UNIT 2 VAI°E^IKA: ATOMISM

UNIT STRUCTURE

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2.1 LEARNING OBJECTIVES

After going through this unit you will be able to

- describe the nature of five elements of earth, water, air, fire and ether,
- explain the Vai\e^ika concept of the creation and destruction of the world.
- explain the nature of atomistic theory of Vai\e^ika philosophy.
- describe the comparison between Vai\e^ika and Greek Atomism.
- evaluate Vai\e^ika atomism critically.

2.2 INTRODUCTION

This unit introduces to you the nature of the Vai\e^ika concept of Atomism. Vai\e^ika philosophy holds that material objects of the world are composed of parts and they undergo production and destruction. These parts are still divisible into further parts. But the minutest particles of matter are not further divisible. This indivisible, partless and eternal particle of matter is defined an atom (Param"nu). Thus Atoms combine in different proportions to produce physical objects. In Vai\e^ika philosophy creation means the combinations of atoms in different proportions and destruction means the dissolution of such combinations. Hence the view of Vai\e^ika concerning creation is called atomism (Paramanukaranavada). Vai\e^ika believes in the doctrine of Asatk"ryav"da which means that the effect does not pre-exist in its cause. The effect is a new beginning, a fresh creation. Though it presupposes a cause, it is not implicitly contained in the cause nor is it identical with the cause. The doctrine of Vai\e^ika atomism is therefore also known as Arambhav"da.

2.3 MEANING OF THE TERM 'ATOM'

The word 'atomism' is derived from the Greek adjective 'atomos' which literally means 'indivisible'. In western philosophy, the history of ancient atomism is not only the history of a theory about the nature of matter, but also the history of the idea that there are indivisible parts in any kind of magnitude—geometrical extension, time etc. Atomism is of different kinds. A number of important theorists in ancient Greek philosophy held the view that universe is composed of physical atoms. For example, in the 5th century B. C. Leucippus and his pupil Democritus proposed that matter was composed of small indivisible particles called atoms. The spiritual atomism of Leibniz states that there are innumerable spiritual atoms. Leibniz called these atoms 'monads'. Monads are the centers of force in the universe. Again, psychological atomism of Hume states that there are only 'impressions' and 'ideas'. In the contemporary philosophical scene we find

Bertrand Russell advocating a different kind of atomism known as logical atomism. Thus we find advocacy of various forms of atomism in western philosophy.

Greek atomism and Vai\e^ika atomism share some common viewpoints regarding the nature of atoms. Nevertheless they differ on some significant points.

2.4 THE FOUR ELEMENTS/ATOMS: EARTH, WATER, AIR AND FIRE

According to the Vai\e^ika atomism, all composite objects of the universe are composed of the atoms of earth, water, air and fire. Hence a brief introduction about the nature of these atoms is needed to be taken up here.

2.4.1 Earth

Earth has the genus of earth. Earth has colour, taste, smell, touch, number, magnitude, conjunction, disjunction, remoteness, proximity, weight, acquired fluidity and velocity. Earth is eternal and non-eternal. The atoms of earth are eternal. The substances composed out of atoms of earth are non-eternal.

2.4.2 Water

The genus of water inheres in water. It has colour, taste, touch, natural fluidity, viscidity, number, magnitude, distinctness, conjunction, disjunction, remoteness, proximity, weight and velocity. Water is eternal and non-eternal. The atoms of water are eternal. The substances composed out of atoms of water are non-eternal.

2.4.3 Air

The genus of air inheres in air. Air has touch, number, magnitude, distinctness, conjunction, disjunction, remoteness, proximity and velocity. Air is eternal as well as non-eternal. The atoms

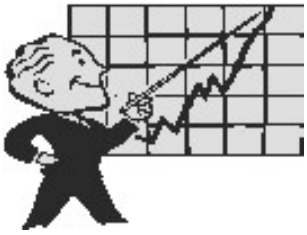
of air are eternal. The substances composed out of atoms of air are non-eternal.

2.4.4 Fire

The genus of fire inheres in fire. Fire has colour, touch, number, magnitude, distinctness, conjunction, disjunction, remoteness, proximity and velocity. Air is eternal as well as non-eternal. The atoms of air are eternal. The composite fiery substances are non-eternal.

