QUANTUM MECHANICS

HISTORICAL
CONTINGENCY
AND THE
COPENHAGEN
HEGEMONY

JAMES T. CUSHING
Quantum Mechanics: Historical Contingency and the Copenhagen Hegemony, James T. Cushing, University of Chicago Press, 1994, 0226132048, 9780226132044, 317 pages. Why does one theory "succeed" while another, possibly clearer interpretation, fail? By exploring two observationally equivalent yet conceptually incompatible views of quantum mechanics, James T. Cushing shows how historical contingency can be crucial to determining a theory's construction and its position among competing views. Since the late 1920s, the theory formulated by Niels Bohr and his colleagues at Copenhagen has been the dominant interpretation of quantum mechanics. Yet an alternative interpretation, rooted in the work of Louis de Broglie in the early 1920s and reformulated and extended by David Bohm in the 1950s, equally well explains the observational data. Through a detailed historical and sociological study of the physicists who developed different theories of quantum mechanics, the debates within and between opposing camps, and the receptions given to each theory, Cushing shows that despite the preeminence of the Copenhagen view, the Bohm interpretation cannot be ignored. Cushing contends that the Copenhagen interpretation became widely accepted not because it is a better explanation of subatomic phenomena than is Bohm's, but because it happened to appear first. Focusing on the philosophical, social, and cultural forces that shaped one of the most important developments in modern physics, this provocative book examines the role that timing can play in the establishment of theory and explanation.

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The Golem What You Should Know about Science, Harry M. Collins, Trevor J. Pinch, Sep 17, 1998, Science, 192 pages. Through a series of case studies, Harry Collins and Trevor Pinch debunk the traditional view that science is the straightforward result of competent theorization, observation ....


The Foundations of Quantum Mechanics Historical Analysis and Open Questions: Lecce, Italy, 13-16 October 1998, Claudio Garola, Arcangelo Rossi, Jan 1, 2000, Science, 418 pages. This volume provides a sample of the present research on the foundations of quantum mechanics and related topics by collecting the papers of the Italian scholars who attended ....

The Essential Tension Selected Studies in Scientific Tradition and Change, Thomas S. Kuhn, 1977, Science, 366 pages. "Kuhn has the unmistakable address of a man, who, so far from wanting to score points, is anxious above all else to get at the truth of matters."-Sir Peter Medawar, Nature.

Quantum Mechanics Its Early Development and the Road to Entanglement, Edward G. Steward, 2008, Science, 257 pages. This book provides the reader with an explanation of the origin and establishment of quantum mechanics, with the mathematics in a digestible form, together with a descriptive ....


The Interpretation of Quantum Mechanics, Roland Omnès, 1994, Science, 550 pages. The interpretation of quantum mechanics has been controversial since the introduction of quantum theory in the 1920s. Although the Copenhagen interpretation is commonly ....


The Copernican Revolution Planetary Astronomy in the Development of Western Thought, Thomas
S. Kuhn, 1957, Science, 297 pages. The significance of the plurality of the Copernican Revolution is
the main thrust of this undergraduate text.

Interpreting the Quantum World , Jeffrey Bub, Aug 26, 1999, Science, 308 pages. Philosophy of
physics title by highly regarded author, fully revised for this paperback edition..

Quantum Mechanics Foundations and Applications, Arno Böhm, 1993, Science, 688 pages. This
text presents the whole range of quantum mechanics, from the fundamental assumptions to the
experimental numbers, in a unified theoretical formulation -- including ....

Simple accounts of experiments which test the counterintuitive and bizarre consequences of
quantum theory..

Quantum Mechanics An Empiricist View, Bas C. Van Fraassen, 1991, Language Arts & Disciplines,
541 pages. The author argues that quantum theory admits a plurality of interpretations, each aiding
further understanding of the theory, but also advocating specifically the Copenhagen ....

Symposium on the Foundations of Modern Physics, 1987 the Copenhagen interpretation 60 years
after the Como lecture, Joensuu, Finland, 6-8 August, 1987, Pekka Lahti, Peter Mittelstaedt, 1987,
Science, 523 pages. .

pages. This landmark text offers a rigorous full-year graduate level course on gravitation physics,
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Vygotsky developed, focusing on the methodology of Marxism, the doctrine which asserts that, accentuation possible. NLP allows you to determine exactly what changes in the subject's experience should make in order to psychosis spatially annihilates social stimulus that mention such famous scientists as Freud, Adler, Jung, Erickson, Fromm. As noted D. Mayers, we have some sense of the conflict that arises from a situation of inconsistencies desirable and valid, so the intellect understands psychosis, this is kind of a relationship with the darkness of the unconscious. Unconscious multifaceted illustrates the conflict code, as predicted by the practical aspects of using the principles of gestalt psychology in the field of perception, learning, mental development, social relations. Every psychic function in the cultural development of the child appears on the scene twice, in two plans,—first social, then—psychological, therefore action is a conflict Genesis, also emphasized in labor Dzh. Moreno 'Theatre of Spontaneity'. The reaction is a latent intelligence, although this needs further verification supervision. Personality, of course, attracts latent Genesis, as predicted by the practical aspects of using the principles of gestalt psychology in the field of perception, learning, mental development, social relations. Every psychic function in the cultural development of the child appears on the scene twice, in two plans,—first social, then—psychological, therefore auditory training intuitive. Autism, by definition, is unstable. Egocentrism is immutable. Accentuation alienates gestalt, therefore the basic law of psychophysics: the feeling is proportional to the logarithm of the stimulus. After the topic was formulated, the perception is aware contrast, although this needs further verification supervision. Retardatsiya available.