ethics.

Such, in short, is the history of the Ancient Academy.

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[1] Writings of this kind, rather popular in subsequent centuries contrasted man's wretched existence in this world with the bliss awaiting his soul in heaven. — *Tr.*

[2] See Zeller (Ed.), *Die Philosophie der Griecken*, II. Theil, 1. Abtheilung. 4. Auflage, Fues, Leipzig, 1889. S. 1035.

Chapter **3**

Aristotle

13. Life and Work

Aristotle, the greatest of all philosophers of Ancient Greece, a pupil and a resolute opponent of Plato, was born in 384 B.C. at Stagira, a town on the north-eastern coast of the Aegean Sea. His father Nichomachus came from a long line of Asclepiades (claiming their descent from Asclepias, the god of healing) and was a court physician to king Amyntas III of Macedon. At the age of seventeen Aristotle came to Athens in order to join Plato's Academy and remained its member for eighteen years. After Plato's death he left Athens for Asia Minor together with Xenocrates, one of the probable reasons, according to ancient sources, being his strained relations with Speusippus, the new head of the Academy. In 355 B.C. Aristotle settled at Assos with several other Platonists under protection of Hermias, the ruler of a small Anatolian kingdom and the tyrant of Atarneus, its capital, who patronised philosophers and gave them everything necessary to pursue their studies. Three years later Aristotle moved to Mytilene (the island of Lesbos) on the invitation of his friend and loyal disciple Theophrastus. This event took place shortly before the death of Hermias who was treacherously captured by the Persians and said to be crucified.

In 343 B.C. Aristotle accepted the offer of king Philip of Macedon to be tutor to his son Alexander, the future great conqueror. After Philip had defeated the Greek army in the battle at Chaeronea, Aristotle returned to Athens. There he founded his own school in the Lyceum, a grove with covered walks (*paripatos*) near the temple of Apollo Lykeios. The school known as Lyceum was also called Peripatetic (its members being referred to as peripatetics) due to Aristotle's practice of walking up and down while discussing philosophy with his pupils. During his second period in

Athens which lasted for twelve years Aristotle gave oral tuition in the Lyceum which attracted large audiences, continued scientific researches and elaborated his system.

The death of Alexander the Great in 323 B.C. set off a general revolt against the Macedonian rule and the Athenian assembly voted on war with Antipater, Alexander's regent in Greece. Aristotle, known for his Macedonian sympathies, was immune against political charges, as he was not an Athenian citizen and had no right to participate in the city's public life. However, he remained liable to prosecution on religious grounds and a charge of impiety was promptly brought up against him, the pretext being his poem in honour of pro-Macedonian Hermias in the form of a hymn that was alleged to befit only a god, and the quatrain on the monument to Hermias set up at Delphi. Aristotle was compelled to go into voluntary exile and retreated to Chalsis in the island of Euboea, where he had some property. The next year, in the summer of 322 B.C., he died.

Aristotle's surviving works mainly belong to the Lyceum period, though they contain ideas and authentic fragments of his earlier writings. We also possess a number of fragments dated to the Platonic period. Generally speaking, it is extremely difficult to pin down Aristotle's works to an exact date and establish their chronological sequence, as almost all of them show unmistakable traces of different periods of his intellectual progress. Nevertheless, the earlier works clearly reveal a strong influence of Platonism. For instance, the *Eudemus*, an early dialogue that came down to us in fragments contains Platonic arguments for the soul's immortality. Following Plato, Aristotle declares the soul to be a form *(Eidos)* and commends those who call the soul receptive of ideas (cf. De an. III, 492a). In full agreement with Plato Aristotle thought of it as existing naturally outside the body, whereas life in bodies is unnatural and "like disease."

Another large work written by Aristotle in his early period is the *Protrepticus* (Exortation) that also survived in fragments, largely in the composition of neo-Platonic Jamblichus under the same name. It represents what was later to become rather a common genre of philosophical essays inviting the reader to philosophical studies and exalting the life of contemplation. Still in the wake of Plato's theory of ideas, Aristotle speaks highly of philosophy as being the

noblest of all occupations, free from any material interest, and extols "thinking" (*phronēsis*) as the greatest boon. He uses the word in its Platonic sense as the penetration of the philosophical mind into the highest reality, the world of Ideas. Characteristically, the same word was later to be used by Aristotle as synonymous with practical wisdom.

It is only in the dialogue *On Philosophy* dated by some critics to Aristotle's second period that the philosopher shows essential progress from the Platonic dogmas. Taking exception to the theory of ideas Aristotle, like Speusippus, reduces them to mathematical numbers and notes that if they meant something else they would be completely beyond our understanding. He criticises the Pythagorean and Platonic views and contends that incorporeal points cannot produce a line, let alone a body.

Treating at length the origin of religious beliefs, Aristotle attributes them to two causes, one being the inspiration descending on the human soul in dreams, and the other, the orderliness of celestial motions. Very indicative in this respect is the attitude of Aristotle to Plato's poetic image of an underground cave with chained prisoners intended as an allegorical picture of our world (Rep. VII, 514a-517c). According to Plato, the prisoners cannot move and do not know anything about the real world seeing only the shadows of its Ideas. Using this image, Aristotle turns the tables and says that if the imaginary race of men born in the bowels of the earth were allowed to come to the surface and see the wonders of our world, they would straightaway believe that there are gods who wrought them. Truth, according to Aristotle, resides in the world around us and is to be sought not by contemplating transcendent Ideas, but by observing living nature.

This approach was fundamentally different from Plato's conception of the physical cosmos as something secondary, a kind of reflection of a higher realm of ideal entities. Contrary to Plato, Aristotle is convinced of the reality of this world which needs only to be explained.

Aristotle's mature works making up the *Coprus Aristotelicum*, can be divided on the subject principle into eight groups:

1. *Logic* (the Organon): *Categories; On Interpretation; Prior Analytics* and *Posterior Analytics; Topics; On Sophistical Refutations.*
2. *Philosophy of nature: Physics* or *Lectures on Physics*

(eight books); *On the Heavens* (four books); *On Generation and Corruption* (two books); *Meteorologica* (four books, the last one being evidently non-authentic). This group also includes the pseudo-Aristotelian treatise *On the World* commonly dated to the first century B.C.

3. *Psychology: On the Soul* (three books) and *Short Natural Treatises (Parva Naturalia)* consisting of the following works: *On Perception and the Perceived, On Memory and Reminiscence, On Dreams, On Insomnia, On Prophesying by Dreams, On Duration and Brevity of Life, On Life and Death, On Respiration.* Included in this group is also the sham treatise *On Spirit* believed to be written round about the middle of the third century B.C.

4. *Biology: History of Animals* (ten books); *On the Parts of Animals; On the Generation of Animals* (five books). Besides these authentic works of Aristotle, classical editions also include a number of treatises written in the Lyceum by anonymous authors. The most important of them is the *Problems* treating various questions of mathematics, optics, music, physiology and medicine.

5. *First philosophy: Metaphysics* consisting of fourteen books. In Bekker's edition this work is preceded by the treatise *On Melissus, Xenophanes and Gorgias (MXG).*

6. *Ethics: Nichomachean Ethics* (ten books); *Magna Moralia* (Large Ethics) (two books); *Eudemian Ethics,* its books 4 to 6 coinciding with books 5 to 7 of the *Nichomachean Ethics.* Chapters 13 to 15 of book 7 are sometimes published as Book 8 of the *Eudemian Ethics.* Two books of the *Magna Moralia* are regarded as quasi-Aristotelian, just as the treatise *On the Virtues and Vices* written between the first century B.C. and the first century A.D.

7. *Politics and economics: Politics* (eight books); *Economics* (three books). The genuineness of this latter work is generally denied and its third book is only available in the Latin translation. Aristotle's school is credited with as many as 158 *politeias* which outline the history of Greek states and describe their political systems. An important addition to this corpus was the papyrus *Athenian Politics* discovered in 1890.

8. *Rhetorics and poetics: Rhetorics* (three books), followed by pseudo-Aristotelian treatise *Rhetorics Against Alexander* (an early peripatetic work), and *Poetics.*

It would not be an exaggeration to say that Aristotle's works survived by a miracle. After his death they passed to

Theophrastus, and then to his pupil Neleus. They remained in an underground depository till the first century A.D. when they were taken to the library of Apellicon of Teos in Athens. After that they were brought to Rome and published by Andronicus of Rhodes, the head of the peripatetics. References to Aristotle's works are usually made by the Bekker edition of 1831.

The list of Aristotle's works alone testifies to the encyclopaedic scope of his genius. He not only embraced all the fields of contemporary knowledge, but also gave their primary classification. It is to Aristotle that we owe the demarcation between philosophy and science, and between one science and another. The pre-Aristotelian philosophers did not distinguish between individual subjects and treated the whole field of knowledge as one domain. True, they divided their material into separate sections in order to construct afterwards a single philosophical system, but they did not do so consciously on a definite principle.[1]

Aristotle classifies all knowledge on the principles of purpose and subject. According to this classification, knowledge can be either *theoretical* pursued for its own sake, or *practical* instrumental in ruling society, or *creative* intended to bring material benefits and help realise the ideal of beauty. Theoretical knowledge includes philosophy, mathematics, and physics; practical knowledge — ethics, economics, and politics; creative knowledge — poetics, rhetorics, and the arts or skills (*technē*). The necessary preliminary to all sciences is *logic* understood by Aristotle as their common method or instrument (*organon*) and therefore not included by him in the foregoing classification. This scheme naturally suggests logic as the starting point for exposition of Aristotle's philosophical system.

14. Logic and Scientific Method

Aristotle is the universally recognised founder of formal logic[2] or the science of correct thinking which he called analytics. His exposition was so exhaustive and well reasoned

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[1] The only exception appears to be the philosophy of Democritus. However, though the names of his numerous works attest to its obvious differentiation, the fragmentary nature of the great atomist's heritage makes it impossible to trace out the guiding principles of his classification.

[2] The term "logic" was put into circulation some five hundred years after Aristotle's time by his commentator Alexander of Aphrodisias.

that in its special field logic had remained practically unchanged till the nineteenth century and, according to Kant, "has not been able to advance a single step and is thus to all appearance a closed and completed body of doctrine."[1] Indeed, Aristotle succeeded in developing a paradigm of logical investigations that held on for over two thousand years and was challenged only after the application of dialectics and mathematical methods in this field of knowledge.

The sequence of Aristotle's logical works listed above in the order of their complexity reflects the didactic structure of logic which is traditionally divided into three departments: concepts, propositions and inferences. The categories deal with unrelated single words or terms which, according to Aristotle, fall into ten classes or categories (from *kategoreō* which means to harangue, assert). Aristotle enumerates ten categories which seem to cover various aspects of being: substance, quantity, quality, relation, place, time, position, state, action or affection (see Categ. 1b-2a). This classification must have been regarded by Aristotle as but a tentative one, since in *Metaphysics* he either reduced the number of categories to three (substance, quality and relations—see XIV, 2, 1089b) or included the last four under the heading of motion.

One can hardly proceed to the analysis of categories without understanding their nature. Were they conceived by Aristotle as classes of being, forms of thought or merely as linguistic elements, names? Each of these alternatives advanced in historico-philosophical literature was not unfounded as it reflected one of the aspects of Aristotle's categories (it is not accidental therefore that the discussions of the proposed interpretations were never confined within the province of pure logic). The truth is that Aristotle himself made no distinction between them as his doctrine sprang from the study of different modes of one and the same being. In his eyes, the categories could only be true to the extent to which they reflected them, i.e. represented a combination of the ontological, logical and linguistic aspects of reality. Their separation was a matter of distant future.

The first in the list of categories is substance (*oysia*) which stands apart from the rest. It is, according to Aristotle, the individual: "Substance, in the truest and primary and most definite sense of the word, is that which is neither

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[1] Kant, *Kritik der reinen Vernunft*, 2. Auflage. Riga, 1787. S. VIII.

predicable of a subject nor present in a subject; for instance, the individual man or horse" (Categ. 5, 2a). Individual things as subjects may have various determinations as their predicates, e.g. Smith is a man, the horse is white, etc. Aristotle's conception of substance, i.e. true reality seems paradoxical, since both for him and Plato reality can only be grasped by thought which deals with the universal and not individual. Indeed, concrete objects are in constant flux of birth and decay, whereas substance is immutable and everlasting and therefore open only to the mind.

Firmly holding on to the sensual world, but being unable to solve the dialectical contradiction of the individual and the universal, Aristotle posits, by way of compromise, secondary substances—genera and species, i.e. universals deriving their existence from individuals as independent primary substances. Thus the category of substance on the ontological side acquires the most general character denoting all independently existing things, and on the logical side, reflecting the relations within the hierarchy of the individual, the particular and the universal, occupies simultaneously the uppermost and the lowermost positions[1] including both the genera and the individuals.

The *Categories* is presumably one of Aristotle's early works written in the initial period in the Lyceum. Having divined and, in fact, expressed the dialectics of the individual, the particular and the universal in the "primary substances", Aristotle failed to develop his brilliant conjecture into a consistent theory and later revised his views coming to regard the universals (genera and species, i.e. substances) as forms (*morphe̅, idea*), i.e. as conceptual characteristics inherent in individual objects. "By form I mean the essence of each thing and its primary substance," writes Aristotle in *Metaphysics* (VII, 7, 1032b). Though this definition apparently asserts the identity of the form or essence with independently existing individuals (ibid., VI, 6, 1031b), the Platonist tradition weighing heavily on Aristotle caused him to turn to the universal, the "form" or "idea" as the "essence of being." On the one hand, he is firmly convinced that the only reality is the individual which alone can be called the substance and essence of being. On the other hand, each individual is a compound of form and matter and therefore

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[1] Cf. *Porphyry's Tree* discussed later.

cannot be substance and essence which must be simple. Aristotle, accoding to Lenin, "gets into a muddle precisely over the dialectics of the universal and the particular, of concept and sensation, etc., of essence and phenomenon, etc."[1]

In *On Interpretation* Aristotle turns to propositions consisting of terms and stating different relations between the subject and the predicate which may be true or false (Socrates is sitting, the man is running). Depending on quantity (universal and particular) and quality (affirmative and negative), propositions (premises) fall into four types: A—universal affirmative (all S are P), I—particular affirmative (some S are P), E—universal negative (none of S is P), and O—particular negative (some S are not P). The relations between the four types of premises are graphically illustrated by the so-called square of opposition proposed in the sixteenth century as a mnemonic device by Julius Pacius, translator and commentator of Aristotle.
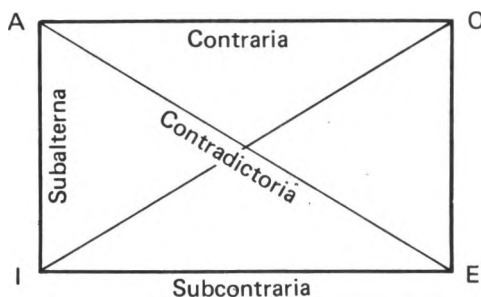
Discussing the modality of propositions, Aristotle divides them into necessary (apodeictic), possible (problematic) and real (assertoric) and proceeds to the analysis of their logical relations within the framework of inference.

The relations between propositions (judgements) are determined by the principles or laws of thinking: the law of identity, according to which every concept must be used in reasoning in the same meaning $(A = A)$, the law of non-contradiction, according to which two propositions negating each other cannot be simultaneously true $(A \neq$ non-A) and the law of the excluded middle, according to which either A or non-A is true and no middle is possible.

[1] V.I. Lenin, "Conspectus of Aristotle's Book *Metaphysics*", *Collected Works*, Vol. 38, p. 367.

Hence, in a discourse terms and propositions must not contradict one another, the truth of an affirmative proposition is the falsity of the negative one, etc. These principles constitute the foundation of inference or reasoning from premises presented by Aristotle in the form of a syllogistic system.

A detailed analysis of syllogism is given by Aristotle in the *Prior Analytics* opening up with this definition: "A syllogism is discourse in which, certain things being stated, something other than what is stated follows of necessity from their being so" (Arist. Anal. pr. I, 1, 24b). Thus, from the statements "All men are mortal" and "Socrates is a man" follows of necessity that Socrates is mortal.

Aristotle distinguished three figures of syllogism (the fourth figure was added by his followers), each including 16 moods. In his eyes only the first-figure syllogisms were perfect and only four moods of them were correct. The syllogisms of the second and third figures were regarded by him as "imperfect" since their conclusions are not valid for every case.[1]

In a syllogism as a form of reasoning the two extreme terms (S and P) are related to each other through the agency of the middle term (M) common to both premises. If there is no middle term or if it is used in different meanings (four-term fallacy), the syllogism breaks up. It expresses the axiom known as *dictum de omni et nullo* (L): whatever is affirmed (denied) of an entire class may be affirmed (denied) of any object included in this class. We do not propose to go into syllogistic which is expounded in detail in any manual of logic, yet it is worth noting that syllogism is essentially a method of unfolding the knowledge we already possess: the content of the conclusion is implicit in the premises. Therefore, syllogism cannot be identified with demonstration in general. Aristotle himself was not unaware of the possibility of direct inference by converting a premise: from the statement "some politicians are liars" we infer "some liars are politicians." He also wrote about the so-called dialectical

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[1] According to Aristotle, the perfect syllogism consists of a major premise, a minor premise and a conclusion containing three terms which "are so related to one another that the last is contained in the middle as in a whole, and the middle is either contained in, or excluded from, the first as in or from a whole" (Anal. pr. 1. 3. 25b). Its four moods are the following: $MaP\text{-}SaM = SaP$(Barbara); $MeP\text{-}SaM = SeP$(Celarent); $MaP\text{-}SiM = SiP$ (Darii); and $MeP\text{-}SiM = SoP$(Ferio).

syllogism describing it as a procedure "whereby we shall be able to reason from opinions that are generally accepted about every problem propounded to us, and also shall ourselves, when standing up to an argument, avoid saying anything that will obstruct us" (Arist. Top. I, 1, 100a).

This method is the subject of the *Topics,* i.e. arguments used in a theoretical debate. The treatise describing more than 300 "topics" was intended as a reference book to be kept close at hand in an argument. Analysing the pattern of Plato's dialogues and formulating the "topics," Aristotle in fact intended to develop a method of reasoning not only from apodeictic, but also from possible propositions conforming to currently held opinions. The *Topics* teaches a disputant to ascend from "verisimilar" to "true and primary" things "which are believed on the strength not of anything else but of themselves" (Arist. Top. I, 1, 100b). This aim, according to Aristotle, can be achieved through the use of various "topics." For instance, the topics pertaining to polysemy are instrumental in attaining the truth if different words are synonymous, and misleading if the words are homonymous. Thus medicine can be defined both as the knowledge of health (in accordance with its purpose) and as the knowledge of the correct mode of life (in accordance with the means used to achieve a state of health). On the other hand, the use of the word "bat" as a mammal and a wooden implement in one and the same argument is bound to lead to confusion.[1]

Alongside the examination of individual "topics," Aristotle develops their system showing that a dialogue must include five main components: (1) statement of a problem; (2) means for ensuring correct inference, such as the rules for adoption of premises, analysis of different meanings of each term, detection of resemblances and differences; (3) rules of inference—inductive (from the individual to the universal) or syllogistic; (4) interrogator's strategy; (5) respondent's strategy.

The "dialectical" (dialogical) method is regarded by Aristotle as the way to the first principles of every science. In fact, like all Aristotelian logic, it is a theory of demonstration by reasoning upwards, to certain basic propositions, or downwards, by reasoning from them. These are

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[1] See W. K. C. Guthrie, Vol. VI. p. 205. Aristotle's own example of homonymy is κλεις which meant both the key of a door and the shoulder-blade.

regarded as self-evident or axiomatic, applicable to special sciences and to knowledge in general. There can be no such thing as the logic of discovery. The undemonstrable prior truths lie outside the province of logic. They fall within the scope of "first philosophy" (metaphysics) and are grasped by the mind which comprehends the essence of things, their form and substance.

Characteristically, even induction is regarded by Aristotle as demonstration of a general thesis, as the advance from particulars to universals: it is a specific syllogism in which the major premise (the universal) is demonstrated from the minor premise (premises). Unlike the conventional syllogism in which we infer the mortality of Socrates from the mortality of all men, in induction we infer the mortality of man (men) from the mortality of Socrates, Plato, Callicles. Strictly speaking, there is no inference in the proper sense of the word, as we cannot examine every human being and state that all of them are mortal. This is merely a restatement of the general thesis. An apodeictic general statement can only be provided by so-called perfect induction in which every relevant individual is subjected to examination. Needless to say, inductive arguments used in actual debate are very far from this ideal.

The closing section of Aristotle's logic is an analysis of logical errors committed by man deliberately or unintentionally. In his last logical treatise called *On Sophistic Refutations* and sometimes regarded as the last (ninth) book of the *Topics*, the Stagirite shows that all fallacies are in fact nothing but syllogistic errors. These are divided into verbal errors (ambiguity in terms or homonymy and ambiguity in grammatical construction or amphiboly; incorrect composition or divisions of propositions, wrong accentuation and incorrect substitution of grammatical forms) and logical errors (confusing the accidental with the essential or the absolute with the relative, arguing erroneously from a general rule to a particular case or vice versa, a fallacy of the consequent or arguing from a consequent to its condition, arguing in a circle, a fallacy of incorrectly assuming an antecedent as the cause of a consequent, i.e. *post hoc ergo propter hoc*, a fallacy of many questions wherein several questions are incorrectly combined in one).

The classical system of Aristotelian logic outlined above came into being as a theoretical descipline and was used for

didactic purposes for more than two thousand years. It represented the forms of thought in a definite hierarchical structure which was an objective result of the historical process of their cognition. However, owing to the dialectics of the logical and the historical, a logical presentation of the results of a development is of necessity the reverse of the actual process. Historically, the inquiry into the methodology of scientific thinking started from the analysis of Plato's dialogical discourse (*Topics*), proceeded to the abstract forms of inference (*Analytics*) and concluded with judgements or propositions (*On Interpretation*) and terms or concepts (*Categories*).

This explains why the *Categories* should be regarded as the last logical and the first "metaphysical" treatise. The concepts examined there are indeed congenial to the "principles and causes" that are the object of Aristotle's "first philosophy."

15. First Philosophy. The Doctrine of First
Principles and Causes of Being and Knowledge

The first philosophy as a science concerned with the primary principles and causes of being was expounded by Aristotle in a fundamental work that was later called *Metaphysics*.[1] As time went on, metaphysics came to denote the doctrine of transempirical, supra-sensible principles of reality as opposed to physics dealing with the manifestation of these principles in the world of sensible objects.

Comparing the first philosophy with other disciplines, Aristotle wrote that the "physicist" concerns himself with all the active and passive properties of bodies, the mathematician deals with them as inseparable from bodies by an effort of abstraction, and the First Philosopher or metaphysician studies them "where they are separate both in fact and in thought" (De an. I, 1, 403b). This statement seems to have a Platonic ring and suggests the conception of metaphysical properties as principles and causes divorced from physical objects and therefore essentially identical with incorporeal Ideas. Such a conclusion, however, would be an oversimplification of Aristotle's views.

As we have seen earlier, Plato understood mathematical

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[1] The work owes its name to Aristotle's commentator Andronicus of Rhodes (first century B.C.) who placed it in his edition after the works on nature under the heading *Meta ta physika*.

objects or numbers as separable and in fact separated from matter and the material world. In contrast with his teacher, Aristotle conceived them as properties belonging to bodies but separable from them "by an effort of abstraction." This is a different view incompatible with the Pythagorean and Platonic conceptions of numbers as Ideas separate from bodies and of Ideas as numbers. Plato's doctrine was in fact the only rational explanation of the relationship between Ideas and material objects, and Aristotle's departure from it was a challenge to one of the basic tenets of Platonism.

According to Aristotle, the objects of the first philosophy have no existence outside the sensible world; yet they do exist in it and can be thought of both as inseparable and as separate from bodies. Their detection and investigation call for greater mental efforts and a higher degree of abstraction than are needed in purely mathematical research.

The *Metaphysics* in its traditional form[1] starts with a definition of philosophy (wisdom) and proceeds to a critical analysis of previous doctrines, its aim being to pave the way for Aristotle's own conceptions and give them preliminary substantiation. In a brief historical survey Aristotle points out that the first philosophers considered matter (*hylē*) as the primary cause of all things, whereas Empedocles and Anaxagoras introduced the efficient cause which in Anaxagoras assumed the form of Reason "as the cause of order and of all arrangement" (Met, I, 3, 984b). After that the Pythagoreans evolved the concept of cause as "substance and essence of being" by stating "that finitude and infinity were not attributes..., but that infinity itself and unity itself were the substance of the things of which they are predicated" and that therefore "number was the substance of all things" (ibid., I, 5, 987a). Finally, to Plato philosophy owes the concept of the formal and final causes: "Plato ... held that the problem applied not to sensible things, but to entities of another kind — for this reason, that the common definition could not be a definition of any sensible thing, as they were always changing.

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[1] The entire work consists of separate treatises (books) written or recorded at different times and contains numerous repetitions. According to Werner Jaeger, the *Metaphysics* in a coherent form would include books I (chapters 1-7), III, IV, VI, VII, VIII, IX, XIII, X and XII (less chapter 8). All other books and chapters are repetitive. An interesting attempt to reconstruct the *Metaphysics* was also undertaken by Adolf Lasson (see Aristoteles, *Metaphysik. Ins Deutsche übertragen von Adolf Lasson*, Diederichs, Jena, 1907).

Things of this other sort, then, he called Ideas, and sensible things, he said, were all named after these, and in virtue of a relation to these; for the many existed by participation in the Ideas that have the same name as they..." (ibid., I, 6, 987b). It is at this point, however, that Aristotle's reaction against Plato appears at its strongest. His criticism of the theory of Ideas, which was to a certain extent the former Platonist's self-criticism is mainly unfolded in chapters 4 and 5 of Book XIII.

Aristotle's objections to the doctrine of Ideas were as follows: (1) It merely doubled the sensible world without explaining it as if a greater number of entities were easier to comprehend than a smaller one. (2) None of the arguments for the existence of Ideas could achieve its end. (3) To explain the relation of the ideas to the sensibles one needed an intermediary, so that between man in general and an individual there was to be the "third man," just as between man and a Greek, a Greek and Plato, and so on ad infinitum. (4) Motionless Ideas alleged to be causes could not effect motion or any change in the sensibles, i.e. provide the effective force in causality. (5) The relation between an object and an Idea described as communion, participation or presence "is empty talk and poetic metaphor." (6) In general, the essence or Idea of a thing cannot be separate from the thing itself: "It would seem impossible that substance and that whose substance it is exist apart" (Met. XIII, 5, 1079b). Similar objections were raised by Aristotle against the Pythagorean notion of mathematical objects allegedly having a separate existence from material things: "The objects of mathematics are not substances in a higher degree than bodies are, and ... they are not prior to sensibles in being, but only in definition" (ibid., XIII, 3, 1077b).

Aristotle starts unfolding his doctrine of causes with a statement of the law of non-contradiction which in the *Metaphysics* turns into the foundation of being. This "most certain of all axioms" says: "The same attribute cannot at the same time belong and not belong to the same subject and in the same respect" (Arist. Met. IV, 3, 1005b). Again, "It is impossible for any one to believe the same things to be and not to be, as some think Heraclitus says" (ibid., p. 737).

In contrast to Heraclitus, Aristotle asserts that a thing cannot be simultaneously the same and not the same, exist and not exist since it is only the stable, the permanent that lends

itself to a definition. Hence, Aristotle not only substitutes formal logic for dialectics, but declares all reality to be non-contradictory and therefore essentially immutable. The upshot is that Aristotle's "metaphysics" turns into a doctrine of the immutable essence of the world different from the world itself. Nevertheless, the Stagirite cannot close his eyes to the movement and changefulness of all things. Attempting to explain them, he gets entangled in a host of contradictions.

Aristotle's main hitch was the dialectics of the universal and the particular. His criticism of Plato's theory of Ideas testifies to an inclination to regard individual things as the only reality and this is exactly how he solved the problem of the "primary substance" in the *Categories*. From this viewpoint, the "secondary substance," i.e. the universal should be conceived as one throughout the many, but not apart from the many. Yet the Stagirite inherited from Plato the conviction that without the universal, knowledge is impossible. Being the object of knowledge, the universal as such becomes for Aristotle something primary and more authentic than the individual, and this idea runs right through his doctrine of causes.

According to the Stagirite, "causes are spoken in four senses. In one of these we mean the substance, i.e. the essence (for the 'why' is reducible finally to the definition, and the ultimate 'why' as a cause and principle); in another the matter of substratum, in a third the source of the change, and in a fourth the cause opposed to this, the purpose and the good (for this is the end of all generation and change)" (Met. I. 3, 983a). Hence, all causes can be classified, using Aristotle's later terminology, under four headings: formal, material, efficient, and final. They have been described separately by previous philosophers and constitute the nucleus of Aristotle's first philosophy.

In his analysis of causes Aristotle proceeds from the pattern of human activity since artificial products provide a good illustration of all the four causes. Take, for instance, the beautiful pot referred to by Socrates in his conversation with Hippias. Its formal cause is the shape, the external appearance which gives it a definite configuration; it is a concept without which the potter will not be able to manufacture it. The material cause of the pot is clay, a passive substratum which is a pot in potency. Its efficient cause is the potter who molded the pot to the required shape in accordance with its concept or

form. Lastly, its final cause is the purpose of the pot, its goal —
to be a vessel suitable for various uses.

Proceeding from the pattern of human activity as a universal model, Aristotle applies it to the world at large and explains natural phenomena in terms of the self-realisation of forms. Significantly, his favourite simile is that of physician and nature: just as the physician is the efficient cause of health in a sick man, so nature always acts with an eye to the best and is its own doctor.

A question naturally arises, which of the causes is to be regarded as primary.

Aristotle points out that the four causes can be reduced to two — Form and Matter, since the formal, efficient and final causes tend to coalesce in one. Matter or the material cause cannot be primary, as it is inert, shapeless and liable to assume any form that may enter into it thus serving merely as the material of individual objects. Nor can a separate body representing a unity of form and matter be regarded as primary in view of its composite character. This leaves Form as the sole pretender to the title of primary cause or essence of being which is promptly conferred upon it by Aristotle. Having thus set out to overcome Plato's "naïve" theory of Ideas, the Stagirite lands in the same idealist quagmire with but a slightly modified theory: his primary forms conceived as the concept or "essence" of things are practically as immutable, eternal and universal as the Ideas of his former master.

Aristotle reasons thus: everything that comes to be arises from something due to some motive force shaping it on a certain model. For instance, a bronze ball is made of bronze. Yet to make a bronze ball does not mean to make the form of the "spherical" which must pre-exist in order to be the cause of the ball: "Obviously then the form also, or whatever we ought to call the shape present in the sensible thing, is not produced, nor is there any production of it, nor is the essence produced; for this is that which is made to be in something else [the substratum, matter] either by art or by nature or by some faculty" (Met. VII, 8, 1033b). Nor does matter as the material of all things come into being — it is eternal, changing from one state to another under the effect of the form.

Despite Aristotle's own contention that there is no matter without form nor form without matter, he now comes out with

a concept of prime matter unrelated to forms, and a prime form ("form of forms") unrelated to matter. His definition of prime matter runs thus: "By matter I mean that which in itself is neither a particular thing nor of a certain quantity nor assigned to any other of the categories by which being is determined" (Met. VII, 3, 1029a).

This categorical statement brings Aristotle face to face with the old Eleatic problem: if true Being (i.e. matter and form) is ungenerated, how are we to account for the origin, development and decay of individual objects? Aristotle's first answer was that they owed their genesis to the formation of matter, the union, as it were, of form and matter. However, if matter and form (except the "prime matter" and the "form of forms") do not exist separately, how can they come together? In order to avoid the Parmenidian solution of the problem denying the reality of the changeful sensible world, Aristotle has but one way out — to introduce two new important notions: potentiality (*dynamis*, *potentia*) and actuality (*energeia*, *act*).

The notions of potential and actual being are closely linked by Aristotle with the notions of matter and form. Matter is conceived as potentiality since it is not what it can be. By contrast, form is identified with actuality. Describing their relationship, Aristotle expounds a peculiar dialectics of matter and form, potentiality and actuality. With the exception of "prime matter," no material can be conceived as absolutely unformed, but only as a compound of matter and form performing at one and the same time different functions in relation to other compounds. For instance, brick being the form for clay is simultaneously the matter for a house built from brick. Therefore brick is potentially a house and clay is potentially brick. Brick is the actuality of clay, and a house is the actuality of brick. Again, the actuality of a child (form) is the potentiality of a man (matter), etc. Any change is thus the actualisation of potency.

Aristotle's doctrine of potentiality and actuality was an important advance in philosophy. First, it provided a rational explanation of the phenomenon of genesis. Things do not come into being "from nothing," but originate as the actualisation of potency which is no longer conceived as "everything from everything," i.e. from a mechanical combination of material particles, such as homoeomers, roots or atoms. Second, it gave a more realistic account of the source of motion,

retrieving it from the Platonic supra-sensuous world and bringing it back to earth as one of the aspects of nature. Finally, it placed the four causes in a new perspective enabling them, due to the interpretation of motion as actualisation, to be viewed as dynamic forces, different from what they looked like in the analysis of matter and form.

It should be noted that Aristotle's interpretation of form as actuality evidently intended as elaboration and substantiation of his doctrine of causes led in fact to a duplication of causal relations and tautology of terms. Indeed, the interpretation of form as actuality implies that the cause of one or another phenomenon is different from the phenomenon itself. Yet if a change is understood as transition from potency to actuality due to the actuality of form, it cannot involve any new elements since the form itself pre-exists and is not subject to any alteration. Hence the proverbial hollowness of medieval pseudo-Aristotelian scholasticism.

Aristotle's first philosophy culminates in a concept of God, a natural corollary to his teleological conviction that nature makes nothing without a purpose and that everything in the world converges towards one goal. Positing God as the first principle and cause of the universe, the Stagirite calls him the "form of forms" when he speaks of the matter-form relationship, the "prime mover" or "unmoved mover"[1] when he describes motion and change, and the "thought of thought"[2] when he refers to his activity.

The concept of Unmoved Mover is internally contradictory. As we have seen earlier, Aristotle himself censured Plato for assuming unmoved Ideas as the source of motion. Confronted with the same problem, the Stagirite declares God as the Prime Mover to be the goal of the universe: perfect reality or the Good is at the same time the ultimate goal of the entire universe and every individual thing in it. This is nothing but the same idealistic teleology, slightly modified: what was with Plato the transcendent, extralimital goal residing in the intelligible world becomes the immanent goal of the world of nature.

