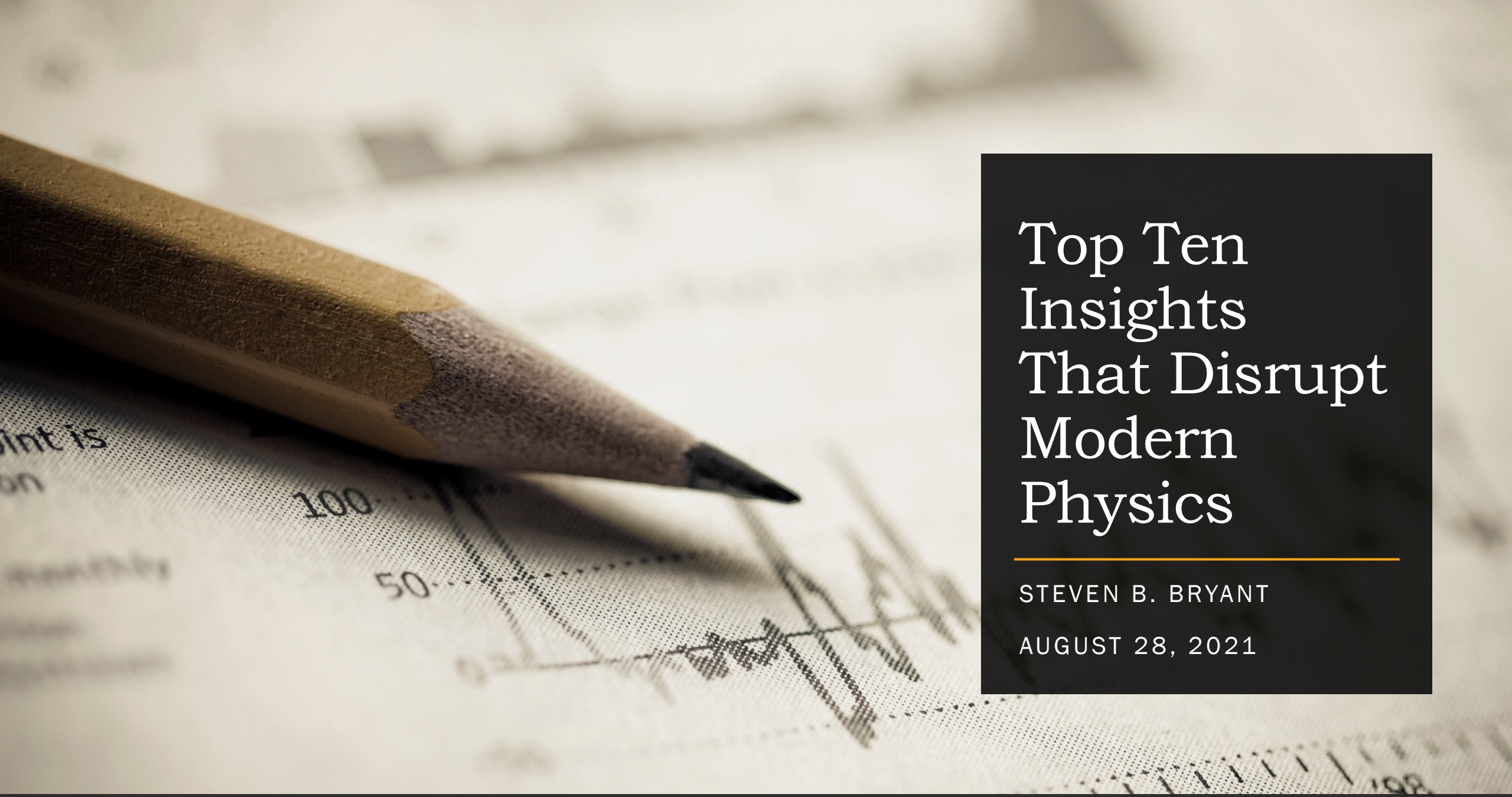

Top Ten Insights That Disrupt Modern Physics

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Introduction – Steven Bryant

Work

- Financial Services Intelligent Automation
- Graduate Teaching Assistant

Education

- MSCS Artificial Intelligence (Dec.)
- MBA
- BSCS

Research

- Physics
- Artificial General Intelligence
- AI Frameworks
- Wealth Inequality

Goals

1. Introduce an easy-to-remember phrase that clearly states the mistake that invalidates Einstein's relativity theory
2. Share insights into how the mistake can go undetected for 100+ years
3. Show how an incorrect theory can still provide useful answers
4. Introduce an alternative theory of moving systems – called Modern Mechanics - that is easy to understand and performs better than relativity

Einstein says 1=0
Abstract Case

Since Einstein creates ξ using the equation $\xi = c\tau$, **this equality must always be maintained.**

Since τ is a *linear* function, it follows from these equations that

$$\tau = a\left(t - \frac{v}{c^2 - v^2}x'\right)$$

where a is a function $\phi(v)$ at present unknown, and where for brevity it is assumed that at the origin of k, $\tau = 0$, when $t = 0$.

With the help of this result we easily determine the quantities ξ, η, ζ by expressing in equations that light (as required by the principle of the constancy of the velocity of light, in combination with the principle of relativity) is also propagated with velocity c when measured in the moving system. For a ray of light emitted at the time $\tau = 0$ in the direction of the increasing ξ

1 ➡ $\xi = c\tau$ or $\xi = ac\left(t - \frac{v}{c^2 - v^2}x'\right)$.

But the ray moves relatively to the initial point of k, when measured in the stationary system, with the velocity $c - v$, so that

$$\frac{x'}{c - v} = t.$$

If we insert this value of t in the equation for ξ, we obtain

4 ➡ $\xi = a\frac{c^2}{c^2 - v^2}x'.$

We cannot check the equality of this abstract statement directly, since they are not expressed in terms of our known variables, x, v, and t.

Fortunately, the next time and appear is when **Einstein provides their equations**, allowing us to use concrete values.

Substituting for x' its value, we obtain

2 ➡ $\tau = \phi(v)\beta(t - vx/c^2),$

3 ➡ $\xi = \phi(v)\beta(x - vt),$

$\eta = \phi(v)y,$

$\zeta = \phi(v)z,$

where

$$\beta = \frac{1}{\sqrt{1 - v^2/c^2}},$$

Einstein says 1=0
Concrete Case

Since $\xi = c\tau$ must always be true and Einstein provides the ξ and τ equations, we can test the statement using the concrete values $x = 1$, $v = 0$, and $t = 0$.

❶ $\xi = c\tau$ or $\xi = ac\left(t - \frac{v}{c^2 - v^2}x'\right)$.

Substituting for x' its value, we obtain

❷ $\tau = \phi(v)\beta(t - vx/c^2)$,
❸ $\xi = \phi(v)\beta(x - vt)$,
$\eta = \phi(v)y$,
$\zeta = \phi(v)z$,

where

$$\beta = \frac{1}{\sqrt{1 - v^2/c^2}},$$

❸
$\xi = \beta(x - vt)$
$\xi = \beta(1 - (0 * 0))$
$\xi = 1$

❷
$\tau = \beta(t - \frac{vx}{c^2})$
$\tau = \beta\left(0 - \frac{0 * 1}{c^2}\right)$
$\tau = 0$

❶ $\xi = c\tau$

$\mathbf{1 = 0}$

Top Ten Insights that Disrupt Modern Physics

1. **Einstein says 1=0, which is mathematically incorrect** and invalidates relativity theory.

Key Questions

The idea that Einstein's special relativity theory could be wrong is hard to accept because it has 1) been reviewed for more than a century and no one has found anything significantly wrong, and 2) it has a wide-body of experimental support that, thus far, only align with relativity.

Einstein says 1=0, which is mathematically incorrect and invalidates relativity theory.