2.5 ETHER IS NOT ATOMIC

Ether is not atomic. Ether is one, ubiquitous, eternal, imperceptible substance which has the special quality of sound. Ether is one, since sound has no difference in kind. Ether is eternal. It is neither produced nor destroyed. Ether fills all space, but it is not itself space.



CHECK YOUR PROGRESS

Q 1: State True or False.

a) Vai\e^ika atomism accepts Satk"ryav"da. (True/ False)

b) Vai\e^ika doctrine of atomism is known as Param"nuk"ranav"da. (True/ False)

c) According to the Vai\e^ika, there are four atoms. (True/ False)

Q. 2: Define atom (param"nu)

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ACTIVITY : 2.I

- Do you think that atoms of earth, water, air and fire are the only ultimate atomic constituents of the universe?

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2.6 VAI°E^IKA ARGUMENTS FOR THE EXISTENCE OF ATOMS

Vai\e^ika advance the following arguments for the existence of atoms: First, there are different degrees of magnitudes, which have the lowest limit in the largest magnitude of ether, and which have the lowest limit in the minutest magnitude of an atom. There are larger and larger magnitudes, which culminate in the largest magnitude of ether. There are smaller and smaller magnitudes which end in the minutest magnitude of an atom. An atom is the minutest part which is indivisible. Secondly, if atoms had parts, then they also would have parts and so on to infinity. Then there would be no difference in the dimensions of things. Again, if all substances were endlessly divisible into an infinite number of parts, then there would be no difference in the magnitude of things, and a mountain and a mustard seed would be of equal dimension. Hence, it must be admitted that atoms are the minutest parts of composite substances which are partless and indivisible.

Thirdly, it is said that since composite products are transient, changeable, divisible, produced and destroyed, therefore they are composed of atoms which are eternal, unchangeable, indivisible, unproduced and indestructible.

Fourthly, if there were no indivisible atoms, there would be no dissolution. Dissolution is the disjunction of the component atoms of composite substances. Their destruction is due to disjunction of their parts.

2.7 CREATION AND DESTRUCTION OF THE WORLD

Vai\e^ika atomism explains that part of the world which is non-eternal. Non-eternal things are the composite things which are subject to

origination and destruction in time. All composite objects are constituted by the combination of atoms and destroyed through their separation. Vai\e^ika subscribe to the moral and spiritual principles governing the processes of composition and decomposition of atoms.

Vai\e^ika atomism is spiritual. Atoms possess the primary as well as the secondary qualities. They are said to be spherical or globular (parimandala). They are co-eternal with the souls and are the material cause of the world. Atoms are motionless in themselves and during dissolution they remain inactive. Motion is imparted to them by an external agent. For the Vai\e^ika, this external agent is an unseen power known as 'adrsta'. Adrsta is defined as the Unseen Power of merit (dharma) and demerit (adharma) which resides in the individual souls and want to fructify in the form of enjoyment or suffering.

The Vai\e^ika maintains that a dyad (dvyanuka) is produced by the conjunction of two atoms. A dyad is minute (anu), short (hrasva) and imperceptible. The two atoms are here inherent cause; their conjunction is their non-inherent cause; the unseen agencies, merits and demerits of individual souls are its efficient cause. When there is an activity among three dyads, they come into conjunction with one another, and produce a triad (tryanuka). The atoms combine in geometrical progression and not in arithmetical one. They increase by multiplication and not by mere addition. Three dyads form a triad (tryanuka) which is great (mahat), long (dirgha) and perceptible. A quartrad (caturanuka) is produced by the conjunction of four triads, which are active. The quartrads are combined into larger and larger composite substances.

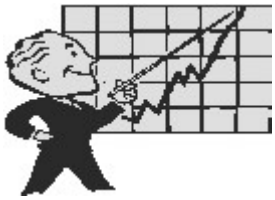
Out of the combinations of air atoms, in the form of dyads and triads, arises the gross physical element (mahabhuta) of air, and it exists as an incessantly vibrating medium in the eternal akasa. In the same vein, there is motion in the atoms of water and the creation of the gross element of water which exists in the air and is moved by it. The atoms of earth are imparted motion in the same way and compose the gross element of earth which exists in the vast expanse of the gross elemental water. Then from the atoms of light arises the gross element of light

and exists with its luminosity in the gross water. After this and by the mere thought (abhidhyana) of God, the embryo of a world (brahmanda) appears out of the atoms of light and earth. Then God entrusted Brahma the work of creation in its concrete details.

