
UNIT 2 ELEATIC AND ATOMISTIC PHILOSOPHERS

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2.0 OBJECTIVES

In this Unit we try to identify the Eleatic and the Atomist philosophical thoughts which made the ancient Greek philosophy so attractive and rich before the world. Both the Eleatic as well as the Atomist are trying to find out the Ultimate Cause which rules over the universe. Atomists say that the universe is formed out of small invisible and physically indivisible particles called 'Atoms' which are eternal and immutable. This mode of thinking slowly develops into a materialist and quantitative theory; because they deny the immortality of souls. By the end of this unit you will be able to identify:

- whether the ultimate principle of the universe is 'Being' or 'Becoming'.
- the fantastic argument of Zeno to prove the permanence.
- the difference between the Pluralist and the Atomist philosophers; and likewise the differences between the qualitative and quantitative philosophy.
- the ethical insights which govern the universe
- an attempt at reconciliation of the monists who simultaneously uphold two contradicting principles such as 'Being' and 'Becoming'.
- The atom theory.

2.1 INTRODUCTION

When Parmenides was sixty five years old, he might have exchanged his own ideas with young Socrates at Athens. Parmenides is the one who prepared laws for his native city of Elea. In the beginning of his philosophic career, Parmenides was a

follower of Pythagoras, but afterwards he left those thoughts in favour of his own. His main teaching was that the reality is “Permanence” and “change” is an illusion.

Proclus said that Zeno made forty arguments to demonstrate that being is one, thinking that he had to help his master. Empedocles wrote his philosophical thoughts in the form of poetry. He agrees with Parmenides that the reality is permanent. But the concept of change is an undeniable fact and the change cannot be looked upon as an illusion. In this statement he is agreeing with Heraclitus.

Leucippus of Miletus was the founder of the Atomist School. According to the Atomists, there are an infinite number of indivisible units. They are called atoms. So the fundamental elements of the universe are atoms for Atomists School. They cannot be perceived by senses.

2.2 PARMENIDES: (540-480 B.C)

He is the head of the Eleatic School of Greek Philosophy. He is the one who developed the concept of “being” in opposition to the concept “becoming”.

Concept of ‘Being’

Parmenides developed the conception of ‘Being’ in opposition to the ‘Becoming’ of Heraclitus. First of all we have to study the truth – the philosophy of ‘Being’. This being is indestructible, perfect and intelligible. He regarded being as material. He thinks that this being is finite, since he thinks that this is one. Being is for the time being infinite, as having neither beginning nor end, but it is spatially finite. He has also difference of opinion compared to Pythagoras’ concept of abstract essences. For Pythagoras’ reality consisted of geometric points, then everything is reduced to abstract essences, just as the point, the line, the triangle, the circle, the cube etc., are abstract. Pythagoras says that the existence must be protected; the existent can not be reduced into logical elements. The existent exists before thought. Before arithmetic and geometry, a philosophy of being is or metaphysics exists on which thought depends, and not vice versa.

Interpretation of ‘Being’

What is this ‘Being’, which is expressed as ‘to be’ as infinitive, and with the singular participle ‘being’, and the third person present indicative ‘is’? There are six interpretations on this ‘Being’.

- 1) Mystical interpretation: Plotinus interpreted the being of Parmenides as to be Xenophanes’ Unum, god.
- 2) Idealistic interpretation: This is done by Hegel and Stenzel. The existent of Parmenides is a production of thought; to think means to be.
- 3) Materialistic interpretation: it is the sum of material bodies.
- 4) Logical interpretation: Being is the copula of a proposition. No being exists before the predication and hence before grammar and Logic.
- 5) Platonic-Aristotelian or categorical interpretation: It is a transcendent concept with various meanings: substance, quality, quantity, place etc., they are modes of being. Being is a concept which is spoken in many ways.
- 6) Existential or metaphysical interpretation: Being is the original and primary form of existence in the world.

Due to many reasons, according to Dario Composta, the first four and the sixth interpretations cannot be accepted. This being cannot be god because it is never called a god in the texts; and this would make Parmenides a pure monist. The idealistic interpretation does not show the attitude of the Greeks, because those philosophers were mainly objectivistic. The materialistic theory is also not acceptable, since being is not the “arche” of the Ionian philosophers. Logical interpretation can not be taken, because he is not working from a judgement to arrive at reality.

