

Independent Scientific Fraud and Corruption Commission

CENTENNIAL REVIEW OF SPECIAL RELATIVITY

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The most beautiful thing we can experience is the mysterious.

- ALBERT EINSTEIN (*Time Magazine 'Person of the 20th Century'*)

Introduction

In *Einstein Year (2005)*, following complaints that something wasn't quite right with the *Theory of Special Relativity*, the *Independent Scientific Fraud and Corruption Commission* has undertaken a *Review* of the Theory with the intention of answering three questions: **'what is it, what does it mean, and is it correct?'** The ISFCC apologizes for the four year gestation of the Review.

In the West, it is believed that the Theory of Special Relativity is a stupendous scientific breakthrough by the genius Albert Einstein concerning the nature of space and time. The theory is all the more impressive, it is said, for defying common sense and for only being understood by a tiny mathematical elite. However, the Commission has been informed that Special Relativity is based on the *Relativity* and *Light Principles*.

According to the Relativity Principle, the laws of dynamics, optics, electrodynamics etc are *the same* for any un-accelerated observer, irrespective of the speed and direction of that observer with respect to the rest of the universe; and according to the Light Principle the *in vacuo* speed of any light ray is a *constant* 300,000 km/sec (1.0c), when measured in any observer's non-rotating un-accelerated frame of reference. The Relativity Principle has two corollaries: in *Corollary (A)* each observer acknowledges that his chronometer is un-slowed, and in *Corollary (B)* each observer acknowledges that his measuring stick is un-shrunk. And the Light Principle has *Corollary (C)* in which each un-accelerated observer acknowledges that an outbound light ray has the same speed as an inbound light ray.

Proceeding from the above, expert witnesses testified that Special Relativity derives a number of *amazing* consequences: according to *Consequence [I]* an observer who is stationary in an un-accelerated frame perceives that clocks in motion relative to that frame have a slower clock-rate (*relativistic time dilation*), and in *Consequence [II]* the observer perceives that solid objects are foreshortened in the direction of the motion of those objects relative to that observer's frame of reference (*Fitzgerald length contraction*). Also, in *Consequence [III]* an observer perceives that a stern clock on a relatively moving spaceship is in advance of the bow clock of that ship, provided the astronauts have properly synchronized those clocks (*the relativity of simultaneity*).

After further inquiry the Commission found that relativists believe that relativistic clock-slowness is *'real'*, but that Fitzgerald length contraction is *'observational only'*. It has been testified that Special Relativity has been confirmed time and time again by experiment, but for all that the Commission has been made aware that ordinary folk continue to be astonished by the *'reciprocity of observations'*. An example of this phenomenon is where Unni observes relatively-moving Prima to have a slow running clock, and Prima observes relatively-moving Unni to have slow running clock, implying that both clocks are running slower than each other! But lack of understanding of this and other relativity paradoxes, experts say, is the result of humans being the product of biological evolution in an environment where travel was at speeds much less than that of light, and where relativistic effects were very small.

PART 1: Einstein doublet - *key to Special Relativity, & source of Popular Wonderment*

1.1 What is the Einstein doublet ?

If the relativistic universe were truly beyond the understanding of other than top mathematical physicists then the question ‘*what is the Einstein doublet?*’ is a question which can only be answered by equations which embody ‘*higher mathematical truths*’ quite incomprehensible to the layperson. However, the Commission, after careful questioning of relativity experts and assistance from ISFCC staff, found that the Einstein doublet boils down to a simple mechanism which enables a seeming impossibility, viz: two relatively moving grids each measure the same ray of light as having the same relative speed! The Commission has also found that this mechanism is best described *diagrammatically* rather than mathematically (see Figure 1a & 1b and Figure 2a & 2b).

Before commenting on these diagrams, it must be explained that in classical physics if a reference grid were to measure a light ray, passing from left to right at a speed of 300,000 km/sec (1.0c), a second grid moving left to right past the first grid at speed 240,000 km/sec (0.8c) would measure the speed of the light ray as $300,000 - 240,000 = 60,000$ km/sec (.2c). By contrast, the ISFCC diagrams will be used to show how this ‘subtractivity’ of light speed *does not* apply in the new physics.

To begin the Commission’s explication of the Einstein doublet, Figure 1a & 1b portray how a *stationary observer*, Unni, uses his reference grid to measure the speed of a light ray whilst simultaneously observing the behavior of a speed 0.8c grid which is also measuring the speed of the same light ray. The set-up of the stationary observer, the stationary grid, the light ray, and the relatively moving grid is known as the ‘unprimed system’.

The gist of Special Relativity is that the moving grid, as observed by the stationary grid, is distorted in length, rate of time, and simultaneity. And although from the point of view of Unni the light ray passes the moving grid at speed 0.2c, the moving grid, because of its distortions, *measures* the light ray as having a relative speed of 1.0c.

Note that in Figure 1a & 1b the ray of light, represented by a line of asterisks, travels from left to right where the emitter (speed unknown) is several light years to the left. The ray of light passes below Unni’s upper ‘unprimed grid’, which is *at rest* with respect to the rest of the universe (i.e. Unni observes that the *black body* frequency distribution of the *cosmic background radiation* is identical, {i.e. has the same temperature} in all directions).

The unprimed grid, as seen in Figure 1a & 1b, is a square which is three length units wide and three units high, where each unit is 300,000 km (1 light second) in length. Note also that the left side of the unprimed grid is the positive ‘unprimed y axis’, and the bottom side is the ‘unprimed x axis’.

