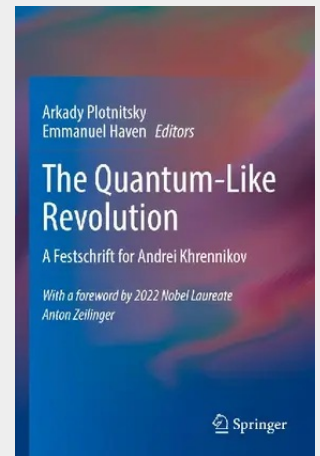


The Quantum-Like Revolution

Over the last ten years, elements of the formalism of quantum mechanics have been successfully applied beyond physics in areas such as psychology (especially cognition), economics and finance (especially in the formalization of so-called 'decision making'), political science, and molecular biology. An important stream of work along these lines, commonly under the heading of quantum-like modeling, has been published in well regarded scientific journals, and major publishers have devoted entire books to the topic. This Festschrift honors a key figure in this field of research: Andrei Khrennikov, who made momentous contributions to it and to quantum foundations themselves. While honoring these contributions, and in order to do so, this Festschrift orients its reader toward the future rather than focusing on the past: it addresses future challenges and establishes the way forward in both domains, quantum-like modeling and quantum foundations. A while ago, in response to the developments of using the quantum formalism outside of quantum mechanics, the eminent quantum physicist Anton Zeilinger said, 'Why should it be precisely the quantum mechanics formalism? Maybe its generalization would be more adequate...' This volume responds to this statement by both showing the reasons for the continuing importance of quantum formalism and yet also considering pathways to such generalizations. Khrennikov's work has been indispensable in establishing the great promise of quantum and quantum-like thinking in shaping the future of scientific research across the disciplines.

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