Principle of Non-Change

How is this possible, he asks, how can a thing both be and not be? How can one thing change into another? How can one quality become another quality? If the answer is positive, then we must admit that something is and something is not. At the same time this would again imply that something can come from nothing and something can become nothing. Parmenides says, “For never will this be proved that things, that are not, are”. This is what is known as the *principle of non-change*. Things which have no existence are nothing. Nothing means non-being. If they are non-being, how can we prove that they are? The answer is no and this is an impossibility. The impossibility remains always an impossibility and never becomes a possibility.

Principle of Indestructibility

“Being cannot not be”, or as the text puts it: “it is not possible for it not to be” (Fragment 11). The Aristotelian *principle of non-contradiction* states that while the being is (but could not be), it necessarily is. Here with this *principle of indestructibility*, according to Parmenides, the being necessarily is. Therefore, Parmenides asserted the un-changeability of being; in so far as he conceived of being as material, he asserted the indestructibility of matter. Thus Parmenides said that being can neither arise nor pass away, that is the indestructibility of the matter. Being is complete one in itself and is Reality which cannot be added to? If it is not one but divided, then it must be divided by something else. This something else does not exist besides the existent. That means besides being there is nothing. Nothing could be added to, because anything that is added to being would also be a being. Therefore, forms of becoming are negated.

Being and Non-being

Another way of expression: if being has *become*, it must either have come from non-being or from being. If from non-being, it has come from nothing, which is impossible, because, “besides the existent, nothing non-existent exists”. In *Metaph*, 986b 28, Aristotle comments on this that Parmenides believes that the existent is of necessity one so that nothing else exists. On this very point Aristotle has spoken more clearly in his work on *Physics*, 184b 16; 185a 9; 185b 18; 186a 7; 186a 22. If it is from being, then it has come from itself. It is the same as saying that it is identical with itself, and thus has always been. Parmenides concludes: “that all things that are, are one and this is being”. This is the *principle of identity*. Hence there can be only one eternal, non-derived, unchangeable being. It must be continuous, indivisible and immovable.

Being and Thought

Moreover, being and thought are one, for what cannot be thought, cannot be; and what cannot be, i.e., non-being, cannot be thought. That is, thought and being are identical. Whatever is thought has being. Parmenides may also have believed that

being and thought exist in the sense that reality is endowed with mind. An important text shows: "Thought and the function of thought are the same thing, because you will not find thought without being in which it is expressed. In fact, thought is, or it is nothing when outside of being" (Fragment B 8).

Being and Illusion

All change is inconceivable, and, therefore, the world of sense is an illusion. To regard as true what we perceive by the senses is to confuse being with non-being. Parmenides shows a firm belief in reason: reality is obeying to reason and what is contradictory to thought cannot be real. "He did not claim that reality was thought, but that it could be truly apprehended only by thought". If this reality is knowledge for Parmenides, his concept of good is formed by reason. It is sure that some sort of reason certainly qualifies his concept of *agathos* (good) and seems to be very near to the control of intellectual virtue over moral virtue of Aristotle.

2.3 ZENO OF ELEA (490-430)

He was a student of Parmenides and he came from the town of Elea. There is difference of opinion about his discipleship of Parmenides. Zeno was a mathematical and logical genius. He showed the stupidity of plurality. He was very famous for his dialectic. Being is one and immutable. Plurality and motion are contradictions in themselves. He denies the reality of both. His argument clearly brings out the discrepancy between logic and experience.

Arguments against Plurality

He argued: If the whole of being is a plurality, it is formed of many points, and this whole can be proved to be both infinitely small and infinitely great. One thing is formed of small parts and the same thing is formed of large parts, it is absurd to say that the one and the same whole is both infinitely small and the infinitely big. For example, let us take a line which is made up of many points each of which is having a certain size. Then the line must be infinitely big; because it is made up of infinite number of units. Therefore, everything in the world must be big in size or the world itself must be infinitely great. Just imagine, on the other side, if the units are without magnitude, the whole universe also will be without magnitude. Since the single unit has no magnitude, the whole sum also will not have magnitude. Then, in conclusion, the universe will be infinitely small. Hence we reject completely the initial supposition of plurality.

