Atomism, Ancient and Modern

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Atomicism - Ancient & Modern.

Many doctrines of Stoicism have come down to us from the Greeks. As truth or may not say the philosophy of antiquity and the philosophy of the Hellenes are identical.

This so-called Oriental Philosophy is an intermixture flooded with religious notions that it is scarcely possible to separate them. To speak of the Doctrines of Confucius of the Hindus and out of their religion and form their pantheistic conception of the world generated a multitude of divinities. Of the Vedas which have been invaluable as a means of ascertaining the beliefs and doctrines of the ancient far away people. Later on the attempts to take with non-caste Buddhism. Porous as founder of the Persian religion is another element in this oriental world of philosophers. Of them all however the Existential one the first and only one who can be said to have exercised any influence on the Greek thinkers. Herodotus claims that the doctrine of transmigration of souls originating with the Egyptians was conveyed to the Pythagorean school. It is probable however that the Greeks were influenced much more by direct scientific knowledge, particularly Astronomy, than by this doctrine of Transmigration.
But how much in this oriental world will
answer to the name of philosophy? At the
distant day so far removed from their ancient
age, even though diligent investigation has
been made into their modern times, it incomplete
and uncertain is our knowledge that our
earliest presentations can be as new to
make.

The true philosophy, however, of wisdom has been so variously applied that
it would be impossible to define it in such
a way as to embrace the usage of different
authors of different ages. Perhaps the most
usual and commonly accepted definition is
"philosophy is the science of principles." This
thought may never be clearly clear by a
little investigation. Philosophy is a science
included under the general division of
science; has the same subject matter to deal
with, the same world of nature spread out
before it, within which its functions must
and does lie. In this instance it differs
from the ordinary sciences. It has no specific
or limited problem with which to be occupied;
the special sciences have covered the whole
ground. How philosophy claims to be the science
of the whole, but having gained from the dif-
ferent sciences the knowledge of the facts that
is there left for philosophy? A this is again
have to answer that philosophy is not occupied


with the whole all the sciences as the sum of all their parts; but with the nature of the whole of every thing that actually exists. The dependence of science upon philosophy is a mutual one. It is as the restricted realm is apt to lose sight of the whole in its special study, so one of the facts, philosophy concerns, shows the relations existing between these facts one to another and to the whole. As the one hand, then, we may say science furnishes philosophy with the matter and philosophy constitutes itself as the critic of the sciences. It is in this connection that we can readily understand the definition as stated above. "Philosophy is the science of principles."

Among the Socratic Plato is the first who uses the word "philosophy" philosophically, with any thing of its restricted meaning. The word does not mean wise man, or scholar, at all. Later writers use it in its modern meaning. The confusion is first found in Xenodochus, explaining however the "pursuit of knowledge." The difference between the "wise man" and "man of wisdom" appears first in Plato's writings. Socrates, who calls himself a laborious in philosophy, describes all wisdom as belonging to God, while to man it belongs to a kind of wisdom. According to Plato, wisdom is true knowledge, and true philosophy, the task of acquiring this knowledge. He says a true philosopher tells
his reflections on that, which we each can really exist and is able to apprehend the eternal and immutable.

We find in Aristotle a double use of which philosophy is used, a trace of which occurred in Socrates and Plato. The broader significance is science in general and includes mathematics, physics, and ethics. But the other meaning, which he dwells on as preeminent, the science of the philosopher and, even said, is the science which considers the principles of everything that exists: as matter, form, cause and end of anything, the science of being as such, which is now known as Metaphysics.

Aristotle's great work in the field of science and philosophy he has gained the appellation of "First Philosophy."

Later as the range of knowledge increased the sciences as such were standardized to degree to the scientific specialist and "philosophy" became restricted to inquiries grouped under metaphysics or "First Philosophy."