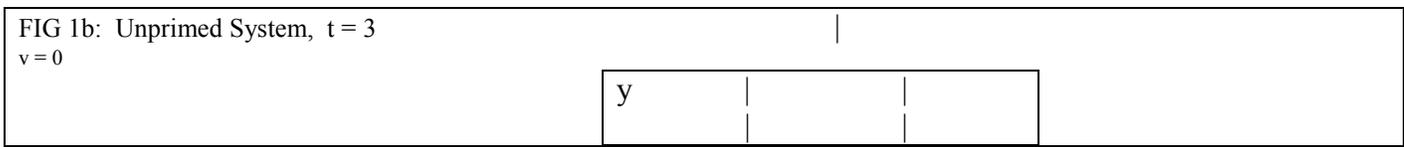
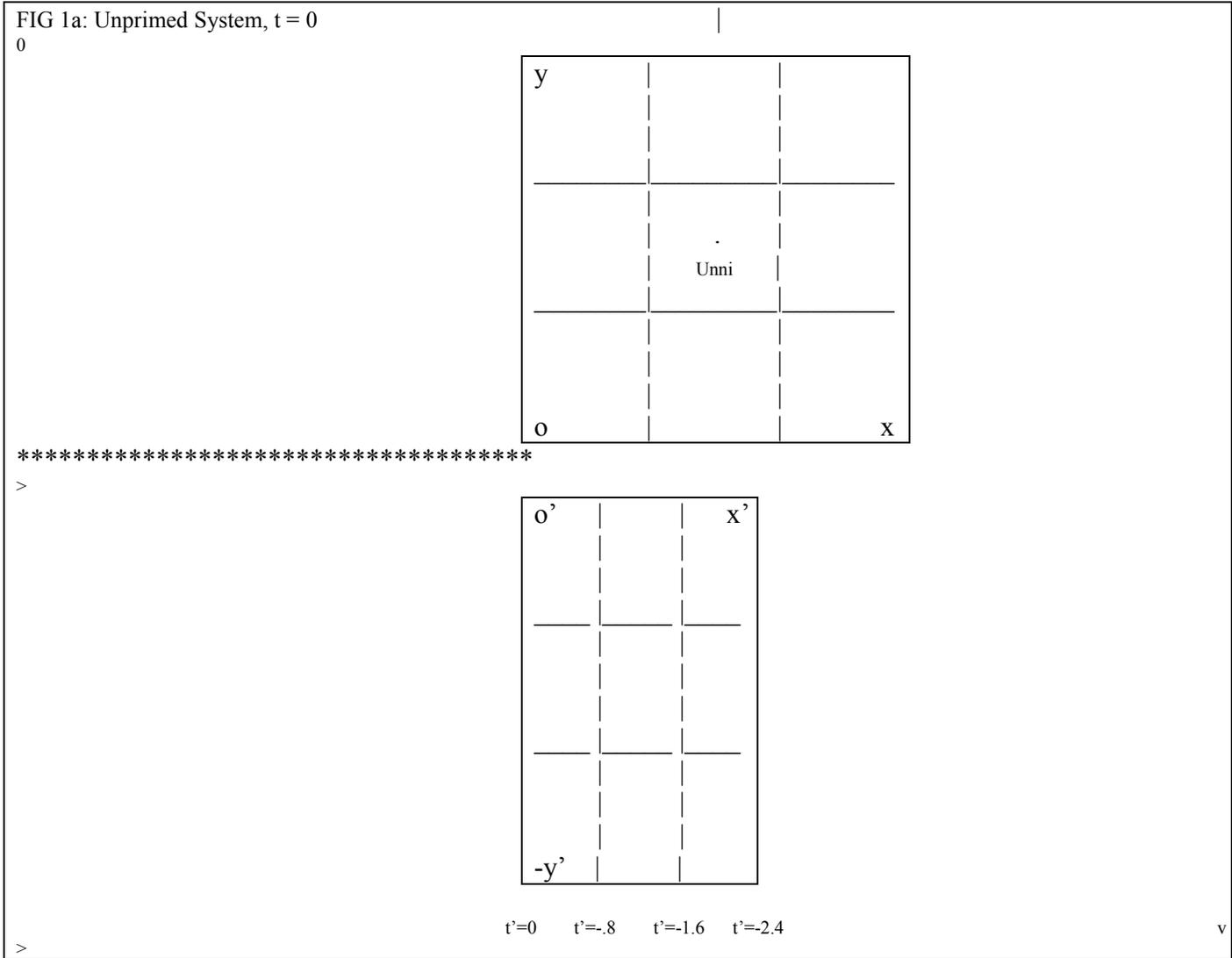
Between the time of $t = 0$ sec (Fig 1a) and $t = 3$ sec (Fig 1b), ‘unprimed system time’, the light ray travels a distance of three width intervals along the x axis. It follows that the light ray, in traveling 900,000 km in 3 sec, has a speed of $900,000 / 3 = 300,000$ km/sec (1.0c), as measured by the unprimed grid.

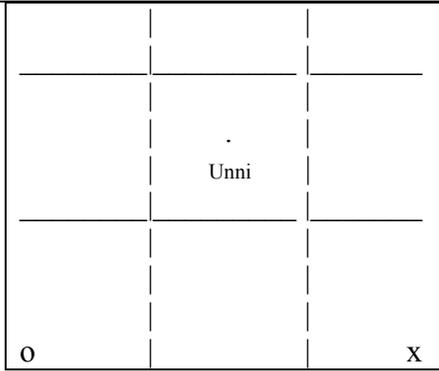
Note also that beneath the light ray there is a moving ‘primed grid’, (nominally) 3 units wide, by 3 units high, whose left side is a negative y’ axis, and whose top side is a positive x’ axis, which is traveling to the right at eight tenths the speed of the light ray, which is to say, a speed of 0.8 of an unprimed width interval per unprimed second. We also note that at the very instant that the origin of the primed grid passes the origin of the unprimed grid, the ray of light is abreast of both origins, and the time at both origins is $t = t' = 0$ sec (Fig 1a).

