

Preface

This book is both apparently ambitious and modest in its aims. Ambitious, as it attempts to achieve something that has been declared impossible by some of the greatest physicists since the 1920s: making sense of what quantum mechanics really means. But modest, because that goal was actually already attained many years ago in the work of Louis de Broglie, David Bohm, and John Bell. I will simply try to explain what they achieved.

This book is written especially for all those students who feel that they have not understood the subject of quantum mechanics, not because they fail to master the mathematics or because they cannot do the exercises, but because they do not see what the theory means.

However, no prior knowledge of quantum mechanics is required. Most of the technical parts have been put in appendices, which can be skipped if one is willing to take certain results for granted.

Hopefully this book should also interest philosophers and historians of science, in particular Chaps. 1, 3, 7, and 8.

The analysis presented here has benefited from such a large number of discussions, seminars, and exchanges with so many people that thanking them all by name would scarcely be possible.

However, I must stress that I learned most of what I know about the subject through discussions with Detlef Dürr, Tim Maudlin, Nino Zanghi, and especially with Sheldon Goldstein.

Many readers of parts of this book have made useful comments and corrections and I wish to thank them: Xavier Bekaert, Serge Dendas, Lajos Diósi, Michel Ghins, Michel Hellas, Dominique Lambert, Vincent Mathieu, Alexis Merlaud, Amaury Mouchet, and Alan Sokal. My special thanks to Ward Struyve for helping me with his great scientific expertise on the topic of this book. I thank also Stephen Lyle for his careful reading of the manuscript and many clarifying exchanges. Needless to say, all remaining errors are mine.

I wish to thank Cathy Brichard warmly for her indispensable secretarial help. And finally, heartfelt thanks to my editor Angela Lahee, without whom this book would not have seen the light of day, for her encouragement and her patience.



<http://www.springer.com/978-3-319-25887-4>

Making Sense of Quantum Mechanics

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2016, X, 331 p. 26 illus., 25 illus. in color., Hardcover

ISBN: 978-3-319-25887-4