
Loc 224 | Highlight

Philosophers are both effects and causes: effects of their social circumstances and of the politics and institutions of their time; causes (if they are fortunate) of beliefs which mould the politics and institutions of later ages.

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a man in whom were crystallized and concentrated thoughts and feelings which, in a vague and diffused form, were common to the community of which he was a part.

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The conceptions of life and the world which we call 'philosophical' are a product of two factors: one, inherited religious and ethical conceptions; the other, the sort of investigation which may be called 'scientific', using this word in its broadest sense.

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Philosophy, as I shall understand the word, is something intermediate between theology and science. Like theology, it consists of speculations on matters as to which definite knowledge has, so far, been unascertainable; but like science, it appeals to human reason rather than to authority, whether that of tradition or that of revelation. All definite knowledge—so I should contend—belongs to science; all dogma as to what surpasses definite knowledge belongs to theology. But between theology and science there is a No Man's Land, exposed to attack from both sides; this No Man's Land is philosophy. Almost all the questions of most interest to speculative minds are such as science cannot answer, and the confident answers of theologians no longer seem so convincing as they did in former centuries

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The studying of these questions, if not the answering of them, is the business of philosophy.

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To understand an age or a nation, we must understand its philosophy, and to understand its philosophy we must ourselves be in some degree philosophers.

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if we forget how much we cannot know we become insensitive to many things of very great importance.

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Theology, on the other hand, induces a dogmatic belief that we have knowledge where in fact we have ignorance, and by doing so generates a kind of impertinent insolence towards the universe.

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Uncertainty, in the presence of vivid hopes and fears, is painful, but must be endured if we wish to live without the support of comforting fairy tales.

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To teach how to live without certainty, and yet without being paralysed by hesitation, is perhaps the chief thing that philosophy, in our age, can still do for those who study it.

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Philosophy, as distinct from theology, began in Greece in the sixth century B.C.

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Its second great period, from the eleventh to the fourteenth centuries, was dominated by the Catholic Church,

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The third period, from the seventeenth century to the present day, is dominated, more than either of

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its predecessors, by science;

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Social cohesion and individual liberty, like religion and science, are in a state of conflict or uneasy compromise throughout the whole period.

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The Stoics thought of the virtuous life as a relation of the soul to God, rather than as a relation of the citizen to the State.

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Christianity popularized an important opinion, already implicit in the teaching of the Stoics, but foreign to the general spirit of antiquity—I mean, the opinion that a man's duty to God is more imperative than his duty to the State.¹

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The barbarian invasion put an end, for six centuries, to the civilization of western Europe.

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The king had to share his power with the feudal aristocracy, but all alike expected to be allowed occasional outbursts of passion in the form of war, murder, pillage, or rape.

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What was the use of conquering the world if they could not drink and murder and love as the spirit moved them?

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All the armed force was on the side of the kings, and yet the Church was victorious. The Church

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won, partly because it had almost a monopoly of education, partly because the kings were perpetually at war with each other, but mainly because, with very few exceptions, rulers and people alike profoundly believed that the Church possessed the power of the keys. The Church could decide whether a king should spend eternity in heaven or in hell; the Church could absolve subjects from the duty of allegiance, and so stimulate rebellion.

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The Middle Ages, though turbulent in practice, were dominated in thought by a passion for legality and by a very precise theory of political power. All power is ultimately from God; He has delegated power to the Pope in sacred things and to the Emperor in secular matters.

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the Roman belief in the unity of civilization.

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In the absence of any guiding principle, politics becomes a naked struggle for power;

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but the anarchy and treachery which inevitably resulted from the decay of morals made Italians collectively impotent, and they fell, like the Greeks, under the domination of nations less civilized than themselves but not so destitute of social cohesion.

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The Catholic Church was derived from three sources.

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Its sacred history was Jewish, its theology was Greek, its government and canon law were, at least indirectly, Roman.

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The Reformation rejected the Roman elements, softened the Greek elements, and greatly strengthened the Judaic elements.

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Protestants, on the contrary, rejected the Church as a vehicle of revelation; truth was to be sought only in the Bible, which each man could interpret for himself.

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Modern philosophy begins with Descartes, whose fundamental certainty is the existence of himself and his thoughts, from which the external world is to be inferred.

