

ISSN 2278-4004

# प्राच्या PRĀCYĀ

*(A Peer Reviewed & Referred Annual Journal on Sanskrit)*

Vol. VII

SCIENCE SPECIAL  
विज्ञानविशेषांकः



M.D.K. GIRLS' COLLEGE  
DIBRUGARH

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## IS TANTRA VERY CLOSE TO MODERN PHYSICS?

Dr. Parimal Kumar Datta

[Tantra's contribution towards human civilization is immense. In spite of its rich encyclopedic literature and scientific cult it is still neglected. We live in the age of science. Tantra is not only a literature or cult but it is also science. Modern physics and Tantra have come closer. The theories of physics that are close to Tantra are discussed in this article entitled 'Is Tantra very close to modern science?']

"You can neither understand the spirit of true science, nor of true religion unless you keep seeking in the forefront?"

- Sir Arthur Edington.<sup>1</sup>

### Introduction

Tantra is a pre-historic cult and ancient literature. In spite of its rich cult and encyclopedic literature, it is still much neglected, severely criticized, bitterly abused, ruthlessly ignored, vehemently opposed, unjustly outranked, disgracefully forsaken, openly blamed, secretly cursed and distinctly overlooked. False notions and misconceptions about Tantra make critics, frown, scholars shrink, readers bewilder, researchers hawk, intellectuals lament, philosophers disgust, teachers shrink, students scream, monalists curse, real sādhakas keep mum, pseudo-Tātrikas gloat, pseudo-secularists sneer, over-secularists clamour, iconoclasts chuckle, atheists snarl, laymen simper and politicians uproar.<sup>2</sup>

### Tantra's Contribution

The very saying of Einstein knocks us at this moment— "I am not especially clever or especially gifted. I am only very very curious".<sup>3</sup>

Out of this curiosity our journey into the domain of Tantra makes us wonder when we are compelled to mark the contribution of Tantra towards, Alchemy, Anatomy, Architecture, Art, Astrology, Astronomy, Ayurveda, Bio-science, Dance, Economics,

Education, Embryology, Environmental Science, Ethics, Geography, Geometry, History, Iconography, Law, Literature, Mathematics, Magic, Music, Philosophy, Physics, Physiology, Psychology, Religion, Symbolic Science and Yoga.<sup>4</sup>

### Tantra and Science

Dr. Capra in his book "The Tao of Physics" rightly comments,<sup>5</sup>

"Eastern thought, and more generally mystical thought, provide a consistent and relevant philosophical background to the theories of contemporary science."

Tantra is science. Tantra is a way of religion. In this context we may remember Einstein<sup>6</sup>,

"Science without religion is lame.  
Religion without science is blind"

### Tantra and Physics

Tantra is a sādhanāśāstra with science<sup>7</sup>. Modern physicists now agree to some postulations of Tantra<sup>8</sup>. Finn finds peculiar similarities between physics and Tantra<sup>9</sup>.

In this article "Is Tantra very close to modern science?", our attempt is to show how Tantra and modern physics express striking similar views and some concepts of modern science.

Great scholars observe,<sup>10</sup>

"Tantra's notions concerning time and space, the nature of light and heat, gravity and magnetic attraction, the wave theory of sound are strikingly similar to the concepts of modern science. It must, however, be borne in mind that these scientific generalizations were based on intuitive insight, Yogic visions and practices and intense observation of natural phenomenon conditioned by an ontological viewpoint, and were not determined by experiments carried out in accordance with modern methods. These discoveries have a direct bearing on Tantric thought, its precepts and practices. As for example, astronomical observations for Tantrics, have a utilitarian value in so far as they are used to determine auspicious times for rites and rituals and also are indicators to man's destiny in relation to the varying positions of the planets.

