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Veda and Science

How does quantum physics work, you may ask, what is it, and where does it come from? In this article we discuss a very brief and simplified history of Quantum Mechanics and will quote what the founding fathers of this branch of science had to say about Vedic influence on the development of their theories.

We are not interested in new age mumbo-jumbo. We are interested in understanding what is real and what is false. This is why we, along with all other great minds, consult the Vedic texts. Please read on...

The famous Danish physicist and Nobel Prize winner, Laureate Niels Bohr (1885-1962) (pictured above), was a follower of the Vedas. He said, "I go into the Upanishads to ask questions." Both Bohr and Schrödinger, the founders of quantum physics, were avid readers of the Vedic texts and observed that their experiments in quantum physics were consistent with what they had read in the Vedas.

Niels Bohr got the ball rolling around 1900 by explaining why atoms emit and absorb electromagnetic radiation only at certain frequencies.

Then, in the 1920's Erwin Schrödinger (1887-1961), an Austrian-Irish physicist (pictured below), who won the Nobel prize, came up with his famous wave equation that predicts how the Quantum Mechanical wave function changes with time. Wave functions are used in Quantum Mechanics to determine how particles move and interact with time.

In the 1920's Werner Heisenberg (1901-1976) (pictured Left) formulated his famous uncertainty principal, which states when a physicist attempts to observe a subatomic particle, the experimental apparatus inevitably alters the subatomic particle's trajectory. This is because they are trying to observe something that is of the same scale as the photons they are using to observe it.

To be more specific, to observe something that is subatomic in size one must use a device (apparatus) that projects photons at the particle being observed. This is because the reception of photons by our retina is what we call vision. Basically, to observe something, we must bounce photons off it. The problem is that the photons disturb the subatomic particles because they are of the same size. Thus, there is no way to observe subatomic particles without altering their trajectories.

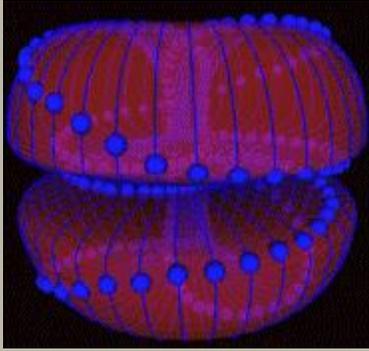
Bohr, Heisenberg and Schrödinger regularly read Vedic texts. Heisenberg stated, "Quantum theory will not look ridiculous to people who have read Vedanta." Vedanta is the conclusion of Vedic thought.

Furthermore, Fritjof Capra, when interviewed by Renee Weber in the book *The Holographic Paradigm* (page 217-218), stated that Schrödinger, in speaking about Heisenberg, has said: "I had several discussions with Heisenberg. I lived in England then [circa 1972], and I visited him several times in Munich and showed him the whole manuscript chapter by chapter. He was very interested and very open, and he told me something that I think is not known

publicly because he never published it. He said that he was well aware of these parallels. While he was working on quantum theory he went to India to lecture and was a guest of Tagore. He talked a lot with Tagore about Indian philosophy. Heisenberg told me that these talks had helped him a lot with his work in physics, because they showed him that all these new ideas in quantum physics were in fact not all that crazy. He realized there was, in fact, a whole culture that subscribed to very similar ideas. Heisenberg said that this was a great help for him. Niels Bohr had a similar experience when he went to China.”

Consequently, Bohr adopted the Yin-Yang symbol as part of his family coat-of-arms when he was knighted in 1947.

Schrodinger wrote in his book *Meine Weltansicht*:



“This life of yours which you are living is not merely a piece of this entire existence, but in a certain sense the whole; only this whole is not so constituted that it can be surveyed in one single glance. This, as we know, is what the Brahmins [wise men or priests in the Vedic tradition] express in that sacred, mystic formula which is yet really so simple and so clear; *tat tvam asi*, this is you. Or, again, in such words as “I am in the east and the west, I am above and below, I am this entire world.”

