



The Thoughts of Mevlana as a Prior Demonstration of Methodology of Physics

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Abstract

The study of quantum mechanics is always a rewarding, while it illustrates the essential methodology of physics, and has been enormously successful in giving correct results in practically every situation to which it has been applied. There is still an intriguing paradox, in which in spite of the overwhelming practical success of quantum mechanics, the foundations of the subject contain unresolved problems as the nature of measurement. Quantum's theory could be considered as one of the theories which is capable of uniting the science and Sufism (or the Eastern Erfan). In Mevlana's poems, there are some points through spiritual contemplation that quantum physics have obtained them through math and investigation of atom and micro atom. In this order, human being can change his life completely, so the one may change the world step by step as well. This study also consider some of Mevlana's poems which are in harmony with theories of quantum, cosmology, theory of evolution, physics and mathematics.

Keywords: Stages of awareness; Quantum theory; Cosmology; Theory of evolution.

1. Introduction

Jalal ad-Din Muhammad Rumi, also known as Jalal ad-Din Muhammad Balkhi, famous through the name of Mevlana /Mawlana/Mevlevi/Mawlavi, and more popularly simply as Rumi, was a 13th-century Persian Sunni Muslim poet, jurist, Islamic scholar, theologian, and Sufi mystic originally from Greater Khorasan. Rumi is known throughout the world for his exquisite poems and words of wisdom, which have been translated into many languages. Mevlana was a Muslim and his doctrine advocates unlimited tolerance, positive reasoning, goodness, charity and awareness through love. To him all religions were more or less truth. Mevlana looked with the same eye on Muslim, Jew and Christian alike. His peaceful and tolerant teachings have appealed to men of all sects and creeds. In 1958, Pope John XXIII wrote a special message saying: "In the name of the Catholic World, I bow with respect before the memory of Rumi". Mevlana died on 17 December 1273 and was laid to rest beside his father in Konya which is located in Turkey. Mevlana's major contribution lies in Islamic philosophy and Sufism. This was embodied largely in poetry, especially through his famous Masnavi of Mevlevi. This book is the largest mystical exposition in verse and discusses and offers solutions to many complicated problems in metaphysics, religion, ethics and mysticism. He portrayed the various stages of man's evolution in his journey towards God as the Ultimate one.

1.1. Mysticism or Erfan

Mysticism is popularly known as becoming united with God or the Absolute. It may also refer to the attainment of insight in ultimate or hidden truths, and to human transformation supported by various practices and experiences. Based on various definitions of mysticism, namely mysticism as an experience of being united or feeling nothing and worthless, mysticism as any kind of consciousness which is attributed in a religious way. It is as an insight, and a way of transformation. Mysticism can be found in many cultures and religious traditions, both in folk religion and organized religion. These traditions include practices to induce religious or mystical experiences, but also ethical standards and practices to enhance self-control and integrate the mystical experience into daily life. It is a school in which any individual could receive to the last and infinite reality. This reality is not tangible by the five senses. Its religious form is observable in Islam, Judaism and Christianity in accordance to have direct relationship with God through meditation and praying, and the secular form of it which is observable in Buddhism and Hinduism.

A practitioner of this tradition is nowadays known as a Sufi or a dervish. The origin of the word Sufi is ambiguous. One understanding is that Sufi means wool-wearer; wool wearers during early Islam were pious who withdrew from urban life. Another explanation of the word Sufi is that it means purity. Sufis generally belong to a Halgha, a circle or group, led by a Sheikh or Murshid. Sufi circles usually belong to a Tariqat which is the Sufi order and each has a Silsila, which is the spiritual series, which traces its succession back to notable Sufis of the past, and often ultimately to the last prophet Muhammad or one of his close associates. The turuq (plural of tariqa) are not enclosed like Christian monastic orders; rather the members retain an outside life. Membership of a Sufi group often passes down family lines. Sufi practice includes:

- Zikr, or remembrance of God, which often takes the form of rhythmic chanting and breathing exercises.
- Sama, which takes the form of music and dance, the whirling dance of the Mevlevi dervishes is a form well known in the West.