Special Relativity predicts that the 0.8c speed primed grid, as observed by the unprimed grid, is contracted to six tenths its normal width such that the total primed grid width is reduced from 3 to 1.8 unprimed intervals, so each primed width interval is 0.6 times the width of an unprimed interval. It follows that after 3 unprimed seconds, when the primed grid has traveled $3 * 0.8 = 2.4$ unprimed width intervals to the right, and the first interval of the primed grid is abreast of the third interval of the unprimed grid (Fig 1b). The Commission notes that this event also corresponds to the arrival of the light ray.

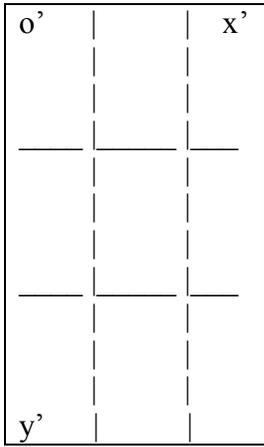
Special Relativity also predicts that the 0.8c speed primed grid is observed by the unprimed grid to have a rate of time of 0.6 that of the rate of time in the unprimed grid. In addition, Special Relativity predicts that the primed grid, as observed by the unprimed grid, has a 'negative simultaneity slope' such that in Fig 1a the time at the first primed width interval is - 0.8 sec as compared to 0 at the origin of the primed axes.

Since in Fig 1b the primed time has advanced by 0.6 of 3 unprimed seconds (ie $\Delta t' = 0.6 * 3 = 1.8$ sec), and the primed grid at width interval 1 has advanced to $t' = - 0.8 + 1.8 = 1$ primed second, it follows that the primed grid measures the ray of light as having a speed of 1.0 primed width interval in 1.0 primed second, ie a speed of 300,000 primed km / primed sec, **which was to be demonstrated by the relativity physicists.**