1. How can an equation go from being "always equal" (which is must be since it is how the equation is created), to a statement that is largely unequal?
2. If Einstein is only performing a substitution followed by simplifying the equations, how can a mistake be introduced to cause the equations to be unequal?
3. If relativity is wrong, why does it appear to work and have a wide-body of experimental support?
4. Is there an alternative theory that works as well as (or perhaps better than) Einstein's theory?

Reviewing The Derivation

"I've looked at Einstein's derivation and, after deriving the equations for myself, I do not see where any mistake is introduced."
– Anonymous.

Since τ is a *linear* function, it follows from these equations that

$$\tau = a\left(t - \frac{v}{c^2 - v^2}x'\right)$$

where a is a function $\phi(v)$ at present unknown, and where for brevity it is assumed that at the origin of k, $\tau = 0$, when $t = 0$.

With the help of this result we easily determine the quantities ξ, η, ζ by expressing in equations that light (as required by the principle of the constancy of the velocity of light, in combination with the principle of relativity) is also propagated with velocity c when measured in the moving system. For a ray of light emitted at the time $\tau = 0$ in the direction of the increasing ξ

❶ $\xi = c\tau$ or $\xi = ac\left(t - \frac{v}{c^2 - v^2}x'\right)$.

But the ray moves relatively to the initial point of k, when measured in the stationary system, with the velocity $c - v$, so that

$$\frac{x'}{c - v} = t.$$

If we insert this value of t in the equation for ξ, we obtain

❹ $\xi = a\frac{c^2}{c^2 - v^2}x'$.

Substituting for x' its value, we obtain

❷ $\tau = \phi(v)\beta(t - vx/c^2)$,
❸ $\xi = \phi(v)\beta(x - vt)$,
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where

$$\beta = \frac{1}{\sqrt{1 - v^2/c^2}},$$

The source of the 1=0 mistake is *almost* impossible to detect because it is not based on what he does, but on what he does not do.

Modern Mechanics
Introduction

Modern Mechanics is introduced as two statements and five questions.

Statements

1. Imagine a *street*; on the street is a *bus*; on the street standing next to the bus is a *jogger*.
2. The jogger performs one activity, which is to run at a constant velocity from the rear bumper of the bus to the front bumper, turn around and then run to the vehicle's rear bumper.

Now, answer the following **questions**:

1. How many nouns (i.e., "things") were introduced in Statement 1?
2. Based on existing knowledge, can a bus go faster than a jogger?
3. In Statement 2, when given the total length, L, run by the jogger, can one half of the total length run by the jogger be determined?
4. Did Question 3 above ask to find *one half of the total length run* by the street, the bus, or the *jogger*?
5. Does the total length run by the jogger indicate the position of the front of the bus?

Modern Mechanics
Key Concepts

1. **Modern Mechanics is a three-system model of motion** consisting of
   - a **stationary system** (e.g., the street),
   - a **moving system** (e.g., the bus), and
   - an **oscillating system** (e.g., the jogger).

2. Modern Mechanics allows us to ask and answer questions about the moving system and the oscillating system.

Key Question: *When given the length L traveled by the oscillating system (i.e., the jogger) what is half of that length?*
(expressed in terms of x, v, t, and c)

Modern Mechanics
Asking The Right Question

In Modern Mechanics, the symbol ξ represents one-half of a total cyclical length traveled by an oscillating system.

The jogger performs one activity, which is to run at a constant velocity from the rear bumper of the bus to the front bumper, turn around and then run to the vehicle's rear bumper.

Question

When given the length L traveled by the oscillating system (i.e., the jogger) what is half of that length?

Answer (Textual)

One-half the length run by the jogger, represented by ξ, is found by taking the total length, represented by L, and **dividing by two**.

Answer (Mathematical)

$$\xi = \frac{1}{2}L$$

Goal: Express the length equation $\xi = \frac{1}{2}L$ in terms of x, t, v, and c.

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1. Let T = Length from rear bumper to front bumper; Let S = Length from front bumper to rear bumper; Let $L = T + S$

$$\xi = \frac{1}{2}(T + S)$$

2. Let $T = ct$; Let $S = cs$, where t is time to travel length T, s is time to travel length S and c is the velocity of the jogger

$$\xi = c\frac{1}{2}(t + s)$$

3. Let $\tau = \frac{1}{2}(t + s)$

$$\xi = c\tau$$

and

$$\tau = \frac{1}{2}(t + s)$$

4. Let $t = x'/(c - v)$; Let $s = x'/(c + v)$, where x' is the length of the bus and v is the velocity of the bus.

5. Solve for τ

$$\tau = \frac{1}{2}\left[\frac{x'}{c - v} + \frac{x'}{c + v}\right]$$

$$\tau = \frac{x'c}{c^2 - v^2}$$

τ is the amount of time required to travel one half cyclical length of the jogger (i.e., oscillating system)

7. Solve for ξ

$$\xi = \frac{x'c^2}{c^2 - v^2}$$

ξ is the length required to travel one half cyclical length of the jogger (i.e., oscillating system)

Goal: Express the length equation $\xi = \frac{1}{2}L$ in terms of x, t, v, and c.

❶ Let T = Length from rear bumper to front bumper; Let S = Length from front bumper to rear bumper; Let $L = T + S$

$$\xi = \frac{1}{2}(T + S)$$ ← a.k.a. "average"

❷ Let $T = ct$; Let $S = cs$, where t is time to travel length T, s is time to travel length S and c is the velocity of the jogger

$$\xi = c\frac{1}{2}(t + s)$$

❸ Let $\tau = \frac{1}{2}(t + s)$

$$\xi = c\tau$$

and

$$\tau = \frac{1}{2}(t + s)$$

❹ Let $t = x'/(c - v)$; Let $s = x'/(c + v)$, where x' is the length of the bus and v is the velocity of the bus.

❺ Solve for τ

$$\tau = \frac{1}{2}\left[\frac{x'}{c - v} + \frac{x'}{c + v}\right]$$

$$\tau = \frac{x'c}{c^2 - v^2}$$

❼ Solve for ξ

$$\boxed{\xi = \frac{x'c^2}{c^2 - v^2}}$$

❽ Solve using an **Incremental Mean approach** (with $n = 2$)

Notice that $t = \frac{1}{2}t + \frac{1}{2}t$. Therefore $\frac{1}{2}t = t - \frac{1}{2}t$. Use substituion:

$$\tau = t - \frac{1}{2}t + \frac{1}{2}s$$

❾ Rewrite as

$$\tau = t - \frac{1}{2}(t - s)$$

❿ **Solve in two explicit steps.** First, solve for $\frac{1}{2}(t - s)$

$$\boxed{\tau = t - \frac{vx'}{c^2 - v^2}}$$ Step ❶

① Second, substitute the stand-alone t

$$\tau = \frac{x'}{c - v} - \frac{vx'}{c^2 - v^2}$$ Step ❷

which simplifies to

$$\tau = \frac{x'c}{c^2 - v^2}$$

② Solve for ξ

$$\boxed{\xi = \frac{x'c^2}{c^2 - v^2}}$$

Where have you seen these equations before?

Since τ is a *linear* function, it follows from these equations that

Step ❶ $$\tau = a\left(t - \frac{v}{c^2 - v^2}x'\right)$$

where a is a function $\phi(v)$ at present unknown, and where for brevity it is assumed that at the origin of k, $\tau = 0$, when $t = 0$.

With the help of this result we easily determine the quantities ξ, η, ζ by expressing in equations that light (as required by the principle of the constancy of the velocity of light, in combination with the principle of relativity) is also propagated with velocity c when measured in the moving system. For a ray of light emitted at the time $\tau = 0$ in the direction of the increasing ξ

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But the ray moves relatively to the initial point of k, when measured in the stationary system, with the velocity $c - v$, so that

$$\frac{x'}{c - v} = t.$$

Step ❷

If we insert this value of t in the equation for ξ, we obtain

$$\xi = a\frac{c^2}{c^2 - v^2}x'.$$

1. ξ and τ answer questions about the jogger (i.e., the oscillating system).
2. ξ is one-half the cyclical length run by the jogger.
3. τ is the time to travel length.