- Muraqaba or meditation.

1.2. Transcendentalism

Transcendentalism is a philosophical movement that developed in the late 1820s and 1830s in the eastern United States. It arose as a reaction to or protest against the general state of intellectualism and spirituality at the time. Transcendentalists are strong believers in the power of the individual. It focuses primarily on personal freedom. Their beliefs are closely linked with those of the Romantics. Transcendentalists believe that society and its institutions which particularly organized religion and political parties corrupt the purity of the individual. They have faith that people are at their best when truly self-reliant and independent. It is only from such real individuals that true community can form. Even with this necessary individuality, transcendentalists also believe that all people possess a piece of the Over-soul (God). Because the Over-soul means the unity of all people as one being Emerson alludes to this concept to find the whole man. Such an ideal is in harmony with Transcendentalist individualism, as each person is empowered to behold within man as a piece of the divine Over-soul. Transcendentalist is a philosophical idea which believe that God is everywhere, especially inside of human being as well as in the nature. They believe in a great soul/unity with God/ Over Soul/ embracing God. They believe in tuition which is above reason and logic. This idea of East is exactly in mysticism of accordance to the mysticism of West.

Unity of all things is as an inevitable corollary to their belief, and as an absolute idea behind all nature, mystics generally believe that all things are at bottom one. They come from the One, and are a manifestation of the ultimate one. The differences of appearance are mere illusion. Each created thing retains its bit of the divine which gave it being. Also since man is the highest of the creatures, and since all creation shares in greater or less degree the characteristics of the Creator, it is clear that every man has some touch of the divine in him. Man's consciousness of the holy; the recognition of the awe-inspiring qualities of deity. It is the original capacity of the total self to sense the Divine, and may very well be the basis of what is called mystical religion. idealism implies that the relation of subject and object is one of the essential starting-points of philosophy, and in its view of that relation it lays down the decisive principle that objects can exist .only for a subject, and that the subject which carries the object within itself is the higher category, and as such must determine the process of philosophical thought. Mysticism is the school of thought which believes most firmly in God as the basis of the universe, which believes that it is possible for men, in the present world, to achieve union with God, and which has pointed out definite ways in which this union may be achieved, called here the mystic way. Idealism looks upon the world of ideas or of mind as original and causative; it beholds the

World of matter as proceeding from mind, and as shaped by it. Matter is but the garment of spirit, the material world is a mere phenomenon. Mevlana enriched the mystic consciousness by his presentation of the Divine Nature.

1.3. Seven Stages of Awareness

- 1- Self-Conscious Stage: It takes place during the man's life and calls as Daily Conscious
- 2- Unconscious Stage: In most cases it governs the conscious stage
- 3- Super Ego Stage: It is like a court. It aims at perfection. It controls the man's sense of right, wrong and guilt. It also helps to fit the society by acting socially.
- 4- Consciousness of human being: It is the Power of Creating and Creator. This stage is the light of God in the heart and soul of human being. The most important founding, epiphany, scientific discoveries and art masterpieces are all done in this stage of awareness. But this stage is not so pure and clean. It can lead to moral deviation, or in some cases lead to the human slaughtering, destroying civilization and culture by deadly weapon exactly when he is at the peak of creativity. Human being can devote his art to the destruction of human's soul.
- 5- The power of curing human being: From this stage on, consciousness enters metaphysic because id, ego and super ego are not able to cure humans through internal power. This power is just for special people who have the talent to cure their spirit.
- 6- Level of intuitive consciousness: this leads to discovery, intuition and also an access to spiritual contemplation. Scientists, Sufi, Aref and artists who have reached to this level may use a lot in discovery, invention, artistic creation and understanding secrets and mysteries.
- 7- Cosmic Consciousness: This is the advanced level of awareness and heart consciousness, the true insight. In this phase the door of sky and heaven is opened, the intelligence of existence shines on human with all of its power.