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This was insanity, and, from this extreme, philosophy has been attempting, ever since, to escape into the world of everyday common sense.

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With subjectivism in philosophy, anarchism in politics goes hand in hand.

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Subjectivity, once let loose, could not be confined within limits until it had run its course.

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The eighteenth-century cult of 'sensibility' began to break it down: an act was admired, not for its good consequences, or for its conformity to a moral code, but for the emotion that inspired it. Out of this attitude developed the cult of the hero, as it is expressed by Carlyle and Nietzsche, and the Byronic cult of violent passion of no matter what kind.

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The romantic movement, in art, in literature, and in politics, is bound up with this subjective way of judging men, not as members of a community, but as aesthetically delightful objects of contemplation. Tigers are more beautiful than sheep, but we prefer them behind bars.

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The typical romantic removes the bars and enjoys the magnificent leaps with which the tiger annihilates the sheep. He exhorts men to imagine themselves tigers, and when he succeeds the results are not wholly pleasant.

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the doctrine of liberalism, which attempted to assign the respective spheres of government and the individual.

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Throughout this long development, from 600 B.C. to the present day, philosophers have been divided into those who wished to tighten social bonds and those who wished to relax them.

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Social cohesion is a necessity, and mankind has never yet succeeded in enforcing cohesion by merely rational arguments. Every community is exposed to two opposite dangers, ossification through too much discipline and reverence for tradition, on the one hand; on the other hand, dissolution, or subjection to foreign conquest, through the growth of an individualism and personal independence that makes co-operation impossible.

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In general, important civilizations start with a rigid and superstitious system, gradually relaxed, and leading, at a certain stage, to a period of brilliant genius, while the good of the old tradition remains and the evil inherent in its dissolution has not yet developed. But as the evil unfolds, it leads to anarchy, thence, inevitably, to a new tyranny, producing a new synthesis secured by a new system of dogma. The doctrine of liberalism is an attempt to escape from this endless oscillation. The essence of liberalism is an attempt to secure a social order not based on irrational dogma, and insuring stability without involving more restraints than are necessary for the preservation of the

community.

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In all history, nothing is so surprising or so difficult to account for as the sudden rise of civilization in Greece.

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They invented mathematics¹ and science and philosophy; they first wrote history as opposed to mere annals; they speculated freely about the nature of the world and the ends of life, without being bound in the fetters of any inherited orthodoxy. What occurred was so astonishing that, until very recent times, men were content to gape and talk mystically about the Greek genius.

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Philosophy begins with Thales,

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The art of writing was invented in Egypt about the year 4000 B.C., and in Mesopotamia not much later.

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There was a considerable difference between Egyptian and Babylonian theology. The Egyptians were preoccupied with death, and believed that the souls of the dead descend into the underworld, where they are judged by Osiris according to the manner of their life on earth.

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The pyramids were built by various kings at the end of the fourth millennium B.C. and the beginning of the third.

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Babylonia had a more warlike development than Egypt.

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The religions of Egypt and Babylonia, like other ancient religions, were originally fertility cults. The earth was female, the sun male. The bull was usually regarded as an embodiment of male fertility, and bull-gods were common.

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In Babylon, Ishtar, the earth-goddess, was supreme among female divinities. Throughout western Asia, the Great Mother was worshipped under various names. When Greek colonists in Asia Minor found temples to her, they named her Artemis and took over the existing cult. This is the origin of 'Diana of the Ephesians'.² Christianity transformed her into the Virgin Mary, and it was a Council at Ephesus that legitimated the title 'Mother of God' as applied to Our Lady.

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The oldest legal code still known is that of Hammurabi, king of Babylon (2067–2025 B.C.); this code was asserted by the king to have been delivered to him by Marduk.

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Babylonian religion, unlike that of Egypt, was more concerned with prosperity in this world than with happiness in the next. Magic, divination, and astrology, though not peculiar to Babylonia, were more developed there than elsewhere, and it was chiefly through Babylon that they acquired their hold on later antiquity. From Babylon come some things that belong to science: the division of the day into twenty-four hours, and of the circle into 360 degrees; also the discovery of a cycle in eclipses, which enabled lunar eclipses to be predicted with certainty, and solar eclipses with some probability.

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For about eleven centuries, say from 2500 B.C. to 1400 B.C., an artistically advanced culture, called the Minoan, existed in Crete.

