Vivekananda’s Universe

SWAMI SUNIRMALANANDA

‘There is no motion in a straight line. Everything moves in a circle; a straight line, infinitely produced, becomes a circle’. And ‘...there is no such thing as motion in a straight line. Every motion is in a circle. If you can take up a stone, and project it into space, and then live long enough, that stone, if it meets with no obstruction, will come back exactly to your hand. A straight line, infinitely projected, must end in a circle’

Swami Vivekananda said this. And he said this a decade before Albert Einstein’s Special Relativity (1905) and two decades before General Relativity (1916). Between 1893 and 1897, through his talks and writings, Swami Vivekananda has hinted at an important theory of the universe, based on the Vedas, Sankhyan philosophy, and on his own insight. Vivekananda’s observations are in a simple language, and we shall see why his worldview is so important.

Since a long time, one question has bothered physicists. Is this universe curved or flat? Is time-space curved or flat? There had been similar doubts about the earth itself—people had doubted if the earth was flat or round. Finally, it was proved that the earth was not flat. Similarly, Einstein’s space-time concept gave the idea that the ‘universe’ is curved. Einstein’s declaration that the gravitational field bends even light, and its subsequent proof during an eclipse confirmed that say space-time is not flat. A new worldview—of relativity—of physical events emerged by 1930, while another intricate world of quantum mechanics saw light during the same time. Swamiji’s declaration in 1896 that there is no motion in a straight line is interesting when read in relation to all these developments.

What made this universe?

Both philosophers and scientists have been asking the same questions about the universe: When and how did creation take place? What is the nature of the ‘brick’ that has been used to build this universe—that is, the fundamental particle? What is that one force or energy which has been divided into so many manifestations of power—some making subatomic particles run while others making stars do what they do. And so on.

Both philosophers and scientists have contributed enormously to our knowledge of the universe. In fact, physics was part of metaphysics, until recently. Physics began its study of the universe independently of philosophers since Descartes quite lately. The new quantum-cum-relativistic worldview of physics is not even a century old. Just as scientists have their huge theories and big bangs, philosophers too have their theories. However, philosophers use a simple language which we lay people too can understand. We need to understand such truths because, though we are common people, we live in this universe and are interested in knowing about it. Scientists used the language of geometry before. Now they use mathematical formulae, and may perhaps switch on to some computerized tongue tomorrow, who knows. No doubt there are a few great scientists who try to explain their complex discoveries in a simple language to us through popular science literature. So far as theories are concerned, scientific discoveries too keep...
changing like philosophical, but in a drastic way. We no more have Pluto in the list of planets in our solar system. Now they say we have antimatter. We have the earth’s twin, Kepler-22, far, far away, which is similar to the earth in every way. And we have something called the neutrino which is terribly energetic and moves faster than the speed of light. Scientists are thinking that if this is really possible, the upper speed limit of any moving wave or particle in the universe shall change and physics books shall have to be rewritten. All this for us lay people appear mysterious but interesting.

Regarding such universal truths, Swami Vivekananda says: ‘The greatest truths have been forgotten because of their very simplicity. Great truths are simple because they are of universal application. Truth itself is always simple. Complexity is due to man’s ignorance’. Why does Vivekananda mention forgetting? Were some of these universal truths known before? Indian Rishis understood ‘the high spiritual flights of the Vedanta philosophy, of which the latest discoveries of science seem like echoes’. Further, Vivekananda says: ‘Today we find wonderful discoveries of modern science coming upon us like bolts from the blue. But many of these are only re-discoveries of what had been found ages ago. It [science] has just discovered that what it calls heat, magnetism, electricity, and so forth are all convertible into one unit force. But this has been done even in the Samhita’.

There was no creation ever

This brings us to the question of questions, of creation. When and how did creation take place? Swami Vivekananda affirms: ‘Creation is eternal’. He explains: ‘The Vedas teach us that creation is without beginning or end. Therefore there never was a time when there was no creation’. ‘...the question may be asked: How was it at the first cycle? The answer is: What is the meaning of a first cycle? There was none. If you can give a beginning to time, the whole concept of time will be destroyed. Try to think of a limit where time began, you have to think of time beyond that limit. Try to think where space begins, you will have to think of space beyond that. Time and space are infinite, and therefore have neither beginning nor end’.

What about the scientific ‘big bang’ then? They say scientists are still hearing the echoes of the bang of a few million years ago. Vivekananda explains:

Here is the word Śrishti, which expresses the universe. Mark that the word does not mean creation. It is Śrishti, projection. At the end of a cycle, everything becomes finer and finer and is resolved back into the primal state from which it sprang, and there it remains for a time quiescent, ready to spring forth again. During that primal state, the different forces are resolved back into the primal Prāna, and this Prāna becomes almost motionless—not entirely motionless; and that is what is described in the Vedic sukta: “It vibrated without vibrations”—anidavātam. We read again in the Katha Upanishad: “yadidam kimcha jagat sarvam prāṇa ejati nihsritam.” Everything in this universe has been projected, Prāna vibrating.

What is Prāṇa? Vivekananda answers: Prāṇa is spandana or vibration. ‘Prāṇa means force [energy]—all that is manifesting itself as movement or possible movement, force, or attraction. Electricity, magnetism, all the movements in the body, all [the movements] in the mind—all these are various manifestations of one thing called Prāṇa’.

What is matter?