If we believe that many beings exist, then Zeno says that this belief is an absurdity. These beings, which are existing, are numerically defined. If they are not numerically counted, how can they exist? If it is not possible to count them, then they are infinite. They are not counted because between two beings (two parts) there is another being. And between the third and the original two there rests yet another; and so on ad infinitum.

There is an argument against the Pythagorean Doctrine of space. Parmenides said that there was no empty space. Zeno supported this view and reduced the opposite view to absurdity. Suppose, there is a space in which things are. If that space is nothing, then things cannot be in it. If this space is something, then this space needs another space and so on ad infinitum. If there is no such space, then things cannot be in space. Things therefore are not in space or in an empty void. In that case multiplicity also does not exist.

Similarly, we shall think that a body is moving through space. In order to pass to some other space it has to pass at least half of that space, in order to reach the half it has to pass half of the half, therefore, ad infinitum. How can you cross infinite number of points and thereby an infinite distance? Therefore no body will cross anywhere and motion is impossible. In this style movement becomes impossible.

Even in movement it does not move, because a body in motion must occupy its own dimensions. Now in every event of its motion, an arrow occupies a space equal to its dimensions, while these dimensions do not have movement. Occupying space means that object is at rest. Therefore the moving arrow is still. Nothing is moving at the moment in which it occupies its own dimensions. As a disciple of Parmenides, Zeno was refuting all the plurality in the universe.

The ultimate principle of the universe, according to Parmenides, is permanence. A thing that exists cannot change into another. If someone believes that they change, that will be a mere illusion. For him change is impossible. He believed that everything, that we experience, that exists, had always existed. Nothing can become anything other than what it is. He was sure that human sense felt the change; on the other side he was sure that his reason felt the permanence even within this change. He has given more importance to the feeling of reason and other is simply denied as an illusion. He was a man of rationalism. He believed that human reason is the primary source of our knowledge of the world.

2.4 EMPEDOCLES (490-430 B.C)

He is from Sicily an Island near Italy. He was a leader of the Democratic Party in his native city. He is also known as magician and wonder worker. He helped us to come out of these complex concepts of his predecessors like Heraclitus and Parmenides. He is of the opinion that these philosophers have concentrated on the monistic way of explaining the substance of the world.

Cosmogony

He says that one thing cannot turn into another matter. In fact, fire can not change. Real fire will remain as real fire and it will continue to be fire. At this point Parmenides is right by telling that 'nothing changes'. On the contrary, Empedocles accepted the teaching of Heraclitus that the sense perception is also true. Here, what we see is the change of the nature. He concludes that this problem arises because of the belief in one single principle. As a solution to this above riddle he suggests that the cosmos is made up of four principles: earth, water, air, and fire. All movements in the cosmos consisted of these four elements. They come together and are separated. The cosmos is a mixture of these elements, but the proportion of these elements would be different. In one comparison Empedocles refers it to the work of a painter. He can make different paintings with four colors: white, black, red, and yellow. The intelligent painter creates various pictures. He harmoniously mixes these colors, some in greater measure and some in lesser, and he creates beautiful figures similar to. The death or destruction of one thing is due to the separation of the unity of these principles. These elements remain always without change, even if we notice the changes with our eyes. Therefore it is not right that everything changes. In reality nothing changes, but what really happens is the combination and separation of these things. All through these combinations and separations these principles keep their character without change.

Principle of Unity and Separation

One doubt remains unclarified. What makes the thing to combine and to disintegrate? Empedocles added two different forces at work in the process of nature. They are love and strife. Love brings unity and life, but strife causes destruction and death. These are the two structural forces in the cosmogony. Nothing becomes, nothing is destroyed and everything is eternal. “There is no means through which something would arise from what earlier did not exist and through which what exist would perish. This would be a vain thing without any terminus. In fact, (being) will always be, wherever we may look” (Fragment B 6). Therefore life and death is not the goal, but mixing and separating is the goal of love and hate through a universal eternal cycle. He also found out the separation of ‘substance’ and ‘force’.

Check your progress I

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit.

- 1) Give the second argument to confirm that there is no change but only permanence according to Parmenides?