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The Mycenaean civilization, seen through a haze of legend, is that which is depicted in Homer.

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The Greeks came to Greece in three successive waves, first the Ionians, then the Achaeans, and last the Dorians

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The mainland of Greece is mountainous and largely infertile. There are, however, many fertile valleys, with easy access to the sea, but cut off by the mountains from easy land communication with each other.

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where commerce and industry flourished, the free citizens grew rich by the employment of slaves—male in the mines, female in the textile industry

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With increasing wealth went increasing isolation of respectable women,

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There was a very general development, first from monarchy to aristocracy, then to an alternation of tyranny and democracy. The kings were not absolute, like those of Egypt and Babylonia; they were advised by a Council of Elders, and could not transgress custom with impunity.

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‘Tyranny’ did not mean necessarily bad government, but only the rule of a man whose claim to power was not hereditary. ‘Democracy’ meant government by all the citizens, among whom slaves and women were not included.

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Coinage seems to have been invented shortly before 700 B.C.

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One of the most important results, to the Greeks, of commerce or piracy— at first the two are scarcely distinct—was the acquisition of the art of writing.

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gradually the pictures, much conventionalized, came to represent syllables (the first syllables of the names of the things pictured), and at last single letters, on the principle of 'A was an Archer who shot at a frog.'

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The Greeks, borrowing from the Phoenicians, altered the alphabet to suit their language, and made the important innovation of adding vowels instead of having only consonants.

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The first notable product of the Hellenic civilization was Homer.

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he was a series of poets rather than an individual.

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The Homeric poems, like the courtly romances of the later Middle Ages, represent the point of view of a civilized aristocracy, which ignores as plebeian various superstitions that are still rampant among the populace.

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Primitive religion, everywhere, was tribal rather than personal.

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These were often such as to generate a great collective excitement, in which individuals lost their sense of separateness and felt themselves at one with the whole tribe.

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It must be admitted that religion, in Homer, is not very religious.

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The gods are completely human, differing from men only in being immortal and possessed of superhuman powers.

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Fate exercised a great influence on all Greek thought, and perhaps was one of the sources from which science derived the belief in natural law.

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They never tell lies, except in love and war.'

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Homer's human heroes, equally, are not very well behaved.

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Greece was divided into a large number of small independent states, each consisting of a city with some agricultural territory surrounding it.

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The goat was the symbol of fertility, because the peasants were too poor to possess bulls.

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the divine madness produced by wine.

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Like all communities that have been civilized quickly, the Greeks, or at least a certain proportion of them, developed a love of the primitive, and a hankering after a more instinctive and passionate way of life than that sanctioned by current morals.

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The civilized man is distinguished from the savage mainly by prudence, or, to use a slightly wider term, forethought. He is willing to endure present pains for the sake of future pleasures, even if the future pleasures are rather distant. This habit began to be important with the rise of agriculture; no animal and no savage would work in the spring in order to have food next winter, except for a few purely instinctive forms of action,

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True forethought only arises when a man does something towards which no impulse urges him, because his reason tells him that he will profit by it at some future date. Hunting requires no forethought, because it is pleasurable; but tilling the soil is labour, and cannot be done from spontaneous impulse.

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The institution of private property brings with it the subjection of women, and usually the creation of a slave class.

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Much of what is greatest in human achievement involves some element of intoxication,¹⁵ some sweeping away of prudence by passion. Without the Bacchic element, life would be uninteresting; with it, it is dangerous. Prudence versus passion is a conflict that runs through history.

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But science, unadulterated, is not satisfying; men need also passion and art and religion. Science may set limits to knowledge, but should not set limits to imagination.

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Science may set limits to knowledge, but should not set limits to imagination.

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acquire mystic knowledge not obtainable by ordinary means.

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Plato, went so far as to claim complete political equality for women. 'Women as a sex,' says Pythagoras, 'are more naturally akin to piety.'

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it was an escape from the burdens and cares of civilization into the world of non-human beauty and the freedom of wind and stars.

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It was the combination of passion and intellect that made them great, while they were great. Neither alone would have transformed the world for all future time as they transformed it. Their prototype in mythology is not Olympian Zeus, but Prometheus, who brought fire from heaven and was rewarded with eternal torment.

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a more primitive way of thinking and feeling, which was always liable to prove victorious in times of stress.

