

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.

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