

BUDDHISM AND EINSTEIN

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According to Buddhism it is wrong to say 'Everything is' because things are not what they seem. Nor would it be right to say 'Everything is not' because then there would be no reality at all. Everything is relative. The world is nothing more than a concept; it is 'mind-stuff'.

According to Einstein the world is a web of relationship, a set of relations – not 'a machine consisting of separate objects'. Here again, everything is relative.

It appears then that relativity is a common platform for Buddhism and Einstein.

Ed.

What did the Buddha say about the nature of the universe? How did He account for man and the world in which he lives?

The moment we ask ourselves these questions, we remember that He maintained silence when confronted with certain questions and rush to the conclusion that He left all such questions severely alone. But the questions He refused to answer relate to fictitious problems which are prompted by our earth-bound habits of thought. Nor would it be correct to say that the Buddha avoided these questions, because they had no direct bearing on the main object of His message which is release from the sorrows of this world as these sorrows are intimately connected with the nature of the universe and the way in which we come into it. Moreover, it is difficult to believe that an Omniscient Buddha whose ministry lasted 45 years failed to make even a passing reference to such all-important questions.

As a matter of fact we find that the Buddha has said all that could have been possibly said having regard to the state of scientific knowledge during His day. The only difference is that He resorted to similes and metaphors where we use mathematics and the controlled experiment. If we have not realised this fact so far it is merely because we have had to wait 2,500 years for science to catch up with the ideas of the Buddha.

It is well known that during the last fifty years there has been a revolution in science itself – a revolution not second to that caused by Copernicus in the 16th century. Einstein has made it necessary for us to throw overboard all our ideas regarding space, time and matter. These ideas shed a new light on certain sayings of the Buddha and invest them with their true significance. When these are considered together it will be seen that the Buddha not only answered the questions quoted above, but also gave the right answers as confirmed by the “Theory of Relativity”.

At the beginning of the century scientists firmly believed that the atom constituted the ultimate particle which was therefore incapable of further subdivision. Fifty-two years ago it was found that when a current is passed through a tube almost exhausted of air there appeared to be particles which were much smaller than the atom. Apparently the current had split the atom into what were called electrons. It had been also known that when a body is charged electrically it behaves as if its mass had increased. In these circumstances Einstein among others wondered, how much of the mass of the electron was due to its electrical charge. The experiment was performed and the calculation was made and it was found that the whole mass of the electron was due to its electrical charge. Thus it was proved conclusively that matter is devoid of any material sub-stratum. It also proved that the velocity of an electron being very great its electrical charge too must be equally great.

This paved the way for the making of the atom bomb which became possible once it was proved that matter was energy pure and simple in a highly concentrated form. But the most important consequence was that we have had to change our ideas regarding the material world which on the authority of twentieth century science is now no longer the substantial objective world we took it to be. It has been reduced to the status of an illusion in which energy masquerades in the form of matter. This explains why the Buddha told Mogharaja that he could overcome even death if he could realise that the material world is one vast void.

Whenever the Buddha referred to the material world, He always compared it to foam or to a bubble. Sir James Jeans gives the scientific view as follows: “To sum up, a soap bubble with irregularities and corrugations on its surface is perhaps the best representation, in terms of simple and familiar materials of the new universe revealed to us by the “Theory of Relativity.”

Once we admit the illusory nature of the external world it becomes unnecessary to scan the heavens for a God Creator, because we ourselves are largely responsible for our own illusions. This is indeed the line of thought which the “Theory of Relativity” suggests.

According to this Theory an apple falls to the ground not because it is attracted towards the centre of the earth but because space near the surface of the earth is curved in such a way that the apple cannot help falling in just that way. What Newton attributed to a force Einstein attributes to the geometrical properties of space. Even matter is looked upon as “wrinkles” in space-time.

Thus the world of Relativity becomes a mental creation, because its mathematical description can only be applied to pure thought. Jeans thought that if the world was created by God then it must have been created by a God with a mathematical turn of mind. This is probably because we are unable to visualise the world of Relativity as revealed to us by Einstein except with the aid of mathematics. Eddington on the other hand was quite definite that the world was made of “mind-stuff”. He had said: “We have found a strange footprint on the shores of the unknown. We have devised profound theories to account for its origin. At last we have succeeded in reconstructing the creature that made the footprint. And Lo! it is our own.”

We can now understand the Buddha’s own sayings on the subject. In the very first verse of the Dhammapadha “things” are described as being “mind-made”. In another verse our position in this world is compared to that of a spider caught in a web of his own weaving. And there is also a saying to the effect that the world, its beginning and end, are all to be found within this fathom-long body of ours.