Before coming to the founders of the Atomistic School of Philosophy there are several systems you earlier date to which we may here only give passing attention. The characteristic of the whole period from Plato to the Atomists (inclusive) is the direction of philosophical inquiry toward the Universe of Nature. He was indebted to Dr. Berkeley for the divine
of the period which we are about to make use of in this brief sketch. The first division of this period includes the ancient Greek natural philosophers who directed their attention to the study of sensible phenomena and enquiring after the material principle of things and the manner of their generation and decay; for them, matter was itself living and physically endowed. The second division includes the Pythagoreans who sought for a principle of things which should account for their form and substance and found it in number and figure. The third division, the Eleatic school, in the unity and immutability of being. The fourth division, or later natural philosophers, partook of the doctrine of the Eleatic philosophers and its part of the earlier natural philosophers, these two systems which were as contradictory to each other. They admitted the Eleatic doctrine of the immutability of being but affirmed with the earlier school, its plurality and explained it as due to the combination or reversal of immanent, primitive elements.

Thales who bears the title of original Greek philosophy belongs to the first school mentioned above together with Xenophanes, Anaximander, and Herodotus. These earlyIonians started with a single form of matter and explained the present order of things as resulting from progressive changes. Thales supposed the
The central thought of the Pythagorean philosophy is the idea of number. According to Aristotle, the Pythagoreans considered the principles of numbers themselves the substance of things that number is the essence of everything. Just as number definitely separates unity from another, so without this limitation while number binds the world would be reduced to chaos. Then for number is the principle of order. From this idea arose the famous theory of the harmony of the sphere. This includes the Universe, and the theory of the 'counter-earth' as curious as they seem, need but slight modifications to bring them up to the modern theory. The doctrine of the transmigration of souls has been already alluded to in connection with the Egyptians, At the same time as confidently allows Pythagoreans to have justified this doctrine from the Egyptians in his travels, still there is little doubt that many conjectures were formed. In the philosophers' life in which lies the self-saved travel.

After the Eleatic group of philosophers, etc.
Xenophanes, Parmenides, and Zeno of Elea (from which the school took its name) according to Aristotle is the Abst active thinker. At the foundation of their philosophy lay the doctrine of complete separation and positive thought and sense. True knowledge is attainable by thought alone. Our ears are continually deceiving us by appearances of things which are true. And by changing our thought, shows we think appearances are contradictory and false. Only being exists, not-being is not. Hence there is no creation for being can not arise out of non-being. Neither can there be change except in appearance for a thing can not arise from what is different from it. Thus true is the thought of unity and immutability of being, the great truth as established by the Zoroastrians. This is 'all is one', eternal, unchangeable. Zeno, a disciple and defender of the doctrine of Parmenides is famous for his arguments against the veracity of sensory perception. He sought to show by various demonstrations that sense was contradictory and contradictory itself. Against sense he directs the following argument: If a single grain of corn in falling causes not to break, you can not hear a whole measure of it when it falls; for the sound of the whole measure is only made up of the sound of each grain.

The later 'Natural Philosophers' believed
in the immutability of being, but unlike the Eleatics assumed a plurality of substances. They explained all development and change as a process of creating or destroying from a change in the relations of these substances to one another. For instance Empedocles traced this change of relations on two ideal principles: love and hate; love acting as a uniting and hate as a separating force. Indeed at one period all heterogeneous elements are separated from each other by hate; at another they are completely united by love. According to him, generation and decay is never absolute. Nothing that has once existed can exist now, neither can anything existing now be annihilated. The origination and destruction is only apparent and results from the continuous going and returning of elements. The four fundamental elements or "roots" of things—fire, air, water, and earth—alone remain unchanged in all mixture and reformation.

During the process of the development of the earth plants first sprang from, then came the animals. In the formation of the latter their different parts first forced themselves independently and then were joined by love. As a result of their combination arose various monstrosities, which perished. Those combinations which formed the requisites for existence, viz.: means of nourishment, propagation and self-defense continued to exist.

Once upon a second representation of
this school instead of the four elements of Euclid, to assume the existence of an infinite number of elementary and original substances, which originally existed in a mixture devoid of all order. The divine mind afterwards brought them into a state of order and from chaos formed the world. Everything that has parts which are inherent in a god and with the whole over its existence, according to Acuraymares, is the coming together of those parts which had existed from the beginning. The combination of homogeneous parts is, according to him, that which brings about what is called becoming or generation, and the separation of those parts is what is called destruction. Again, Acuraymares differ from Euclid, who according to the shaping force of the world not to be the power of love but that of a world ordaining mind. Midway between Euclid, and Acuraymares came, the Acuraymares who made an advance upon Euclid by assuming a single ultimate matter, made up of indivisible particles, which possessed each a variety of shapes that every sort of combination could be made with these. On the other hand, however, they fell far behind Acuraymares in a philosophic conception of moving causes, appealing to the law of necessity while the latter defended upon the all-knowing mind of reason.
and Democritus. Of these former little is known. It is even uncertain that he wrote anything himself. Although Aristotle speaks concerning his opinion, he commonly names him in connexion with Democritus. And it is possible his information was derived from the writings of his pupil, Democritus.