❽ Solve using an **Incremental Mean approach** (with $n = 2$)

Notice that $t = \frac{1}{2}t + \frac{1}{2}t$. Therefore $\frac{1}{2}t = t - \frac{1}{2}t$. Use substituion:

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❾ Rewrite as

$$\tau = t - \frac{1}{2}(t - s)$$

❿ **Solve in two explicit steps**. First, solve for $\frac{1}{2}(t - s)$

$$\tau = t - \frac{vx'}{c^2 - v^2}$$ Step ❶

① Second, substitute the stand-alone t

$$\tau = \frac{x'}{c - v} - \frac{vx'}{c^2 - v^2}$$ Step ❷

which simplifies to

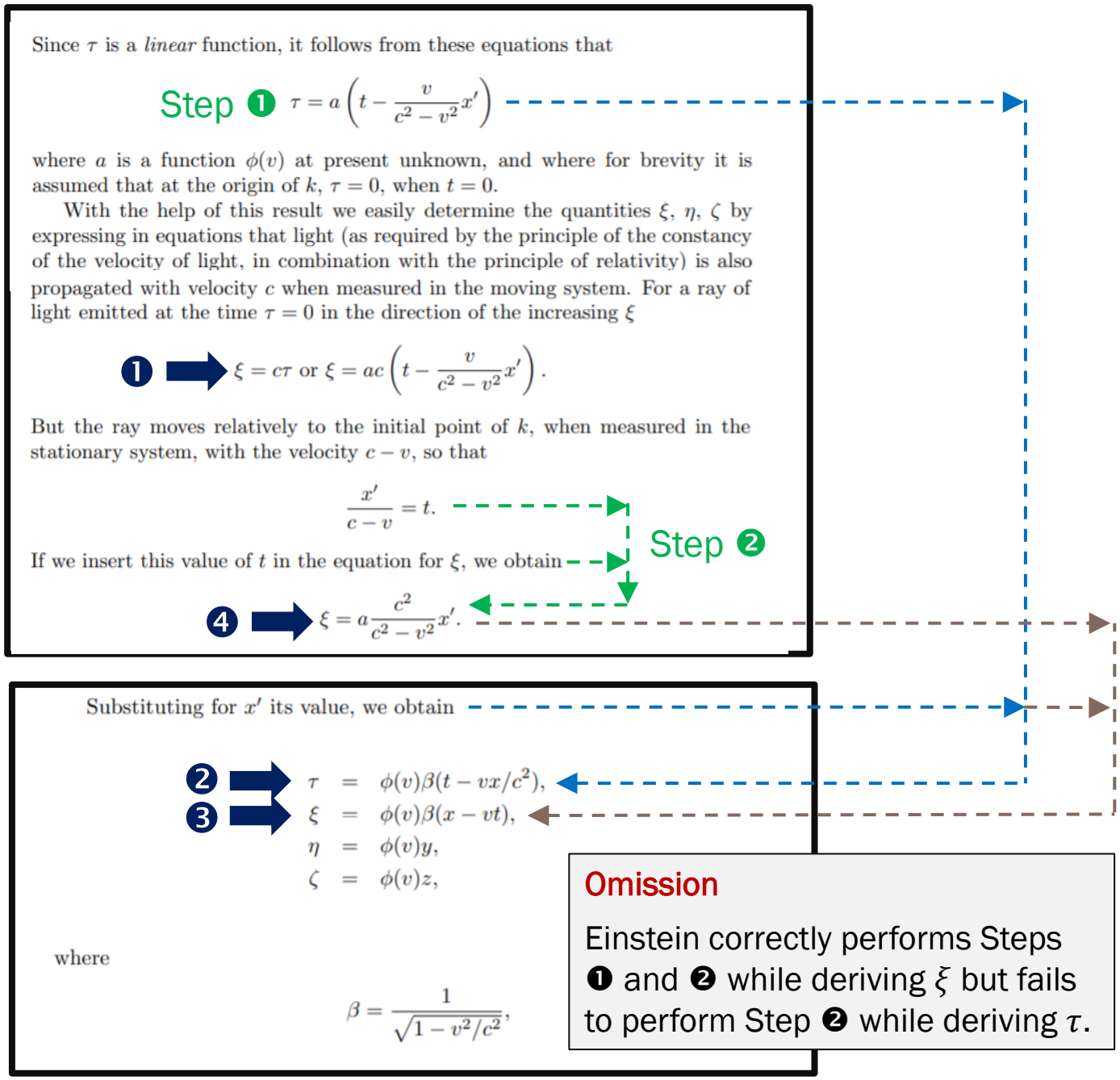
$$\tau = \frac{x'c}{c^2 - v^2}$$ **This is the correct τ**

② Solve for ξ

$$\xi = \frac{x'c^2}{c^2 - v^2}$$

The Reason 1=0

The mistake is due to Einstein correctly performing Step ❷ prior to substituting x' and simplifying ξ, but then omitting Step ❷ prior to substituting x' and simplifying τ. This creates the equation inequality that results in $1 = 0$.



Omission

Einstein correctly performs Steps ❶ and ❷ while deriving ξ but fails to perform Step ❷ while deriving τ.

Einstein's derivation say 1=0

Any time a derivation includes Einstein's transformation equations, check to see if $\xi=c\tau$ appears in the derivation. If it does, then that derivation contains says 1=0.

Each derivation has a statement of equality that will evaluate to $1 = 0$ when given the concrete values $x = 1$, $v = 0$, and $t = 0$.

On the Electrodynamics of Moving Systems [Einstein, 1905]

- $\xi = c\tau$

Einstein's 1912 Manuscript on the Special Theory of Relativity [Einstein,1912]

- $\sqrt{x'^2 + y'^2 + z'^2} = ct'$

Relativity [Einstein, 1916]

- $x' = ct'$

Four Lectures on Relativity and Space [Steinmetz, 1922]

- $x' = ct'$

$\xi = c\tau$ might be written as, $x' = ct'$, $x'^2=c^2t'^2$, $\sqrt{x'^2} = ct'$, or some similar variation.

Goal: Express the length $\xi = \frac{1}{2}L$ in terms of x, t, v, and c.

1. Assume that when time $t = 0$ the rear of the bus is at position 0 and the front of the bus is at position x', thus computing the "length" of the bus.
2. Assume at time $t > 0$ the front of the bus is at position x.
3. The bus moves with velocity v in in a straight line in one direction (aka, uniform translatory motion) and is governed by the equation

$$x = x' + vt$$

1 Begin with

$$\tau = \frac{x'c}{c^2 - v^2}$$

2 Substitute for x'

$$\tau = \frac{(x - vt)c}{c^2 - v^2}$$

3 Begin with

$$\xi = \frac{x'c^2}{c^2 - v^2}$$

4 Substitute for x'

$$\xi = \frac{(x - vt)c^2}{c^2 - v^2}$$

Equations are Not the same

Substituting for x' its value, we obtain

$$\begin{aligned} \tau &= \phi(v)\beta(t - vx/c^2), \\ \xi &= \phi(v)\beta(x - vt), \\ \eta &= \phi(v)y, \\ \zeta &= \phi(v)z, \end{aligned}$$

where

$$\beta = \frac{1}{\sqrt{1 - v^2/c^2}},$$

In Modern Mechanics, the equations associated with one-half the length an oscillating system travels, not a moving system's position

Top Ten Insights that Disrupt Modern Physics

1. **Einstein says 1=0, which is mathematically incorrect** and invalidates relativity theory.
2. **Modern Mechanics is a three-system theory** consisting of a stationary system, a moving system, and an oscillating system.
3. **Relativity is** a three-system theory **mistreated as a two-system theory.**
4. **ξ is a length** that represents one-half the cyclical length of an oscillating system; it is not a moving system position or coordinate.
5. **τ is the time to travel length ξ** and is found using the incremental mean equation.

