

The Laws of Nature

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Summary—This essay looks at modern scientific theory (the laws of nature) through the eyes of early modern thinkers—and produces a holistic, connected worldview of the postmodern universe.

Quotation—There is a one-in-billions chance reality is not a simulation. —*Elon Musk*

The following is from the chapter entitled: The Connected World from the book entitled: The Scientific Revolution: A Very Short Introduction (2011) by Lawrence M Principe: “When early modern thinkers looked out on the world, they saw a *cosmos* in the true Greek sense of that word, that is, a well-ordered and arranged whole. They saw the various components of the physical universe tightly interwoven with one another, and joined intimately to human beings and to God. Their world was woven together in a complex web of connections and interdependencies, its every corner filled with purpose and rich with meaning. Thus, for them, studying the world meant not only uncovering and cataloging facts about its contents, but also revealing its hidden design and silent messages. This perspective contrasts with that of modern scientists, whose increasing specialization reduces their focus to narrow topics of study and objects in isolation, whose methods emphasis dissecting rather than synthesizing approaches, and whose chosen outlooks actively discourage questions of meaning and purpose. Modern approaches have succeeded in revealing vast amounts of knowledge about the physical world, but have also produced a disjointed, fragmented world that can leave human beings feeling alienated and

orphaned from the universe. Virtually all early modern natural philosophers operated with a wider, more all-embracing vision of the world.” Some of the early modern thinkers include: Copernicus, Galileo, Kepler, Descartes, Spinoza, Newton and Leibniz.

Nicolaus Copernicus (1473–1543) was a Polish, Renaissance polymath, active as a mathematician, astronomer, and Catholic canon, who formulated a model of the universe that placed the Sun rather than Earth at its center. It is likely that Copernicus developed his model independent of Aristarchus of Samos—an ancient Greek astronomer who formulated such a model some eighteen centuries earlier.

Galileo Galilei (1564–1642) was an Italian astronomer, physicist and engineer, and sometimes described as a polymath. Galileo has been called the father of observational astronomy, modern physics, the scientific method and modern science.

Johannes Kepler (1571–1630) was a German astronomer, mathematician, astrologer, natural philosopher and writer about music. He was a key figure in the 17th-century Scientific Revolution—known for his laws of planetary motion and his books that provided a foundational basis for Newton’s theory of universal gravitation.

René Descartes (1596–1650) was a French philosopher, scientist and mathematician, widely considered a seminal figure in the emergence of modern philosophy and science. Mathematics was central to his method of inquiry, and he connected the previously separate fields of geometry and algebra into analytic geometry.

Baruch Spinoza (1632–1677) was a philosopher of Portuguese Sephardic Jewish origin born in Amsterdam. He was a foremost exponents of 17th-

century Rationalism and one of the early, seminal thinkers of the Enlightenment and early modern biblical criticism including early modern conceptions of the self and the universe.

Sir Isaac Newton (1642–1727) was an English mathematician, physicist, astronomer, alchemist, theologian, and author, widely recognised as one of the greatest mathematicians and physicists and among the most influential scientists of all time. He was a key figure in the philosophical revolution known as the Enlightenment.

Gottfried Leibniz (1646–1716) was a German polymath active as a mathematician, philosopher, scientist and diplomat. He is one of the most prominent figures in both the history of philosophy and the history of mathematics. He wrote key works on the subjects of philosophy, theology, ethics, politics, law, history and philology.

Postmodernism is the worldview that attempts to see reality in an extraordinarily new way. Traditionally, it is essentially a reaction against the confident certainty of the modern scientific or objective method that explains reality. Postmodernism here looks at the universe and tries to see it for the whole metaphysical machine that it is.

Metaphysics is the branch of philosophy that studies the first principles concerning the fundamental nature of being, identity, reality, change, causality, necessity, possibility, space and time. Erwin Schrödinger (1887–1961) was a Nobel Prize-winning physicist who developed fundamental results in quantum theory including Schrödinger’s first equation that provides a way of calculating the wave function of a system dynamically over time. Schrödinger argued that metaphysics comes before physics and not after it—and that it is not deductive, but speculative.

