

ROBERT J. BUENKER'S REVOLUTIONARY CORRECTION OF ALBERT EINSTEIN'S SPECIAL THEORY OF RELATIVITY

A new Socratic method in physics

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FOREWORD

The intention of this report is to demonstrate how Robert J. Buenker uncovered the “Original Sin” of Albert Einstein’s faulty Special Relativity Theory (SRT) by showing how Einstein had made a serious error through trying to base the curvature of relative physical space-time on a mathematical fallacy of composition whereby he could ignore that he was missing the experimental data.

It turned out that with that data, and applying it through what constituted units of measurement, others were readily able, many decades later, to begin achieving the value of the results of the experiments. The first great benefit might be the Global Position Navigating System (GPS), which applies the new universal principle of velocity proportionalities in relation to time slowing.

However, the science priesthood, those who now still refuse to print *anything* by Buenker, refuses to recognize the authority of Buenker for science as a whole and rejects the benefits of the truth revealed by his experiments and exposure of the Einstein errors, thereby continuing the Paolo Sarpi fallacy of principle.¹

Buenker discovered that by correcting the mathematical fallacy of Einstein’s through units of measurement, one could fully restore the value of his original discovery and adjust it truthfully with the appropriate proof of a Global Position Navigating System (GPS).

By demonstrating that space and time can no longer be considered as separate sense perception entities in and of themselves, Buenker has made it

¹ Lyndon LaRouche, [*The Pagan Worship of Isaac Newton*](#), Executive Intelligence Review, Vol. 30, No. 45, November 21, 2003, pages 18-20-21-29-30-31.

possible to solve the Einstein problem with a more advanced *higher hypothesis* whereby space and time can be seen, for the first time, as expression of interacting immaterial physical principles. This is an elaboration following Lyndon LaRouche's original metaphorical view of Bernhard Riemann's multiply dimensional extended manifold, which he successfully incorporated in his new science of physical economy in 1952, and which he proposed should also subsume special relativity as a non Euclidean form of geometry, not as embodying a specific neo-Euclidean hyperbolic geometry as wrongly suggested by Minkowski in 1907.

I

ATONEMENT FOR EINSTEIN'S "ORIGINAL SIN" THROUGH ROBERT BUENKER'S SOCRATIC AXIOMATIC DISCOVERIES IN SPECIAL RELATIVITY PUTS THE SUBJECT OF SPECIAL RELATIVITY AND THE HISTORY OF 20TH CENTURY SCIENCE AS A WHOLE IN A NEW AND DIFFERENT LIGHT

Most people, knowing some of the great successes of special relativity such as the mass energy relationship and Global Position Navigating System (GPS) have been all too ready to accept the validity of the theory in totality. In so doing, however, they ignore numerous forms of irrationality and outright violations of common sense which have emanated from the axiomatics of its derivation. Dr. Robert Buenker, a chemical physicist has, unlike perhaps any previous critic, followed Lyndon LaRouche's warning that the important errors in science are over elementary axiomatic issues which are allowed to become imbedded early in a scientist's career.²

To this day, despite over 100 articles and two books, Buenker has been unable to get any article published in a major physics journal, receiving back rejection letters asserting the subject is not of interest to readers! LaRouche stresses the instilling of irrationality into the population as a whole and enforcing it through control by the scientific priesthood as an ancient instrument of mind control and reversing all further economic progress. Bertrand Russell³, who best

² See Lyndon LaRouche, [*The Pagan Worship of Isaac Newton*](#), Executive Intelligence Review, Vol. 30, No. 45, November 21, 2003. This should clarify why Buenker is not getting published despite his admiration for Newton! See Buenker's exchange with Scientific American.

³ The method of radical empiricist opposition typified by Russell can be traced to the Venetian monk and Doge, Paolo Sarpi, and his stable of scientists including Galileo and Descartes.

exemplified those evil purposes, wrote his 1920's book *ABC's of Relativity* playing up the irrationalities of the theory cited below.

Buenker, a chemical physicist, now in his 80's, told me that he became determined to pursue this, because he couldn't accept that each of two observers in relative motion, could from the standpoint of their own inertial reference frame, find that the other's clock was slower, what can be called an expression of Einstein's Erroneous Symmetry Principle, the ESP. These and several other irrational ideas include:

1. Observations by these moving observers on the measurement of time intervals are bound to disagree, making simultaneity impossible. This followed directly from the ESP and has extremely profound implications for the irrationality that we will get to.

2. Amazingly, the incorporation of the Fitzgerald-Lorentz Contraction (FLC) into his theory, which asserts anisotropic contraction of length in the direction of motion at relativistic speeds. Although originally designed to account for the role of the ether in the Michelson-Morley null experiment of the 1880's, it was kept as an implication of his own equations by Einstein despite his revolutionary rejection of the existence of the ether. There is still no evidence for the FLC and a crucial experiment designed by him decades before it could be carried out not only strongly contradicted the FLC, but in fact showed that rather, the opposite, isotropic length expansion is the case! In addition, its formulation is not only paradoxical, creating the "clock riddle", but also is self contradictory. Again, this goes to why Buenker's not published.

3. Buenker has shown how time no longer can be thought of by itself but, due to the Lorentz Transformation (LT), is together with space artificially fused into a new entity of "space-time", through the t/t' equation of the LT (Lorentz Transformation). This is discussed in his book⁴ on page 35 and follows directly

⁴ Robert Buenker's first 2014 book. [*Relativity Contradictions Unveiled: Kinematics, Gravity, and Light Refraction*](#). My first chapter, the Introduction, addresses several of the bitter disputes played out around special relativity. To identify each of them and arrive at a unifying conception for the higher principle involved, get to know, starting with the book, how Buenker discovered, his seemingly hum drum but actually revolutionary notion of units, especially its solution to the discrepancy of measured lengths and times by observers in relative motion by introducing curvature, which should be seen, in our view, in the same sense of Gauss, Riemann, and LaRouche. For an extensive bibliography of Buenker's articles on relativity, see Robert J. Buenker, [*The Alternative Lorentz Transformation \(ALT\): Publications*](#).

from the t/t' equation 43. This will be eventually refuted by the results of experiments measuring the knowability of this direct relationship of t and t' as in Hafele-Keating experiments through a newly discovered *universal physical principle of proportionality* of lapsed time intervals always measured with respect to an *objective rest system*.

Given the seemingly greatly increased complexity when two different sets of variables, one for each observer are required, what would you expect to gain by the strategy adopted by Lorentz, and Einstein?

Buenker has been able to locate the single *a priori* and *ad hoc* cardinal assumption introduced by Einstein which caused all of these many wrong ideas, like the ONE of the many of the Parmenides paradox in Plato's dialogue. I call that Einstein's "Original Sin". Buenker is the first to have traced this error of method back to its hidey-hole and based upon the results of crucial experiments inserted the ONE solving the paradox into the original equations to constitute a conversion factor for *relating the differing sets of units of measurement*, which are being applied due for instance to different proportions between velocities or clock rates.