ब्रह्मैवेदममृतं पुरस्तात् ब्रह्म पश्चात् ब्रह्म उत्तरतो दक्षिणतश्चोत्तरेण ।
अधश्चोर्ध्वं च प्रसृतं ब्रह्मैवेदं विश्वमिदं वरिष्ठम् ॥ 2.2.11

This is a reference to the Mundaka Upanishad mantra (above) in which the Vedic understanding of the connectivity of living entities is put forward to help the Bhakta (practitioner of *yoga*) to understand the difference between the body and the living entity. How the real nature of the living entity is realized only in union with the source, the supreme being (Brahman/Krishna) through a platform of transcendental divine loving service.

Schrödinger, in speaking of a universe in which particles are represented by wave functions, said, “The unity and continuity of Vedanta are reflected in the unity and continuity of wave mechanics. This is entirely consistent with the Vedanta concept of All in One.”

“The multiplicity is only apparent. This is the doctrine of the Upanishads. And not of the Upanishads only. The mystical experience of the union with God regularly leads to this view, unless strong prejudices stand in the West.” (Erwin Schrödinger, *What is Life?*, p. 129, Cambridge University Press)

“There is no kind of framework within which we can find consciousness in the plural; this is simply something we construct because of the temporal plurality of individuals, but it is a false construction... The only solution to this conflict insofar as any is available to us at all lies **in the ancient wisdom of the Upanishad.**” (Mein Leben, Meine Weltansicht [My Life, My World View] (1961), Chapter 4)

In his biography on Schrödinger, Moore wrote: “His system – or that of the Upanishads – is delightful and consistent: the self and the world are one and they are all... He rejected traditional western religious beliefs (Jewish, Christian, and Islamic) not on the basis of any reasoned argument, nor even with an expression of emotional antipathy, for he loved to use religious expressions and metaphors, but simply by saying that they are naive.

Vedanta and gnosticism are beliefs likely to appeal to a mathematical physicist, a brilliant only child, tempted on occasion by intellectual pride. Such factors may help to explain why Schrödinger became a believer in Vedanta, but they do not detract from the importance of his belief as a foundation for his life and work. It would be simplistic to suggest that there is a direct causal link between his religious beliefs and his discoveries in theoretical physics, yet the unity and continuity of Vedanta are reflected in the unity and continuity of wave mechanics. In 1925, the world view of physics was a model of the universe as a great machine composed of separable interacting material particles, During the next few years, Schrödinger and Heisenberg and their followers created a universe based on superimposed inseparable waves of probability amplitudes. This new view would be entirely consistent with the Vedantic concept of the All in One.” (Schrödinger: Life and Thought (Meine Weltansicht), p. 173)

In Schrödinger’s famous essay on determinism and free will, he expressed very clearly the sense that consciousness is a unity, arguing that this “insight is not new...From the early great Upanishads the recognition Atman = Brahman (the personal self equals the omnipresent, all-comprehending eternal self) was in Indian thought considered, far from being blasphemous, to represent, the quintessence of deepest insight into the happenings of the world. The striving of all the scholars of Vedanta was, after having learnt to pronounce with their lips, really to assimilate in their minds this grandest of all thoughts.”



According to Moore on page 125 of his biographical work, *A Life of Erwin Schrödinger*, Schrödinger found “Vedanta teaches that consciousness is singular, all happenings are played out in one universal consciousness and there is no multiplicity of selves... The stages of human development are to strive for Possession (Artha), Knowledge (Dharma), Ability (Kama), Being (Moksha)... Nirvana is a state of pure blissful knowledge. It has nothing to do with individual. The ego or its separation is an illusion. The goal of man is to preserve his Karma and to develop it further – when man dies his karma lives and creates for itself another carrier.”

The above quote clearly demonstrates Schrödinger’s firm belief in reincarnation.



Schrödinger wrote in his book *My View of the World*: “In all the world, there is no kind of framework within which we can find consciousness in the plural; this is simply something we construct because of the temporal plurality of individuals, but it is a false construction... The only solution to this conflict in so far as any is available to us at all lies in the ancient wisdom of the Upanishad” (p. 31).