Democritus of Abdera was born about 460 B.C. and is said to have died at the age of ninety years (according to others one hundred and five years). During his life he travelled extensively, Egypt and the Orient being among the places visited by him. According to a story of the Ancients he is said to have done, that he put out his eyes in order that he might not be diverted from his meditations. Plato treated his materialistic doctrines with contempt, and desired that his writings should be burned. Aristotle speaks of him with respect and Cicero greatly prized his style of writing.

The first principle concerning this philosophy was the 'full,' and the 'void' or matter and the spaces devoid of matter. The 'full' was identified with being of something, while the 'void' signified not-being or nothing. The latter must be considered to have existence equally with the former. New beingness as well as being, which is in direct contradiction to the Eleatics, was asserted—only being exists, nothing is not. Matter is absolute.
of indivisible, unperishable particles which are alike in substance and can only be distinguished from one another by their force, position and arrangement. Third, primitive particles they call 'Atmes.' They are continually in motion, at the invisible, such as they proceed might this motion is naturally downward in a straight line. The atoms themselves are changeless but there are infinite combinations in which they enter, every one of which contains also the void; for the Atmes are the only solid, and in order to have this motion, there must be space 'void' for the Atmes to move about in.

Of all the materialistic explanations of the Universe the theory of Democritus has held the most permanent place in philosophical thought. In consequence of his near ceasing motion the things of today are continually passing away to give place to the things of tomorrow. The world is coming into existence and old ones dissolving back into the atoms from which they came.

As the Atmes move downward through infinite space, the heavier ones gain upon the lighter and soon partake their acid, and thus there is one side. This lateral motion necessitates new combinations from which entanglement follows; then variety of motion gives the whirling movement. The Spheres at first small receive constant additions from the falling particles and eventually
a world is produced. Our world came about in just such a way. As the atoms became settled, the heavier drew closer together and formed the earth. Of the lighter ones which were thrown off from the earth, the very lightest formed an enveloping circular shield; while those having more weight formed the heavenly bodies which took their place as they passed through the air. The earth which at first was coloring about in now stationary having crowded out some small round particles which filled the hollows, thus making the sea. The shape of the earth is that of a flat cylinder.

In all this process the formation of the different elements of our world resulted from the law of necessity. There was none left for the parts to play a part in the system of Deucritus. Going further toward this, the plants and the animals, as the philosopher stated, arose from the earth while it was still fresh and moist. To get a better idea from his general statement, that by the motion of the atoms the mold was produced with all that it contains.

Deucritus revered man as the highest with nature. His body is sustained by food and drink, but the soul lives by inhaling and exhaling evil atoms from the air. These atoms that make the evil are small, smooth and round, and are distributed through...
out the body as its animating force. In certain parts of the body there seems to be a "concentration of soul." The brain is the seat of thought, the heart of anger, the liver of desire.

The Stoic theory of perception was as follows. These films are continually passing off from the surface of things, thereby images are produced which enter the organs of sense and give rise to sensation. Thought is immediately produced which is due merely to a change among the evil atoms when coming in contact with something outside the body. The source of all knowledge is asserted to be sensation. Still the senses do not reveal truly the outside world. Hence follows their skeptical utterance: "There is nothing true, and if there is we do not know it," and "We know nothing, not even if there is anything to know." Solonocrates himself rejected all ideas about the reality of things, and particularly those of Epicurus. Solonocrates placed this "common sense" in a negative happiness, the tranquility of mind, the absence of
torment and suffering. A passive rather than an active state.

It is found it necessary in order to understand the past played up the world of philosophy by the Ostracists and their relations to various systems to trace some of what has become the principal phases of early Greek speculation. We again find something of the same necessity in dealing with Epicureanism, that system which derived its name from Epicurus. Only we may say that this necessity is a more urgent one than in the case of the Early Atheists. While the latter men great original thinkers in philosophy, the Epicureans, while Epicurus left his mark, were chiefly forward men.