### Big Bang Theory of Physics

The Big Bang Theory is the idea that the universe began with a single large explosion and that the pieces are still flying apart.<sup>11</sup>

Its essential feature is the emergence of the universe from a state of extremely high temperature and density. The so-called big bang occurred at least 10,000,000,000 years ago. The universe has no edge, so that the big bang again occurred not at a particular point in space but rather throughout space at the same time.<sup>12</sup>

According to a modern cosmologist of Belgium, "This universe is created due to the bursting of a great and original Bindu."<sup>13</sup>

### Quantum Mechanics of Physics

The word 'quantum' means the minimum amount of any physical entity involved in an interaction. Quantum Mechanics or Quantum Physics or Quantum Theory is a branch of Physics. It provides a mathematical description of much of the dual particle and wave-like behaviour and interactions of energy and matter.<sup>14</sup>

When light is absorbed by some material, the energy of the material does not rise continuously, but in discrete jumps. Each jump occurs when the material absorbs a single quantum of light. Energy levels (orbits) of electron in an atom do not have a continuous range of possible energies, but instead that only discrete 'orbits' are possible. This strange behaviour is linked to the concept of wave-particle duality. It is an outgrowth of the concept that all forms of energy are released in discrete units or bundle called quanta.<sup>15</sup>

Moreover, according to Quantum Mechanics, electrons can sometimes move in erratic directions in an apparent whimsical manner which may be construed as a manifestation of consciousness.<sup>16</sup>

### Theory of Relativity of Physics

The Theory of Relativity of Physics usually encompasses two theories by Albert Einstein, special relativity and general relativity.<sup>17</sup>

The Special Theory of Relativity of Physics essentially deals with the question of whether rest or motion and or relative or

absolute and with the consequence of Einstein's conjecture that they are relative.<sup>18</sup>

The General Theory of Relativity primarily applies to particles as they accelerate, particularly due to gravitation and acts as a radical revision of Newton's theory, predicting important new results for fast moving or very massive bodies. This theory shows that objects continue to move in a straight line in space-times but we observe the motion as acceleration because of the curved nature of space-time.<sup>19</sup>

In this Theory of Relativity, Einstein postulates that mass and energy are two facets of the same thing and can be converted from one to the other by this formula.<sup>20</sup>

$$E = MC^2 \text{ or } M = \frac{E}{C^2}$$

Where,

C is the Velocity of Light

E is the Energy

M is the Mass

C equals to the speed of Light (300000 kilometers [186000 miles]) per second.

M is the 'rest mass' of the body. Its mass is determined when the body is at rest.

### Creation Theory of Tantra

According to Tantra, Śiva has two aspects Nirguṇa (attribute less) and Saguṇa (with attributes).<sup>21</sup> As the former, He is transcend and therefore, dissociated from Prakṛti or Śakti and as the latter, he is associated with Śakti.<sup>22</sup> It is out of this that is Śakti emanates; from that, Nāda and out of Nāda, Bindu bursts<sup>23</sup> and divides itself and out of that division there arises, Bindu, Nāda and Bija.<sup>24</sup> Bindu partakes of the nature of Śiva or Jñāna. Bija is Śakti and Nāda is the relation between the two as the stimulator and stimulated.<sup>25</sup> When Bindu bursts, there arises an inchoate, volume of sound. This sound is called 'Śabda Brahma' which is the Caitanya pervading all creation<sup>26</sup> and is the source of letters of the alphabet of words and other sounds by which thoughts are exchanged. From Śabda

arises Pañcabhūta.<sup>27</sup> This universe of moving and motionless objects is composed of Pañcabhūta - earth, water, fire, air and ether.<sup>28</sup>

### Quantum Mechanics of Tantra

Vāmakeśvara Tantra says that Energy (Śakti) is the wavy dance of Katā (atoms).<sup>29</sup> It is also called The Law of Indeterminacy of Physics.

### Theory of Relativity of Tantra

Tantra's Yantra, Mantra and Deity are the examples of this theory.