So this eternal universe is the vibration of Prāṇa. But we are experiencing matter every moment. We see solid objects. What about matter that we experience then?
Swami Vivekananda says: ‘All matter throughout the universe is the outcome of one primal matter called Ākāsha; and all force, whether gravitation, attraction or repulsion, or life, is the outcome of one primal force called Prāṇa. Prāṇa acting on Ākāsha is...projecting the universe. At the beginning of a cycle, Ākāsha is motionless, unmanifested. Then Prāṇa begins to act, more and more, creating grosser and grosser forms out of Ākāsha—plants, animals, men, stars, and so on. After an incalculable time this evolution ceases and involution begins, everything being resolved back through finer and finer forms into the original Ākāsha and Prāṇa’. So, Vivekananda adds, ‘Mind becomes matter, and matter in its turn becomes mind, it is simply a question of vibration.’ ‘The same [fact] looked at from one standpoint becomes matter. The same one from another standpoint becomes mind’.11

Next, there was always a question regarding time within this space-time. Is time, of two individuals observing the same event from different locations, absolute or relative? Einstein resolved this question by 1915, and said that time is relative. Vedic India, however, knew that time is relative, and Swami Vivekananda knew too. He therefore declared that ‘...you cannot have any idea of abstract time, but you have to take two events, one preceding and the other succeeding, and join the two events by the idea of succession. Time depends on two events, just as space has to be related to outside objects. And the idea of causation is inseparable from time and space’.12

Within this so-called Srishti, there is motion. Motion too is relative, remarks Swami Vivekananda. He says:

Every little bit, every atom inside the universe, is in a constant state of change and motion, but the universe as a whole is unchangeable, because motion or change is a relative thing; we can only think of something in motion in comparison with something which is not moving. There must be two things in order to understand motion. The whole mass of the universe, taken as a unit, cannot move. In regard to what will it move? It cannot be said to change. With regard to what will it change?’13

Swami Vivekananda gives an example of the uncertainty of things when he says that

...a train is in motion, and a carriage is moving alongside it. It is possible to find the motion of both these to a certain extent. But still something else is necessary. Motion can only be perceived when there is something else which is not moving. But when two or three things are relatively moving, we first perceive the motion of the faster one, and then that of the slower ones. How is the mind to perceive? It is also in a flux. Therefore another thing is necessary which moves more slowly, then you must get to something in which the motion is still slower, and so on, and you will find no end.14

What about space? Between the earth and the moon or the sun, there is space. About the ‘empty’ space, Vivekananda says: ‘Is there any break between you and the sun? It is a continuous mass of matter, the sun being one part, and you another. Is there a break between one part of a river and another?’15

Regarding matter-energy relationship, Vivekananda says: ‘We have resolved the whole universe into two components, into what are called matter and energy, or what the ancient philosophers of India called Ākāsha and Prāṇa. The next step is to resolve this Ākāsha and the Prāṇa into their origin’16. ‘Both can be resolved into a third thing called Mahat—the Cosmic Mind. This Cosmic Mind does not create Ākāsha and Prāṇa, but changes itself into them’.17

Vivekananda did not want a
mathematical formula to explain the interrelationship between matter and energy. He wanted a formula which resolved both matter and energy into a third, higher state. So he approached Nicholas Tesla, the famous scientist who used to listen to Vivekananda’s lectures, seeking a formula which said how energy and matter could be reduced to potential energy (mahat). Tesla invited him to his lab to demonstrate the equation, but he could not make the formula.

These days, there is a lot of discussion going on regarding the speed of light. It is interesting to see what Vivekananda has to say regarding light. Just as in the case of sound, light too has some speciality in Vivekananda’s view. He says: ‘The vibration of light is everywhere. The owl sees it in the dark. That shows it is there, though man cannot see it. To man, that vibration is only visible in the lamp, in the sun, in the moon, etc’.\(^{18}\) He also says, ‘The vibration of light is everywhere, omnipresent; but we have to strike the light of the lamp before we can see the light’.\(^{19}\) So with sound, he adds.

Why are Vivekananda’s ideas about the universe important? The physicist, Professor Hans Peter Dürr’s ‘Inanimate and Animate Matter’ in *What is Life* (2002) declares: ‘Modern quantum physics reveals that matter is not composed of matter, but reality is merely potentiality’ (p. 145). He also writes in ‘Whatever Matter Is—It’s Not Made Of Matter’: ‘...the green we see [for instance] is a quality appearing in the mind in response to this frequency of light. It exists only as a subjective experience in the mind.’ Professor Dürr has worked with Werner Heisenberg for many years. Such a personality declares in his German book (2000), translated into English: ‘Matter is not made up of matter. Basically there is only spirit’ (p. 18). Vivekananda also said: ‘You see this glass, and you know it is simply an illusion. Some scientists tell you it is light and vibration. All these [objects you see], are but dreams.’\(^{20}\) Professor Lothar Schäfer of Arkansas University affirms it when he says: (in Lou Massa’s *Science and the Written Word*, 2011): ‘The quantum phenomena show that reality is a transmaterial, transempirical, and transpersonal wholeness’ (p. 93).

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**REFERENCES**

3 C. W., Vol. 6, p. 35.
10 C. W., Vol. 1, p. 503.
11 Ibid., p. 504.
13 Ibid., p. 338.
15 Ibid., p. 154.
19 C. W., Vol. 4, p. 139.
20 Ibid., p. 235.

* Swami Sunirmalananda is a monk of the Ramakrishna Order and formerly Editor of the *Prabuddha Bharata*. 

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