

**The Simple Essence of
Dewey B. Larson's
Reciprocal System of Physics**

*To give an essential overview of the Universality of this mathematical model,
without an enquirer having to wade through volumes of heavy detailed text
to see it!*

by J. M. Boardman

Introduction

Dewey Bernard Larson, USA, 1898—1990, was an extraordinary guy; basically he was a chemical engineer, but he also had detailed knowledge of electrical engineering, nuclear physics and astrophysics. He had a life-long passion to find a way of explaining the physical properties of materials from just their atomic numbers. In 1959 he published his first book: "*The Structure of the Physical Universe*" which presented his revolutionary ideas. He wrote a total of 10 books. This overview considers his later writings on his main theory, which he describes as '*a revised and enlarged edition of the Structure of the Physical Universe — in three volumes*'. Also included is his companion volume "*Neglected Facts of Science*" which greatly helps in practical comprehension of his theory.

Vol I	Nothing But Motion	1979
Vol II	Basic Properties of Matter	1988
Vol III	The Universe of Motion	1984
Companion book:	Neglected Facts of Science	1982

Dewey B. Larson claimed his theory was a complete, Universal theory encompassing all physical phenomena **replacing** the many disconnected theories that have emerged within contemporary physics—not something added to the existing bunch. It is a replacement of conceptual theory, not experimental empirical knowledge—which in most cases is imported directly. For example; Newton's laws of motion are exactly the same numerically within Larson's framework as they are within classical physics and engineering—rather it is the conceptualising of what the physical entities actually 'are' that is revolutionarily different!

His writings are at a high level, primarily speaking to professional scientists; a few of them accept his arguments, but alas the mainstream of scientists still do not. ...Inertia of ideas and beliefs is inevitably a large part of the problem (*yes even within the science community!*) though it must also be said that the true brilliance of the theory is its Universality; But in order to see that: If a reader has got to slowly wade through three heavy volumes of detail—then it does rather lose its impact!

So for this reason, this short 'Essence and Overview' on the Reciprocal System has been compiled.

Other people have seen spiritual significance in his findings, though Larson himself was quite adverse to such notions (at that time) — but in a way, this makes it even more accurate!

The Postulates

Dewey B. Larson's theory is built-up from two basic postulates or notions:

FIRST FUNDAMENTAL POSTULATE

"The physical universe is composed entirely of one component, Motion, existing in three dimensions, in discrete units, and with two reciprocal aspects, space and time."

SECOND FUNDAMENTAL POSTULATE

"The physical universe conforms to the relations of ordinary commutative mathematics, its primary magnitudes are absolute, and its geometry is Euclidean."

The first postulate is an observation of natural law of the universe; the second postulate is his own statement about how it all behaves.

Do not dismiss these two postulates as being overly simple, there is a considerable amount said in just a few concise words!

Larson followed a sort of *'What If'* scenario using these two postulates on Motion; then proceeded to successfully reverse-engineer material physics!

Scalar Motion — the mathematical model of the universe...

The word "Scalar" means it has magnitude only, for example temperature or money. ... We fully measure such quantities by amount alone.

This contrasts with the word "Vector", which means it has both magnitude AND direction. For example: the motion of a vehicle or a physical force.

Speed is usually regarded as a Vector, but it is not necessarily so! When Speed has both magnitude and direction, it is correctly called a Velocity. However, speed can also be a Scalar with magnitude only.

Scalar Motion does actually exist in the real world. Examples are:

- Dots drawn on the surface of an expanding or contracting balloon
- Currants relative to each other in a pudding rising in the oven
- Plastic foam uniformly expanding or contracting
- Recession of distant Galaxies

Each point has no specific direction, either they just move outwards from each other, or just move inwards towards each other. So while they don't have any specific direction, they do have a sense—outward or inward.

The second fact to notice is; **this movement of any individual point, is completely independent of where it is in space**—they have their same movement whatever! ... For example: The scalar motion of an expanding balloon is independent of where the balloon is, or where the motion is viewed from—even if viewed from any position inside the balloon! ...This fact is extremely important! ...In effect, it is saying Scalar motion has *non-local* properties!

Let's examine Speed of Motion: We are all familiar with speed taken as some unit of space, divided by some unit of time. For example:

- *Miles per hour*
- *Kilometres per hour*
- *Metres per second*

To write this formally, we do it as a fraction

$$\frac{Space}{Time} = Speed$$

Dewey B. Larson's concept is that Scalar Speed is the basic, and only constituent of the physical Universe: not 'Space' or 'Time', as these cannot exist independently.