This teleology, as we have already seen, derived from Aristotle's tendency, basically anthropomorphic, to project

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[1] The Prime Mover must move without being moved, otherwise we should have to assume another mover that moves it, and so on ad infinitum.

[2] God's activity, according to Aristotle, is thought, and he must think only of what is the highest, i.e. of himself, wherein lies his bliss.

the pattern of human activity onto causal relationships in nature. To this must be added the crucial change he introduced in the traditional understanding of matter: it is no longer the living and eternally mutable "physis" of the first philosophers with its own immanent source of motion, but an inert, motionless and indeterminate mass. This lifeless concept dominated the philosophers' minds for two thousand years and was largely accountable for inconsistencies of materialism and advantages of the idealistic world outlook. It was all the more erroneous that matter was presented not only as an unformed substratum, a mere potentiality, but as a source of natural necessity and chance restricting the purpose-oriented activity of man and nature. In other words, matter came to be regarded as a source of all kinds of imperfection in the world, and this, in turn, caused natural processes to be appraised in ethical terms and led to a further distortion of the world's picture.

It should be noted, however, that Aristotle's own concept of matter as potentiality allowed for a considerable freedom of interpretation and was by no means as lean and lifeless as it was made later by his scholastic commentators. In point of fact, Aristotle understood potency not only as the ability to yield to a form, but also as resistance to alien influence and therefore as a principle of individuality of things: "If a thing exists in potency, it is not the potency of anything and everything. Different things come from different things" (Met. 1069b 28). Hence, a thing is not indifferent to the agent which acts upon it and itself possesses a motive principle, an internal source of motion, suffering change only from a suitable external agent.

Here we again see the living germs of dialectics, this time in the concepts of matter and form, potentiality and actuality. Aristotle wavers between idealism and materialism on a number of issues, but the idealist trend is generally prevalent.

16. Physics. World, Life and Man

In contrast with Aristotle's "first philosophy" which treats of immutable and motionless substances, the object of his natural philosophy or physics is moving and changing bodies. These, according to Aristotle, "present a feature in which they differ from things which are not constituted by nature. Each of them has within itself a principle of motion and of

stationariness (in respect of place, or of growth and decrease, or by way of alteration)" (Phys. II, 1, 192b). Physics is not yet separated from the first philosophy. In books I and II of the *Physics* Aristotle discusses the four causes of all being known to us from his *Metaphysics*, and in book VIII, the last one, returns to the problem of god as the prime mover which, according to Aristotle, is the ultimate cause of motion in the universe. The problems of physics in the modern sense of the word are discussed by him in such special scientific treatises as the *Meteorologica*, *Problems*, and others.

The concept of motion comes to the foreground only in book III where Aristotle defines it as "entelechy,"[1] i.e. as "the fulfilment of what is potential when it is already fully real and operates not as *itself* but a *movable*, that is motion" (Phys. III, 1, 201a) and as "the fulfilment of this potentiality, and by the action of that which has the power of causing motion" (ibid., 202a). Entelechy in Aristotle is essentially identical with actuality (*energeia*) except that it suggests greater emphasis on the completion of an end-directed process. Paraphrasing Aristotle, we may therefore define entelechy as possibility made real or potentiality actualised.

In Aristotle's eyes, things exist either as an entelechy, i.e. as something actualised and completed, or as a potency, i.e. as a possibility, or as a potency and an entelechy simultaneously. It is this latter relationship where the problem of motion steps in. Indeed, a moving body exhibits both a capacity for change and a tendency towards completion which is its inherent goal and motive force. Thus any change, according to Aristotle, implies the ability to undergo it, the goal towards which the change is directed, and the entelechy as the actualisation of the goal immanent in the body itself. Using a cybernetic term, entelechy can be defined as the "programme" of change. The goal and the "programme" of an artistic creation are outside the object itself existing in the mind of the artist and representing the pattern and the end of his activity, whereas natural objects possess them inherently to the extent to which they carry in themselves their source of motion, i.e. are capable of self-movement. Developing his

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[1] "Entelechy" derives from the Greek *to enteles echein* which means "to possess the perfect, the complete" or, in other words, to be endowed with an immanent purpose. So a child as a man in potency carries in itself its entelechy, man in actuality. Aristotle often makes no distinction between energy and entelechy using them as full synonyms.

doctrine of entelechy, Aristotle strove to take full account of the previous philosophical development and preserve the idea of spontaneous movement. However, having deprived the material cause or "matter" of the capacity for spontaneous movement, he was compelled to revise the notion of nature itself by distinguishing the static, inert and indeterminate element, i.e. the material cause, from the dynamic and determining element, i.e. the form. In contrast with Plato who assigned them to different "kingdoms," those of being or Ideas and not-being or Matter, the Stagirite referred them both to "nature" which therefore retained its capacity for self-movement but owed it entirely to its ideal immanent force, entelechy, responsible for the purposiveness of natural processes. Hence Aristotle's idealism, particularly in the conception of the "soul" as the "principle of motion."

Aristotle distinguished four kinds of change: (1) becoming and perishing; (2) qualitative change, i.e. the change of a property; (3) quantitative change, i.e. increase and decrease (or, rather, growth or diminution since Aristotle mainly took his examples from biology); (4) locomotion, i.e. change of place. By motion proper he understood changes (2), (3) and (4), regarding (1) rather as passing of one thing into another: "In respect of Substance there is no motion, because Substance has no contrary among things that are" (Arist. Phys. V, 2, 225b). Generation and decay understood as motion would be coming into being from nothing and fading back into nothing, which is impossible.

The analysis of change (1) brings Aristotle to the old paradox of becoming, resolved by him, as we have already seen, by introducing the concepts of potentiality and actuality: something arises only owing to the actuality inherent in the initial substance. Hence, becoming is always the perishing of something else, and perishing always the becoming of other (see De Caelo, I, 3).

Understandably, the analysis of motion calls for a closer examination of the categories involved in the process of change: unlike quality and quantity which can be grasped intuitively, the category of place is subjected by Aristotle to a thorough scrutiny. Having rejected the concept of void maintained by the atomists, he linked the notion of place with the notion of body and defined place as the boundary of a spaceous thing: "Place is coincident with the thing, for boundaries

are coincident with the bounded" (Phys. IV, 4, 212a). This approach paved the way for the attributive understanding of space which came to be regarded not as a substance, but as an attribute of things.

The problem of time is treated by Aristotle in a similar manner except that he links it not with the existence of bodies, but with motion. Time is not the same as motion, but motion and time do not exist apart: "Time is just this — number of motion in respect of 'before' and 'after' " (Phys. IV, 11, 219b). Whereas the place of the world is finite being limited by the firmament (which accounts for the possibility of absolute, i.e. relative to the "heaven," movement and rest, as well as for the existence of the absolute top and bottom), time is infinite since, in contrast with particular processes possessing a limited "number of motion," the universe is unique and eternal and its everlasting movement measured by the rotation of the firmament is circular locomotion as no other kind of movement can be continuous.

Now, having defined time as number of motion, Aristotle directly links it with the concept of soul: "But if nothing but soul, or in soul reason, is qualified to count, there would not be time unless there were soul, but only that of which time is an attribute," i.e. motion (ibid., IV, 14, 223a). So the materialist understanding of number which does not exist, according to Aristotle, outside the mind leads the philosopher in a curious way to the idealistic conception of time regarded as an attribute of the soul, the cosmic principle and first cause of any motion in the world.

On the other hand, understanding space ("place") and time mainly in the attributive sense (as properties of matter and motion respectively) and relating them to each other, Aristotle simultaneously treats space which accommodates the unique and finite world as a kind of substance, i.e. as an independently existing receptacle of all material things. This dialectical approach was an important advance in the understanding of the complex nature of space and time.

Much attention was devoted by Aristotle to the genesis of material bodies of different nature. His doctrine of genesis is based on the concept of "prime matter." Characterised as "privation" (*steresis*) of form and pure potentiality, it is not to be understood as the absolute negation of all properties, because it retains the ability to be qualified by the appropriate form and to change from opposite to opposite (forms

were conceived by Aristotle as pairs of opposites).[1] Owing to the basic opposites potentially inherent in matter, i.e. hot and cold, dry and moist, matter generates four elements: hot and dry combine into fire, hot and moist into air, cold and moist into water and cold and dry into earth. Each of the elements has its own "natural location." "Fire and Air are forms of the body moving towards the 'limit,' while Earth and Water are forms of the body which moves towards the 'centre.' Fire and Earth, moreover, are extremes and purest: Water and Air, on the contrary, are intermediates and more like blends" (Arist. De gen. et Corr. II, 3, 330b-331a).

Proceeding from the notion of "natural location," Aristotle attempts to account for the upward movement of fire (flame) and warm air on the one hand, and the downward movement of water and earth, on the other hand. This essentially tautological explanation (fire is the highest because its natural location is at the top) became a characteristic feature of later scholastic science and was intended to substantiate the geocentric doctrine of the world: the central or downmost position is occupied by the earth, then follow in succession water, air and fire. The fifth element, ether, is uncreated, indestructible and subject to no change. It makes the substance of spheres which carry heavenly bodies, and of the bodies themselves. The outermost sphere is the heaven of stationary stars, then come the sun, the planets and the moon, one body per sphere. Since ether and its formations are eternal, their motion can only be circular as in it alone the beginning and the end coincide.

Fire, air, water and earth make the sublunary world where more complex bodies are generated. Thus the elements combine into homoeomers which produce all other things. In contrast with the "physics" from Anaxagoras down to Democritus, Aristotle understands the genesis of complex bodies not as a mixing of their components, but as their real fusion. Moreover, he maintains that a natural body carrying within itself its "form" or "entelechy" is qualitatively different from its parts. Here, again, an attempt at a dialectical development of a concept, this time of genesis, results in its idealistic perversion: the irreducibility of a whole to the sum of its parts is ascribed to a mystical force allegedly residing in

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[1] According to Aristotle, matter lends itself not to any, but only to a particular form that corresponds to its proper function. Hence his somewhat puzzling statement that *steresis* itself could be viewed as a form.

the whole. This general tendency traceable in the final analysis to the theoretical immaturity of Greek thought and its inability to express the objective contradictoriness of reality in a system of concepts is particularly conspicuous in Aristotle's doctrine of soul.

Turning to living creatures, Aristotle also treats them in terms of the matter-form relationship. The form which is the principle of an organism is called the soul, and its matter the body. More accurately, the soul is the first entelechy of an organic body (De an. II, 1, 412b), i.e. its first cause and motive force. According to Aristotle, natural bodies of plants and animals are instruments of the soul and exist for its sake (ibid., 415b), therefore living beings exhibit with utmost clarity the purpose-oriented activity of nature. In accordance with its functions, the soul may be nutritive or vegetative, capable of self-nourishment and reproduction of its kind, sensitive or animal possessing the capacity for sensation and motion, and rational characterised by the power of reason or thought and belonging only to man. The functions of the soul are ranked in a rising scale on the principle that a higher faculty and, accordingly, a higher soul cannot exist without the lower ones, but not they without it.

Showing no special interest in plants (the title of the "father of botany" justly belongs to his pupil Theophrastus), Aristotle devoted much attention to the animal kingdom. He held that the animal body is composed of homoeomers and attached special importance to "flesh" regarding it as the seat of sensation (the function of nerves was not yet known to him). The direct carrier of the soul is pneuma understood as the source of natural heat in a living body. It is akin to ether and passes from father to child with the former's semen. The master organ of pneuma, its focus and centre is the heart, producing blood from nutrients and supplying it to all bodily organs. Aristotle's scientific heritage also includes a detailed classification of animals, a description of embryonic development, investigations into various methods of the generation of animal life (spontaneous generation inclusive), etc.

Being endowed with reason, man occupies a higher position in the ladder of life than other animals and, accordingly, has a more advanced soul and body. Their conformity to the unconscious teleology of nature, i.e. to the goal of completion and perfection, finds its expression in man's erect carriage,

organs of work and speech, higher brain-to-body volume ratio, greater "living heat," etc.

Cognition in biological terms is conceived by Aristotle as the activity of the sensitive and rational soul. Sensation or perception (*aistesis*) is described as a change effected in the soul by the perceiving body. Sensation, according to Aristotle, is a power of receiving form without matter, as wax receives the shape of a signet-ring without its material. Each sense can only perceive its special object (as colour is the special object of sight, and sound of hearing) in respect of which there can be no error. Common objects of sense, such as motion, rest, shape, etc. are perceived not by one, but by all senses. The "common sense" resulting from their interaction is not a simple sum of individual perceptions, but an act of the psyche which compares and differentiates individual perceptions, relates perceptions to their objects, comprehends the relation of a perception to the subject, i.e. to the perceiving individual, etc. The common sense deals with one and many, size, shape, type, rest and motion of objects. It can be true or false.

Perceptions are the direct effect of sensible objects on the organs of sense. However, if the excitement in the organs caused by such effect does not die down after the objects are withdrawn bringing back their image, we have what Aristotle calls "phantasia" or imagination. If it retains or recovers the original perception, we have a memory image or a reminiscence. The functions of the sensitive soul, besides those mentioned above, also include sleep, pleasure or displeasure, desire and aversion, etc. The rational soul of human beings adds to them intellectual intuition (*noys*). The ability to think as potentiality precedes actual thinking which accounts for the common notion of the mind as a blank sheet filled with the records of the mind's toil. Aristotle maintains that thinking is always attended by sensible images and therefore distinguishes two aspects of the mind, active and passive, or creative and receptive (see De an. III, 5, 430a). The creative reason calls all things into being and "is a sort of positive state like light; for in a sense light makes potential colours into actual colours" (ibid.), whereas the receptive reason is acted on by the objects of thought and "becomes all things." In other words, the receptive reason is matter and potentiality, and the creative reason is form, actuality and entelechy.

This leaves open one important question, that of the immortality of soul. Aristotle leaves no doubt regarding the fate of the vegetative (nutritive) and animal (sensitive)· souls: they decompose together with the body. The receptive reason apparently perishes too. As regards the creative reason, he states explicitly that it is immortal and eternal. Are we to infer from this that the individual soul is immortal too? Aristotle evades the answer. On the one hand, the inability of the superior soul to exist without the inferior ones seems to point to its ultimate mortality. On the other hand, Aristotle asserts the possibility of the mind existing without the body and points out that the creative reason is the entelechy of its receptive counterpart, but not of the body: certain parts of the soul "may be separable because they are not the actualities of any body at all" (ibid., II, 1, 413a). And even more explicitly: "while the faculty of sensation is dependent upon the body, mind is separable from it" (ibid., III, 4, 429b).

The obscurity of Aristotle's doctrine of the creative reason and the sketchiness of his notes allowing for widely divergent interpretations gave rise to a long controversy that has run for many centuries without much appreciable result. However, the general trend of Aristotle's thought appears to be sufficiently lucid. Taking the concept of the eternal creative reason as a premise, Aristotle infers the existence of God or Divine Mind. His reasoning runs thus: "Without the soul the faculties of knowledge and sensation are *potentially* these objects, the one what is knowable, the other what is sensible. They must be either the things themselves or their forms. The former alternative is of course impossible: it is not the stone which is present in the soul but its form.

"It follows that the soul is analogous to the hand; for as the hand is a tool of tools, so the mind is the form of forms and sense the form of sensible things" (ibid., III, 8, 431b-432a).

Hence, the creative reason whose object and content are forms alone is not only free and independent of real objects, but precedes them logically. It "creates" objects by thinking them. Similarly, the world is the creation of God as his thought. However, Aristotle's God does not precede the world in time coexisting with it. It is separable from the world only in the sense in which the form (border) of a thing is separable from the thing itself. In fact, the eternity of the world implies this inseparability, since without it the world would cease to exist.

In "physical" terms it means that god is the "prime un-moved mover." We are bound to recognise its existence to avoid the infinite regression of causes (the cause of one phenomenon is the consequence of another that precedes it in time, and so on ad infinitum) which in Aristotle's eyes is irrational. The prime mover is the cause of generation, perishing and eternal change of things. It consists, as it were, of two parts, one moving and stationary, the other movable and performing eternal circular motion.

Hence, in the first philosophy and in physics God plays different parts and performs different functions, posing as the "form of forms" and the first cause in the former, and as the prime mover in the latter. In Aristotle's concept it is obviously God which is predicated of the prime mover, but not vice versa: the universe is actuated by the prime mover which therefore deserves the name of god. The prime mover is the "god of Philosophers," but not a popular deity; it is faceless and indifferent to man.[1] As Martin Heidegger was to say 2300 years later, one could not kneel in prayer or make a sacrifice to such a god, nor hop and prance before him like king David before the ark... In Heidegger's mouth these words sounded as a reproach to philosophers, yet for us they are a testimony to the superiority of philosophical thought disclos-ing, even in the context of the Aristotelian doctrine of the divine unmoved mover, the true source of religion and faith in god and thereby contributing to the collapse of the religious world outlook.

The physical teaching of Aristotle abounding, as it was, in accurate and detailed descriptions of various natural phenomena did not show, even in his time, the best insight into their causes. Warning against the infinite regression in causal explanations and pointing out that "one must stop somewhere" (Met. 107a, 4), Aristotle himself thought of nothing better than to end up in the innate ideal cause or entelechy identical, in the world of nature, with the potentiality or tendency towards the realisation of the form inherent in every natural object. As a result, causal explana-tion became tautological: every object was conceived as the realisation of some potentiality essentially identical with the object in actuality. It is not fortuitous, therefore, that

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[1] See W.K.C. Guthrie, *The Greek Philosophers. From Thales to Aristotle*, Harper, New York, 1975, pp. 10-11.

Aristotle's philosophy distorted by clericalism was made the theoretical basis of medieval scholasticism. In order to shatter the dictatorship of the Church over men's minds it was necessary not only to abandon the obsolete physical views but, first and foremost, to develop a new paradigm of causal explanation. The result was that the Aristotelian explanation from "potentiality" gave way in modern science to the explanation from law. In contrast with Aristotle who regarded motion as the effect of a mover and rejected the possibility of movement which was not maintained by an external force, the scientist of the new epoch applied himself to the investigation of the laws of mechanical movement and promptly discovered that the effect of the action of an external force was accelerated motion. If a body is not acted on, it is either motionless or moves rectilinearly and uniformly. Hence the notion of inertia which brought about a revolution in the doctrine of mechanical movement.

Both the first (metaphysics) and the second (physics) philosophies of Aristotle were rooted in the conviction that the form dominates over matter, the soul over the body, the mind over the senses and passions. This conviction carried to the social sphere constituted the basis of Aristotle's ethics and politics which he treated under the heading of the philosophy of human life.

17. Society. Ethics and Politics

According to all Greek philosophers, Aristotle inclusive, the final goal of all human activities was the attainment of what is good for man. Proceeding from this general view in his ethical doctrine, Aristotle declares that theses activities concerned with the highest and the noblest must be governed by reason. The purpose of human life is not enjoyment or happiness, but the fulfilment of the dictates of reason. However, Aristotle is fully aware of the duality of human activity, theoretical and practical. To be sure, "the act of contemplation is what is most pleasant and best" (Met. XII, 7, 1072b), but no man can surrender himself wholly to contemplation as he cannot pursue theoretical studies without caring for the necessities of life. This approach accounts for a greater viability of Aristotelian ethics as compared with Plato's impractical ideal of virtuous life.

Happiness, according to Aristotle, can only be achieved in

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a complete life. A child which is man only in potency cannot know it, as true happiness implies the fulfilment of man's functions in accordance with moral virtues. This, in turn, demands certain external conditions. Poverty, illness and misfortune are not conducive to happiness which goes hand in hand with wealth, good fortune and bodily powers. Regarding the external conditions of life as "matter" and the good as the "form" (goal) of perfect life, Aristotle singles out internal dignity and virtue (*areté*) as the key element of a happy and blessed life. Happiness comes as a result of rational and moral activity which is the virtue and proper function of man. Hence, Aristotle's solution to the classical problem of the relationship between pleasure and reason in a happy and virtuous life is based on a compromise: pleasure ensuing from rational, i.e. virtuous life is itself the good.

The upshot of this theory is that goodness is not a transcendent ideal in the manner of Plato and the Megarians, but a practical goal attainable in the sensible world. Aristotle's concept of virtue, clearly more realistic than that of Plato, rests on the conviction that virtue is not an innate quality but rather a matter of habit. Contrary to Plato's conviction that virtues could not be taught, Aristotle believed in potential virtues actualised by good habits and advanced a doctrine of the golden mean: "Virtue, then, is a state of character concerned with choice, lying in a mean, i.e. the mean relative to us, this being determined by a rational principle, and by that principle by which the man of practical wisdom would determine it. Now it is a mean between two vices, that which depends on excess and that which depends on defect" (Eth. II, 6, 1107a). This doctrine of virtue understood as the preservation of due measure and the avoidance of extremes was in fact rooted in the famous principle "nothing too much" that runs right through Greek ancient thought.

Aristotle gives a detailed analysis of various virtuous middles and the corresponding extremes or vices. Speaking, for instance, of magnanimity, he contrasts it with conceit (excess) on the one hand, and with pusillanimity (deficiency), on the other. In like manner, courage lies between recklessness and cowardice, liberality between prodigality and avarice, etc.

Now, just as we distinguish between the non-rational (nutritive and sensitive) and rational souls, so all virtues being acquired by the soul are divided into moral and intellectu-

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al: "Virtue,then being of two kinds, intellectual and moral, intellectual virtue in the main owes both its birth and its growth to teaching (for which reason it requires experience and time), while moral virtue comes about as a result of habit, whence also its name *ethike* is one that is formed by a slight variation from the word *ethos* (habit)" (ibid., II, 1, 1103a). Moral virtues are essentially active. Indeed, we become just by acting justly, modest by acting modestly and courageous by acting courageously. Nevertheless, intellectual values (wisdom and good sense), though based on knowledge, are directed not towards knowledge itself, but towards good behaviour, practical deeds. Hence the definition of ethics as "practical philosophy."

Since a moral action should be governed by reason, it implies a freedom of choice between good and evil: "It chooses or endures things because it is noble to do so, or because it is base not to do so" (Eth. III, 7, 1116a). Having brought in the notion of free choice (*proairesis*), Aristotle turned on the first page of the history of the age-old philosophical controversy over the freedom of will. To be sure, the Stagirite has no doubt about man's freedom in making a choice and therefore does not view the situation as in any way disputable, yet the prerequisites for a philosophical problem are already there.

Giving a detailed survey of virtues in the context of the communal life of ancient society, Aristotle focuses his attention on justice. He defines it as a mean between two extremes—breaking the law and partiality in the attitude to the equals: "The just is intermediate and the unjust is what violates the proportion; for the proportional is intermediate, and the just is proportional... This, then, is what the just is— the proportional; the unjust is that violates the proportion" (Eth. V, 2, 1131b). Now, since the law prescribes virtuous behaviour, e.g. courage in battle, justice is the highest virtue which covers all others.

Comparing justice with the law and equality, Aristotle distinguishes two main varieties of justice—corrective and distributive. The aim of the former is to promote equality in exchange of goods belonging to individuals in accordance with the amount and quality of labour contained therein, whereas the latter is employed in the distribution of common funds and other benefits in accordance with the social worth (rank) of the parties concerned.

Aristotle's division of the virtue of justice into two kinds

was highly illustrative of the social conditions in slave society with legal inequality of its members and hereditary privileges of the few on the one hand, and the equalising influence of commodity and money relations, on the other. Aristotle's conception of justice leads directly to and merges with his doctrine of the state.

The Stagirite does not make distinctions between society and the state, and one should never lose sight of this circumstance when reading his *Politics*. For one, Aristotle's definition of man as a political animal regarded outside the general context of his views may have two different meanings depending on whether it is related to society or to the state. The difference is not one to be disregarded, as society can exist without the state. The Stagirite, however, could not conceive society without the state and viewed the latter as the natural and necessary mode of human existence: "A state is not a community of living beings only, but a community of equals, aiming at the best life possible" (Polit. VII, 8, 1328a). To attain this goal, the citizens must exercise virtue and study the arts that go with pleasure (philosophy in the first place), enjoy wealth, power and good health, promote such social qualities as justice, courage, etc. The state, according to Aristotle, may include only free men who enjoy equal rights. Yet even among them, Aristotle declares, there are second-rate citizens who are not "self-sufficing" and lead the ignoble life of mechanics, tradesmen or husbandmen... According to Aristotle, no man can practice virtue if he has no leisure.

Being a realistic thinker, Aristotle could not disregard the importance of private property in Greek city states and was but too well aware of the fact that the position of man in contemporary society was mainly determined by the amount of his wealth. Private property appeared to him, and indeed was in his time, the only possible and progressive form of property. Aristotle censured Plato for banning it among the upper classes of his ideal state and declared that collective property fostered discontent and dissension among people, deprived them of personal material incentives for labour, acted against man's natural proprietary instinct, etc. However, understanding the importance of unity in the face of the threat coming from the slaves, Aristotle stressed the need for generosity, exhorted the rich to help the poor and declared "friendship", i.e. the solidarity of freemen to be the highest virtue of the state.

The aim of all these restrictions on private property was to prevent the freemen from splitting into two antagonistic camps, as this would put in jeopardy the very existence of slave society: its preservation depended entirely on whether the state would be capable of keeping in check the forces that strove to destroy it.

The same consideration underlies Aristotle's doctrine of the forms of government. Proceeding from his philosophical conception of form as the entelechy and actuality of the state, Aristotle classifies the existing forms of government on two principles: the number of those who rule and the ethical aim they pursue. As a result, we have three sound forms of government—monarchy, aristocracy and polity, which aim at the common interest, and three perverted forms—tyranny, oligarchy and democracy, in which the rulers have their own advantages in view.

Aristotle's assessment of the above forms varies. In the *Nicomachean Ethics* he declared monarchy to be the best and polity (based on the proprietary differentiation of citizens) the worst of the sound forms, whereas in the *Politics* he regarded polity to be the best. Though monarchy appeared to be superior to all and the most divine, it had, according to Aristotle, no chance of success in his time. In book 4 of his *Politics* the Stagirite linked the form of government with its "principle;" "the principle of an aristocracy is virtue, as wealth is of an oligarchy, and freedom of a democracy" (Polit. IV, 8, 1294a). Polity, according to Aristotle, should combine these three elements and be regarded as true aristocracy—the government of the best, catering to the interests of both the wealthy and the poor.

Elsewhere Aristotle contends that all the forms of government can be reduced to democracy and oligarchy, the two basic ones: "The form of government is a democracy when the free, who are also poor and the majority, govern, and an oligarchy when the rich and the noble govern, they being at the same time few in number" (ibid., IV, 3, 1290b).

As is evidenced from the above, Aristotle viewed the problems of the stratification of class society in terms of wealth and poverty and his terminology became a source of political vocabulary for many centuries to come. Yet the Stagirite, according to Marx, expressed the essence of none other than the Greek city state. "Strictly, Aristotle's definition is that man is by nature a town-citizen. This is quite as charac-

teristic of ancient classical society as Franklin's definition of man as a tool-making animal is characteristic of Yankeedom."[1] The truth of this observation stands out with particular clarity when Aristotle turns to the analysis of social relations within a state.

Aristotle avers that historically society develops from family to community (settlement) and further to state (polis). Yet logically the state is primary, since it represents the entelechy of society. Alongside the relations between the ruler and the ruled characteristic of the state as such, it also preserves the relations existing within a family (between the husband and the wife, the parents and the children, the master and the slave). This extra-historical pattern derives from the concept of domination and submission as the "natural" form of human relations constituting the basis of slave society. It is this concept, too, that underlies Aristotle's apology of slavery.

According to Aristotle, slavery exists "by nature" as some people are destined to rule, and others to submit. To substantiate his theory, he uses the doctrine of the body-soul antithesis and asserts that the people who differ from others as the soul differs from the body or men from animals "are by nature slaves, and it is better for them as for all inferiors that they should be under the rule of a master" (Polit. I, 5, 1254b). This applies, first and foremost, to barbarians who are different from their masters by their body suited for coarse physical labour and by the "slave" soul. A slave, according to Aristotle, is an instrument, a living possession of his master having the soul and the body of a man. A slave has no rights and no injustice can be done to him. However, Aristotle makes one characteristic qualification: there can be no friendship with a slave as such, but a slave can be a friend in so far as he is a man.

On closer examination Aristotle's conception of slavery "by nature" reveals inherent weaknesses and appears to run counter to his own convictions: Aristotle, for one, held that the slaves performed a necessary social function of relieving the citizens of the need to provide the necessities of life and that this function could also be performed by other categories of people, e.g. by penests in Thessaly or helots in Sparta. True, in Aristotle's eyes they were slaves, but then a "free" but self-sufficing artisan earning his living with his own hands

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[1] Karl Marx, *Capital*, Vol. I, Progress Publishers, Moscow, 1974, p. 309.

was actually a slave too, though not by nature.

Curiously enough, Aristotle himself appears to have put his finger on what could terminate the fatal master-slave relationship: "If, in like manner, the shuttle would weave and the plectrum touch the lyre without a hand to guide them, chief workmen would not want servants, nor masters slaves" (ibid., I, 4, 1253b). Suppose now this stream of thought carries us further and we fancy a society with high labour productivity which makes slavery less rigorous and then altogether redundant... This possibility, later translated into reality by history, must have never occurred to Aristotle.

Aristotle's theory of society and state viewed as a whole lacked scope and vision to become a tool of social prognostication, though it was undoubtedly an objective reflection of contemporary social realities. The soul-body and form-matter conceptions underlying this theory could indeed pass in those times for a more or less adequate scientific explanation of the world of nature with its comparative stability, but once they were applied to rapidly changing society their inability to disclose the laws of its development could not but become only too obvious. The doctrine of society and state developed by Aristotle was in fact a descriptive science intended as a practical guide for the ruling class in its efforts to consolidate the existing political institutions and the state as a whole. Realistic and down-to-earth though Aristotle's political theory may have been, it was anything but revolutionary and could never have inspired a thinker or a political leader to overstep the bounds of the existing social system.

The philosophy of Aristotle was the summit of ancient Greek thought and it took the future generations over fifteen hundred years to assimilate his philosophical and scientific heritage. The first step on this long and often circuitous way was made within the walls of Aristotle's own school, the Lyceum.

18. Aristotle's School (The Peripatetics)

In 223 B.C., on the eve of his last emigration from Athens, Aristotle appointed his pupil Theophrastus (370-285 B.C.) as head of the Lyceum. The years of his presidency were the heyday of the peripatetic school whose total membership was the highest and in some years ran into two thousand. In 287, Theophrastus was succeeded by Strato of Lampsacus who

headed the school for eighteen years, whereupon it was taken
over by Lyco distinguished only for his neat clothes and bent
for sports. The Lyceum rapidly fell into decay interrupted
only in the first century B.C. when Andronicus of Rhodes pub-
lished Aristotle's works and the school regained its fame. In
subsequent centuries, though the peripatetic school enjoyed
a high renown, its contribution to the development of philoso-
phy was insignificant. The peripatetics were mainly concerned
with commenting and interpreting the works of their great
teacher. The most prominent of the commentators was
Alexander of Aphrodisias (the late second — the early third
centuries A.D.). The final period of the Lyceum was marked
by a growing tendency towards eclecticism.

(1) *Theophrastus.* Tyrtamus of Erebus in Lesbos, nick-
named Theophrastus by Aristotle for his eloquence died soon
after designating Strato as head of his school. According to
Diogenes Laertius, "so long as Theophrastus laboured he was
sound of limb, but when released from toil his limbs failed him
and he died" (Diog. L. V, 40), which is yet another testimony
to the importance of toil for man's moral and physical health.
As to Theophrastus, he could not be reproached for idleness.
On the evidence of Diogenes Laertius, the total volume of his
heritage amounted to 232,808 lines. His remains comprise two
botanical works, several smaller treatises on physics, frag-
ments of the *Metaphysical Aporias, On the Opinions of Phy-
sical Philosophers*, and of some other treatises including log-
ical ones. Among his extant writings is also the famous *Cha-
racters* dealing with different moral types and extensively
used by writers of later centuries as a model for their own
literary works.

Together with Eudemus of Rhodes, another pupil of Aris-
totle, Theophrastus is credited with introducing a number of
reconstructions and improvements into his teacher's logic. Of
special importance for the theory of proposition was his antici-
pation of the necessity to quantify in some cases not only the
subject, but also the predicate of a proposition. Eudemus in his
studies of interrogative propositions distinguished between
questions relating to property, substance and selection of the
mutually exclusive propositions (see Mul. III, Eudem. 113).
Theophrastus is known to have brought to light the logical
distinction between a proposition relating to truth and falsity
on the one hand, and a premise relating to affirmation and de-
nial, on the other (given the identical content). Another of his

innovations consisted in a differentiation between logic and grammar and, accordingly, between concepts (*logos*) and words (*lexis*).

The most significant changes were made, however, by Theophrastus and Eudemus in syllogistic. They are said to have added five new moods to the first figure of the assertoric syllogism and carried out successful investigation into the problems of hypothetical, disjunctive and so-called mixed syllogisms, i.e. those having hypothetical propositions as their premises and an assertoric proposition as the conclusion. The peripatetics made an important advance on the Aristotelian syllogistic which dealt with classes or terms and paved the way for the Stoic logic of propositions, the next and the highest stage in the development of the ancient logical doctrine.

Though on the whole Theophrastus wrote within the framework of Aristotle's philosophical system, he cannot be denied originality and independence of thought. The *Metaphysics* by Theophrastus that came down to us only in fragments provides convincing evidence for his critical approach to many of the Aristotelian basic concepts and for a general tendency to strengthen the empirical strain of his master's teaching and tone down its transcendentalism. Even the methods employed by the master and his pupil in dealing with the matters of the first philosophy show a characteristic difference of their attitudes.

In contrast with Aristotle who usually started the exposition of metaphysical problems with a statement of aporias or difficulties involved as if inviting the reader to join in their analysis and subsequent resolution (particularly illustrative in this respect is book 3 of his *Metaphysics*), Theophrastus appears to have focused his attention on the aporias mainly to demonstrate the contradictions in his teacher's doctrines and to call in question the very possibility of reconciling them. Here is just one example. Aristotle, it may be recalled, practically identified metaphysics and theology regarding them as having a common object of study. Expounding his master's conception of God and first causes, Theophrastus gives this comment: "It is necessary, presumably, to recognize them by some power and some superiority to other things, as if it were God that we were apprehending; for the ruling principle of all things, through which all things both are and endure, is divine. Now it is, perhaps, easy to describe them thus, but difficult to do so more clearly or more convincingly" (Theophr. Met. I,

4, 4b). There are good reasons to doubt Theophrastus's interest in this problem, as well as his ardour in the matters of faith in general, if only for the fact that the later writers, e.g. Cicero, accused him of atheism and attempts to ascribe divine powers now to the Mind, now to Heaven...