Key Questions

The idea that Einstein's special relativity theory could be wrong is hard to accept because it has 1) been reviewed for more than a century and no one has found anything significantly wrong, and 2) it has a wide-body of experimental support that, thus far, only align with relativity.

Einstein says 1=0, which is mathematically incorrect and invalidates relativity theory.

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4. Is there an alternative theory that works as well as (or perhaps better than) Einstein's theory?

Modern Mechanics produces different equations than relativity. How does it perform when compared to the relativity equations?

Substituting for x' its value, we obtain

$$\begin{aligned}\tau &= \phi(v)\beta(t - vx/c^2),\\ \xi &= \phi(v)\beta(x - vt),\\ \eta &= \phi(v)y,\\ \zeta &= \phi(v)z,\end{aligned}$$

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Equations are Not the same

1. Begin with
$$\tau = \frac{x'c}{c^2 - v^2}$$

2. Substitute for x'
$$\tau = \frac{(x - vt)c}{c^2 - v^2}$$

3. Begin with
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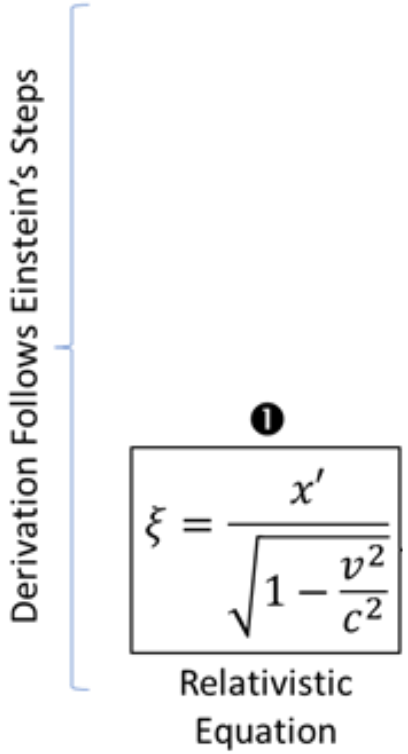
Relativity | Modern Mechanics

If a theory's equation produces $E = mc^2$, then any experiment that validates $E = mc^2$ also validates that theory.

Derivation Follows Einstein's Steps

Source Derivation: Does the Inertia of a Body Depend Upon its Energy-Content?, [Einstein, 1905]

If a theory's equation produces $E = mc^2$, then any experiment that validates $E = mc^2$ also validates that theory.



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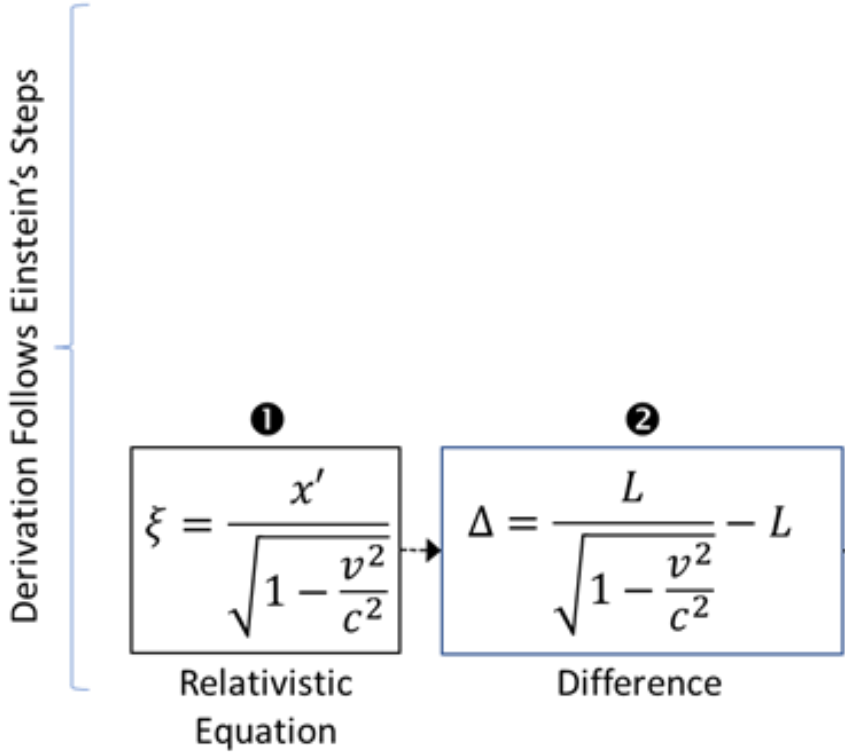

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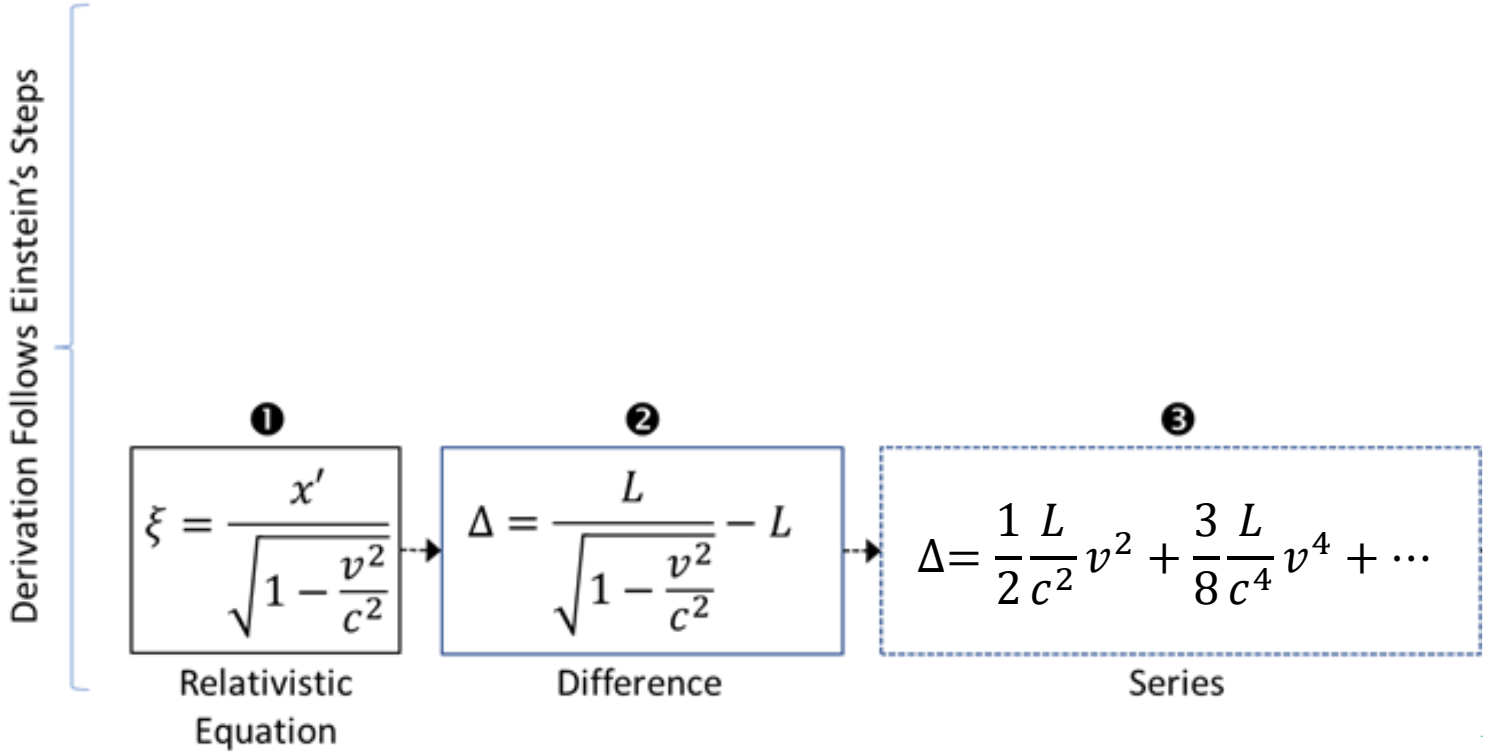