The circle of creation and destruction has no beginning. The souls get rest and space in destruction only after they have passed through many births and deaths, continually experiencing pain and pleasure. One creation between two destructions is called 'kalpa'. When Brahma, the world soul gives up his body like other souls, there appears in Mahesvara or the Supreme Lord a desire to destroy the world. With this, the creative adrsta or unseen moral agency in living beings is counteracted by the corresponding destructive adrsta and stops functioning for the active life of experience. When the destructive adrsta begins to operate, motion in the constituent atoms of their body and senses begin to start. Due to the motion, there is disjunction of the atoms and consequent disintegration of the body and the senses. Thus with the destruction of the senses and the body, the atoms are destructed through the cessation of their conjunction. The four kinds of atoms of earth, water, light and air are disintegrated and destroyed. It is to be worthily mentioned at this point here that in the order of destruction, earth compounds come first, and then those of water, light and air in succession; while in the order of creation, air compounds come first, water compounds next, and those of the great earth and light appear in succession.

2.8 VAI°E^IKA ATOMISM IS NOT MATERIALISTIC

Vai\e^ika atomism is not materialistic since Vai\e^ika admit the reality of the spiritual substances-souls and God-and also admits the Law of Karma. While the atoms are the material cause of this world; God, assisted by the Unseen Power, is the efficient cause. It is therefore, said that in Vai\e^ika atomism the physical world presupposes the moral order.



CHECK YOUR PROGRESS

Q. 3: State True or False.

a) Vai\e^ika atomism is materialistic. (True/ False)

b) According to the Vai\e^ika, atoms are inactive and motionless in themselves. (True/ False)

c) Motion is imparted to the atoms by an Unseen Power (Adrsta). (True/ False)

d) Atoms combine in arithmetical progression. (True/ False)

Q. 4: What is dyad?

Q. 5: What is triad?

Q. 6: Define Adásta.



ACTIVITY 2.2

- Do you think that Vai◦e^ika theory of creation and destruction of the world is a comprehensive theory of atomism?

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2.9 VAI°E^IKA ATOMISM AND GREEK ATOMISM: A COMPARATIVE STUDY

Vai\e^ika atomism and Greek atomism have agreements as well as disagreements as regards the nature of atom. The following are the points of agreements:

Vai\e^ika atomism agrees with the Greek atomism of Leucippus and Democritus in considering the indivisible, partless, imperceptible and eternal nature of atoms.

Both Vai\e^ika and Greek atomism regard atoms to be the material cause of this physical universe.

On the contrary, Vai\e^ika disagrees with Greek Atomism as regards the following points:

Leucippus and Democritus hold that atoms differ only quantitatively. They denied any qualitative difference among atoms. But Vai\e^ika atomism maintains both quantitative as well as qualitative differences among atoms.

The Greek atomists do not attribute any secondary qualities to atoms, while the Vai\e^ika atomism accepts the secondary qualities in the atoms.

Greek atomism believed that atoms have inherent motion in themselves and they are therefore essentially active. In contrast to the Greek view, Vai\e^ika maintain that atoms are motionless and inactive. Moreover, the Vai\e^ika brings about the role of an unseen power here. The atoms get moved by the unseen power (adrsta).

According to the Greek view, the souls are constituted of atoms, but according to the Vai\e^ika, souls and atoms are different. Moreover, souls and atoms are regarded by the Vaisesikas to be eternal and independent.

Regarding evolution Greek atomism opines that evolution is mechanical. Greek atomism is thus materialistic. But Vai\e^ika view of atomism is guided by spiritual and the moral law. It is found that the later Vai\e^ika admit God as the efficient cause.

2.10 CRITICAL APPRECIATION OF VAI\E^IKA ATOMISM

Prof. C. D. Sharma critically angles the Vai\e^ika theory of atomism in the following way:

Sharma says that the qualitative differences in the atoms of the Vai\e^ika system cannot be upheld. He argues that if the atoms of earth possesses the greatest qualities and the atom of air the least, there should be difference between their weight and magnitude. Moreover, if the atoms possess qualities like smell, touch, colour etc, how can they be eternal? And if the qualities of the atoms are eternal and cannot be separated from them, then why to maintain that the

qualities of the souls can be separated from them in liberation, and why maintain that the substance can remain without qualities? These are few observations made by C. D. Sharma.