### Yantra

Yantra is the development of Mantra and a deity is apprehended in the form of Mantra.<sup>30</sup>

Yantra functions as a positive physical object which enables the Sādhakas to concentrate on the meaning and significance of the Mantra he is utilizing. It is believed that when the Sādhaka concentrates upon the Mantra utilizing the patrician Yantra as a physical object that Yantra becomes an idol of the Deity and the physical part of this object begins to expand within the mind of the Sādhaka. His own personality slowly gets transformed from the original quality of crudeness and becomes free from egoistic tendencies.<sup>31</sup>

### Mantra

A Mantra is composed of letters. Letters and their combinations as syllables and words and Mantras are originated from Kuṇḍalini which is a form of Śabda Brahma.<sup>32</sup> Mantra is a particular sound body of consciousness. Mantra is a mass of radiant energy.<sup>33</sup>

Under vibration small particles of matter group themselves into definite geometrical patterns and figures corresponding exactly to the quality, strength and rhythm of sound.<sup>34</sup>

### Deity

Tantric deities have three forms- as personifications (devatāmūrti), as symbolic diagrams (yantramūrti) and as sound (mantramūrti). The sonic form of a deity is a Mantra. Out of the Mantra is produced its deity.<sup>35</sup> This conversion from one another reminds us of the Theory of Relativity.

### Observations

#### Oneness of the Universe

This universe is the playground of Mahasakti and also the manifestation of Herself.<sup>36</sup>

चैतन्यरुरिणी देवी सर्वभूतप्रकाशिनी  
[caitanyarūpini devī sarvabhūtaprakāśini]

All the different energies, powers and sources are form of that Mahāsakti. After researches of many centuries scientists have realized that one energy (śakti) is at the root and source of all energies in this universe. In the language of Swami Ranganathanand— "Referring to the basic unity of the universe, as upheld in Eastern mysticism and modern physics".<sup>37</sup> Capra says— "The basic oneness of the universe is not only the central characteristic of the mystical experience, but is also one of the most important revelations of modern physics. It becomes apparent at the atomic level, and manifests itself more and more as one penetrates deeper into matter, down into the realm of sub-atomic particles. The unity of all things and events will be a recurring theme throughout our comparison of modern physics and Eastern philosophy."

#### Consciousness

According to the Western scientists, energy (Śakti) is insensible and lifeless. Tantra calls Śakti full of consciousness, but not insensible or lifeless.<sup>38</sup>

या देवी सर्वभूतेषु चेतनेत्यभिधीयते  
[yā devī sarvabhūteṣu cetanetyabhidhīyate]

This Mahāsakti in the form of consciousness exists in all the animate and the inanimate being. Mahāsakti alone and only exists in this world. There is none second to Mahāsakti.<sup>39</sup>

एकैवाहं जगत्यत्र द्वितीया का ममापरा  
[ekaiivāham jagatyatra dvitīyā kā mamāparā]

Mahāsakti is also the reservoir of grace and kindness. Mahāsakti is Mother. This motherhood of Mahāsakti pervades throughout the universe.<sup>40</sup>

या देवी सर्वभूतेषु मातृरूपेण संस्थिता  
[yā devī sarvabhūteṣu mātṛrūpeṇa samsthitā]

Tantra's concept of consciousness strikes the mind of the modern scientists. In the language of Dr. Capra—"In modern physics, the question of consciousness has arisen in connection with the observation of atomic phenomena".<sup>41</sup>

He adds,— "Penetrating into ever deeper realms of matter, he (the physicist) has become aware of the essential unity of all things and events. More than that, he has also learnt that he himself and his consciousness are an integral part of this unity. Thus the mystic and the physicist arrive at the same conclusion; one starting from the inner realm, the other from the other world".<sup>42</sup>

Stephen Hawking observes,— "With the advent quantum Mechanics, we have come to recognize that events cannot be predicted with accuracy, but that there is always a degree of uncertainty, but that there is always a degree of uncertainty. If one likes one could ascribe the randomness to the intervention of God".<sup>43</sup>

### Conclusion

In conclusion we may quote Dr. Capra,— "Atomic physics provided the scientists with the first glimpses of the essential nature of things. Like the mystic, physicists were now dealing with a non-sensory experience of reality and like the mystics; they had to face the paradoxical aspects of this experience. From then on, therefore, the models and images of modern physics became akin to those of Eastern philosophy".<sup>44</sup>

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