Manifestation of humanity is in human's action. Human being has the power to ascend. Not only he is capable of reaching the highest power of spirit and soul to comprehend the super conscious but also he can comprehend the super conscious and reach the region of love and intelligence.

2. Quantum Mechanics

Quantum mechanics is a science dealing with the behavior of matter and light on the atomic and subatomic scale. It attempts to describe and account for the properties of molecules and atoms and their constituents—electrons, protons, neutrons, and other more esoteric particles such as quarks and gluons. These properties include the interactions of the particles with one another and with electromagnetic radiation (i.e. light, X-rays, and gamma rays). The behavior of matter and radiation on the atomic scale often seems peculiar, and the consequences of quantum theory are accordingly difficult to understand and to believe. Its concepts frequently conflict with common-sense notions derived from observations of the everyday world. There is no reason, however, why the behavior of the atomic world should conform to that of the familiar, large-scale world. It is important to realize that quantum mechanics is a branch of physics and that the business of physics is to describe and account for the way the world on both the large and the small scale, actually is and not how one imagines it or would like it to be.

2.1. The Relation of Quantum with Erfan

As Dr. Farshad [1] discusses in his *Quantum thoughts of Mevlana*, there are similarities between some poems of Mevlana and quantum theory. Although Mevlana was not familiar with quantum physics, he wrote about the theories that scientists of 20th century has talked about. Both Fritjof Capra and Gary Zukav believe that New Physics and Erfan share some common points. According to Erfan, the result of understanding by wisdom is imagination and error. He suggests the interior method to lighten the inner self. Physicists try to make new models to describe the power of nature. But the result that they get by testing and experimentation is the same with teaching and instructions. If scientists want or not, when they propose a new theory about the world, they reach to Erfan's teaches and thought and this is the basis of unity of Erfan and science and so the union of scientists and Aref (Sufi). Now the question is how a person who is not a scientist and does not have academic learning, through inner insight and revelation, knows the theories that science of physics and math discovered centuries later? Scientists and writers of metaphysics literature consider seven stages of awareness for human being. Up to third level, it is related to metaphysics but by reaching to fourth level and upper levels are among the significant spiritual levels of man.

2.2. Quantum of Physics

Fritjof Capra, an American physicist, mentions that the great world from Erfan's point of view is a complicated thing and all part of it is active. It consists of active agents that are moving constantly and contemporary physics calls this world as Dynamic. According to quantum, molecule is never static and inactive; rather it is moving all the time. The great world of Dynamic is shaking, rhythmical, harmonic and active. Now let's pay attention to the harmony of Mevlana's thought with quantum theory to see how Mevlana is talking about molecule's movement and their dynamism.

جمله در تخیرو سیر سرمدی است
تا پدید آید همه ارض و سما
بهره ریک اسم و معنی ساختیم
باز بر شکل نگر پیوسته شد
صد هزاران آفتاب آمد عیان
علت صوری این خورشیدها
برگرفته سوی گرداب فنا
با تمام برها و بحرها
از توایت یا که از سیارگان
تا که روزی می شوید از هم جدا

Nothing is permanent
Small particles are all getting united
It took time to know them all
Again, the small particle being separated

هیچ چیزی ثابت و برجای نیست
ذره ها پیوسته شد با ذره ها
تا که ما آن جمله را بشناختیم
ذره ها از یکدیگر بگسسته شد
ذره ها بینم که از ترکیبشان
صد هزاران نظم و آیین خدا
باز این خورشیدها آیین ها
ای زمین هست بی قدر و بها
آن چه داری در طریق کهکشان
جملگی ترکیبشان زین ذره ها

All in changing toward ultimate
To make universe and sky
We named them and meaning
Then they gathered in other shape and form

In both of the worlds- quantum's world and the world which is bigger than atom – the man can observe the lack of constancy, change and the path of eternity. In quantum world, electron is not fixed and it is rotating around the sun. In quantum world, atoms are active and they are moving. Atoms and molecules are moving continually. In frozen degree, - 273 centigrade, all atoms and molecules stop moving.