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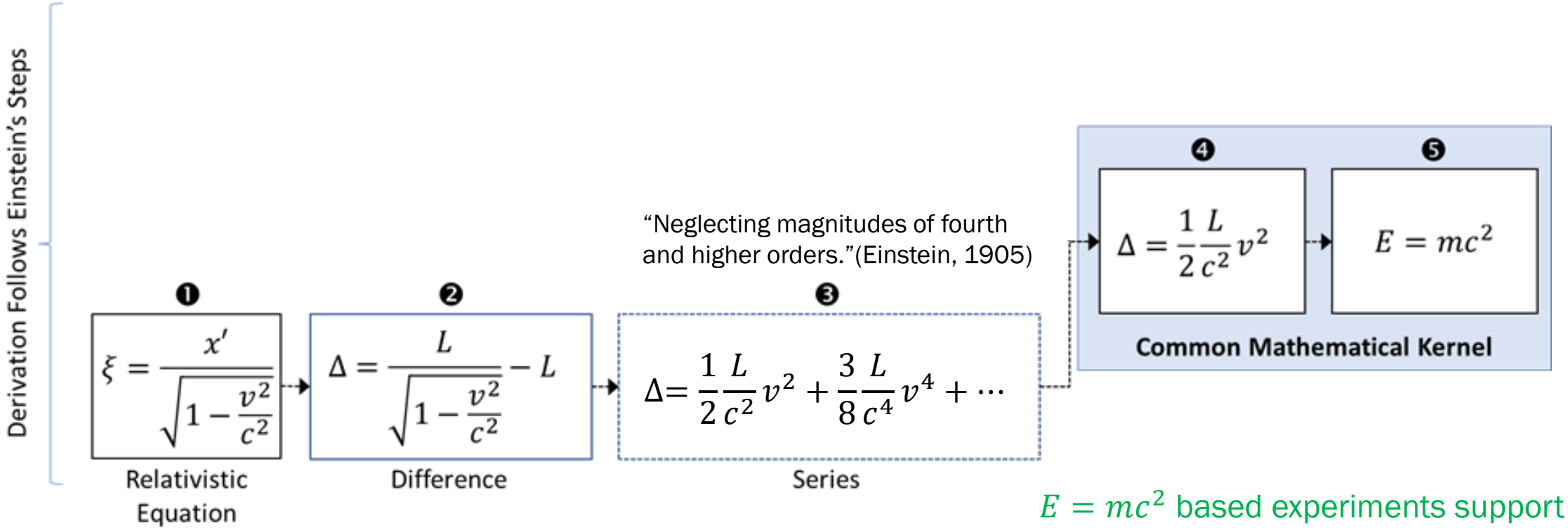

$E = mc^2$ based experiments support relativity.

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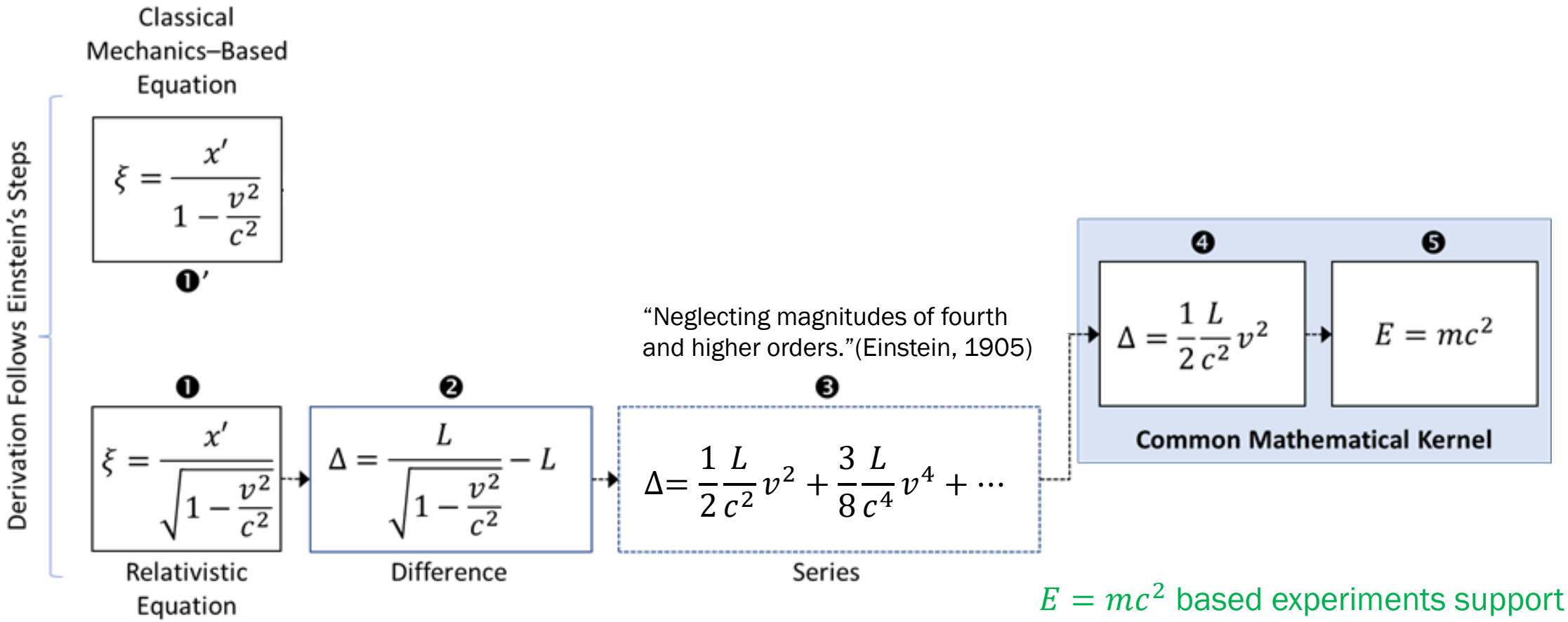

