

Study of Relationship between Some Concepts of Quantum Mechanics and Indian Spiritual Writings (With Special Reference to Shrimad Bhagwat Geeta)-I

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Abstract: *Shreemad Bhagwat Geeta is one of the great spiritual writings which one can locate among the Indian spiritual writings. Shreemad Bhagwat Geeta may be considered as a path director in many fields. This is one of the most pious and holistic spiritual writing. Quantum mechanics, though is the development of last century and has approximately 100-125 years of its development. This mechanics is serving as a backbone of the studies of physical sciences precisely in the structural and properties studies of the matter. The aim of the present paper is to establish analogy between some concept of physical sciences especially from quantum mechanics with that of Shreemad Bhagwat Geeta.*

Keywords: Concepts of Quantum Mechanics/ Spiritual writings/ Shreemad Bhagwat Geeta

1. Introduction

Shreemad Bhagwat Geeta is one of the Great writings which one can find among the Indian Spiritual writings [1-2]. This may be considered as a path director in many fields. This is one of the most pious and holistic spiritual writing.

Quantum mechanics though is a development of last century and has almost 100 – 125 years of its development, is serving as a backbone of the studies of physical science whether Physics or Chemistry, carried out in the direction of establishment of structure of material / matter now-a days.

Any physico-chemical studies viz. Spectroscopic studies such as IR, NMR, ESR and MASS spectroscopy which are carried out today in order to get the solutions of or we can say to solve the mysteries of studies of matter have their base lies in the quantum mechanics.

In the beginning of last century, i.e. during the period of 1900-1925, galaxy of physical scientists was there on this earth. It is note-worthy to mention the names of some of those here in this text/ proposal. They were Max Planck, W. Hiesenberg, N. Bohr, A. Eienstien, DeBroglie and E. Schrodinger etc.

It is their contribution which we take as a basis of modern quantum mechanics as they have framed and gave the basic laws on which the studies of quantum mechanics of today's world are based.

2. Literature Survey

Some of the references are there in the literature [3-15], which indicates / shows that the observations/ contributions made by this galaxy of these scientists may have somehow inspiration taken by the Indian spiritual writings such as Shrimad Bhagwat Geeta, Upnishads, Shrimad Bhaagwat Mahapuraan

etc. and there is some connect of quantum mechanics with spiritual writings

Names mentioned above in the text i.e. in the section: - Introduction may be considered as those persons who are the thinkers and whose thinking might be inspired by the spiritual writings of Indian origin. There may be some relationship in the laws given by these great scientists / thinkers with the philosophy mentioned in the Indian spiritual writings which needs to be explored.

Keeping this in mind, the investigator has proposed a project i.e. "A Study of Relationship between Quantum Mechanics and Indian Spiritual Writings (With special Reference to Shrimad Bhagwat Geeta)". Understanding the depth and vastness of the subject, investigator wishes to restrict his studies with special reference to Shrimad Bhagwat Geeta only. The present paper is a little trial of the author and contains inputs in this field in which some of the concepts are presented which author has tried to corelate with the shloka/s of Shreemad Bhagwat Geeta.

3. Methodology

Keeping in mind the vast nature of the subject, investigator made a questionnaire after studying the concepts and shreemad Bahgwat Geeta and after having discussions with the persons who have their knowledge in the related field.

It is trying to get responses from intellectuals' peoples of the society viz. teachers with scientific background, thinkers, philosophers, saints and other related persons as progress of this project.

4. Results and Discussion

The questions were prepared after studying the concepts of physical sciences especially quantum mechanics and Shreemad Bhagwat Geeta. Some of the concepts in the form of questions which are included in the questionnaire are mentioned as below:

- 1) Law of conservation of energy states that *“Energy can neither be created nor destroyed but it changes its form in any process / reaction”*. This law may have some analogy with the shlokas of Shreemad Bhagwat Geeta (chapter 2) which are mentioned below.

न जायते म्रियते वा कदाचिन्नायं भूत्वा भविता वा न भूयः।
अजो नित्यः शाश्वतोऽयं पुराणो न हन्यते हन्यमाने
शरीरे॥२०॥

वासांसि जीर्णानि यथा विहाय नवानि गृह्णाति नरोऽपराणि।
तथा शरीराणि विहाय जीर्णान्यन्यानि संयाति नवानि
देही॥२२॥

नैनं छिदन्ति शस्त्राणि नैनं दहति पावकः।
न चैनं क्लेयन्तयापो न शोषयति मारुतः॥२३॥

- 2) It is believed that Max Planck had given the very first Principle related to Quantum Mechanics. He explained the concept of emission / absorption of energy by a black body and he used the term *“Quantum”* first time in his theory. According to this theory energy is released / absorbed by a black body in the form of tiny discrete packets. These packets are formed by association of vibrating oscillators, known as *“Quanta” (singular Quantum)*. Energy of these vibrating oscillators is explained as *“E = hv”* by Max Planck where **E** is energy of the vibrating oscillator and **v** is its frequency with which it is oscillating and **h** is Planck’s Constant. This theory of Max Planck may have analogy with shloka/s (chapter 2) mentioned below of Shreemad Bhagwat Geeta.