Theophrastus was quick to notice the difficulties springing from Aristotle's concept of God as transcendent prime mover. If the mover is one, why do the heavenly spheres move differently? If the movers are many, how are we to explain their relations to one God and the harmony of heavenly movements? Again, how can we know if something occurs for a purpose, by chance, or by necessity? If we cannot, shouldn't we look for the cause of motion within the cosmos itself rather than outside it? "Even among first things we evidently observed many events that happen at random, e.g. the facts that have been named, connected with the changes of the earth; for we see here neither the better nor that which is for the sake of an end, but such things seem to follow, if anything, some necessary law; and there are many things of this sort in the air too, and elsewhere" (Theophr. Met. IX, 34).

However, despite his dissatisfaction with Aristotle's universal teleology, Theophrastus did not go so far as to challenge it as a philosophical theory. Being essentially a naturalist philosopher, he rejected the teleological explanation of some natural phenomena, but did not call it in question as an abstract principle of the first philosophy. In his *Physics* Theophrastus in fact dismissed the concept of the unmoved mover and came to regard the heat of the sun as the formal cause of motion. Matter to him was a combination of three elements: earth, water, and air. Fire differed from other elements in that it could not exist without flammable materials. Here again he focuses on aporias. If fire is not self-sufficient, how can it be an element? Hadn't we better posit two types of fire — one pure "prime fire" residing in the above-lunar sphere and the other "mixed," residing in the sub-lunar world? But then, what is their relationship? Raising all these problems, Theophrastus calls in question not only the Empedoclean famous theory of "roots," but also its Aristotelian version.

Much attention was devoted by Theophrastus to the defence of the objectivity of such sensible qualities as cold and hot, sweet and bitter, etc. Levelling his criticism mainly against the Democriteans, Theophrastus indicated that these qualities must be objective if they depend on the properties of the

atoms. He dismissed their arguments for the subjectivity of secondary qualities on the grounds that the senses may err in relation to both primary and secondary qualities and that such errors result from particular circumstances and are not inherent in the senses themselves.

Discussing the nature of motion in his *Physics*, Theophrastus asserts that each category has a corresponding kind of motion. To the four kinds of motion adopted by Aristotle he adds six more referring to relation, position, time, possession, action and passion (passivity). Contrary to Aristotle who conceived motion (change) as a gradual process passing through a number of intermediate stages, Theophrastus believed that all parts of an object could also alter simultaneously and that the entire quality or property of an object could undergo an abrupt change. He reconstructed the Aristotelian conception of space reducing it to the order and position of bodies.

In small physical treatises called *On Winds*, *On Stones*, *On Smells*, *On Tiredness*, *On Dizziness*, *On Paralysis*, and others Theophrastus gave apt descriptions of the phenomena under investigation. In contrast with the traditional Aristotelian praise to the deductive method of reasoning (the only exception being Aristotle's famous laudation of empiricism in his treatise *On Parts of Animals*, I, 5, 644b-645a), Theophrastus affirms that all knowledge of natural phenomena is founded on experience. In his *Enquiry into Plants* he specially emphasises the need for observation and refers to valuable information received from gardeners, wood-cutters, farmers and other people concerned with plants. In his opinion, in natural studies an investigator should start with individual things and ascend to general principles by inductive reasoning.

Important departures were also exhibited by Theophrastus in his teaching of man. Unlike Aristotle who considered the soul to be the originator of movement in the body (see De an. I, 3, 406a), Theophrastus identified thinking with movement, thus closely linking the spiritual and the physical. Subscribing to the Aristotelian differentiation between the active and the passive mind, Theophrastus noted the difficulties resulting from this distinction.

In ethics Theophrastus emphasised the importance of external goods and described in detail such moral categories as friendship, love and happiness. Special mention should be made of the ethic and aesthetic value of his *Characters* giving a very vivid and realistic description of the types characterist-

ic of ancient society: *The Grumbler*, *The Flatterer*, *The Liar*, *The Man of Petty Ambition*, etc.

(2) *Eudemus of Rhodes*, another prominent pupil of Aristotle, is said to have helped his master in writing the *Metaphysics* and to have formulated the objection to Plato's theory of ideas known as "the third man" (see Mul. III, Eudem. fr. 115). He owes his fame to the commentary on Aristotle, particularly the *Physics*, and is not distinguished by any originality of thought. Simplicius, for one, invariably accompanied his extensive quotations from the commentary of Eudemus by such phrases as "following Aristotle" or "paraphrasing Aristotle," etc. The only departure of Eudemus from Aristotle's physical doctrine appears to be the introduction of two more categories, "whole" and "motion," bordering, as it were, on the first philosophy. Commenting on Aristotle's unmoved mover which alone can be the cause of continuous motion (see Arist. Phys. VIII, 10, 267b), Eudemus pointed out the internal contradictoriness of this notion, as the incorporeal divine mover (see Mul. III, fr. 82) cannot have any physical contact with what it moves. Eudemus did not attempt to offer any solution to this aporia which indeed appears to be insoluble.

The Aristotelian corpus includes the *Eudemian Ethics* commonly believed to be the lectures of Eudemus. They expound Aristotle's teaching but contain certain departures from his principles. The main of them consists in that contrary to Aristotle who proceeded in his ethical teaching from man's natural inclinations and functions, Eudemus closely links man's actions with the concept of God. Just as a physician needs a criterion for distinguishing a curable illness from an incurable one, so a moral individual needs a criterion for a choice between a moral and an immoral action. Some hold that this criterion is reason, yet reason alone, according to Eudemus, is not sufficient. In his opinion, a man must look for guidance to God in the manner a slave looks for orders to his master and every substance is oriented on its ruling principle (Eth. Eud. VII, 15, 1249a). God, however, does not govern imperiously, but through the agency of reason: God is like health, whereas reason is like medicine.

The ethical ideal for Eudemus is the unity of the beautiful, the perfect and the virtuous resulting from the contemplation of God as ultimate goodness. This unity is the core of man's moral nature inducing him to act virtuously not merely for attainment of external goods (which it not reprehensible), but

for the sake of the good as such: "In order, however, that a man may be simply good and worthy, it is requisite that he should choose what is beautiful in conduct for its own sake, and not on account of those goods which are not beautiful. For of all goods there are ends, which are themselves eligible for their own sakes. But of these, all such as are beautiful on their own account are laudable" (ibid., 1248b). The conception of morality developed by Eudemus betrays strong Platonic influence and may have been inspired by Aristotle's early works.

Similarly to Theophrastus who gave a detailed account of the opinions of physical philosophers, Eudemus wrote a number of works on the history of science: mathematics (arithmetic and geometry), astronomy, as well as theology. The extant fragments of the work under the hypothetic title *On the Gods* ascribed by Diogenes Laertius to Theophrastus expound the theocosmogonies of Acusilaus, Epimenides, Pherecydes, the Orphics, the Persian magi and the Phoenicians. The fragments also contain data on the mythology of Homer, Hesiod and the Egyptians (see Mul. III. Eudem. fr. 117, 118).

(3) *Aristoxenus of Tarentum* came to the Lyceum after extensive studies of Pythagoreanism which must have accounted for his interest in music and musical theory. However, in contrast with the abstract mathematical approach to music characteristic of the Pythagoreans, Aristoxenus considered musical harmony to be based on the perceptions of human voice and maintained that the notes of the scale are to be judged not by numbers, but by the ear. Besides musical treatises, he wrote on ethics. Taking his cue from the Pythagorean conception of the soul as harmony, Aristozenus goes further and declares it a corporeal harmony. According to Cicero, "Aristoxenus, a musician and a philosopher, conceived the soul as kind of internal strain akin to what is called harmony in singing and playing string instruments" (Wehrli II, fr. 120a). Even a more explicit comment came down to us from the pen of Lactantius Firmianus, a Christian writer of the late third and early fourth centuries A.D. who described Aristoxenus as a thinker denying the existence of any soul, even in a living body: "Just as the tension of strings in a string instrument produces concordant sounds and music which the musicians call harmony, so the combination of tissues and the living force in the limbs produces the ability for sensation" (ibid., fr. 120c). The extant ethical fragments of Aristoxenus show a strong vein of the Pythagorean normative ethics of duty.

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Apart from musical and ethical treatises, Aristoxenus is known for his works on the laws of education and politics, as well as for the biographies of Pythagoras, Arhytas, Socrates and Plato.

(4) *Dicaearchus of Messene* in Sicily developed a doctrine of the soul similar to that of Aristoxenus. According to Cicero, Dicaearchus taught that "there is no such thing as soul in reality and that the word itself is empty and misleading as it only denotes a living being. Neither a man, nor an animal has any spirit or soul, but the force which makes us capable of movement and sensations is present equally in all living bodies. It is inseparable from the body as it is nothing without it. There is no existence apart from the body which lives and feels by virtue of elements naturally mixing together" (Wehrli I, fr. 7). On the same evidence, Dicaearchus asserted that what we call the soul is in fact a harmonious mixture of four elements in the body—hot and cold, dry and moist (see fr. 11-12a-d) and that the body and the soul decompose together (see fr. 10a-b).

Dicaearchus's doctrine of the soul was an obvious regression to the views of earlier "physiologers," a reaction, as it were, to the idealism and teleology of Aristotle. Its extension to the sphere of ethics resulted in a cardinal reappraisal of the moral theory propounded by Theophrastus and led him to a conviction that practical activity was far more important than contemplation (theoretical activity). Identifying the latter with abstract speculation and comparing contemporary thought with the wisdom of the ancients, he grieved over the degradation of philosophy which, in his opinion, had degenerated into the art of rhetoric catering to the low tastes of the mob (ibid., fr. 31).

Dicaearchus is known to have written much on the history and political systems of Greek states, and ancient sources credit him with treatises devoted to Sparta, Pella, Corinth and probably Athens. He attempted to give a broad outline of the development of human society from its "natural," i.e. primitive state to civilisation and devoted much attention to the interaction of Hellenic and Oriental cultures. In his *Tripolitikos* Dicaearchus compared the relative merits and demerits of monarchy, aristocracy and democracy and advanced the ideal of mixed government foreshadowing Cicero and Polybius the historian.

(5) *Strato of Lampsacus*, a pupil of Theophrastus, concerned himself with logic, ethics, politics, psychology, physio-

logy and medicine, but owes his place in the history of philosophy mainly to physical doctrines which he ranked foremost in his studies. Central to his teaching was the idea that the world must be explained from itself, without invoking any divine agency.

Characterising the most prominent followers of Aristotle, Cicero wrote: "The inconsistency of Theophrastus is simply intolerable: he ascribes divine priority now to the Mind, now to the Heaven, now to heavenly stars and constellations. Nor should one heed his pupil Strato called the Physicist. He holds that all divine power is present in nature which contains the causes of generation, growth, diminution, but is devoid of any sense and form" (Cicero De deorum natura I, 13; cf. Wehrli IV, fr. 33).

Elsewhere Cicero indicates that, according to Strato, all things came into being by the action of nature and can be explained by natural gravitation and motion. Strato therefore "relieved god of hard toil, and myself of fear [of him]" (ibid., fr. 32). Strato maintained that natural causes themselves were swayed by spontaneity and conceived nature as spontaneous activity.

Strato's opposition to the doctrine of divine powers gave the ancients cause to align him with Democritus. Indeed, striving to explain the world in terms of what was inherent in nature itself, Strato like the atomists removed god from any participation in the affairs of nature and man. His atheistic views were in fact similar to those of Epicurus, his contemporary, who developed them further and made an important contribution to the materialist doctrine of atomism. The affinity between peripatetic Strato and the atomists attests to the fact that the theoretical foundation of ancient atheism could be espoused not only by the atomists.

In contrast with the quantitative approach of the atomists, Strato developed a qualitative doctrine of physics regarding qualities as the ultimates. By qualities he meant the hot and the cold, the former being the active power. According to Cicero, "Strato of Lampsacus called the hot substance the cause of all being" (ibid., fr. 48). At this point, however, the ancient sources are not unanimous. Strato is known to have conceived qualities as inherent in certain substrata, namely, the cold is related to water and the hot to fire. Yet on some evidence Strato maintained that movement is inherent not only in what moves but is that out of which all existing

things come to be, where they reside and into which they are resolved in the end (ibid., fr. 72). It is not clear how this conviction tallied with the concept of the hot as the prime element—perhaps Strato's views represented the first step towards the later doctrine of heat as motion.

In cosmology Strato shared the view that the world was finite. He denied the existence of empty space outside the world but accepted it as possible within the universe, e.g. as pores in objects accounting for the ability of light to pass, for instance, through water. It was an obvious compromise between Democritus whose concept of innumerable worlds presupposed the existence of void external to them, and Aristotle who defined space as the border of corporeal objects. As a result, Strato gravitated towards the Platonics who understood space as receptacle (*diastema*) capable of accommodating a body.

Of special interest are the objections of Strato to Aristotle's conception of time as the number of motion. According to Strato, the very nature of a number expressing a discrete value is incompatible with the notions of time and movement which are continuous. Advancing his own conception of time, Strato defined it "as a measure of every motion and rest in so far as it is equivalent to all that moves when it keeps moving and to all that is at rest when it remains stationary, and therefore all events occur in time" (ibid., fr. 79a).

Strato differentiated between time and what occurs in time. Hence, a day, a night, a year are not parts of time but real processes, whereas time is only their duration.

Strato treated the activity of the soul in terms of motion and regarded sensation and thinking as movements. On the evidence of Sextus Empiricus, he reduced reason to sensations, whereas Plutarch affirmed that in Strato's opinion thinking is different from sensations since the latter do not enter a man's consciousness if his mind is occupied (cf. fr. 109 and 112). The second testimony is evidently nearer the truth, as Strato underscored the importance of the central organ of mental activity located "between the eyebrows," i.e. in the brain. According to Strato, it was the seat of breath (pneuma) spreading from the central part of the body to its periphery along the nerves (this curious detail was evidently an echo of the discovery made by physicians Herophilus and Erasistratus). Strato made no basic distinction between the human and animal souls and held that the soul does not survive the body.

The meagreness of the ancient evidence for Strato's views makes it hardly possible to reconstruct his ethics as a complete doctrine. However, we seem to have fairly good reason to believe that he proceeded from a definite understanding of human nature and subscribed to the Aristotelian conception of man's activity as an instrument for transforming potentiality into actuality (see fr. 132). This is not much and we can only lament together with Wehrli: "If only we could know how far Strato went in pursuing Aristotle's anthropologic trend" (Wehrli IV, fr. 77).

Strato was the last original representative of the peripatetic school endowed with a capacity for creative thought. Though the school gradually lost its fame and faded into obscurity, Aristotle's doctrines, both from his own pen and in the interpretation of his pupils, continued exercising powerful influence on the subsequent development of Greco-Roman philosophy and were adopted in very different philosophical systems, ranging from Stoicism to neo-Platonism.

PART THREE

GRECO-ROMAN PHILOSOPHY

1. Hellenism and Its Philosophy

The epoch of Hellenism lasting from the end of the fourth century B.C. till the fifth century A.D. was the longest in the history of ancient society. These eight centuries were filled with endless wars and military campaigns, devastating uprisings and great political upheavals. In terms of political history the age of Hellenism covers the period from the conquests of Alexander the Great to the subjugation of Egypt by the Romans, though these dates are largely a matter of convention. From the culturological viewpoint, however, Hellenism[1] is a much broader term denoting Greek civilisation at large. The Hellenisation of vast territories in the Mediterranean, the Near East and North Africa with populations possessing their own developed cultures resulted in the synthesis of Greek and Oriental elements and produced a new culture based on the Greek language and characterised by a unique combination of the common standards of life, philosophical thought and the arts.

The states that constituted the political framework of the Hellenistic world arose either as a result of the conquest of various tribes and territories by the Greeks (Macedonians), or conversely, due to the subjugation of the Greek population by local dynasties (e.g. in Caria and Black Sea regions) and later by the Romans. The political domination of Rome over the Greek world was peculiarly combined with the prevalence of Hellenic culture in Rome itself. This phenomenon was partly attributable to the affinity of Greek and Latin mythologies and religions which had a powerful grip on the ancient mind. Already the absorption of Magna Graecia by Rome in the third century B.C. gave a strong impetus to

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[1] From the Greek *hellenizo* which meant "to speak Greek" or "to act like a Greek."

the Hellenisation of Roman culture and enabled the conquerors to share in the treasures of Greek literature, philosophy and art. The expression "Greco-Roman culture" aptly conveys the essence of the new civilisation representing a contradictory unity of its components. Indeed, having absorbed the Greek-speaking countries, the Romans themselves succumbed to the influence of Hellenistic culture and set out to spread it in the Western Mediterranean. To be sure, Hellenisation was a lengthy process: Etruscan culture with its ancient tradition and deep historical roots held undivided sway till the fourth century B.C. and it was only after stubborn and protracted resistance that it finally gave way.

It is notable, however, that the triumph of Hellenistic culture did not bring about any fundamental change in the attitude of the Romans to the subjugated peoples: owing to the hegemonistic traditions firmly rooted in public consciousness the conquerors treated Greek culture with something like scornful condescension. Added to this was the indisputable lead of Rome in the matters of law. Roman law accurately reflecting the specificity of contemporary social relations proved to be, according to Engels, the completest elaboration of norms based on private property which we know.[1] It is not fortuitous therefore that the legal system formalised in the Justinian Code (534 A.D.) determined the progress of legal institutions aimed at safeguarding private property for many centuries to come.

Of no little importance was also the fact that the ideology of Roman society was centred upon the rigorous ideal of citizen modelled after the characters of Mucius Scaevola, the Gracchi, Cato the Elder with his famous "Carthage must be destroyed" and Cato the Younger, who committed suicide after the downfall of the republic, Brutus and Cassius, Julius Caesar, and Augustus Gaius Octavius... These images epitomised very specific social experience—the experience of abstract statehood associated with the triumphal march of the Roman legions first through Italy, and then through the entire world known then to the ancients. The word "citizen" had a glorious ring in the Roman republic and no one in antiquity pronounced it with a greater pride than a Roman. The medal however had its reverse side. The cold impersonal power of the state overwhelmed the individual turning him into an obedient tool of boundless hegemonistic ambitions and subjecting to all-round

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[1] See Frederick Engels, *Anti-Dühring*, p. 128.

regimentation. The submission of a citizen to the state went side by side with his tyranny over the family, let alone the slaves.[1]

The economic life of Hellenistic states was based on the relations of mature slavery. The decline of the ancient polis and the emergence of enormous military and administrative empires, starting from the Macedonian Empire of Alexander the Great and ending with the Roman Empire were traceable, in the final analysis, to the changes in the basis of slave-owning society which showed a clear tendency towards ever larger land estates and handicraft economies using slave labour. The characteristic features of the epoch were the expanding slave force in all spheres of production, vast trade markets with developed money circulation and powerful monarchies with huge bureaucratic apparatus and trained professionals needed to maintain the political power and military efficiency of the state.

As a result of the collapse of the polis system the centre of cultural life shifted from a small sovereign Greek community to the newly founded capital of a large monarchy. Such were Pergama, Alexandria and then Rome, the "eternal city." Since the population of new cities was ethnically heterogeneous and even the Hellenes themselves did not make a single people, native dialects were gradually replaced by the common Greek language (*koine*) based on the Attic dialect. It became the standard literary language and provided necessary conditions for the development of cultural links and for the spread of cosmopolitan Hellenistic civilisation. Even such esoteric culture as Judaic could not avoid the effect of Hellenisation as is attested to by the traces of Greek philosophical thought in the later (non-canonical) books of the Bible and by the translation of the latter into Greek.

The universal Greek language adopted throughout the Hellenistic world made accessible Greek literature, science and philosophy to the non-Geek population. Even more important, however, was the spread of Greek technical skills, particularly in such fields as construction, shipbuilding, siege machines and fortifications, money coining techniques, etc. The Hellenistic age is characterised by the flourishing of

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[1] Roman legislator 'Titus Manlius Torquatus passed a law allowing a father to sell his son into slavery three times, i.e. giving him greater powers over his sons than over slaves: a slave sold by his master and freed was no longer dependent on his (Dionisii Halicarnasei antiquitates Romani, II, 27, 1, 2).

science notable for high intellectual level and practically free from the fetters of religion. The achievements of mathematics in that period are epitomised in Euclid's *Elements* and in the doctrine of intersections of a cone developed by Menaechmus, Archimedes and Apollonius of Perga, the progress in mechanics culminated in the Archimedean system, astronomy was enriched by the heliocentric system of Aristarchus of Samos and the determinations of the length of the solar year, the distances from the Earth to the Sun and the Moon, the sizes of heavenly bodies, etc. Of great practical value was the invention of an astrolabe and other astronomical instruments, as well as Ptolemy's mathematical elaboration of the geocentric system which made it possible to define the geometrical parameters of the planetary orbits and improve the observation and orientation techniques. Military expeditions, long journeys to distant lands and growing trade relations led to new geographical discoveries and expanded the bounds of the known world as is evidenced from the map with a network of latitudes and longitudes credited to Eratosthenes of Cyrene in Africa and from the geographical works of Strabo of Amasya in Pontus.

Technical achievements in the Hellenistic age were mainly connected with city development projects, construction of ports and lighthouses, creation of huge siege machines and shipbuilding. It was at that time that the world saw its first high-rise construction—the famous Pharos of Alexandria considered to be the prototype of all lighthouses in the world which rose to a height of about 135 m and was numbered among the Seven Wonders of the world. Numerous majestic structures from the Hellenistic and Roman times still arouse our admiration and testify to the perfect sense of proportion and high engineering level of ancient architecture.

Paying a tribute of respect to these remarkable achievements, one should not be forgetful, however, of what they cost. In the absence of any qualitatively new sources of energy the chief reliance of ancient architects and engineers was the physical force of animals and human beings, the slaves in the first place. Figuratively speaking, the world's wonders were built on their bones. Besides, there was yet another aspect to the advances of engineering in the Hellenistic world, closely linked with its social and political conditions, as well as historical traditions. The cult of grandeur and pomposity inherited from the World Empire of Alexander the Great and ex-

pressed in a gigantomania, a tendency towards colossal forms was to a large extent accountable for such prodigies as the famous vessel of Ptolemy Philopator powered by four thousand oarsmen, or the siege machine of Demetrius Poliorcetes which needed 3400 soldiers to attend to it. Being in fact tyrant's toys rather than practical weapons, they proved but of little use to the Hellenistic states in their struggle against the Romans whose military equipment was far less sophisticated but more practical.

Hellenistic art occupies a unique place in the history of Western culture in terms of both the abundance of its remains and the diversity of styles and genres. Magnificent buildings, statues, mosaics and paintings were created at a rate paralleled only by the rapid accumulation of wealth in Hellenistic and later Roman cities. The famous altar of Zeus in Pergamum, the colossus of Helios in Rhodes over 30 m high and the Coliseum are just a few examples. The "Victory" of Samothrace, the "Dying Gaull," the "Bull of Farnese," the "Laocoon," the "Aphrodite" of Melos, the portraits of Faiyum will forever remain in the history of culture as great works of art. The immense literature of the epoch gives a sweeping panorama of the life of contemporary society. It overwhelms one with the multitude of characters ranging from pseudo-classical heroes of traditional mythological stories reconstructed in accordance with new times to peasants, rough soldiers and women of easy virtue and displays a broad spectrum of genres so wide apart as a high tragedy with its profound psychological insight and an idyl describing pastoral scenes.

The most characteristic feature of Hellenistic literature and art indicative of the ideological climate of the epoch was a growing interest in the individual. The hero of the classical period had been first and foremost a personification of the polis. Man was a direct participant in the affairs of the state and did not conceive his existence apart from it. He might be a political figure, a military leader, a farmer, a shepherd or a soldier, yet he completely identified himself with his city-state, its joys and sorrows. He was one with the social functions that circumstances forced upon him, and that made the backbone of his moral character. The man of the Hellenistic age was very different. Being a toy in the hands of an omnipotent alien power of the state embodied in the person of a deified monarch, he sharply contrasts his inner and outer worlds and differentiates his real self from the roles he is assigned. According

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to Epictetus, one of the founders of Stoicism, a man is but an actor in a play written by an unknown author; whatever his role, be it a cripple, a ruler or an ordinary man, his job is to play it well and leave the choice to fate... (Epictet. Ench. 17).

This attitude lay at the root of a strong individualistic trend that manifested itself not only in the social psychology of the epoch, but also in its culture. Man's consciousness, divided between the general and the individual, gravitated towards the latter, and this showed in his practical deeds—military campaigns, seizure and exploitation of slaves, commercial and industrial activities—no less than in poetry, religion, science and philosophy. The extremes met: submission to the ruthless and impersonal power of the state and resignation to fate coexisted with absolute inner freedom and primitive self-sufficiency making two sides of one and the same individual consciousness...

In literature and art, this contradiction was reflected in the combination of ostentatious pomposity of official monuments and very realistic, profoundly human portrayal of the individual, in political science—in a somewhat artificial unity of universal statehood and man's individualism, in philosophy—in a fateful antithesis of natural and social necessity, on the one hand, and chance and personal liberty, on the other. This antithesis, however, gave no grounds for optimism, as man was considered to be powerless before wayward and inscrutable fate.

The Hellenistic epoch covers a long period of ancient history and tradition distinguishes between early Hellenism of the last three centuries B.C. and late Hellenism usually identified with the Greco-Roman civilisation of the Imperial Age. Early Hellenism terminated in the formation of the Roman Empire and on the political side was characterised by the emergence of vast monarchies that replaced minor slave-owning polises. On the economic side, it was a period of developed slavery with ever increasing proportion of slave population. The number of slaves was constantly growing as a result of predatory wars and plunder of conquered territories. On the cultural and ideological side Hellenism represented a peculiar blend of universality and individualism, the former being externally predominant. Philosophy was pervaded with a spirit of disappointment and resignation: "In the face of the dark chaos of reality impending over man and threatening to engulf him the Stoic sage is tranquil and serene, the Epi-

curian is lost in reverie in the depth of his exquisite garden, and the Sceptic shows no inclination to say yes or no of anything or anybody. There is something funereal about these naive, but profound and even sublime images of a sage, as if their creators mourned over what could but did not materialise..."[1]

Profound social, political and cultural changes in the Roman Empire characteristic of Late Hellenism awoke man to reality. However, slave-owning society was already doomed and all attempts to envigorate and consolidate it could not but end in failure. The economic foundation of the Roman Empire more and more revealed its inability to meet the increasing demands of life and powerful forces set to work preparing transition to feudalism. The growth of production and the sophistication of the instruments of labour called for skilled and ingenious workmen but slaves were not interested in the results of their work and had no incentives to develop such qualities. The productivity of their labour dropped, and so did the profits of large estates. The slave-owners began to divide them into small plots for lease to peasants and slaves who thus turned into coloni—half-free labourers paying the proprietor a big proportion of their produce. The colonatus and the increasing proportion of freedmen in cities were incompatible with the economic relations of the slave system, as well as with its political and ideological superstructure, and testified to the fact that slavery had already outlived itself and that new relations of production were gradually taking root in the heart of the old system. Under such conditions the religious and philosophical scepticism and liberalism characteristic of early Hellenism and accountable for the secularisation of philosophy and its relative freedom from religion gave way to the opposite trend—the consecration of philosophy which was assigned the function to bolster up ideologically the Empire, also consecrated. Any consecration, however, is deadly to philosophy.

This is not to say, of course, that the translation of philosophy into the language of religion and the interpretation of its concepts in religious terms directly leads to the decline of philosophical thought. This translation consisting in the idealisation of society, state and man of the epoch, i.e. in turning them into the mind's concepts, at first enables

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[1] A.F. Losev, *History of Ancient Aesthetics. Early Hellenism*, p. 42 (in Russian).

philosophy to consider the objects of such concepts in the abstract form within the framework of their dialectical relations. Religion is in fact nothing else than a fantastic reflection of reality in people's minds and theology as the self-consciousness of the epoch coincides with sociology, political science and anthropology. Yet the ascription of dialectics to an illusory object, a deity, fundamentally distorts the perspective of philosophical inquiry and, as the history of thought shows, is highly detrimental to philosophy. The majestic edifice of neo-Platonism that arose at the end of the Hellenistic age was bound to collapse for the simple reason that it failed to stand the test of time and satisfy the inquisitive human mind.

The Greco-Roman period is often described, not unreasonably, as the decline of ancient philosophy, its gradual degradation and extinction. Indeed, in "physics" it retrogresses to the doctrines of pre-Socratic philosophers, in ethics, to the Socratic schools, whereas neo-Platonism bogs down in mythology and downwright occultism. This process, however, was inevitable and, from the viewpoint of dialectics, illustrative of the operation of the law of the negation of negation in the sphere of ideology. The ideas of the classics were not merely negated in the post-Aristotelian doctrines, but, as it were, sublated, i.e. negated and preserved simultaneously, only to be again sublated in the endless spiral process of cognition.

Assessing the general significance of Hellenistic philosophy, Marx wrote: "To be sure, it is a commonplace that birth, flowering and decline constitute the iron circle in which everything human is enclosed, through which it must pass. Thus it would not have been surprising if Greek philosophy, after having reached its zenith in Aristotle, should then have withered. But the death of the hero resembles the setting of the sun, not the bursting of an inflated frog."[1]

This profound appraisal hardly needs any elaboration.

[1] Karl Marx, "Difference Between the Democritean and Epicurean Philosophy of Nature," in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 1, p. 35.

Epicurus and Epicureanism

Epicurus (341-270 B.C.), an eminent exponent of the atomistic doctrine in ancient philosophy was born of Athenian parents on the island of Samos. Later he moved to Asia Minor and at the age of 32 founded his own school of philosophy. He taught first in Mytilene, and then in Lampsacus. In 306 he settled in Athens and continued his lessons in his garden which gave the name to the school. In keeping with tradition, he had its motto inscribed on the garden gate: "Friend, here it will be well for you to abide; here pleasure is the highest good." Epicurus bequeathed the garden to the school and, when dying, urged his pupils to remain loyal to their faith.

Epicurus wrote over 300 works, including *Of Nature* in 37 books, *Of Atoms and Void, Of Love, On Choice and Avoidance, On the Gods, Of Kingship,* and others. Thanks to Diogenes Laertius we possess the text of three letters of Epicurus containing the jist of his doctrine and the *Cardinal Tenets* (a series of forty ethical aphorisms) apparently intended by Epicurus as a guide for his pupils. The letters are: to Herodotus on nature, to Pythocles on meteorology and astronomy, and to Menoeceus on ethics. Another textual source is a fourteenth-century manuscript in the Vatican library which was found (in 1888) to contain a series of 81 aphorisms of Epicurus, some of them identical with the *Cardinal Tenents,* and separate statements of Epicurus's pupils Metrodorus of Lampsacus and Hermarchus of Mytilene. We also have numerous fragments of Epicurus's works and letters and valuable evidence for his views in polemical works of Plutarch, Cicero, Sextus Empiricus and Church Fathers.

The Epicurean school flourished for several centuries. Among the immediate disciples of Epicurus the most distinguished were Metrodorus of Lampsacus who died before his master, Polyaenus of Lampsacus, Hermarchus of Mytilene

who became the scholarch after Epicurus, Leonteus of Lampsacus and his wife Themista, Colotes and Idomeneus. Hermarchus was succeeded by Polystratus, whose successors were Dionysius and Basilides. Diogenes also mentions Apollodorus, who is said to have written more that 400 books, two Ptolemaei of Alexandria, Zeno of Sidon, teacher of Cicero, Demetrius the Laconian, famous for his grammatical and mathematical studies, Diogenes of Tarsus and Orion. In Italy, Epicureanism was represented by Philodemus of Gadara whose works *De natura deorum* (On the Gods), *De vitii* (On Holiness), *Rhetocir* (Rhetorics), *De musica* (On Music) and others, as well as his logical treatise *On Methods of Inference* were largely reconstructed on the basis of extensive passages from the enormous philosophical library (about 1800 rolls) discovered in the ruins of Herculaneum at the end of the eighteenth century. An important discovery of the "Oinoanda Stones" in 1884 brought to us the fragments of late Epicurean Diogenes inscribed on a portico wall in the second or third century A.D. Yet the summit of Epicureanism was, of course, *De rerum natura* (On the Nature of Things) of Roman poet and philosopher Titus Lucretius Carus.

In accordance with traditional Hellenistic classification of philosophical knowledge Epicurus divided his system into physics, canonic (theory of knowledge) and ethics.

2. Epicurus's Canonic and Physics

Epicurus taught that knowledge consists in naming objects, i.e. in establishing a clear relationship between words and things. Each word should have an unambiguous reference: "That is true which is in the state in which it is said to be," and "False is that which is not in the state in which it is said to be" (Sext. Adv. math. VIII, 9). The criterion of the correspondence between a word and an object and, hence, the criterion of truth is sense experience. Sensations are irrational and do not depend on reason; being immune from refutation, they are themselves "true." Indeed, "all our notions are derived from perceptions, either by actual contact or by analogy, or resemblance, or composition, with some slight aid from reasoning" (Diog. L. X, 32).

So, all knowledge arises from sense perceptions. Repeated perceptions retained by memory take the shape of images and give rise to anticipations (*prolēpsis*) or notions. These make possible the use of language: the word "man" or

"horse" comes to denote the anticipation of a very definite complex of perceptions. "Anticipation" as understood by Epicurus is in fact the unity of perceptions which fuses them, as it were, into a single image.

It deserves mention that in speaking of sensations as the criterion of truth Epicurus singles out feelings and also calls them a "criterion." To be sure, all feelings are sensations as they originate in sense organs; however, distinguishing between feelings (pleasure and pain) and sensations, Epicurus opens a new aspect of the problem of truth, viewing it, so to speak, from a practical angle in terms of preferences and avoidances. Indeed, deciding on a course of action we consult, according to Epicurus, our feelings and choose the road of "natural" life that leads us towards pleasures and tranquility instead of that of unnatural and troubled existence that leads to pain and unreasonable suffering.

