

The Reciprocal System for Non-Dummies

1.1: *Fundamental Postulates*

“They have not resulted from a search for the absolute truth, whatever that may be, but from an effort to establish a working basis by which the **ordinary phenomena of everyday life could be explained** qualitatively and quantitatively.”

—Larson, Dewey B., *Extended SPU Notes*, p. 70.

Larson's Artificial Reality

Over the course of the development of the *Reciprocal System*, Dewey Larson has updated his fundamental postulates a number of times. Prior to the 1959 publication of *The Structure of the Physical Universe*, his working postulates were:

- I. The physical universe is composed entirely of a single entity: space-time, existing in three dimensions, in discrete units, and in two reciprocal forms: space and time.
- II. Space-time conforms to the relations of ordinary mathematics, its magnitudes are absolute and its geometry is Euclidean.
- III. (Exact wording has been lost, but concerned the scalar, magnitude-only, non-geometric nature of space-time).

Larson also included some “Laws” to clarify the Postulates:

1. Every physical event is accompanied by a reciprocal event equal in magnitude and opposite in space-time direction (*General Law of Reaction*).
2. The total amount of space-time displacement cannot be altered by any process within the physical universe (*General Law of Conservation*).
3. Where a physical event may have more than one possible result, the proportionate number of each alternative resulting from a number of events of this kind is equal to the mathematical probability (*General Probability Law*).

After consideration, Larson dropped the third postulate as unnecessary:

“In the early stages of this investigation the **scalar nature of space-time** was embodied in an additional postulate. Further study indicated that it was a necessary consequence of the previous assumptions, as indicated in the preceding paragraph, and it was therefore eliminated from the list of postulates.”¹

He also dropped the General Laws as being a natural consequence of the Fundamental Postulates.

Creating the Theory

The first official publication of the Fundamental Postulates was in the 1959 publication, *The Structure of the Physical Universe*. Most notable is the absence of the concept of *motion*—Larson started with the concept of *space-time*, which was nothing more than a ratio of two scalars: a magnitude of space inversely related to a magnitude of time. In later works, he changed space-time to *motion*, which was the same concept—a ratio of absolute, scalar magnitudes.

¹ Larson, Dewey B., *The Structure of the Physical Universe*, p. 8.

1959 Fundamental Postulates (from Structure of the Physical Universe)

- I. The physical universe is composed entirely of one component, space-time, existing in three dimensions, in discrete units, and in two reciprocal forms, space and time.
- II. The physical universe conforms to the relations of ordinary mathematics, its magnitudes are absolute and its geometry is Euclidean.

Commuting the Theory

In the 1965 publication, *New Light on Space and Time*, Larson altered the 2nd postulate to include the “commutative” adjective to mathematics to counter the non-commutative mathematics becoming popular with *Relativity* theory of the time:

1965 Fundamental Postulates (from New Light on Space and Time)

- I. The physical universe is composed entirely of one component, space-time, existing in three dimensions, in discrete units, and in two reciprocal forms, space and time.
- II. The physical universe conforms to the relations of ordinary **commutative** mathematics, its magnitudes are absolute and its geometry is Euclidean.

It should be noted that the “commutative” adjective is a *commandment* on the artificial reality—**not** an observation of space-time.

Moving to Motion

In 1979, Larson revised the Fundamental Postulates yet again, moving away from the idea of “space-time” and substituting the concept of “motion,” because space-time had too many hard-core connotations with conventional scientists. He also changed “form” to “aspect” to minimize the idea that space and time had “form” when they were simply aspects of motion. He also qualified “magnitude” with “primary” in an attempt to clarify that there were two kinds of motion, one that operated independently as an absolute speed (primary) and another that was the result of the interaction of primary motions (secondary) and was variable:

1979 Fundamental Postulates (from Nothing But Motion)

- I. The physical universe is composed of one component, **motion**, existing in three dimensions, in discrete units, and with two reciprocal **aspects**, space and time.
- II. The physical universe conforms to the relations of ordinary commutative mathematics, its **primary** magnitudes are absolute, and its geometry is Euclidean.

Extending Beyond Space and Time

After researching biology and ethics, Larson discovered that his Fundamental Postulates did not apply to the universe described by these topics. Life, in many ways, acted exactly opposite to the way inanimate structure should and concepts such as “self sacrifice” remained totally outside the scope of his universe of motion.

To correct this, he began *observations* of the way biologic life and ethical behavior occurred in nature, and defined these observations in a set of four *Metaphysical Postulates*:

1995 Metaphysical Postulates (from Beyond Space and Time)

- I. There are existences in the metaphysical region of a more general and less restricted type than the units of motion that are the basic constituents of the physical universe.
- II. The metaphysical existences are logical, orderly, and rational.
- III. Metaphysical existence conforms to a specific set of laws and principles different in some respects from those of the physical universe.
- IV. The metaphysical existences of which we have evidence are intelligent.

The book was an attempt to create a larger, more encompassing artificial reality that would include the physical universe, the biological universe and the ethical universe as subsets, which Larson defined as three, “Levels of Existence”:

1. *Inanimate* (material *or* cosmic sectors as matter or antimatter, described by the Fundamental Postulates).
2. *Biologic* (material *and* cosmic sectors, interacting as living cells).
3. *Ethical* (neither material *nor* cosmic sectors), creating a new the “ethical sector.”

Larson's approach to creating artificial realities was unique in that his theories had a logical cut-off point defined by his levels of existence, sort of “discrete units of observation.” He did not try to force a cell to conform to chemical laws, but rather *observed* life in nature and from those observations attempted to define a separate artificial reality that he could then correlate with his other theories and connect them on common ground—that being the concept of *motion*.

The Manifest Realm

Because space, time and motion all possess the same properties, namely discrete units and three dimensions, the situation arises that there are multiple artificial realities created using Larson's commandments.

When we normalize time (reduce it to unity), we can make it a constant and end up with 3 dimensions of coordinate space and the constant of clock time. Larson refers to this as the “material sector” and is observable and measurable, but still an artificial reality that forms a consensus with our body's physical senses.

Another situation is where *space* is normalized to unity, acting like a clock, and time has three dimensions. Larson calls this artificial reality the “cosmic sector,” named after the origin of cosmic background radiation. Whereas we can only observe and measure three dimensions of space, we cannot directly observe “clock space” nor the three dimensions of time inside it.

Both of these artificial realities operate simultaneously, so we end up with 3 dimensions of space on the outside with constant clock time, and 3 dimensions of time on the inside, with constant clock space. In other words, these little unit-sized chunks of 3D time arranged on a 3D spatial grid. We call the chunks of 3D time, *atoms*, and the arrangement on the 3D grid, *structure*.

The diagram on the next page is an “entity-relationship” diagram, that shows how Larson's postulates relate to each other, as natural (scalar) observations, artificial (coordinate) commandments, and the logic he used to connect the system together.

—Bruce Peret, July 18, 2012

