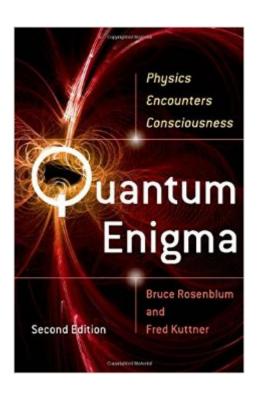
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Quantum Enigma: Physics Encounters Consciousness





Synopsis

In trying to understand the atom, physicists built quantum mechanics, the most successful theory in science and the basis of one-third of our economy. They found, to their embarrassment, that with their theory, physics encounters consciousness. Authors Bruce Rosenblum and Fred Kuttner explain all this in non-technical terms with help from some fanciful stories and anecdotes about the theory's developers. They present the quantum mystery honestly, emphasizing what is and what is not speculation. Quantum Enigma's description of the experimental quantum facts, and the quantum theory explaining them, is undisputed. Interpreting what it all means, however, is heatedly controversial. But every interpretation of quantum physics involves consciousness. Rosenblum and Kuttner therefore turn to exploring consciousness itself--and encounter quantum mechanics. Free will and anthropic principles become crucial issues, and the connection of consciousness with the cosmos suggested by some leading quantum cosmologists is mind-blowing. Readers are brought to a boundary where the particular expertise of physicists is no longer the only sure guide. They will find, instead, the facts and hints provided by quantum mechanics and the ability to speculate for themselves. In the few decades since the Bell's theorem experiments established the existence of entanglement (Einstein's "spooky action"), interest in the foundations, and the mysteries, of quantum mechanics has accelerated. In recent years, physicists, philosophers, computer engineers, and even biologists have expanded our realization of the significance of quantum phenomena. This second edition includes such advances. The authors have also drawn on many responses from readers and instructors to improve the clarity of the book's explanations.

Book Information

Paperback: 304 pages

Publisher: Oxford University Press; 2 edition (August 1, 2011)

Language: English

ISBN-10: 0199753814

ISBN-13: 978-0199753819

Product Dimensions: 9.2 x 0.6 x 6.1 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars Â See all reviews (232 customer reviews)

Best Sellers Rank: #31,079 in Books (See Top 100 in Books) #15 in Books > Science & Math >

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Customer Reviews

Before reading this book my thinking on the interaction of quantum mechanics and consciousness was:1. Quantum mechanics states that "nothing exists until it is measured."2. An object can't be measured unless there is a conscious mind to measure it.3. Therefore Quantum Mechanics implies that consciousness (God) created the universe. This book was important to me because it broadened my understanding of the "enigma" that I have thought about for much of my life --- did consciousness create the universe or did the universe create consciousness? It is miraculous that this book was ever written. Scientists, at least in their public lives, must rigorously separate their work from their philosophy or theology. It is career suicide for a scientist to even speculate on the idea of consciousness creating the universe. The authors have engaged in exactly that kind of speculation. They have trespassed into the forbidden encounter of consciousness with the universe. The starting point is that even the most agnostic of physicists have pointed out how amazing it is that the universe, from its largest macrostructures to its tiniest subatomic particles, conforms to precise mathematical formulas conceived by the human brain. Why IS the universe so orderly when odds are it should have been disorderly? Was the universe conceived by the "Old One" (Einstein's reference to a Divine Creator)? Did the universe imbed itself in the creation of consciousness, or did consciousness imbed itself in the creation of the universe? Does OUR IMAGINING the past, present, and future bring it into being for our micro-universe of personal experience?

*****"Everything is determined, the beginning as well as the end, by forces over which we have no control. It is determined for insects as well as for the stars. Human beings, vegetables, or cosmic dust, we all dance to a mysterious tune, intoned in the distance by an invisible piper." -- Albert EinsteinSince all natural phenomena are essentially interconnected, we need to comprehend them all in order to explain any one of them, an unachievable hard task. However, science has formulated the bootstrap model, "that represents the ultimate view of nature that arose in quantum theory with the realization of an essential and universal interrelationship." Quantum Interconnection attracted attention in the last decades; since physicists came to realize that the universe is inter-connected in much subtler ways than had once been thought. The "inter-dependence of all things" can be found in many mystical traditions. The 'observer' and the 'observed' in quantum physics, can no longer be separated and the whole takes precedence over the part. The founders of quantum mechanics debated the role of the observer, with Pauli and Heisenberg believing that it was the observer that produced collapse. This point of view, was never fully endorsed by Bohr, while denounced as

mystical and anti-scientific by Einstein. Pauli accepted the term, calling Q M lucid mysticism. Some people claim that this idea gains support from the description of the physical world provided by quantum mechanics. Heisenberg and Bohr always described quantum mechanics in logical positive terms, while Bohr believed that quantum theory offers a complete description of nature, and never drew a dividing line above which objects cease to be quantum and become classical.

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