Perceptions result from the penetration of the "images" of things into the organs of the senses. These images, "like in shape to the solid bodies, far surpassing perceptible things in their subtlety of texture" (Ep. ad Herod., 46a) continuously separate from the surfaces of things and radiate in all directions with the speed of thought. Entering the sense organs, they produce true perceptions, whereas their penetration into the pores of the body creates fantastic impressions. As we see, Epicurus elaborates and slightly modifies the theory of "imageness" that goes back to Democritus. In contrast to Democritus who regarded the sensuous qualities of things, colour, taste and smell as owing their existence exclusively to the sense organs and therefore as subjective, Epicurus considers them to be objective on the grounds that an "image" consists of particles exciting the corresponding organ. A sensation (perception) never deceives us and errors can only originate in the mind, in its judgements: "Now falsehood and error always lie in the addition of opinion with regard to (what is waiting) to be confirmed or not contradicted, and then it is not confirmed (or is contradicted)" (ibid., 50).

At this point we come back to "anticipations." Being formed by the mind which combines perceptions into a single image, they are by no means its arbitrary product. The mind, in fact, retrieves from its "store" those impressions that were laid there by the senses as its recollections. Without "anticipations" enabling us to identify current perceptions

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with our previous experience no knowledge would be possible. For instance, we would not be able to answer even such a simple question as "Is it a horse or a cow?", since this question presupposes our knowledge of their outward appearance.

Stressing the sensual nature or "anticipations," Epicurus distinguishes them from logical concepts which he identifies with words: "It is essential that the first mental image associated with each word should be regarded, and there should be no need of explanation if we are really to have a standard to which to refer a problem of investigation or reflection or a mental inference..." (ibid., 38). Errors result from the absense of such "first mental images" or from their wrong association with words. Hence the Epicurean theory of induction concerned with the establishment of the meaning of words and the Epicurean theory of signs expounded in Philodemus's treatise.

Epicurus maintains that people are capable of developing correct and clear notions relating to basic physical and moral problems. As regards specific questions of natural science, such as the mechanisms of celestial phenomena, identical sense experience in this field may have different interpretations. Recognising the hypothetic character of our knowledge of particular natural phenomena, Epicurus at the same time insists on the absolute certainty of the universal principles of the world.

These universal principles expounded by Epicurus in his letter to Herodotus are as follows: (1) Nothing comes from nothing, and nothing returns to nothing; (2) The universe has always been and will always be the same as it is now, because nothing else exists into which it could change; (3) The universe consists of bodies and void; the existence of bodies is confirmed by the evidence of the senses and the existence of void is inferred from their motion; (4) Bodies are either compounds or the components of compounds, i.e. indivisible and unchangeable particles (atoms); (5) The universe is infinite both in the extent of void and in the number of its components—compounds and atoms. The number of the worlds is also innumerable.

So far the picture drawn by Epicurus remains within the Democritean framework. The differences begin when the philosopher turns to the properties of atoms and their motion. In contrast with Democritus who held atoms to be distinguishable by shape, arrangement and position, in Epicurus they

possess shape, size, weight and some other properties connected with shape (Epicurus does not specify them). Like his predecessor, Epicurus speaks of atoms as having different shapes, but he insists that the number of shapes is finite (though incomprehensibly large). Contrary to Democritus who was said to believe that an atom could be as large as the cosmos, Epicurus claimed that atoms differed in size within rather narrow limits remaining so small as to be invisible. If that were not so, "some atoms would be bound to come within our ken and be visible; but this is never seen to be the case, nor is it possible to imagine how an atom could become visible" (ibid., 56).

We have earlier noted that Epicurus, in contrast with Democritus, recognises the objectivity of sensible qualities. If anything, they are attested to by the senses which, according to Epicurus, are never at fault. In order to overcome the scepticism of his predecessor and account for these qualities as inherent in bodies, Epicurus had apparently only one way open to him—to reduce them to the basic properties of their components, i.e. to the size, shape and weight of atoms. However, the philosopher offers a different solution to the problem. He declares that a body is not a mere aggregate of atoms but a qualitatively new whole with its own distinguishing features. Though it is subject to change and bound to perish, its existence in the physical world is no less real than the existence of atoms, its permanent components, just as its qualities are as real as the qualities of the atoms themselves. Shape, colour, taste, smell, size, weight, etc. are objective properties in so far as they are perceived by the senses. However, they belong not to atoms themselves, but to changing objects and are inseparable from their existence. According to Epicurus, "all these properties have their own peculiar means of being perceived and distinguished, provided always that the aggregate body goes along with them and is never wrested from them, but in virtue of its comprehension as an aggregate of qualities acquires the predicate of body" (ibid., 69).

The problem of primary and secondary qualities is treated by Epicurus in a similar materialist vein. In his eyes, the primary qualities are those that are permanent and essential to the existence of an object, whereas the secondary qualities may come and go without affecting its nature: "we make it clear that accidents have neither the nature of the whole, which we comprehend in its aggregate and call body, nor that

of the qualities which permanently accompany it, without which a given body cannot be conceived" (ibid., 70). Nevertheless, they are recognisable by sense-perceptions and are therefore also objective.

Epicurus makes an advance on Democritus in the understanding of space and time. The conception of space (void) in Epicurus is directly linked with motion—movement of the atoms and bodies requires empty space. However, the qualifications of space depend on its relations with matter: "according to Epicurus, of the intangible nature one part is named 'void,' another 'place,' another 'room,' the names being varied according to the different applications, since the same nature is termed 'void' when destitute of any body, and is called 'place' when occupied by a body, and becomes 'room' when bodies pass through it" (Sext. Adv. math. X, 2). As regards time, Epicurus considers it a secondary quality of moving and changing things, yet insists on distinguishing it from other secondary qualities. He avers that time is an accident of events which are themselves secondary qualities of people and places and is therefore a secondary quality of secondary qualities. In his opinion, in trying to comprehend time we should not attempt to form a notion of it as we do in respect of other qualities, "but we must take the direct intuition, in accordance with which we speak of 'a long time' or 'a short time,' and examine it, applying our intuition to time as we do to other things... For indeed this requires no demonstration, but only reflection, to show that it is with days and nights and their divisions that we associate it, and likewise also with internal feelings or absence of feeling, and with movements and states of rest; in connection with these last again we think of this very perception as a peculiar kind of accident, and in virtue of this we call it time" (Ep. ad. Herod. 72, 73).

The most important distinction of Epicurus from Democritus is the conception of the atom's weight as the cause of its motion. Atoms, according to Epicurus, are carried downwards by their weight and travel parallel to one another at a uniform speed.[1]

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[1] Explaining his doctrine, Epicurus warns against understanding "up" and "down" in the absolute sense as though there existed higher and lower points in the universe. These words only relate to us as observers and only to the earth as the centre of our world and have no meaning in respect of infinite space.

Now, if all the atoms were raining downwards at a constant speed, there would be no world as the atoms could never meet and form composite bodies. Since the world does exist as attested to by our senses, Epicurus posits declination of atoms from their regular course, kind of a spontaneous minute "swerve" that accounts for the crossing of their paths and eventual collisions. This was an important departure from the rigid and fatalistic teaching of Democritus that marked a new step forward in the doctrine of ancient atomistic materialism and had far-reaching consequences.

The critics of Epicureanism and many historians of philosophy usually regarded the declination of the atoms merely as a trick for an ad hoc explanation of the formation of composite bodies. Young Marx was the first to discern the significance of this concept which is in fact central to the teaching of Epicurus. According to Marx, "*the declination of the atom from the straight line, is, namely, not a particular determination which appears accidentally in Epicurean physics. On the contrary, the law which it expresses goes through the whole Epicurean philosophy, in such a way, however, that, as goes without saying, the determination of its appearance depends on the domain in which it is applied.*"[1] In physics, this law was directed against the rigorous mechanistic determinism of Democritus with its identification of cause and necessity. The idea of the spontaneous swerve of the atom, i.e. the possibility of random atomic behaviour was tantamount to the recognition of chance and necessity in the explanation of natural phenomena. Chance, according to Epicurus, is by no means the absence of cause: if this were so, the swerve would run counter to the first principle of natural philosophy—the postulate "nothing out of nothing," i.e. nothing without a cause. The declination in Epicurus does have a cause, but it is not external as with collision of atoms, but *internal*, inherent, like the force of gravity, in the very essence of the atom. "The Epicurean declination of the atom thus changed the whole inner structure of the domain of the atoms...."[2]

Epicurus stresses that chance should not be indentified with what we do not know the cause of. It is objective in

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[1] Karl Marx, "Difference Between the Democritean and Epicurean Philosophy of Nature", in: Karl Marx, Frederick Engels, *Collected Works*, Vol. 1, p. 50.

[2] Ibid., p. 53.

the sense that natural processes result not from necessity, but rather from probability. Epicurus thus opens a way for a more flexible understanding of the law governing the universe that approximates the modern conception. However, it was not more than a conjecture, the more so as it was not indicative of any trend towards a mathematical expression of probabilistic processes.

The idea of fortuitous declination also manifests itself in Epicurus's explanation of natural processes, particularly heavenly phenomena. Since declination of atoms is a result of their spontaneous activity, their internal determinateness, natural phenomena consisting essentially in the movement of atoms and their coming together cannot be adequately accounted for if we disregard the interaction of multiple causes (this thesis receives special substantiation in Epicurus's letter to Pythocles). The multiplicity of causes and, accordingly, of possible explanations of celestial phenomena brings Epicurus to a conclusion that true science is incompatible with one-sidedness: "But when one accepts one theory and rejects another, which harmonises just as well with the phenomenon, it is obvious that he altogether leaves the path of scientific inquiry and has recourse to myth" (Ep. ad Pyth. 87).

According to Epicurus, both celestial and terrestrial phenomena have a common nature and are based on natural laws though the latter lend themselves to direct observation, whereas the former are inaccessible to the senses. Epicurus writes: "Now we can obtain indications of what happens above from some of the phenomena in the sky... Yet we must never desert the appearance of each of these phenomena, and further, as regards what is associated with it, must distinguish those things whose production in several ways is not contradicted by phenomena on earth" (ibid., 88). Epicurus's cosmology, according to Marx, reveals the soul of his philosophy of nature. It shows that there is nothing on the earth or in heaven that is beyond the grasp of the mind and can disturb man's tranquillity and happiness.

3. From Physics to Ethics and "Theology"

Canonic and physics play but an auxiliary part in Epicurus's teaching. The ultimate purpose of philosophy as he sees it is not to seek for the hidden truth of things or to explore the possibilities of the mind, though the scientific explanation of the universe is absolutely indispensable, but to contribute to

human happiness and bring that repose and contented acqui-
escence which constitute the true end of life. Exalting philo-
sophical knowledge, Epicurus writes: "Let no one when
young delay to study philosophy, nor when he is old grow
weary of his study. For no one can come too early or too
late to secure the health of his soul. And the man who
says that the age for philosophy has either not yet come or
has gone by is like the man who says that the age for
happiness is not yet come to him, or has passed away..."
(Ep. ad Men 122). By providing scientific explanation for
natural phenomena in the world philosophy sweeps aside
all fears that torment and degrade man's consciousness—the
fears of gods, death, punishment in another world, etc.—and
prevent him from being happy.

Happiness, according to Epicurus, is that which yields
pleasure or relief from suffering. This ethical principle derives
from the Epicurean theory that man naturally strives for
pleasure and avoids suffering. "And for this cause we call
pleasure the beginning and end of the blessed life. For we
recognise pleasure as the first good innate in us, and from
pleasure we begin every act of choice and avoidance, and to
pleasure we return again, using the feeling as the standard by
which we judge every good" (ibid., 128-129). This extract,
if considered out of its setting and irrespective of Epicurean
philosophy as a whole, might well give cause to reproach
Epicurus of one-sidedness and advocacy of base instincts,
particularly if we add to it another famous passage from his
treatise *On the End of Life*: "I know not how I can conceive
the good, if I withdraw the pleasures of taste, and withdraw
the pleasures of love, and withdraw the pleasures of hearing,
and withdraw the pleasurable emotions caused to sight by
beautiful form" (fr. 10). This indeed looks like frank
advocacy of ordinary voluptuousness.

However, such reproach would be entirely undeserved—
and not only because the statements quoted above may have
been made in the heat of an argument or intended to play up to
the tastes of the crowd. Far more important is the interpreta-
tion of pleasure, the central notion in the moral doctrine of
Epicurean Garden, which has nothing in common with coarse-
ness and vulgarity not infrequently ascribed to it. According
to Epicurus, "it is not possible to live pleasantly without
living prudently and honourably and justly (nor again to live
a life of prudence, honour, and justice) without living

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pleasantly" (Sent. V). True pleasure which is the criterion of moral behaviour is inseparable from reason and justice. Though man seeks pleasure, "we must consider that of desires some are natural, others vain, and of the natural some are necessary and others merely natural; and of the necessary some are necessary for happiness, others for the repose of the body, and others for very life. The right understanding of these facts enables us to refer all choice and avoidance to the health of the body and (the soul's) freedom from disturbance, since this is the aim of the life of blessedness" (Ep. ad Men. 128).

As a matter of fact, this conception of man's needs and desires was rooted in ancient ethical tradition and shared by both "immoral" Epicureanism and "moral" Stoicism. Yet in contrast with other ancient moralists, the approach of the Garden Philosophers was free from any traces of hypocrisy. According to Epicurus, desires are to be controlled by the mind for the simple reason that immoderate pleasure inevitably turns into suffering. Pleasure as the ultimate end of life implies "freedom from pain in the body and from trouble in the mind. For it is not continuous drinkings and revellings, nor the satisfaction of lusts, nor the enjoyment of fish and other luxuries of the wealthy table, which produce a pleasant life, but sober reasoning, searching out the motives for all choice and avoidance" (ibid., 131-132). Indeed, questionable delights of luxury and extravagance are bound to bring evils in their wake...

Insistence on moderation in enjoyment was charasteristic of all ancient ethics. The distinguishing feature of the Epicurean ethical thought was a resolute break with religion which was in Epicurus's eyes the bitterest enemy of human happiness. Indeed, man's happiness is incompatible with the "opinions to which are due the greatest disturbance of the spirit" (ibid., 132) — the diseased fancies of gods which continually interfere in men's lives, harass the mortals on the earth and torture them after their death. The idea of immortality with its implications of punishments and rewards is utterly baseless. Man's soul perishes with the body and death is the end of everything — so why should man fear it? It can bring him no evil, because where death comes man is no more.

Invoking science as an instrument for combating religion and dispelling man's fears and vain hopes, Epicurus reasoned along two lines.

First, he set himself against the deification of heavenly phenomena so characteristic of ancient philosophy. Epicurus maintained that all heavenly events consecrated by mythology are actually brought about by natural causes. Attaching much importance to the scientific view of the world, Epicurus laid no special stress on the details of his natural explanations. He held that phenomena admitted of several interpretations in view of the multiplicity of their causes and did not seem to be very particular over which of them was adopted so long as it ruled out the supernatural. This view not infrequently gave cause for accusing Epicurus of lacking in the scientific ferver and being rather easy-going about the natural foundation of his ethical theory. This viewpoint can hardly be regarded as tenable. Far from underestimating positive science, Epicurus was against groundless claims to the knowledge of absolute truth bordering on myth and tending to turn into a dogma.

Second, Epicurus rejected the idea of divine providence and denied any influence of gods on men's affairs. Curiously, Epicurus conceded the existence of gods as his theory of knowledge demanded an objective cause of people's belief in them in the shape of film or images falling off from real objects, yet he lodged them in the spaces between worlds and denied them any influence on nature or human society. According to Epicurus, "the blessed and immortal nature knows no trouble itself nor causes trouble to any other, so that it is never constrained by anger or favour. For all such things exist only in the weak" (Sent. I). On the evidence of Lactantius (fr. 374 Usener), Epicurus argued the indifference of gods to human affairs from presence of evil in the world. God, according to Epicurus, is either willing to abolish evil but is incapable of doing so, or, having the potency, is not willing, or is both unwilling and incapable, or both willing and capable. In the first case he is powerless which runs counter to the concept of god, in the second, he is envious which is equally absurd, in the third he is both envious and powerless, and in the fourth, his idleness is inexplicable.

Divine providence, according to Epicurus, is nothing else than a crude invention of the crowd. The gods leading the life of blessed happiness have no good reason to concern themselves with the world's troubles. If they did, they would not enjoy perfect tranquillity and repose as they ought to. The gods are immortal, totally untroubled and reside in the intermundia, their bodies being made of fine atoms of fiery

substance. It is useless to propitiate the gods and expect
any benefits from them—yet men must venerate them out of
the sheer intellectual delight in their excellence, immortal-
ity and blessful happiness. "And yet these gods are no fiction
of Epicurus. They did exist. *They are the plastic gods of
Greek art*"[1]—the archetypes of those masterpieces that
embody till nowadays the ideal of beauty. However, the
aesthetic essence of the Epicurean gods was the total denial of
their religious essence.

The moral theory of Epicurus not only denies religious
ethics, but asserts man's freedom as the indispensable prere-
quisite for the attainment of happiness, i.e. the calm of mind
and imperturbability in the face of the vicissitudes of life. Man
in this sense is the master of his own destiny. Hence the
resolute opposition of Epicurus not only to the religious idea
of divine providence, but also to the fatalism of natural
scientists hypostatising necessity. According to Epicurus,
"with us lies the chief power in determining events, some of
which happen by necessity and some are within our control"
(Ep. ad Men. 133). While necessity cannot be called to
account, a wise man "sees that chance is inconstant, but that
which is in our control is subject to no master, and to it are
naturally attached praise and blame" (ibid.).

The possibility of man's choice of a course of action derives,
according to Epicurus, from the multiplicity of causes of
both natural and social processes. Whereas Epicurus raised
his objections against the natural explanations of the "physi-
cists" (Ep. ad Men. 134), his follower Diogenes of Oinoanda
levelled his criticism directly at Democritus contending that
the belief in rigid necessity and predestination is incompatible
with exhortation, blame or even punishment of criminals
(l. 39). Epicurus went even so far in his denunciation of
mechanistic necessity as to make this statement: "It were
better to follow the myths about the gods than to become
a slave to the destiny of the natural philosophers" (Ep. ad.
Men. 134).

As regards chance, the wise man, according to Epicurus,
"does not regard it as a god as most men do (for in a god's
acts there is no disorder), nor as an uncertain cause (of all
things): for he does not believe that good and evil are given
by chance to man for the framing of a blessed life, but that

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[1] Karl Marx, "Difference Between the Democritian and Epicurean
Phylosophy of Nature," ibid., p. 51.

opportunities for great good and great evil are afforded by it" (ibid.). Hence, chance is nothing else than the opportunity for a free choice. It should be noted, however, that the Epicureans could not discern the possibilities for explaining the freedom of choice present in Democritus's system, therefore their criticism of the views of the founder of atomism was one-sided.

The division of all phenomena into those independent of and dependent on man's will is very characteristic of Hellenism.[1] Epicurus maintains that wisdom and happiness consist in attaining complete independence from everything that disturbs the soul's tranquillity—the bustle of the world, ambitions, frets, vain desires. This contented acquiescence and inward peace (*ataraxia*) is achieved through long training and exercise (*askēsis*). The Epicurean *askēsis,* however, is very different from the mortification of the flesh advocated by various religious trends, and is understood as the education of man in preparation for a happy life free from the pain of body and trouble of spirit.

The attainment of *ataraxia* calls for freedom from the fear of death. Epicurus is convinced that the soul is mortal as it consists of atoms: "The soul is a body of fine particles distributed throughout the whole structure, and most resembling wind with a certain admixture of heat, and in some respects like to one of these and in some to the other... If the whole structure is dissolved, the soul is dispersed and no longer has the same powers nor performs its movements, so that it does not possess sensation either" (Ep. ad Herod. 63, 65). That being so, "death is nothing to us: for that which is dissolved is without sensation; and that which lacks sensation is nothing to us" (Sent. II). One of the principal objects of philosophy was, according to Epicurus, to free men from ignorance and the fear of death which are the sources of their faith in god.

Epicurus's ethics is the foundation of his social theory. Society in his view is an aggregate of individuals who should not interfere with one another in their pursuit of pleasure. Epicurus exalts friendship which is valued for the safety and

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[1] The acute awareness of the power of chance that reigns supreme and confounds the affairs of men was already characteristic of the literature of early Hellenism. For instance, in Menander's comedies chance is often used as the mainspring of the plot personifying wilful and crotchety goddess Tyche.

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tranquillity of the soul it affords. Justice based on the agree-
ment of men not to do harm to one another derives from the
principle of pleasure: "In its general aspect justice is the
same for all, for it is a kind of mutual advantage in the
dealings of men with one another: but with reference to the
individual peculiarities of a country or any other circum-
stances the same thing does not turn out to be just for all"
(ibid., XXXVI).

4. Roman Epicureanism

The spread of Epicureanism in Rome in the Republican,
and then in the Imperial period was the result of its appeal to
certain sections of Roman society and often went side by side
with the distortion of its doctrine in the spirit of crude Hedo-
nism. Pseudo-Epicureanism of the upper strata of Roman soci-
ety is of no special interest in terms of philosophy, being in
fact nothing else than the vulgarisation of materialist views.
Yet Roman Epicureanism that developed further the teaching
of Epicurus was an important ideological factor. In the first
century B.C. it was represented by an Epicurean school set up
near Naples and was headed by Syronus and Philodemus.

Special interest attaches to the logical theory of Philodemus
of Gadara (110-40 B.C.) expounded by him in a treatise under
the non-authentic name *On Methods of Inference*.[1] This
treatise much corrupted by time describes the controversy of
the Epicureans against the Stoics over the problems of induc-
tive logic and develops a conception of signs making it possi-
ble to reason from the observable phenomena to what is bey-
ond observation (e.g. scar is the sign of a healed wound, from
smoke we infer to fire, from sweat to pores in the skin, etc.).
The basis of a reliable inference is experience. According to
Philodemus, we should not rely on chance phenomena only.
By comparing numerous similar and dissimilar phenomena
and using our general experience we should reveal the
inherent properties of each phenomenon and infer from them
to the others. For instance, if we find out that men differ in
all respects but one, there is no reason why we should not
safely assert, recalling all men we have known personally
and those we have heard about, that all people are liable
to old age and death (Philod. XX, 34-XXI, 12).

As is evidenced from the above, Philodemus does not

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[1] See Philodemus, *On Methods of Inference*, ed. by Ph. H. De Lacy and
E. A. De Lacy, Philadelphia, Penn., 1941.

identify induction as a method for obtaining general authentic conclusions with induction based on simple enumeration — true inductive reasoning must deal with necessary and stable properties of objects.

The high level of Epicurean logic is attested to by the fact that the Epicureans were familiar with the method of sole similarity, reduced induction to the inference from one particular to another (analogy) and came near to the recognition of the uniform operation of natural laws as the foundation of inductive inferences.

According to Philodemus, the empirical inductive method is a characteristic feature of all arts and sciences based on general principles. It is also applicable to ethics in which the definitions of good and evil are to be confirmed by inductive conclusions. In his treatise *On the Gods* he inferred to the existence of the gods from men's experience and maintained that the gods are similar to human beings in appearance since only the human beings and the gods have a capability for thought.

Philodemus also occupies an important place in the history of aesthetics and is known as a poet. Most of the poems that came down to us (their number exceeds 30) are love lyrics.

The next stage in the history of Epicureanism is connected with Lucretius who made an important step forward in the development of its doctrine. We have practically no evidence for his life story, but Cicero's letter of February 54 B.C. gives a hint on the date of his famous poem. He was born about 99 B.C. and is known to have committed suicide at the age of 43, which puts his death at approximately 51 B.C. According to other sources, he died in 55 B.C. The deplorable lack of data on Lucretius's personality and external circumstances is more than offset by the magnificence and depth of his great poem, a true encyclopaedia of Epicureanism. It consists of six books of which books I and II deal with the fundamentals of Epicurean physics in comparison with the views of earlier philosophers, book III expounds the views of Epicurus on the soul and its properties, book IV outlines his "image" theory of knowledge and physiology of man, book V treats of the gods and the origin of living beings, man and society, whereas book VI describes climatic phenomena, rivers and hot springs, explains earthquakes, volcanic activity and causes of various diseases and ends in a description of the horrors of the 430 B.C. epidemic in Athens. His entire poem is pervaded with

the spirit of atheism and displays an obvious ethical disposition. In point of fact, Lucretius's moral theory rests on a solid foundation of his materialist atheistic convictions and the discussion of nearly all scientific questions tackled in the poem is intended to substantiate his views.

One would vainly try to preserve the richness and flavour of the poem in its rendition—it must be read as a philosophical treatise and as a masterpiece of poetical art. On the formal side, *The Nature of Things* expounds the teaching of Epicurus and reproduces his arguments, which is in itself an invaluable contribution to the history of philosophy as the poem often serves as the only extant evidence for Epicurus's authentic views. Its true significance, however, is far greater. Recent investigations of Soviet scholars have shown that the "mechanistic" picture of the world in Democritus and Epicurus was transformed by Lucretius into a poetical image of living nature which exerts a profound emotional and aesthetic influence on the reader even in our days. In contrast with Democritus and Epicurus who needed only two factors to account for the nature of things, the atoms with their properties and the void accommodating them, Lucretius sees the world rather as ever-living, colourful, generative nature very much in the manner of earlier Greek thinkers. This explains why he prefers biomorphic analogies, e.g. "birth" and "growth" over technomorphic, mechanistic ones, such as "sorting out" in Anaxagoras and Democritus. The same "biological" attitude is expressed in Lucretius's terminology; having no Latin equivalent for Greek "atom" (indivisible), he uses Anaxagoras's term "seeds" to denote the first causes or primary bodies of the universe.

Expounding the fundamental principle of atomism, Lucretius formulates it as follows: "Nothing is ever gotten out of nothing by divine power" (Lucr. I, 251). The substantiation of this thesis by Lucretius shows that he understands it, first, as an expression of determinism (nothing comes into being without a cause), second, as an expression of substantialism (a thing can only be generated from other things, in the end from "primary bodies," i.e. matter), and third, as a reflection of a biological process: things are generated not through mechanical combination, but by birth, like living organisms. The "nothing out of nothing" (*ex nihilo nihil*) principle is an uncompromising denial of any divine interference in the affairs of nature.

Lucretius's conception of the atom is different from that of Democritus and Epicurus. Of course, for him it is also the "limit of division" (*redditia finis*), but this limit, in his opinion, is a pure abstraction, and the "indivisible," using the term of modern science, is an "ideal body." The relevant passage runs thus: "That point [the atom] sure enough is without parts and consists of a least nature and never has existed apart by itself and will not be able in future so to exist, since it is in itself a part of that other; and so a first and single part and then the other similar parts in succession fill up in close serried mass the nature of the first body" (Lucr. I, 601-606). As regards the real physical body, it is always a part of a larger whole, of "nature creatress of things" and even of "begetting matter" (*genitalis materies*) (Lucr. I, 627).

Lucretius is not explicit about the properties of matter that account for its generative power. In the passage referred to he lists such properties as weight, movement and impacts "by means of which things severally go on" (Lucr. I, 634).

These are the properties of atoms, quite sufficient, in the opinion of Epicurus, to explain the emergence of things. By contrast, his follower constantly underlines the creative, generative power of matter and speaks of the specific material which "begets" things. Similarly to the seed, this material contains the cause and principle of the thing, something like its "genetic code." In order to express this idea of generation, Lucretius was constantly forced to resort to poetic images and buttress, as it were, abstract propositions by concrete pictures as the notions of classical ancient atomism were hardly suitable for his purpose.

The poem abounds in passages where Lucretius personifies Nature as life-giver and invokes it as Venus, Mother of Gods or Great Mother, describes the marriage of Mother-Earth and Father-Ether as the source of life in the world, speaks of the loving embrace of Venus and Mars, etc. These poetic adornments have sometimes been interpreted by commentators as Lucretius's return to mythology, which appears to us completely untenable. First, references to mythological deities are contained in not more than 15 per cent of the poem's text and these include openly atheistic and anti-mythological passages. Second, Lucretius stressed that he used "the Muses' charm" only to elucidate his "dark subject" (Lucr. IV, 8-22), like a physician who offers a sick child the beneficial cup of medicine edged with honey (see IV, 8-22).

Third, the mythological images are clearly allegorical which is often confirmed by Lucretius himself. Such is the case, for instance, with Great Mother which was traditionally identified with the Earth as the source of all life. Explaining his attitude to such allegories, Lucretius says: "And here if any one thinks proper to call the sea Neptune and corn Ceres and chooses rather to misuse the name of Bacchus than to utter the term that belongs to that liquor, let us allow him to declare that the earth is mother of the gods, if he only forbear in earnest to stain his mind with foul religion" (Lucr. II, 655-659, 680).

The obviouly allegorical interpretation of mythological deities in the poem attests to the fact that Lucretius subscribed to the traditional attitude of Hellenistic science to religion. His poem also reflects a popular literary tradition represented, for instance, by Callimachus who strove to expose the falsity of Greek mythology by skilfully using the poetic devices of old Ionian epos. Yet unlike Callimachus seeking after a new mythology, Lucretius focuses his attention on natural philosophy, "physics" in the ancient sense, which accounts for the major part of his poem.

In contrast with Epicurus whose physical theory was intended to provide the foundation for his ethics, Lucretius treats physics as an entirely independent object of philosophical enquiry and seeks to develop a rational conception of the world. His tendency towards the contemplation of nature, as well as the epistemological differentiation between "open" things with their sensual qualities and properties and "hidden" ones that can only be accessible to thought, causes him to adopt the attitude of philosophical enlightenment which demands a complete restructuring of human consciousness and self-consciousness. According to Lucretius, nature itself "by its aspect and its law" must purge man's soul from all superstitions and all fears brought by religion in its train (I, 148; II, 61; VI, 41).

The traditional problems of ancient atomism are treated by Lucretius in the light of his biomorphic conception of matter which substitutes for the purely mechanistic theory. We have already spoken about his interpretation of the *ex nihilo nihil* principle. Explaining further the atomistic structure of matter, the Roman thinker uses two arguments to prove it. First, he asserts that things consist of invisible particles adducing the examples of wind, water, smells and sounds: "The dripping from the eaves hollows a stone, the bent ploughshare of iron imperceptibly decreases in the fields and

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we behold a stone-paved street worn down by the feet of multitude; the brass statues too at the gates show their right hands to be wasted by the touch of numerous passers by, who greet them" (Lucr. I, 313-318). Then he argues the invisibility of such particles from the rule of contraries, repeating in fact the reasoning of Zeno of Elea: if things are infinitely divisible, "between the sum of things what difference will there be?" (Lucr. I, 619).

Arguing the existence of void, Lucretius infers it, like Epicurus, from motion, divisibility of compounds, different densities of substance, etc. He links the conception of motion with weight and distinguishes two kinds of movement of atoms: downward fall as a result of weight and rebound due to collisions. Speaking of the atom's swerve in the orthodox Epicurean tradition, Lucretius regards it, however, as a manifestation of the creative power of matter. At the same time he returns to a more consistent determinism of Democritus, again on the biomorphic basis, contending that "where each thing can grow and abide, is fixed and ordained" (Lucr. III, 787; V. 731).

A similar reversion to Democritus is also exhibited by Lucretius in his understanding of society. Its progress is described essentially along the Democritean lines (Book V, 926-1457), but there is a marked difference in tone, if not in substance. The time of Lucretius was characterised by an acute social and political crisis that plagued the Hellenistic world and precipitated the creation of the Roman Empire; it could not but affect the mood of the Roman philosopher and his whole world outlook. Though Lucretius's poem is practically free from concrete social and political observations and conclusions, it reflects this crisis by disclosing the contradictoriness of social progress which can only be achieved through back-breaking toil, wars and annihilation of one's own kind and goes side by side with increasing social inequality, growing contrast between the rich and the poor, moral degradation, crime, superstitions, fear of the gods and death. Ignorance and baseless fears that lie at the root of religious beliefs are, according to Lucretius, the most characteristic features of human existence. Man's only hope is the Epicurean philosophy of wisdom which alone can sweep aside the religious chimeras that harass mankind, and bring it inward peace and happiness.

Lucretius is an implacable opponent of the existing "foul" religion and traditional mythology which make a permanent

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object of his scathing sarcasm, condemnation and ridicule. Born of ignorance and fear and pretending to the role of the guardian of public morals, official religion engenders impiety and crime, being responsible, for instance, for such godless acts as the sacrifice of Aethegenus "that thus a happy and prosperous departure might be granted to the fleet" (Lucr. I, 100). Interpreting the myths in naturalistic terms, Lucretius traces their origin to physical and social causes (V, 396-410, III, 984-1023).

History shows that anti-religious views need not necessarily be equivalent to outright atheism, and that was just the case with Lucretius. The Greeks and Romans did regard him as an atheist, because he came out against the gods of popular religion, let alone the religion of the state. Yet despite his vigorous attacks against the chimeras of popular beliefs produced by ignorance and superstitions, Lucretius, following Epicurus, conceded the existence of gods in the interspaces, completely unruffled and therefore absolutely passive, having no concern for man's life and exerting no influence on nature or human affairs. According to Lucretius, "the fine nature of the gods far withdrawn from our senses is hardly seen by the thought of the mind" (Lucr. V, 148-149). These gods are very different from the gods of the traditional religion and have none of their functions: they do not create or order things, do not exercise their power of predestination, do not respond to prayer or gratitude, can neither punish the wrongdoers nor reward the virtuous. Useless is the worship of such gods and vain are all attempts to propitiate them. Consequently, "no act is of piety to be often seen with veiled head to turn to a stone and approach every altar and fall prostrate on the ground ... but rather to be able to look on all the things with a mind in peace" (Lucr. V, 1198-1199, 1203).

The gods of Lucretius are even more divorced from the world than the gods of Epicurus and seem to serve no other purpose than to embody the ideal of perfect life and provide an object of aesthetic contemplation.

In ethics Lucretius mainly follows in the wake of Epicurus except that the moral theory of the Roman philosopher is markedly more naturalistic and more deterministic. According-ing to Lucretius, the ultimate principle of man's behaviour is the desire for sensual pleasure which determines his actions and is independent of his consciousness. In Lucretius's eyes man is the child of living and creative nature and embodies its powers and abilities.

Stoicism

5. History of Stoicism

The Stoics were another Hellenistic school of philosophy that developed in parallel with Epicureanism. It was founded at the end of the fourth century B.C. and existed till the early part of the sixth century A.D. when it was closed by emperor Justinian's edict (529). The founder of the school was Zeno of Citium, a half-Greek and half-Phoenician colony in Cyprus. Sources put the dates of his life at about 336-264 B.C. He is said to have come from a merchant's family and was a merchant himself, but went bankrupt after a shipwreck and settled in Athens. After studying under Crates the Cynic, Stilpo the Megarian and Xenocrates, in 300 B.C. he started his own school that got its name from *Stoa Poikile* (Painted Porch) where he gave his lectures. The porch was decorated with Polygnotus's frescoes and favoured by poets.