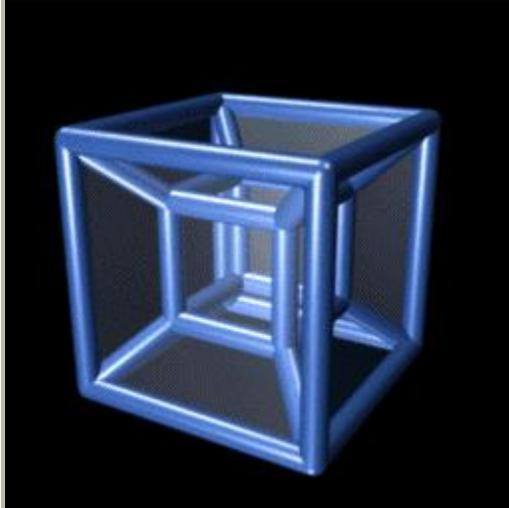
The Vedas teach that we are more than physical bodies operating according to the laws of physics and chemistry. We, the eternal conscious self (*Atma*), are inherently connected to the greater whole (*ParamAtma*), and this eternal inherent connection is totally transcendental to matter. All living entities (*Atmas*), having free will, are able to ignore this connection or recognize it. The Vedas teach us how to do both. When we act as scientists and look for facts and accept them and then go on to use and act according to our new realizations we can make great progress. Similarly, as living entities, we must scientifically study the great work of the evidential books of the Vedas in order to help us realize the facts of this universe and beyond, and our natural position in it.

Schrödinger explicitly affirmed his conviction that Vedantic jnana (knowledge) represents the only true view of reality, a view for which he was prepared to offer empirical proof (Klaus K. Klostermaier, *A Short Introduction to Hinduism*, p. 168).

Regarding mystical insights, Schrödinger tells us: “The multiplicity is only apparent. This is the doctrine of the Upanishads, and not of the Upanishads only. The mystical experience of

the union with God regularly leads to this view, unless strong prejudices stand in the West” (Amaury de Riencourt, *The Eye of Shiva: Eastern Mysticism and Science*, p.78).

In autumn of 1925 Schrödinger wrote an interestingly personal account of his philosophy of life called *Mein Weltansicht* – My World View.



He completed this in 1960. In chapter 5 of this book he gives his understanding of the basic view of Vedanta. He writes, “Vedanta teaches that consciousness is singular, all happenings are played out in one universal consciousness and there is no multiplicity of selves.”

Maya (illusion) is the cause of our faulty identification with this material world. In all the embodied forms of existence, Atma (the individual living entity) is fully able to at any time revive his forgotten, eternal and inherent connection with Brahman or Paramatma, the supreme self and source of all the living entities.

Schrödinger did not believe that it is possible to demonstrate the unity of consciousness by logical arguments. One must make an imaginative leap guided by communion with nature and the persuasion of analogies. He understood the nonmaterial eternal nature of the conscious self and how the Atman is intimately connected to the supreme.

In the 1920's quantum mechanics was created by the three great minds mentioned above: Heisenberg, Bohr and Schrödinger, who all read from and greatly respected the Vedas. They elaborated upon these ancient books of wisdom in their own language and with modern mathematical formulas in order to try to understand the ideas that are to be found throughout the Vedas, referred to in the ancient Sanskrit as “Brahman,” “Paramatma,” “Akasha” and “Atman.” As Schrödinger said, “some blood transfusion from the East to the West to save Western science from spiritual anemia.”

In 1935 Einstein, Podolsky and Rosen challenged Quantum Mechanics on the grounds that it was an incomplete formulation. They were the first authors to recognize that quantum mechanics is inherently non-local, which means it allows for instantaneous action across arbitrarily great distances. So, an action in one place can instantly influence something on the other side of the universe in no time at all. This very powerful paper (The EPR paper)

explaining Quantum Entanglement changed the world and alerted us to the magical implications of quantum mechanics' metaphysical implications.

But, Einstein states in his letter from to Max Born, 3 March 1947, "Es gibt keine spukhafte Fernwirkung" which translates to "There is no spooky action at a distance." He did not believe in magic. He believed in science and would regularly read the Bhagavad-gita. Einstein's famous quote on the Bhagavad-gita is: "When I read the Bhagavad-gita and reflect about how God created this universe everything else seems so superfluous." He also wrote in his book *The World as I See It*, "I maintain that the cosmic religious feeling is the strongest and noblest motive for scientific research" (p. 24-28).

Physicists have not yet ascertained whether Bohr and company or Einstein and company are right.

