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Nota di contenuto Chapter 1. Introduction -- Chapter 2. Indiscernibility of quantum

particles: a road to orthodoxy -- Chapter 3. The source of the Symmetrization Postulate -- Chapter 4. Logic and metaphysics of discernibility -- Chapter 5. Qualitative individuation of same-type particles: beyond orthodoxy -- Chapter 6. The heterodox approach to absolute discernibility and entanglement -- Chapter 7. Two views on quantum individuation -- Chapter 8. The metaphysics of quantum

objects.

Sommario/riassunto This book analyzes metaphysical consequences of the quantum theory

of many particles with respect to the fundamental notions of identity, individuality and discernibility. The main focus is on the proper interpretation of the quantum formalism in relation to the role of permutation invariance and the adequate representation of the

properties of individual subsystems. Two main approaches to the issue

of the individuation of quantum particles are distinguished and

thoroughly discussed. These approaches differ radically with respect to their metaphysical consequences - while one of them implies the complete indiscernibility of quantum particles of the same kind, the

other one restores the possibility of discerning individual particles by

their properties. We connect the problem of quantum individuation and discernibility with an analysis of the concept of quantum entanglement, and we also discuss identity over time and in counterfactual scenarios. Tomasz Bigaj is Professor of Philosophy at the University of Warsaw, Poland. His previous publications include the book Non-locality and Possible Worlds (2006) and numerous articles on various topics in philosophy of physics, philosophical logic and analytic metaphysics (Synthese, Erkenntnis, Foundations of Physics, Foundations of Science).