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but there can be no doubt that, to the Greeks, the phenomenon of ecstasy suggested that the soul

was something more than a feeble double of the self, and that it was only when “out of the body” that it could show its true nature ...

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Priesthoods do not make dogmas, though they preserve them once they are made;

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Deductive reasoning from general premisses was a Greek innovation.

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There is, however, ample reason to feel respect for Thales, though perhaps rather as a man of science than as a philosopher in the modern sense of the word.

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Babylonian astronomers had discovered that eclipses recur in a cycle of about nineteen years.

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They could predict eclipses of the moon with pretty complete success, but as regards solar eclipses they were hampered by the fact that an eclipse may be visible in one place and not in another.

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The statement that everything is made of water is to be regarded as a scientific hypothesis, and by no means a foolish one. Twenty years ago, the received view was that everything is made of hydrogen, which is two thirds of water.

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Anaximander, the second philosopher of the Milesian school,

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He held that all things come from a single primal substance, but that it is not water, as Thales held, or any other of the substances that we know. It is infinite, eternal and ageless, and 'it encompasses all the worlds' — for he thought our world only one of many.

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The thought which Anaximander is expressing seems to be this: there should be a certain proportion of fire, of earth, and of water in the world, but each element (conceived as a god) is perpetually attempting to enlarge its empire. But there is a kind of necessity or natural law which perpetually redresses the balance; where there has been fire, for example, there are ashes, which are earth. This conception of justice—of not overstepping eternally fixed bounds—was one of the most profound of Greek beliefs. The gods were subject to justice just as much as men were, but this supreme power was not itself personal, and was not a supreme God.

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The worlds were not created, as in Jewish or Christian theology, but evolved. There was evolution also in the animal kingdom. Living creatures arose from the moist element as it was evaporated by the sun. Man, like every other animal, was descended from fishes. He must be derived from animals of a different sort, because, owing to his long infancy, he could not have survived, originally, as he is now.

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He held that the earth is shaped like a cylinder.

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Anaximenes,

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The Milesian school is important, not for what it achieved, but for what it attempted.

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The next stage in Greek philosophy, which is associated with the Greek cities in southern Italy, is more religious, and, in particular, more Orphic—in some ways more interesting, admirable in achievement, but in spirit less scientific than that of the Milesians.

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Pythagoras, whose influence in ancient and modern times is my subject in this chapter, was intellectually one of the most important men that ever lived, both when he was wise and when he was unwise.

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Mathematics, in the sense of demonstrative deductive argument, begins with him,

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Pythagoras is one of the most interesting and puzzling men in history.

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He may be described, briefly, as a combination of Einstein and Mrs Eddy.

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In the society that he founded, men and women were admitted on equal terms; property was held in common, and there was a common way of life. Even scientific and mathematical discoveries were deemed collective, and in a mystical sense due to Pythagoras even after his death.

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It might seem that the empirical philosopher is the slave of his material, but that the pure mathematician, like the musician, is a free creator of his world of ordered beauty.

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So much by way of explanation of the two aspects of Pythagoras: as religious prophet and as pure mathematician. In both respects he was immeasurably influential, and the two were not so separate as they seem to a modern mind.

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Pythagoras, as everyone knows, said that 'all things are numbers'. This statement, interpreted in a modern way, is logically nonsense, but what he meant was not exactly nonsense.

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He presumably thought of the world as atomic, and of bodies as built up of molecules composed of atoms arranged in various shapes.

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In this way he hoped to make arithmetic the fundamental study in physics as in aesthetics.

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The influence of geometry upon philosophy and scientific method has been profound. Geometry, as established by the Greeks, starts with axioms which are (or are deemed to be) self-evident, and proceeds, by deductive reasoning, to arrive at theorems that are very far from self-evident. The axioms and theorems are held to be true of actual space, which is something given in experience. It thus appeared to be possible to discover things about the actual world by first noticing what is self-evident and then using deduction.

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When the Declaration of Independence says 'we hold these truths to be self-evident', it is modelling itself on Euclid. The eighteenth-century doctrine of natural rights is a search for Euclidean axioms in politics.

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Mathematics is, I believe, the chief source of the belief in eternal and exact truth, as well as in a

super-sensible intelligible world. Geometry deals with exact circles, but no sensible object is exactly circular; however carefully we may use our compasses, there will be some imperfections and irregularities. This suggests the view that all exact reasoning applies to ideal as opposed to sensible objects; it is natural to go further, and to argue that thought is nobler than sense, and the objects of thought more real than those of sense-perception.