The miracle of existence existed in this movement because without evolutionary movement, molecules can't create life somewhere in this world. The sun is orbiting around the Milky Way and the Milky Way itself is orbiting round the center of cosmic. The miracle of existence existed in this movement because without evolutionary movement, molecules can't create life somewhere in this world. Change in existence created many rules like three parts rule of thermodynamics which are:

- The rule of survival of energy
- Entropy rule (disorder)
- Inability of man in reaching the absolute zero

2.3. Survival of Energy

Energy is fixed and stable in this world. It doesn't become less or more and if in one part of the world energy becomes less, for keeping the balance, energy becomes more in other part of the world. In survival of energy, energies change to each other. But how it is possible for a stable energy to be changed? The path of eternal existence, evolution and transition of things and also transformation of solid to plant and plant to animals and animals to human being, has no effect on survival of energy. Energy exists in the world and on the other hand evolution and changing are taking place simultaneously without damaging the survival of energy. Through the assistance of science, the man know that the atoms make the molecules. In other word, the connection of energy has made atoms. Some of the scientists believe that atoms are made of smaller parts which are called Quark. The earth and the stars all are made by the conjunction of atoms. Let's look at this couplet:

غرق میگردند در گرداب ها بار دیگر این ذرات آشنا
Once again these familiar particles diving in the Whirlpools

It is significant that Mevlana lived in 13th century when there was not even a simple telescope to show the Milky Way. All of the pictures that are taken by of Hubble Space Telescope show a place like a whirlpool that all the particles rotating around it and stars come to existence from the sky's cloud and dust. How Mevlana saw the scenery of rotation and movement in the sky?

صد هزاران آفتاب آید عیان ذره ها بینم که از ترکیشان
The particles are amalgamated Then thousands of lights (sun and stars) are observable

From this couplet, it is possible to deduce very advanced physics theory, and it is astonishing how Mevlana is able to predict it centuries before. Four centuries after Mevlana, Galileo Galilei proposed his contentious view about earth's rotation around the sun. Mevlana like Galilei announced that there is not just one sun, but thousands of stars. This couplet shows Mevlana's intuition that discovered the existence of hundreds of stars even before scientists.

3. Theory of Evolution and Mevlana's Thought

Darwin in 19th century proposed theory of evolution. He states that all species of organisms arise and develop through the natural selection of small, inherited variations that increase the individual's ability to compete, survive, and reproduce. His theory influenced cosmic, psychology and economy. In cosmetics, the theory of big explosion made a great effect on worldview and also on knowing the world. According to this theory, the world becomes to exist after a big bang, cosmic explosion through development of energy and atoms. This evolution continued up to the existence of the stars, the sun, the earth and then solid, plant animals and mankind. Mevlana mentions this evolution perfectly:

وز نما مردم ز حیوان سرزدم از جمادی مردم و نامی نددم
یس چه ترسم کی ز مردن کم شدم؟ مردم از حیوانی و آدم نددم
تا بر آرم از ملائک بال و پر جمله دیگر بمیرم از بشر
کل شیئی هالک الا وجهه وز ملائک بایدم جستن ز جو
آن چه اندر وهم ناید آن شوم بار دیگر از ملک پیران شوم

وز جمادی در نیاتی اوقتاد آمده اول به اقلیم جماد
وزجمادی یاد نآورد از نبرد سال ها اندر نیاتی عمر کرد
نامدش حال نیاتی هیچ یاد وز نیاتی چون به حیوانی فتاد
می کشید آن خالقی که دانیش باز از حیوان سوی انسانیش
هم از این عقلس تحول کردنی ست عقل های اولینش یاد نیست