Once the material world is dethroned from its position of reality, we must find something else to take its place. Two candidates immediately offer themselves – space and time. We have always looked upon space and time as two distinct realities which are absolutely independent of each other and everything else.

If this view is correct then it should be possible to measure the absolute velocity of the earth through space. Michelson and Morley performed this experiment and found that they could not detect any absolute motion at all. This means that there is no such thing as absolute motion and that all motion is relative. This deprives space and time of the absolute character we have assigned to them.

The experiment also proved that the velocity of light is the same to all observers whatever their own motion relative to the source of light. This means that if one observer travels faster than another and overtakes him still a ray of light will overtake both at the same rate. This looks absurd but it is quite true. Add to this the fact that it is this same erratic light messenger whom we employ in all our measurements and we may expect even more absurd results.

Thus if the velocity of light is constant to all observers, then it can be proved that an aeroplane travelling with a velocity of 161,000 miles per second, will measure only half its length to an observer on the ground. If it can travel with the velocity of light its length will vanish while its breadth and height will remain unaltered. What happens to the plane on such an occasion? Does it shrink? We don't know because even a passenger in the plane will be none the wiser as his own foot ruler would have shrunk proportionately.

Thus lengths and times begin to lose the absolute character assigned to them. They are merely relations between object and observer which change with every change in their relative motion.

Observers on different systems moving with different velocities will obtain different readings regarding the same measurement. This is obviously unsatisfactory and Minkowski asked himself if there is no relation on which all observers will agree. He found that such a relation cannot be formed without incorporating both the space and time readings into it. Such a relation can never be expressed in terms of space or time alone.

From this we come to the conclusion that reality is neither space nor time nor even space and time but a combination of both – space-time. Hence Minkowski's saying "Henceforth space by itself, and time by itself, are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent reality."

Thus according to Relativity, reality is neither matter, space nor time. Reality is a union of space and time – space-time. This means that we must look on space and time as inseparable twins which exist together or not at all. Now matter is to space what mind is to time. But matter, space and time have all lost their absolute character and have been reduced to the status of illusions. Therefore the mind itself is an illusion because it makes us believe in the existence of a permanent ego.

Again, who created mind and matter? We can only say that they created each other, because they exist together and therefore arise together or not at all. How is this possible? The Buddha has referred to two sticks neither of which can be made to stand upright by itself but both of which can be made to do so by being made to support each other. But matter we have seen is a movement. A movement may under certain circumstances produce the illusion of rest because we have been told that a ball of fire whirled round rapidly can produce the illusion of a circle.

Thus we see that the case of mind and matter (or man and his world) is a case of “dependent origination” – *paticca samuppada*. We can now understand the Buddha’s cryptic saying that the arising of the world – is dependent on the arising of the senses and their objects. But the fact that mind and matter are inseparable twins, points to a common source and the question of origins can be advanced one step further. Bergson has shown at length that the mind may be regarded as a condensation from consciousness. He has also shown that once consciousness is given matter can be deduced from it. And this is precisely what the *Paticca Samuppada* says: “*Vinnana* (consciousness), *paccaya* (gives rise to), *nama* (mind), *rupa* (and matter)”.

Beyond this, science and philosophy will not go. But, the *Paticca Samuppada* goes even further, deriving *vinnana* from the *Sankharas* and the *Sankharas* from *Avijja*. The Buddha always referred to things as being “compounded” (*Sankharas*). Of what were they “compounded”? Relativity tells us that reality is a joint phenomenon between the object and the observer. Thus things partake of the nature of both the object and the observer. In the nature of the case the observer is inextricably bound up with his observation and a pure observation is called for. This means extensive repairs to the mental machinery so that it may become possible to cut out the observer’s contribution.

This is the essence of the Buddhist method of meditation. Its object is to apprehend reality, to see things as they are – *yathabhuthagnana*. For the Buddha has said that if we can realise the illusory nature of the Ego and the material world we may even overcome death. What then is the nature of the ultimate reality? The nearest approach to this reality is represented by the laws of nature we have unearthed.

Unfortunately these laws say nothing about Dame Nature herself. May it not be because that is all there is to it? To Einstein the world is a set of relations. He says in effect. “Give me the geometry of your space and I will deduce therefrom the laws of nature obtaining in your world.” According to the Buddha it is wrong to say “Everything is,” because things are not what they seem. It would be equally wrong to say “Everything is not,” because then there would be no reality at all.

The world is real enough but it is only a set of relations. Hence the importance we attach to the *Pattana* which describes these relations in detail. Incidentally it will be seen that all those philosophies which derive mind from matter or *vice versa* are clearly wrong and that the Buddha is the one great religious teacher who realised that the genesis of mind and matter is simultaneous. That He did so 2,500 years ago proves His Omniscience.