This is a radical shift in conceptual thinking, though he was certainly not the first person to say it, as several inspired Mystics have said similar things before him, for example: René Descartes, Walter Russell and Dion Fortune—Larson though, followed it through into detailed mathematics.

If Motion is the basic constituent of the Universe, it means that "Space" and "Time" Do Not make a container in which all "stuff" exists. ...There is no "container" like that — contrary to orthodox scientific thinking!

Starting with no interaction between two opposing scalar Motions* — the first going outwards, the other returning inwards. The Speed of both of them is the same as the speed of light, but of course in opposite senses. (it is ambiguous to say "directions" because they are Scalar)

So let's re-write our fraction calling the speed of light, a speed of "One"

$$\frac{Space}{Time} = Speed = 1$$

Normally we write the speed of light as 300,000,000 metres per second, but what are 'metres' and what are 'seconds' other than man-made units?

So if this particular speed of motion in our model is the basic constituent of the Universe, we are very much entitled to call it "Unity"!

This becomes the datum base. Note; we could not choose Zero for datum, because we are saying this motion has some actual speed.

* We are now constructing a mathematical model based on known types of motion to see if it fits experimental results; so assumptions on how it all came to be are outside the scope of this model—It is perfectly valid therefore to say two opposing scalar motions are just 'happening': irrespective of Creation!

Gravity and Radiation

So in our mathematical model under construction, let us identify these two opposing Motions with physical “stuff”.

- The outward scalar motion is equivalent to Radiation (of photons etc.)
- The inward scalar motion is equivalent to Gravity (aggregates of matter)

Something flowing outwards concurrently with something flowing inwards to make a whole! ...*Where have we met that concept before?*

The balance between the opposing flows appears stationary.

We have to think the other way around to what is familiar, **not motion of something, but rather “motion” itself is fundamental!** ...*Meditate on it! You need to employ your 'Right-Brain' to comprehend this!*



It also explains why photons, and likewise gravity go through vacuum!

Imagine moving conveyor belts, but with nothing on them yet! This is the abstract nature of the basic motions, except they are Scalar motions (*like the trace path of the dots drawn on our expanding balloon example*).

Now if this was all there was to it, then matter would just be one big, amorphous, uniform, rarefied, matrix—which it is not! ...So lets consider other scalar motions superimposed on the two basic opposite motions.

Other Types of Scalar Motion

Remember; this is a mathematical model that is being constructed using known types of motion. The various possible combinations of these motions are shown by Larson to accurately represent the complete span of physics, which is unprecedented by any other science theory!

Up to now, we have discussed linear motion; this sort of motion traverses a straight line even though no specific line is drawn. For example: going back to our original example of a dot on an expanding / contracting balloon, the dot will trace a straight line as it moves outwards, or inwards (*if the rubber thickness and consistency is perfectly uniform that is!*)

There is another sort of basic motion—Rotary. This has the effect of tracing spirals and helixes. But it can still be “scalar” motion; so for adding local special effect to our basic two inward / outward motions of Gravity and Radiation of our emerging mathematical model; rotary scalar motion fits the bill.

Another possible variable; is that motion could be oscillatory! Meaning like ‘simple harmonic motion’, or a vibration. This could be both linear pulses or rotary like a watch balance-wheel spring.

The 4 possibilities:

1. Linear Scalar Motion (straight outward or inward)
2. Rotational Scalar Motion (spiralling outwards or inwards)
3. Linear Oscillations (vibration — constant reversals in direction)
4. Rotary Oscillations (like a watch balance-wheel spring reversals)

How Many Dimensions?

Did you notice after the introduction above, where Larson's two Postulates were stated, that he figured out there must be 3 Dimensions of Motion — but this is not the same thing as 3 dimensions of "space"!

Of these 3 dimensions of motion, only One can manifest to our awareness and is subdivided into Length, Height, Width all divided by Time. The other two "dimensions of motion" cannot be represented in our spatial frame of reference; though they very much affect and build our world.

Individual local alterations to the basic background motions thus occur; though it can be within one, two or all three dimensions of motion!

- Where all three dimensions are employed, the result is atom building!
- Where two dimensions are employed, the result is magnetism!
- Where only one dimension is employed, the result is electrical.

Sub-Atomic Particles?