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- 2) Give the first argument against Plurality according to Zeno?

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2.5 ANAXAGORAS (500-428 B.C)

Anaxagoras born in Clazomenae, in Asia Minor, took up his abode at Athens, and became the friend of the great statesman Pericles, who aimed to make his city the intellectual as well as political center of Hellas. His life span was between 500-428.

Anaxagoras like Empedocles, adopted the teachings of Parmenides that the being is permanent. That means, being neither comes into being nor disintegrates, but it remains unchangeable. Anaxagoras does not agree with the teaching of Empedocles the ultimate units are many like earth, air, fire and water. He teaches that everything which has parts which are qualitatively the same as the whole is ultimate and un-derived. For example a piece of silver is cut into two, the second piece also will have the quality of the first. Here the part is also the same as whole. Those things, which have the same quality even in parts and are same as the whole, are ultimate and un-derived. They are mixtures composed of many qualitatively different particles. According to Anaxagoras there was no individual particle, but all kinds of particles stayed together and they were indivisible. But in reality some particle was dominating,

that is why something becomes gold and other thing becomes silver. He continues, “In everything there is a portion of everything”. In this way he was trying to explain the concept change and permanence. If it is so, it is easy to explain that flesh can come from grass or grass can come from flesh. From one nature, something of a different nature can emerge.

Teleology

In Anaxagoras we encounter for the first time the linking of teleology with the uniqueness and perfection of the world order. He sees the entire complex world-process, as it now appears, as the result of a long series of movements, which followed necessarily from the original rotation. To account for the initial motion he puts this *nous*, an intelligent principle, as the cause. *Nous* is a spontaneous active being, the free source of all movement and life in the world. It rules over all that has life. This *nous* or mind is a special contribution of Anaxagoras. *Nous* has power over all things that have life, both great and small. It is controlling the whole revolution and it started to revolve in the beginning. The *nous* is a teleological or purposive principle.

Ethical Principle

He had no formal ethical teachings but at the same time he introduced the concept of mind or intelligence (*nous*) into Greek philosophical studies. He stressed that “Mind is infinite and self-ruling, and is mixed with nothing, but is alone by itself”. Aristotle gave Anaxagoras credit for the soberness of his thought but criticised him for failing to use *nous* consistently in explaining cosmic events. It is possible that the concept of mind in Anaxagoras would have helped Aristotle to discuss the mental aspects of human conduct. Sometimes, Anaxagoras is calling the mind the most rarefied of all things. Thereby he is suggesting that it is a kind of matter. *Nous* is not to be considered as creating matter. At the same time it is both immanent and transcendent. *Nous* is present in all living things. Among living beings it has essential differences in bodies, but not in their souls. Anaxagoras, however, does not explain the human consciousness as having independent selfhood. There is confusion in his doctrine of mind, whether it is theism or pantheism. Aristotle criticises him saying that Anaxagoras brings the mind only when mechanical explanation fails to answer the reality.

2.6 DEMOCRITUS & LEUCIPPUS (ATOMISTS)

The founders of Atomists’ School are Leucippus of Miletus and Democritus of Abdera. But, Aristotle and Theophrastus made Leucippus to be the sole founder of this School. Democritus of Abdera was born about 460 B.C. in the commercial city of Abdera, situated on the coast of Thrace, and died in 370 B.C. He said that the universe is built upon certain small invisible particles. The characteristics of these particles are eternity and immutability. He named these small units ‘atoms’. The meaning of the term ‘a-tom’ is ‘not-divisible’.

Atom Theory

For him the most important thing was that the substantial element of the nature, out of which the nature was built up, could not be indefinitely divided into smaller particles. If this were possible the permanent character of the nature would be in danger. There would not be then any permanency to the nature. He also agreed in the teaching of Parmenides that ‘nothing comes from nothing’. So, the substantial particle

of nature should be eternal, and then only the nature can come out of it. These eternal particles which are atoms, are firm and solid, but they are not identical. Otherwise, the multiplicity and the unity of the nature would be impossible. Because, we see mountains, oceans, sky, ameba, birds, fish, flowers, animals and human beings. He confirmed that the universe is composed with unlimited number and variety of atoms. Out of them, some are round and smooth, some are irregular and jagged. And precisely due to their multiplicity in eternity, they could combine each other to unlimited bodies. When a body dissolved or disintegrated, the atoms become free and ready for other new combinations of bodies. Atoms moved around in space, but they are hooked and are free to join together for a new creation.