Thus, it has been the overlooked change in "time units" occurring at relativistic velocities that caused the seemingly inevitable disagreements of observers in relative motion. Not some mysterious "space-time!"

Because Buenker's discovery of this crucial role for units in Special Relativity Theory (SRT) is of extraordinary importance, in my view, for all of science, including even biology and physical economy, I will therefore compare it with the great scientist Eratosthenes's method of discovery of the earth's spherical curvature a transcendental Platonic idea; that is a *vicarious hypothesis*, so named by Kepler. Kepler made the far greater discovery of the non-constant curvature of the planetary orbits.⁵

⁵ LaRouche wrote: "Let us, therefore, reconsider the proper choice of definition of "Intelligence Quotient." Morality and human intelligence are to be "measured" in the relative weight of reliance on the interdependent principle of *vicarious hypothesis* and *metaphor*, in contrast to the relative weight of sense-perception. *Vicarious hypothesis* and *metaphor*, as combined in practice, determine relative human sanity and practical levels of intelligence, that of both the individual personality, and of the generality of the ideology of the society.

"To the extent that human society were progressive in its direction of development, *vicarious hypothesis* and *metaphor*, when properly combined, tend to become victorious."

Thus, the seemingly far greater complexity in having two observers instead of one can now by means of the experimentally determined proportion between their differing units be easily resolved and their apparent difference in measured time intervals reconciled under a single standard of measurement, i.e. a principle of truthfulness!

LaRouche may have originally taken the idea of *vicarious hypothesis* from Kepler's *New Astronomy*, but he defined it from Eratosthenes' extraterrestrial outlook as opposed to a simple sense-perception experiment for determining the circumference of the Earth. LaRouche described Eratosthenes' method of discovery as follows:

“Eratosthenes' method (Third Century B.C.) focused on the difference, or anomaly, between the angles of shadows cast on two identical sundials at divergent latitudes. *The significance of the experimental lies not in its extraordinarily accurate computation, but in its demonstration that knowledge, rather than being based on experience, is actually based on discovering the contradictions implicit in our opinions about experience* [Emphasis added].”⁶

Thus, *vicarious hypothesis* becomes the *metaphor for the Riemannian multi-principle manifold of extraterrestrial creative-mental-perception* as opposed to the expression of an earthbound *Euclidean straight-line-sense-perception*. This process of creative composition, of course, also includes the use of ironies. As LaRouche put it most emphatically:

“In a long, and originally, often obscured tradition, the human species has become apparently accustomed, but mistakenly, to employ a notion of time and space based on the premises of what had been mere sense perception. The folly of continuing that originally crude tradition of mankind, had reached a critical stage of practice, at a juncture occurring during a time in which scientists have often based definitions of universal physical principles, mistakenly, as depending upon mere human sense-perception.

“A notable challenge to the persistence of that simplistic practice, presented itself at the point at which universal physical principles *respecting*

Lyndon H. LaRouche, Jr., [*Grasping the Future! A New System Among Nations*](#), EIR, Vol. 40, No. 12, March 22, 2013, p. 16.

⁶ Lyndon H. LaRouche, Jr., Op. Cit., p. 10.

universal physical space outside planet Earth, were defined on the basis of human sense-perception attributed to processes within the bounds of planet Earth: the future of mankind now demands primary emphasis on the use of the practice of defining experimental principles which must be applied, more emphatically, to regions of our Solar system beyond the realm of Earth.”⁷

II

SO, WHAT EXACTLY WAS THIS ORIGINAL SIN?

Einstein, in his seminal paper on Special Relativity Theory (SRT) of 1905, adopted as his space time transformation the 1899 Konrad Lorentz Transformation (KLT) set of equations. These addressed the novel question: How to relate the measurements made by observers in inertial frames, of each other’s time and trajectories, and also those of a moving object, even including light pulses, while in relative motion, taking into account two required postulates? These were 1. The speed of light in free space is the same for all observers relative to the light source. 2. Provided they are in inertial frames with constant speed and direction, the laws of physics are the same for all observers.

This means that people within that frame and their instruments such as clocks and wave length measuring resonators will not recognize changes in rates of time or wave length in their frame, because the very instruments have *concurrently* slowed down or increased their dimensions and *units*. The help of recorded results from those instruments must be interpreted from outside. As Einstein said: “Subtle is the Lord”, but “Malicious he is not.”⁸

Again, this reflected Buenker’s discovery of the underlying change in units of measurement based on the overlooked implications from an experiment! So, Buenker’s reformulation of the First Postulate: Yes, the laws of physics remain the same, but the units of measurement do change, unbeknownst to the passengers in

⁷ Lyndon H. LaRouche, Jr., [*Grasping the Future! A New System Among Nations*](#), EIR, Vol. 40, No. 12, March 22, 2013, p. 10.

⁸ Abraham Pais, [*Subtle Is the Lord: The Science and the Life of Albert Einstein*](#), Oxford University Press, 1982.

the frame: “Length measured by a cryogenic resonator during the Braxmaier measurement of the speed of light.”⁹

Lorentz had four equations, each comparing the three space coordinates and the time coordinates. The y/y' and z/z' equations being identical in form, only one additional *physically based* constraint was still needed in addition to the above two in order to actually solve the equations. Lorentz recognized that deficiency and accordingly put in front of one side of each equation a yet to be determined constant multiplier, *epsilon* acknowledging the need to discover the third constraint. However, very important, this also represented a degree of freedom, because one could also divide Lorentz’s length coordinate equation by his time coordinate equation and get a perfectly valid equation relating velocities free at last of $\epsilon=1$ and freedom to give it a new value, as GPS depends upon. Also, a very important result is that if you feed a velocity of c into one side of these equations, known as the RVT or relativistic velocity equation, that in fed velocity will be called U_x , i.e. $U_{\text{sub}x}$, and the corresponding counterpart new velocity for the object or light pulse comes out to also be c' as the velocity U_x' , i.e. $U_{\text{sub}x, \text{prime}}$. So the constancy of c is upheld. See his book starting page 21 bottom for derivation.

Einstein himself developed this set of equations called the relativistic velocity transformation or relativistic addition equations. Because the division factored out $\epsilon=1$, it eliminated the false symmetry and the requirement for non simultaneity. Important new results and theorems involving velocities thus become possible using the Relativistic Velocity Transformation RVT although Einstein did not use his RVT, instead relying on the flawed LT.¹⁰ Buenker in

⁹ See Buenker’s article commenting on C. Braxmaier, [*Tests of Relativity Using a Cryogenic Optical Resonator*](#), Physical Review Letters 88, December 14, 2001. See also Buenker’s 2020 subtle critique of that experiment and the original report on it from 2002. R. J. Buenker, *Deduction of Relativistic Length Variations Based on Tests Using a Cryogenic Optical Resonator*, Int J Nanomater Nanotechnol Nanomed 6(2): 016-020. DOI: <https://dx.doi.org/10.17352/2455-3492.000035>. [*The Alternative Lorentz Transformation \(ALT\): Publications*](#).