They don't exist! ...Yes shock horror! ...So what are all these high profile scientists doing with their Large Hadron Colliders etc? ...What they call 'particles' are actually 'packets of motion', often very transitory, but each of these 'packets of motion' is insufficient to form a complete atom. They are not 'components' of atoms, but incomplete atoms! There is essentially no basic difference between any of the elements except for the varying displacements from unity speed within each of the three dimensions of motion.

Atoms

When independent scalar motions in the gravity sense, are superimposed upon the basic out-flowing progression, or radiation of the Universe, and when these motions are in all three dimensions—it produces what we call Atoms. ...Because of the novel nature of Unit speed being the datum, rather than our familiar Zero, Larson formulated a coding system based upon speed-displacement away from Unity; for example:

Helium	2	—	1	—	0
Silicon	2	—	2	—	4
Carbon	2	—	2	—	4
Iron	3	—	2	—	8

*Where the first two digits refer to displacement from unity in the two magnetic dimensions, and the third digit represents the electrical displacement from unity. (always whole numbers).
Isotopes are also described, though they are slightly different.*

As was stated in Larson's Postulates, motion can only come in discrete units, albeit extremely tiny. This is the same as Quantum theory and goes back to Max Planck's black-body radiation where he found energy could only be in discrete packets — or quanta.

One "Atom" therefore, is the smallest entity possible, of any matter.

Forces

Above it was stated that the two basic opposite motions are Radiation and Gravity. ... Consider Gravity: Isn't gravity just an expression of how much attractive influence is put onto mass? And, aren't we saying that mass is just complex 3 dimensional motion? So, remember Newton's Laws from school...

$$\text{"Force = mass} \times \text{acceleration"}$$

If mass is just complex motion (aggregates of atoms), and acceleration is change in speed of motion, then surely, by this model, "Force" is also some sort of "motion"—this is where "force" comes from, not the other way around as in conventional science theory!

But how can there be any "acceleration" in a steady state speed? This is another of the peculiarities special to Scalar motion! ...It is the motion of expanding or shrinking; so as the distance outwards or inwards increases, the effects are felt by the surface area—a squared relationship. Think of our expanding balloon, as the diameter is doubled, the surface area is quadrupled. Now as "any" total effect has to be shared around the whole area, the intensity decreases accordingly. This is exactly the same principle as the 'Inverse Square Law' for light intensity at a distance. So this is how a steady Scalar motion has an acceleration to it—positive acceleration for an inward scalar motion, and vice versa.

Larson's books describe in detail about electric forces, magnetic forces, and also give alternative explanations to the so called nuclear forces!

Faster than Light

The Reciprocal System theory of physics predicts that motion occurs that is faster than light, though above this critical speed there is a big change!

Put aside Einstein's theory of General Relativity, which Larson and others have grave doubts about—the point is that this speed of light seems to be the maximum experimental speed possible. ...But consider this; if we are attempting to accelerate stuff using giant electro-magnets, and these magnets operate by motion of this same speed (see below), then by this means it is impossible to accelerate faster than light, regardless of power! And even as we approach this speed, we enter into diminishing returns as the magnets have less and less effective force to give. However, if we found another means of acceleration, then it is possible!

We have chosen to use the number 1 to define the speed of both of our basic opposing motions, which in familiar terms is the speed of light. But we are considering additions of different motions; which include vibratory reversals in direction superimposed upon the basic linear outward motion. The total **net motion** therefore, can be either *Slower* or *Faster* than Unit speed, but there is a catch! ...Above Unit speed, it is motion in time! This does not mean time-travel machines; rather it means that we can travel in time relative to where we started from, but we will always be in a different location—that's the rub!

Motion only occurs in discrete units—the same as for atoms and quantum physics; so writing out our net-speed fractions for the three cases:

$$SLOWER \quad \frac{Space}{Time} \quad | \quad \text{Unit Speed} \quad | \quad \text{FASTER} \quad \frac{Space}{Time}$$

MATERIAL SECTOR

COSMIC SECTOR

$$\frac{Space \text{ is } 1}{Time \text{ is more than } 1}$$

1

$$\frac{Space \text{ is more than } 1}{Time \text{ is } 1}$$

We are in the 'Material Sector' where motion shows as a movement in space, but in the unobservable 'Cosmic Sector' where speeds are above Unity, the reciprocal happens and motion shows as movement in time! ...*In the Material Sector 'time' flows—in the Cosmic Sector 'space' flows!* This is explained mathematically in Larson's books! ...*But it is abstract!*

Larson described these two opposing sectors as an unexpected but major incontrovertible consequence to his theory, and he also realised there was a continual interchange between the two, which he envisioned as taking eons: Radiation going out and cosmic-rays and antimatter coming in! ...However, continued research known as 'RS2' seems to show that the whole lot is far more dynamic than Larson himself imagined. In fact the whole nature of the build-up of atoms may be dynamically between these two sectors! This is where an extension of theory starts to occur. For those interested in pursuing this, there is a significant difference between Larson's books and the 'RS2' mathematical developments.