$v = c >$

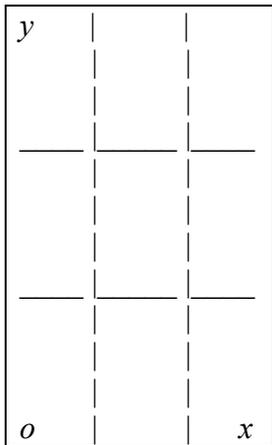


$v = .8c >$

$t'=1.8 \quad t'=1 \quad t'=2 \quad t'=-.6$

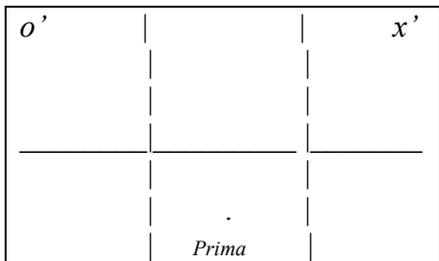
$v = .8c <$

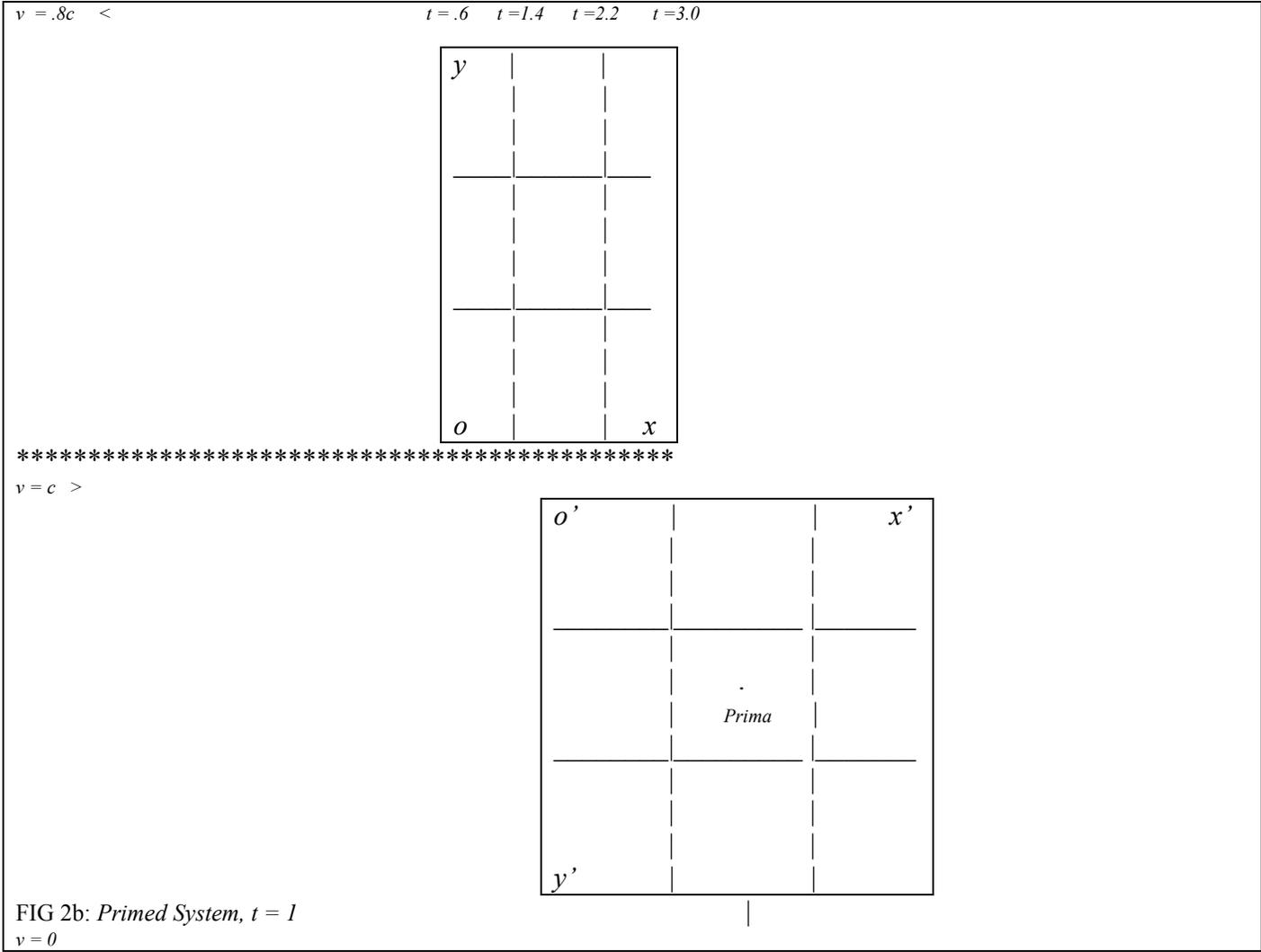
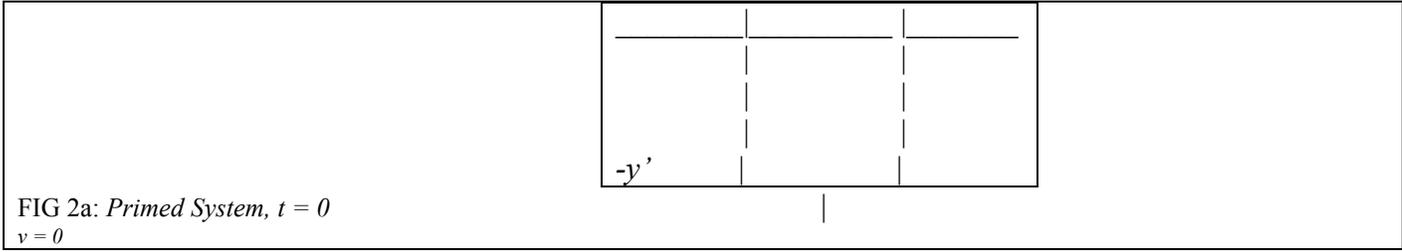
$t = 0 \quad t = .8 \quad t = 1.6 \quad t = 2.4$



$= c >$

v





1.2 What does the Einstein doublet mean ?

Section 1.1 and Figure 1a & 1b have described what the Einstein doublet predicts from the unprimed observer's point of view, but the Commission found that that was only half the story.

Figure 2a & 2b shows what Special Relativity predicts from the *primed observer's* point of view, which is to say, that which is observed by *Prima* and her (lower) now relatively stationary *primed grid*. The Commission notes that *Prima*, her *primed grid*, the light ray and the upper relatively moving *unprimed grid* is called the '*primed system*'.

From *Prima's* point of view the upper *unprimed grid* is moving to the left, and the light ray is moving to the right (as before). Even more salient is that, contrary to the Unni's view (Fig 1a & 1b), from *Prima's* point of view the *primed grid* is square, and the relatively moving *unprimed grid* is rectangular with the width less than the height.

In other words it is found that just as Unni observes his unprimed grid to be undistorted, and the primed grid to be distorted, *Prima* observes her *primed grid* to be undistorted and the *unprimed grid* to be distorted. In fact Figure 2a & 2b show that *Prima* observes the relatively moving *unprimed grid* to have the very same distortions in length, rate of time, and simultaneity slope as occurred in Figure 1a & 1b, which is to say this reciprocity of observations is an expression of the ‘symmetry’, or the *relativity* of the laws of nature.

Specifically, Figure 2a & 2b portrays how the (lower) relatively stationary *primed grid* (now square in shape) measures the speed of the light ray whilst simultaneously observing the behavior of the (upper) relatively moving *unprimed grid* (now contracted into a rectangle) as it measures the speed of the light ray. And at this stage it is important to note that the combination of the *primed system* (*Prima*, *primed grid*, light ray, and the relatively moving *unprimed grid* {Figure 2a & 2b}) **and** the *unprimed system* (Unni, unprimed grid, light ray, and moving primed grid {Figure 1a & 1b}) is known as the ***Einstein doublet***.

In Figure 2a the previously described ray of light, represented by the line of asterisks, is traveling from left to right, and is abreast of the origins of both grids at the moment when $t' = t = 0$ for both origins. As the ray of light passes above the *Prima*'s (lower) *primed grid*, *Prima* observes that as the ray traverses *one primed width division* (an *uncontracted 300,000 km*) in *one second* of her unslowed time, she concludes that the light ray has a speed of *300,000 km/sec* (see Figure 2b).