In leaving the Ostracists we come to a new division of Greek philosophy. The tendency hitherto has been toward the divine or the divine. The attention of philosophers is now to be directed to the problem of nature.

Socrates marks the epoch of this development. During the prevalence of the sophists, the imaginary theories of the Eleatic and other schools concerning the Cosmos had been discovered to be unreal and fantastic. The subject was left by them in utter confusion and Socrates forthwith it as a hopeless problem to direct his attention to human relations and the duties consequent to them. Socrates can hardly be called a philosopher, but rather a teacher.
or better still an educator. His theory was formed from the study of previous philosophers, and though not a philosopher himself, his practice became the basis of several subsequent schools of philosophy. One pays a high price to be called a philosopher down from the heavens to earth and introduced it into the cities and houses of men, compelling men to inquire concerning life and its ways and things good and evil. The main problem for discovering for Socrates was not the problem which he introduced into his peculiarly Socratic conversations regarding the nature of virtue. The only knowledge attainable and therefore to be sought after is Virtue. Only as he can not conceive a man knowing good and doing evil, he achieves that evil is knowledge and virtue is knowledge. Knowledge, virtue, and happiness he held to be indissociable. Accordingly each precept that Socrates recommended should be obeyed because it will ensure the happiness and comfort of the individual. He believed in the laws and morals as revealed only in the works of the Deity who regulated and harmonized the world, and is a divine preservation of the soul. While Socrates rejected the pursuit of knowledge and then for having claimed to be regarded as the founder of a philosophic school, his followers had insisted that from his teachings which became the originatio
in-full towards systematic philosophy. But the generation of Socrates was incapable of fully grasping this. Accordingly those of his associates whose minds permitted a turn for speculative took several from his teachings that which was more permissible to their mind while not exiting their tastes. Nevertheless, I, several scholars of philosophy look back to Socrates as forming the basis of their systems. Stoics such as Chrysippus and Antisthenes, the Cynics, and Euclides the Megarian, as well as other Socrates, took great fondness at a single phrase if his doctrine and because founders of schools of distinction characterize. They are often spoken of as the "incomplete Socrates" to distinguish them from Plato who accepted the whole of the Socratic teaching and proceeded to construct a system which he conceived as harmonizing with the doctrines of his teacher. The Cynics, in particular, from the Socratic doctrine as a starting point developed theories not only distinction but also dialectically opposed to each other. The Cynics built on the "Virtue" of Socrates and, in accordance with the rugged scenery Aristotle was the light pleasure, laid down a liberal rule of actions that imitated all the asceticism of their master. The Cynics on the other hand emphasized the doctrine of happiness. Chrysippus had his own theories concerning the glean-
moral of life and interpreted the ethical doctrine of Socrates in accordance with it. He makes happiness the sole aim of life, and man's duty to secure the pleasures of the moment. He, however, holds that in this search for happiness reason must always be employed.

From these three incomplete Socratic Schools later sprang three other schools. The Cynic giving rise to the Stoics, the Cyrenaic to the Epicurean, and the Megarian to the Sceptics.

Society during this later period had degenerated. Greece had been haggard, and was now crouching in decline. Still the great gildings of Socrates were discussed more than ever. Happiness fell to the lot of none, a fact which all agreed must be a consequence of the unfortunate condition of man. Philosophy aimed at freeing about harmony between man and his surroundings. The Stoics believed that this was accomplished by making mind superior to matter and observed an attitude of absolute indifference to all external things. Virtue is sufficient for happiness. By virtue was meant life conducted in nature in perfect agreement with the divine will.

The Epicureans going in exactly the opposite direction, founded their system on that of the Cyrenaics. Happiness is synonymous with pleasure. In order to decide which
the performance of an action is pleasurable or not, the results that must necessarily follow it must be carefully considered and the question decided according to the predominance of pleasure or pain resulting from it.

Once pleasure is the object to be considered, many pains would be rejected as leading to a greater happiness. While on the other hand, many a pleasure would be rejected as resulting in pain. The virtuous man is the one who is able to proceed in the right way in his search for pleasure.