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I do not know of any other man who has been as influential as he was in the sphere of thought. I say this because what appears as Platonism is, when analysed, found to be in essence Pythagoreanism. The whole conception of an eternal world, revealed to the intellect but not to the senses, is derived from him. But for him, Christians would not have thought of Christ as the Word; but for him, theologians would not have sought logical proofs of God and immortality. But in him all this is still implicit. How it became explicit will appear as we proceed.

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Now almost all the hypotheses that have dominated modern philosophy were first thought of by the Greeks; their imaginative inventiveness in abstract matters can hardly be too highly praised. What I shall have to say about the Greeks will be said mainly from this point of view; I shall regard them as giving birth to theories which have had an independent life and growth, and which, though at first somewhat infantile, have proved capable of surviving and developing throughout more than two thousand years.

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The Greeks contributed, it is true, something else which proved of more permanent value to abstract thought: they discovered mathematics and the art of deductive reasoning. Geometry, in particular, is a Greek invention, without which modern science would have been impossible.

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But in connection with mathematics the one-sidedness of the Greek genius appears: it reasoned deductively from what appeared self-evident, not inductively from what had been observed. Its amazing successes in the employment of this method misled not only the ancient world, but the greater part of the modern world also. It has only been very slowly that scientific method, which seeks to reach principles inductively from observations of particular facts, has replaced the Hellenic

belief in deduction from luminous axioms derived from the mind of the philosopher.

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When an intelligent man expresses a view which seems to us obviously absurd, we should not attempt to prove that it is somehow true, but we should try to understand how it ever came to seem true. This exercise of historical and psychological imagination at once enlarges the scope of our thinking, and helps us to realize how foolish many of our own cherished prejudices will seem to an age which has a different temper of mind.

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Mortals deem that gods are begotten as they are, and have clothes like theirs, and voice and form ... yes, and if oxen and horses or lions had hands, and could paint with their hands, and produce works of art as men do, horses would paint the forms of gods like horses, and oxen like oxen, and make their bodies in the image of their several kinds. ... The Ethiopians make their gods black and snub-nosed; the Thracians say theirs have blue eyes and red hair.'

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The doctrine that everything is in a state of flux is the most famous of the opinions of Heraclitus, and the one most emphasized by his disciples, as described in Plato's Theaetetus. 'You cannot step twice into the same river; for fresh waters are ever flowing in upon you.'³ 'The sun is new every day.'

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His words, like those of all the philosophers before Plato, are only known through quotations, largely made by Plato and Aristotle for the sake of refutation. When one thinks what would become of any modern philosopher if he were only known through the polemics of his rivals, one can see how admirable the pre-Socratics must have been, since even through the mist of malice spread by their enemies they still appear great.

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The search for something permanent is one of the deepest of the instincts leading men to philosophy. It is derived, no doubt, from love of home and desire for a refuge from danger; we find,

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accordingly, that it is most passionate in those whose lives are most exposed to catastrophe. Religion seeks permanence in two forms, God and immortality.

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Philosophically inclined mystics, unable to deny that whatever is in time is transitory, have invented a conception of eternity as not persistence through endless time, but existence outside the whole temporal process. Eternal life, according to some theologians, for example, Dean Inge, does not mean existence throughout every moment of future time, but a mode of being wholly independent of time, in which there is no before and after, and therefore no logical possibility of change.

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The doctrine of the perpetual flux, as taught by Heraclitus, is painful, and science, as we have seen, can do nothing to refute it. One of the main ambitions of philosophers has been to revive hopes that science seemed to have killed. Philosophers, accordingly, have sought, with great persistence, for something not subject to the empire of Time. This search begins with Parmenides.

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The Greeks were not addicted to moderation, either in their theories or in their practice. Heraclitus maintained that everything changes: Parmenides retorted that nothing changes.

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The essence of this argument is: When you think, you think of something; when you use a name, it must be the name of something. Therefore both thought and language require objects outside themselves. And since you can think of a thing or speak of it at one time as well as at another, whatever can be thought of or spoken of must exist at all times. Consequently there can be no change, since change consists in things coming into being or ceasing to be.