According to him, the only things that existed were atoms and the void. 'Soul' and 'force' have no much role in his teaching on the universe. 'Soul' is connected with brain. Once brain disintegrated, we lose consciousness, and then the special round smooth shaped 'soul atoms' spread in all directions. He believed that nothing could influence the universe except atom. It could be possessed by some other new bodies. That means, human beings have no immortal soul. Therefore, he is known as a materialist, since he believed in material things. In nature, everything happens quite mechanically, it does not mean that it happens randomly. Because, he said, there were the inevitable laws of necessity. A natural cause, which is inherent in everything, guides the happenings in the nature. All the processes in the universe are quite natural, though, it is mechanical.

Theory of Knowledge

The theory of knowledge according to this school is developed from the sense perception. Sense perception is formed by the action of emanations resembling the perceived body. All bodies transmit their image through air. The image, which is transmitted by the body, modifies the object near to it and so on; finally it reaches the sense organs of a person or a living being. If the images proceeding from other objects interfere with other images in the process of transmission, then illusion takes place. If they proceed without interference true knowledge takes place. It means a direct hit on the organs of sense and finally on the soul.

The sensible qualities (colour, sound, taste, smell and touch) are not in the things themselves. It is merely the effects of combinations of atoms on our sense organs. Atoms as such have no qualities other than shape or size. Hence sense perception does not provide true knowledge of things. It shows how things affect the human beings. The Greek atomists have already distinguished between the primary qualities (shape, impenetrability, etc.) and the secondary qualities (colour, sound, smell, etc.). This distinction is a main discussion in modern philosophy.

We can only think of atoms, we can not see them as they are. Sense perception is not a clear knowledge. Thought, which penetrates our sense perception and appearances, and reaches atom, is the only right knowledge. Democritus is a rationalist. Rational thought begins where sense perception ends. It is the genuine way of knowing. Reason is the highest function of soul. For Democritus soul and reason are the same.

Ethical Principle

Democritus stressed the soul as the locus of human well-being. His concept of *eudaimonia* includes both the notion of 'good existence' (*eu-esto*) and of 'good

feeling' (*eu-thumie*). Pace Gosling and Taylor think that Democritus was the first Greek philosopher to produce a systematic ethical theory. The most important step towards systematisation was, the transition from the vague ethical thinking that everybody wants to be happy or cheerful, or free from troubles.

On the list of Democritus' writings on ethics there appears a treatise *Peri euthymias* (DL IX 46) of which only a sentence or two has remained. Later doxographers, assuming the framework of eudaimonistic theories, tell us that Democritus declared *euthymia* to be the goal of life (*telos*).

The superiority of reason is taken into consideration in the ethical life. The end of all conduct of men is well-being of society and ultimately of man. Well-being means not only the intellectual satisfaction but also the pleasure of senses. We can trace a line of hedonism in the teaching of Democritus. True happiness is the end of man's life. It is an inner state of satisfaction or pleasure, depending on the tranquillity, harmony and fearlessness of the soul. This happiness is not coming from wealth or material good, nor from the pleasure of the body. It needs a little pain, and requires repetition and moderation of pleasure. The less you desire, the less you are disappointed

All virtues are valuable only if they help to cultivate happiness. Envy, jealousy and bitterness of mind bring friction and they will destroy everybody. The sense of duty must be the basis of doing the right thing; it should not be from the fear of punishment. We have to serve the state too, because if the state is in peace, all realm of state will grow; if the governance of the state is corrupted, then there will not be any order or law but only chaos.

Theology of Democritus

According to Democritus God exists. God is composed of atoms. The Gods are mortal like men, but they live longer. They are more powerful than human being and they possess reason of high order. Gods are known to men in dreams. They do not interfere in the affairs of men and therefore men need not fear them. Like all other things, God is subjected to the motion of atoms. One must achieve mental power to reach the goal reflecting and contemplating on beautiful acts.

Check your progress II

Note: a) Use the space provided for your answer

b) Check your answers with those provided at the end of the unit.