The third view that philosophy took during this period is that of the sceptics, who believed that all the questions and troubles moral came from accepting these groundless theories. Many of these asserted the uncertainty of every thing, while others withheld their judgments in all cases of dispute, seeking by avoiding to secure peace of mind.

But this later group of philosophers the Cynics and in particular are among the pre-Socratic philosophers the Atomists most form have said that Epicurus was no great originator in the field of philosophy and to them two schools is traced much of the so-called Epicurean Philosophy. According to Epicurus the only "act" that is really important is that which, if one were to act in such a way, life would be the best possible life.
With this practical end in view we are not surprised that while he accepted the usual threefold division of philosophy into Logic, Physics, and Ethics, the first two should be made entirely subordinate factors. He was interested in Logic only as an element introducing Physics, and Physics by coincident as existing entirely for Ethics, and being necessary in order to find new forms of speculation.

Epicurus once said in considering Natural Science was to obtain such a view of nature as would dispense with the aid of supernatural interventions. Hence he his whole development see them but accepts or rather supposes as possible any ideas which will do away with the resistance of the gods. This fact may be best presented to our minds by the following quotation of Pellew: "Possibly the world shall move and possibly it may be at rest. Possibly it may be round to thee it may be triangularly or have any other shape. Possibly the sun by the stars may be extinguished at setting and be lighted afresh at the rising: it is how ever practically possible that they may only disappear beneath the earth. I reappears again, or that their rising and setting may be due to yet other causes." From this he appears to have free accord favourer by hatred of religion than love of natural law.

From Epicurus' dislike and positive
ignorance of science it is quite natural that he should have relied on some older views adapted to carry out his views of ethics. The Atomic theory of Democritus especially commended itself to him. The old physicists and ethicians had however undergone extensive and considerable modifications.

Democritus assumes that the atoms are an infinite number of shapes also that they are small as to be comprehended by the mind. These two statements Epicurus at once perceived to be inconsistent with each other. No modification suffices then for a limited number of shapes but an infinite number of atoms of each shape. He also sees the impossibility of the heavy atoms, as Democritus asserted, overcoming the lighter ones in their downward motion. If in a vacuum all bodies must fall equally fast. He attributes their contact to a dextrum aside the atoms from their straight downward path and that this reversing motion is caused by a force inherent in the atoms.

It would be impossible here to enter into the origin and arrangement of the universe as proposed by Epicurus from the very conflicting theories which he accepted and his apparent carelessness as to their truth. His assertion that these heavenly bodies are as larger than they appear to us and may indeed be smaller is a startling declaration of his
own ignorance. He also makes the statement that the earth is supported by the air and
remains at rest in the middle of the world, which is impossible since he accepts the weight
of bodies as another element in his theory. Con-trary to the atomists Epieicus believed in the
existence of gods but denied them any connec-
tion with the affairs of mortals.

The system of Epieicus also forced cer-
tain differences from the Cynic form. Like them
he believed that happiness was the thing to be sought
for, but differed from these regarding the fac-
tors of it. While Epicurus regarded the great-
lest pleasure of the moment as the ideal of
happiness, Epicurus strived for a system of
morals which shall teach men how to ob-
tain happiness for the whole lifetime. The
persuasion which the Cynics felt, due
to the fact of the preponderance of evil over
the world, of good and of pleasure, was also provid-
ad against by Epicurus again revived the principle
of Socrates that virtue is inseparable from true
pleasure. He would teach that to be rational
and miserable would be preferred to being
happy and irrational. Hence though the
Cynics by nature might be happy, he
seems to have carried out this principle in
his own life; for just before his death in a
letter written to a friend he asserts that the
agencies of disease have been overcome by the
pleasure derived from thoughts of his philosophical researches which had caused the last day to be the happiest ones of his life.

Socrates was a Roman. The work of the Romans was not in the field of philosophy. As I have already stated at the outset that among the ancients the world of philosophy and that of the Greeks very nearly coincided: It may properly be asked at this point there why so much science and philosophy as much as others has been laid in the philosophy of Socrates and the influence on modern thought has been so largely attributed to him.

