



# Richard Feynman : Contribution to Quantum Mechanics

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Richard Feynman was an immense personality. He was a personality that fit in one or two adjectives. He was such a personality that there would be separate books on each of his aspects. Richard Feynman, who was born on May 11, 1918, in a suburb near New York, USA, due to his scientific influence and other qualities earned him a highly respected position among influential scientists of the 20th century; But still he had a distinct place from all others. This distinction was due not only to his research, but also to his character traits and keen intelligence.

The Manhattan Project is the world's first atomic bomb project! At that time, utmost secrecy was very important. Letters of scientists working on the project were censored. Even Feynman's letters from Arlina and her father did not escape the Censor Board. Then he started writing letters in sign language. The censors implemented a method of forwarding letters, keeping the code-language puzzle to themselves.

Feynman used to make fun of the censors in the Manhattan Project, opening them without a key. For the locks that require a clue, generate the clue (i.e. match the numbers) and open the lock! Because of this, a lot of fun happens, some risky things also happen. But mischievous Feynman did not take it seriously. It shows the lack of security system. The security system at Los Alamos was the highest security system of its time. But Richard Feynman used to find the raw links, the errors. Talking about it, it was said that "Whatever is a secret, one first tries to reveal the secret".

Shortly after Arlina's death, the United States dropped the  
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atomic bomb on Japan, killing more than 80,000 civilians. The world war was to be ended by the use of the atomic bomb to deter Germany; But it happened! Richard Feynman was distraught.

Feynman was appointed professor at Cornell University. There he devoted himself entirely to the teaching profession, keeping research aside. There too, he earned a reputation as an exceptional teacher. He teaches any subject (physics) very easily. They used to teach the subject at the level of intimate students. After sometime he turned back to research. He gave a different approach to 'Quantum Electrodynamics' (QED) or mass electrodynamics by studying and researching interactions between matter and radiation. His research changed the way we understand particles and waves. His research led to the discovery of light, radio waves, electricity and magnetism together. All matter is made up of atoms and molecules. These molecules are composed of two or more atoms. When atoms form molecules, the electrons in the outermost orbitals of the atoms form these atomic bonds. When an electron in one atom passes by an electron in another atom, the momentum between them creates an electromagnetic wave energy beam (photon). An electron throws this energy beam towards another electron and is itself displaced from its position. Similarly, the electron which receives the energy charge is also deviated from its position.

Such an exchange of photons or energy causes the two electrons to move away from each other. Due to Feynman's research, the theoretical answers in this context and the answers found by actual experiments matched exactly. For this research, he was awarded the 1965 Nobel Prize in Physics along with Julius Schwinger (USA) and Tomonega Shinichiro (Japan).

After the Nobel Prize was announced, he considered rejecting it. Feynman was ready to accept the Nobel Prize, which made him a 'celebrity' and he did not want it, but he was advised that refusing the Nobel would make him an even bigger celebrity.

While explaining or explaining a subject, Feynman kept the equations of mathematics, mass mechanics, physics aside