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This is the first example in philosophy of an argument from thought and language to the world at large.

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This whole argument shows how easy it is to draw metaphysical conclusions from language, and how the only way to avoid fallacious arguments of this kind is to push the logical and psychological study of language further than has been done by most metaphysicians.

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philosophical theories, if they are important, can generally be revived in a new form after being refuted as originally stated. Refutations are seldom final; in most cases, they are only a prelude to further refinements.

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What subsequent philosophy, down to quite modern times, accepted from Parmenides, was not the impossibility of all change, which was too violent a paradox, but the indestructibility of substance.

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The mixture of philosopher, prophet, man of science, and charlatan which we found already in Pythagoras, was exemplified very completely in Empedocles,

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His most important contribution to science was his discovery of air as a separate substance. This he proved by the observation that when a bucket or any similar vessel is put upside down into water, the water does not enter into the bucket.

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He also discovered at least one example of centrifugal force: that if a cup of water is whirled round at the end of a string, the water does not come out.

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He knew that there is sex in plants, and he had a theory (somewhat fantastic, it must be admitted) of evolution and the survival of the fittest.

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As regards astronomy: he knew that the moon shines by reflected light, and thought that this is also true of the sun; he said that light takes time to travel, but so little time that we cannot observe it; he knew that solar eclipses are caused by the interposition of the moon, a fact which he seems to have learnt from Anaxagoras.

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It was he, as already mentioned, who established earth, air, fire, and water as the four elements (though the word 'element' was not used by him).

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The most famous passage in Plato, in which he compares this world to a cave, in which we see only shadows of the realities in the bright world above, is anticipated by Empedocles; its origin is in the teaching of the Orphics.

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The originality of Empedocles, outside science, consists in the doctrine of the four elements, and in the use of the two principles of Love and Strife to explain change.

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The greatness of Athens begins at the time of the two Persian wars (490 B.C. and 480–79 B.C.).

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The victory of Athens against the Persian king Darius at Marathon (490), and of the combined Greek fleets against his son and successor Xerxes (480) under Athenian leadership, gave Athens great prestige.

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Athens became rich, and prospered under the wise leadership of Pericles, who governed, by the free choice of the citizens, for about thirty years, until his fall in 430 B.C.

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The age of Pericles was the happiest and most glorious time in the history of Athens.

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The achievements of Athens in the time of Pericles are perhaps the most astonishing thing in all history.

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In philosophy, Athens contributes only two great names, Socrates and Plato. Plato belongs to a somewhat later period, but Socrates passed his youth and early manhood under Pericles.

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It was possible in that age, as in few others, to be both intelligent and happy, and happy through intelligence.

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Both Aristotle and the Platonic Socrates complain that Anaxagoras, after introducing mind, makes very little use of it.

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It was he who first explained that the moon shines by reflected light, though there is a cryptic fragment in Parmenides suggesting that he also knew this.

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Anaxagoras gave the correct theory of eclipses, and knew that the moon is below the sun. The sun and stars, he said, are fiery stones, but we do not feel the heat of the stars because they are too distant. The sun is larger than the Peloponnesus.

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The founders of atomism were two, Leucippus and Democritus

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Democritus was a contemporary of Socrates and the Sophists, and should, on purely chronological grounds, be treated somewhat later in our history.

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Their point of view was remarkably like that of modern science, and avoided most of the faults to which Greek speculation was prone. They believed that everything is composed of atoms, which are physically, but not geometrically, indivisible; that between the atoms there is empty space; that atoms are indestructible; that they always have been, and always will be, in motion; that there are an infinite number of atoms, and even of kinds of atoms, the differences being as regards shape and size.

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It was common in antiquity to reproach the atomists with attributing everything to chance. They were, on the contrary, strict determinists, who believed that everything happens in accordance with natural laws. Democritus explicitly denied that anything can happen by chance.

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The theory of the atomists, in fact, was more nearly that of modern science than any other theory propounded in antiquity.

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The atomists, unlike Socrates, Plato, and Aristotle, sought to explain the world without introducing the notion of purpose or final cause. The 'final cause' of an occurrence is an event in the future for the sake of which the occurrence takes place.

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Until the Sophists, no philosopher seems to have doubted that a complete metaphysic and

cosmology could be established by a combination of much reasoning and some observation. By good luck, the atomists hit on a hypothesis for which, more than two thousand years later, some evidence was found, but their belief, in their day, was none the less destitute of any solid foundation.