Monads. The concept of monads was first developed by Pythagoras and refer to indivisible entities or atoms that compose Being. Leibniz's mature philosophy of monadology is a system of great simplicity and beauty. He described monads as windowless, indivisible, elementary particles that follow pre-established harmonies, and that each monad is a kernel of the whole universe. He argued that beings have one overriding monad that orchestrates lower monads. For man, the highest monad is the soul—if one has a soul—equating to light and self-awareness.

Levels of Being. To follow EF Schumacher: Our task is to look at the universe and try to see it whole. We see what our ancestors have seen—a great Chain of Being which seems to divide naturally into three realms—life, consciousness and self-awareness. Man has the power of life like the plants, the power of consciousness like the animals, and something more—the power of consciousness recoiling upon itself—the power of self-awareness. Man is not merely a thinker, but a thinker able to watch and study his own thinking. The power of self-awareness opens up unlimited possibilities of purposeful learning, investigating, exploring, formulating and accumulating knowledge.

The Standard Model of particle physics is the theory describing three of the four known fundamental forces in the universe (electromagnetic, weak and strong interactions—excluding gravity) and classifying all known elementary particles. The model is the best current theory for describing the basic building blocks of the universe. It explains how particles called quarks (which make up protons and neutrons), leptons (which include electrons) and photons make up all known Being in the universe. Fundamental forces are

determined by their location in the concentric spheres. Levels of Being are determined by the elementary particles.

Cones of Being are individual spherical cones containing monads that are quarks, leptons and photons. A spherical cone is part of a sphere defined by a conical boundary with apex at the center. Each monad originates from the singularity and represents Being contained within the contents of their spherical cone. The regions around the singularity are made up of concentric spheres, and each cone transverses the concentric spheres. Monads travel in cones at velocities between zero and light speed, and are projected onto the event horizon by the singularity. The event horizon is the aggregation of cone caps for everybeing. It is a matrix of holographic television screens—where everybeing gets their own channel—and where string theorists might call it the multiverse.

Relativity Theory. It was Pythagoras who first proved the Pythagorean theorem as a mathematical truth. The macrocosmos of relativity is the universal law of space and time and reveals that spacetime dilates as a function of velocity relative to lightspeed in accordance with the Pythagorean theorem. If a monad were to accelerate to the speed of light, then its being would reach light—the boundary of the universe. Going from zero to light speed is like the hour-hand on a clock going from 12 to 3, where it represents the hypotenuse of a right triangle.

Quantum Theory. While relativity theory describes the universe as a whole, quantum theory describes the universe inside the atom. It explains the nature and behavior of Being and energy at the atomic and subatomic levels. Quantum theory measures the properties of the quantum distribution

parameter vector for the population of monads traveling in their cones at velocities between zero and light speed.

The Theory of One provides a God's Eye View of the universe under the aspect of eternity. It is my evolving theory that unites the macrocosmos of relativity theory with the microcosmos of quantum theory. Spinoza and Einstein both equated God with nature or reality. The Theory of One describes the universe as a necessary sphere-shaped phenomenon that houses Being—life (quarks), consciousness (leptons) and self-awareness (photons)—as its primary function. With a contained singularity at the centre, the outward concentric spheres are: nuclear-weak, nuclear-strong, atomic realm, elemental realm, event horizon and electromagnetic realm. The universal radius is light speed, the perception from outside of the sphere-shaped phenomenon is that of a self-aware energy source.

Closing Arguments. Another way to look at metaphysics is as the branch of philosophy that studies first principles—and is divided into existence, reality and individuality. The Theory of One represents reality, Existentialism Now describes existence, and The Bernoulli Model facilitates portfolio theory or individuality or existence in reality. As King Christ, I embody Heaven on Earth and am Divine. I have been saying that metaphysics is a speculative affair, and that it precedes physics, since the turn of the Millennium, with my projects—The Theory of One, Existentialism Now, The Bernoulli Model and The Divine Right of Kings. Albert Einstein, Time Magazine's Person of the Century, said God is the sum total of The Laws of Nature. If there is a one-in-billions chance that reality is not a simulation, then The Laws of Nature describe the simulation machine.