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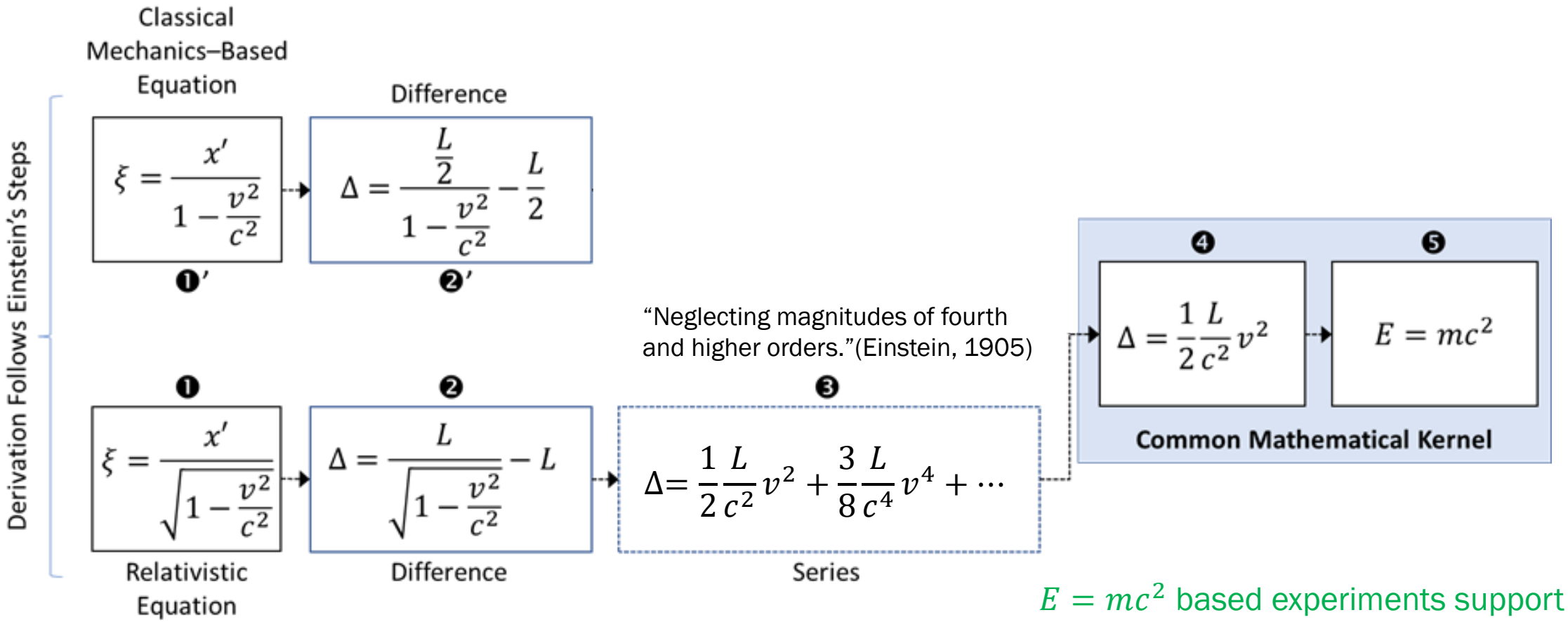

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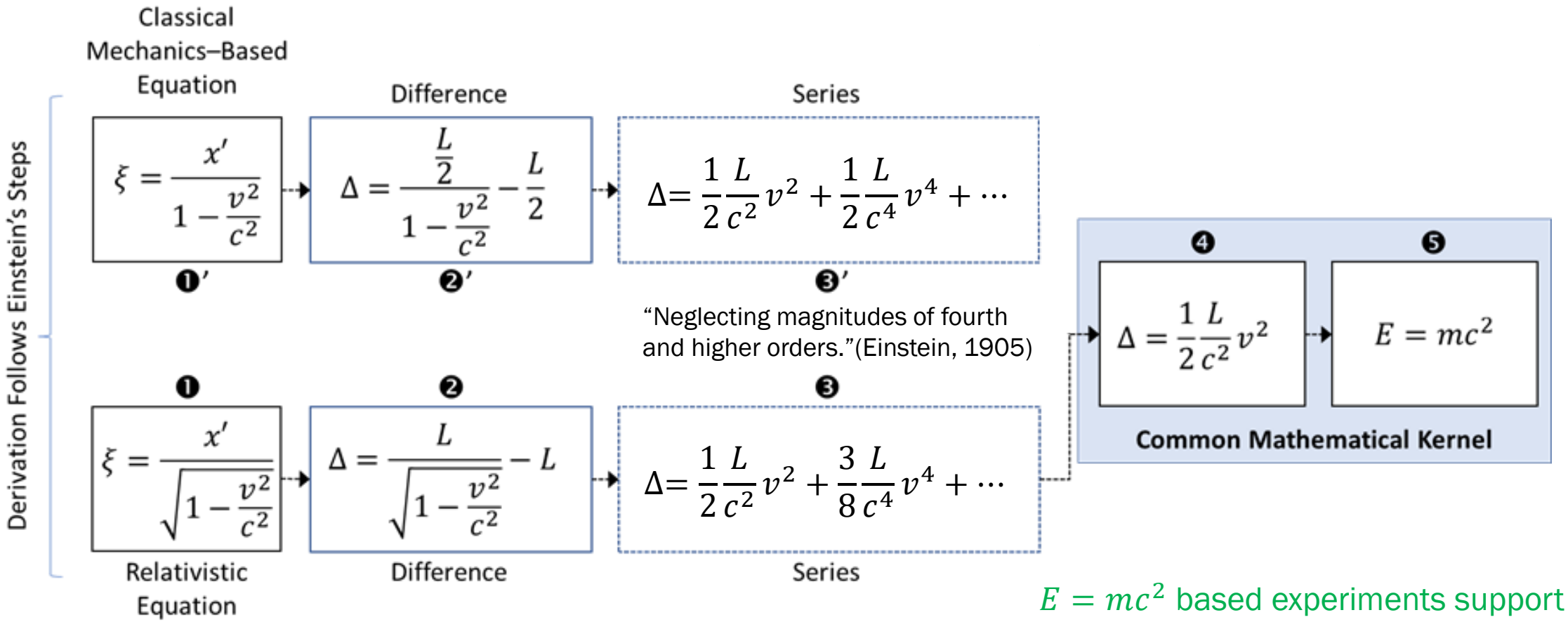

$E = mc^2$ based experiments support relativity.

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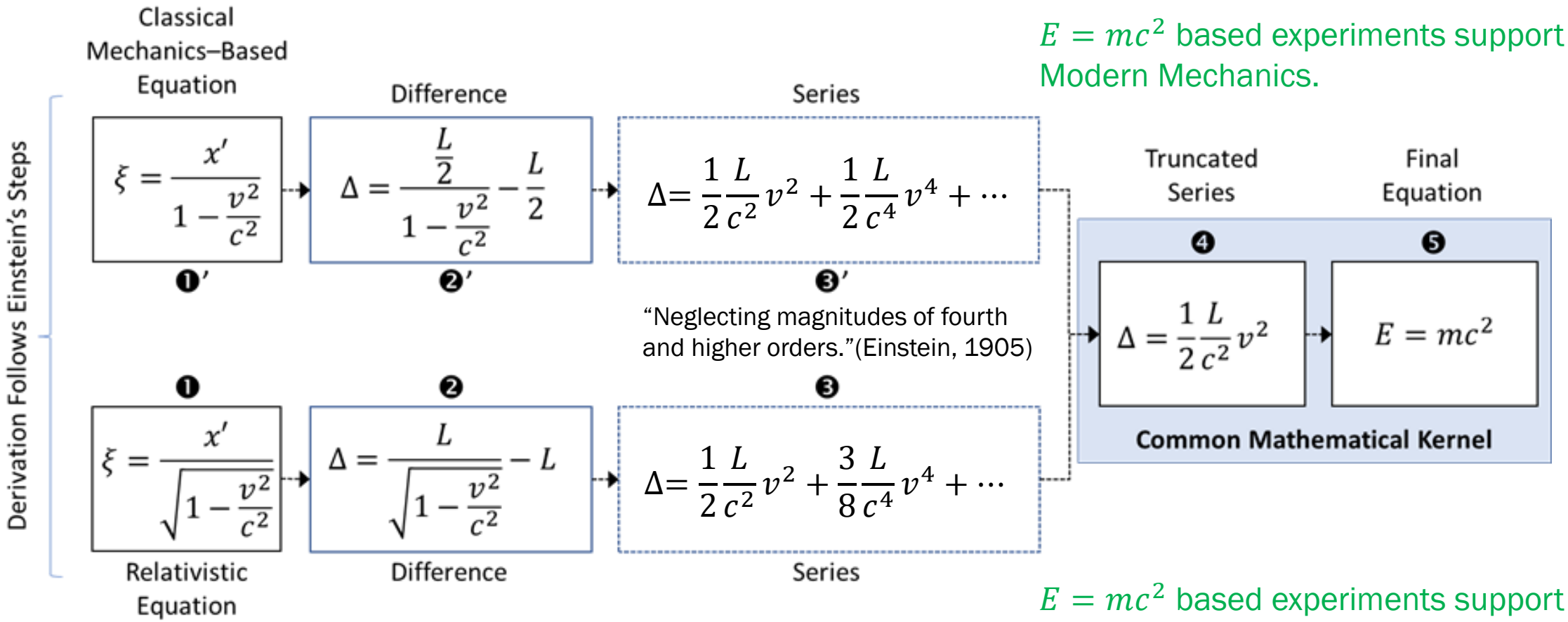
Modern Mechanics matches the predictive performance of relativity. Experiments that validate $E = mc^2$ support Modern Mechanics and relativity. Due to truncation, $E = mc^2$ is properly stated as the approximation $E \approx mc^2$.