Energy

Since our basic fraction is put equal to Unity by definition, then it is the same ratio whichever way up it is written:

$$\frac{Space}{Time} = 1 = \frac{Time}{Space}$$

However; Larson describes in his books the reciprocal:

$$\frac{Space}{Time} = Speed \quad \frac{Time}{Space} = Energy!$$

Electricity

'Electrons' and 'Electric-Charge' are two different things! Both are **one** dimensional motion, but different aspects of it. Therefore such a thing as an "Uncharged-Electron" exists — which is a rotating unit of space — the flow of which through a conductor material is an electric current. It can be collected up in a capacitor, but it is inaccurate to call it "charged". ...*Conventional physics confuses Charge and Electrons together; as shown by the inconsistencies between their electrons in atoms, and in electricity!*

"Electric-Charge" is a rotational vibration, it is a type of force, and "force" as shown above using Newton's law, is an effect of certain types of motion—When 'charge' is added up, it is what we know as "Static Electricity".

Magnetism

Permanent magnets and Electro-magnets are also two different things! They are both 2-dimensional, but due to completely different types of motion.

Permanent magnets are a two dimensional charge—magnetostatics; like electrostatics but in two dimensions of rotary vibratory motion.

Electro-magnetism is different; this is linear inward scalar motion, like gravity but stripped of one of the 3 dimensions of gravity by an electric current. It is the residue after the electric current has removed one of the scalar-dimensions. This also explains: “current / motion / magnetic-flux” all being at right angles to each other. (Fleming’s Right Hand Rule)

Conclusion

This RS theory of Dewey B. Larson’s has no argument with experimental sciences, on the contrary it lives by it and is continuing to unfold; rather it is contemporary theoretical physics that is challenged; *en-mass*!

...Larson also rejects “black holes” and “big bang” theories!!

RS is a “Theory” but gosh it does fit the real world remarkably well, and in all departments of physics! ...Much better than the hotchpotch of existing theoretical-physics currently believed in by our learned establishment!

The theory continues to unfold by a few dedicated advocates; the basic concepts remain unchanged, but new work and new ideas have suggested modifications: ‘RS2’ (Reciprocal System 2) introduces the concept of Yin and Yang by employing ‘complex numbers’ in the mathematics—so that linear motion in the Material Sector is said to be “Yang”, while the rotary motion is “Yin”; but in the Cosmic Sector their roles reverse!

I hope this short synopsis has helped put into perspective the Universal nature of this theory before you proceed into the detailed proofs. Larson’s books are slow reading, and as one topic relies upon another, an overview will surely be of some help.

Further Reading: I would suggest starting with his short book: “*Neglected Facts of Science*”, especially the first 5 chapters, though I do question the chosen title, as it is more about the practical aspects of his own concepts.

Websites:

<http://rsttheory.org/> has full information on Dewey B. Larson’s Reciprocal Theory, including an on-line store, an on-line library with down-loadable content, and an active scientific forum “RS2” on the latest developments and ideas on the overall concepts within abstract theoretical physics.

<http://www.al-ruh.org/> is my own website, and includes about how the Reciprocal System, together with other Insights, may fit into materialising a ‘Mind Based Universe of Divided Motion.’

Peace.

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Larson quotes from: 'Nothing but Motion'

“Cosmologists often begin their analyses of large-scale physical processes with a consideration of a hypothetical “empty” universe, one in which no matter exists in the postulated space-time setting. But an empty universe of motion is an impossibility. Without motion there would be no universe. The most primitive condition, the situation which prevails when the universe of motion exists, but nothing at all is happening in that universe, is a condition in which units of motion exist independently, with no interaction. In this condition all speed is unity, one unit of space per unit of time, and since all units of motion are alike—they have no property but speed, and that is unity for all”

(page 31)

“The Reciprocal System of theory deals only with the physical universe as it now exists, and reaches no conclusions as to how that universe came into being, nor as to its ultimate fate. The theoretical system is therefore completely neutral on the question of creation. It is compatible with either the hypothesis of creation by some agency, or the hypothesis that the universe has always existed.”

(page 46)