

PREFACE

This book is about a triumph of the vortex theory. Introduced at the dawn of science almost 2600 years ago, it had passed through five phases of accumulation of its strength by absorbing the discoveries made during the Greek civilization, the Copernicus Revolution, the age of electromagnetism, the atomic age, and the information age. During the first four phases (see Chapters 1 through 12 of this book), the development of the vortex theory followed the same unfortunate pattern. Each time, this theory managed to bring attention of a new generation of brilliant scientists, who were enchanted by a deep physical meaning of its basic concept. But, although they employed the latest advances in science, none of them was able to produce a mathematical tool making the vortex theory practically usable. Consequently, the wonderful theory repeatedly faded away and stayed underground waiting for another chance to come back.

During the 20th century physicists utilized the latest achievements of quantum mechanics and theory of relativity to develop their best jewels, standard model and string theory. But by the end of the century, the conditions in physics had suddenly changed. Although the standard model still remained the best tool accurately predicting the results of numerous experiments, its predictions proved to be applicable only to a small fraction of matter contained in the universe. Out of the scope of the model were newly predicted dark matter and dark energy that occupy from 95 to 99% of the universe. The string theory turned out to be much less successful than the standard model, failing so far even to predict some basic physical phenomena.

In 1993 I discovered a unique spacetime spiral element, called the *toryx*. The toryx is a particular case of a multiple-level dynamic spiral with a poetic name *helicola* that describes the paths of all moving celestial bodies in our universe. The ability of the toryx to be turned inside out made it perfect for modeling the polarized prime elements of matter. A close offspring of the toryx called the *helyx* turned out to be ideal for modeling the polarized prime elements of the radiation particles. The space-time properties of the toryx and the helyx are governed by eight fundamental equations that can be viewed as their genetic codes. This discovery led me to the development of a new version of the vortex theory called *Three-Dimensional Spiral String Theory (3D-SST)*.

Outlined in Chapters 13 through 16, 3D-SST absorbs many valuable aspects of current theories. But, it modifies and further extends the exist-

ing ideas by outlining the fundamental processes leading to the creation of our universe.

- Creation of spiral prime elements of nature by polarization of Nothingness
- Formation of quantum vacuum
- Formation of elementary particles
- Formation of ether
- Formation of nucleons and hydrogen atom
- Formation of radiation particles.

Unlike any theory of elementary particles proposed so far, the elementary particles of 3D-SST are the live entities sustaining their existence by absorption and release of energy. The life-sustaining process becomes possible due to a wonderful interplay between subluminal and superluminal velocities of propagation of the strings making up both the toryces and the helyces. 3D-SST is the unified theory, and its four most important attributes are:

- Unified structure of the prime elements of the entire universe, including ordinary matter, dark matter and dark energy
- Unified nature of strong, superstrong, gravitational, and electric forces
- Unification of subluminal and superluminal velocities
- Unification of positive and negative infinities.

At the core of 3D-SST are the four fundamental processes: polarization, unification, natural selection, and absorption-release of energy. One can readily discover that the very same processes govern the existence of all the entities of the Universe, including the human beings. Further interesting discoveries can be made by combining the knowledge coming from 3D-SST and cybernetics. By using the powerful synergy of these two branches of sciences, we will be able to look at ourselves from a completely different perspective and to recognize that the role for the human race is much more important than we had previously thought.

Acknowledgements

This book is primarily about the great scientists of all times. Directly or indirectly, they all affected the development of my ideas, and if some of these ideas have any merit, the credit must go to these studious servants of science. I am also grateful to several contemporary scientists for making their valuable and stimulating comments on my novel ideas. Among them are: Professor Carlo Rovelli (Department of Physics and Astron-

omy of the University of Pittsburgh), Professor Gregory M. Townsend (Department of Physics of the University of Akron), Professor Clifford Taubes (Department of Mathematics, Harvard University), who made encouraging comments on my idea of multiple-level Universe.

Several American physicists made valuable comments on my model simulating strong and electric forces between thin rings with evenly distributed electric charges. Among them are: Professor Rudolph Hwa (Department of Physics, University of Oregon), Dr. Blair M. Smith (Innovative Nuclear Space Power and Propulsion Institute, University of Florida), Professor Edward F. Redish (Department of Physics, University of Maryland), Professor David F. Measday (Department of Physics and Astronomy, University of British Columbia, Canada), Dr. Eric Carlson (Department of Physics, Wake Forest University), and Professor Warren Siegel (Department of Physics and Astronomy, Stony Brook University).

Thanks to the recommendations made by Dr. Akhlesh Lakhtakia (Department of Engineering and Mechanics, the Pennsylvania State University), I was able to publish the first three papers describing my version of the vortex theory. My latest five papers on this subject were published with the assistance provided by Dr. Harold Fox (Editor of *The Journal of New Energy*), Yasuhiko Genku Kimura (Publisher and Editor-in-Chief of *VIA, The Journal of Integral Thinking for Visionary Action*). I appreciate very much my interesting discussions with Marvin Solit, Director of Foundations for New Directions, and his ideas about possible space orientations of torques. I am very grateful to Dr. Cynthia Kolb Whitney (Editor of the Journal *Galilean Electrodynamics*) for reading the first edition of this book and giving me very valuable suggestions. I am especially grateful to Mr. Nobuyuki Kanai from Osaka, Japan who followed my research on spirals for the last several years. He impressed me by his deep knowledge of history of science. After reading the manuscript of this book, he proposed to make many corrections that certainly improved the quality of the book.

Let me finish the introduction to this book with the words of three great visionaries of the 20th century.

... Spirality pervades the Universe concretely and abstractly, visibly and invisibly. Not only do the galaxies of stars tend to this rotary form, and possibly the supergalaxies or even the Universe itself, but the spiroid theme dominates the courses and shapes of bodies and substances all the way down to the atom.

Guy Murchie

The author of *The Seven Misteries of Life*.

That the man calls matter, or substance, has no existence whatsoever. So-called matter is but waves of the motion of light, electrically divided into opposed pairs, then electrically conditioned and patterned into what we call various substances of matter. Briefly put, matter is the motion of light, and motion is not substance. It only appears to be. Take motion away and there would not be even the appearance of substance.

Walter Russell

The author of *The Secret of Light*.

. . . we can not rest satisfied until the deeper unity between the gravitational and electric properties of the world is apparent.

Sir Arthur Eddington.

Their prophetic words resonate with the essential aspects of this book.