The national Roman characteristic was an essentially practical one; while the tendency of the Greeks was equally artistic. The contributions to humanity of the former lay in the domain of political science, while those of the latter consisted in art, literature, and philosophy. Where the Romans first felt the need of developing this other side of their nature, the Greeks furnished them their models. In philosophy the Greek systems had already been developed. There the Romans adopted, examining and accepting them partly for training. By cultivating the mind, hit for the most part early as furnishing an explanation of the universe and a rule for correct living. So far as the Romans
dipped into philosophy at all, the practical end and aim was ever their foremost motive. Whereas the Greeks loved speculation for its own sake.

In Lucan's time all the principal schools of Greek philosophy were represented at Rome. Of these all perhaps the Epicureans in Italy were in the poorest condition. The for-
pounders of this system had been once of little strength and the peculiarities of it had made
the subject of much ridicule. In this
state of affairs Lucan rises as an advocate
of Epicureanism and throws the whole story
of his Roman character into his work.

The De Renun Naturae is in the subject
matter strictly Greek. Lucan himself claims
no originality in the work, but it bears the
distinctive Roman stamp— the spirit was
all Roman. It did not mean to say that
Epicurus had no practical aim in his
philosophy: far from the time of Socrates the
tendency had been to become more and more
practical, and that the Romans from the hist
their National character inclined this
tendency. As the Epicurean philosophy is
far abroge the Pythagonian and Atomic theories from
which it was so largely derived, as the do-
trines of Lucan, as devoid of originality as
one may claim them to be, far exceed the
power of influence on the world of science.
philosophy the Greek philosopher's work.

The Atomists sought knowledge for its own sake, understanding their universe to lie in originating a philosophy and not about doing it. Epiecurus held a motion and his system was practical, his aim being to establish a scheme of ethical principles which may be made use of at any time or by any people. It seems to be universal; to him, just such a scheme is helpful in his speculation. Lucretius looked at his scheme in quite another way.

His citizens were being degraded by the influences of superstition, by the selfish and degenerate society. They were carried away by the gods. As a result, Heidegger's cornerstone of political life, Lucretius saw in the Atomic Materialism an system adapted to meet the crying needs of his people. And with ardent belief in the doctrine he accepted, coupled with a strong conviction of a will to perform and a firm belief in his own power, the conditions for which he believed all the great achievements of the world has yet been, Lucretius presents the system as a correct view of life leading his fellow men from the luxurious lives of the times and all other evil influences to seek happiness in higher things.

In the "De Rerum Natura", Lucretius does not discuss the whole of The Epicurean
We are only taught by what he considers necessary to the actual needs of his definite aim. He deals with the theory of knowledge to free men from the superstitious fear they have from strange visions and horrid dreams. He seeks for the only true source of knowledge, yet the thin fibres that all formerly existed are continually giving way to new life, modified or their own true essence. Thus a square tour appears round, if once disturbed off, which is due to the sharp corners of the idea being rubbed smooth by contact with the air. They irregularities of other sense perceptions may be so easily explained. We smell and taste the contact of our senses with our own atoms produces pleasure but discomfort quickly from contact with our own atoms. As these atoms are continually travelling through the air, the forms of the dead may visit men in dreams. The appearance of centaurs and monsters of all kinds were explained as due to the mingling of material confusion with the air.

He has already said that Phoenician provided for the existence of gods, but it is nothing gods as they were called by the existence of the doctrine. Religion, according to Secularism, hastens the cause of the greatest evil as he thinks that he who is able to assign natural causes for everything is the greatest benefactor of mankind.
In his theory of the Universe, therefore, all the terribe natural phenomena, as earthquakes, floods, ashes, thunder and lightning, violent storms, things which from the earliest times have long been in men's minds fear of higher powers, have been explained in detail; for fear, says Lucretius, gives the base of religion and moves it not for the groundless fears that guard the souls of men, a study of the workings of nature would, for us reason be needed.

The gods? Lucretius had human forms and dwelt in the spaces of the universe between the worlds, devoid of all pain or sorrow, living perfectly happy existence. So the gods... So now they are.

The gods, who hailed
The lucid inter-space, world of world,
Their never ceasing cloud or move a mind,
Never falls the least white pelt of snow,
Nor ever lighten roll of thunder unless
Nor round of human storms removes to near
Their sacred, ever acting value.