One thing that all this materialistic research has done is open up the doors for the world to look deeper into the validity of the Vedas. For, it is stated in the Bhagavad-gita, "A mundaner 1) is sure to commit mistakes, 2) is invariably illusioned, 3) has the tendency to cheat others and 4) is limited by imperfect senses. With these four imperfections, one cannot deliver perfect information of all-pervading knowledge." So no matter how many experiments we conduct, we can never come to the absolute truth using imperfect instruments of perception, even if we have a super brain like Einstein or Schrödinger. For our very minds, thoughts and power of intelligence only work on the platform of time and space and are rendered defective from being subject to the four defects that the Bhagavad-gita mentions. So, we must come to accept a higher authority, not a mundane person of the material world that is limited by his own imperfect senses and instruments in a laboratory. We must approach Krishna, the supreme person! We must give Him the credit for he is the supreme father of all Quantum processes that all these other men mentioned in this article are trying to understand. He established all the laws of nature and is controlling it; it is by His will that we will or will not ever understand. For the Vedas are coming from Krishna and are ultimately meant to help us understand and love Krishna, the supreme being. The dry mental speculators and scientists (depicted at the bottom of the picture, at left) try by their own limited power of intellect and observation to understand Krishna/God, unaware that Krishna is only known by those fortunate souls that serve Him in the mood of love and surrender. Let us not forget, "God" means the all-powerful; we cannot force the all-powerful supreme personality to reveal Himself to us by our own limited strength and arrangements. Krishna is way above that. The scientific process to understand Krishna and the nature of the universe is to learn from a fully self-realized soul, like Srila Prabhupada. By reading his books, chanting the hare Krishna Maha mantra and practicing celibacy (controlling the senses), we may purify our minds and hearts so we are qualified to understand Srila Prabhupada's transcendental books and the Vedic literature and thus surrender to the supreme being, Krishna.

Since scientists like Schrödinger did not possess a direct knowledge of Sanskrit to discern first-hand what the Vedic texts actually were saying, they were forced to read various translations of these great books of wisdom, such as the Upanishads. There are persons like Robert Oppenheimer (1904 – 1967) (pictured on left) who were not lacking in such an advantage. Oppenheimer learned Sanskrit in 1933 and read the Bhagavad-gita in the original,

citing it later as one of the most influential books to shape his philosophy of life, stating that “The Vedas are the greatest privilege of this century.”

Upon witnessing the world’s first nuclear test in 1945, he instantly quoted Bhagavad-gita chapter 11, text 32, “Now I am become death, the destroyer of worlds.”

Vedic texts such as the Bahgavad-gita and the Upanishads were collectively considered the most influential books ever written by eminent people like Thoreau, Kant, Schopenhauer, Schrödinger, Werner Heisenberg, Tesla, Einstein etc.

The fact is that, irrespective of east or west, great minds that come in contact with the Vedic texts agree that the ultimate reality remains timeless and changeless, and is contained in the Vedic texts such as the Bhagavad-gita and the Upanishads.

Furthermore 300 years before Quantum Mechanics, Sir Isaac Newton came up with Classical Mechanics which describes very basic action and reaction. Newton’s entire work in Physics and Calculus was taken wholesale from the Vedas and Kerala book of Calculus. It was simply taken from the Vedas where it was originally used for calculating rates of change in Astronomy and Astrology for many thousands of years before Newton.

Another genius scientist was Nikola Tesla, a super genius Serbian. Tesla, along with the others mentioned above, knew that the ancient Indian Brahmans (wise men), well equipped with knowledge from the Vedas, had understandings of the intricate laws, mathematical formulas and subtle workings of the universe that far surpass anything we can even imagine today.

It is uncertain how Nikola Tesla was introduced to the Vedas. Much of Tesla’s life and work has been erased from history due to this mastermind inventor and scientist wanting to make the fruits of all his work available for free to the world (google “free energy Tesla” and your mind will be truly blown away). Unfortunately for us, because he was not trying to use his genius for profiteering and exploiting others he was met with one setback after another. His grants and funding were constantly being revoked by those that control the economy and trade. Nikola Tesla originally invented many things that we all use on a daily basis but most people have never even heard of him because his name was removed from common history (just like much of the teaching of the Vedas) and he was eventually murdered. I guess he know too much and wanted to share it freely for the betterment of mankind (just like the Vedas), not to exploit it. Unfortunately, not everyone saw eye to eye with him.