Also during the *one second* of elapsed time between Figure 2a and Figure 2b, *Prima* observes that the upper *unprimed grid*, now *1.8 primed intervals* in width, travels *0.8 primed intervals* to the left (ie $v = 0.8c$), at which moment the *third interval* of the *unprimed grid* is abreast of the *first interval* of the *primed grid*, and simultaneous with this event is the arrival of the light ray. Note also that at *primed time* $t' = 0$ in Figure 2a, the *unprimed time* at the *third unprimed width interval* is $t = 2.4 \text{ sec}$, due to stern clock advance. But at *primed time* $t' = 1 \text{ sec}$ in Figure 2b, after an elapsed *primed time* of *1 second*, the *unprimed time* has advanced by $t = 1 * 0.6 = 0.6 \text{ second}$.

It follows that in Figure 1b the *unprimed time* at the *third unprimed interval* has advanced to $t = 2.4 + 0.6 = 3 \text{ sec}$. Hence, as viewed by *Prima*, Figure 2a & 2b shows that the relatively moving *unprimed grid* has measured the light ray as traveling *three unprimed width intervals* in *three unprimed seconds*. This is a distance of *900,000 unprimed km* in *3.0 unprimed seconds*, or *300,000 unprimed km / 1.0 unprimed second (1.0c)*, **which was to be demonstrated by the relativity physicists**.

1.3 Is the Einstein doublet *correct* ?

Section 1.1 (and Figure 1a & 1b) and Section 1.2 (and Figure 2a & 2b) describe the mechanism of how Unni and relatively moving *Prima* both measure the speed of the same light ray as having an identical relative speed. The Commission was somewhat disturbed to find that the Einstein doublet requires that Unni and *Prima* each occupy a frame of reference so different from the other that the two frames have the appearance of alternative universes - in each universe the ‘at rest’ individual’s space and time are uncontracted and unslowed, and the moving guy’s space and time is foreshortened and slowed down. (Note that in this paper a distinction is made between the world of Unni and the world of *Prima* by italicizing the latter.)

And yet the Commission has come to the view that the Special Relativity has passed five minimal credibility tests, as listed:

In the 1st test, the Unni/*Prima* example of the Einstein doublet must demonstrate internal consistency, which is to say, salient events in the unprimed system (Figure 1a & 1b) must correspond with the same events in the *primed system* (Figure 2a & 2b). And indeed it is so. For example, in Figure 1b the arrival of the light ray at the third width interval of the unprimed grid (at $t = 3 \text{ sec}$) at the same unprimed time as the arrival of the first width interval of the primed grid (at $t' = 1 \text{ sec}$), does correspond to the event in Figure 2b where the light ray arrives at the *first width interval* of the *primed grid* (at $t' = 1 \text{ sec}$) at the same *primed time* as the arrival of the *third width interval* of the *unprimed grid* (at $t = 3 \text{ sec}$).

The 2nd test that SR must pass is that its first premise, the Relativity Principle, must be empirically correct. Indeed, the Relativity Principle is unexceptionable - despite the Earth having a speed with respect to the rest of the universe which varies between 400 km/sec in December and 340 km/sec in June (in the direction of Leo), no one has ever detected an effect of this speed on any terrestrial phenomenon. Although claims have been made of detecting absolute motion in a closed laboratory, and although public demonstration of such an experiment would guarantee the fame and fortune of the experimenter, numerous ether drift experiments, including Silvertooth's 'standing-wave laser beam experiment', and Marinov's 'rotating cylinder experiment', have all come to nothing.

The 3rd test that SR must pass is that its second premise, the Light Principle, must be empirically correct. Indeed, it is known from innumerable observations that the *in vacuo* out-and-return speed of light is 300,000 km/sec. The Commission notes that SR experts claim that the measurement of the one way speed of light, being dependent on assumptions about the signal speed in the synchronization of two stations, is a philosophical impossibility.

The 4th test that SR must pass is its prediction that relatively moving clocks run slow. This claim is now well confirmed since innumerable observations have shown that relatively moving subatomic phenomena have a slower rate. The first confirmation of this phenomenon occurred with the 'transverse Doppler experiment' by Herbert Ives, and in more recent times it became known that an atomic clock in a centrifuge will always run slower than its stationary twin sitting on the lab bench.

The 5th test that SR must pass is its claim that relatively moving solid objects appear foreshortened. This claim has not been put to direct experimental investigation, since it would require the buzzing of an observer by a solid object at sub-luminal speed. However, relativistic length contraction *can* be inferred by consideration of two familiar frames of reference, viz: the non-rotating Earth centered frame and the non-rotating Sun centered frame.

From the point of view of a stationary observer in the Sun centered non-rotating frame the SR interpretation of Michelson's experiment is fully vindicated: an SR observer hovering above the Sun's north pole would observe (i) that the speed of light is 300,000 km/sec with respect to the Sun's frame and (ii) that the arm of the Michelson interferometer aligned with the Earth's orbital motion is subject to Fitzgerald contraction.

At this stage of the SR Review the Commission nonetheless remained troubled by length and duration being things which are relative to the speed of the observer. And the Commission found it even more difficult to conceive that the universe consists of a space time continuum in which not only is time and simultaneity relative, but where past, present, and future are illusory!

Notwithstanding the above doubts, Commission was obliged to acknowledge that the Einstein doublet, as shown in Figure 1a & 1b and Figure 2a & 2b, and as interpreted in Section 1.1, 1.2 & 1.3, is 'simple, useful, and beautiful'. The Commission also found that although counterintuitive (or even absurd!), the Einstein doublet *is* 'true' in the sense of predicting (a) the *behavior* of one's own clocks and measuring sticks and (b) the *observed behavior* of the clocks and measuring sticks of the other relatively moving guy.

