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Quantum Theory and Local Causality

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ISSN 2211-4548 ISSN 2211-4556 (electronic)
SpringerBriefs in Philosophy
ISBN 978-3-319-73932-8 ISBN 978-3-319-73933-5 (eBook)
https://doi.org/10.1007/978-3-319-73933-5

Library of Congress Control Number: 2017963282

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

This book summarizes the results of research the authors have pursued in the past several years on the problem of implementing Bell's notion of local causality in algebraic quantum field theory and relating it to such fundamental concepts as the Common Cause Principle, Bell's inequalities, and the EPR scenario. These results have been presented at various workshops and department seminars. We wish to thank the audience and the members of the *Budapest Research Group*, the *Budapest-Kraków Research Group*, the *Center for Philosophy of Science at the University of Pittsburgh*, the *Munich Center for Mathematical Philosophy*, the *Nagoya Winter Workshop Series*, the *Sidney Edelstein Center at the Hebrew University*, the *Sigma Club at the London School of Economics*, and the *Southern California Philosophy of Physics Group* for the valuable discussions from which the present book greatly benefited.

The results contained in this book have been published by the authors in a number of papers. The authors gratefully acknowledge permissions to reuse copyrighted material. A substantial part of the main text and all figures are reproduced from these papers:

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The research that the book is based on was supported by the Hungarian Scientific Research Fund, OTKA K-108384 and K-115593.

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