$E = mc^2$ based experiments support Modern Mechanics.

$E = mc^2$ based experiments support relativity.

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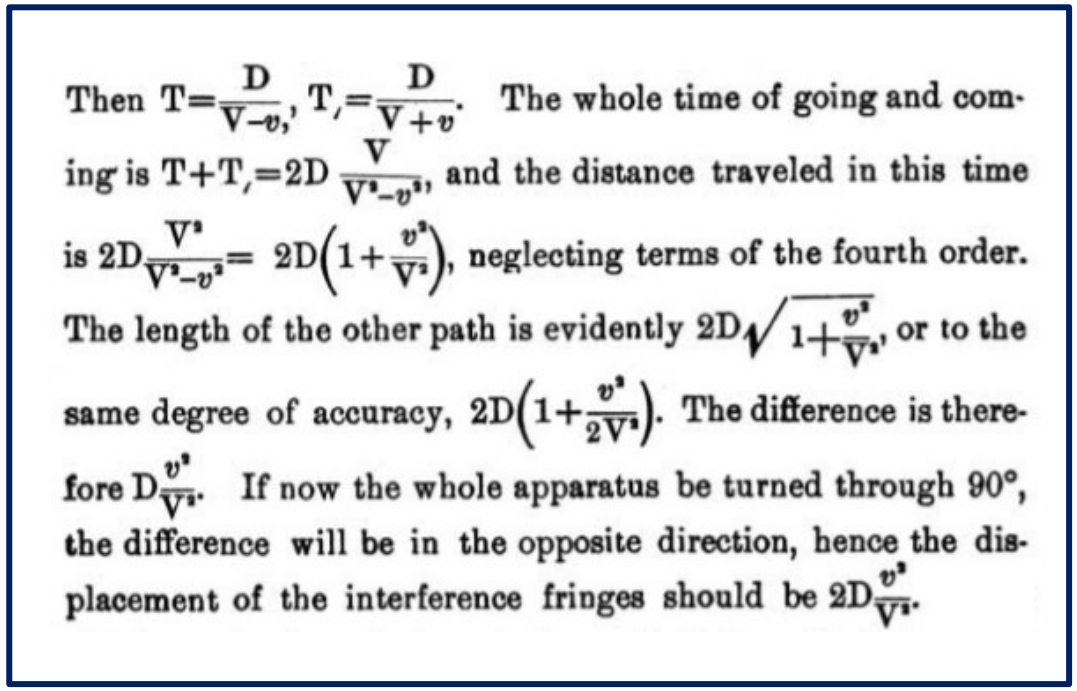
1. **Einstein says 1=0, which is mathematically incorrect** and invalidates relativity theory.
2. **Modern Mechanics is a three-system theory** consisting of a stationary system, a moving system, and an oscillating system.
3. **Relativity is** a three-system theory **mistreated as a two-system theory.**
4. **ξ is a length** that represents one-half the cyclical length of an oscillating system; it is not a moving system position or coordinate.
5. **τ is the time to travel length ξ** and is found using the incremental mean equation.
9. **Modern Mechanics and relativity both produce,** $E = mc^2$ which, due to truncation, is properly stated as the approximation: $\boldsymbol{E \approx mc^2}$.
10. **Every experiment that validates $\boldsymbol{E = mc^2}$ supports Modern Mechanics** and relativity.

Do Modern Mechanics
and relativity always make
the same predictions?

Or do they sometimes
make different
predictions?

The 1887 Michelson Morley Experiment is widely accepted as a foundational experiment that aligns with relativity.

Relativistic Interpretation



Then $T=\frac{D}{V-v}$, $T_{,}=\frac{D}{V+v}$. The whole time of going and coming is $T+T_{,}=2D\frac{V}{V^2-v^2}$, and the distance traveled in this time is $2D\frac{V^2}{V^2-v^2}=2D\left(1+\frac{v^2}{V^2}\right)$, neglecting terms of the fourth order. The length of the other path is evidently $2D\sqrt{1+\frac{v^2}{V^2}}$, or to the same degree of accuracy, $2D\left(1+\frac{v^2}{2V^2}\right)$. The difference is therefore $D\frac{v^2}{V^2}$. If now the whole apparatus be turned through 90°, the difference will be in the opposite direction, hence the displacement of the interference fringes should be $2D\frac{v^2}{V^2}$.

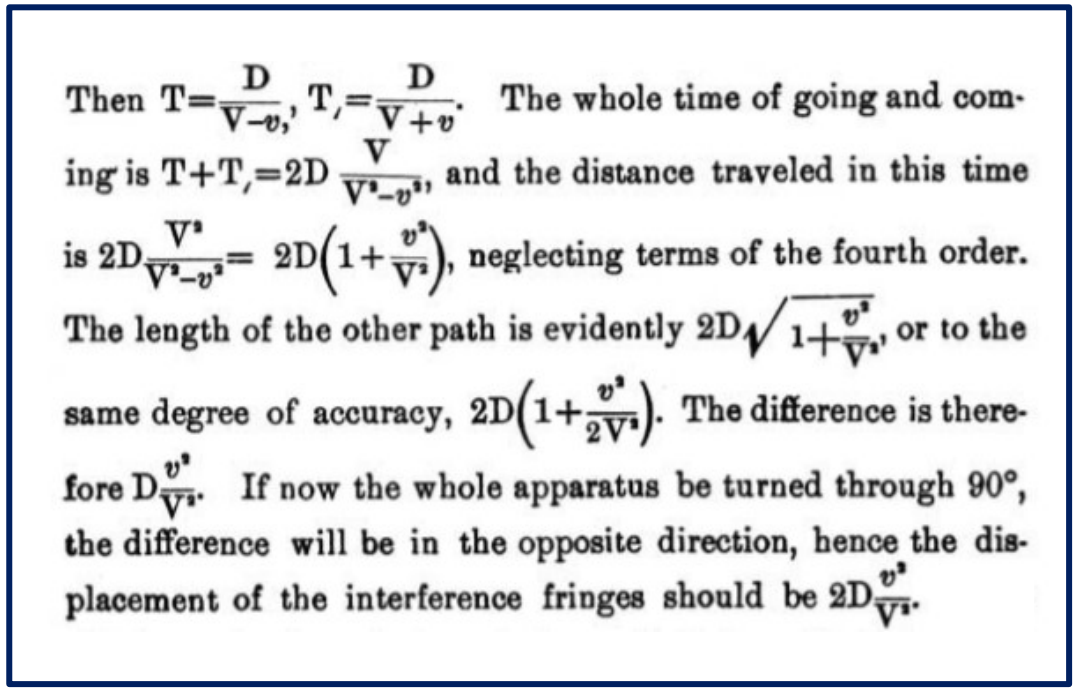
Yellow light: $D = 5.24\ X\ 10^{14} Hz$

According to the Michelson-Morley equations, when v=0:

- $D_1 = 2D\sqrt{1+\frac{v^2}{c^2}} = 10.48\ X\ 10^{14} Hz$
- $D_2 = 2D\left(1+\frac{v^2}{c^2}\right) = 10.48\ X\ 10^{14} Hz$
- $diff(D) = D\frac{v^2}{c^2} = 0$
- The individual light rays, with a frequency of $10.48\ X\ 10^{14} Hz$, falls outside of the visible range of the human eye ($4.30\ X\ 10^{14} Hz$ to $7.70\ X\ 10^{14} Hz$)
- Their experiment is not capable of counting the number of elapsed cycles of light

The 1887 Michelson Morley Experiment is widely accepted as a foundational experiment that aligns with relativity.