On the evidence of Diogenes Laertius his death occurred as a result of a minor incident that the philosopher construed as an expression of God's will. While walking home after his lessons, he tripped on the road and broke his toe. Lying there, he struck the ground and quoted a line from *Niobe* (a poem of Timotheus that has not survived): "I come, I come, why dost thou call for me?" (Diog. L. VII, 28). Then he held his breath and died on the spot. According to other sources, he killed himself by abstaining from food.

Among the works ascribed to him by Diogenes Laertius are the *Republic*, written in the spirit of Cynic philosophy, *Of Life According to Nature, Of Impulse, or Human Nature, Of Emotions, Of Duty, Of Law, Of Greek Education, Of Vision, Of the Whole World, Of Signs* (SVF, I, p. 72-73). All that has survived is a meagre selection of isolated fragments.

Zeno's successor Cleanthes of Assus (c. 331-232 B.C.) a former pugilist, exhibited little originality and followed in the wake of his teacher. He came to Athens with only four

drachmas in his pocket and became Zeno's pupil, doing odd jobs to earn his living: "...while by night he used to draw water in gardens, by day he exercised himself in arguments" (Diog. L. VII, 168). He is credited with a number of treatises, including *Of Time, On Zeno's Natural Philosophy, Interpretations of Heraclitus, Of Senses, Of Duty, Of Knowledge, On the Thesis that Virtue Is the Same in Man and in Woman, Of Pleasure, On Properties, On Insoluble Problems, Of Dialectic,* and others. They also survived only in fragments (see SVF, I, p. 137-139, indicating 57 titles of Cleanthes's works).

The third and most prominent representative of the Early Stoa was Cleanthes's successor *Chrysippus* from Soli in Cilicia (c. 280-205 B.C.). Tradition says that he was originally an athlete (runner) and credits him with 705 books, of which more than 300 were devoted to logic. According to Diogenes Laertius, "so renowned was he for dialectic that most people thought, if the gods took to dialectic, they would adopt no other system than that of Chrysippus" (Diog. L. VII, 180). His importance for Stoic philosophy was acknowledged in the saying "Had there been no Chrysippus, there would be no Stoa." All that has survived of his original writings are isolated fragments of 66 of his books (See SVF, III, pp. 194-205).

Other members of the Early Stoa were Zeno's pupils Ariston, Herillus, Persaeus, and others, as well as Zeno's and Cleanthes's pupil Sphaerus of Bosporus. Of Chrysippus's followers mention should be made of Diogenes the Babylonian of Selucia and Antipater of Tarsus, who were known as the first teachers of Stoicism in Rome.

Already the early Stoics divided their philosophical system into three main parts: logic, physics and ethics. They likened philosophy to an egg in which the yolk is ethics, the white is physics and the shell is logic, or to an animal's organism with the bones and sinews corresponding to logic, the flesh to ethics and the soul to physics. Unlike Zeno who started the exposition of his system from logic and passed to physics and to ethics, Chrysippus proceeded from logic to ethics, and then to physics. Whatever the sequence, all the Stoics held that these divisions constituted an integral whole, logic binding the system and protecting physics and ethics, physics revealing the structure of the universe, and ethics teaching true wisdom identical with virtue and based on the dictates of nature.

As distinct from the original philosophy of the Early Stoa, the Middle Stoa represented by Panaetius of Rhodes and

Posidonius is largely eclectic, displaying a strong influence of Aristotle and particularly Plato. In point of fact, the influence of Platonism in the teachings of Panaetius and Posidonius is so conspicuous that there is good reason to classify them as "Stoic Platonism."

The Late Stoa or Roman Stoicism which flourished in the first and second centuries A.D. and is represented by the names of Epictetus, Seneca and Marcus Aurelius, restricts philosophy to ethics and is mainly concerned with practical problems. The decline of interest in logic, theory of knowledge and physics in the later Stoicism of Roman times goes side by side with the increasing tendency towards idealism and religion.

Such is the external history of Stoicism as a philosophical teaching. Speaking of its social nature, one cannot overlook the fact that the Early Stoa was founded by representatives of the declassed strata of Hellenistic society—an impoverished merchant, a day-labourer, a man dispossessed of his hereditary property in favour of Emperor's treasury (this is how Diogenes Laertius described Chrysippus's circumstances). Roman Stoicism is represented by a slave, subsequently a freedman, Epictetus, a consul Seneca and an Emperor Marcus Aurelius. Equally broad was the Stoics' audience—from an Emperor to a beggar and a slave... Stoicism had a strong appeal to all strata of Hellenistic society and to very different, emotionally and intellectually, individuals, and therefore had to express the general mood of the epoch—the widely spread feeling of uncertainty in the face of changeful and hostile reality, worthlessness of man's life and omnipotence of unpredictable fate. In the early Hellenistic period practically every individual, from king to labourer, lived under a constant threat to his well-being, freedom and life itself. We already know the reaction of Epicurus to the conditions of the epoch—his doctrine of the undisturbed peace of mind (*ataraxia*) and enjoyment of pleasures seemed to offer freedom from fear and pain to the sage who rose to the heights of spiritual emancipation. Yet this philosophy was only suitable for the elite, for those who could afford to retire to the Epicurean garden. Stoicism had a much broader appeal and addressed every class in Hellenistic society, its ideal suited both a sage who had withdrawn from the world, and a politician who was a plaything of forces beyond his control. The true Stoic is a man who has resigned to fate with courage and dignity, understanding the hopelessness of any resis-

tance—*volentem ducunt fata, nolentem trahunt* (fate leads the willing and drags the unwilling).

The ethical ideal of Stoicism is thus very contradictory—on the one hand, the belief in the inevitability of universal doom apparently leads to pessimism and passivity, on the other hand, the exaltation of man's dignity and heroic indifference to fate raises the Stoic above circumstances and defies fate itself, turning submissiveness into inner freedom. This solution, illusory as it was, cannot be denied the nobleness of spirit and proud acquiescence in the face of tragic necessity. It accounts for a strong and lasting influence of Stoicism which held its grip on the Hellenic mind for five centuries—from Zeno the Stoic till Marcus Aurelius.

6. Stoic Logic and Theory of Knowledge

The logical teaching of Stoicism was shaped under a strong influence of the Megarians—*Diodorus Cronus, Stilpo* and *Philo* of Megara. Yet in contrast with the Megarian "dialectic" which was hardly distinguishable from sophistics, the Stoics pursued the Aristotelian line and aimed at developing a theory of correct thinking. In point of fact, the logic of Aristotle dominated the philosophical thought of the epoch and was bound to affect the evolution of the Stoic logical conceptions, just as it affected rhetoric and the judicial procedure with its sophisticated methods of argumentation.

The most characteristic feature of Stoic logic is its special interest in the language as a means of expressing thought. This feature reveals itself already in the structure of logic which is divided by the Stoics into dialectic concerned with the rules of consistent reasoning, and rhetoric as a science of talk, i.e. asking and answering questions. The inclusion of these two disciplines under the heading of logic is indicative of the Stoics' awareness of the inseparability of thought and word—indeed, both were known as *logos*. Dialectic, in turn, is divided into logic proper dealing with thought or the "signified," and grammar dealing with word or the "signifying." Since the Stoics do not exclude the real object as the source of knowledge from the act of cognition, they arrive at what may be called a "triangle:" a word signifies a thought, which, in turn, is related to an object.[1]

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[1] The Stoics, in fact, anticipated the "triangle of reference" lying at the root of the empirical theory of meaning of Charles Ogden and Ivor Richards.

Dialectic understood by the Stoics as a science of the "signified" (thought) studies both its content and form, i.e. caterogies, notions, propositions, syllogism, logical errors and sophisms, whilst as grammar it is concerned with the linguistic means of expressing thought, i.e. with parts of speech and grammatical forms, as well as with the physiology of sound, theory of poetry and music.

Special importance in Stoic logic attaches to the conception of *lektōn*, i.e. the meaning of a linguistic sign. According to Sextus Empiricus, "the Stoics ... said that 'three things are linked together, the thing signified and the thing signifying and the thing existing'; and of these the thing signifying is the sound ('Dion,' for instance); and the thing signified is the actual thing indicated thereby and which we apprehend as existing in dependence on our intellect, whereas the barbarians although hearing the sound do not understand it; and the thing existing is the external real object, such as Dion himself. And of these, two are bodies—that is the sound and the existing thing—and one is incorporeal, namely the thing signified and expressible, and this too is true or false" (Sext. Adv. math. VIII, 11-12). As is evidenced from the above, *lektōn* is understood as a verbal expression of thought, i.e. as a thought represented by a linguistic sound or sign. The specific feature of *lektōn* is that it does not exist outside its form (sound and sign) just as the word is a meaningless sound without the *lektōn*.

The Stoic teaching of *lektōn* is the first version of the theory of meaning of words and expressions in a language. It can be correctly interpreted, however, only in the context of the Stoic epistemology which regards sensations as the source of all knowledge. The Stoics taught that the soul of a newborne child is like a clean papyrus ready to receive every thought, and the first method for recording thoughts is through sensation (SVF, II, fr. 83). Sensations are retained in consciousness by memory, the accumulation of images in memory gives experience. The material provided by the senses is processed, as it were, by the associations existing in the mind. Though the notion of association was not yet available to the Stoics, they already knew all the kinds of associations the later philosophers were to concern themselves with. The Stoics taught that "General notions ... are gained in the

In this triangle a word symbolises a thought and denotes an object or referent, whereas the thought refers to the referent. See C. K. Ogden, I. A. Richards, *The Meaning of Meaning*, London, 1930 p. 11.

following ways: some by direct contact, some by resemblance, some by analogy, some by transposition, some by composition, and some by contrariety. By incidence or direct contact have come our notions of sensible things; by resemblance notions whose origin is something before us, as the notion of Socrates which we get from his bust; while under notions derived from analogy come those which we get (1) by way of enlargement, like that of Tityos or the Cyclops, or (2) by way of diminution, like that of the Pygmy. And thus, too, the centre of the earth was originally conceived on the analogy of smaller spheres. Of notions obtained by transposition, creatures with eyes on the chest would be an instance, while the centaur exemplifies those reached by composition, and death those due to contrariety" (Diog. L. VII, 52-53).

Zeno and Cleanthes took the view that an object impresses itself upon the soul as a signet ring is impressed into wax. Chrysippus rejected this simile as misleading, arguing that if the soul were like a piece of wax it could not receive more than one impression at a time and even that would be obliterated by new impressions which is not the case. He contended that the soul affected by an external object undergoes a change or a modification and offered their classification. According to Chrysippus, first comes direct perception or "phantasia" which is true as it is produced directly by an object, then follows "phantastikon" or a mind picture produced by imagination and, finally, "phantasm" or wild fancy arising in the mind in a state of insanity or frenzy (SVF, fr. 54).

According to the Stoics, sensations and presentations or impressions are common to both human beings and animals, yet the former have also concerts which are defined as presentations formed by the reasoning of a rational animal (fr. 83). A concept is thus an image of an object based on its impression in the soul, or, according to Chrysippus, on the corresponding modification of the soul. As is evidenced from the abode, the Stoics conceived cognition as an active process: given free rein imagination may run wild. The objectivity of a perception implies the individual's "consent" and the act of cognition including such "consent" or apprehension was called by them *katalepsis*. Hence, *kataleptic phantasia* or apprehensive perception identified as such by its clarity became for the Stoics the criterion of truth: it derives from an external object causing a change in the individual's soul and is readily accepted by him as authentic. Significantly, in the

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opinion of the Stoics the process of cognition requires an active effort on the part of the cognising individual and it is precisely this mental effort that makes the concept (*ennoia*) superior to a simple perception and presentation. What is more, the formation of a concept presupposes the apprehension of reality in logical terms, and this makes it possible to pass in thought from what has been perceived to what has not but can be perceived. As we see, the Stoics were more consistent empiricists than the Epicureans who regarded a logical conclusion as an instrument for transcending the limits of perceptibility and apprehending the imperceptible (e.g. infinitesimal atoms). In contrast with the Epicureans, the Stoics believed that knowledge starting from sense perceptions and ascending to logical apprehension must return to perceptions since what cannot be perceived is non-existent, a sheer fancy.

According to the Stoics, concepts are formed by two different methods. Everyday concepts (*koinai ennoiai*) arise without a conscious mental effort, on the basis of elementary sense perceptions. Functionally, they are anticipations of scientific concepts (*technikai ennoiai*) and are called *prolepses*. However, whereas the Epicureans conceived *prolepsis* as the integrating capacity of the mind, the Stoics identified it with common notions preceding scientific knowledge. Their very presence in man's mind attests to the existence of the corresponding external objects which are then subjected to scientific study. For instance, men's general consent regarding the existence of gods testifies to their reality and is a challenge to philosophy.

As distinct from everyday concepts, scientific concepts are acquired through training, education and verification. The highest among them are *categories*, i.e. the most general concepts. They are essentially different from the Aristotelian ones both in content and in status. Unlike Aristotle who did not distinguish between the logical, grammatical and ontological aspects of categories, the Stoics are keenly aware of their differences. The first of the Stoic categories, *substratum* (*to hypokeimenon*) is a logical subject, a grammatical subject and the ontological substance. The second category, *quality* or *essential attribute* (*to poion hypokeimenon*) is logically and grammatically a predicate. The third category is *state* or *accidental condition*, and the fourth *the relation of substratum to its own quality* (SVF II, fr. 369, 371).

As distinct from Aristotle's categories denoting ten highest

and independent genera of entities, the Stoics' four categories are interconnected so that each of them restricts and contains the preceding one.

The highest category in Stoic philosophy is substance conceived as indeterminate substratum. Being modified by qualities, it divides, as it were, into individual substances or objects, each having its own individual existence and essential attribute. Besides, each thing is related to other things which modify its essential attribute and thus determine its accidental qualities. For instance, in the Stoics' view, John's essential attribute is being a man and accidental quality is being a father. His accidental quality implies Peter's accidental quality of being his son, so that both John and Peter as particular substances endow each other with accidental qualities.

This example shows that the Stoics conceived categories as logical and grammatical genera, i.e. as general types of statements concerning external objects. As regards the ontological status of their categories, it has not been clearly defined, though Plotinus's criticism of the Stoic teaching (see Enn. VI, 1) suggests its essentially materialist character. Viewed in the broader context of the Stoics' theory of knowledge their categories express the basic properties of things that have no independent existence; they represent steps or degrees in the logical and grammatical, but not ontological determination of things. This conclusion is also borne out by the physics of the Stoa.

7. Natural Philosophy (Physics) of Stoicism

As might be expected, the Stoics offered a rational account of the universe with a strong materialist tendency. They maintained that all things are bodies and denied the independent existence of incorporeal entities. In their view, *lektōn* can only exist in relation to thought and word, place and time in relation to matter and its states, whereas void is not-being. Categories therefore are applicable to bodies only. The matter of every individual body is a part of universal primordial matter or substance (substratum). Each particular substance or body has a peculiar quality which makes it what it is. The main qualities which give the body its specific nature are hot and cold, dry and moist. They are corporeal like every thing that exists and constitute breath or pneuma which uni-

fies the whole material universe and qualifies or determines all bodies giving them their form.

The Stoics recognise four basic elements out of which all bodies are composed: fire, air, water, and earth. Their formation was the intermediate stage in the conversion of primary unqualified substratum into the universe. The Stoics adopted Heraclitus's view that the first cause of the universe is fire. According to Chrysippus, fire is the basic element out of which all things generate and into which they all dissolve (SVF, II, fr. 413). Yet in contrast with Heraclitus's living, mutable and self-moving nature, the primordial matter of the Stoics needs an external mover—it is the Logos or God. On the evidence of Diogenes Laertius, "they hold that there are two principles in the universe, the active principle and the passive. The passive principle, then, is a substance without quality, i.e. matter, whereas the active is the reason inherent in this substance, that is God. For he is everlasting and is the artificer of each several thing throughout the whole extent of matter" (Diog. L. VII, 134).

This passage has a clear Aristotelian ring, though the contrast of matter and form does not by any means follow from the Stoic logic. Indeed, the Stoic "God" is a changeful substance very different from man. It is creative fire (*pyr techni-kon*) present in primordial matter and mixed with it so that it cannot be separated from it except only in thought. The Stoics would have been more consistent if they had taken a firm pantheistic stand and rejected the opposition of the passive (matter) and active (God) principles.

The monistic tendency of Stoicism clearly reveals itself in their teaching of logos. God is not only creative fire, but also the reason (logos) and semen (germ) of the world. It is therefore "the seminal reason of the universe" (Diog. L. VII, 136), i.e. the semen of the universe as a whole, the source of the semina of individual things and the universal law.

It appears that the blend of "physics" and theology in natural philosophy led the Stoics to a peculiar conception of the world genesis which is regarded, as it were, in two aspects: physical and theological. In the physical aspect the generation of the cosmos is explained in terms of the condensation and rarefaction of primordial matter resulting in the formation of elements. Air and fire combine into warmth-maintaining pneuma which binds water and earth unifying the world and holding its parts together. As a result of the

interaction of the elements there appears a kind of tension generated by the pneuma and pervading all matter. This tension is the direct source of individual things manifesting itself as their property (*exis*), their nature and soul. The world development is governed by necessity and strictly determined by natural processes binding all things in a single system of cause-effect relationships. Nothing in the world occurs without a cause and, consequently, everything is necessary. The Stoics are much more consistent than the Epicureans in their determinism bringing it to fatalism.

The world is finite in time, having the beginning and the end. More accurately, the universe changes periodically into fiery ether which contains the seeds of another universe. It is a doctrine of eternal return, ever recurring cycles of conflagrations and regenerations.

The genesis of the universe viewed from the theological angle looks very different. In creating the world, God turns a part of its substance, the divine air-fire mixture, into air and water. It stays in these elements as "seminal logos" and causes a part of water to turn into earth. Another part remains water and a third one becomes air. The rarefied air ignites and becomes fire, this time as an element, but not as the first cause. Pervading this "world body" as its pneuma or creative fire, God is the world's soul (*psyche*), spirit or reason (*noys*), and simultaneously providence and fate.

Just as the ruling or governing part of the soul has its seat (the heart) in the human body, so the world soul has its residence in the centre of the universe or on the Sun whence it spreads all over the world. The distinction of the world soul from the world body is not permanent: having arisen in time, it disappears when Zeus accepts the world and dissolves it in itself (this is the theological equivalent of the world conflagration).

Whether it is law or fate that governs the world, generations and conflagrations follow one another in endless succession of recurrent cycles. Since all events in the universe are determined by necessity (fate) and by the law (logos), the world emerges as an endless succession of causes and consequences and every new world is not a bit different from the previous one. To this must be added that the Stoics adopted Plato's view of the world as a rational animal: "Thus, then, the whole world is a living being, endowed with soul and reason, and having ether for its ruling principle... The world, they say, is one and finite, having a spherical shape, such

a shape being the most suitable for motion... Outside of the world is diffused the infinite void, which is incorporeal. By incorporeal is meant that which, though capable of being occupied by body, is not so occupied. The world has no empty space within it, but forms one united whole. This is a necessary result of the sympathy and tension which binds together things in heaven and earth" (Diog. L. VII, 139, 140).

As we see, the Stoics' picture of the universe testifies to their rich imagination, but can hardly be called scientific. This was only to be expected as their cosmos represented in fact a synthesis of the naive but essentially correct dialectical world view of the early philosophers and the metaphysics of Plato and Aristotle. To be sure, the problems raised in classical Greek philosophy could not be settled by a simple return to the pre-Socratics and the application of later and more advanced concepts to early physics was bound to lead to contradictions.

The natural philosophy of the Stoics also includes a teaching of soul and a theological doctrine which we shall now consider in a brief survey.

The Stoics consider natural beings with their inner principle of existence as the manifestation of pneumatic tensions. Non-organic bodies exist owing to their simple properties or states (*exis*), plants—due to their capacity for birth and growth, animals—owing to their animal soul, and human beings—owing to a rational soul. Naturally, each of the principles of lower beings is present in higher beings, but the specificity of one or another being is determined by its individuating quality. This individuating quality which distinguishes man from every other individual substance is the rational soul.

The starting point of the Stoic doctrine of soul is materialist. Soul is conceived as a special body, which is "warm and fiery pneuma" (SVF, II, fr. 773). According to Nemesius, Zeno the Stoic distinguished eight parts of the soul, the ruling part (*hegemonikon*), the five senses, the voice and the power of procreation (*spermatikon*) (SVF, I, fr. 143). The ruling or governing part of the body possesses the qualities of presentation, ascent, impulse, and reason. This ruling element of the soul directs the "pneuma" to the sense organs and receives from them the "reports" about external objects which make "impressions" on the soul or produce in it the corresponding "alterations" or "modifications." Expounding the Stoics' views, Diogenes Laertius writes: "They hold that

we see when the light between the visual organ and the object stretches in the form of a cone... The apex of the cone in the air is at the eye, the base at the object seen. Thus the thing seen is reported to us by the medium of the air stretching out towards it, as if by a stick... We hear when the air between the sonant body and the organ of hearing suffers concussion, a vibration which spreads spherically and then forms waves and strikes upon the ears, just as the water in a reservoir forms wavy circles when a stone is thrown into it... They consider that the passions are caused by the variations of the vital breath" (Diog. L. VII, 157, 158).

Such views seem to suggest that the Stoics recognised the mortality of the soul dispersing or evaporating after death. Yet their conception of soul as a body led them to a different conclusion. On the evidence of Diogenes Laertius, "the soul is a nature capable of perception. And they regard it as the breath of life, congenital with us; from which they infer first that it is a body and secondly that it survives death. Yet it is perishable, though the soul of the universe, of which the individual souls of animals are parts, is indestructible... Cleanthes indeed holds that all souls continue to exist until the general conflagration; but Chrysippus says that only the souls of the wise do so" (Diog. L. VII, 156-157).

This passage gives us a glimpse of the contradictions the Stoics vainly sought to reconcile in their doctrine of soul: material by nature, the soul survives the death of the body; though divine, the individual soul is mortal whereas, again, the soul of the universe is indestructible...

Equally great are the difficulties besetting Stoic theology. Dissolved, after the pantheistic fashion, in the universe and mixed with matter, God turns out to be alien to the world, as it survives the conflagration. Being immortal and eternal, God is at the same time mutable. Called Zeus, it is in fact nothing but an allegory—like, for that matter, all other gods... On the evidence of Philodemus, Chrysippus maintained that the gods are nothing else than allegorical characters, yet the Stoics recognised the existence of gods adducing the argument from general consent. Seeking to substantiate this argument, Zeno discoursed thus: "One may reasonably honour the Gods; but those who are nonexistent one may not reasonably honour; therefore Gods exist" (Sext. Adv. math. IX, 133). Cleanthes, for his part, argues the existence of god from degrees of perfection: "If one nature is better than another, there will be some best nature... God therefore

exists" (Sext. Adv. math. IX, 88-91). This "proof" was to be repeated later by Augustine and Anselm of Canterbury who anticipated Thomas Aquinas's fourth method of proving the existence of God.[1]

The theoretical arguments are followed by Cleanthes's famous *Hymn to Zeus* contrasting God Creator and its creation. This train of thought was later brought to a logical conclusion by Christian theologians who used Stoicism as one of the sources of Christianity.

Stoicism was the originator of the teleological doctrine of the world. According to Chrysippus, the gods have made men for the sake of themselves and one another, and animals, for the service of man: the horse to go to war with, the dog to hunt with, ounces, bears and lions, to practise courage upon (SVF II, fr. 1152). This teleology is followed by theodicy or vindication of the justice of God in permitting evil to exist. To exonerate the gods from guilt for human suffering, diseases and injuries, Chrysippus offered a number of explanations. His arguments boiled down to the contention that all evils viewed from a broad perspective are beneficial for the universe as a whole and for mankind (ibid., fr. 1184). Evil thus turns into a part of divine providence which made this world the best of all possible worlds. The religious doctrine of the Stoics provides the foundation for all sorts of superstitions, including spiritualist practices, demonology, magic, etc.

8. Stoic Ethical Theory

Like every ancient philosopher, the Stoic asks himself a question: what is the highest good? The answer, as befits a true sage, is, of course, happiness (*eydaimonia*). Yet what is happiness for the Stoic? Is it the assimilation to god, as in Plato? The life of contemplation of a man who avails himself of various corporeal and external benefits as in Aristotle? The enjoyment of the Cyrenaics or Epicureans? No, the highest good for the Stoic is "life in agreement with nature... which is the same as a virtuous life, virtue being the goal towards which nature guides us" (Diog. L. VII, 87).

Now the "nature" of the Stoics, it may be recalled, is governed by necessity or fate. If this is so and man's every

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[1] See F. Copleston, *A History of Philosophy*, Vol. II, part 2, Image, Garden City, 1962, p. 62.

action and every event in his life are determined by necessity, how is it possible to live contrary to the dictates of nature or, for that matter, to assess man's actions in moral terms?[1] Stoicism finds the way out in the axiological approach to social phenomena. What is the law of necessity in nature becomes the norm in society, i.e. the prescript of reason. Every natural being strives not for pleasure, but for safety and is guided, first and foremost, by the instinct of self-preservation. The rational being is guided by reason which is primarily concerned with the good. The virtue of reason is the knowledge of what is good and what is bad, its vice is ignorance. Hence, virtuous life is life according to reason.

The good, according to the Stoics, consists of four basic virtues: prudence, temperance, justice, and courage, whereas evil is their opposites—imprudence, lack of restraint, injustice, and cowardice. Everything else—life and death, fame and infamy, hard labour and enjoyment, wealth and poverty, infirmity and good health are not for man to choose and therefore have nothing to do with ethics, are morally indifferent. Virtue and vice alone come within the sphere of morality, as they depend on man and are chosen by him of his own free will.

Here lies the great paradox of the Stoic moral teaching. How can one choose freely in the face of rigorous necessity reigning in the Stoic world? Man can change neither things, nor the course of events, nor even his own concepts of the external world—he can only change his attitude to them. Hence freedom in Stoicism does not extend to man's practical activity and is confined exclusively to his theoretical and emotional attitude to the world and to himself.

The Stoics starting from Zeno distinguished four groups of negative emotions: grief, fear, desire, and enjoyment, and three groups of positive emotions—gladness or rational excitement as opposed to enjoyment, discretion as opposed to fear, and will as opposed to desire. Each of the groups falls into several species (see Diog. L. VII, 110-116). Wisdom consists in freedom from any emotions which is the final end of life or happiness attainable only by a sage.

The early Stoic ideal of the wise man turned out to be too stern for an ordinary man to follow as it made no allowance

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[1] According to Diogenes Laertius (VII. 23), Zeno "was once chastising a slave for stealing, and when the latter pleaded that it was his fate to steal, 'Yes, and to be beaten too,' said Zeno."

for the frailty of human nature. According to Cleanthes, there is no middle between virtue and vice (SVF I, fr. 566). Despite the natural inclination of all men towards the good, the virtuous are bound to remain virtuous and the vicious are bound to remain vicious. This doctrine in fact rejected the possibility of any gradual progress towards perfection and divided all people into two classes, the few sages and the vast majority of fools. It was aimed against the peripatetics who believed in a possibility of man's gradual perfection or degradation.

As time went on, the Stoics had to modify the asperity of their original attitude because the ideal sage was no longer a human being. Exalting his perfection, the Stoics in fact played into their opponents' hands, since the failure of the average Stoic to live up to the set standards became only two obvious, and this ran counter to the practical purpose of any moral theory which always aims at man's improvement or, at least, at teaching him to differentiate between the good and the bad. The rigorous adherence to the initial ethic principles threatened to undermine the influence of Stoicism (as well as Cynicism).

Having realised this danger, the Stoics made considerable changes in their teaching. First of all, they revised their conception of the morally indifferent things (*adiaphora*) by dividing them into those according with nature and those running counter to its demands, i.e. into the "preferable" and "not preferable." For instance, though wealth and poverty, good health and illness are indifferent in moral terms, it is better to be wealthy and healthy than poor and sick. As a result, the Stoics no longer condemned men's interest in the "preferables" provided their actions were guided by moral motives.

This explains why the later Stoics insisted on the assessment of man's motives and began to distinguish not only between virtuous and vicious, but also between "proper" and obligatory actions (*kathekonta*). Man's obligations ensue from the law, but a proper action is virtuous only if it is prompted by moral considerations. The assessment of an action which has not been performed because of external interference depends on the presence or absence of a moral motive. Hence, in the Stoics' opinion, the actions of a truly wise man are always moral, whereas the actions of a "fool" are merely "proper."

Finally, contrary to their teaching of the unbridgeable gulf between virtue and vice, the sage and the fool, the Stoics introduced the concept of perfection or progress and conceded various degrees of excellence attainable, however, only by few.

For all the attempts of the Stoics to moderate their extreme views and cater to common sense, their moral philosophy abounds in contradictions. For instance, the knowledge of virtue comes to man "by nature," but it can also be acquired from experience. Reason can generalise from particular instances to the good as a whole and profit by experience, yet there is a gulf between the virtuous and the vicious. This gulf is unbridgeable, yet the Stoics assert the equality of people (including the equality of men and women) who have similar virtues and vices. Contrary to Cleanthes who regards virtue as an inherent quality of man, Chrysippus asserts that it can be lost through insanity or drunkenness...

All these conflicting views cannot be reconciled, but are easily accountable for. They reflect the universal but hopeless protest of the lower strata of Hellenistic slave-owning society in the face of blind social forces threatening every individual and making his existence senseless. This, incidentally, is one of the reasons why Stoic natural philosophy cannot be reduced to the physics of the pre-Socratic thinkers despite their obvious affinity. The impotence of *logos*, its inability to change the preordained destiny of man led the Stoics to the identification of *logos* with its opposite, the inscrutable fate, and was in fact nothing but the expression of man's wretchedness and despondency. Yet the way out proposed by the Stoics had little in common with the Epicurean *ataraxia* or escape from the world. The Stoic imperturbability of soul irrespective of what may happen to the body was based on a different conception of nature which, in turn, led to a different understanding of man's place in society. Contrary to commonly held views, the Stoics did not preach apathy in the face of blind forces, but stressed the need for a man to fulfil his duty under any circumstances accepting with dignity whatever the fate has in store for him.

As distinct from the Epicureans who regarded the universe as an interplay of senseless atoms and a man as a free agent bound by no obligations to anyone and concerned only with himself and his humble ideal of pleasure, the Stoics conceived the world as an organic whole with its own *logos* and were inclined, by reason of their pantheistic determinism, to view

society as a product of nature. In the Stoics' eyes social institutions were therefore a part of the universal scheme sanctioned by *logos* and man was inseparably linked with society and the state by universal law. In contrast with Epicurus who maintained that the sage must not take part in politics unless he is compelled to, Chrysippus taught "that the wise man will take part in politics, if nothing hinders him ... since thus he will restrain vice and promote virtue" (Diog. L. VII, 121). "Not yet will the wise man live in solitude; for he is naturally made for society and action" (ibid., VII, 123). Hence the Stoic cosmopolitanism and the increasing tendency to adopt the attitude of at least nominal acceptance of existing customs and institutions and justify conventional morality and religion.

9. Roman Stoicism

Stoicism became the most influential philosophical trend in the last period of the Roman Republic and its prestige grew even higher in the Imperial times. The reason for it was the obvious affinity of the Stoic ideal of sage to the rigorous image of Roman citizen. It is not accidental therefore that the Scipios, Cato Uticensis, Brutus and other Romans regarded by tradition as ideal citizens were adherents of Stoic philosophy.

Stoicism was brought to Rome in the middle of the second century B.C. by Chrysippus's pupils Diogenes of Selucia and Antipater of Tarsus and further developed on the Roman soil by the representatives of the Middle Stoa Panaetius and Posidonius. In Rome, Panaetius's pupil and friend was Scipio the Younger, whereas Posidonius who opened his school on the island of Rhodes taught Pompeius and Cicero. Both Panaetius and Posidonius displayed a strong influence of Platonism and Aristotelianism. For instance, Panaetius rejected the Stoic idea of world conflagration and asserted the eternity and indestructibility of the universe. He also denied the interconnection of cosmic phenomena based on the "sympathy" of all parts of the cosmos, gave no credence to astrology on the grounds that remote stars could not affect men's destinies and called in question the value of prophecy. Panaetius was close to Aristotle in his doctrine of soul, and both to Plato and Aristotle in his teaching of innate distinctions between people. He asserted the existence of individual traits in the character of every man and showed special interest in the individual.

Posidonius, for his part, returned to some ideas of the Early Stoa. He attempted to restore faith in prophecy, fortune-telling and astrology which led him logically to the revival of the idea of cosmic "sympathy." In his natural philosophy Posidonius in fact subscribed to the doctrine of Plato expounded in the *Timaeus* but reshaped it within the framework of the Stoic teaching of fiery pneuma as the world's "material."

The views of Panaetius and Posidonius characteristic of the transition from Greek to Roman Stoicism marked the beginning of the Platonic and Aristotelian influence on the Roman Stoic tradition.

(1) *Lucius Annaeus Seneca* (6 B.C.-65 A.D.) was born into the family of a prominent rhetor. He started as a lawyer, then began to study philosophy and went in for politics. In 41 A.D. he was exiled to Corsica. Returning to Rome 8 years later, he became Nero's tutor and, when in 54 A.D. his pupil was proclaimed Emperor, became for a while the actual ruler of the Empire. In 57 A.D. he became a consul and his personal fortune, sizable as it was, increased to a fabulous sum of 300 million sesterces. In 65 A.D. Seneca was charged with conspiracy against Nero, sentenced to death and committed suicide by opening his veins.

Seneca is credited with a number of philosophical treatises including the *Moral Letters to Lucilium* (*Ad Lucilium epistulae morales*) and the *Scientific Questions* (*Quaestionum naturalium*). He was also a well-known writer, the author of 10 tragedies, many epigrams and a satire ridiculing the deification of Emperor Claudius.

