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Nota di contenuto	1 Fundamental assumptions -- 2 The state of a quantum system as a subsystem of a composite system -- 3 Relation between the state of a system as isolated and as open -- 4 Universality of the probability function -- 5 Appendix A -- 6 Appendix B -- 7 Appendix C -- 8 Appendix D.
Sommario/riassunto	This book presents a selection of Prof. Matteo Campanella's writings on the interpretative aspects of quantum mechanics and on a possible derivation of Born's rule – one of the key principles of the probabilistic interpretation of quantum mechanics – that is independent of any priori probabilistic interpretation. This topic is of fundamental interest, and as such is currently an active area of research. Starting from a natural method of defining such a state, Campanella found that it can be characterized through a partial density operator, which occurs as a consequence of the formalism and of a number of reasonable assumptions connected with the notion of a state. The book demonstrates that the density operator arises as an orbit invariant that has to be interpreted as probabilistic, and that its quantitative implementation is equivalent to Born's rule. The appendices present various mathematical details, which would have interrupted the

continuity of the discussion if they had been included in the main text. For instance, they discuss baricentric coordinates, mapping between Hilbert spaces, tensor products between linear spaces, orbits of vectors of a linear space under the action of its structure group, and the class of Hilbert space as a category.