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We may put the Parmenidean position in this way: 'You say there is the void; therefore the void is not nothing; therefore it is not the void.'

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Leibniz, on somewhat different grounds, also believed in the plenum, but he maintained that space is merely a system of relations.

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As regards space, the modern view is that it is neither a substance, as Newton maintained, and as Leucippus and Democritus ought to have said, nor an adjective of extended bodies, as Descartes thought, but a system of relations, as Leibniz held.

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Moreover the modern view cannot be stated except in terms of differential equations, and would therefore be unintelligible to the philosophers of antiquity.

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Democritus worked out his theories in considerable detail, and some of the working-out is interesting. Each atom, he said, was impenetrable and indivisible because it contained no void. When you use a knife to cut an apple, the knife has to find empty places where it can penetrate; if the apple contained no void, it would be infinitely hard and therefore physically indivisible. Each atom is internally unchanging, and in fact a Parmenidean One. The only things that atoms do are to move and hit each other, and sometimes to combine when they happen to have shapes that are capable of interlocking.

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There are many worlds, some growing, some decaying; some may have no sun or moon, some several. Every world has a beginning and an end. A world may be destroyed by collision with a larger world.

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There was no purpose in the universe; there were only atoms governed by mechanical laws.

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Democritus—such, at least, is my opinion—is the last of the Greek philosophers to be free from a certain fault which vitiated all later ancient and medieval thought.

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They were interested in everything—meteors and eclipses, fishes and whirlwinds, religion and morality; with a penetrating intellect they combined the zest of children.

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it was not until the Renaissance that philosophy regained the vigour and independence that characterize the predecessors of Socrates.

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What was called democracy did not touch the institution of slavery, which enabled the rich to enjoy their wealth without oppressing free citizens.

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It is said that he taught a young man on the terms that he should be paid his fee if the young man won his first law-suit, but not otherwise, and that the young man's first law-suit was one brought by Protagoras for recovery of his fee.

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and his doctrines are discussed seriously in the Theaetetus. He is chiefly noted for his doctrine that 'Man is the measure of all things, of things that are that they are, and of things that are not that they are not.' This is interpreted as meaning that each man is the measure of all things, and that, when men differ, there is no objective truth in virtue of which one is right and the other wrong.

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one opinion can be better than another, though it cannot be truer.

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Plato objects—somewhat snobbishly, according to modern notions—to the Sophists' practice of charging money for instruction. Plato himself had adequate private means, and was unable, apparently, to realize the necessities of those who had not his good fortune. It is odd that modern professors, who see no reason to refuse a salary, have so frequently repeated Plato's strictures.

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A stupid man's report of what a clever man says is never accurate, because he unconsciously translates what he hears into something that he can understand.

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The Apology gives a clear picture of a man of a certain type: a man very sure of himself, high-minded, indifferent to worldly success, believing that he is guided by a divine voice, and persuaded that clear thinking is the most important requisite for right living. Except in this last point, he resembles a Christian martyr or a Puritan.

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The Platonic Socrates consistently maintains that he knows nothing, and is only wiser than others in knowing that he knows nothing; but he does not think knowledge unobtainable. On the contrary, he thinks the search for knowledge of the utmost importance. He maintains that no man sins wittingly, and therefore only knowledge is needed to make all men perfectly virtuous.

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The close connection between virtue and knowledge is characteristic of Socrates and Plato. To some degree, it exists in all Greek thought, as opposed to that of Christianity. In Christian ethics, a pure heart is the essential, and is at least as likely to be found among the ignorant as among the learned. This difference between Greek and Christian ethics has persisted down to the present day.

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Dialectic, that is to say, the method of seeking knowledge by question and answer, was not invented by Socrates

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The dialectic method is suitable for some questions, and unsuitable for others.

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Some matters are obviously unsuitable for treatment in this way—empirical science, for example.

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Socrates, in Plato's works, always pretends that he is only eliciting knowledge already possessed by the man he is questioning; on this ground, he compares himself to a midwife. When, in the *Phaedo* and the *Meno*, he applies his method to geometrical problems, he has to ask leading questions which any judge would disallow.

