

# What is time?

## On the Construction of the World Formula

### Summary and Experimental Proof

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### Overview

In the previous works "Unified Principles of Nature: Solution to the Problem of Time",<sup>1</sup> "Solution to the Problem of Time II +III",<sup>2</sup> "Search for the World Formula",<sup>3</sup> etc.<sup>4</sup> A way was shown how a fundamental misconception in contemporary science can be uncovered by an investigation of the concept of "time" and how a world formula can still be constructed by correcting fundamental misconceptions and fallacies of Einstein and Planck. The main results of the author's work in recent years are to be summarized here and the world formula is to be formulated tentative - according to the current state of research. As a result, a simple plausible explanation is identified as the cause of the current incompatibility between the Standard Model of physics (Electromagnetism) and the General Theory of Relativity (Gravity): While the General Theory of Relativity uses the gravitational center of the solar system as a reference point for the definition of time and space, the Standard Model of physics uses the center of the Earth as a reference point for the definition of space and time. This is physically and mathematically incompatible as long as the dimensions of space and time are not uniformly defined by the concept of  $\pi = \text{Time} / \text{Length}$  (Circumference / Diameter).

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<sup>1</sup> Pohl M.U.E (2019): Unified Principles of Nature I, Scientific God Journal Vol 10 No3, <https://scigod.com/index.php/sgj/article/view/669>

<sup>2</sup> Pohl M.U.E (2020): Unified Principles of Nature II +III, Scientific God Journal Vol 11 No1, <https://scigod.com/index.php/sgj/article/view/718>

<sup>3</sup> Pohl M.U.E (2022): Search for the World Formula, Scientific God Journal Vol 13 No1, <https://scigod.com/index.php/sgj/article/view/781>

<sup>4</sup> Pohl M.U.E (2023): Unification of Electromagnetism and Gravity by correction of Einstein's ill defined speed of light <https://vixra.org/abs/2307.0141>

## 1 What is time ?

The term time is used for two different phenomena of perception. On the one hand, we use the term as a synonym for the principle of cause and effect or the principle of causality in general (yesterday = cause, tomorrow = effect), on the other hand, we use the concept of time in relation to "movements" or relative movements, in which no cause and effect can be differentiated. When two things are moving towards each other at an accelerated rate, we cannot say which of the two things is the cause of the acceleration.

### A : Time<sub>A</sub> as a principle of cause and effect

- Time<sub>A</sub> = an "absolute" time independent of space (Newtonian time)
- Time<sub>A</sub> = the combined driving force (cause of everything)
- Zeit<sub>A</sub> = God
- Time<sub>A</sub> = expression of free will
- Time<sub>A</sub> = expression of infinity
- Time<sub>A</sub> = expression of a living universe
- Time<sub>A</sub> = Not measurable, not detectable in experiments
- Time<sub>A</sub> = Only spiritual and can be experienced through feelings

Quantum theory has "proven" that this aspect of the concept of time (the principle of causality) is not measurable. Here it becomes clear that the assumption of a universally valid time as a principle of order is not amenable to measurement. However, quantum theory thrives on the assumption that universal time exists as a "measurable" phenomenon, which is not the case. This is the only reason why this theory appears to be "indeterministic".

### B: Time<sub>B</sub> as a derivative from the concept of relative motion

- Time<sub>B</sub> = relativistic time, derived from relative motions
- Time<sub>B</sub> = only measurable as angular measure (angular velocity)
- Time<sub>B</sub> = no distinction between cause and effect

The concept of time, which is derived from relative movements, for everything measurable and demonstrably accessible to man in experiments, the material world. Insofar as this time can only be measured as an angular measure, this time is necessarily connected to space to form a space-time that represents our means of "measuring" space and time. Einstein's theories of relativity and the proof of their validity have been "proven" that this time forms the basis of our measurement technology

"Time" as a term refers to two fundamentally different aspects (dimensions) of our perception that must be treated separately.

## 2 What is Physics, What is Theology: Necessary Distinction for the Construction of the World Formula

In order to construct the world formula as a logical definition of space-time, it is necessary to strictly separate what man can prove and falsify in experiments, i.e. what is objectively accessible to man at all and what is only subjectively accessible, i.e. what can be experienced by the individual, but is not measurable. It is not possible to physically explain the feelings of another living being in the sense that they can be measured or predicted in experiments. Thus, in order to establish a "world formula", this aspect of time must be excluded from physics and must not be the subject of physical theories related to the materially experienceable, but must be the subject of discussion within the framework of theology.