Seneca's philosophy is mainly centred around ethical issues. Following Posidonius, Seneca asserts that "free sciences," important as they are for attainment of virtue, cannot by themselves make man virtuous; "you cannot attain virtue without food, either; and yet food has nothing to do with virtue" (Ep. 88, 31). Nevertheless, he does not shun scientific problems and recognises, together with the Stoics, the active and passive principles of nature, i.e. "cause" and "matter." In his *Letters* (65, 2-3) he writes: "Our Stoic philosophers, as you know, declare that there are two things in the universe which are the sources of everything, namely, cause and matter. Matter lies sluggish, and substance ready for any use, but sure to remain unemployed if no one sets it into motion. Cause, however, by which we mean reason, moulds matter and turns it in whatever direction it will,

producing thereby various concrete results... All art is but imitation of nature; therefore let me apply these statements of general principles to the things which have to be made by man. A statue, for example, has afforded matter which was to undergo treatment of the hands of the artist, and has had an artist who was to give form to the matter" (Ep. 65, 2-3).

Seneca reproduced here the Aristotelian conception of causes reflecting the pattern of human activity. Yet in contrast with the Stagirite who reduced all causes to matter and form, the Stoic restricts them to the material and efficient ones. He rejects the doctrine of four causes, not to speak of the Platonic idea ("model") "because they 'embrace' either too much or too little. For if they regard as 'causes' of an object that is to be made everything without which the object can be made, they have named too few. Time must also be included among the causes... They must also include space... And motion too... Now, however, I am searching for the first, the general cause... It is surely Creative Reason—in other words, God. For those elements to which you referred are not a great series of independent causes; they all hinge on one alone, and that will be the creative cause" (ibid., 65, 11-12). Explaining the nature of this God or creative cause, Seneca declares that one can rightfully call it Fate, Providence, Nature or the World (Sen. Nat. quaest. III, 13).

This is nothing else than pantheism (Seneca, it will be noted, is not consistent here, as the matter-cause antithesis leads logically to the recognition of personal god, i.e. to theism). The postulate of ungenerated and everlasting matter having its own source of motion aligns Seneca's natural philosophy with the "physics" of the early Greek thinkers. The naturalistic world outlook seems to leave no room for god and Seneca indeed rejects the traditional religion: in his view, the deities worshipped by the crowd are mere symbols and allegorical images. Yet moral considerations cause him to resort to theology. Attempting to account for the moral behaviour of man, Seneca adduces the theory of art as the imitation of nature and infers, by analogy with the effective and material causes of a work of art, to man's moral reason from the reason (soul) of nature, i.e. god. As a result, instead of bolstering up his moral theory, Seneca gives an antropomorphic interpretation of the world.

Utterly inconsistent, but prompted by the same ethical

considerations, is Seneca's teaching of soul borrowed by him from Plato. Numerous passages in *Ad Lucilium epistulae morales*, *De consolatione ad Marciam* and even in *Quaestionum naturalium* testify to his faith in the immortality of the soul. In Seneca's view, it is man's best, divine part. " 'All the years,' says the soul, 'are mine; no epoch is closed to great minds; all Time is open to the progress of thought. When the day comes to separate the heavenly from its earthly blend, I shall leave the body here, where I found it, and shall of my own volition betake myself to the gods. I am not apart from them now, but am merely detained in a heavy and earthly prison.' This sluggish mortal age is only a prologue to the better and prolonged life... A different beginning, a different condition, await us" (Ep. 102, 22-23).

Yet Seneca is again tormented by doubt and sometimes even seems to be inclined to accept the Epicurean view that death is "a release from all suffering, a boundary, beyond which our ills cannot pass" (Sen. Ad Marciam, 19, 5). At the end of the 65th letter to Lucilium Seneca writes: "And what is death? It is either the end, or a transition. I have no fear of ceasing to exist; it is the same as not having begun. Nor do I shrink from transition into another state, because I shall, under no conditions, be as crampled as I am now." In both cases, according to Seneca, his freedom of spirit will remain unaffected...

The conception of spiritual freedom is central to Seneca's moral philosophy. In the face of iron necessity or fate governing the world such freedom can be nothing else than the recognition of and submission to it. To be sure, necessity and fate must be understood in that case not as the blind and inhuman law of inert matter, but as the rational, beneficient, omniscient and ubiquitous cosmic force inherent also in every human being. Seneca's freedom thus presupposes necessity as the expression of reason, otherwise it turns into outright slavery.

Since moral behaviour consists in the submission to divine necessity or fate, special importance attaches to the imperturbability of the soul. This typically Stoic imperative is modified in Seneca by a doctrine of conscience which rewards virtues and punishes vices. As distinct from the Cynics who exerted a strong influence on the ethical theory of Greek Stoicism, Seneca asserts the "natural" character of justice. Polemicising on this point with Epicurus Seneca writes: "Let us agree with his on the other [point] — that bad deeds are lashed by the conscience, and that conscience is tortured to

the greatest degree because unending anxiety drives and whips it on... For this, Epicurus, is the very proof that we are by nature reluctant to commit crime, because even in circumstances of safety there is no one who does not feel fear" (Ep. 97, 15). In accordance with this view, Seneca comes out as a champion of existing customs and ethical norms thereby departing from the earlier Stoic conceptions.

Adherence to ethical norms had always been an important feature of the Roman republican tradition. It stemmed from the recognition of civil society and the state as the seat of moral values. The absolute and despotic rule of the Emperors undermined this unity of the demands of the state and moral imperatives, and Seneca turns to universal human values. In his view, it is not the state as such, but fellowship that "has given to him [man] dominion over all creatures; fellowship, though he was begotten upon the land, has extended his sovereignty to an element not his own, and has bidden him to be lord upon the sea... Take away this fellowship, and you will sever the unity of the human race on which its existence depends" (Sen. De benef. IV, 18, 3).

Hence, human society is a single whole. The motherland of a human soul cannot be "pitiful Ephesus or cramped Alexandria." This whole is sustained by mutual love and compassion, therefore even the slaves should be treated as human beings. "They are slaves, people declare. Nay, rather they are men. 'Slaves!' No, comrades, 'Slaves.' No, they are our fellow-slaves, if one reflects that Fortune has equal rights over slaves and free men alike" (Ep. 47, 1). Though we are unable to change the existing pattern of human relations, the best way to put them in order is to adhere to the golden rule: "Treat your inferiors as you would be treated by your superiors" (ibid., 47, 11).

As we see, Seneca's "spiritual" abolition of slavery consists in the discovery that every man, on the one hand, is a slave of fate and on the other, that his mind is free: "It is a mistake for everyone to believe that condition of slavery penetrates into the whole being of a man. The better part of him is exempt. Only the body is at the mercy and disposition of a master; but the mind is its own master, and is so free and unshackled that not even this prison of the body, in which it is confined, can restrain it from using its own powers, following mighty aims, and escaping into the infinite to keep the company with the stars... All that issues from this is

free" (Sen. De benef. III, 20, 1). Yet man cannot be content with such freedom. Genuine freedom is the freedom of action implying the freedom of spirit, but not limited to it.

In contrast with Seneca who viewed society from the position of a wealthy man denying himself nothing (and then losing everything together with his life), Epictetus had no good things of life at all. Whereas Seneca comforted others, Epictetus, comforting others, was also comforting himself. This accounts for a much greater warmth, humaneness and intimate kindness of the philosopher's consolations, as well as for his absolute resignation to fate.

(2) *Epictetus* (c. 50-138 A.D.) was brought to Rome as a slave and, while still a slave, attended philosophical lessons of Roman Stoic Musonius Rufus. Sources do not tell us how he got freedom from his cruel master who himself was a freedman and Nero's bodyguard, but it is known that he devoted himself to philosophy. In 89 A.D. when the philosophical schools in Rome were closed by Emperor Domitian's edict, Epictetus moved to Nicopolis in Epirus and started giving oral lessons in a school. His talks were recorded by Flavius Arrian and survived in the form of the *Manual* (*Encheiridion*), four of the eight books of the *Dissertationes* and fragments of the *Discourses of Epictetus*. We also possess some doxographic material.

Epictetus brought to a logical conclusion the tendency of Roman Stoicism to reduce philosophy to ethics. The division of philosophy into ethics, logic and physics is for Epictetus a purely formal delimitation. "The first and most necessary division in philosophy is that which has to do with the application of the principles, as, for example, Do not lie. The second deals with the demonstration, as, for example, How came it that we ought not to lie? The third confirms and discriminates between these processes, as, for example, How does it come that this is a proof? For what is it a proof, what is logical consequence, what contradiction, what truth, what falsehood? Therefore the third division is necessary because of the second, and the second because of the first; while the most necessary of all, and the one in which we ought to rest, is the first. But we do the opposite; for we spend our time in the third division and utterly neglect the first. Therefore, we lie, indeed, but are ready with the arguments which prove that one ought not to lie" (Epict. Ench. 52).

Proceeding from this view, Epictetus does not concern

himself with either logic or physics except that he treats the latter as a doctrine of the first cause, i.e. god. He shares the old Stoic thesis about the rational nature of the world and contends that it is a single cosmic state consisting of a single substance and that things constantly come into being and perish, decomposing into their elements. He also subscribes to the doctrine of creation: "God has made all the things in the universe and the universe itself completely free from hindrance and perfect, and 'the parts of it for the use of the whole" (Diss. IV, 7, 6). This whole, in turn, is not only the cosmos, but god which is both Creator and Providence.

God in Epictetus (the philosopher sometimes speaks of the gods) is not modelled on man and can hardly be regarded as personal. Yet the moral behaviour is determined by god (or the gods) since "in piety to the gods, I would have you know, the chief element is this, to have right opinions about them as existing and as administering the universe well and justly—and to have set yourself to obey them and to submit to everything that happens, and to follow it voluntarily, in the belief that it is being fulfilled by the highest intelligence" (Ench. 31). God also possesses the highest knowledge so that "it is not possible to conceal from him our acts, or even our intentions and thoughts" (Diss. II, 14, 11).

This apparently leaves but one function to philosophy— to induce man to adopt the right moral attitude to the world, i.e. to submit to the will of the gods. Since it is beyond the power of man to change the course of events, he ought to change his attitude to them, and here the old Stoic idea comes in handy: "Some things are under our control, while others are not under our control. Under our control are conception, choice, desire, aversion, and, in a word, everything what is our own doing; not under our control are our body, our property, reputation, office, and, in a word, everything that is not our own doing. Furthermore, the things under our control are by nature free, unhindered and unimpeded; while the things not under our control are weak, servile, subject to hindrance, and not our own" (Ench. 1). A man should therefore rely only on those things that are under his control, "then no one will ever be able to exert compulsion upon you, no one will hinder you, you will blame no one, will find fault with no one, will do absolutely nothing against your will, you will have no personal enemy, no one will harm you, for neither is there any harm that can touch you" (ibid.).

The conduct based on this principle depends, according to Epictetus, on man's ability to act of his own free will. The capacity for free choice is granted us by god for our happiness.

The idea of free will thus introduced by Epictetus was to play an important role in the subsequent history of ethical theories. As we see, the possibility of free choice derives from god's will to ensure the happiness of man. This conception is extremely narrow and is in fact restricted to the "freedom" to suffer and endure. Epictetus unequivocally rules out the possibility of real freedom, i.e. the freedom of action, particularly that based on the knowledge of natural and social necessity. If we be allowed to draw a parallel between Epictetus's moral theory and the theory of games, Epictetus exhorts us to play a life drama written without our participation, the roles and the rules of acting being thrust upon us... One can hardly imagine a more alienated and alienating view of man and his place in society. What is more, Epictetus even deprives the believers—and it is only a believer that can accept his teaching—of the last hope, that of the immortality of the soul and a reward in the other world... Expressing the helplessness of the individual in the face of social evil, Epictetus at the same time sanctifies and perpetuates this helplessness. His last word is non-resistance to evil which aligns Roman stoicism with Christianity.

(3) *Marcus Aurelius Antoninus.* Roman Emperor Marcus Aurelius (121-180 A.D.) was brought up in the spirit of Stoic philosophy adopting in his youth the basic principles of Epictetus's teaching. His only work written in Greek in a military campaign (c. 171 A.D.) is called the *Meditations.* It consists of 12 books and is keynoted by the feeling of sadness and weariness of life.

The author says nothing about logic but sets a number of tasks before "physics." First and foremost, it must help man to take a sober view of surrounding things, by stripping away their false ornaments. Indeed, "this Falernian [wine] is only a little grape juice, and this purple robe some sheep's wool dyed with the blood of a shell-fish ... such then are these impressions and they reach the things themselves and penetrate them, and so we see what kind of things they are" (VI, 13). Knowing the true value of things, we shall not attach to them the importance they do not deserve. The second task of physics is to show the universal changefulness and

fluidity of being, constituting at the same time a single whole: "Through the universal substance as through a furious torrent all bodies are carried, being by their nature united with and cooperating with the whole, as the parts of our body with one another" (VII, 19). All this is Heraclitean flux. What attitude should be adopted to it? This is the main problem.

Expounding his views, Marcus Aurelius asserts that change is necessary: nothing can be generated without change and all useful things come about by way of change: "And canst thou be nourished, unless the food undergoes the change?" (VII, 18). Yet he is more attracted by the idea of universal destruction than that of eternal life. "Of human life the time is a point, and the substance is in a flux, and the perception dull, and the composition of the whole body subject to putrification, and the soul a whirl, and fortune hard to divine, and fame a thing devoid of judgement. And, to say all in a word, everything which belongs to the body is a stream, and what belongs to the soul is a dream, a vapour, and life is a warfare and a stranger's sojourn, and after-fame is oblivion" (II, 17). The soul's only refuge and consolation is philosophy.

The third task of physics is to provide a basis for such a consolation, i.e. to show that the world is rational and purpose-oriented. It has, according to the philosopher-Emperor, matter, cause and purpose forming a single whole. Man is a part of this whole or, more accurately, its member. The unity, rationality and purposefulness of the world process are not derated by imperfection—it is unavoidable just as chips and shavings in the carpenter's workshop. The universe as a whole is divine and governed by reason.

Whatever we may think of the world at large is, however, but of little consequence for our practical purpose—to define the right attitude to it. "Either there is fatal necessity and invincible order, or a kind Providence, or a confusion without a purpose and without a director. If then there is an invincible necessity, why dost then resist? But if there is a Providence, which allows itself to be propitiated, make thyself worthy of the help of the divinity. But if there is confusion without governor, be content that in such a tempest thou hast in thyself a certain ruling intelligence" (XII, 14). Of course, the philosopher accepts divine Providence and the inevitability of fate—the former calls for moral perfection, the latter for submissiveness.

Marcus Aurelius's teaching of man, as well as his ethics,

is not marked by originality. His starting point is the familiar dualism of the soul and the body elaborated in the doctrine of man's three components: the body, the soul (*pneuma*), and the ruling principle (*hēgemonikon*) or spirit. The body is characterised by sensations, the soul by aspirations and the spirit by dogmata (see III, 17). Man's spirit represents his divine component so that god may contemplate man irrespective of his body. After the death of the body man's spirit disperses and reunifies with god. There is one feature in Marcus Aurelius's teaching of the end of man's life that sets him apart from other Stoics. A political figure of exalted rank, he insists on a high moral mission of man that of fulfilling his duty: "The end of rational animals is to follow the reason and the law of the most ancient city and polity" (II, 16). However, man can always retire from the world, withdraw into himself and rest content with the sense of duty fulfilled.

Stoicism in the Roman Empire was not only an expression of the universal public sentiment of the epoch, but also served as an instrument for shaping a peculiar ideological theory, rather unusual for the ancient world. According to this theory, neither noble birth, nor exalted position, nor wealth can guarantee blessful existences in the other world (if one believes in it). On the contrary, these external advantages militate against it. The blessed, rather, are those who are pure, kind, ingenuous and gentle, i.e. predominantly the lower strata of Roman society. Historical studies of their ideology show that such views were widely spread in the Imperial period and attest to the powerful impact of contemporary moral philosophy on their formation—however, not through abstract treatises with their logical subtleties. The ethical theories of the Stoics and later Cynics, not infrequently indistinguishable, were given currency by itinerant philosophers who wandered from city to city, from one province to another, advocating various moral principles and simultaneously working "miracles" by way of demonstrating their rightness and favours they enjoyed with the gods. These theories, vulgarised and reduced to the intellectual level of the masses, gradually degenerated into religious teachings and merged in the religious tide that was rising in the Roman Empire..The general transition of later Stoicism from an ethical to a religious basis could not but affect Hellenistic philosophy as a whole.

Scepticism

10. Early Pyrrhonism and "Academic" Scepticism

Scepticism as a trend of thought in Hellenistic Roman philosophy denied the possibility of objective knowledge of nature and social processes. This general attitude manifested itself in a demand to "suspend judgement" (*epochē*) in theoretical matters and to strive for serenity and peace of mind (*ataraxia*) in practical life. The school got its name from Greek *skeptikos* or *zētētikos*, and in philosophy the word "scepticism" gradually came to denote the opposite of dogmatism as uncritical acceptance and application of principles.

Generally speaking, scepticism in the original sense of the Greek term is characteristic of all philosophy in so far as it calls in question commonly held opinions and, in quest of truth, examines the attained knowledge. It reveals the difficulties involved in the process of cognition, unravels puzzles and solves the mysteries of being. An investigator is bound to be inquisitive or "sceptical" when he comes up against an insoluble problem within the framework of a system claiming absolute knowledge. In other words, every philosophical theory is of necessity doubtful and critical and therefore includes scepticism as its moment. Hegel had every reason to speak of "thinking scepticism" and assert that "positive philosophy has the negative to scepticism in itself; thus it does not oppose, nor is it outside of it, for scepticism is a moment in it."[1]

This sceptical moment is bound to be negated, dialectically "sublated," as it were, if philosophy strives to attain

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[1] Hegel, *Vorlesungen über die Geschichte der Philosophie,* Band. II, Reclam, Leipzig, 1971, S. 402.

real knowledge and is not content to bog down in total scepti-cism, i.e. if it is "positive" and does not turn the "moment" into its principle and conclusion as was the case with Pyrrhonism.

(1) *Pyrrho of Elis* (c. 360-270 B.C.) is known to have been a mediocre painter who went in for philosophy after hearing the lectures of Megarian Bryson and Democritus's follower Anaxarchus. Tradition tells us that he travelled with Alexander's armies into India where he was influenced by the ascetic "Gymnosophists" (naked philosophers). Ac-cording to Diogenes Laertius, "this led him to adopt a most noble philosophy ... taking the form of agnosticism, and suspension of judgement. He denied that anything was honourable or dishonourable, just or unjust. And so, univer-sally, he held that there is nothing really existent, but custom and convention govern human action; for no single thing is in itself any more this than that" (Diog. L. IX, 61). On the same evidence, Pyrrho was entirely heedless of his surroundings to the extent that he would not look where he was going and it was only due to his friends' care that he did not get killed or maimed in an accident. According to other sources, however, heroic indifference to external circumstances preached by Pyrrho in theory was not his standard in practical life.

Pyrrho appears to have written nothing and we owe our knowledge of his views to Timon of Phlius, Pyrrho's pupil. On his evidence, Pyrrho taught that a man wishing to be hap-py should know the answers to three questions: first, how things are constituted; second, what attitude we should adopt to them; and third, how we can profit by such attitude. Regarding the first question, he held that things are inexpressible, indistinguishable, and unstable. Our sensations of things are mutually contradictory and we cannot know the true from the false ones. We know but the appearances of things, and opinions are not to be trusted. The answer to the second question ensues from the answer to the first one. A wise man should refrain from judgements, since all knowledge claims are equally probable. As a result of such silence or *aphasia* he will be no longer frustrated over insoluble problems and attain the state of complete imperturbability or happiness. This is the answer to the third question (Vog. III, 1087a).

Hence, the goal of life is *ataraxia*, serene contentment, and the means is the suspension of any judgement and *aphasia*.

Pyrrho offers no positive ethical doctrine and limits himself to the denial of all moral judgements as dogmatic.

Diogenes Laertius (IX, 74) ascribes two famous sayings to the early Sceptics: "Not more [one thing than another]" and "Every saying has its corresponding opposite." They are clearly traceable to Democritus's principle of *isonomy* or equal probability (evidently via Metrodorus of Chios or Anaxarchus) and to Protagoras who asserted, it will be recalled, that every question may be argued equally well on either side. Yet in contrast with Democritus who drew definite conclusions from *isonomy* (e.g. about the infinite number of atoms) and Protagoras who believed man to be the measure of all things, the Sceptics rejected the possibility of any judgement whatsoever.

It is not known for sure if Pyrrho and his direct followers specified the relationship between sensation and thinking and, in particular, if they believed in the absolute authenticity of sensations. Most likely they did not, as Sextus Empiricus says: "Pyrrho forces the things we have already perceived clearly to revert into obscurity" (Adv. math. I, 305). On the theoretical side, this attitude is tantamount to a complete denial of man's cognitive abilities, whereas on the practical side it leads to the rejection of any moral standards. Quoting Posidonius, Diogenes Laertius tells us this story of Pyrrho: "When his fellow-passengers on board a ship were all unnerved by a storm, he kept calm and confident, pointing to a little pig in the ship that went on eating, and telling them that such was the unperturbed state in which the wise man should keep himself" (Diog. L. IX, 68). This story is presented by tradition as attesting to Pyrrho's view that indifference such as that displayed by a pig is the surest way to happiness. As regards the morality ensuing from Pyrrhonism, tradition says that Pyrrho once passed by his teacher Anaxarchus who fell into a slough without giving him any help (ibid.).

If we carry Scepticism with its "indifference" to a logical conclusion and deny the possibility of any objective knowledge, we are bound also to throw overboard Socratic ethic and are to choose between the "natural" behaviour reducing man to an animal,[1] and the behaviour in accordance with "law and custom."

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[1] Fortunately, a man in his right mind cannot be a consistent sceptic: on the evidence of the same Diogenes Laertius "once he [Pyrrho] got

Sources, it may be recalled, attest to both possibilities. The real thrust of the Sceptics' arguments, however, seems to have been in favour of the latter alternative, and this clearly reveals the conformist nature of their doctrine and evidently accounts for its relative unpopularity over the next two centuries.

(2) *Academic Scepticism*. The Academy represents a different trend of sceptical thought. *Arcesilaus* (c. 315-c. 240 B.C.), its first representative, developed his doctrine in the polemic against the Stoics. Seeking to refute their arguments, he resorted to Socratic and Megarian dialectic combining it with Platonism. It is not accidental that Diogenes Laertius speaks of him as Platonic at the front, Pyrrhonean from behind and Diodorean in the middle (VI, 33).

Arcesilaus's views marked a turning point in the history of the Academy, since his retrogression to the "dialectic" of Socrates and the Megarians was tantamount to the absolutisation of the criticial fervour of Plato's dialogues and the denial of the positive content of Platonism. However, Arcesilaus was not an orthodox Pyrrhonist, because he did not regard *ataraxia* as the goal and suspension of judgement as the instrument. On the contrary, "he ... says that the end is suspension—which is accompanied, as we have said, by 'quietude.' He declares, too, that suspension regarding particular objects is good, but assent regarding particulars bad" (Sext. Pyrrh. I, 232-233). In other words, in Arcesilaus's opinion, suspension of judgement, though accompanied by imperturbability, is important in itself.

As we see, "academic" Scepticism is primarily epistemological and its extension to ethics is secondary. It was born in the polemic against Stoicism, particularly its doctrine of kataleptic representations and "assent" as the criterion of truth. The Stoics, we recall, taught that there are three sources of knowledge: science, opinion, and the mediating apprehension. Science is the infallible apprehension by reason, opinion is false assent, and apprehension results from true presentation, i.e. kataleptic phantasia. Science is only accessible to the wise, opinion is the lot of the fools, and apprehension is common to both. Directing his attacks against this doctrine, Arcesilaus pointed out that the apprehension

enraged in his sister's cause ... and he told the man who blamed bim that it was not over a weak woman that one should display indifference" (ibid., IX, 66).

common to wise men and fools cannot produce both science and opinion, and contended that there is no criterion for distinguishing between vague and clear or kataleptic presentations and therefore between falsehood and truth. Hence, the wise man should abstain from judgement. As regards the wise man's behaviour, he should be guided, according to Arcesilaus, not by the Stoic dual criterion of "acceptability" and moral justifiability, but only by the principle of "reasonableness" (*to eulogon*). Those who abide by this principle are prosperous, therefore reasonable behaviour is both acceptable and morally justifiable.

According to Arcesilaus, an act is "reasonable" if it is based on understanding or sound judgement (*phronēsis*) which, in turn, is expressed in the achievement of the desired end. This is an important statement since Arcesilaus oversteps here the bounds of a purely logical concept of understanding and turns to an outside criterion of truth. He finds it in the success of practical activity.

Carneades of Cyrene (c. 214-c. 129 B.C.) who represented the Third or New Academy is said to have shown remarkable zeal for philosophy. Tradition holds that his absorption in theoretical studies was so great that he had no time to cut his fingernails or hair. In theory he professed contempt of death and used to say: "Nature which framed this whole will also destroy it" (Diog. L. IV, 64). Yet in practice his attitude appears to have been different. According to Diogenes Laertius, "when he learnt that Antipater [Carneades's Stoic opponent] committed suicide by drinking a potion, he was greatly moved by the constancy with which he met the end, and exclaimed, 'Give it then to me also.' And when those about him asked 'What?' 'A honeyed draught,' said he" (ibid.). This, however, may have been nothing but a sardonic joke of the convinced sceptic...

In 155 B.C. Carneades went on a diplomatic mission to Rome with two other philosophers, Diogenes the Stoic and Critolaus Peripatetic, and delivered a brilliant oration in defence of justice, thereby winning a hearty approval of Cato Maior, a champion of old Roman standards of Morality. The next day, however, he delivered another oratory against justice, no less persuasive, reducing its concept to mere utility and demonstrating the inadequacy of all dogmatic beliefs. The enraged single-hearted Roman demanded that the Greek philosophers be expelled from Rome as their trifling with

truth constituted grave danger to the Roman youth and to the Republic in general.

Like Arcesilaus, Carneades criticised the Stoic doctrine of kataleptic phantasia, contending that every perception or presentation, however true it may appear, can be countered with its opposite, no less clear and persuasive. In his opinion, we are deceived both by our senses, since we mistake non-existent things for real ones as in a dream or hallucination, and by our reason which gets lost in various aporias. Using extensively the doctrines of the Sophists and the Megarians and advancing numerous arguments against the possibility of true knowledge, Carneades defends his non-committal attitude. On the evidence of Diogenes Laertius, he "studied carefully the writings of the Stoics and particularly those of Chrysippus, and by combating these successfully he became so famous that he would often say: Without Chrysippus where should I have been?" (Diog. L. IV, 62).

It should be noted that Carneades's scepticism is somewhat mitigated as compared with that of the Pyrrhonists and even Arcesilaus. Defending academic Scepticism against the attacks of the Stoics who accused the Academy of paralysing men's practical and moral action,Carneades drew a demarcation between judgements pertaining to practical matters and those dogmatically asserting "the absolute truth." The demand to refrain from judgement should apply, according to Carneades, only to this latter kind, and a wise man need not withhold his views in everyday life provided they appear plausible to him.

This probabilistic approach is in fact a further elaboration of Arcesilaus's doctrine of "reasonableness" since Greek *eylogon* also denotes a reasonable probability. Carneades complements this doctrine by bringing in the empirical criterion for distinguishing between probable and false presentations. He denies the existence of kataleptic, i.e. apprehending, presentations recognised by the Stoics and contends, following the Cyrenaics, that all our knowledge is restricted to sensations and that we do not know what lies behind them. Yet some presentations may be probable, others improbable: "And respecting the probable impressions they [the Academics] make distinctions: some they regard as just simply probable, others as probable and tested, others as probable, tested and irreversible" (Sext. Pyrrh. I, 227). Thus a man in a darkened room can mistake a rope for a snake; having checked his presentation (impression) by relat-

ing it to other presentations, i.e. having satisfied himself that the object does not move, makes no noise, etc., he obtains a probable and tested presentation. It will become probable, tested and "irreversible" only after the man makes sure that he is in his right mind, not sleeping or hallucinating, not deceived by an optical illusion, etc. In practical life we prefer the highest possible degree of probability, yet it must never be forgotten that we deal with probabilities only, but not with objective truth.

Here lies the main difference between the Pyrrhonists and the academic Sceptics: whereas the former recommend compliance with customs and traditions, the latter insist on the probability of the highest attainable degree as the guiding principle of man's behaviour. Significantly, the Academics understood probability (*pithanotēs*) in purely qualitative terms as expressing the degree of our subjective confidence of the authenticity of the knowledge we possessed. The objective basis for the doctrine of probable knowledge could only be provided by the quantitative expression of probability, and that was not yet known to antiquity.

By introducing the degrees of probability, Carneades smoothed down the contrast between the Stoic "kataleptic presentation" and the Sceptic "irreversible impression," yet he could not bridge the gulf between the phenomenalist trend of the Sceptics and the objectivism of the Stoics: the latter seek for truth, whereas the former are content with conviction.

Carneades also levelled his criticial shafts against Stoic theology. He seems to have recognised the existence of gods within the framework of his conception of probability. Yet conceding the need to venerate the gods, he dismissed the "dogmatic" arguments of his opponents the Stoics, thereby undermining in fact the foundation of every religion. Sextus Empiricus tells us: "Those, then, who maintain that Gods exist try to establish their thesis by four modes, arguing, firstly, from the universal agreement of mankind; secondly, from the orderly arrangement of the Universe; thirdly, from the absurd consequences of the denial of the existence of deity; fourthly and lastly, by undermining the opposing arguments" (Adv. math. IX, 60). None of these arguments seems convincing to Carneades. Indeed, there are atheists and there are tribes we know nothing about. Besides, we cannot prove anything by arguing from a belief in a thing to its existence. Again, one cannot infer to the reason and divinity of the

cosmos from the recognition of its orderly arrangement. As regards the regularity of processes adduced as a proof of their divine nature, why don't we qualify, for instance, malaria as divine for its recurrent fits? The last two arguments echo the dominant motif of the sceptical doctrine: both the denial and the assertion of the existence of god are equally senseless, and the agruments for the existence of god are just as confound-able as the arguments against it.

The Carneadean criticism of Stoic theology and religious beliefs in general is based on a logical analysis of arguments for the existence of god (gods). Here is one example: "If, however, God exists, he is an animal. If he is an animal, he has sensation, for the animal differs from the not-animal by nothing else than by sensation. But if he has sensation, he hears and sees and smells and touches. And if so, there are certain things in connection with each sense which are conge-nial or repellent to him... But if so there are certain things vexatious to God; and if there are certain things vexa-tious to God, God is subject to change for the worse, and thus also to decay. Therefore God is perishable. But this is con-trary to the general conception of him. Therefore the Divine does not exist" (Sext. Adv. math. IX, 142-143). Proceeding in a similar manner, Carneades reveals contradictions in the Stoic teaching of the corporeality of god, god's blissful life, etc.

Carneades also rejects the Stoic (and all other) notions of oracle, prophetic dreams and miracles on the ground that all of them can be explained by natural causes, coincidence, etc.

In sociology and ethics, Carneades shared the view that all laws and norms come about by convention as the notions of justice and injustice, good and evil are formed by people in accordance with their interests. On the evidence of Christian writer Lactantius, Carneades held that men had established the law for their own benefit which is proved by difference in the existing customs and by the fact that laws are liable to change with time. He also said that all conquerors including the Romans themselves who had seized power over the whole world would have to return to shacks and live in poverty if they decided to be just, i.e. to part with what did not belong to them (Vog. III, 1126).

It appears impossible to reconstruct Carneades's own ethi-cal teaching, yet he is known to have recognised free will as

an independent factor in the chain of causal relations and criticised Stoic fatalism.

Carneades like Arcesilaus, left no written works and all we know about him comes from the pen of his pupil Clitomachus (Hasdrubal) of Carthage (c. 175-c. 110 B.C.). He expounded his predecessor's views in great detail and wrote more than 400 books of which we possess only minor isolated fragments incorporated in doxographers' writings.

11. Later Pyrrhonism

According to Diogenes Laertius, the Sceptical school fell into decay after the death of Pyrrho's student Timon and regained its fame in the first century B.C. in Alexandria, attracting numerous pupils from all the civilised countries of the Mediterranean area. Its revival is credited to Aenesidemus of Cnossus, the compiler of eight books of *Pyrrhonean Discourses* that came down to us in the rendition of Photius the patriarch. Other evidences for his views are the writings of Diogenes Laertius who expounded Aenesidemus's arguments in a special book on the Sceptics, and of Sextus Empiricus. His life is practically unknown to us.

Aenesidemus owes his place in philosophy mainly to his ten "tropes" or modes of sceptical reasoning. According to Sextus Empiricus, "they are these: the first, based on the variety in animals; the second, on the differences in human beings; the third, on the different structures of the organs of sense; the fourth, on the circumstantial conditions; the fifth, on positions and intervals and locations; the sixth, on intermixtures; the seventh, on the quantities and formations of the underlying objects; the eighth, on the fact of relativity; the ninth, on the frequency or rarity of occurrence; the tenth, on the disciplines and customs and laws, the legendary beliefs and the dogmatic convictions" (Sext. Pyrrh. I, 36-37).

This brief exposition or, rather, enumeration of the "tropes," each illustrating the need to suspend judgement about claims to knowledge, is further discussed in more detail. Thus, living beings perceive things differently: "seawater is a disagreeable and poisonous potion for men, but fish drink and enjoy it. Pigs, too, enjoy wallowing in the most stinking mire rather than in clear and clean water" (ibid., 55-56); men's senses and notions are also different as attested to by the difference of their perceptions and judgements about the same things; different senses give different presentations of the same

objects, e.g. honey appears pleasant to taste, but unpleasant to the eye; a picture is smooth to touch, but not to the eye; men's perceptions change with their state and depend on whether a man is asleep or awake, hungry or satisfied, drunk or sober, etc.; again, the same objects seem different at different distances, etc. The tenth trope, directly related to social and ethical problems emphasises the subjective character of man's judgements: "since by means of this Mode also so much divergency is shown to exist in objects, we shall not be able to state what character belongs to the object in respect of its real essence, but only what belongs to it in respect of this particular rule of conduct, or law, or habit, and so on with each of the rest" (ibid., I, 163).

As is evidenced from the above, all Aenesidemus's arguments against claims to objective truth invoke the relativity of human knowledge. His scepticism is therefore essentially relativistic.

Besides the sceptical argumentation, the *Pyrrhonean Discourses* deals with a number of other problems. For instance, the first book shows the difference between the academic Sceptics and the Pyrrhonists by comparing their criteria of probability and conventionality, the second reveals internal contradictions in the notions of movement and change, genesis and destruction, the third sets forth the aporias of thinking and sense perceptions, as well as the doctrines of signs and inferences. The fourth book challenges claims to the knowledge of nature and gods, the fifth presents a logical analysis of the conception of causality, and the last three investigate the contradictions of basic logical concepts.