Modern Mechanics Interpretation



Then $T=\frac{D}{V-v}$, $T_{,}=\frac{D}{V+v}$. The whole time of going and coming is $T+T_{,}=2D\frac{V}{V^2-v^2}$, and the distance traveled in this time is $2D\frac{V^2}{V^2-v^2}=2D\left(1+\frac{v^2}{V^2}\right)$, neglecting terms of the fourth order. The length of the other path is evidently $2D\sqrt{1+\frac{v^2}{V^2}}$, or to the same degree of accuracy, $2D\left(1+\frac{v^2}{2V^2}\right)$. The difference is therefore $D\frac{v^2}{V^2}$. If now the whole apparatus be turned through 90°, the difference will be in the opposite direction, hence the displacement of the interference fringes should be $2D\frac{v^2}{V^2}$.

Yellow light: $D = 5.24\ X\ 10^{14} Hz$

According to the revised Michelson-Morley equations that use an "average", when v=0:

- $D_1 = D\sqrt{1+\frac{v^2}{c^2}} = 5.24\ X\ 10^{14} Hz$
- $D_2 = D\left(1+\frac{v^2}{c^2}\right) = 5.24\ X\ 10^{14} Hz$
- $diff(D) = D\frac{v^2}{c^2} = 0$
- The individual light rays, with a frequency of $5.24\ X\ 10^{14} Hz$, falls within of the visible range of the human eye ($4.30\ X\ 10^{14} Hz$ to $7.70\ X\ 10^{14} Hz$)
- Their experiment is a frequency based experiment

A frequency-based analysis of the Michelson Morley Experiment using the revised Modern Mechanics equations shows that their experiment was a success. Experimental alignment with relativity requires rejecting the hypothesis and observed measurements, which negates the experiment.

Relativity

- ☒ **Rejects Hypothesis**
  Rejects the experimenter's hypothesis of an Earth Orbital Velocity (EOV) of $30km/s$.
- ☒ **Actual Results Do Not Agree with Original (or revised) Hypothesis**
  Coverts the recorded measurements into an EOV that is "is probably less than one sixth the earth's orbital velocity, and certainly less than one fourth", or approximately $5 - 8km/s$
- ☒ **Rejects Actual Results**
  Actual results are dismissed as experimental error and $0km/s$ is used instead.
- ☒ Observed error is 0 because the experiment's hypothesis and measured results are both rejected. Otherwise, the error would be $\mathbf{5 - 8km/s}$.
- ☒ **Analysis not aligned with device capabilities**
  Count-based analysis is not possible with the experimental device.

Modern Mechanics

- ☑ **Accepts Hypothesis**
  Retains the experimenter's hypothesis of an EOV of $30km/s$.
- ☑ **Actual Results Agree with Match Original Hypothesis**
  Converts the recorded measurements into an EOV of $32km/s$
- ☑ **Accepts Actual Results**
- ☑ Observed error is: $\mathbf{2 - 3km/s}$.
- ☑ **Analysis aligned with device capabilities**
  Frequency-based analysis aligns with experimental device capabilities.

Top Ten Insights that Disrupt Modern Physics

1. **Einstein says 1=0, which is mathematically incorrect** and invalidates relativity theory.
2. **Modern Mechanics is a three-system theory** consisting of a stationary system, a moving system, and an oscillating system.
3. **Relativity is** a three-system theory **mistreated as a two-system theory.**
4. **ξ is a length** that represents one-half the cyclical length of an oscillating system; it is not a moving system position or coordinate.
5. **τ is the time to travel length ξ** and is found using the incremental mean equation.
7. The **Michelson-Morley and Miller's** 1933 experiments both **evaluate to 30km/s** when analyzed **using Modern Mechanics.**
8. **Relativity rejects the Michelson-Morley hypothesis and** dismisses their measured **actual results** as experimental error.
9. **Modern Mechanics and relativity both produce,** $E = mc^2$ which, due to truncation, is properly stated as the approximation: $\boldsymbol{E \approx mc^2}$.
10. **Every experiment that validates $\boldsymbol{E = mc^2}$ supports Modern Mechanics** and relativity.

Is there a way that we can be sure that this analysis is correct? Yes: Einstein's required spherical wave proof fails because the transformed shape is not a spherical wave. (Draw it).

The second shape in Einstein's Spherical Wave Proof is not a spherical wave because the points do not all share a common radius.

We now have to prove that each ray of light reproduces itself, as measured in the moving system, with a velocity of c, if this is what we assumed is the case in the resting system; for we have not yet supplied the proof that the principle of the constancy of the speed of light is compatible with the principle of relativity.

At time $t = \tau = 0$, a spherical wave is emitted, from the joint point of origin of both systems, that propagates in System K [the stationary system] at velocity c.

If (x, y, z) is a point touched by this wave, then

$$x^2 + y^2 + z^2 = c^2 t^2 .$$

With the aid of our transformation equations and a simple calculation, this equation is transformed into

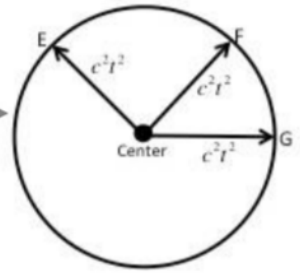
$$\xi^2 + \eta^2 + \zeta^2 = c^2 \tau^2 .$$

So, the transformed wave when viewed from [System k] the moving system is a spherical wave that propagates at velocity c. This proves that both principles are compatible.

Einstein's Spherical Wave Proof

☑ All points maintain equality
☑ Points share common radius

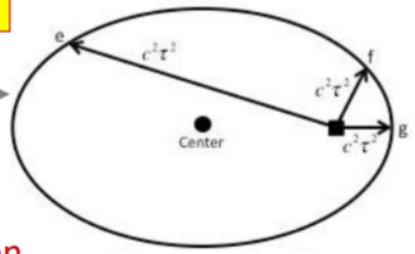
Original wave is a spherical wave



Proof Fails

☑ All points maintain equality
☒ Points do not share common radius

Transformed wave is not a spherical wave



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Key Questions

The idea that Einstein's special relativity theory could be wrong is hard to accept because it has 1) been reviewed for more than a century and no one has found anything significantly wrong, and 2) it has a wide-body of experimental support that, thus far, only align with relativity.

Einstein says 1=0, which is mathematically incorrect and invalidates relativity theory.

1. How can an equation go from being "always equal" (which is must be since it is how the equation is created), to a statement that is largely unequal?

2. If Einstein is only performing a substitution followed by simplifying the equations, how can a mistake be introduced to cause the equations to be unequal?

3. If relativity is wrong, why does it appear to work and have a wide-body of experimental support?

4. Is there an alternative theory that works as well as (or perhaps better than) Einstein's theory?

Goals

1. Introduce an easy-to-remember phrase that clearly states the mistake that invalidates Einstein's relativity theory
2. Share insights into how the mistake can go undetected for 100+ years
3. Show how an incorrect theory can still provide useful answers
4. Introduce an alternative theory of moving systems – called Modern Mechanics - that is easy to understand and performs better than relativity

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More Information

- https://vixra.org/pdf/2108.0044v1.pdf
- www.StevenBBryant.com
- Einstein vs. Newton (The Rematch) (see website)
- Disruptive: Rewriting the rules of physics

Thank you:

Sarah Bryant-Cole (Illustrator, Disruptive)
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