Lucretius dwells particularly on their not mix- ing in human affairs, for if they did as how could they lead their tranquil happy lives? He embodies his ideal of happiness in the form of the gods and it may be in part for this purpose that they were accepted as a part of his beliefs. As good others as Lucretius
puts us in the absence of all divine assistance in the region and affects Felibres in a world governed by chance. Law and order he thoroughly prefers, but strangely enough the necessity of a law-giver is the first thing to occur to him.

To drive away the fear of death, which Lucretius says is the true of life, was as natural, said he, of great importance. The reason the whole of the world was a principle that nothing exists but matter. The void, which is the dejecting root and is situated in the region of the spirit and the evil which is the "eraulating principle." Man, but is diffused throughout the body are in their material being embryo of the finest atoms. Then the spirit and soul to exist in connection with the body that neither can take away and leave the other. The ondibility the one is argued from the relation of spirit and body and the analogy between their. Thus: the body is often racked with disease: the mind is likewise harassed with grief and fear. When the body is sick the mind dies in frequently diseased and many others. Now the body dies, and the soul which in this life is affected in a similar way must also be mortal. Of death these are also annihilations. Why should it be feared by men? "For when we are, death
is not; and where death is, we are not. There
for it should not be a matter to concern us
in the least.

Spontaneous generation is Lucretius' theory
of organic life, the vegetable life preceding the
Animal. In the early times many minute
organisms were created which, once dissipated, not
possessing the requisites for the continuance
of their species, and if the well formed beings
many ages perished; for only the fittest (this
may have included those possessing either the
most cunning or courage or speed, a rare qual-
ity rendering them particularly useful to man)
died.

After having provided an explanation
for the beginnings of life on our earth, Lucretius
then proceeds to trace the development of means
beginning with primitive men who were
sheltered under huts and feeding on the roots
and shoots of trees. During the whole course of
their progress from savagery to civilization the
fort shows a natural Pause at every step,
now does away with the popular belief of his times
concerning the making of wine and other
preparations, thus bringing down
Man himself although little better
than the Animals, possessing a material
naturally, truly, and seemingly differing little from them, was still raised above the sphere of performing the office of a machine. From the district of the revolving aside of the atom, free will was granted him, and he at once became master of his own destiny.

It is difficult to trace the influence of the great work of Secundus in the light of history. Once in his own time it was boarded for liberty; but very seldom does he receive credit for the lofty ideals which were handled so freely by the Latin writers. Yet was one of the first great literary men who were neither ashamed nor afraid to own his admiration for the man Secundus. I make mention of him but more often with divergent feeling. Lived with the wise and, of all the Christians, the two conflicting doctrines met and after the victory of the Church Secundus and his system alike were lost sight of and reunited in obscurity till the revival of learning in Europe, where it was taken up once more. Bruno is said to have derived much from the De Rerum Natura in constructing his own didactic prose. While Descartes at a later date revived Cartesianism.

Thus the seventeenth century, the influence of Secundus has been ever increasing. The triumph of Secundus perhaps will occur to go the whole during the reign of scepticism.
in France the latter part of the last century. The spirit of wild speculations which this growth up among the French people received its distinctive character from Lucretius. In him, such men as Voltaire and Rousseau found a congenial spirit; and the works that they afterwards carry on in every respect but servile imitation of his "De Rerum Natura".

The name of Lucretius has in the present day acquired renewed interest due to the fact that modern philosophers recognize the relation existing between his subject and many of the questions to which speculative thought is being more and more directed. The problems of Lucretius are the problems of today.

Two theories of the constitution of bodies have from early times interested the speculative mind. One, the Atomic theory, asserts that bodies are made up of Atoms, each being a body that cannot be divided into parts. The other, the Vitruvian theory, will be Democracy, Epicurean, and Stoic. It is either the "full" and the "void". The other, the theory of infinite divisibility of bodies, asserts that the division of bodies may be repeated over and over again, without end. It can not imagine anything as small but that it may be again divided. Its advocates believe in the contingency of bodies and the "Universal Plenum". The Stoics need "no empty space". They believe that the quantity
of matter in a body can only be measured by the volume of space occupied by the body, while the atoms estimate the quantity of matter by counting the atoms in it.