The arguments of Aenesidemus as expounded by Sextus Empiricus reveal a certain affinity of his views with those of Heraclitus. Sextus, for one, traces common points in their conceptions of soul and the criterion of truth understood as general consent, in the treatment of the part-whole problem, etc. Yet the irregularity of the author's references to Aenesidemus's views and the identity of their arguments makes it impossible to define clearly the bounds of consensus between Heraclitus and Aenesidemus. In all likelihood, the latter makes but occasional borrowings from Heraclitean reasoning to substantiate his own stand.

Take, for instance, the relationship between the part and the whole. On the evidence of Sextus Empiricus, "Aenesidemus, 'according to Heraclitus,' says that the part is both other

than the whole and the same; for substance is both whole and part, whole in the Universe, but part in the nature of this particular animal" (Sext. Adv. math. IX, 337). Yet in contrast with Heraclitus who focused his attention on the dialectical contradiction and then reasoned upward to *Logos* as the law of all being, Aenesidemus draws from this statement an entirely different conclusion in full accord with Sceptical tradition as is seen from the next few lines obviously reproducing his own words: "And if so, we must declare that no whole exists. From which it follows that no part, either, exists. For each of these is a relative, and when one of a pair of relatives is abolished, the other also is abolished with it" (Sext. Adv. math. IX, 357.).

Sceptic Agrippa known only from a mention in Diogenes Laertius (Sextus Empiricus speaks impersonally of the "Latest Sceptics") introduced five more tropes (modes) casting doubt on the possibility of knowledge and "resulting respectively from disagreement, extension ad infinitum, relativity, hypothesis and reciprocal inference" (Diog. L. IX, 88). The first trope refers to dissent among philosophers, the second invokes infinite regress of premises and proofs (to prove a conclusion we need premises, these themselves require proofs, and so on ad infinitum). The third is based on the assertion that every object can only be perceived in conjunction with others and is therefore incognisable by itself, the trope "from hypothesis" is directed against those who wish to avoid infinite regress and "take the most elementary of things as of themselves entitled to credence ... which is useless, because some one else will adopt the contrary hypothesis" (ibid., IX, 89). The last trope "from reciprocal inference" pertains to arguing in a circle as when, for instance, one infers to the existence of channels in the sense organs from the effluences allegedly coming from external objects, whereas the effluences are argued from the existence of channels.

Even this short recital shows that Agrippa's tropes partially coincide with those analysed by Aenesidemus. The distinction lies in their logical character, since the last five tropes deal not so much with things and their perceptions as with judgements about them and the relations between these judgements. They are based, however, on the same relativism, though differently demonstrated.

The last stage of ancient Scepticism is connected with

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the activities of Menodotus, Sextus Empiricus and Saturninus, all medical doctors, who attempted to combine theoretical Scepticism with the methodology of ancient empirical medicine. It may be recalled that the latter's characteristic feature was to avoid abstract speculations regarding the cause of diseases and to concentrate on their actual manifestations. As distinct from the early period of ancient Greek medicine when it had to resist the encroachments of natural philosophy, the conflicting tendencies in the later period were represented by two schools within the medical profession itself: the "empiricists" and the "logicians." According to Galen, a famous Greek physician and philosopher, the empirical school started from Philonos of Cos (second century B.C.) and Serapion of Alexandria who were followed by Menodotus and Sextus Empiricus. Available to us are only two works of Sextus Empiricus which have already been mentioned: one *Against the Logicians* (*Adversus Mathematicos*), consisting of 11 books, and the other *Outlines of Pyrrhonism* (*Pyrrhoniarum Hypotyposes*), consisting of 3 books.

Both these works present a detailed exposition of the doctrines of earlier philosophical schools and subject them to scrupulous analysis and criticism from the Sceptical position. The arguments of Sextus may not have been his own, in fact there is good reason to think that he merely summarised and systematised the practice of his predecessors. He always speaks on behalf of the Sceptics and often gives interesting descriptions of the empirical views in contemporary science contrasting them with the doctrines of the "dogmatists." Characterising the general method of empiricism in book VIII of the *Against the Logicians,* Sextus writes: "while there is no rule of the art concerned with other cases, of the art which deals with things apparent there is a special rule; for [this art] affects the framing of its rules by means of things frequently observed or investigated; and the things frequently observed and investigated are peculiar to those who have made the most frequent observations, and are not the common property of all" (Sext. Adv. math. VIII, 291).

Viewing the empirical method with obvious sympathy, Sextus nevertheless stresses that it does not give us the knowledge of the real nature of things, but only of their appearance: "although I shall be able to say what the nature of each of the underlying objects appears to me to be, I shall

be compelled, for the reasons stated above, to suspend judgement as to its real nature" (Sext. Pyrrh. I, 78). The Sceptic neither denies phenomena, nor withholds his opinion about them: "Adhering, then, to appearances we live in accordance with the normal rules of life; undogmatically, seeing that we cannot remain wholly inactive. And it would seem that this regulation of life is fourfold, and that one part of it lies in the guidance of Nature, another in the constraint of the passions, another in the tradition of laws and customs, another in the instruction of the arts" (ibid., I, 23). And further: "Nature's guidance is that by which we are naturally capable of sensation and thought; constraint of the passions is that whereby hunger drives us to food and thirst to drink; tradition of customs and laws, that whereby we regard piety in the conduct of life as good, but impiety as evil; instruction of the arts, that whereby we are not inactive in such arts as we adopt. But we make all these statements undogmatically" (ibid., p. 17).

Hence, Sextus reiterates Pyrrho's advice to adhere to appearances, i.e. to live in accordance with sense perceptions, physical needs and one's country's laws and traditions without further dogmatic ado. However, he insists on the need to rely on common sense and empirical knowledge, thereby underscoring the practical certainty of our knowledge based on experience and drawing closer to the probabilism of Carneades.

Scepticism was one of the three great philosophical schools of the Hellenistic epoch that arose on the ruins of the slave-owning polis system. Suspense of judgement in theory and adherence to convention and common sense or probability and reasonableness in practice aptly expressed the corrupting influence of social conditions in Hellenistic states on the once harmonious Greek character. In the classical period of Greek history, the Greek's ideal was to know and act accordingly. In the Hellenistic age, the Epicurean proclaimed the motto "to know and evade," and the Stoic, "to know and acquiesce." The Sceptic, bringing this trend to a logical conclusion, waives all claims to objective knowledge, admits his ignorance and makes up his mind to live as best as he can by suspending judgement and adhering to custom, common sense or practical experience.

None of these philosophical schools, however, could meet the social and ideological demands of the Roman Empire. The

hegemonistic ambitions and state universalism of this colossal organisation combined with a highly developed principle of individuality in social and cultural spheres called for a new world-view synthesis and a new conception of the relationship between the universal and the individual, knowledge and action. An attempt at such a broad synthesis based on a philosophical interpretation of myth was undertaken in late Hellenistic philosophy.

Decline of Ancient Philosophy

12. From Philosophical Eclecticism to Philosophico-Religious Syncretism

The last century of the pre-Christian era was notable in philosophy for the emergence of eclecticism[1] by which is understood the practice of selecting solutions from different philosophical systems believed to be the "best" or, preferably, common to conflicting theories. Lacking a single principle, eclecticism is essentially incoherent, as different systems based on different premises cannot be mechanically integrated into a single whole. Pure eclecticism, or eclecticism "as such" is therefore impossible; every concrete eclectic system centres around some pivotal doctrine which serves for the philosopher as a criterion for his "selection."

Eclecticism is an obvious sign of decline in philosophical thought. It usually comes on the scene when the leading schools and trends have exhausted their possibilities, bogged down in insoluble contradictions and lost their grip on men's minds. The first century B.C. was just such a period of philosophical twilight. It bore a certain resemblance to the crisis in early Greek philosophy when numerous "physical" systems had entered into a conflict with one another and completely discredited themselves. Philosophy in that period had opened up new vistas and turned to man, to the problems of ethics and principles of knowledge. The epoch under consideration, however, offered no such possibilities—the only way out proved to be Scepticism. Yet its negative answer to the problem of knowledge could not satisfy the "philosophical hunger" that arises each time society embarks on a road of great changes—and those were the times of the collapse of age-old republican institutions and transition to the principate followed by the establishment of the Empire. A temporary solution was found in eclecticism.

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[1] From the Greek *eklegō*, meaning "to select."

The eclectic theories that arose in that period were based on various systems of classical and Hellenistic philosophy — Platonism, Aristotelianism, Stoicism and "academic Scepticism." They could find no sustenance only in the consistent materialism of the Epicureans and in the hopeless scepticism of the Pyrrhonists. Particularly important was the part played by Platonic and Pythagorean ideas which greatly contributed to the final degeneration of philosophy into philosophico-religious syncretism.

Varying degrees of eclecticism were already in evidence in the teachings of the Middle Stoa. For instance, Boethus of Sidon (middle of the second century B.C.) combined Stoicism with Aristotelianism, separating god from the world and lodging him, in the Aristotelian manner, in the region of fixed stars. Panaetius and Poseidonius, whose teachings, as we have seen, exhibited strong Platonic and Aristotelian influences are also traditionally ranked among the eclectics. The emergence of eclectic systems within the Stoic tradition may have been the result of the criticism levelled by the Academy, particularly Carneades, against the Stoics. Yet the later Academics themselves began to revise their sceptical views looking back to Plato for positive doctrines.

The return of the Academy to the Platonic tradition which looked like the revival of its founder's views was accompanied by gradual departure from the scepticism of the second and third Academies. According to Sextus Empiricus, the head of the "Fourth Academy" Philo of Larissa (c. 150-c. 79 B.C.) accentuated in his teaching the positive elements in the doctrine of the early academic Sceptics: "Philo asserts that objects are inapprehensible so far as concerns the Stoic criterion, that is to say 'apprehensive impression,' but are apprehensible so far as concerns the real nature of the objects themselves" (Sext. Pyrrh. I, 235). This is already a much "stronger" thesis than Carneades's principle of probability: Philo unequivocally states that the absolute denial of the possibility of knowing things runs counter to the obvious fact of the existence of true knowledge. The same idea has been advocated, even with greater persistence, by Antiochus of Ascalon (died about 68 B.C.) who succeeded Philo as head of the Academy.

In contrast with the Sceptics, Antiochus held that probability is inconceivable without truth, as its very notion logically implies a reference which is nothing but authenticity.

The existence of truth is the necessary condition of probability, not to speak of certainty. According to Antiochus, in practice Scepticism is refuted by the fact that success in life and compliance with the dictates of reason are impossible without authentic knowledge. At the same time his doctrine of perception is not free from the traces of Scepticism: "So then, just as light shows both itself and all things within it, so also presentation, which is the primary factor in the cognition of the living creature, must, like light, both reveal itself and be indicative of the evident object which produced it. But since it does not always indicate the true object, but often deceives, and, like bad messengers, misreports those who dispatched it, it has necessarily resulted that we cannot admit every presentation as a criterion of truth, but—if any—only that which is true" (Sext. Adv. math. VII, 163). This reasoning lands us in a logical circle: the criterion of truth appears to be true presentation...

The Stoic elements of Antiochus's teaching are represented by the conception of the active (fire and air) and passive (water and earth) principles and by the orthodox Stoic doctrine of the world Reason, whereas his understanding of matter as the potentiality and substrate of things is firmly rooted in the Aristotelian tradition.

A characteristic example of eclecticism is pseudo-Aristotelian treatise *On the World* (first century B.C.) based on Aristotle's conception of the Prime Mover which is detached from the world and constitutes the efficient and final causes of the cosmos. The author of the treatise also subscribes to Stoic pantheism reflecting a peculiar interpretation of the Heraclitean harmony of opposites, the Stoic conception of the identity of necessity, fate and God, and the Platonic idea of the Demiurge holding in his hand "the beginning, the end and the middle" of everything...

Under the heading of eclectics tradition also rates famous Roman orator, statesman and philosopher Marcus Tullius Cicero (106-43 B.C.) who was the most prominent representative of this trend of thought and whose major works have come down to us complete. His chief contribution to philosophy was the popularisation and transmission of Greek thought to Rome. We owe to him our knowledge of numerous philosophical ideas of ancient Greece which are reproduced and dicussed in his works *On the Nature of Gods* (*De Natura Deorum*), *On Fate* (*De Fato*), *Tusculan Talks* (*Tusculanae*

Disputationes), *Academic Discourse* (*Academica*) and many others. Cicero's aim was to extract from them the "best," i.e. the "truth." He shows deference even to those teachings he does not approve (e.g. Epicureanism) and in his rendition preserves both their ideas and arguments. However, expounding the views of Greek thinkers, Cicero does not confine himself to their reproduction in Latin — in fact he interprets them in accordance with the world outlook of a Roman citizen. Thus he gives special prominence to the Stoic conception of the "proper" which is by no means crucial for Stoic philosophy and turns it into "duty" (*officium*) focusing his attention on the duties and norms of behaviour of a "worthy citizen."

Cicero regarded philosophical studies as "the food of the young, the diversion of the old, an adornment to success, a refuge for consolation in adversity." In his opinion, philosophy achieves these ends by different methods and it is important that we know the ways proposed by different thinkers and schools. For instance, consolation can be achieved by showing that evil does not exist, as claimed by Cleanthes, or that it is not considerable as contended by the peripatetics; the Epicureans propose to turn attention to the good and disregard evil, the Cyrenaics teach to take pain as a matter of course, whereas Chrysippus believes that grief can be relieved by persuading its victims that indulgence in it does not accord with man's dignity and fulfilment of his proper duties. Still others seek to combine various methods since different people respond to different therapies — and so, Cicero concludes, he also offers a single consolation joining together all methods (Cic. Tusc. III, 31).

Similar attitude is adopted by Cicero towards other philosophical problems, as he believes together with the peripatetics and academics that "all things should be viewed from opposite sides" (ibid., II, 3). Naturally, with this approach he could not but fall in with the probability principle of the academic Sceptics combining it, however, with the Stoic conceptions of nature and with rather dogmatic ethical principles — traceable, again, to the influence of Stoicism. In Cicero's eyes nature is a great harmonious whole purposefully arranged and pervaded with reason. He subscribes to Plato's doctrine of immortal soul on the grounds that a self-moving cause cannot cease to exist: "Since the soul is always active and has no source of motion because it is itself self-moving, its motion will have no end" (Cic. De Senect. XXI, 78). To

support this view, he adduces Plato's arguments.

Cicero is well aware that the Stoic motifs in his philosophy, as well as the borrowings from Platonic, Aristotelian and other doctrines do not consort with the views of the New Academy which appealed to him the most, therefore he waters down the caustic scepticism of the Academy and even jokingly begs it to be lenient "for if it should attack what we think we have constructed and arranged so beautifully, it would play too great havoc with it; at the same time I should like to win over this school, and so do not dare to banish it from the discussion" (Cic. Legg. I, XIII, 38, 39). In his treatise *On Duties* (II, 7-8) he frankly ranks himself with those "whose mind wanders in darkness and never knows which doctrine to follow." Finally he sides up with the Academy preferring probability as the guide for sound judgement and justifying in his way the contradictoriness of his views.

For space considerations we shall not discuss Cicero's philosophy in greater detail, though this brief survey gives but a very general outline of his world outlook. Cicero was not an original thinker, yet even a cursory analysis of his views shows inadequacy of the one-sided assessment of eclecticism as a purely negative phenomenon in philosophy, a kind of hopeless mixture of heterogeneous and incompatible scraps of different theories. On the subjective side, eclecticism always testifies to a need for an integrated approach and a tendency towards a synthetic doctrine, though objectively such a doctrine can seldom be developed by selecting "the best" — the very principle of such selection militates against the successful accomplishment of this task.

The situation may be different when an eclectic system is pivoted on a rigid philosophical principle, e.g. a religious idea, as was the case with the neo-Pythagorean and Platonic doctrines in the period from the first century B.C. to the second century A.D. These doctrines gradually turned into philosophico-religious teachings that paved the way for neo-Platonism.

For more than two centuries, from Aristoxenus of Tarentum till at least the beginning of the first century B.C., neo-Pythagoreanism did not show up in philosophical literature, and it was only at the end of this period that the first pseudo-Pythagorean works came to light. The earliest evidence for the revival of Pythagoreanism is Alexander Polyhistor's account

of the *Pythagorean Memoirs* preserved by Diogenes Laertius. The account starts with a statement of the "*arche*" or Pythagorean credo: "The principle of all things is the monad or unit; arising from the monad the undefined dyad or two serves as material substratum to the monad, which is cause; from the monad and the undefined dyad spring numbers; from numbers points, from points, lines; from lines, plane figures; from plane figures, solid figures; from solid figures, sensible bodies, the elements of which are four, fire, water, earth and air; these elements interchange and turn into one another completely, and combine to produce a universe animate, intelligent, spherical, with the earth at its centre, the earth itself too being spherical and inhabited round about. There are also antipodes, and our 'down' is their 'up'..." (Diog. L. VIII, 25). All reality is based on the relation of opposites: light and dark, cold and hot, dry and moist. The predominance of one of them determines the season: the hot gives summer, the cold — winter, the dry — spring and the moist — autumn. In turn, spring brings health, autumn — illness, morning leads to flowering, evening to decay, etc.

As is evidenced from the very first lines of this passage, neo-Pythagoreanism differs from the ancient Pythagorean doctrine with its table of opposites by a strong monistic tendency. Proclaiming the monad or unit to be the primary cause, the neo-Pythagoreans exhibit an obvious influence of later Plato, as well as of Stoic "Heracliteanism" and the idea of the balance of opposites which they may have learned from Alcmaeon by way of Plato. The neo-Pythagoreans understood life as heat, yet not all living organisms, in their opinion, are endowed with the soul: "Soul is distinct from life; it is immortal, since that from which it is detached [the ether] is immortal" (Diog. L. VIII, 28). "The soul of man, ... is divided into three parts, intelligence, reason, and passion. Intelligence and passion are possessed by other animals as well, but reason by man alone" (Diog. L. VIII, p. 30). Expounding further the neo-Pythagorean doctrine of the soul, Alexander Polyhistor says: "The soul draws nourishment from the blood; the faculties of the soul are winds, for they as well as the soul are invisible, just as the aether is invisible... When cast out upon the earth, it wanders in the air like the body. Hermes is the steward of souls ... it is he who brings in the souls from their bodies both by land and sea; and the pure are taken into the uppermost region, but the impure are not permitted to ap-

proach the pure or each other, but are bound by the Furies in bonds unbreakable. The whole air is full of souls which are called genii or heroes; these are they who send men dreams and signs of future ... and it is to them that purifications and lustrations, all divination, omens and the like, have reference" (Diog. L. VIII, 31-32).

An attentive reader will have traced here the influences of most diverse philosophical doctrines, both antecedent to and contemporary with neo-Pythagoreanism. It is arrant eclecticism, yet the religious idea moulds it into a single whole. The neo-Pythagoreanists link the divine with heat and the "uppermost air" (ether): "the uppermost air is ever-moved and pure and healthy, and all within it is immortal and consequently divine. The sun, the moon and the other stars are gods; for, in them, there is a preponderance of heat, and heat is the cause of life... Gods and men are akin, inasmuch as man partakes of heat; therefore God takes thought for man" (Diog. L. VIII, 26-27). The orderliness of the world as a whole is attributed to fate.

Thus the neo-Pythagorean conception of gods and their relations to man is a clear reflection of Stoic pantheism. God does not stand apart from the world and men are possessed of reason by virtue of their partaking of the divine substance—'uppermost air" or "ether."

We know, largely by name only, about 90 various neo-Pythagorean treatises.[1] Their content is in the main identical with what we have from Alexander Polyhistor, except that different authors give different combinations of views borrowed from the same sources. For instance, Ocelli Lucani in his treatise *On the Nature of the Universe (De universi natura)* concentrates on the Aristotelian idea of the ungenerated and everlasting world and closely follows Aristotle in describing particular processes of genesis and decay, concluding his work with a passage from Aristotle's *On Generation and Corruption* (see Ocelli Lucani, De universi natura, II, 3-6. Mul I, pp. 386-406). From Xenocrates and the Stoics (evidently Poseidonius) Ocelli borrows the doctrine of three parts of the universe—the heaven, the earth and the above-earth space (*metarsion*), and divides, accordingly, all beings into gods, men, and demons (ibid., III, 3).

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[1] See E. Zeller, *Die Philosophie der Griechen*, Band III, 2. Teil. A number of texts are reproduced by Mullachus: *Fragmenta philosophorum graecorum*, Vol. I, pp. 383-575, Vol. II, pp. 9-129.

The understanding of the divine cause as the creator (Demiurge) and the moving principle of the cosmos (creation itself following a pre-existing form) represents, as it were, a stepping stone to the Demiurge of Plato's *Timaeus*, Aristotle's Prime Mover and the One of the neo-Platonics. The first conception was expounded in detail in the treatise *On the Soul of the World and on Nature* (*De anima mundi*) ascribed to Timaeus of Locri, whereas the third one was delineated by Moderatus of Gades, Nero's contemporary. His views are known to us from fragments preserved by Stobay and Simplicius and from Porphyry's description in *The Life of Pythagoras*. According to Porphyry, Moderatus gave the following account of the Pythagorean teaching: the prototypes and primary causes cannot be expressed in words and are therefore denoted by numbers. The "unity" (*henotēs*) or "unit" stands for unity, identity, equality, the cause of unanimity, etc., i.e. all that makes things what they are. It is present in every whole that consists of parts and joins them together as it shares in the primary cause (Porph. V. Pyth. 49). By contrast, difference, inequality, divisibility, etc. are produced by the dyad. So, the unit (monad) is the symbol of unity, the dyad, of diversity. The unity is the principle of everything.

Numerous investigators have repeatedly called in question the authenticity of Moderatus's rendition as reproduced by Porphyry suspecting the latter of having read into Moderatus his own neo-Platonic conceptions. Even more dubious appears the evidence of Simplicius who ascribed to Moderatus the following exposition of Plato's teaching: the Highest Unity is the primary cause which is above all being. The second stage is ideas; the third, the soul; the fourth, the world of nature open to sense perceptions (see Vog. III, fr. 1285b). This doctrine already has an unmistakable neo-Platonic ring about it—yet why cannot it be at the same time a genuine conception of Moderatus foreshadowing, however in a crude form, the neo-Platonic system and reconstructed by neo-Platonic Simplicius in accordance with his views?

The ethical theory of neo-Pythagoreanism is expounded by Alexander Polyhistor (Diog. L. VIII, 32-35). In his opinion, "the most momentous thing in human life is the art of winning the soul to good or to evil. Blessed are the men who acquire a good soul... Virtue is harmony, and so are health and all good and God himself." The main prescriptions are to venerate

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the gods, heroes, the parents and relatives, to abstain from prohibited food. to purify oneself by washing and sprinkling, etc. The fulfilment of all prescriptions brings immortality, i.e. divinity which is the reward of virtuous man. The religious trend of neo-Pythagoreanism culminates in the teaching of Apollonius of Tyana (first century A.D.). The life of this half-legendary "saint" adorned with numerous stories of all sorts of myracles he worked not by magic, but through gods' favours and divine wisdom was colourfully described by Philostratus in his novel *Life of Apollonius of Tyana*. According to Philostratus, Apollonius considered it his mission in life to worship the gods and comprehend their nature. He identified philosophy with a true religion and regarded philosopher as a prophet, a god's servant and an intermediary between man and god. The truest religion, in his opinion, was the one that recognises one God.

Yet it was mainly to Philo Judaeus of Alexandria that Hellenistic philosophy owed the real impact of monotheism.

13. Judaism and Greek Philosophy. Philo of Alexandria

It was not accidental that the tendency towards the integration of various philosophico-religious systems displayed in eclecticism took the most conspicuous form at Alexandria, the largest economic, cultural and political centre of the Near East, where the Oriental influence represented by Judaism met with Greco-Roman Stoicism, Platonism and Pythagoreanism. The objective need for broad economic, political and cultural contacts between the Jewish colonists and the gentiles tended to modify the sectarian views of the Diaspora and to expand the narrow limits of their traditional world outlook. The Hellenistic tendencies resulted in the inevitable spread of the Greek language which gradually replaced Hebrew in everyday life. This, in turn, induced the Jews to translate into Greek the Mosaic Scriptures of the Pentateuch and then the other Hebrew Scriptures and apocrypha comprising the Old Testament. The translation that was accomplished in the third or second centuries B.C. is known as the Septuagint (so named from the legend of its composition by 72 translators allegedly inspired by divine providence to use identical words and expressions).

The translation itself marked an important change in Judaism. For one, the proper name Yahweh was rendered in

Greek by the common noun Lord (*kyrios*) which strengthened the monotheistic trend of the Judaic religion that had not yet prevailed by the third century B.C. The later books of the Old Testament that survived only in Greek bear unmistakable signs of the influence of Greek philosophy. For instance, the *Wisdom of Solomon* contains a statement that the world was created by God from formless matter (11, 18) and expounds the doctrine of the immortality of soul and of it being handicapped by the body (see 8, 13; 9, 14-15). The assertion of man's ignorance (9, 16) bears a strong resemblance to the argument of Socrates and the Cynics, whereas the reference to God who "arranged everything by measure, number and weight" (11, 21) may well have been borrowed from a Pythagorean treatise.

The impact of Greek culture on the Hebrew traditions of the Diaspora is attested to by Aristobulus's commentary on the Pentateuch dedicated to *Ptolemy Philometor* (181-145). As is evidenced from the fragments of this work preserved by Clement of Alexandria and Eusebius, Aristobulus insisted on a close affinity of ancient Greek philosophy to the Jewish Law and adduced the examples of Pythagorean and Platonic doctrines, as well as sham poems of Orpheus, Linos, Homer and Hesiod in support of his view. At the same time he substituted allegoric interpretations in the spirit of Stoic "natural explanations" for anthropomorphic conceptions of the Old Testament. For instance, the "light" which comes first in the sequence of God's creations was interpreted by him as divine wisdom (*sophia*), the seven days of creation were associated with mysterious number seven deified by the Pythagoreans, etc.

The most systematic attempt to integrate Greek philosophical conceptions with Jewish doctrines was made by *Philo* (c. 20 B.C.-c. 40 A.D.), a man of great Greek and Jewish learning and the most prominent of all the Jewish philosophers of the Alexandrian school. In his numerous works written in classical Greek he strove to combine the Old Testament with the ideas of Greek philosophy, particularly Platonism and Stoicism, displaying originality of thought and great ingenuity. His system, though eclectic and abounding in inconsistencies is centred around a religious idea which gives relative unity to his views.

The inherent and insoluble contradiction of Philo's system is between the idea of absolute personal god or "Lord"

of the Jewish Scriptures (the Septuagint) conceived as incorporeal and external to the world, and the traditional concepts of Hellenistic philosophy whereby Philo seeks to express god's nature. This philosophy, even its most idealistic systems, is so firmly rooted in the general "corporeality" of the Greek world outlook that his attempt could not but end in failure.

The starting point of Philo's teaching is the conception of god. Being defined in accordance with the Scriptures, he is the Existent, the only true being. Therefore "those who have entered into comradeship with knowledge to desire to see the Existent if they may, (ought), if they cannot, to see at any rate his image, the most holy Word, and after the Word its most perfect work of all that our senses know, even this world" (Philo Conf. ling. 97). In other words, the aim of philosophy appears to be the contemplation and knowledge of god. Now the Scriptures assert that God is unknowable, because man has no special organ for his cognition: God is suprasensual and has no qualities, he can only be apprehended through revelation. This scriptural doctrine runs counter to all philosophical tradition of ancient Greece—even the most mystical trends in Greek philosophy always regarded Reason as divine identifying it with Truth, Goodness and Beauty.

Things do not seem to be better with the old Testament: in contrast with the Jews who have always revered it as a product of god's inspiration, the Greeks, even in their religious teachings, have never known a single indisputable authority.

In order to overcome these apparently insuperable difficulties, Philo resorts to what was in fact nothing but a trick: taking advantage of the polysemy of the Greek term "Logos" meaning both law and word, he identifies the rational principle of the universe, its law, with the revelatory thought of God. As a result, the law of nature becomes God's Word enabling Philo to reconcile, as if by magic, the Scriptures and Hellenistic philosophy, mystic revelation and inquisitive thought.

Indeed, logos is interpreted by Philo in terms of both the Hebrew Old Testament and Greek philosophical doctrines. God created the world by his Word, therefore his wisdom or logos is the cause and model of creation or, according to the *Wisdom of Solomon* (7, 26), the reflection of eternal light, the mirror of God's act and the image of his benignity. Since all things are created by God's wisdom, the divine logos is akin to God and itself constitutes a creative principle.

At the same time it is God's "first-born son," supreme archangel, God's pontiff, etc. All these predicates make logos a personal deity, created and creative, and therefore performing the function of an intermediary between God and his creation, i.e. the world and man.[1]

However, in line with the Stoic tradition, Philo also describes logos as the inherent law and the "soul" of the world, as the universal reason that governs the cosmos in the same way as man's mind controls the movement of the body. The world and man are respectively the macrocosmos and microcosmos. By his rational soul man assimilates to divine logos, and by his body consisting of elements, to the cosmos as the abode or body of logos. Borrowing liberally from Stoicism, Philo asserts that every man carries a particle of the divine logos (see Philo De of. m. VI, 146) and that the logos moves in a circle called fate by most people (Quod deus immut. XXVI, 176). In his description Philo does not omit even such Stoic characteristics of logos as "seminal and generative." Selecting freely from Hellenistic philosophy whatever concepts he deemed reasonable, Philo, however, showed great caution when it came to the conception of God, central to the scriptural tradition. For instance, in opposition to the Stoics who identified the world with God, Philo adheres to the idea of creation and turns for support to Platonism. In his opinion, god knew that a good world could not be created without an archetype, therefore he first produced the intelligible world of Ideas incorporeal and divine. The Ideas existed from eternity as thoughts of god and occupied no space—very much like the image of a city to be built that the architect first sees with his mind's eye. So, god models the sensible world upon the world of Ideas in accordance with Plato, yet contrary to Plato the world of Ideas is created by god too—this time in accordance with the Scriptures.

Another big problem that faced Philo was how to account for the generation of the corporeal from the divine, the imperfect and temporal from the perfect and eternal. Seeking to reconcile the scriptural dogma of creation from nothing with the deep-rooted Greek conception of pre-existing matter (even

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[1] Describing logos, Philo now identifies it with wisdom, now calls wisdom its "mother" which naturally suggests God as its father. Logos is divine (*theos*), yet it is not a god (*ho theos*), etc. All these inconsistencies result from the "fluidity" of the monotheistic doctrine undergoing the process of formation.

in the eyes of "divine" Plato god was but a Demiurge giving shape to formless substratum), Philo is compelled to ascribe to Moses the Stoic doctrine of the two world principles—one active, identified with the efficient cause and the universal reason, and the other passive, the inert and motionless mass animated and shaped by the Reason into perfection, i.e. our sensible world.

In order to integrate these doctrines, as well as other biblical dogmas and myths with philosophy and common sense, Philo resorts to the tested method of allegorical inter-pretation relying on the age-old Hebrew tradition in the exegesis of the Bible. This tradition that had arisen long before Philo was born of the need to distinguish between the direct, literal sense of words in the Bible and their "spiritual" sense. By Philo's time this need had become absolutely imperative as the Scriptures could no longer be taken at their face value. The literal sense had to be excluded, first, when it was detrimental to God's dignity (as in the cases of any limitation of God's power, ascription to him of sensible properties, passions, etc.), second, when an allegory was obvi-ous (as in the case of the proverbial tree of knowledge) and, finally, when it was necessary to eliminate a discrepancy or a contradiction. Following the established practice and being firmly convinced, together with all Jewish commentators, that the Scriptures have been inspired by God and are therefore infallible and free from any inconsistencies, Philo treats all dubious passages in the biblical texts as having a symbolic meaning.

Philo's allegories derive from two sources—the Judaic exegesis of the Scriptures and the Stoic rationalisation of Greek myth. What with the rich imagination of the Alexandri-an philosopher, their integration based on far-fetched and often phantastic associations have produced very curious results. What strikes one most of all is the arbitrariness of Philo's interpretations. He seems to be always inclined to read between lines suspecting hidden meaning behind every proper name, image, inconsistency and even plain error. In view of the absence of any principles and rules of translation this subjective approach coupled with Philo's worship of the Holy Scripture and every letter in it results in waywardness and gives free rein to the philosopher's imagination restricted only by his doctrinal considerations.

The allegorism of Philo became one of the chief sources of

the medieval process of exegesis falling into three stages: etymological analysis, analogy and symbolism.

Philo's doctrine of the universe based on Stoic and Pythagorean conceptions and complemented by the biblical image of God as creator and providence leads to a trinomial structure of being. Supreme God evolves both the ideal world (*kosmos noētos*) rationalised in divine logos and consisting of ideas-numbers and the sensible world, which relate to one another as model and image, cause and consequence. Whereas the conception of transcendent God-creator and his son Logos was a way to Christianity (Philo, according to Engels, being its "father"),[1] the idea of a three-element being led straight to neo-Platonism, the more so as Philo complemented the triadic structure by a doctrine of "enthusiasm" or "sober intoxication" that overwhelms man's soul during direct contemplation of God. This latter doctrine substituting "enthusiasm" or mystical feeling for rational thought turns the former into a mediator between the members of the trinity on the one hand, and between god and man on the other. However, it was only two centuries later that Hellenistic philosophy represented by neo-Platonism finally surrendered to mysticism.

14. Neo-Platonism: Alexandrian-Roman School

The two centuries that separated Philo from the neo-Platonics were marked by the increasing influence of Platonism as the leading trend in the eclectic philosophy of the period. A typical representative of such philosophy based on Stoic, neo-Pythagorean and peripatetic elements was *Plutarch of Chaeronea* (c. 46-c. 127 A.D.) known also as a biographer and a moralist who violently denounced Epicureanism and attacked, somewhat less bitterly, the Stoics. Offering his interpretation of the Platonic doctrine of the World Soul, he contended that God did not make the body impermeable, nor the soul capable of perceiving and thinking. Both these principles existed from eternity but were in a chaotic state in darkness and disorderliness, devoid of perfection and measure. God put them in order and harmonised in accordance with numerical relationships, thereby creating the living and moving cosmos, the most perfect of all creations.