¹⁰ The forms of the derivations of the LT and RVT expressed different intentions of their authors. Einstein seems to be the one who went with his own proposed solutions through seeking an experimentally determined relation involving time but not considering length, and therefore tragically missed the full Riemannian implication of the interaction of length and time; thereby preventing him from seeing what his own proposed brilliant Ives-Stilwell experiment and its brilliant execution had accomplished. See also the chapters on the rotor experiments. The intent

numerous articles brings to the surface the many benefits derivable. The false symmetry effects that were coming from *epsilon* are removed, allowing for new simplifying theorems, because although space and time are changing, velocity, the key variable, typified by *c*, is not. This, given the lack of awareness about units has generated some amusing errors in the popular textbook account of muons in flight to earth. See his book's section on muons pages 46-49. The fact that so many problems in relativity have been solved using the RVT puts a sharper focus on the mystery of why Einstein perversely stuck with the LT.

In his excellent and thorough biography of Einstein, physicist Abraham Pais cited conversations in which Einstein cited the decisive roles of the 1851 experiment and what he saw as agreement of the theory of starlight aberration with his own view of the ether in his basing his physics solely on the nature of space and time, not material ether. The fact that Einstein developed, himself, the RVT, which showed the way to combine or subtract sufficiently high velocities, *relativistically*, instead of additively, might well relate to the results of the Fizeau experiment, whose results shocked physicists by not supporting simple additivity. In his book and a number of articles, Buenker discusses fully how the RVT can be used to prove non-additivity and justify the constancy of the speed of light in free space. Based on the RVT, in 1907, Von Laue showed how the RVT resolved the non additivity of velocities in the Fizeau experiment.¹¹

of $\epsilon = 1$ is well covered in Buenker's 2009 article on [*Simultaneity and the Constancy of the Speed of Light: Normalization of Space-time Vectors in the Lorentz Transformation.*](#) It expressed the 20th century illusion that physics questions could be solved through mathematics, the subject of LaRouche's papers such as [*Science Is Not Statistics*](#), EIR September 15, 1997, [*Kepler's Actual Discovery: Mathematics Is not Science*](#), EIR Vol. 35 No 46, Nov. 21, 2008 and pungent statements by Riemann in his 1854 Habilitation Thesis: [*ON THE HYPOTHESES WHICH LIE AT THE FOUNDATIONS OF GEOMETRY.*](#)

¹¹ Buenker's most thorough treatment of the background and some of what the perpetrators hoped to solve is addressed most fully in this 2009 lengthy article [*Simultaneity and the Constancy of the Speed of Light: Normalization of Space-time Vectors in the Lorentz Transformation.*](#) Understanding this requires a familiarity with how the original derivation as discussed in his book was done based on what physical assumptions were introduced. Their assuming a requirement for "Lorentz invariance" for a solution to the system of equations ultimately will prove incorrect. So their manipulations with this intent turns out to have been bench marking and in my view less important and of less present interest than how it ended up being solved by experiments devised by Einstein himself! Today's enormous use of Lorentz invariance to compose space-time diagrams is based on the false construct of the space-time interval. See Taylor and Wheeler's 1966 book built around the "interval." Simultaneity is an

Thus, Einstein effectively had two contradictory theories of Special Relativity Theory (SRT), one based on the Lorentz Transformation (LT), the other on his Relativistic Velocity Transformation (RVT).

To repeat, the Relativistic Velocity Transformation (RVT) equations to combine relativistically velocities that Einstein personally derived in 1905, but which he unfortunately never used, do not have the *original sin* because their common divisor *epsilon* has been factored out, and have proven very valuable. They are consistent with simultaneity, do not mix space and time, do not contain the ESP, and obey the two postulates. They do not support the FLC but, rather, they directly contradict it! They also directly, as Buenker proved, allow us to prove that two observers must necessarily agree on the relative speed of an object or light pulse, relative to either one.

This agreement also turns out to be consistent with what Buenker and others have shown based upon the results of experiments that Einstein himself proposed but were done only decades later. We can now easily and directly derive from the experimental physics a valid expression for *epsilon*, including a time units conversion factor, Q, which when inserted in either the original Lorentz equations or the RVT, provides the conversion factor between the frames. The conversion factor Q linking the differing time units for the two observers gets incorporated in the new *epsilon*, and therefore elegantly eliminates the Original Sin and the many problems it has generated. This new expression for *epsilon* includes a time unit conversion factor, Q, but also the Greek letter, *eta*, which is in both the LT and the RVT's, and therefore also includes the velocity of the common object of observation, U_x . This also indicates that the bench marking for *epsilon* was not correct in only making v the common velocity of the two frames its common subject. So much for benchmarking!

III

HOW DID THE ORIGINAL SIN HAPPEN?

Instead of insisting on the need for actual experimental data to constitute that third constraint just cited, Einstein in a flight forward argued that he could tell

independent principle. LaRouche and Newton are right! This great principle and its restoration to science will be our focus from now on.

simply from the mathematics that *epsilon* must at most depend upon a single variable, the relative velocity of the frames, and therefore it further followed, based on that *ad hoc* assumption, that *epsilon* must equal 1. This is in spite of the many internal inconsistencies we have cited.

In his book [*Relativity Contradictions Unveiled*](#) (2014), Buenker identifies the conflict with the light speed second postulate and the assumption about the non-change in length in the y and z directions when shrinking while advancing in the x. This conflict comes from a combination of the FLC and the actual changes during motion, discovered in experiments. Buenker calls this the clock riddle and gives instances in his book. Remember, inconsistencies or contradictions are illogical, not paradoxes!

However in the case where only length and time are at issue, the Lorentz invariance is not applicable, despite its featuring in many elementary courses in Special Relativity Theory (SRT) where, to this day, it forms the basis for the use of space-time diagrams. This currently erroneous feature in the pedagogy of SRT should instead be replaced by the importance for science as a whole of the physics derived scaling of units. The correction of the Original Sin must be taught for correction of the multiplicity of false predictions such as non simultaneity and for the urgently needed discussion of what this unprecedented human error tells us about the true history of science as a battle ground for the human mind itself. How could this scandal be still kept going for 120 years?

SRT needs to be resituated in the history of science as exemplifying a *higher hypothesis* which over centuries has shaped its sequence of necessary predecessors; especially Bernhard Riemann's multiply extended manifolds. See in this light LaRouche's insistence in the memo later cited in chapter XI that SRT belongs in a sequence of *higher hypotheses*, the highest being Riemannian geometry, not under a hyperbolic merely neo-Euclidean form based on the expression of a false construct of the space mixing of Lorentzian invariance.¹²

IV

¹² [*A non-Mystical View of the Necessity for Absolute Time*](#) is an unpublished report by Lyndon LaRouche, written on March 16, 1988.