अच्छेद्योऽयमदाह्योऽयमक्लेद्योऽशोष्य एव च।
नित्यः सर्वगतः स्थानुरचलोऽयं सनातनः॥२४॥

अव्यक्तोऽयमचिन्तयोऽयमविकार्योऽयमुच्यते।
तस्मादेवं विदित्वैनं नानुशोचितुमर्हसि॥२५॥

- 3) De Broglie had given the concept of dual nature of particle during motion viz. particle like behavior and wave like behavior. This is one of the important and significant concepts so far as wave mechanics is concerned. This concept helped in the understanding of behaviour of a tiny particle like electron while motion. He had also derived an equation correlating the wavelength and momentum of the tiny particle like electron. This equation is

$$\lambda = h/p$$

This may have analogy with the shlok/s (chapter 2 and chapter 3 respectively) of shreemad Bhagwat geeta according to which *“mann”* has different behavior at a time. It may have different thoughts at any moment.

एषा तेऽभिहिता सांख्ये बुद्धियोगे त्विमां शृणु।
बुद्ध्या युक्तो यया पार्थ कर्मबन्धं प्रहास्यसि॥३१॥

न हि कश्चित्क्षणमपि जातु तिष्ठत्यकर्मकृत्।
कार्यते ह्यवशः कर्म सर्वः प्रकृतिजैर्गुणैः॥३५॥

- 4) In 1925, great scientist Ervin Shroodinger had given the basic equation for Quantum Mechanics *“Hφ = E φ”* where **H** is Hamiltonian – an operator, **E** is energy, and **φ** is wave function. This equation is being studied as on operation of operator (**H**) energy value is obtained and function (**φ**) is obtained back.

This may be compared with the shloks (chapter 2) of Shreemad Bhagwat Geeta which means that in the life period jeevatma or **φ** gets karmafal **E** according to the his / her karma / operator **H** which is operated.

कर्मण्येवाधिकारस्ते मा फलेषु कदाचन।
मा कर्मफलहेतुर्भूमति सङ्गोऽस्त्वकर्मणि॥४७॥

योगस्थः कुरु कर्माणि सङ्गं त्यक्त्वा धनंजय।
सिद्धयसिद्धयोः समो भूत्वा समत्वं योग उच्यते॥४८॥

- 5) Schrodinger equation *“Hφ = E φ”* has been explained above. Experts of quantum mechanics have explained this equation as: When operator is operated for a system different **E** or eigen values may be obtained out of which only one value may be the precise value / near exact value for the system which may be selected for the system which is under study.

This may have analogy with the shloka/s (chapter 13 and 14) of shreemad Bhagwat Geeta according to which in a life **φ** or jeevatma may be operated by different operators (may be yog as explained above) and many different fal (values for **E**) that may be obtained and out of which one is suitable for selection.

पुरुषः प्रकृतिस्थो हि भुक्ते प्रकृतिजान्गुणान्।
कारणं गुणसंगोऽस्य सदसद्योनिजन्मसु॥२१॥

सत्त्वं रजस्तम इति गुणाः प्रकृतिसंभवाः।
निबध्नन्ति महाबाहो देहे देहिनमव्ययम्॥२५॥

These questions along with some other notable questions related to the project whose title is given above were prepared and the questionnaire so prepared was circulated and provided to the intellectual people belong to the different sections of the society to get their inputs on the questions related to these concepts. The project is still in progress.

5. Conclusions

Though the proposed project is still in progress, The conclusions both qualitatively and quantitatively will be drawn and will be mentioned in the detailed project report after the completion of this project.

This may be concluded on the basis of the inputs which were obtained so far from a sample of about 40 peoples of the society belonging to different sections that most of the people agreed that these concepts of quantum mechanics have some analogy with the Sholka/s of Shreemad Bhagwat Geeta.

Acknowledgements

The author sincerely acknowledges the Indian Council of Philosophical Research for the financial support in the form of a research project.

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