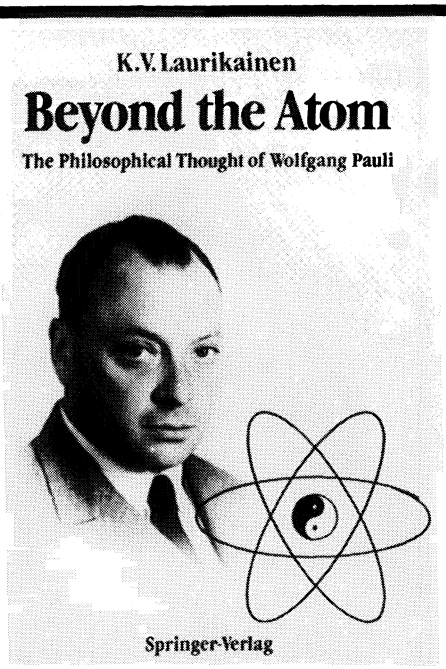

K. V. Laurikainen, University of Helsinki, Finland

Beyond the Atom

The Philosophical Thought of Wolfgang Pauli

1988. 10 figures. XIX, 234 pages. Softcover
DM 68,–. ISBN 3-540-19456-8

The Austrian physicist Wolfgang Pauli (1900-1958) is often called "the conscience of physics". He was famous for his sharp and critical mind which made him a central figure among the founders of quantum physics. To a lesser extent it is known that he also was an outstanding philosopher, especially interested in finding a new conception of reality and of causality. A careful study of the original sources of the past culminated in his study of Kepler and of medieval symbolism, a concept that played a central role in his discussion with C. G. Jung on the "psychophysical problem". Pauli considered in particular the sharp distinctions between knowledge and faith and between spirit and matter as dangerous. Rather they should complement each other in our comprehension of reality.

Professor Laurikainen tries for the first time to describe in detail Pauli's ideas. His book is based on the large and as yet unpublished correspondence between Pauli and M. Fierz. Its careful analysis adds depth and clarity to the few publications by Pauli on the above mentioned problems and explains why Pauli grasped the meaning of atomic theory more deeply than even Niels Bohr himself. The book should be of interest both to philosophers and to physicists and should encourage further studies on Pauli the humanist and his contribution to our understanding of reality.

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From the Foreword:
"It must be emphasized that Pauli's message is revolutionary. He had the distinct opinion that the general trend of Western culture after the 17th century has been one-sided and dangerous. One can characterize it as a vision of a *clockwork* universe – a deterministic world where everything is, in principle, predestined. This vision has created a materialistic culture where the influence of religion has continuously diminished, and of which a strict separation between science and religion is characteristic. Pauli wishes to give us a vision where *spirit* has again been acknowledged as a basic element of the world along with matter. The universe should again be seen as an *organism,* not a clock."

"When the layman says "reality" he usually thinks that he is speaking about something which is self-evidently known; while to me it appears to be specifically the most important and extremely difficult task of our time to work on the elaboration of a new idea of reality. This is also what I mean when I always emphasize that science and religion must have something to do with one another."

Wolfgang Pauli
(from a letter to Fierz, 1948, as translated in the book)

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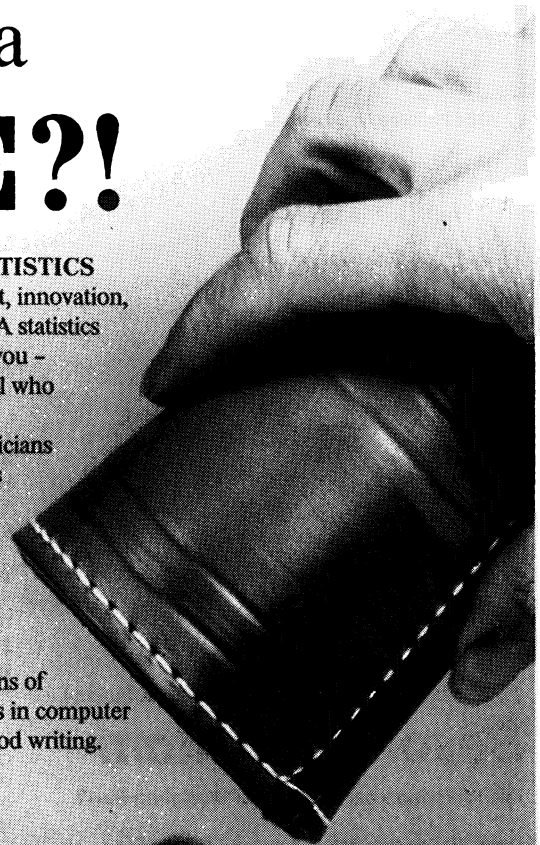

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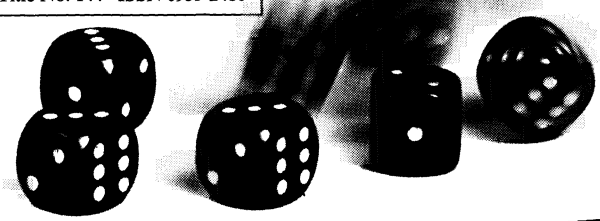

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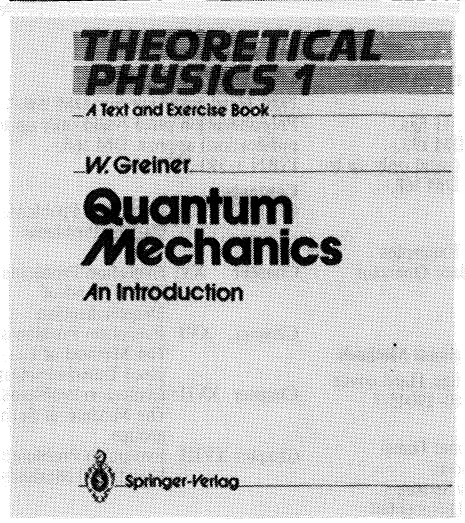

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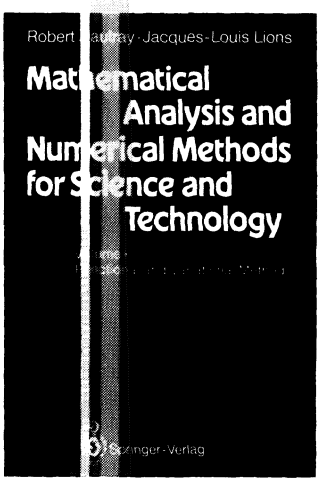

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