A CRUCIAL EXPERIMENT CALLED FOR IN 1905 BY EINSTEIN, DONE FINALLY IN 1938, CONFIRMED HIS UNIQUELY BRILLIANT PREDICTION ON SLOWING OF TIME, SOMETHING NEVER PREVIOUSLY OBSERVED, BUT ALSO, UNEXPECTED BY EINSTEIN AND TO THIS DAY LARGELY IGNORED BUT FOR BUENKER. IT DEMONSTRATED AN INCREASE IN WAVE LENGTH OF LIGHT, ALSO REFUTING THE FLC AND POINTING TO A NEW, AND HITHERTO, UNSUSPECTED MANIFOLD OR DOMAIN OF INTERACTION OF IMMATERIAL PRINCIPLES

Einstein proposed that there must be a *relativistic* Doppler slowing of light waves as distinct from the primary much larger Doppler Effect long known for light and sound. The primary effect could, he proposed, be suitably eliminated by only measuring light traveling at right angles to the observer's line of sight. It was called therefore the Transverse Doppler Effect and was the basis for the 1938 Ives-Stilwell experiment, where Einstein's predicted clock slowing, in the form of a reduced light frequency, was observed!

At that time, the small change in frequency involved was not directly measurable, but could be inferred from an increase in the wave length, based upon the constancy of the speed of light, the product of frequency and wave length.

Remarkably, as Buenker uniquely points out, the increase in wave length refutes the FLC which predicts shortening of length. The *selective inattention* to this can be ascribed to stubborn adherence to the FLC but also overlooks something hitherto unsuspected, the bounding of the interaction of light and length as representing universal principles *by a still higher principle*, itself making obligatory the constancy of light speed.

This exciting Riemannian implication, until Buenker, had gone unrecognized, even by Einstein himself. The irony here is that Einstein was himself a follower of Riemann and Kepler. Buenker has uncovered such unsuspected implications in many experimental reports.

The notion that principles can also act as boundaries is implied by Einstein's own comment on Kepler's uniquely original theory of gravitation, which Kepler based on the principle of musical metaphor, was that it showed the universe to be "finite but unbounded". A more familiar statement of the same idea of bounding by a principle in the cognitive domain was made by Lyndon LaRouche, for example regarding the role of the principle of the sovereign nation state based

*upon scientific progress, the concept of natural law and the common good, therefore vastly opposed to feudalism, as the unique source of the sustained rise of population beginning with the Italian Renaissance with its unleashing of scientific and artistic creativity. The evidence for this bounding role of the state is the enormous progress in the condition of life despite setbacks to progress caused by the oligarchy's instigating of wars. It is the reintroduction of imperial rule through control of money such as had preceded the Renaissance, an altogether opposing principle that has now taken over much of the planet. Unless the oligarchical principle is reversed, civilization can no longer survive!*¹³

The second reason for the blocking is that most scientists saw the result as simply derived from the ESP, not because the light source had been under acceleration via rotational motion. This idea of Einstein's could be tested by performing the mirror experiment, whereby this time the absorber/detector could be at greater acceleration and angular velocity than the source, *but still record a higher frequency, i.e. a blue shift relative to the source.*¹⁴

The role of simultaneity as a bounding principle makes sense in light of its role in ensuring that the parts of a wave retain their tight relationship i.e. coherence in order to end up doing work, down to the very small, what Leibniz called the "fitness of things." It also ensures the wave front keeps its form until it gets absorbed or reflected. The joint work following Ole Roemer's great 1677 discovery of the constancy of the speed of light by Huygens, Leibniz, and Jean Bernoulli was effectively exploring the role of simultaneity in the large as well as the very small and its interaction with the principles of least action and of circular action, whose necessary roles emerge when we consider how light actually gets propagated at a finite speed, but only of necessity with aid of singularities, and the unique role perhaps played by the cycloid or other unfolding of circular action such as also the catenary curve. Formation of singularities in an otherwise continuous medium involves negative curvature, the subject Riemann's Italian disciple, Eugenio Beltrami, took to a higher level beyond Riemann.

¹³ For principles themselves becoming boundaries, see Lyndon LaRouche, [*Spaceless-Timeless Boundaries in Leibniz*](#), The Schiller Institute, *FIDELIO Magazine*, Vol. VI, No. 3, Fall 1997.

¹⁴ Albert Einstein, [*On The Electrodynamics of Moving Bodies*](#), June 30, 1905, The original article, translated from the German, has an extensive treatment of what exactly a transverse Doppler experiment is designed to measure and what to exclude.

EINSTEIN’S SYMMETRY PRINCIPLE, AND ITS CONSEQUENCE, THE FITZGERALD LENGTH CONTRACTION (FLC), ARE FINALLY DETHRONED AND BEGIN TO BE REPLACED BY A CRUCIAL “MIRROR EXPERIMENT” DESPITE SKEPTICS¹⁵

Einstein’s idea that each observer sees the other’s clock as the slower was called the clock paradox. The Hay et al 1960 “mirror experiment” to Ives-Stilwell was made possible by the leap in precision thanks to the nuclear spectroscopic method based upon the exquisitely sensitive and precise Mossbauer Effect. It used gamma rays generated in the atomic nucleus of radioactive cobalt 60 instead of infrared light rays from atoms and molecules, such as in the Ives Stilwell experiment. The absorber was a rare isotope, iron 57. Both source and absorber were mounted opposite each other on rotors, the source closer to the axis and therefore rotating slower. This ingenious arrangement was much better suited for the detection of the transverse Doppler Effect because no tangentially directed rays, but only the radial ones, could reach the absorber.

Unlike Ives-Stilwell, the use of the nuclear spectroscopy measuring much higher energy waves made possible precise measurement of *frequencies* by means of the experimental setup. That was the intent, *not* to do the “mirror” experiment! Once again, Buenker was able to discern what had been overlooked because of his application of the principle of units.

Paradoxically, the absorber, despite its much greater acceleration and predicted “clock slowing”, resonated with a higher frequency compared with the source. Buenker has again furnished a plausible explanation *based upon his discovery of the kinetic scaling of units*. The slowing of the nuclear clock, i.e. the enormous rate of oscillation of the iron nucleus, *makes its second of longer duration* and able to absorb more gamma rays coming from the cobalt 60 per unit during the iron’s enlarged time unit; i.e. a blue, not a red shift, to effectively a higher frequency. I am reminded of an earlier article, [*Asymmetric Time Dilation and the Velocity Transformation*](#) (2015), which Buenker devoted to the isotropic length expansion accompanying time dilation where he describes an observer in a rapidly moving satellite looking out his window and measuring the velocity of the earth’s daily rotation as increased and its day’s length shortened because the

¹⁵ Robert J. Buenker, [*Experimental Refutation of Einstein’s Symmetry Principle*](#), East African Scholars Journal of Engineering and Computer Sciences Feb. 2023.

observer's second, has unbeknownst to him because of the first postulate, gotten longer!

The amusing thing is that despite the seeming overthrow of the symmetry principle, now another objection came up, to attribute the result to the equivalence principle of general, not special relativity. This states that at high enough velocities acceleration becomes equivalent to gravitation in its effects including upon light.