CHECK YOUR PROGRESS

Q 7: State one important difference between Greek atomism and Vaisesika atomism?

Q 8: State True or False.

a) Vai\e^ika atomism maintains both quantitative as well as qualitative differences among atoms.
(True/ False)

b) Vai\e^ika atomism does not accept the secondary qualities in the atoms. (True/ False)

c) According to Vai\e^ika atomism, evolution is mechanical. (True/ False)



2.11 LET US SUM UP

- In this unit we have come to know about the Vai\e^ika theory of atomism.
- Vaisesika atomism states all composite objects of the universe are composed of the atoms of earth, water, air and fire.
- The Vai\e^ika view concerning creation is called atomism or param"nuv"da.
- This unit also has dealt with several arguments for the existence of atoms.
- Vai\e^ika atomism explains that part of the world which is non-eternal.
- Non-eternal things are the composite things which are subject to origination and destruction in time.
- All composite objects are constituted by the combination of atoms and destroyed through their separation.
- Vai\e^ika subscribe to the moral and spiritual principles governing the processes of composition and decomposition of atoms.

- Since Vai\e^ika accepts the existence spiritual substances, namely, God and souls, hence Vai\e^ika atomism is spiritualistic and materialistic.
- Moreover Vai\e^ika atomism and Greek atomism agree as well as disagree with regard to the nature of atoms.
- The unit ends up with a note of critical estimate of Vai\e^ika atomism.



2.12 FURTHER READINGS

1. Surendranath Dasgupta : A History of Indian Philosophy, Motilal Banarasidass Publication.
2. Jadunath Sinha:Indian Philosophy, Motilal Banarasidass Publication
3. Chandradhar Sharma: A Critical History of Indian Philosophy, Motilal Banarasidass Publication
4. D. M. Datta & S. C. Chatterjee: An Introduction to Indian Philosophy, Motilal Banarasidass Publication
5. S. Radhakrishnan : Indian Philosophy, Motilal Banarasidass Publication
6. Thomas Mcevilley: The Shape of Ancient Thought, Motilal Banarasidass Publication



2.13 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: A) False

B) True

C) True

Ans to Q No 2: The indivisible, partless and eternal particle of matter is defined an atom (Param"nu)

Ans to Q No 3: A) False

B) True

C) True

D) False

Ans to Q No 4: A dyad (dvyanuka) is produced by the conjunction of two atoms. A dyad is minute (anu), short (hrasva) and imperceptible.

Ans to Q No 5: When there is an activity among three dyads, they come into conjunction with one another, and produce a triad (tryanuka).

Ans to Q No 6: Adásta is defined as the Unseen Power of merit (dharma) and demerit (adharma) which resides in the individual souls and want to fructify in the form of enjoyment or suffering.

Ans to Q No 7: The important point of difference between Greek atomism and Vaisesika atomism is: Leucippus and Democritus hold that atoms differ only quantitatively. They denied any qualitative difference among atoms. But Vai\e^ika atomism maintains both quantitative as well as qualitative differences among atoms.

Ans to Q No 8: A) True

B) False

C) False



2.14 MODEL QUESTIONS

A) Very Short Questions:

Q 1:What is atomism (paramanukaravada)?

Q 2: State the meaning of asatk"ryav"da?

Q 3: What is the other name of }rambhav"da?

Q 4: Define 'adrista'.

Q 5: What is Kalpa?

B) Short questions (Write in about 150- 200 words)

Q 1: Briefly state the meaning of the term 'atom'.

Q 2: Briefly explain the Vai\e^ika arguments for the existence of atoms.

Q 3: Briefly explain the nature of the four atoms of earth, water, fire and ether.

C) Long questions (Write in about 300-500 words)

Q 1:Discuss the theory of Vai\e^ika Atomism.

Q 2: Explain and examine the relation between Greek atomism and Vai°e^ika atomism.

Q 3: What are the arguments for the existence of Vai°e^ika atoms? Explain.

Q 4: Critically evaluate Vai°e^ika doctrine of atomism.

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