The Commission was on the point of finding in favor of the Einstein doublet when, during a coffee break, a relativity physicist was heard to say that 'the Einstein doublet is *physically unintelligible* and is only a mathematical model of ultimate reality'! But later when this physicist was asked to explain, he argued that 'since Western analytical philosophy shows that ultimate reality can never be apprehended with absolute certainty, the true task of physics is to grasp the mathematical laws of nature, and simplify those laws, and unify them, whilst all the while steering clear of futile metaphysical speculation about what ultimate reality might be'.

Later in the same session the Commission was discombobulated when another relativity physicist proudly testified that 'the Einstein doublet generates a majestic overarching *LAW governing* the laws of nature'. Also the Commission was underwhelmed when this witness stated 'the Einstein doublet provides the best available explanation of the empirical regularities by subsuming them under the Relativity and Light Principles', since the statement implied that in fundamental physics the methodology has to be *deductive* rather than *inductive*.

PART 2: Lorentz doublet - *precursor of Special Relativity, & source of the SR Math Model*

2.1 What *is* the Lorentz doublet ?

To make the Review fully comprehensive, the Commission now decided to look at the *history* of Special Relativity. Senior historians and philosophers of science gave evidence that Einstein relativity was, historically speaking, derived from an alternative model of space and time devised by H A Lorentz.

The Commission was informed that a Lorentz doublet preceded the Einstein doublet, and that the former was a *constructive* model based on a process of deduction. Although the Commission was assured by the historians and philosophers of science that Lorentzian physics is much inferior to Einstein relativity, we were duty bound to inquire into the Lorentz doublet, the explication of which was, surprisingly, found to be a reinterpretation of Figure 1a & 1b and Figure 2a & 2b, previously used to illustrate the Einstein doublet.

As recalled, the Commission's unprimed grid was located at cosmic rest by setting its speed to zero with respect to the rest of the universe using the sphere of 2.7 degrees Kelvin cosmic background radiation as a reference. Not previously mentioned, the dimensions of the unprimed grid, as monitored by Unni, were automatically adjusted by means of a set of roboclocks, where one roboclock is located at each of the 16 corners of the grid.

Each roboclock was equipped with a cesium atomic clock, a rocket motor and a radar set which enabled the roboclocks to maintain station relative to each other by ensuring that radar signals to adjoining roboclocks reflected back after 2.0 seconds of unadjusted roboclock time. In the Lorentz version of the doublet it is assumed that an atomic clock at rest with respect to the universe keeps *absolute time*, and one second of absolute time is defined as '*9,192,631,770 vibrations of the radiation generated from the transition of cesium atoms at cosmic rest*'.

One should also mention that in the Lorentz doublet, the speed of light in the fundamental cosmic rest frame is *uniquely 300,000 absolute km / absolute second*. A corollary of this is that the (absolute) speed of light is additive or subtractive to the absolute speed of the moving observer (Prima), as in classical physics.

Also each roboclock in the unprimed grid is synchronized with the master clock at the origin of the x and y axes by signals that assume that the speed of the signal is 1.0c. Hence in Figure 1a all unprimed clocks are reading 0 sec, and in Figure 2b all unprimed clocks are reading 3 sec.

The Commission states that although Lorentz (1853 – 1928) believed that the fundamental frame did exist, this frame wasn't positively identified during his lifetime. It was only in 1965 that Penzias & Wilson discovered the cosmic background radiation, and only in 1977 that Muller & Smoot discovered the temperature anisotropy which defined the speed and direction of the fundamental frame relative to the Solar System.

2.2 What does the Lorentz doublet *mean* ?

The next bit of the Lorentz doublet which the Commission considered was the absolutely moving primed frame in Figure 1a & 1b.

As with the stationary unprimed frame, the moving frame is equipped with 16 roboclocks to maintain its dimensions. In this case Lorentz theory holds that the clock rate of each roboclock slows down by virtue of the speed of the clock relative to the fundamental frame. At an absolute speed of $0.8c$, according to Lorentz, the atomic clock in each roboclock slows to 60% of the rate of an atomic clock at cosmic rest, and the time kept by these slow rate clocks is called *local time*.

The moving roboclocks of the primed grid (as in the unprimed grid) space themselves by ensuring that each adjoining clock is at such a distance that it takes 2 seconds of (local) time before the return of each radar pulse. In this case, the speed of a radar pulse relative to the moving primed grid is $0.2c$ in the direction of the grid's motion, and a radar pulse has a speed of $1.8c$ relative to the grid in the direction contrary to the grid's motion. It can be shown that the roboclocks are thus caused to bunch up longitudinally to 60% of absolute rest length, and Lorentz theory says that this longitudinal spacing between the primed clocks is deemed to be 300,000 km *local width*, even though the *actual* width is only 240,000 km.

As before, all of the clocks of the primed grid are synchronized to correspond with the master clock at the origin of the x' and y' axes, and as before Prima and her primed grid assume that the synchronization signals have a relative speed of $1.0c$ (local), on the assumption of *local light speed isotropy*. However, as previously stated, the signals which go in the same direction as the primed grid's motion have in reality a relative speed of only $0.2c$. As a consequence, it can be shown that the clock at the first width interval from the origin is set at 0.8 of an absolute second *behind* the actual time of the clock at the origin!

This *bow clock retardation* of 0.8 of an absolute second per grid width interval is a real asynchrony, but for the primed grid the convention of *local simultaneity* is adopted. Thus by a process of using locally shortened lengths, together with locally slow running and mis-synchronized clocks, the moving grid measures the light ray to have a speed of 300,000 local km / local second.