VI

HOWEVER, EINSTEIN'S SECOND 1905 PROPOSED EXPERIMENT FINALLY SHIFTED THINKING TO AN ASYMMETRIC VIEW REGARDING WHAT HAD BEEN CALLED THE CLOCK PARADOX. GPS IS THE PROOF OF THE NEW UNIVERSAL PRINCIPLE OF STRICT PROPORTIONALITY DISCOVERED IN THIS EXPERIMENT!

Thus, given the continued blocking, the decisive importance of a second crucial experiment called for by Einstein in 1905, which was finally done by Hafele and Keating in 1971 with measurements of the changes in elapsed time on atomic clocks borne by airplanes circumnavigating the globe. Einstein had predicted that based upon special relativity, time slowing, i.e. less time elapsed being recorded, would occur. In the experiments, about 50 nanoseconds were lost on average on east bound clocks and 250 gained on west bound flights, compared to clocks stationary at the North Pole, selected as a reference point due to its relatively inertial status.

These time slowing effects also had to include a substantial contribution from general relativity which depended on the altitude of the plane. What is even more important, the lost time due to time dilation was proportional to gamma, itself a known function from the Lorentz Equation (1 divided by the square root of 1 minus v^2/c^2) of the *velocity of the circumnavigating plane taken relative to the center of the earth or the pole i.e. to the clock rate at the pole*. It might be seen as an expression of the *dynamics* of SRT.¹⁶

What Buenker called the concept of an objective rest system at last gave us an objective standard of measurement instead of a subjective arbitrary view from the standpoint of a second observer. This is an important axiomatic underlying assumption to identify as an Aristotelian epistemological flaw of sense perception

¹⁶ See Robert J. Buenker, [*Time Dilation and the concept of an Objective Rest system*](#), Apeiron Vol. 17, No. 2, April 2, 2010.

by Einstein. This supplanted Einstein's a priori acceptance of a subjective measurement of the velocity of relative motion taken from the standpoint of the counterpart observer.¹⁷

The restoration of proportionality based on what appears to be a new universal law of physics has had enormous theoretical and practical consequences and was accomplished by inserting into the LT's t'/t equation the ratio of the rates of elapsed times for the respective observers' planes. If the flight was taken from its objective rest system, the gamma value was inversely proportional to the amount of elapsed time from that objective rest system which was consumed in the flight. A large gamma value for the flight corresponds to a higher value for v , the plane's velocity relative to its objective rest system in the denominator and a greater clock slowing. Hafele and Keating took the ORS to be the earth's center of mass because they thought of it as the most inertial point.

By substituting the ratio of t and t' , the respective elapsed times for the two observers, itself designated as Q , into the t/t' equation, of the LT, one could directly derive the true value for *epsilon*, containing Q , the units conversion factor between the observers as one of its combined terms. This corrected the original sin!

Perhaps unexpectedly, The Ives-Stilwell and its Hay and others' "mirror experiment" now turn out to be both equivalent to the airplane experiments as based upon their objective rest systems common to both, as in the concept of Buenker.

The quantitative aspect of the experiment, i.e. the proportionality between their elapsed times on the respective clocks for two different flights, pointed to a crucial analogy to the rotor/ultracentrifuge experiments just reviewed. The reduction in frequency, predicted by Einstein in 1905, induced by the high angular velocity rotations were in each experiment proportional to the gammas computed accordingly for the "clock" or periodic radiation source. The rotor the source was attached to might be seen as its Objective Rest System (ORS) where force was originally being applied. [DYNAMICS!!] Ignoring this question of objective rest system seems to have been a source of error in classical electrodynamics, not

¹⁷ This error seems consistent with what LaRouche describes in [*The Fraud of Algebraic Causality*](#), Fidelio Magazine, Vol. 3, No. 4, Winter, 1994.

necessarily relativistic, as Buenker has helped to bring out, along with Thomas Phipps.

Thus, for the Ives-Stilwell and Hay/Kundig experiments, the axis around which the light source and absorber-detector were rotating while attached to it became as if the origin of the force being applied to them was also their shared objective rest system. Like with the planes, the ratios of clock slowing measured at different rotational speeds as elapsed time lost for the source or for the absorber in each case were proportional to their gamma factor, (1 divided by the square root of $1-v^2/c^2$), the v being not the flight speed but rather, the angular velocity of the rotating radiation source or detector.

Gamma is a factor that directly came out in the course of the derivation of the original LT equations because of the application of the same constant speed of light for both observers. The reader should review Buenker's book, because it helps vindicates the application of the two postulates in the course of the original derivation. Perhaps it can be seen as the dynamic factor in the equation, expressing the *intention* implicitly governing the change in units.

LaRouche's view of the principles in a manifold is that they constitute the actual intentions of the Creator. From that standpoint, changing units can be seen as changing interaction of intentions. LaRouche's discussion of changing curvature in economic cycles and also of how to transform economic cycles might clarify this question also in physics, especially in Kepler's approach to nonconstant curvature of orbits.

VII

BASED UPON THIS NEW UNIVERSAL PRINCIPLE OF STRICT CLOCK RATE PROPORTIONALITY, ENGINEERS INVENT AND PERFECT A NEW TECHNOLOGY THE GLOBAL POSITION NAVIGATIONAL SYSTEM (GPS), WHICH IS BASED UPON AND THEREFORE REESTABLISHES THE GREAT PRINCIPLE OF SIMULTANEITY WHICH SPECIAL RELATIVITY THEORY (SRT) HAD APPARENTLY DISCREDITED FOR 120 YEARS!

GPS utilizes Einstein's second postulate of the constant speed of light and clock rate proportionality to determine the distance of a satellite from your car. The extraordinary precision of this measure of distance is now officially recognized and rationalized since the 1983 decision by an international body which considers that length is no longer measured against a standard object but rather by the duration of

the measured time interval for light to traverse it.¹⁸ The extreme precision of the constant proportion of rates of clocks moving at a fixed relative speed and altitudes allows us to so pre-correct prior to launch a clock that would as a result be able to continue to register the same time as one back on the earth. This allowed them to agree on the time the light pulse from the satellite was taking to get to your car. *This implies simultaneity!*

This discovery of a hitherto unsuspected remarkable *coherence between length and time* also needs to be pondered as an expression of universal law. Its intention to contribute to what Leibniz called “the fitness of things” including simultaneity needs to be considered! To me this is far from self-evident. It is the unprecedented accuracy of measurement that enables us to in turn recognize hitherto unsuspected expressions of lawfulness.

However it is now no longer necessary to pre-correct a clock prior to launch to preserve simultaneity, because we are able now to continuously adjust clock rates by monitoring the flight data, applying clock rate proportionality and taking change in altitude into account, as the source of a major general relativistic effect.

