

## The Bauddha atomism

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There are three Indian philosophical schools that developed and adopted the atomic theory by their speculation. The first school is represented by Jain philosophy. The second one is represented by the Vaiśeṣika and Nyāya systems of thought and the Bhāṣya (commentary) on later by Vātsyāyana and Vaibhāsikas. The third one is represented by Sautrāntikas of the Buddhist school. In this short note, we are going to throw light on atomism given by these three Indian philosophical schools. Particular emphasis is given on Bauddha atomism.

### 1. Nyāya Vaiśeṣika and Jaina concept of atomism

It is well known to scholars that the six orthodox systems that accept the authority of the Veda are Nyāya, Vaiśeṣika Sāṃkhya, Yoga, Pūrvamimāṃsā and Uttara-mimāṃsā or Vedānta. The Vaiśeṣika system is supposed to have been propounded by Kanāda. The word Vaiśeṣika means, according to H. Ui, "Superior, excellent or distinguished in relation to Sāṃkhya".<sup>1</sup> The two principal authorities of the Vaiśeṣika School are (i) Vaiśeṣika Sūtram by Kanāda and (ii) Padārthadharmasamgraha by Praśastapāda. Some scholars say that Kanāda or Kanabhuj, or Kanabhaksa means one who eats particle or grain indicating probably the atoms or particles. From this conception it seems to us that scholars, that Kanāda enunciated the essential of an atomic theory. Ulūka is another name of this author according to Buddhist writings<sup>1</sup> and that is why the Vaiśeṣika school is also known as Aulukya or Aulukya-darśana prasaśtapāda seems to have been inclined by the Buddhist ideas.

In the Nyāya Vaiśeṣika, the atomic theory was shaped by the concept of *Avayavin* (whole) and *Avayava* (constituent part). The substance is considered to be of nine types. The first four viz, earth, water, fire and air are considered to be atomic. The atom is eternal (indestructible), indivisible and without magnitude. All atoms are to be considered as spherical but each element has its own class of atoms with particular attributes. It is known to the authority of Nyāya Vaiśeṣika that earthy atom has odour, airy atom has touch, watery atom has taste and fiery atom has colour. The effect of the combination of the two like atoms goes by the name of *dvyanuka* (dyad). Similar conception applies for *tryanuka*, *Caturanuka*, etc. The Jaina has developed also atomism in his own way that was structurally different from that of Nyāya Vaiśeṣika. In *Bhagavatisūtra* we find *paramānu* as defined by Jaina as that which cannot be cut or divided. The atom is also conceived to be the subtlest particle, without any parts, even though with reference to its condition its capacity is to change in relation to colour,

taste, smell and touch. The Jainas discussed their atomism in their canonical works.

## 2. The Bauddha atomism

It is known to us that there are two categories of Buddhism, viz, (i) Mahāyāna Sect., and (ii) Hīnayāna Sect. Again there are two types of Buddhist school, which belongs to Mahāyāna Sect., viz, (a) Yogācāra, and (b) Mādhyamika. There are also two types of Buddhist school that belongs to Hīnayāna Sect., and they are: (a) Vaibhāsika, (b) Sautrāntika. If we go through the old canonical Buddhist work, then we find that there does not exist any account of atomism. Latter, the Mādhyamika and Yogācāra schools are opposed to atomic theory of matter. But Hīnayāna Sect., i.e., Vaibhāsika and Sautrāntika schools, are regarded as Sarvāstivādin (the realists), admitting the state of matter as a part of their concept of rūpa.<sup>2</sup> According to Hīnayāna Bauddha, the atom is indivisible, unanalysable, invisible, inaudible, untestable and intangible. It is true that they (Hīnayāna Bauddha) consider matter as collocation consisting of the four-fold substratum of colour, taste, odour and touch, and regard atom as minutest unit of rūpa. There are two types of atoms, viz, (i) Dravyaparamānu (simple) and (ii) Samghātaparamānu (compound). There are three opinions regarding these concepts: (i) Some believe that it is a clean combination; (ii) A group of Buddhist think that there remains always an intervening space between the atoms; and (iii) A small fraction of Buddhist think that these are in such a close proximity that there is no inter-atomic space.

According to Buddhist philosophy there are in an aggregate eight atoms, viz, four fundamental atoms that are solid (earth), liquid (water), hot (fire), moving (air) and four secondary that are colour, odour, taste and touch. Thus the qualities are also atomic in this scheme. Each secondary atom requires four fundamental atoms for its support. The aggregate therefore consists of  $4 \times 4 + 4 = 20$  atoms if the body does not sound. If it is to sound, the aggregate

will consist of 25 atoms.<sup>3</sup>

Buddhists do not think of atoms in terms of particles of some stuff; instead, they think of them as force or energy. Thus, earthy atom is thought of as force of repulsion, and watery atom as kinetic energy. The Buddhist view of atoms as dynamic force is in tune also with the doctrine of momentariness which unequivocally states that all things change and that every thing is momentary.

The constituents of the material universe interacting with one another are really inseparable. The concept of the atom has important philosophical significance. Things do not exist individually. The existence of a single object is nothing more than a mental illusion. The universe is simply a process, a system of interconnected activities in which nothing moves independently of the rest and where all is in ceaseless motion. This is exactly the same in principle, but in different words, as the Buddhist preaching of "Anicca" which means the impermanent or transient nature of things. Upāsaka Wu Shu (Loo Yung Tsung)<sup>4</sup> said the reaction which occurs in an exploding atomic bomb can be expressed in the following:  $U-235 + \text{neutron} = I + Y + N \text{ neutrons}$  (U = Uranium, I = Iodine, Y = Yttrium, N = a number). In modern notation its correct expression is as follows:  $^{235}\text{U} + \text{neutron} \rightarrow I + Y + N \text{ neutrons}$ .<sup>5</sup> Thus uranium breaks up and transforms into atoms of iodine and yttrium. Atom, the meaning of which is "indivisible", had been finally proven to be divisible. In spite of the original meaning "indivisible" of atom, the nucleus of it is still divisible into "quarks".<sup>6</sup> But in ordinary chemistry, the conventional theory of the atom still holds good for most practical purposes. Paradoxically it might be put in the following way: An atom is not (really) an atom; it is called an atom for the sake of convenience. One might notice the startling resemblance here of science with Buddhism if one ever had read the Diamond Sutra in which it is said "when

the Tathāgata speaks of universe he does not mean really universe; he calls them universes only nominally." In the Greek atomism,<sup>7</sup> both atoms and void are real. The atoms have different sizes and shapes, and they constitute the physically indivisible building material of the universe. Moreover, the atoms are held to be in perpetual motion, and thus notion and void are equally real.

Thus in our short note we see that Buddhists have a philosophical idea on atoms.

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