Tesla understood the great power of Zero Point Field or Akasha or Ether: the power of space between the electrons and the nucleus. Vivekanda’s effect on Tesla was so great that he became vegetarian, became celibate and started using Sanskrit words. He died with his scalar energy science in his head, because he did NOT want the US military to use it to destroy the planet. No wonder he was denied the Nobel prize and eventually killed. Knowledge is power, and there are many people that want all the power for themselves. Tesla wanted to give power to everyone for free! He was actually the first person to figure out how to make radio communication possible across the Atlantic Ocean. But because he wanted to make this ability free for others his funding was stopped and the credit was later given to someone else that played the power game better than him.

Here is just a small list of some of Tesla's contributions to the world that he has not been given credit for:

Alternating Current -AC electricity (Thomas Edison literally stole his ideas from him and took the credit for for it).

Radio (Marconi just took the ideas and work of Tesla and got the credit for it).

Hydro-electricity (Tesla Built the first Hydro-electric power plant at Niagara falls As a result we see what's there now.)



X-ray transistors (you are using a transistor right now to view this webpage)

Resonant frequency (everyone else figured it out 50 years later)

Fluorescent and Neon lighting

The induction motor

The rotating magnetic field (precursor to gyroscope)

Arc lighting

Tesla coil

Oscillators

Encryption technology and scrambler

Wireless communication and power transmission

remote control

Tele geodynamics (a way to search for metals and minerals)

Tachometer and speedometer

Refrigeration machines

Bladeless turbines and pumps

Cryogenic engineering

reactive jet dirigible (precursor to Harrier jet)

Hovercraft Flivver plane (precursor to Osprey helicopter/aircraft)

Particle-beam weapons (precursor to Star wars)

All Tesla's engineering was done in his head, he never worked things out on paper or used scale models to come to a functioning final result. He was truly empowered by Krishna. Things would appear in his head and he would simply record it exactly as it came to him, similar to Beethoven.

Below is a picture of the tower Tesla built in the early 1900s in Shoreham, New York referred to as "Wardenclyffe." This tower was proposed to be a model for more of these towers located around the world to provide free wireless energy to everyone. Upon J.P. Morgan's finding out it was not equipped with any type of meter to monitor who was using how much of the energy it provided and was thus not for profit he ripped Tesla's funding out from under him and the tower was torn down.



Tesla lived to be 86 years old. He was 6 ft. 2 in. (1.88 m) tall and reported to be strikingly handsome. He was also a celibate his whole life. This goes in line with the teachings of the Vedas that Tesla and other master minds were familiar with. The Vedas recommend for yogis, and those wanting super intelligence and inner power, to conserve their own divine energy by observing celibacy. As Tesla himself has said, “The gift of mental power comes from God, divine being, and if we concentrate our minds on that truth, we become in tune with this great power.” and “Our senses enable us to perceive only a minute portion of the outside world.”

Now ask yourself why don't we learn about the Vedas in school? Instead we are told it is all just some *hindu* “mythology.” Maybe for the same reason, we have not ever heard about Mr. Nikola Tesla.

Although not a physicist, the German philosopher Arthur Schopenhauer (1788 – 1860) I feel also deserves a place in this article due the fact that he read a Latin translation of the Vedic texts and also glorified the Upanishads in his main work, *The World as Will and Representation* (1819), as well as in his *Parerga and Paralipomena* (1851). He found his own philosophy was in accord with the Vedic ideas.

He states: “That I encounter in the Vedas deep original lofty thoughts, suffused with a high and holy seriousness”

and

“If the reader has also received the benefit of the Vedas, the access to which by means of the Upanishads is in my eyes the greatest privilege which this still young century (1818) may claim before all previous centuries, if then the reader, I say, has received his initiation in primeval Indian wisdom, and received it with an open heart, he will be prepared in the very

best way for hearing what I have to tell him. It will not sound to him strange, as to many others, much less disagreeable; for I might, if it did not sound conceited, contend that every one of the detached statements which constitute the Upanishads, may be deduced as a necessary result from the fundamental thoughts which I have to enunciate, though those deductions themselves are by no means to be found there.”

(source: *The World as Will and Representation* Preface to the first edition, p. xiii)