The discovery of the principle of clock rate proportionality, what Buenker calls the Universal Time dilation Law (UTDL) requires that Einstein’s Symmetry Principle be superseded by recognition that observers do not *a priori* have to disagree on clock times as the LT derived ESP implies, but only *for an objective and physical reason or causal factor* that makes the clocks’ time units differ. Therefore measurement of each one’s velocities must be relative to its own objective rest system or a common objective rest system, not the subjective view from its counterpart frame.

If their altitudes differ, this will also give rise to a measurable general relativity derived rate difference based upon gravitational, not kinetic, scaling. The ESP had been based on an *a priori* assumption, not real physics. So introducing the objective rest system effectively introduces the *necessary idea of the physical cause of the motion, i.e. dynamics*.

Buenker points out that clock rate proportionality *already implies simultaneity*, because of another elementary, but often overlooked, point that even though the two observers disagree on the precise timing, if their readings of the length of the particular time interval for a given pair of events are strictly proportional, then if one’s time interval is zero, so must the other, likewise be

¹⁸ See Tom Wilkie, *Time to Remeasure the Meter*, New Scientist 27, 258, 1983.

zero, as a proportional multiple of the other; *this is still simultaneity; simultaneity is not precluded by a difference in units!*

Again, it is no longer necessary to pre-correct a clock prior to launching of the satellite to preserve simultaneity with the ground clock, because we are able now to continuously adjust clock rates by monitoring the flight data and applying clock rate proportionality while also taking altitude into account.

VIII

PRECISELY HOW AND WHERE THE ORIGINAL SIN ALSO INTRODUCED NON-SIMULTANEITY. THE CORRECTION WILL BE OFFERED HERE TO THE ORIGINAL SIN BASED UPON EINSTEIN'S OWN SUBSEQUENT CRUCIAL EXPERIMENTS WHICH RESTORE SIMULTANEITY PLUS SOME IMPLICATIONS OF GPS.

According to the LT's equation relating the time for the two frames, t' and t , such as equation 43 on page 35, there is also a term x , [or x' in the inverse equation under the first postulate], representing the location of an object that both observers are measuring. However, there is no reason why this ratio, t'/t , (or $\Delta t'/\Delta t$ if intervals of time are being compared), should also depend upon what is extraneous, the speed and position of the object being measured by two observers, yet this irrationality was what Einstein included in the equation. The experiments with rotors and the earth circumnavigating experiments provided us a *direct proportionality* between the two respective t and t' , allowing us to bypass the extraneous factors.¹⁹ What allows that to work is that Q is a known experimental figure and is a function of the ratio of the respective elapsed times departing from the objective rest system, a measure of proportionate time slowing. The correction of the original sin is to first conceptually clarify the issue.²⁰ [[See Buenker The Space Time Myth; Failure of the Lorentz Transformation.]]

¹⁹ If the reader want to struggle with the mathematics, see the derivation of equation 62, the ALT (Alternative Lorentz Transformation), on page 56 on his book, from the original Lorentz Transformation, equation 15 on page 12. on page 56 of his book, in particular the first one relating t and t' .

²⁰ Robert J. Buenker, [*The Relativistic Velocity Transformation and the Principle of Absolute Simultaneity*](#), Apeiron Vol. 20, No. 2, December 2015. Fundamentally it is required to clarify the source of the apparent differences in units of time. See also Robert J. Buenker, *The Spacetime: Myth: Failure of the Lorentz Transformation*, Published in [Relativity and Gravity Publications : Preprints](#).

Ordinarily, Einstein's theory says that the time of the one in motion is dilated relative to the observer but there is an additional just cited extraneous factor unrelated to time. He overlooked the possibility of a clock rate difference due to a change in unit duration, the usual and simplest reason two clocks don't agree! Experiments earlier reviewed describe how that can be measured and be taken into account by exploiting the great discovery of three new principles:

1. The precisely measurable proportion of time intervals to the gamma factor for clocks at the same altitude and therefore for their measured velocities and time dilation.
2. The extraordinarily precise ratio of light speed frequency and measured length, which we can use to equalize clock rates and measure distances in GPS systems.
3. The proportionality between altitude and time elapsed as a principle of general relativity.

The precisely measurable t'/t ratio equal to Q of respective clock rates is readily introduced into the equations of either the Lorentz or the Relativistic Velocity. See his book on deriving the ALT i.e. the Alternative Lorentz Transformation, which accomplishes two things. First, it introduces a common system of time units and secondly, it readily allows solving for *epsilon* because it is the missing third experimental constraint that Lorentz recognized in including *epsilon*. *Epsilon* ends up including as one of its three factors Q , the time units conversion factor.

The LT is repeatedly contradicted by experiments including the ones we have reviewed in this article, which overthrow the ESP and the FLC, especially the transverse Doppler experiments. Therefore, since the assumptions going into the derivation of the LT must include errors such as lead to the above result, they cannot be valid as a theory. Again, Einstein's alternative RVT does not conflict with simultaneity. Therefore, Einstein's theory need not necessarily lead us astray anymore if it is properly applied.

IX

**BUENKER SEEKS EXPERIMENTAL CONFIRMATION OF THE
BROADER APPLICATION I.E. EXTENSION OF HIS KINETIC UNIT
SCALING METHODS BEYOND TIME, LENGTH, MASS, AND ENERGY
INCLUDING THEIR ASSORTED QUOTIENTS AND PRODUCTS TO ALL**

VARIABLES WHERE SPECIAL RELATIVITY MIGHT NEED TO BE TAKEN INTO ACCOUNT AS A NEW PHYSICAL PRINCIPLE BECAUSE WE ARE ENTERING SUFFICIENTLY EXTREME CONDITIONS.

The experimental discovery of the universal time dilation law and its governance of the proportionality phenomenon of elapsed times based upon the physically determined objective rest system(s) allows us to solve for clock rate proportionality by inserting these dynamic factors into the UTDL (Universal Time Dilation Law). See the relevant section of Buenker's first book on UTDL and kinetic scaling. .

A potentially vital area of investigation is opened up, because of the relativistic changes in units of measurement with acceleration. If Buenker's hypothesis about units is correct, their scaling and composition may affect at relativistic speeds or other relativistic conditions like inside the atomic nucleus the *measurement of all possible variables* including, not just as mass, energy, length, time, but also even electric charge, Planck's constant h , and various electromagnetic related forces! In addition, given the proportionality between the effects of the respective gravitational potential of these variables, there is a separate uniformly gravitational scaling equivalent to the kinetic.

A case of particular interest is of the photoelectric effect measured under relativistic conditions. If Buenker's kinetic scaling theorem is correct, Planck's constant, h , being a component of Q for angular momentum being the relevant variable, h , is squared in the course of kinetic scaling [see page 73 of his book] and could furnish a good test of his scaling hypothesis. He hopes this experiment can be done.

In his first book, [**RELATIVITY CONTRADICTIONS UNVEILED: KINEMATICS, GRAVITY AND LIGHT REFRACTION**](#) (2014), Buenker has a full discussion of the applicability of this method to the phenomenology of general relativity. However, in this case, I feel he will have to situate this in the underlying causes of general relativity, which he has not done as yet, since thus far, he has sought to proceed on a purely empirical basis showing one can derive through appropriate scaling the acknowledged results of GR.