Currently, however, absolute time is still defined and anchored as a physical dimension / quantity in physics, although Einstein actually showed that this time does not exist in the sense of measurable time.

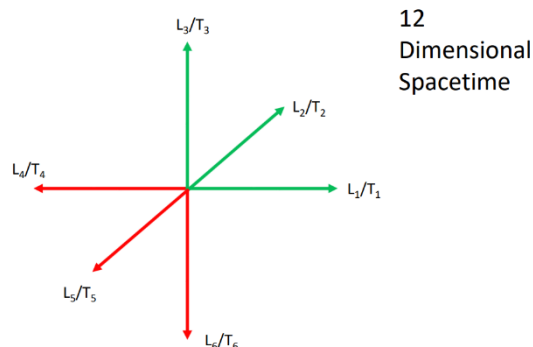
The definition of time on which our entire science edifice is currently based

$$T_{\text{absolut}} \quad f_{cs} = \text{constant} = \frac{9192631770}{1 \text{ s}} = \frac{1}{T} \quad (1)$$

is therefore to be rejected for the world formula and banished as an inadmissible physical dimension, because this aspect of time can only be experienced spiritually and reflects the nature and work of God (a living universe), which is only accessible to feeling. Unfortunately, this also shows that the entire Western culture has indulged in an illusion for centuries and with Galileo at the latest science has claimed the sovereignty of interpretation over God, although this claim must be called irrational and megalomaniacal.

## 3 What movement ?

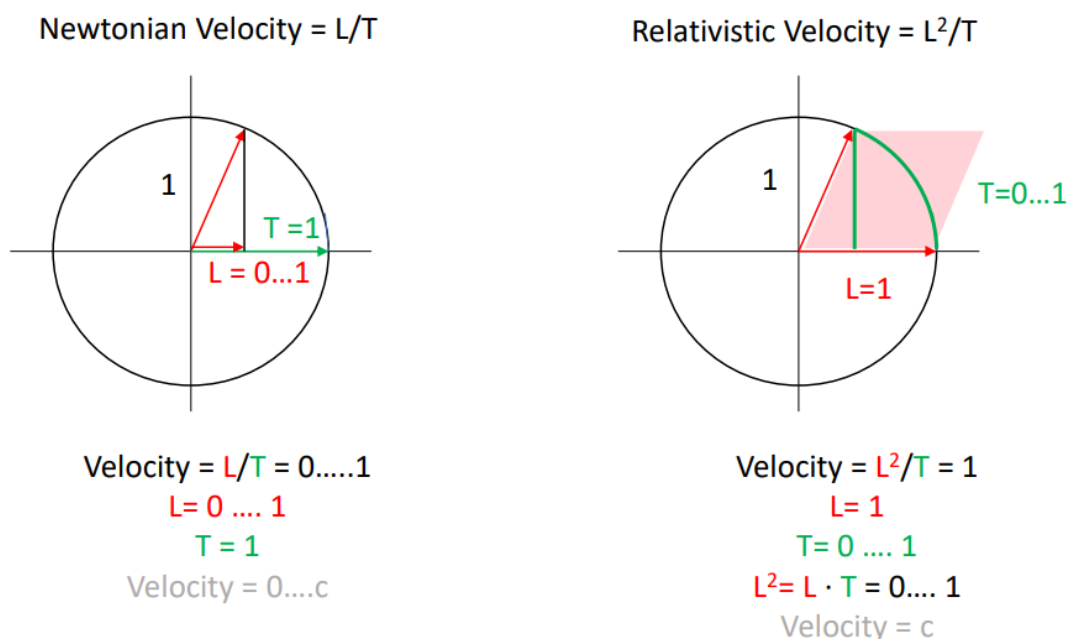
Although Einstein correctly recognized that there is no such thing as a general time as Newton assumed it, or that such a time is not definable, and with the postulate of the constant speed of light in a vacuum defines a "universe clock" that introduces a relativistic time instead of a universally valid time, Albert Einstein overlooked the fact that with the postulate speed of light = constant the dimensions length and time become interchangeable and "time" in principle (which is why the principle of causality no longer applies in quantum theory), but Albert Einstein defined this relativistic time only for one dimension and only in one direction. However, the space has three dimensions, each with two directions. So there are a total of 12 dimensions to consider. Einstein's fundamental mistake was that he assumed that one could characterize a velocity in the dimension of length / time. However, this is only true if one assumes a universally valid time or absolute