These two systems the discontinuous or Atomic and the continuous or doctrine of homoeoeoria as it was called by Arayagora, its ancient founder, correspond respectively to the two doctrines of quantity, mathematical and geometrical. The doctrine of space indeed and of time later on preceded and led up to the doctrines of matter.

Descartes and Spinoza in more modern times have held to the Doctrine of Arayagora. Descartes himself admits that human senses may be incapable of dividing certain particles of matter and in this respect they may be said to be indivisible, but that this Deity that made them must retain his power of dividing them. The advocates of the theory of Continuity and infinite divisibility of matter have, inside a hard struggle to maintain their position, but found its very nature the theory seems incapable of development. More than a century was spent in devising means for investigating some of the intricacies of Descartes' System, and his own incapability coupled with that of his followers explaining many of its details shows it as yet to be in practice.
Today the Atomic theory or matter is the domi-
nant one both in scientific and philosophy.
Bacon introduced it into modern science by
Dr. Dalton in his application of its principles
to Chemistry has rendered an invaluable
service to the world of science. Although as
yet an unverified hypothesis it is often
accepted as an unquestionable truth by mater-
ialists, evolutionists, and deists.

The tendency of the followers of Lucre-
tius seems to have for some time toward the
acceptance of the doctrine came in distinctive
form the "New" of their author. There we have
a new development in the accepting the Christian
conception of God in connection with the At-
omic theory of Lucretius, although they become
more and more of its times to reconcile these two be-
liefs. Bacon and Boyle, the chemist, however, find
no difficulty in looking toward the power
of God as of final cause in bringing together
the atoms and building up things out of them.

With the discovery of gravitation a
change took place. The "dissolving" nature of the
atoms which had been such a drawback to
Lucretius doctrine and from its incon sistency,
had led men away from it to accept a God
who could serve to abide away with and gradually,
the repelling and attracting force of acting
directly upon the atoms one with another
being developed, was introduced as a mod-

knowledge to his theory. The doctrine now, with its modification because it is the prevailing one and the explanation was so simple yet so powerful, that a guiding and directing spirit seemed hardly necessary either to explain the creation or maintain the existence of the world. A mechanical explanation of the Universe was deemed sufficient. Locke formulates his doctrine in accordance with this belief, and the French skepticism of the last century, which we have already spoken of, received the outcome of the same principle. That modern science does not accept with Lucretius the surviving power of the atoms has been already explained. By carrying the difference still farther it substitutes the vibratory force for the downward tendency of atoms but agrees with him that their judgement is inconceivably swift. And with him again recognizes that all the phenomena of nature is in accordance with certain universal, invariable law. The theistic physicist ascribes these laws to an omnipotent Creator who is the law-maker, God, who carries on all the processes of nature in accordance with his own laws and divine plan.

On the contrary the Atheistic thinkers of the present time start with the doctrine of the atoms and assume the existence of law.
controlling them and assert that with free time and space it is possible to account for all existing facts and phenomena. D"erections derive matter as able, "without the frame of the lord, to do all things." Some modern materialists adopt the same theory, while others put evolution in the place of nature and identify a process of her law.

Ancient atomists claimed that life is spontaneously produced in matter by certain combinations of atoms. Materialists agree with this theory. The theistic believe that it has its origin only in a higher power and cannot proceed from any combination of matter without the intervention of that life giving power.

Modern thinkers make proto-organisms the basis of organic life. The doctrine of evolution regards the higher forms of life as gradually arising step by step from the lower, the highest and most complex forms of existence as following and depending upon the lower and simpler forms. Its advocates hold that the physical world is a gradual progress from the simple to the complex and the development of organic life is conditioned upon the indiscernible mold.

To theistic evolutionists God is the source of proto-organism. To the theistic it is a spontaneous product, not only matter free.
and there are required to bring about the result.

Modern Materialism is not unlike the doctrine of Lucretius in its contempt for religion and like him it makes vigorous but abortive efforts to construct a world without a God. A universe with no intelligent, controlling Power.

The problems of the present correspond essentially with those of the past and are no nearer a satisfactory solution. The tendency in the human mind to identify power with thing is as strong as has been said by Lodge "it seems almost a matter of taste whether or not we worship the masculine God, the feminine Nature, or the neutral All."

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