Until now, units have not been seen as a physical question but more as a sort of accounting question. For example, LaRouche has emphasized that due to today's accounting methods, the principle of antientropic growth, e.g. changing proportions in the relative rates of growth of key variables, like population density

and rate of energy consumption per person, deeply embedded in physical economy has been overlooked leading to disastrous results due to the linear thinking. In his 2004 Special Report on *Economics: The End of a Delusion*, LaRouche takes up the implication of such curvature for discerning the intention of the underlying economic policy, analogous to what Kepler identified with the causes of non-constant curvature of planetary motion:

“Is there some ontologically paradoxical undeniable empirical evidence, which points our cognitive powers towards an appropriate search for a relevant hypothesis, which might, in turn, lead us to an experimentally defined universal physical principle? That ‘external’ action by a principle is embodied within the cycle itself that more or less in the same sense that it is the orbit as a whole which determines the short term motion of the planet. In astrophysics or economics, it is a universal physical principle, which is both embodied within the cycle as a whole, and which *pending the efficient introduction of a newly added long term cyclical principle*, subsumes the idiosyncrasies observable, in effect, at each moment.

“Therefore, in physical science, and the methods of mathematics appropriate to that science, the secret of competent forecasting in general, is the same which Leibniz developed in his unique original discovery and refinement of the calculus. This was a discovery which met precisely the challenge which Kepler had bequeathed to future mathematicians. We must discover the cycle, first, and then the local action within that functional frame of reference.

“It is the long-term cycles which are of greatest importance. Therefore, in all my forecasting, I have always forecasted from a long range cyclical standpoint, as Gauss, in his development of his general notions of curvature, and Riemann later on, successively perfected this conceptual approach for mathematical physics in general.”²¹

²¹ Lyndon LaRouche, *Economics: The End of a Delusion*, EIR Special Report, Section A, The Physical Basis for Economic Cycles, 2004, p. 21. For a somewhat different discussion see [*Economics: At the End of a Delusion*](#), EIR, Vol. 29, No.7, February 8, 2002. And “The Physical Basis for Economic Cycles” with special regard to the relevant work of Kepler, Leibniz, and Riemann.

X

LAROCHE'S VIEW OF SIMULTANEITY AS A UNIVERSAL PRINCIPLE: HOW TO RELATE IT TO BUENKER'S WORK? HOW TO SITUATE ITS INTERACTION WITH LEAST ACTION?

LaRouche has introduced the idea of a self bounded domain where a single principle determines what kind of action is possible and has stressed the repeated instances of the bounding role of simultaneity. As an excellent and first example of such bounding, the Renaissance revolution in science began with Cusa's refutation of Archimedes efforts to square the circle through Eudoxus's method of exhaustion. By showing that everything that is composed of straight lines can be composed from circular action and not the other way around, Cusa showed circular action had a different generating principle or "power" (Leibniz's "*kraft*" and Plato's "*δύναμις*") than linear action. Circular spherical action also bounded the Platonic solids, which could therefore be inscribed in a sphere as Kepler emphasized. Circular action in LaRouche's view is the prototype for all least action. However, I suggest that simultaneity and least action are very closely intertwined. Consider the catenary. For the hanging chain to maintain its unique shape, simultaneous interactions throughout the chain down to the smallest part must occur continually.

The discovery through Einstein's transverse Doppler experiments of the interaction of principles governing time and length show both are themselves changeable expressions of a higher principle that preserves the constancy of the speed of light, something not self evident, because time and distance are spoken of as fixed categories of sense-perception, not as principles or monads with substantiality.

The Riemannian implication of those experiments was ignored until Buenker finally identified it 85 years later, and identified the necessity for units to represent its changes. I suggest given its requirement for a coherent universe, what Leibniz called the "fitness of things," this governing principle is *simultaneity*, perhaps in partnership with least action.

In September, 1988, LaRouche wrote his still unpublished memo: [LYNDON LAROCHE, A NON-MYSTICAL VIEW OF THE NECESSITY OF EXISTENCE OF THE NOTION OF 'ABSOLUTE TIME', 1988](#). In that report, he discussed how simultaneity bounds and interacts with various manifolds in what he will later call "*the simultaneity of temporal eternity*."

Perhaps one of its broadest implications concerns the history of ideas and their reverberations throughout time. Human language culture and memory uniquely allow us to instantaneously access millennia old ideas and effectively dialogue with their authors as if they were still living in our minds and their actual living tissue. In this physically real sense, we are each potentially immortal through our creativity. The painting by Raphael, *The School of Athens*, portrays what LaRouche calls *the simultaneity of temporal eternity*.

Thus, the living *higher hypothesis* subsuming a series of discoveries and rediscoveries, for example, through communication between today's minds with their long deceased author, as if he were still living, can transform past discoveries' meaning as well as that of the hypotheses that it originally generated, by giving them a new and changed causal function today, in *the simultaneity of temporal eternity*. For instance, St. John references the application of this principle in retrospective when he says that Christ was there from the beginning of Creation as the *Logos*. LaRouche called *temporal eternity* the most important principle of science.²²

XI

WHAT IS THE EXTRAORDINARY RELEVANCE OF ERATOSTHENES DISCOVERY OF THE EARTH'S CURVATURE TO BUENKER'S DISCOVERY OF UNITS?

Eratosthenes was a leading scientist in Egypt in the 3rd century B.C. Academy in Alexandria and an associate of both Archimedes in Syracuse and the Platonic Academy in Athens. He discovered the means to prove that the earth is a sphere by introducing a new astrophysical dimension, the effect of the changing diurnal and seasonal distance of any location from the sun on the angle of its shadows cast by the sun using a gnomon. The required measurement placed hemispherical sundials along a meridian of longitude and observed each one's reading at noon.

²² This 1988 memo by LaRouche cited above on absolute time, which I urge you to review, discusses the many facets of *simultaneity*. I see it acting in concert with least action, each as a *higher hypothesis* governing still other principles. It might for example govern the interaction of length and time maintaining the constancy of *c* which Buenker first identified from the transverse Doppler experiments.

Thus at Syene (Aswan today) on the equator it was zero while at Alexandria it was 7.2 degrees. To ensure that there was the same implied curvature down to the very small, many more such sundials were probably tested along the meridian, in view of Eratosthenes's extraordinary rigor.

The earth's dimensions were very accurately obtained from the curvature. A map based upon this experiment was drawn by Toscanelli, the astronomer and friend of Cusa, and used by Columbus on his voyages. Also, an Egyptian fleet drawing on Eratosthenes's discoveries and instruments made a remarkable trip to Polynesia and a lengthy return voyage eastward which included sailing along the Pacific coast of South America, recorded in their inscriptions, recently translated by Barry Fell.

