

## *Introduction*

The old foundations of scientific thought are becoming unintelligible. Time, space, matter, material, ether, electricity, mechanism, organism, configuration, structure, pattern, function, all require reinterpretation. What is the sense of talking about a mechanical explanation when you do not know what you mean by mechanics?

The paradox is now fully established that the utmost abstractions are the true weapons with which to control our thought of concrete fact.

So said the philosopher Alfred North Whitehead in his *Science and the Modern World*, 1925. But surely weapons are not needed to control belief in what is true in Nature. Abstraction can surely have no lasting place in science. Physicists have had rather more to assimilate than has been possible and have lapsed a little into a world of abstraction. Whitehead must be wrong. The old foundations of scientific thought were intelligible to their creators. To say that they were becoming unintelligible merely implies developing weaknesses in the minds of later generations of scientists. There was impatience at the difficulties of fathoming and charting that sea of energy permeating space—the aether. And so, many pretended that the aether does not exist and did so by abstract mathematical formulations. History will one day show that they were wrong. In this work we will explore the modern evidence proving that the aether is a reality. We will proceed without mathematics and we will attack abstraction, and, in particular, we will attack Whitehead's problem of understanding mechanics, by explaining the nature of mass.

A mathematical analysis is provided in the author's book *Physics without Einstein*, but this new work goes beyond the scope of that book by incorporating the results of further research and exposing some weaknesses in existing theories. A solution to the mysteries of the creation of the solar system is an important original feature presented in this work. It is anticipated that

the evidence provided will convince the reader that the ever-present aether deserves his attention, but if the reader is left with doubts it is hoped that this book will stimulate him to voice them and to seek to resolve them constructively. The true form of Nature is already set. It needs imagination and analysis and a will to defend as well as criticize any theories put forward, if we are to find a way to comprehend the sub-structure of Nature. In this book the author has been ready to criticize and has offered much that can be criticized, and if the reader is left with doubts he did not have before, this book will have served him well.