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Enough of this. Newton forgive me; you found the only way which, in your age, was just about possible for a man of highest thoughts — and creative power.
Albert Einstein 1946

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Enough of this. Einstein forgive me; you found the only way which, in your age, was just about possible for a man of highest thoughts — and creative power.
Espen Gaarder Haug 2014

Preface

Unified Revolution is about a new physics theory that basically explains the foundation of everything. For the first time in recorded history, space, time, energy, matter, causality, uncertainty, the microcosmos and macrocosmos, and even the origin of life and intelligence, is explained and derived from the simplest of all principles.

This book is not about some loose theory. It is about a sound philosophical idea that is backed up by an extensive mathematical framework. Further, since all equations are derived from the same simple basis, all equations presented are consistent with each other. Hundreds of new, fundamental physics derivations and formulas are introduced for the first time. However, a sound philosophical idea backed up by an extensive mathematical framework is not enough. The ultimate test of a theory is the world around us, both as concerns everyday phenomena, as well as counter-intuitive effects that we have observed in high precision physics experiments. A series of well-known physics experiments are all consistent with the theory presented in this book, and a number of previously ignored experiments are also brought into light, which have been ignored partly because they have not been fully understood. Not only can our theory perfectly explain these experiments, but it also shows that other theories in physics are heavily flawed and/or incomplete.

Atomism was introduced more than 2,500 years ago by Leucippus and Democritus. Only fragments of their writings have survived, and one of the reasons for this could be that Plato himself decided to burn as many of Democritus' books as possible.

In ancient times, the word *atom* was defined as an indivisible or uncuttable particle. If such a particle exists, it must be the very foundation of everything. However, today, the word *atom* means something completely different. It has been totally polluted by modern physics. What modern science today calls atoms are related to the periodic table introduced by John Dalton. Modern atoms are composite structures that can be broken down into smaller parts, which means that the modern use of the word *atom* has nothing to do with its original meaning. True atoms are indivisible particles traveling in the void. The big question is: do they exist? Ancient atomism was abandoned and ignored by modern science, not because the theory was flawed, but because it was never understood and fully explored.

Today, atomism is mostly studied by modern philosophers and historians. Most modern philosophers have very limited math skills and often lack scientific training¹. Further, many of them are better at arguing for the sake of winning an argument rather than they are at being seekers of wisdom. Physicists, on the other hand, often have good mathematical skills, but typically have little knowledge of ancient atomism, and no knowledge regarding the power of the expanded atomism that is introduced in this book for the first time.

Mathematical atomism is the wonder beyond wonders. It is the unified theory man has been seeking for thousands of years. No theory is more wonderful, nor more powerful. Mathematical atomism reveals the true depth of reality and the true laws of physics. Most of modern physics is just surface science, which can often be very useful in a practical sense, but it gives us little insight into the depth of reality.

Chapter 1 explains ancient atomism and the very foundation of everything. Every fundamental aspect of this world can be derived from the assumptions laid out in chapter 1. Chapter 2 describes how energy and matter are related to atomism, and Chapter 3 describes how atomism can explain gravity. Chapter 4 is an introduction to space, time, and the speed of light. Chapters 1 to 4 are introductory chapters that basically require no

¹Naturally, there are some exceptions.

math skills. Chapters 5 to 18 discuss space, time, and the speed of light in-depth, as well as the many implications surrounding these topics. From atomism comes *indivisible relativity theory*, which will replace Einstein’s special relativity theory.

Einstein’s special relativity theory actually only scratches the surface of reality. Einstein assumed that the one-way speed of light was the same in every direction and the same as the experimentally-tested, round-trip speed of light. When using Einstein synchronized clocks to measure the one-way speed of light, we are only measuring an apparent one-way speed of light, not the true one-way speed of light. Atomism shows us what the true one-way speed of light must be, and also how we can measure the speed of the solar system against the void. Relativity of simultaneity as introduced by Einstein is only an apparent effect due to Einstein synchronization of clocks. Absolute simultaneity is reintroduced. Indivisible relativity theory also shows us how we must distinguish between one-way and round-trip time-dilation. Einstein’s special relativity theory predicts the correct round-trip time dilation, but only gives us an apparent one-way time dilation that contains a hidden error.

Chapters 19 to 21 discuss energy and matter in-depth. Einstein’s formula, $E = Mc^2$, is correct, but it does not provide very deep insight. From atomism, I derive $E = Mc^2$ in a way that provides much deeper insight. Further, a series of new relationships between energy and matter is derived and explained. Indivisible relativity theory shows for the first time how energy and matter are truly related to space and time.

Chapter 22 looks at chaos, order, and uncertainty. Many empirical phenomena have so-called fat-tail and high peak statistical distributions relative to the theoretical normal distribution (Gauss curve). Atomism perfectly explains why we should actually expect non-Gaussian distributions for most phenomena. It is also clear that the second law of thermodynamics is not a law at all, and that the entropy of a system will actually decrease at some point after it has increased.

Chapter 23 explains how the smallest of all substances, the indivisible particles in the void, can help us understand the grand scale of the universe. Atomism shows us that the Big Bang theory must be flawed.

Chapter 24 discusses how atomism can even explain the origin of memory and intelligence. Where did life come from? Where are we going? Atomism can even answer these questions.

Chapter 25 is a more speculative chapter in which we reconsider what the ancient philosophers knew and possibly tried to both tell us and conceal from us. In ancient times, it was common to write about science using a hermetic writing style, and in this way, conceal the knowledge from the uninitiated.

This book is filled with new, revolutionary results. This book is the start of a *Unified Revolution* in science. There is indeed a storm coming – a storm of knowledge!

Espen Gaarder Haug, 20 October 2014