To see what the primed grid and Prima 'see' as their *illusionary picture* we must turn to Figure 2a & 2b. Prima envisages that the dimensions of her grid are 900,000 km wide and 900,000 km high, although the true width is 540,000 km and it can be shown that the true height is an unshrunk 900,000 km. Also it can be shown that Prima, using her local widths, local time rate and local simultaneity, gets a distorted view of the light ray and the relatively moving unprimed grid.

Specifically, it can be shown that (i) Prima measures the unprimed grid as having a local speed of 180,000 local km / 1.0 local second, i.e. local $0.8c$, (ii) she (mis)observes the clocks of the unprimed grid running at 0.6 of her local clock rate, and (iii) she (mis)observes the clocks of the unprimed grid as being out of synchrony, such that the clock on the first unprimed width interval *seems* to be reading 0.8 of a second of her local time in advance of the clock at the origin of the axes of the unprimed grid. One must emphasize that it can be shown that this perceived *stern clock advance* of the unprimed grid is an artifact of Prima using her local measures of time, distance and simultaneity.

Also, since in Figure 2a Prima observes that at her zero time the stern clock of the unprimed grid is reading positive 2.4 seconds, and since in Figure 2b, after 1 second of local time, the stern clock has advanced by 0.6 second to read 3.0 seconds, this 'confirms' to Prima that the unprimed grid is measuring the light ray as having a speed of 300,000 km / sec using Unni's dimensions, clock rates and simultaneity, which *appear* to Prima to be contracted, slowed and subject to stern clock advance.

2.3 Is the Lorentz doublet *correct* ?

The Commission found that Lorentz theory was in the realm of logically understandable classical physics, but *history & philosophy of science* witnesses were greatly averse to the Lorentz doublet, and the reasons they cited were many. For one thing, these witnesses thought that the distinction between local and absolute time made the reciprocity of observations unnecessarily complex. Also the H&PoS relativists disliked the fact that the Lorentz doublet confines true light isotropy to the fundamental frame, thus implying a luminiferous ether, which medium 'has never shown up in any experiment'.

One expert historian and philosopher of science testified that 'Lorentzians would have people believe that local time, length and simultaneity aren't *real*, but when these people were asked how local clocks, measuring sticks and simultaneity have to be corrected to get *true* time, length and simultaneity, they say that one has to keep an eye on one's speed and direction with respect to the rest of the universe!' This expert further stated that 'beyond anything the Lorentz doublet is crudely mechanistic, and greatly detracts from the elegant simplicity of the Einstein doublet'.

After the most searching interrogation by Counsel Assisting the Commission, the H&PoS experts admitted that ‘the Lorentz doublet wasn’t wrong as such, but that the Einstein doublet was incomparably superior from a metaphysical point of view’. However, the Commission found it was difficult to get these witnesses to say *why*, or to justify their hostility to Lorentz theory by logical arguments.

In frustration the Commission authorized the covert recording of history & philosophy of science witnesses during coffee breaks, and a fuller picture of their thought processes emerged. In casual conversation the witnesses admitted that the real reason why they hated Lorentz theory so much was that ‘it implied that nature was indulging in a conspiracy to cover up any evidence of motion with respect to the CBR frame’.

Armed with this information Counsel Assisting was able to probe a senior history & philosophy of science academic, who eventually came out with an extraordinary outburst. He exclaimed that ‘Lorentz theory is pernicious because it requires a supernatural light medium designed by a higher intelligence, and if this idea gains currency the human race will be cast back into a new dark age of superstition!’

After calming down a bit the H&PoS academic went on to say that ‘the Lorentz doublet may have preceded the Einstein doublet, historically speaking, but if Lorentz had never devised his theory it was still inevitable that the Special Relativity, and its associated doublet, would have been discovered by someone, even if not Einstein’. The professor emphatically stated that ‘the Einstein doublet, as an expression of the relativity and light principles was, is, and is likely to remain the best model of the buzzing confusion which is the physical universe.’ The professor, now hyperventilating, went on to say ‘the Lorentz doublet is *without value* and therefore irrelevant.’

After an adjournment in which the witness recovered his composure, the eminent H&PoS professor continued by saying ‘the so called “Review” of Special Relativity being conducted by the ISFCC is an impertinence, and an insult to generations of theoretical physicists and philosophers of science who have created our science and technology based civilization.’ Finally the good professor pronounced that ‘any findings by the ISFCC would be treated with contempt by the science community because of the lack of accreditation of the Commissioners in higher degrees in Special and General Relativity, and that if there were ever to be “a review of Special Relativity” it would have to be carried out by properly qualified personnel, and would have to be subject to scrutiny via exhaustive debate in peer reviewed physics and history & philosophy of science journals!’

It was on this histrionic note the Commission adjourned to make its findings on the Theory of Special Relativity.

PART 3 ISFCC Centennial Review of Special Relativity - *Main Findings*

- I. The Commission finds that the Theory of Special Relativity is the worst example of scientific fraud and corruption in the history of science.
- II. We finds that Special Relativity is a multi-headed monster:
- III. The general public *misguidedly* believes that Special Relativity is a foundational theory of physics and cosmology.
- IV. Relativity physicists *are correct* in believing Special Relativity is a useful mathematical engine for getting accurate predictions of how nature behaves, and *are correct* in believing that Special Relativity is **not** a physical description of the microcosm and macrocosm.
- V. However relativity physicists **are** culpable in refusing to recognize that it is their job description to *provide a physical description of the microcosm and macrocosm*.
- VI. Historians and philosophers of science are culpable in allowing ideological considerations to breach their professional duty as truth seekers.
- VII. Firstly, history & philosophy of science relativists are culpable in allowing the contradictory situation of the general public believing one thing, and the professional physicists believing another.
- VIII. Secondly, H&PoS relativists are blameworthy for covering up the fact that Lorentz ether theory *is* scientifically tenable, whereas Special relativity *is not*.