In a section called: "*Higher Hypothesis*" of his paper [*Spaceless-Timeless Boundaries in Leibniz*](#), LaRouche demonstrates how Eratosthenes creates the *higher hypothesis* of curvature, specifically spherical, of the surface of the Earth supplanting the sense perception flat earth assumption of his time. The key element of the experiment, not explicitly cited in the accounts but established by LaRouche, was to take gnomons along the meridian from Syene to Alexandria and measuring not only the angles of the shadow cast by the vertical gnomon pointing to the earth's center, but also showing the progressive differences of that angle and adding them up. LaRouche stated:

"The angles are different; the difference is ordered, south-north, by a consistent difference of 'more than' that shadow cast by the preceding sundial. If the sun were a large object, located at a great distance from a presumed 'flat earth', the angles ought to appear no worse than very nearly equal, according to the proposition expressed by the design of the experiment. Express copies of each and all among these angles, as sectors of a circle. Shade-in the sector of that circle defined as the difference between the smallest and largest of these angles. Note the length of the arc of a circle defined by that shaded area of difference. Now, that latter arc corresponds to the idea of the distance between the relatively most southerly and relatively most northerly placements of the sundials.

"By the principle of similar figures, [successive sectors of the curved figure being progressively defined-ES] the Earth is shown to be a spheroid, and the length of the approximate Great Circle, defined by the experiment's south-north direction, can be estimated by treating the arc in question[arc generated from the successive shadows cast-ES] as an arc of that great

circle. Eratosthenes' estimate for the polar diameter of a spheroid Earth was off by a margin of about fifty miles."²³

In numerous articles, LaRouche cites and reviews the history of this unique discovery in depth, because it was a distinct example of a Platonic idea, the visualizing of something that no one had seen directly, based upon the method of a *vicarious hypothesis*. It required invoking a higher dimension of epistemological astrophysics. The cause of curvature responsible for Buenker's units, like Eratosthenes, is likewise situated in the higher domain where it originates with unseen immaterial interacting principles. Kepler took this method to an even greater level in determining the nonconstant curvature of the planetary orbits, in LaRouche's view, founding modern mathematical physics.

CONCLUSION

In short, Robert Buenker has shown the internal contradictions of Albert Einstein Special Relativity Theory (SRT). The many predictions it has given rise to and the simplicity of the correction and higher lawfulness emerging from reflecting on the results of the experiments Einstein proposed, as early as 1905, have greatly improved the modern scientific conception of physical space-time. And yet the science priesthood squatting on and suppressing it in favor of irrational ideas have kept science as a whole from accruing the beneficial correction. If modern science is to regain its integrity and truthfulness, scientists must take up an open discussion on this Buenker correction.

Buenker's discovery of principle in the space-time experimentation of Einstein's "Original Sin" committed in his *Special Relativity Theory* (SRT) has uncovered a hitherto unsuspected domain of interaction between principles. The changed curvature that expresses that interaction can now be actually represented by changing units of length and time but only now proven experimentally. .

Thus, in conclusion, Buenker's crucial epistemological recovery is nothing short of the rediscovery of the truth of the nature of scientific experiment itself in the LaRouche form of a *vicarious higher hypothesis principle* by means of which Eratosthenes had discovered the human mental power to measure the Earth and Johannes Kepler had established the mental framework for discovering the elliptical curvature of the Mars orbit around the Sun; that is to say, the resolution

²³ Lyndon LaRouche, [*Spaceless-Timeless Boundaries in Leibniz*](#), The Schiller Institute, *FIDELIO Magazine*, Vol. VI, No 3, Fall 1997.

of the sense perception fallacy of believing the illusion that the shortest distance between two points is a straight line.

In other words, the truthfulness of a scientific experiment is never given by so-called sense perception evidence, but by the contradictions and paradoxes generated by one's own opinions in conflict with the opinions of others about the nature and meaning of a scientific experiment. As a result, such a truth can only be manifested through a *higher hypothesis* of understanding the true curvature of physical space-time, which can only be developed in *the simultaneity of temporal eternity*. Is this not what Robert Buenker was attempting to achieve?

EXPERIMENTAL REFUTATION OF EINSTEIN'S SYMMETRY PRINCIPLE

By Robert J. Buenker

Abstract: A well-known prediction of the Lorentz transformation (LT) of Einstein's theory of Special Relativity (SR) is that when two observers exchange light signals, they will both measure a red shift (lowering in frequency). An experiment with gamma rays was reported by Hay et al., in 1960 in which an absorber is mounted at the rim of a high-speed centrifuge while the source is located near the rotor axis. There is general agreement that because of its acceleration, the clock attached to the absorber must be retarded relative to the gamma ray source. Despite the claim that this result is a confirmation of the Symmetry Principle, the fact remains that the slowing down of the absorber clock means that the frequency of the signals it receives from the source will be greater than the standard value, i.e. a blue shift will be observed because more waves are counted per second by virtue of the absorber clock's reduced rate. This experience therefore stands in direct contradiction of the Symmetry Principle. In addition, it is pointed out that the three space-time predictions of the LT (equal speeds of light, time dilation and FitzGerald length contraction) are incompatible with one another. An alternate theory is presented (Uniform Scaling method) which is in full agreement with the results of the ultra-centrifuge experiment and also avoids any incompatibility with regard to its space-time predictions.

[THE ALTERNATIVE LORENTZ TRANSFORMATION \(ALT\)](#)

By Robert J. Buenker

The present blog calls attention to an *undeclared assumption* made by Albert Einstein in his landmark paper [Ann. Physik 17, 891 (1905)] in which he introduced the special theory of relativity (SR). The emphasis in textbooks and periodicals is always on his two postulates of relativity (the relativity principle and the constancy of the speed of light in free space), but the well-known results of his theory such as Fitzgerald-Lorentz length contraction and the symmetry of time dilation (two clocks in motion each running slower than the other) are based just as directly on this totally unsubstantiated assumption as on the latter. [...]

The ALT demonstrates that it is possible to satisfy the famous two postulates in Einstein's 1905 paper without sacrificing the principle of simultaneity of events. It also frees one from the necessity of arguing that two clocks can both be running slower than each other at the same time or that two rods can both be smaller than each other (Einstein's symmetry principle). Instead, the ALT allows one to return to the ancient principle of rationality (and objectivity) of measurement (PRM), that is, that all observers must agree on the ratio of any two physical quantities of the same type. The PRM is the essential basis for introducing a rationalized set of units such as the mks or cgs systems. Experiments with clocks on airplanes, rockets, centrifuges and satellites (GPS technology) indicate strongly that measurement is not symmetric but instead rational, and especially in the case of GPS, that events do occur simultaneously for all observers after taking account of differences in the rates of clocks used to make the respective measurements. The latter conclusion is perfectly consistent with the relativity principle, but the ALT also emphasizes that the units in which the various laws of physics are expressed vary systematically from one system to another depending on their state of motion and position in a gravitational field.

All these points are discussed in detail in R. J. Buenker, [Simultaneity and the constancy of the speed of light: Normalization of space-time vectors in the Lorentz transformation](#), Apeiron 16, 96-146 (2009)