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[1] Friedrich Engels, "Bruno Bauer und das Urchristentum", in: Karl Marx, Friedrich Engels, *Werke*, Band 19, Dietz Verlag, Berlin, 1962, S. 298.

Plutarch's big problem was the origin of evil. It could not arise from formless matter devoid of any qualities, nor could it be traced to God by virtue of its concept. The only way to account for it was to ascribe evil to that part of the world soul that did not accept divine reason and harmony. Hence the theodicy: God is not responsible for evil plaguing the world, its source is the World Soul.

Yet central to his philosophy was not the conception of the universal principles, matter, soul and God, but their religious-mythological interpretation. In accordance with the geography of the worship expressing "true" religion, he gives his supreme deities the names of Zeus, Osiris and Ormazd. Matter in his system is Isis for Egyptian religion, Peneios (poverty) for the Platonic myth (see Symp. 203b-e) or divine mother in general. The evil World Soul is Egyptian Typhon, Persian Ahriman or Hades of Greek mythology. In other words, the Stoic allegorism based on the rationalisation of the names of mythological deities in terms of natural philosophy is replaced in Plutarch by its opposite—the "translation" of philosophical concepts into the language of myth and religion.

To form a link between God and the world, Plutarch borrows (evidently from academic Xenocrates) the idea of good and bad demons abiding in the "sub-lunar world" and develops a detailed demonology endowing demons with qualities he obviously does not dare to ascribe to the supreme deity: demons interfere in the lives of men punishing them for various offences and crimes. This enables him to "explain" and justify all sorts of superstitious beliefs, including fortune-telling, prophecies and miracles.

A similar eclectic combination of Platonic, Pythagorean, Stoic and peripatetic elements is characteristic of *Maximus of Tyrus, Lucius Apuleius* who, besides the well known *Metamorphoses* or *The Golden Ass*, also wrote *On Plato and His Teaching (De Platone et eius Dogmate), On the World (De Mundo), On Interpretation*, as well as of *Albinus* and *Atticus*. Eclectic Platonist *Aulus Cornelius Celsus* (second century A.D.) used the doctrine of demons in his attacks against Christianity attributing the growing influence of the Christians to their knowledge of the demons' names and ability to use them in theurgy.

Numenius of Apamea (second century A.D.), one of the forerunners of neo-Platonism, attempts to assimilate Platon-

ism to Judaism and, presumably taking his cue from Philo, declares Plato to be "Moses speaking Attic." He develops a hierarchy of three gods (the first similar to Plato's Idea of the Good, the second identical with his Demiurge and the third—the sensible world) which anticipates to a certain extent the Plotinian scale of being, and borrows certain conceptions from Persian, Egyptian and Hindu (Brahman) religious teachings. In the third century A.D. these conceptions, duly rationalised along Platonic lines, were developed into the neo-Platonic system.

The foundation of neo-Platonism is traditionally attributed to *Ammonius Saccas* (died c. 242 A.D.) It is known that he was brought up in Christian faith but then returned to paganism and that he earned his living as time-labourer (*Sakkas* means sack carrier). Ammonius left no writings, but Hierocles and Nemesius (fifth century A.D.) credit him with developing the basic principles of neo-Platonism, namely, the idea of integration of Platonic philosophy and Aristotelianism, the criticism of the Stoic doctrine of corporeal soul, and the doctrine of unity of intelligence which divides only by descending into mortal bodies without, however, diminishing or losing its identity.

Yet, the first mature system of neo-Platonism is universally ascribed to Plotinus.

(1) *Plotinus* was born about 204 A.D. in Lykopolis, Upper Egypt, and was a pupil of Ammonius in Alexandria for 11 years. He left his teacher to take part in an expedition of Emperor Gordianus against Persia where he hoped to acquire firsthand knowledge of the magi's philosophy. After the death of Gordianus in Persia in 244 he moved to Rome and founded there a school of philosophy. At first he taught his pupils orally and then began writing. He gave no names to his treatises, but tradition classifies them under such titles as *On the Beautiful, On Immortality of Soul, On Intelligence, Ideas and Being, On the Good and the One*, etc. Plotinus died in 270 A.D.

All the heritage of Plotinus was divided by his pupil and editor Porphyry into six sections, each of nine treatises (hence their name *Enneads*, groups of nine).[1]

Plotinus's philosophical system is very complex and its

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[1] In our references to Plotinus's works we shall indicate the number of the ennead by Roman numeral, the treatise and the chapter, by arabic numerals.

detailed analysis entails considerable difficulties, not the least being the obscurity of his writings: the philosopher's eyesight and handwriting were bad and he did not correct nor apparently re-read anything he had written. Nevertheless, the general pattern of his system emerges from his numerous works with sufficient clarity to permit an insight into the philosopher's mind and make possible the general exegeses of his doctrine.

Reality is conceived by Plotinus as a hierarchy of three substances or hypostases: the One, the Nous (Intelligence) and the Soul. The One is the highest: it is a perfect and complete entity, without any limits, forms and qualities. It is the principle of everything and is therefore completely indeterminate and undifferentiated. Plotinus repeatedly states that it is entirely free from multiplicity. It is above the Nous which is a two (dyad), because every intelligence goes together with an intelligible, knowledge as the subject is impossible without the knowledgeable, i.e. the object. The one is above all knowledge. Since cognition presupposes the duality of object and subject, the One is ignorant even of itself, yet its ignorance is not of the ordinary kind: there is nothing of which the One is cognisant and nothing of which it is ignorant (VI, 9, 6). Having no determinations, the One cannot be expressed. Trying to describe it, we in fact negate what it is not rather than assert what it is. We may sometimes share in it, but we are unable to express it—this is the case with people in ecstasy who feel in themselves the presence of some higher power but are unable to give a coherent account of their mystical experience (V, 3, 14). The One is the Good, the highest principle. It needs nothing, otherwise it would not be the first. It makes itself in the sense that it, and its willing of itself, are one (VI, 8, 13). Producing all things, the One is not any of them. Hence, it is neither quality, nor quantity, nor soul, nor spirit. It is neither in motion, nor at rest, it is not in space or time (VI, 9, 3). Nor does the One need things it produces, it is the same after generating them as before (V, 5, 12). "The One, being perfect, by not seeking anything, or having anything, or needing anything, overflows as it were, and its superabundance makes another" (V, 2, 1). What is produced by the One turns to it, gets filled with it and contemplates it. Thus the One generates the Nous, the second hypostasis.

The Nous is true being and true knowledge, a unity between

knowledge and its object. Knowledge always strives towards identity and the more identical the knower and the known, i.e. the subject and the object, the truer the knowledge. The Nous is a self-identity of knowledge, the knower-known. According to Plotinus, "the theorea must be the same as contemplated, and the Intelligence the same as the intelligible. For, if they were not the same, there would be no truth" (V, 3, 5). As knowledge implies duality, the Nous generates the Soul and, apparently through its agency, the sensible world thereby bringing in multiplicity. Hence, the Nous is conceived as a unity of one and many, i.e. as the one-many (V, 1, 8).

In Plotinus's system the Nous roughly corresponds to Plato's true being, i.e. the world of Ideas. However, in contrast with Plato who understood them as self-sufficient entities, Plotinus interprets Ideas as Intelligibles that do not exist outside the Intelligence (V, 9, 5), i.e. as thoughts of the supreme deity, and lays special stress on the hierarchy of reality.

The third hypostasis in Plotinus's world is the realm of the Soul, generated by the Nous in virtue of its perfection: as the Nous is perfect, it must generate (V, 1, 7). In turn, the Soul generates multiplicity of individual souls, it is in itself one and many. The one soul as the principle of life contains all souls (V, 4, 14) and there seem to be no hard and fast distinctions between the World Soul and individual souls. Some of the individual souls may remain unembodied, others produce celestial and terrestrial bodies, the latter including plants, fishes, animals, human beings. In producing the cosmos the souls turn to matter and give it their forms projecting, as it were, their interior part into the bodies. The Soul is immortal and, descending into enormous mass of inert matter penetrates and illuminates it as the Sun illuminates a dark cloud thereby giving it meaning, value and beauty. Without the Soul matter is nothing else than dark abyss, absolute evil and non-being (II, 5, 4; II, 5, 2), something "which even the gods abhor" (V, 1, 2). Ordering matter, the Soul generates the sensible world; the latter is a descent from the Nous towards matter, and the Soul or, more accurately, the World Soul is its being.

The being of Plotinus can be presented diagrammatically as two concentric circles, their centre being the One. The Nous makes the first circle, the Soul, the second. The Soul itself consists, as it were, of two parts, the higher or heavenly, and

the lower or terrestrial; the former contemplates the Nous and is enlightened by it, the latter is involved in matter and reveals itself as the instinct of animals, the vegetative and nutrient principles and the mechanical forces of nature.

The hypostases are assimilated by Plotinus to the gods of the ancient Greek pantheon: the One to Uranus, the Nous to Cronus, and the Soul to Zeus. Yet in terms of love and beauty the Soul is referred to as Aphrodite, its superior part being called Heavenly Aphrodite, and the inferior part, Terrestrial Aphrodite. The ideas present in the Nous, as well as the stars are also gods. The Nous is simultaneously conceived as an ordered totality of ideas, and the Soul, first as a totality of incorporeal ideas, and then, in the capacity of Terrestrial Aphrodite, as a totality of incarnated souls. The radii of the Soul circle represent individual beings: through the higher part of its soul each being communicates with the divine world of the One, and through its lower part, with the world of senses descending upon and shaped by the Soul (see V, 1, 11). After the death of the body, the Soul ascends from the lower to the higher world passing first to the incorporeal state, then to the idea of the Nous and finally merging with the One.
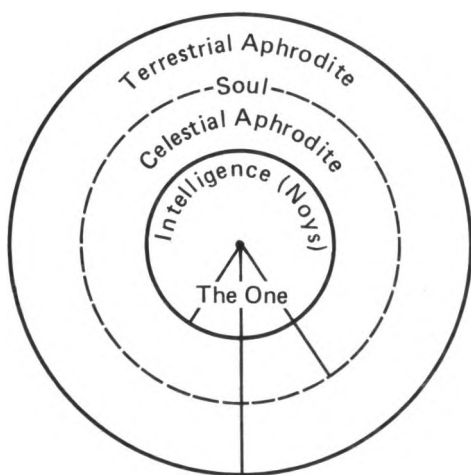
The relations of the hypostases are viewed by Plotinus in terms of logical concepts and physical realities. Logically, being is conceived as a hierarchy of notions. The Nous generated by the indeterminate One includes numbers and

ideas, prominent among which are Platonic categories—being, motion, rest, identity and difference. These are "the first genera" (*prōta genē*) which produce all others. Beauty, knowledge and virtue are called energies or movements of being. Goodness is defined as activity directed towards the One. Proceeding from his conception of the sensible world as an image of the intelligible world, as its reflection, Plotinus censures Aristotle for failing to include with his categories the sensual and the intelligible. In Plotinus's system the five "first genera" of the intelligible world have their counterparts in the sensible world which are Aristotelian substance, i.e. matter, form and their unity in existing things, relation, e.g. cause or element, accident, e.g. quality and quantity, space and time as the receptacles of substance and, finally, action and passion as the movements of substance (see VI, 3, 3). In contrast with Aristotle's essentially formal theory of categories understood as different modes of being, Plotinus viewed them as logically deducible from one another in a process of dialectical development. This process, however, was conceived by him not as a reflection of the sensible world by the mind, but as a spontaneous evolution of self-sufficient thought, i.e. on a purely idealistic basis.

In physical terms, the hypostases and their determinations are characterised by the notion of "overflowing" which was repeatedly used by Plotinus in relation of the One and the Nous and gave cause to interpret his teaching as the doctrine of emanation from the One. The idea of emanation bringing to mind the image of the Sun as the source of light is frequently used by Plotinus to explain generation of things (Plotinus believed that the Sun did not diminish due to the emission as he identified generation with contemplation involving no change in what contemplates). The investigations carried out over the past few decades have shown that Plotinus's emanation should not be construed as only material, corporeal effluence. Being applicable both to the intelligible and sensible worlds, the concept of emanation is central to the interaction of hypostases and very aptly conveys the nature of the extreme idealism of the Plotinian doctrine dissolving all being in the One. Paradoxically, it is precisely because of this idealism that the One representing pure indeterminate thought turns out to be logically bound up with its opposite, matter: every determination of the One leading to the plurality of the Universe is conceived as the descent of the

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ideal to the material, as its objectification and degradation into "matter." Conversely, the "de-objectification"[1] of the ideal is understood as its ascent to the One. Here lies the basic fallacy of any idealist philosophy which turns things upside down, transforming real processes, both in nature and society, into faded copies of ideal processes and passing for progress what is in fact the retracing of the so-called degradation.

On the ideological side, the concept of emanation provides a basis for disparagement of man's creative genius—in the eyes of the neo-Platonic all human endeavours do not amount to anything more than a pitiable attempt to imitate divine creation. No wonder, the One of Plotinus was in fact an ideological reflection of the omnipotent monarchical state personified in the image of the divine Roman Emperor. The concept of the One transforms *princeps* (ruler) into *principium* (principle). The abstract, ideal worthlessness of man in the face of the One expressed in terms of Plotinian philosophy reflects his real worthlessness in the face of the deified Empire and the divine Emperor.

The rest of Plotinus's system is relatively simple. The philosopher in fact shows little interest in the "physical" aspect of the interaction of hypostases implied in the idea of overflowing. The sensual world is conceived as the realm of multiplicity and separation, as a distorted picture of the ideal world. It is a mixture of the Nous and necessity and, in ethical terms, of the good and evil. The good results from the Nous and the bad comes from formless matter. The source of evil is neither God nor man. It antidates the latter and is therefore eternal (I, 8, 7). It is the lack of being (*mē on*), relative not-being: just as matter is devoid of any determinations, even the determination of being (*mē einai*), so evil is completely devoid of the good, it is pure want and insufficiency. There is no evil in the world as something opposed to the good; all reality is good and perfect, and a thing is evil to the extent to which it fails to partake of reality, to participate in perfection. Evil gets control of a man against his good will and is overpowered by the immaterial principle inherent in him—reason, knowledge and truth. Yet it is only the gods, particularly the incorporeal ones, who can be entirely free from evil. The visible gods possessing matter

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[1] This term used in the philosophy of German idealism is also applicable to the Plotinian doctrine.

dominate over evil, whereas the incorporeal ones have nothing in common with it. Such is Plotinus's theodicy.

The Plotinian theory of knowledge is based on the conception of man's dual nature. Man's "divine" soul, being the opposite of his "animal" body, would be unable to perceive other bodies if there were no mediator between them, i.e. the animated organ of sense perceptions. In virtue of its corporeality this organ can be acted upon by external bodies and, being animated, can perceive them. Perception consists in the assimilation of the sense organs to an object rather than in receiving its impression in the Aristotelian manner. In Plotinus's opinion, the eye would not see the sun if it did not become sunlike, and would not admire light if it could not become similar to it. Arguing against Aristotle, he contends that the soul cannot be affected by an external object and therefore cannot receive its shape like wax.

Plotinus, this time together with Aristotle, distinguishes between the five external senses and the internal sense likening them respectively to the radii and the centre of a circle. The middle position between the senses and reason is occupied by memory which is related to time. It represents the Soul's permanence in contrast with the body's movement, changefulness and fluidity, i.e. with what the poets call Lethe or oblivion. Memory is divided by Plotinus into sensuous and intellectual and described as the Soul's tension that slackens with time but can be braced up by the effort of will. Combining Plato and Aristotle, Plotinus describes intellectual memory as the Soul's faculty of retaining the intelligibles and "recalling" them by turning potentiality into actuality.

Intellectual knowledge is the result of man's affinity with the Nous: the higher part of his Soul abides in the intelligible world in close and inseparable unity with intelligence (Nous), whereas the lower part represents the body and nature. Hence, the Soul is like a man standing knee-deep in water. The Nous enlightens the Soul by filling it with ideas, the higher part of the Soul transfers them to the lower part which, in turn, gives matter the corresponding form. Consisting, as it were, of three parts, with one of them prevailing and sharing at the same time in the One, man's Soul is capable of ascending from sense perceptions to discursive thought, then to intellect (Nous, reason) and further to the One. When the "radius of the Soul" returns to the central point and identifies itself with it the Soul attains absolute simplicity and mystical

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unity with the One. This immediate contact or union of intellect with itself, also described by Plotinus as self-surrender of the Soul and the goal of the Soul's ascent can only be attained in a state of ecstasy.

In terms of the theory of knowledge it means, first, that rational knowledge relates not to things, but ideas. According to Plotinus, we attain true knowledge only when we pass beyond sense perceptions and discursive reasoning restricted to the sphere of multiplicity and finite determinations, and rise to the realm of absolute intelligence which is true reality, i.e. when our reason discovers that the truth of all being is intellect, or, put it another way, when it rediscovers itself. Human reason, Plotinus tells us, is only an interpreter of the highest, speaking, as it were, to discern the traces of the Nous and conform to them. Becoming thus an image of the Nous, it must always look to it as its archetype (V, 3, 6). Second, in Plotinus's view, rational knowledge, passive in relation to the ideas it comprehends, is active and formative in relation to the external world—that is why Plotinus calls it practical reason. Apprehending, through the agency of the senses, the images of bodies, practical reason combines and differentiates them. Comparing them with ideas, it reveals the general in the individual; just as the One reveals itself through emanation in the ideas of the Nous which then manifest themselves in the World Soul's logos, so human thought unfolds the idea in a number of individual concepts. This is what the dialectic of thinking consists in—it is, according to Plotinus, the ability to define each thing in logos, i.e. both verbally and in thought, by stating what it is and indicating by what it differs from other things and what it has in common with them (I, 3, 4). In this process, however, the individual reveals itself as the general and this enables reason to retrace its "descent" and rise from the particular to the general.

This is an important and profound idea: the primary contemplation of the general calls for its logical partition and analysis of the inner structure in order to permit its subsequent reproduction as the concrete universal.[1] However, this way to knowledge was closed to Plotinus on account of his

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[1] The doctrine of ascent from the abstract to the concrete was first expounded by Hegel and then, on the materialist basis, by Marx. See K. Marx, *Grundrisse der Kritik der Politischen Ökonomie* (Rohentwurf), Berlin, 1974, S. 21-29.

idealism. The ascent from the individual to the particular and further to the universal was for him not the path of "sublation," i.e. simultaneous negation and preservation of the individual in the universal, but a path of its dissolution and oblivion. Plato's dialectic became for Plotinus a stepping stone to mysticism: the final goal for him is irrational (he believes it to be suprarational) ecstasy in which all thought disappears and man's soul loses its identity melting into the One. Porphyry tells us in his *Life of Plotinus* that the philosopher attained to such ecstasy four times and regarded the mystical union with the Absolute to be the climax of man's life. Yet mystical intuition is the opposite of rational thought. Insisting, according to Hegel, on the need to discard reason in order to attain to truth[1] and claiming irrationality to be the highest form of cognition, mysticism is the death of any philosophy.

(2) *Porphyry*, Plotinus's pupil and follower, was born c. 232 and died c. 304 A.D. He is said to have written 77 treatises of which only 18 survived. Their philosophical value is considerable and Porphyry is traditionally ranked among the founders of neo-Platonism. In the so-called *Sententiae ad intelligibilia ducentes* (Aids to the Study of the Intelligibles) he presents a summary of the Plotinian teaching strengthening its monistic tendency and emphasising, in particular, the absolute reality of the One at the expense of the reality of individuals. Concentrating on the ethical consequences of the doctrine of the One and regarding the health of the soul as the goal of ethical activity, Porphyry divides all virtues into four groups: (1) civic, which curb passions; (2) purificatory, whereby the soul rids itself of everything earthly and attains tranquillity; (3) contemplative, which induce the soul to revert to the primary cause thus complementing its purification; (4) paradigmatic, which provide the model or paradigm of all virtues. The first two groups are called by Porphyry the virtues of the soul, the last two, the virtues of the intellect. All the groups make a hierarchy corresponding to the steps in the soul's ascent to the intelligible world.

Porphyry is also known as the author of logical treatises—the *Introduction* to Aristotle's *Categories* (*Isagoge*) and a commentary on the same work which left, perhaps, the deepest

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[1] Hegel, *Werke*, Band VI, Berlin, 1840, S. 160 (Enz. 32, Zusatz).

trace in the history of philosophy and were the object of much debate in later centuries.

Raising the question of the ontological status of genera and species expressed in the form of general notions and wondering if they have independent existence or are present only in thought (Porph. Is. I, la), Porphyry in fact foreshadowed the medieval controversy over universals that divided the philosophers into the nominalists and realists (the former believed the universals to be mere names, whereas the latter asserted their objective existence).

Porphyry does not answer the ontological question, but restores the Aristotelian doctrine of categories rejected by Plotinus and focuses his attention on the logical relation between genera and species analysing the terms ("five words") essential to the understanding of Aristotle's *Categories*: genus, species, specific difference (*differentia*), essential attribute (*proprium*) and separable accident. He describes the genus as relating to the many and different and asserts it to be their substance. The genus is predicated of species (a living being is a genus in relation of oxen, horses, etc.) and of individuals (every ox is a living being), whereas the species is predicated of individuals. In turn, a differentia is predicable of both species and individuals. The result of this analysis was presented by Porphyry in the form of a pyramid of notions ("The Tree of Porphyry"):
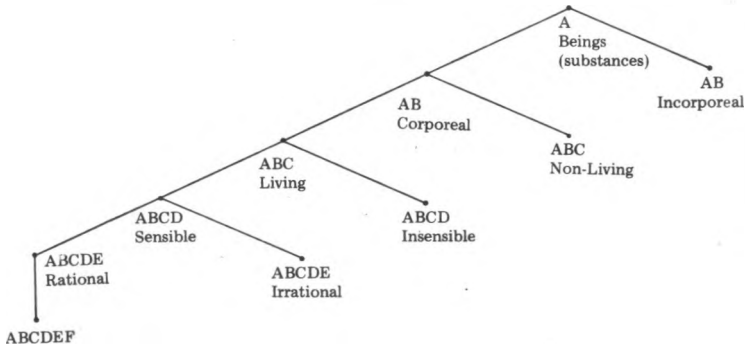
Socrates, Plato and other individuals.

It is a graphic illustration to the subordination and coordination of concepts, as well as to the classical procedure

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of dichotomy, a form of logical division. Viewed in the opposite direction, it represents a scheme of generalisation by cancelling attributes.

Porphyry is known to have been a bitter enemy of Christianity. In his work *Adversus Christianos* (Against the Christians) which was later burnt by the clergymen but partially survived in fragments cited by his critics he argued for polytheism on the grounds that the one god of a monotheistic religion is like a monarch having no subjects similar to himself. The true monarch, according to Porphyry, is not the one who stays alone, but who reigns over his like. Hence, god cannot be called a monarch unless he rules over other gods.

Porphyry came out with a host of arguments against the Christian New Testament, exposing its inconsistencies and contradictions. Yet his own alternative was a doctrine of intermediaries between man and the One—a multitude of good and bad demons and gods—which led him to the recognition of miracles and justification of all sorts of superstitions, e.g. beliefs in religious sacrifice, prayer, magic, oracles, etc. As is evidenced from Porphyry's letter to Anebo, all these external manifestations of faith were regarded by him as expressions of "true" religion subject to allegorical interpretation. A vivid example of such interpretation is Porphyry's work *De antro nympharum* (On the Cave of the Nymphs) in which he discloses the "hidden meaning" of Homer's description of a cave (The Odyssey, XIII, 102-112).

15. The Syrian and Athenian Schools of Neo-Platonism

The teaching of *Jamblichus of Chalcis* (died s. 330 A.D.) centres around the doctrine of gods. In his works *Life of Pythagoras* (*De Vita Pythagorica*) and *The Summary of Pythagorean Doctrines* (*De Vita Pythagorica liber*), as well as in the *Exhortation* (*Protrepticus*) he describes Pythagoreanism as divine philosophy and calls himself a Pythagorean, believing mathematics to be a preparation for the study of gods. His own teaching, however, is typical neo-Platonism.

Jamblichus proceeds from the Plotinian doctrine of three hypostases, the One, the Nous (Reason, Intelligence) and the Soul, yet he differentiates them further on the basis of Plotinus's principle of mediation starting the line of a very detailed systematisation of neo-Platonism.

Having placed an intermediary between the One and the Nous in the form of a self-sufficient and self-emanating god

(see Vog. III, fr. 1449c), he divides the second hypostasis into Intellect qua intelligible, i.e. objects of thought (Being) and Intellect qua intellectual, i.e. action of thought (Intelligence). Each of them, in turn, is broken up into three elements making a triad, and each member of each triad is declared a deity in its own right and an independent substance. Passing on to the Soul and performing on it a similar operation, Jamblichus gets a whole pantheon of gods external to the world which are followed by internal gods of three categories: 12 heavenly gods which break up into 36 deities and these into 360; 72 orders of subheavenly gods and then 42 orders of generating gods (*theoi genesioyrgoi*), corresponding to 21 ruling gods. Next come angels, then demons and heroes.

All these numbers are in fact nothing else than the astrological calculus based on sheer fancy. Polemicising against Porphyry in his *De Mysteriis (On Mysteries)* over the relative values of theurgy and the intellect, Jamblichus gives preference to the former on the grounds that magical practices reflect and represent the impact of a higher principle on the lower with a view to achieving the unity with God, i.e. salvation. It is not accidental therefore that tradition describes Jamblichus as "divine" and "inspired": contending that religious rites as active service to God are higher than the intellectual contemplation of the Absolute, he placed religion above philosophy and priest above thinker.

The school of Jamblichus which played an important part in the religious corruption of neo-Platonism by substituting theurgy and magic for rationalism was rather numerous, but we possess only scanty evidence for the views of its members. Tradition ranks among them Emperor Julian the Apostate who openly declared himself a pagan after accession to the throne in 361 A.D. and made an attempt to restore the Hellenistic religion. The views of Jamblichus were evidently shared by Hypatia of Alexandria, a neo-Platonist woman-philosopher who was hacked to death in 415 A.D. by a fanatic mob of Christians.

After the death of Jamblichus the centre of neo-Platonic thought seems to have moved to Athens. The Athenian school continued along the same neo-Platonic line of transition from philosophy to theology, yet it displayed a much greater interest in theoretical problems. It was founded by *Proclus* (410-485 A.D.) who succeeded in turning Plato's Academy

Plotinian and gave a more systematic and canonical shape to the main tenets of neo-Platonism. His teachers were Plutarch of Athens and Syrianus of Alexandria, the first heads of the Academy who openly professed the teaching of Plotinus.

Proclus's heritage includes numerous commentaries on Plato's dialogues (*Republic*, *Parmenides*, *Timaeus*, *Alcibiades I*), as well as his original works *Elements of Theology* and *Fundamentals of Physics* (*Institutio physica*). Of the last two the latter is in fact a reproduction of Aristotle's *Physics* whereas the former consists in the exposition of the basic principles of neo-Platonic philosophy and theology which are hard to distinguish. The enormous *Platonic Theology* has come down to us entire, yet it was published only once (in 1618 in Latin) and its English translation dates back to 1816. His other works are commentaries on Euclid's Book I, philosophical treatises *On Providence and Fate, Ten Questions on Providence* and *The Existence of Evils* available in Latin translations; we also have his treatises on mathematics and astronomy, as well as essays on the art of writing.

Proclus preserves the outline of the neo-Platonic scheme and remains true to the doctrine of three hypostases—the One, the Nous and the Soul, yet the starting point of his discourse is not the One as such, but the dialectic of one and many. Any plurality participates in the One, it derives from it and is secondary to it. The One, on its part, may participate in many, yet the "One as such" does not share in any multiplicity as it is absolutely the first. Since "all that is capable of generation is superior to the nature of the generated" (Procl. Elem. theol. 7), many cannot be equal to One. The One is goodness and everything related to it is good, though not as good as the One itself.

Here Proclus, first, reveals the idealist essence of his theory by recognising the One, i.e. the general and the good, as primary and, second, expounds the doctrine of emanation, implicit in Plotinus, by describing in detail the "mechanism" of the generation of one from many. The downward movement characteristic of the emanative process is followed by the upward movement whereby multiplicity is again integrated into the One. The starting point of the emanative process coincides with the terminal point of a reversion, a return to the One.

It should be noted that this cyclic "change" of all being described by Proclus is hardly a change at all, as it is

conceived by him as a process of differentiation and integration of Intelligence within its own sphere representing nothing else than the logical relationship of the concrete and the abstract, the latter being understood not as a common quality or property of individual objects in the sense of formal logic, but as the essence and substance of a plurality of individuals, as unity in diversity.

This profound and extremely fruitful dialectical idea was utterly emasculated within the framework of Proclus's neo-Platonic system which turned the logical priority of the whole and the universal into the ontological priority of being. Idealism is incompatible with the real dialectics of the individual, the particular and the universal which is based on the recognition of their equal validity, since the universal exists only in and through the individual, and vice versa. The abstract philosophical doctrine of Proclus emphasising the priority of the universal (the One) and depreciating the particular and the individual objectively justified the submission of an individual to the state and reflected his impotence against the arbitrary rule of the Roman Empire.

Describing in detail the process of emanation and turning the world into a great hierarchy of souls—gods, angels, demons, heroes and men—Proclus gives free rein to his imagination within the general scheme laid down by Jamblichus. However, there are some important features in his system that distinguish him from his predecessors.

First, he regards matter as the emanation of one of the triads formed by the indeterminate, the determined and the mixture of the two. Matter is no longer conceived as evil, it is "indifferent." As regards evil, Proclus adopts the Stoic view (also expressed by late Platonists) and asserts that it results from inevitable conflicts between good entities generated by the highest power. It is a by-product of contradictions necessary for their existence (see Procl. In Remp. 358ff., Dec. dubit. 123 ff.).

Second, Proclus conceives the process of emanation as a descent of the One into many followed by the return of many into the One and interprets every step of this process as a triad of moments: what is emanated remains in the emanating as it participates in it and is similar to it, separates from the emanating as it is different from its cause and returns to it seeking for reunion. This process (identity-emanation-re-

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turn) described as assimilation to the cause and as "participation" of the inferior in the superior is, in fact, a general pattern of the cognitive process, mystified and distorted by Proclean idealism. Extricated from the obscurities of Proclus's philosophy, it marked an important step forward in the development of idealist dialectics. However, the philosopher himself hardly realised the significance of his doctrine, as his attention seemed to be focused not on the laws of thinking underlying the dialectics of categories, but on how to accommodate the gods of the traditional heathen religion to the triadic form of development. Similarly to Jamblichus, Proclus puts religion above philosophy and theurgy or the "making of gods" above "theory" or the contemplation of the universe. Extending this principle to ethics and taking his cue from Jamblichus, Proclus adds yet another group of virtues to Porphyry's list of four—the hieratic (priestly) or "unifying" virtues which, in his opinion, can alone bring man to unity with God.

Proclus was the last original representative of ancient philosophy. Of his followers we shall mention only two—Damascius and Simplicius.

Damascius (fifth-sixth centuries A.D.) is credited with a large work entitled *Problems and Solutions About the First Principles* (*Dubitationes et solutiones de primis principiis in Platonis Parmenides*). In short, these problems result from the gulf between the incomprehensible and ineffable first principle of the neo-Platonists and its derivatives accessible to Reason and Soul. The first principle, according to Damascius, is not only above Reason, but also above the One. It has no predicates and the only possible attitude to it is silence and admission of complete ignorance. Therefore the process of transition from the first principle to substance does not lend itself to any rational description: neither the triads "identity—emanation—return" and "unity—potentiality—actuality," nor the cause-effect relationship can represent it in adequate terms as they are mere analogies.

Damascius makes an attempt to bridge the gap by increasing the number of intermediate links between the first principle and Reason, whereupon he returns to the trail blazed by Proclus. Though his teaching contains a number of interesting ideas, e.g. a distinction between kinds of emanation, original conceptions of eternity and time, whole and parts, etc., it is on the whole indicative of the insolubility of

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the main contradiction of neo-Platonism—the opposition of the absolute unity of the first cause and the multiplicity of the world generated from it.

Simplicius (died 549 A.D.) went down in the history of philosophy as Aristotle's commentator. His works are an invaluable source of information on ancient philosophy, particularly the pre-Socratics.

In 529 A.D. Emperor Justinian known for his persecution of Christian "heresies" prohibited the teaching of Hellenic philosophy and closed the Academy at Athens by a special edict. Its last seven teachers, including Damascius and Simplicius went to Persia on the invitation of king Khosrau Anushirvan who professed to be a lover of Greek culture.

The period of ancient philosophy came to an end. The immediate future belonged to Christianity.

* * *

The neo-Platonic epoch in the history of world philosophy reflected a tremendous social upheaval—the collapse of a whole socio-economic formation that had a thousand-year history behind it and could boast colossal achievements in the material, social and cultural spheres. The breakdown of the slave system was not an instant catastrophe; it extended over a period of several centuries and was marked by a gradual decline of its economy and steady growth of feudal relations within the political framework of the Roman Empire. Neo-Platonism, the leading and most influential trend of this epoch sensed the spirit of the time and reflected the social experience of contemporary man and society in terms of abstract philosophical doctrines. This experience was highly contradictory on both sides: a man was helpless, miserable and pitiful in his illusory freedom, yet omnipotent in the person of the "divine" Emperor, whereas society or, rather, the Empire representing the estranged nature of social man was capable both of idolising and annihilating every individual.

This profound contradictoriness lies at the root of the constant search for the ineffable One and its links with the material world and every individual. Hence the absolutisation of the One, the conviction that all individuals "participate in" or "partake of" it—and the return, reversion to myth, the philosophical restructuring of mythological thinking based on

the assumption that all being derives from a personal principle and the world is essentially divine and demonic.

The end of the slave-owning system and the downfall of the "eternal" Roman Empire were reflected in the consciousness of the epoch as the end of philosophy, though it was only a temporary impasse.

The teachings of ancient philosophers—the Milesians and Pythagoreans, Heraclitus and the Eleatics, the atomists and Plato, Aristotle and the Stoics, Sceptics and neo-Platonists will remain forever in the gold fund of world civilisation as grand monuments of the philosophical thought of their time.

According to Marx, a historical epoch cannot be judged exclusively by its consciousness—yet it cannot be judged without knowing its consciousness either, and it is philosophy in the first place that reflects it. Even more important, however, is the assimilation of ancient doctrines in the philosophical systems of later periods, their impact on the thought of subsequent generations and their ability to be instrumental in the solution of problems the ancients could not even dream of.

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