

# Department of Psychology

CHRIST (Deemed to be) University Bannerghatta Road Campus, Bangalore

## Activity Report

Code: No | 2021 | Psychology | A webinar on 'Quantum Mechanics and Consciousness'

### General Information

Type of Activity	Webinar
Title of the Activity	Quantum Mechanisms and Consciousness
Date/s	14 September 2021 - Tuesday
Time	2-3 pm
Venue	Cisco WebEx

### Speaker/Guest/Presenter's Details

Name	Prof. Dr. Mathew Chandrankunnel CMI
Title/Position	Professor, author, scientist, philosopher and theologian
Organization	Dharmaram Vidya Kshetram, Bangalore, India
Title of Presentation	Quantum Mechanisms and Consciousness
Speaker's Profile	<p>Dr. Mathew Chandrankunnel was ordained a priest in the Syro-Malabar Catholic Church on 5 May 1987, and is in the Carmelites of Mary Immaculate Congregation, Province of Kottayam.</p> <p>Dr. Chandrankunnel CMI studied physics and philosophy in several Indian universities. In 1998 he earned a PhD in Philosophy of Science from the University of Leuven in Belgium. He did his postdoctoral research at the Harvard-Smithsonian Centre for Astrophysics, and lectured at the State University of New York. In July 2000 he won the Science and Religion Course Award from the Centre for Theology and Natural Sciences in Berkeley, California for his contribution: "<i>Search for Unity and Interconnectedness: Meeting Point between Science and Religion</i>".</p>

### Participants' Profile

Type of Participants	Psychology students and Faculty
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No. of Participants	1PSYH A, B, C, 3PSYH A, B, C and 5PSYH
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## Synopsis of the activity (Description)

Highlights of the activity	<ol style="list-style-type: none"> <li>1. To gain an understanding about quantum mechanics and its interdependent relationship with human consciousness.</li> <li>2. How different experiments have proven and supported the existence of quantum theory.</li> <li>3. Quantum Psycho-Religion Therapy (QPRT) and techniques of Quantum healing.</li> </ol>
Key Takeaways	<ol style="list-style-type: none"> <li>1. Schrodinger's equation, which is one of the most important equations in physics, makes us know everything about a system, we can solve it.</li> <li>2. How Neils Bohr believes that it is impossible to develop a language to describe "quantum reality" and that quantum theory forces us to choose a description from the ones developed in classical physics in a given situation.</li> <li>3. Collapse of the wave function explained through the infamous Schrodinger's cat experiment.</li> <li>4. Macrocosm &amp; Microcosm – the Buddhist concept of Mandala.</li> <li>5. The principles of Quantum Psycho-Religion Therapy (QPRT) and the core meaning of quantum healing.</li> </ol>
Summary	<p>The emcee for the webinar was Jagori Chatterjee from 3PSYH A. The session started off with a small formal welcome by the emcee. The emcee later hands over the meeting to Dr. Chandrankunnel, our special guest and speaker for the day. He starts off the session by narrating an account of his past life experiences – which includes visiting a plane crash site and a visit to a local morgue, both of which reminded him of a very similar dream that he had a week before. He then proceeds to introduce the basic concept of Quantum physics, the various physicists and scientists who have proposed equations, postulates and theories that provided a foundation to quantum mechanics as a concept. This included,</p> <ul style="list-style-type: none"> <li>- Max Planck's quantization theory</li> <li>- Heinrich Hertz's electromagnetic spectrum</li> <li>- Neils Bohr's atom model and quantum jump</li> <li>- Werner Heisenberg's uncertainty principle</li> <li>- De Broglie relations</li> <li>- The Schrödinger equation</li> <li>- Gilbert Lewis' Gilbert space</li> </ul>

	<p>He proceeded to explain how Bohr's atomic principles were interconnected with complementarity, and the limit of knowability. The limit of knowability is backed by the Schrödinger's equation, Heisenberg's Uncertainty Principle, both of which's experiments supported the quantum theory. He reiterated the statement that the quantum theory only predicts the probability of results of measurements, stating that "The truth is stranger than fiction".</p> <p>Though most of the scientists validated and accepted the quantum theory, they did not agree upon a single, general definition for it. differing opinions of Bohr, Einstein, and Feynman were given as examples. The explanation then shifts to the significance of the Schrödinger's cat experiment and how a wave function collapse occurs when a wave function – initially in a superposition of several eigenstates – reduces to a single eigenstate due to interaction with external world. The double slit experiment and quantum tunneling concepts follow suit. The relationship between quantum computing and artificial intelligence was the next topic, of which the most important point was of the significance of the Penrose-Hameroff experiment. The next concept explained was Microcosm and Macrocosm, which entails the integration of different disciplines together to transform a person into a meditating model. Then the important concept and takeaway for the day – the QPRT technique was introduced which is a healing procedure conducted on individuals suffering from various mental health disorders. The session was concluded with an outlook on the various levels of consciousness and how the method of Quantum Healing enables the eradication of mental health illnesses.</p>
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## Rapporteur

Name of the Rapporteur	Meghana Annup
Email and Contact No.	meghana.annup@psyh.christuniversity.in

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**de Broglie 1923**

Licht  $p = \frac{h}{\lambda}$   $\longleftrightarrow$  Materie  $\lambda = \frac{h}{p}$

Materieeigenschaften  $\longleftrightarrow$  Welleneigenschaften?

**Berechnung der "Materiewellenlänge" aus der Beschleunigungsspannung für e-**

nicht relativistisch:  $\lambda = \frac{h}{p}$   $eU = \frac{1}{2}mv^2 = \frac{1}{2} \frac{p^2}{m}$

$\lambda = \frac{h}{\sqrt{2eUm}}$

relativistisch:

$W = W_{kin} + W_0$

$p^2 c^2 = W^2 - W_0^2$

$= W_{kin}^2 + 2W_{kin}W_0 + W_0^2 - W_0^2$

$= W_{kin}^2 + 2W_{kin}W_0$

$W_{kin} = eU \rightarrow (eU)^2 + 2eU m_0 c^2$

$\Rightarrow p = \sqrt{\frac{(eU)^2 + 2eU m_0 c^2}{c^2}}$

de Broglie-Wellenlänge

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**Bohr and Complementarity**

**What is "complimentarity?"**

- Quote from Bohr: "The quantum postulate forces us to adopt a **new mode of description** designated as **complementary** in the sense that any given application of classical concepts **precludes the simultaneous use of other classical concepts** which in a different connection are equally necessary for the elucidation of phenomena."
- Bohr believes it is impossible to invent a new language to describe "quantum reality". **The modes of description we need (observation & definition of states) have been developed in classical physics. Quantum theory forces us to choose only one of these descriptions for a given situation, which one is determined by the choice of experimental apparatus!**

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