time, to which this concept of speed is supposed to refer. However, as shown, such a movement does not exist at all, so that relative motions can only be described in the dimension length<sup>2</sup>/time, because "time" is first measured by a motion (time / length) and then related to a third length, so that motion (relatively) can only be formally described as a three-dimensional phenomenon :

$$\text{Movement} = \text{Length A} \cdot \text{Length B} / \text{Time} \tag{2}$$

## Movement : Length/Time vs. Length<sup>2</sup>/Time



So because velocities can only be given in the dimension L<sup>2</sup>/T, 12 dimensions in spacetime are needed, since a square cannot be formed with negative numbers. To put it more simply, the coordinate system must not have negative numbers, but must always be described with positive numerical values from the source.

Experimental proof:

If one takes into account that, contrary to Einstein, the connection between space and time is not given by L/T = constant = speed of light, but by L/T = 1/π and also that this connection is to be applied three-dimensionally ( T<sup>3</sup>/L<sup>3</sup> = constant = π<sup>3</sup> ) and not one-dimensionally, taking into account that the meter was originally (1793) defined as 1/4000000000 of the Earth's circumference and the second as 1/86400 of the Earth's day

$$\pi^3 = \frac{\text{Erdumfang}^2}{2 \cdot \text{Lichtgeschwindigkeit}} \cdot \frac{1}{\text{Erddentag}} \tag{3}$$

$$\text{Lichtgeschwindigkeit} = \frac{\text{Erdumfang}^2}{2 \cdot \text{Erdentag}} \cdot \frac{1}{\pi^3} \quad (4)$$

$$\text{Lichtgeschwindigkeit} = \frac{40078091,23^2 \text{ m}^2}{2 \cdot 86400 \text{ s}} \cdot \frac{1}{\pi^3} = 299792458 \frac{\text{m}^2}{\text{s}} \quad (5)$$

The relative deviation between the circumference of the Earth, calculated here from the speed of light, and the mean circumference of the Earth at the equator of 40075017m (WGS 84) given in the literature, is  $7.6706 \cdot 10^{-5}$ . The deviation is thus in the range of the relative uncertainty of the gravitational constant in the third power and thus in the expected value range. Thus, it was shown that the speed of light in a vacuum is neither constant nor a constant of nature.

#### 4 The World Formula : 12 Dimensional Space-Time

The world formula was originally formulated in 2019 as

$$12 \pi c^3 = 1 \quad (6)$$

Taking into account the fact that the number of circles in one-dimensional space has the dimension  $T/L = \pi$ , but in three-dimensional space the dimension  $T^3/L^3 = \pi$ , this formula can be used in the dimension analysis (L= length as distance; T = time as angle) can be written as

$$12 \cdot \frac{T_1 T_2 T_3}{L_1 L_2 L_3} \cdot \frac{L_4 L_5 L_6}{T_4 T_5 T_6} = 1 \quad (7)$$

and is to be understood as the definition of three-dimensional space as the mathematical "stage" of world events, as we can measure it at any point in time, but without being able to draw conclusions about the past or future from it.

Experimental proof:

$$12 \pi \left( \frac{10^{-5}}{12} \frac{c \cdot R_\infty}{f_{Cs}} \right)^3 = 1 \quad (8)$$

$$12 \pi \left( \frac{10^{-5}}{12} \frac{299792458 \cdot 1,0973731568162E+07 \text{ m} \cdot \text{m}^{-1}}{9,1926317700000E+09 \text{ s} \cdot \text{s}^{-1}} \right)^3 = 0,99998364.. \quad (9)$$

(error  $1,635 \cdot 10^{-5}$  within uncertainty of gravitational constant)

- c = Speed of light in Vacuum (Dimension L/T)  
Definition of Length in Base SI Units; not measured
- $R_\infty$  = Rydbergconstant for infinite mass  
Dimension 1/L, most precise natural constant measured in physics
- $F_{Cs}$  = Hyperfine Frequency of Caesium 133  
Dimension 1/T; Definition of Time in Base SI Units; not measured