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The matters that are suitable for treatment by the Socratic method are those as to which we have already enough knowledge to come to a right conclusion, but have failed, through confusion of thought or lack of analysis, to make the best logical use of what we know.

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But when our inquiry is concluded, we have made only a linguistic discovery, not a discovery in ethics.

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We can, however, apply the method profitably to a somewhat larger class of cases. Wherever what is being debated is logical rather than factual, discussion is a good method of eliciting truth.

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Logical errors are, I think, of greater practical importance than many people believe; they enable their perpetrators to hold the comfortable opinion on every subject in turn. Any logically coherent body of doctrine is sure to be in part painful and contrary to current prejudices. The dialectic method—or, more generally, the habit of unfettered discussion—tends to promote logical consistency, and is in this way useful.

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Sparta had a double effect on Greek thought: through the reality, and through the myth. Each is important. The reality enabled the Spartans to defeat Athens in war; the myth influenced Plato's political theory, and that of countless subsequent writers.

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The sole business of a Spartan citizen was war, to which he was trained from birth.

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everything else was sacrificed to success in war, and Sparta ceased to have any part whatever in what Greece contributed to the civilization of the world.

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the armies of Rome that made these things important. The Greeks, though admirable fighters, made few conquests, because they expended their military fury mainly on each other.

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The problem of finding a collection of 'wise' men and leaving the government to them is thus an insoluble one. That is the ultimate reason for democracy.

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Before philosophy began, the Greeks had a theory or feeling about the universe, which may be called religious or ethical. According to this theory, every person and every thing has his or its appointed place and appointed function. This does not depend upon the fiat of Zeus, for Zeus himself is subject to the same kind of law as governs others. The theory is connected with the idea of fate or necessity. It applies emphatically to the heavenly bodies. But where there is vigour, there is a tendency to overstep just bounds; hence arises strife. Some kind of impersonal super-Olympian law punishes hubris, and restores the eternal order which the aggressor sought to violate.

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Justice, we are told, consists in every man doing his own job. But what is a man's job? In a State which, like ancient Egypt or the kingdom of the Incas, remains unchanged generation after generation, a man's job is his father's job, and no question arises.

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Although all the rulers are to be philosophers, there are to be no innovations: a philosopher is to be, for all time, a man who understands and agrees with Plato.

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the ideals of its creator. Let us consider, for a moment, what we can mean by 'ideals'. In the first place, they are desired by those who believe in them; but they are not desired quite in the same way as a man desires personal comforts, such as food and shelter. What makes the difference between an 'ideal' and an ordinary object of desire is that the former is impersonal; it is something having (at least ostensibly) no special reference to the ego of the man who feels the desire, and therefore capable, theoretically, of being desired by everybody. Thus we might define an 'ideal' as something desired, not egocentric, and such that the person desiring it wishes that every one else also desired it.

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Yet, if there is nothing further, an ethical disagreement can only be decided by emotional appeals, or by force—in the ultimate resort, by war.

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He proclaims emphatically that 'justice is nothing else than the interest of the stronger'.

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Is there any standard of 'good' and 'bad', except what the man using these words desires?

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At this point, religion has, at first sight, a simple answer. God determines what is good and what bad; the man whose will is in harmony with the will of God is a good man. Yet this answer is not quite orthodox. Theologians say that God is good, and this implies that there is a standard of goodness which is independent of God's will.

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'There is no question of proving or disproving; the only question is whether you like the kind of State that Plato desires. If you do, it is good for you; if you do not, it is bad for you. If many do and many do not, the decision cannot be made by reason, but only by force, actual or concealed.'

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This combination of the logic of Parmenides with the other-worldliness of Pythagoras and the Orphics produced a doctrine which was felt to be satisfying to both the intellect and the religious emotions; the result was a very powerful synthesis, which, with various modifications, influenced most of the great philosophers, down to and including Hegel.

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Our question is: What is a philosopher? The first answer is in accordance with the etymology: a philosopher is a lover of wisdom. But this is not the same thing as a lover of knowledge, in the sense in which an inquisitive man may be said to love knowledge; vulgar curiosity does not make a philosopher. The definition is therefore amended: the philosopher is a man who loves the 'vision of truth'. But what is this vision?

He himself, at a later date, began to see this difficulty, as appears in the *Parmenides*, which contains one of the most remarkable cases in history of self-criticism by a philosopher.