1) How does Empedocles explain the theory of Cosmogony?

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2) Sketch out the Atom theory of the Atomists?

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2.7 LET US SUM UP

We have been looking into the cosmological point of speculation basing mainly on the reflection of the Eleatic and the Atomist philosophers. Though they were convinced of the cosmic unity, they had to answer the problem of the multiplicity in the world. They, therefore, faced the dilemma of the one and the many.

The Atomist and the Pluralist Schools were slowly preparing the base of reconciliation of these contraries of 'Change' and 'Permanence' proposed by their predecessors. It was really a tough task for them to fulfil, though they were not fully successful in their attempt. The Pluralist and the Atomist School gave the same answer to the problem put forward by Heraclitus and Parmenides. That is how, they admitted the change, but it is accepted as relative change not as an absolute change. In this explaining they were admitting the permanent reality i.e., Being. In other words, they agree absolute change is impossible but relative change is possible. Nothing in the universe arises or perishes, everything is keeping the same nature, but through combination we feel that something arises, and through separation we feel that they disintegrate. Aristotle and Plato will explain it more clearly as we are to see in the coming units. Now it is time to switch over to the problem of man as such by the time of Sophists and Socrates.

2.8 KEY WORDS

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| Illusion | : Illusion is the state of mind in which one mistakes one thing for the other due to passion, prejudice, or conditioning. It is distinct from hallucination in which one perceives an absent thing as present. |
| Cause | : Cause is a real principle which exercises a positive influence in the production of an effect. |
| Universe | : Universe is the totality of space which includes all the galaxies. |

2.9 FURTHER READINGS AND REFERENCES

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2.10 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress I

- 1) “Being cannot not be”, or as the text puts it: “it is not possible for it not to be” (Fragment 11). The Aristotelian *principle of non-contradiction* states that while the being is (but could not be), it necessarily is. Here with this *principle of indestructibility*, according to Parmenides, the being necessarily is. Therefore, Parmenides asserted the un-changeability of being; in so far as he conceived of being as material, he asserted the indestructibility of matter. Thus Parmenides said that being can neither arise nor pass away, that is the indestructibility of the matter. Being is complete one in itself and is Reality which cannot be added to.
- 2) If we believe that many beings exist, then Zeno says that this belief is an absurdity. These beings, which are existing, are numerically defined. If they are not numerically counted, how can they exist? If it is not possible to count them, then they are infinite. They are not counted because between two beings (two parts) there is another being. And between the third and the original two there rests yet another; and so on ad infinitum.

Answers to Check Your Progress II

- 1) The cosmos is made up of four elements: earth, water, air, and fire. All movements in the cosmos consist of these four elements. They come together and are separated. The cosmos is a mixture of these elements, but the proportion of these elements would be different. In one comparison Empedocles refers it to the work of a painter. He can make different paintings with four colors: white, black, red, and yellow. The intelligent painter creates various pictures. He harmoniously mixes these colors, some in greater measure and some in lesser, and he creates beautiful figures similar to. The death or destruction of one thing is due to the separation of the unity of these principles. These elements remain always without change, even if we notice the changes with our eyes. Therefore it is not right that everything changes. In reality nothing changes, but what really happens is the combination and separation of these things. All through these combinations and separations these principles keep their character without change.

- 2) For him the most important thing was that the substantial element of the nature, out of which the nature was built up, could not be indefinitely divided into smaller particles. If this were possible the permanent character of the nature would be in danger. There would not be then any permanency to the nature. He also agreed in the teaching of Parmenides that 'nothing comes from nothing'. So, the substantial particle of nature should be eternal, and then only the nature can come out of it. These eternal particles which are atoms, are firm and solid, but they are not identical. Otherwise, the multiplicity and the unity of the nature would be impossible. Because, we see mountains, oceans, sky, ameba, birds, fish, flowers, animals and human beings. He confirmed that the universe is composed of unlimited number of atoms. Out of them, some are round and smooth, some are irregular and jagged. And precisely due to their multiplicity in eternity, they could combine each other to unlimited bodies. When a body dissolved or disintegrated, the atoms become free and ready for other new combinations of bodies. Atoms moved around in space, but they are hooked and are free to join together for a new creation.