

## Preface

As a theoretical physicist, my daily work consists of research and education in highly specialized topics of theoretical physics. Usually, I concentrate on the tiniest constituents of matter, the elementary particles, and the way they interact. It is the experimental physicists who do the marvelous job of designing and operating the complicated constructions with which they make all their observations. They identify the particles and measure their properties. We theoreticians then do our best to put all these findings in a proper context, after which we try to make predictions as to what might still be there to be discovered next, and how this might be done.

The language we use and the formulae we write down, can only be understood by a small number of people. It is a universal language, that of mathematics, and it can be used for the tiniest particles as well as for properties of the universe as a whole, and also the stars and planets that populate it. But it is a very difficult language to learn.

This book is in a different language; that of normal people, who do not necessarily have a comprehensive understanding of mathematics. It is also on a different topic: that of speculations

concerning the future. Science fiction mixed with science fact, known by some as “science faction”.

My aim was never to lose sight of what we know about science, facts that I believe cannot be ignored when speculating about the future. Still, in spite of all restrictions this imposes, the world that lies ahead of us is a fascinating one. This is the world I wanted to describe, although every now and then, I did let my fantasies run wild.

This book was first written in Dutch, my mother tongue. My daughter Saskia then translated it into English. With great enthusiasm, she produced an English translation that at the same time improved the original Dutch text considerably.

I profited from numerous discussions with friends and colleagues. We specially thank Edward Fredkin for his many interesting comments and suggestions, Joanne Furniss for her editorial contribution, and Annemarie Kleinert for a critical reading of the manuscript.

*Playing with Planets* (originally *Planetenbiljart*, in Dutch) became a personal testimony of the fantastic speculations and day dreams one can be inspired to, by real science.

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