

Article

## Physics & Cosmic Order: Introduction

Robert Campbell \*

### ABSTRACT

The current paradigm of physics still rests on ideas that emerged in the Golden Age of Greece, and it has been instrumental in accumulating a great fund of knowledge over the past few centuries. At the same time it has done little to advance our understanding of the creative process. This leaves us struggling with an ever burgeoning number of facts and fragments to a jigsaw puzzle, without an overall picture to guide us in their assembly into coherent meaning. The alternative paradigm presented here encompasses the vast fund of factual evidence in presenting an integrated picture of a more fundamental worldview. The basic laws of physics are rendered transparent when seen through the lens of new insights into the cosmic order. A new quantum-relativity emerges naturally. This has profound implications for our view of quantum events, atomic structure, the nature of space-time, and cosmology.

**Key Words:** Cosmic Order, physics, quantum relativity, spacetime, laws of physics, cosmology.

In the broadest sense, physics concerns how experience is organized and integrated, for by the endeavor we seek to integrate our experience in more meaningful ways. Our efforts therefore imply that there is an order underlying the whole of experience that can be understood. It is this that is meant by cosmic order. It has two faces that are properly complementary. The face directed outward to our mutual social undertakings is the face of physics that will concern us here. The other face seeks meaning in personal experience. It is a spiritual pursuit that is essentially private but nevertheless relevant. This strange Janus-faced order has been a subject of interest to humans since we first looked at the stars and wondered.

In the articles that follow, it will be shown that there is a non-linguistic way to delineate a self-consistent System of organization that is all pervasive. It allows of unlimited elaboration within itself through a progression of discrete sub-systems nested within it that reconcile multiplicity with unity. It is a living dynamic system. In this respect it offers new insights into the physical, biological, and social sciences.

This series of articles concentrates on the development of the lower three Systems with the main emphasis on the physical sciences, introducing new mathematical identities related to quantum-relativity with cosmological implications. The lower systems are most fundamental. They transcend and subsume the higher systems nested within them. They generate the primary patterns elaborated upon in the higher systems.

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\* Correspondence: Robert Campbell, Independent Researcher. Website: <http://www.cosmic-mindreach.com>  
E-mail: [bob@cosmic-mindreach.com](mailto:bob@cosmic-mindreach.com) Note: The articles presented in this Focus Issue are based on my book "SCIENCE AND COSMIC ORDER: A New Prospectus (Book I: Physics)" self-published in 1997 and updated in 2012. More information is available at my website .

The presentation is rigorously self-consistent, and also consistent with the vast fund of factual knowledge that we have accumulated over the centuries. It is a captivating adventure.

### **Physics & Cosmic Order I: A New Prospectus, an Ancient Theme**

An historical review of the empirical evidence indicates a fundamental discontinuity in space and time that suggests a new interpretation of the cosmic order and its scientific relevance. A universal methodology is indicated that complements traditional methods of science.

### **Physics & Cosmic Order II: Introducing the System**

The System of delineating the cosmic order embraces all possible varieties of experience. Alternating subjective and objective orientations are associated with a cyclic discontinuity. Systems 1 & 2 transcend and subsume the higher systems that determine events in space and time.

### **Physics & Cosmic Order III: Introducing System 3**

System 3 delineates the synchronous projection of matter as a succession of atomic space frames alternating with their timeless and formless quantum energy equivalents that collectively constitute the Void. The Void is a master repository that spans space and time. It integrates the whole of history. The symmetries of the hydrogen atom emerge accordingly in a way that defines the nature of space and time.

### **Physics & Cosmic Order IV: Gravity, Quantum Relativity & System 3**

System 3 renders the most basic formulae of physics transparent, introducing conjugate identities and historic coordinates. Special relativity, gravitation, Coulomb's law, Planck's law, de Broglie's wave equation, and the uncertainty principle find reinterpretation in a new Quantum-Relativity as an alternative to General Relativity. A new perspective of the universe emerges in a state of perpetual renewal.

### **Physics & Cosmic Order V: Quantum Atoms, Space & Time**

A review of atomic theory shows that early contributions to quantum mechanics were consistent with System 3. A primary interval of time derives from the hydrogen atom. The action of light in a primary interval defines external linear space with respect to the internal spherical space of the atom. Space and time are quantized consistent with the derivation of de Broglie's wave equation. The integrated fabric of space-time is defined by atomic processes. It is not a priori as current relativity theory assumes.

### **Physics & Cosmic Order VI: Cosmology & System 3**

The angular velocity of galactic stellar populations is relatively constant at various galactic radii except near an accretion disc at black hole centers. This results in a relatively constant galactic contraction ratio across the galaxy's external space-time profile. As fresh stocks of primary hydrogen are ejected radially outward from the center the contraction profile generates the accretion of new stars that continue to migrate outward until their accumulated internal space-time contraction associated with fusion processes exceeds the contraction profile of the galaxy. At that point old dense stars become drawn back toward the center of the galaxy by the same quantum forces. In this way galaxies creatively regenerate their stellar populations eternally with a variety of observational effects. These include the red shift, the background radiation, quasars and related phenomena.