### 5 Illustrative Unification of Quantum Theory and General Relativity

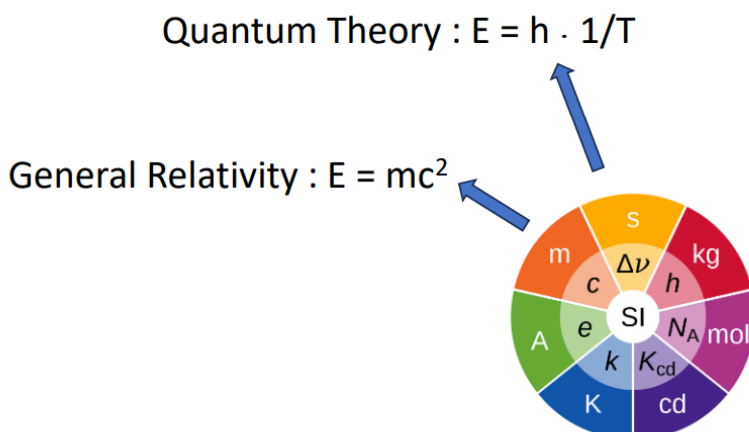
In view of the fact that in our measurement system, the 7 basic quantities in physics, "time" has been defined twice, with each definition being wrong in itself, resulting in two worldviews, both of which are inaccurate and could not be reconciled. First, time over the constant speed of light is defined as a relative magnitude

$$T_{\text{relativ}} \quad c_{\text{Vakuum}} = \text{constant} = \frac{L}{T} \quad (10)$$

and once again as an absolute measure

$$T_{\text{absolut}} \quad f_{CS} = \text{constant} = \frac{1}{T} \quad (11)$$

Via the assumption or the law of conservation of energy, this then leads to the theory of relativity, in which  $L/T = \text{constant}$  applies to the conservation of energy, and to the Quantum Theory in which  $L^2/T^2 = \text{constant}$ .



It can be said that in the general theory of relativity (gravity) or in the "macrocosm" the "constant" speed of light in a vacuum is derived from the constant movement of the earth,

$$c_{GR} \quad \text{Speed of light} = \frac{\text{Earth-Diameter}^2}{2 \cdot \text{Earth-Day}} \cdot \frac{1}{\pi^3} \quad (\text{Length}^2/\text{Time}) \quad (12)$$

Whereas in quantum theory (in the microcosm) the speed of light is derived from a constant motion in the atomic model (from 8)

$$c_{QT} \quad \text{Speed of Ligth} = 10^5 \cdot 12^{\frac{2}{3}} \cdot \pi^{-\frac{1}{3}} \cdot \frac{f_{CS}}{R_{\infty}} \quad (\text{Length}/\text{Time}) \quad (13)$$

It can be seen that these two theories are physically incompatible because of a different definition of "time".

If we consider both definitions of time (absolute and relative) in the base units, we can see that  $fcs * c = \text{constant}$  was defined there and thus  $L/T^2 = \text{constant}$  in the dimensional view, although  $L^2/T = \text{constant}$  must hold as shown above.

