

Preface and Acknowledgments

Physics textbooks for nonscientists, even today, seldom address questions that are of relevance to nonscientists, such as questions of meaning, values, creativity, and spirituality. This is in spite of the fact that the theory of relativity and quantum physics have made major impacts on such questions of philosophy.

Several years ago, I initiated the teaching of a course entitled "The Physicists' View of Nature," under the auspices of the University of Oregon Physics Department, to specifically introduce questions of meaning in our presenting of basic physics to nonscientists. The course has been highly successful and eventually led to the writing a two-volume book by the same name. The first volume, subtitled *From Newton to Einstein*, deals with classical physics and has already been published. This is Volume II of the book and it deals with the quantum revolution.

Besides covering the standard material, I have extensively discussed questions that intrigue the nonscientist: What is the relation of physics and biology? Why is mathematics important to physics? Does physics have something to say about consciousness, about values, about meaning? Can one integrate the worldviews of scientists and nonscientists? Can we ask the question of the existence of God within physics? What is the nature of creativity, scientific or otherwise? I hope the answers are stimulating and will even be satisfying to most students.

I would like to acknowledge the many discussions with my nonscientist students who took the course at the University of Oregon. Many thanks are due to Eve Brant who has done practically everything to bring the book to print. Finally, I would like to give sincere thanks to Sidney Solomon and Raymond Solomon, without whose encouragement the book would never have been written. I thank you all.

—A. G.
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The Physicists' View of Nature Part 2

The Quantum Revolution

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