I died of solid, became famous and received a name

In science, solid (جماد) is used to call the things like stone, soil, and brushwood in nature. French scientists discovered that the earth was like a melted pile at first and then after rotation by the pressure of gravity it becomes cold and little by little change to a form and shape. In other words, the earth's surface became cold and is called solid. In stating the process of evolution from solid to human and then to angel, Mevlana is the forerunner of man:

وز نما مردم ز حیوان سر زدم از جمادی مردم و نامی نددم

Who is this "I" in the process of evolution? Who is this "I" that first is solid and then changes to plant and dies again and this time becomes human and this process continues to become an angel and at the end it reaches to a place which is not understandable by mind. Scientists believe that our body consists of millions of electrons that have crucial and spiritual energy. Human spirit consists of these spiritual electrons. "I" is immortal and even after death of physical body, it continues living. According to Jean-Émile Charon – a French physicist- this "I" is the same as human's soul or spiritual electron which develops from solid to mankind as an intelligent molecules and eternal awareness.

با تو میگویند روزان و شبان	جمله ذرات عالم در نهان
با شما نامحرمان ما خاموشیم	ما سمیعیم و بصیریم و هشیم
محرمان جان جملدان کی شوید؟	چون شما سوی جملادی می روید

Mevlana mentions molecules which are wise, hearer and well informed. These are special characteristics of molecules which are alive, aware and intelligent; exactly like spiritual electrons which has made our soul. Chinese Daoist, who are a group of philosophers, have a symbol which shows a big eye and the stars and The Milky Way are floating. It seems that this symbol is watching us like a big eye and is supervising mankind. Not only it is watching us but also it is worried about us like a sympathetic mother. The universe wants mankind to make a better spiritual life and not to spoil it. This is the meaning of spiritual perfection. The universe likes mankind's spiritual perfection and the progress of solid to superhuman. When Mevlana says we all are listener (سمیعیم), it means that we are the molecules of universe and we hear the big explosion and the sound of creation. Because of being observer (بصیر), we see the universe and visit the process of development of creatures. Mankind has knowledge (هشیم), that is by the meaning of undergoing toward the conscious and wise and acting as one soul and one mind.

4. Conclusion

The word Sufi comes from a Persian original word by the meaning of wisdom. The original root of many other derivations can also be traced among the Greek word of Sophia. Wisdom is the ultimate power which also is rooted in religion that connotes law and inspiration. But the point of view of the wise differs from that of the simple followers of a religion. The wise and faith have always been able to meet each other beyond all West and East boundaries of external forms and conventions which are covered the human life. Sufism takes away the boundaries by bringing into full light the underlying wisdom under the power of Vahdat e Vojud, and over soul, all in hope to become united with God. Sufi is aware of Vahdat e Vojud and Tohid, and in this order, he is consciousness of power of almighty in creating universe under the wisdom and cosmic spiritual. The similarity of this idea and this world view between Aref or Sufi and the reflection of it in mystical literature proves their wisdom and the knowledge of this century accept it. Wisdom of molecules in Mevlana's poems is the theory of Spiritual Unity. According to this theory all the universe has spirit. Most of the people who are against this theory do not believe in the wisdom and consciousness of the universe. As quantum of physics discusses the fundamental particles of electrons have a wise and intelligent manner and this is exactly what Mevlana mentions:

با تو میگویند روزان و شبان	جمله ذرات عالم در نهان
با شما نامحرمان ما خاموشیم	ما سمیعیم و بصیریم و هشیم

The unity of wisdom and the unity of spirit is one of the secrets of the universe and it is perceived just by Aref and rational men. By the help of quantum theory of today, it is possible to conclude the whole fundamental particles to demonstrate through a kind of consciousness and spiritual knowledge.

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