However, the correct definition of time must be

$$T_{12D} \quad \frac{T}{L} = \text{constant} = \pi$$

and the definition of length

$$L_{12D} \quad \frac{L^2}{T} = 1$$

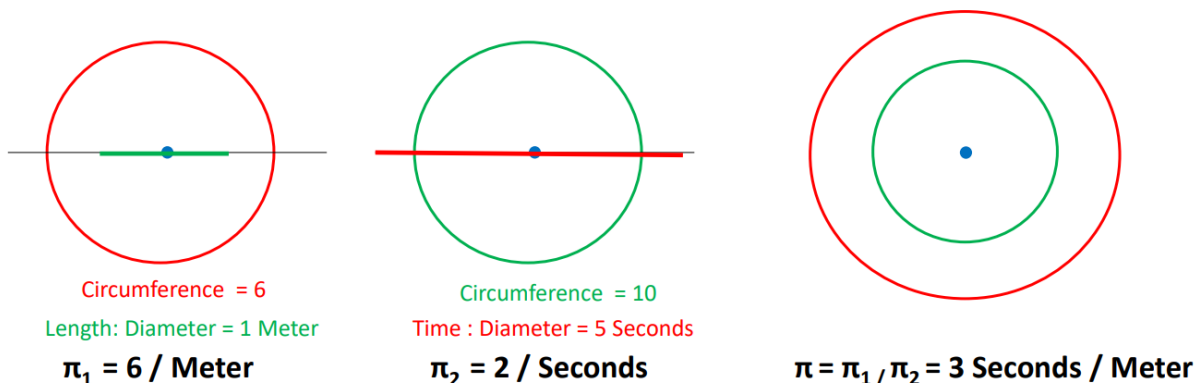
## 6 Discussion and Conclusion

As a result, the "world formula" in the sense of the correct definition of "time" eliminates all natural constants and all physical quantities, and the only physical qualities (measured variables) are length in space (as a straight line between two points A and B) and time (as an angular measure between three points in space A, B and C). As the only "natural constant" in the sense of a "number", the circle number remains  $\pi$ , since with the application of complete general relativity and the renunciation of a reference to God in the system of units, all measured quantities are always relative and cannot have a fixed (absolute) value.

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### Understanding $\pi = \text{Time} / \text{Length}$ as relativistic motion between observer and observed

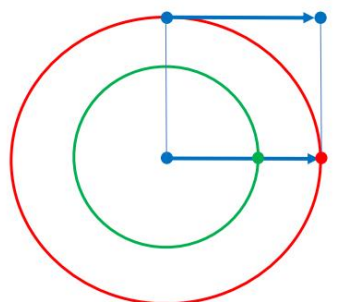
If  $\pi$  is understood as ratio between Time and Length, this means it is not longer a „number“, but an indication for rotational speed. It becomes the definition of time and space.



The relation  $T/L$  then represents the amount of gravitational Force that correspond between observer and observed. So if the Earth and the Earth's rotation are defined as a reference frame, each celestial body receives its own "gravitational constant" in the Dimension  $T/L$ .

Ill defined Speed of light (c = const.) vs. „World-Formula“  $\pi = \text{Time} / \text{Length} = \text{constant}$

Any relativistic speed in the length/time dimension is an orbital motion. Every relativistic speed is a relation between two speeds, where one speed defines the length in space and the other speed defines the rotation period (time). The fundamental connection between space and time is therefore the relation of two ideal circles of different diameters with respect to a common center.



Space: Length (L) =  $2 \cdot \pi \cdot r_1$

Time: Cycle (T) =  $2 \cdot \pi \cdot r_2$

Velocity:  $(L/T) = 2 \cdot \pi \cdot r_1 / (2 \cdot \pi \cdot r_2) = r_1 / r_2$

But :  $r_1 / r_2$  is dimensionless !

This is the fundamental mistake in Einsteins Postulate. The idea „speed of lighth = constant“ represents a fundamental mistake in dimensional analysis .

On the contrary  $\pi_1 / \pi_2$  is not dimensionless

If  $\pi$  is defined to be the fundamental relation between space and time:

$\pi_1 = \text{Circumference} / \text{Length}$

$\pi_2 = \text{Circumference} / \text{Time}$

**$\pi = \pi_1 / \pi_2 = \text{Time} / \text{Length}$**



Expulsion from Paradise, Giovanni di Paolo (1445)

As a result, a simple plausible explanation is identified as the cause of the current incompatibility between the Standard Model of physics (Electromagnetism) and the General Theory of Relativity (Gravity): While the General Theory of Relativity uses the gravitational center of the solar system as a reference point for the definition of time and space, the Standard Model of physics uses the center of the Earth as a reference point for the definition of space and time. This is physically and mathematically incompatible as long as the dimensions of space and time are not uniformly defined by the concept of  $\pi = \text{Time} / \text{Length}$  (Circumference / Diameter).

Much more important, however, are the social implications of the realization that science (as in retrospect does not occur for the first time in the history of mankind) has fundamentally erred with regard to our knowledge of nature and against the background of this new insight the conclusion is required that it was not life that originated in the universe, but that the universe must have arisen from life.

On the basis of this insight, it also seems important to note that contemporary science has in fact taken over the interpretive sovereignty over the concept of a living universe, i.e. over God, finally in the 16th century with the renunciation of the geocentric worldview through an inadmissible definition of space and time, and today functions more as a substitute religion, i.e. as a belief in something constant in the universe (the speed of light). in which the majority of people in the world are excluded from the discussion about God and about science by the "diktat" of "science".