- IX. Thirdly however, the greatest crime of the H&PoS relativists is their acting (starting from Bertrand Russell) as *corrupt philosophical guardians* dedicated to ‘protecting’ society from knowledge of the Lorentzian light/matter medium.
- X. The Commission finds that Special Relativity originated as a willful mis-interpretation of Lorentz ether theory in which the light/matter medium is made superfluous.
- XI. The explanation of why the Special Relativity mis-interpretation of Lorentz ether theory has survived for 100 years is that in Lorentz ether theory the distinction between absolute time and local time, and the distinction between absolute length and local length, can be replaced by ‘time per se’ and ‘length per se’ without any loss of predictive power of the Lorentz doublet.
- XII. But the fundamental explanation why the Special Relativity mis-interpretation of Lorentz ether theory is possible is that absolute motion induces the slowing of clocks and the fore and aft contraction of matter (a) by just that amount which frustrates attempts to measure the speed of ether drift, and (b) by just that amount required to eliminate any observable distinction between the system of an at rest observer and the system of a moving observer.
- XIII. The reason why Lorentz ether theory is scientifically correct whereas Special Relativity is scientifically incorrect is because Lorentz ether theory is an empirically well validated theory of physics and cosmology, whereas Special Relativity is an unphysical mathematical model of the empirical regularities.
- XIV. Lorentz ether theory is more user friendly than Special Relativity once it is realized that all measurements of time, simultaneity, and length are convenient local *conventions*, and that the valid observer, in the case of the Global Positioning System for example, is a notional Lorentzian observer standing as the North Pole.
- XV. The historical reason why the Western cultural zeitgeist has favored Special Relativity vis a vis Lorentz ether theory is that the metaphysical implications of Lorentz ether theory are contrary to the secular humanist world view of a universe which is indifferent to life.
- XVI. The Commission finds that the Lorentz ether theory’s light/matter medium has many features which are fine-tuned to conceal ether drift, and constitute prima facie evidence for benevolent design by an omnipotent spirit being.
- XVII. Because secular humanists are discomforted by this, they corruptly promote the unphysical Special Relativity mathematical model of space-time in which there is no supra-natural light/matter medium.
- XVIII. This ideologically motivated rejection of Lorentz ether theory has impeded the progress of science in understanding how electricity, magnetism and gravity actually work.
- XIX. The past century of Special Relativity hegemony has stymied the development of anti-gravity levitation and propulsion, and has therefore been responsible for hundreds of thousands dying horribly in inherently hazardous road vehicles, and in ‘incendiary-bomb’ multi-passenger air borne flying machines.
- XX. The absence of antigravity has also confined humankind to an increasingly overcrowded planet, thus causing all manner of civil strife, terrorism, warfare and genocide.
- XXI. Accordingly, the IFCC proposes a *‘five stage action plan’* for implementation by the United Nations and participating national governments with a view to remediating the ill effects of Special Relativity.
- XXII. First priority: high school children and young adults at university must not be taught about Special Relativity without equal time being given to Lorentz ether theory.
- XXIII. Second priority: a range of academics, such as theoretical / mathematical physicists, astrophysicists and General Relativity cosmologists must be given the option of re-education, or alternatively must be reclassified as *‘empirical-regularity modelers’*, and relocated in faculties of engineering.
- XXIV. Third priority: H&PoS academic relativists should be given an amnesty of twelve months to cease their dishonest obfuscation, and in the case of recalcitrance these people should be pursued with the full rigor of the law.

- XXV. The Commission recommends that unrepentant H&PoS academic relativists should be stood down from their posts for professional misconduct, and should then be charged with the grave crime of *scientific fraud and corruption*.
- XXVI. If found guilty the Commission recommends there be no mercy, and that they should be punished in all cases with the undiscounted *International Criminal Court* penalty of 200 hours of community service.
- XXVII. Fourth priority: the full biography of the inventor of Special Relativity, Albert Einstein, should be put on record, including the fact that he was a poor performing student high school teacher who, having been denied a teaching position after graduation, conspired with his failed student high school teacher wife to pervert Lorentz ether theory, for the purpose of his avoiding honest work in the Swiss patent office.
- XXVIII. Fifth priority: Science must be set back on track by establishing a new discipline called *New Natural Philosophy* in which the original ideals of science are revived to seek an understanding of the physical universe in terms of cause-and-effect cosmology, founded on evidence-based investigations of natural phenomena using systematized common sense.
- XXIX. Although scientific fraud and corruption has become systemic during a century of Special Relativity, the ISFCC recommends that the *United Nations Educational, Scientific and Cultural Organization* honor the individuals who refused to get swept up in its madness, including Hendrik Lorentz, Albert Michelson, Oliver Lodge, Herbert Ives, Simon Prokhovnik, Franco Selleri, and Ronald Hatch.
- XXX. Finally, since the scientific project will ever be fraught with willful error and professional malfeasance, the ISFCC recommends that UNESCO provide generous funding, in perpetuity, of the premier organization of truly independent New Natural Philosophers, the *Natural Philosophy Alliance*, based in the United States of America.

Chairperson,

Chief Justice Muidem Rettam-Thgil -

Commission,

Independent Scientific Fraud and Corruption

Fongafale, Tuvalu

May 2009

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