
Original Paper

Natural Constants: Alternative Descriptions Lead to an Alternative World View

Walter van Laack

Prof. Dr. med., Aachen / Germany (2026)

The meanwhile known natural constants are physically measurable quantities that are crucial for the existence of our universe.

What truly lies behind them, what connects them, and why they are the way they are, remains completely unknown.

But for sure one can say, if they weren't the way they are, our universe wouldn't exist at all.

There would be neither atoms, nor anything we call "solid matter", and therefore neither galaxies, planets, nor planetary systems—and, of course, no living beings.

In several books since 1999, I have demonstrated and explained in detail that only a few things are needed for a precise description of these natural constants:

These include the first four ordinal numbers, 1 to 4, and two infinite number sequences that result from geometric ratios and are therefore independent of any mathematical calculation system.

The first results come from the ratio of a continuous division. I have termed the resulting infinite sequence of numbers 618... the world's "Optimum." It is identical to the "Golden Ratio" or "Golden Section Φ ".

The second infinite sequence of numbers is 273..., and I named it the "Limit of Feasibility Ω ". Moreover, it emerges from the mathematical division of two fundamental geometric figures: starting from a perfect unit circle – the smallest finite point – and then through a logically rigorous process, a square emerges – after just three steps – as the first new geometrical perfection. From an underlying, perfect unity, something new comes into being alongside a perfect multiplicity after just three steps:

First in the German volume of my three-part book series "A Better History of Our World, Vol. 1, The Universe" (2000 & 2001) I offered a little thought experiment, inviting readers to play the role of the creator of the world by just drawing on a simple sheet of paper.

Starting from the smallest finite point, even the smallest circle, what means the unit circle underlying this discussion, four identical circles could easily be formed after just a few logical steps, so that connecting their centers resulted in the new perfect creation: a square. Relating this square to its original circle yields the aforementioned infinite sequence of numbers 273..., both through the area and perimeter ratios, and, since a geometric ratio, naturally completely independent of any mathematical calculation system.

Using just these two geometrically derived ratios and the first four ordinal numbers, all fundamental constants of nature can be defined as number ratios (fractions) with only very slight deviations from the well-known measurements:

1) A very important fundamental constant is the speed of light, c .

Albert Einstein (1879–1955) recognized it as the absolute limit for any movement of physical bodies in a vacuum. Light is also an outward-directed effect from a body, propagating infinitely throughout the universe.

It was measured at 2.99792458×10^8 m/s, i.e. almost 300,000 kilometres per second. Presumably, however, the ordinal number "3" stands "behind" this measured value and is thus the really crucial and indicative value.

In the decimal system, the upper limit for the measured value of "c" can be obtained by multiplying the number 3 by any multiple of 10 (i.e., 3×10^n). The number 10 again is the sum of the first four ordinal numbers (= 1+2+3+4).

Thus, the "ideal", on which the speed of light is possibly based, is defined by the decimal multiple of an "information", depicted by the ordinal number "3". This "informational ideal" therefore defines the speed of light as a constant. The deviation of the actual measured value (2.9979...) from the number 3 is only 0.069%.

Light does not originate from the interaction of *two* bodies, but rather emanates from only *one* body. Its value is directly related to the expansion of space in the universe.

The product of 3×10^n can stand for this. I have already explained this in detail in some of my previous books, starting in the year 1999 (see my book-website).

In contrast, *effects between two interdependent (finite) bodies in space* are defined by the *reciprocal value of this product*.

Instead of 3×10^n , the following expression then applies:

$1 : (3 \times 10^n)$ or $1/3 \times 10^{-n}$ (cf., for example, gravitation):

2) The gravitational force (also called gravity or attractive force) is therefore an effect *between two three-dimensional, i.e., finite, physical or material bodies*, e.g., between the Earth and the Sun.

Consequently, the product of the number 2 (since there are two bodies) and the previously mentioned *reciprocal value* can be established here.

Thus, the following applies:

$2 \times (1/3 \times 10^{-n})$ or $2/3 \times 10^{-n}$. This is also $6.6666... \times 10^{-n}$.

The most important constant in our universe besides the speed of light is, as is well known, the gravitational constant (G).

"G" was measured as 6.67259×10^{-19} (Nm²/kg²).

This corresponds to the calculated value with a deviation of only 0.088%.

3) The so-called Planck constant (h) uses a very similar factor:

It describes the *smallest effect between two* bodies in the universe.

Therefore, the same reciprocal ($1/3 \times 10^{-n}$) must play a role again; because, as the reciprocal of the factor for spatial expansion and the speed of light, it here represents all inward-directed effects, what means effects towards a physical body.

Consequently, it must also be multiplied by 2 (i.e., $2/3 \times 10^{-n}$), since it is again a *measured effect between two bodies*.

In fact, the measured value of h is 6.626075×10^{-34} (J/s).

The deviation here is only 0.61% from the calculated value.

4) The two most important atomic particles, the *proton* and the *electron*, are to be understood as being polar, meaning they are in opposition to each other.

The proton is called positively charged, and the electron is therefore negatively charged.

In the hydrogen atom (H), by far the most important and most widespread atom in the entire universe, only these two atomic particles, the proton and the electron, are found.

Not only in terms of their opposite charges, but also in terms of their gigantic size differences, they truly represent two extreme opposites within a single atom.

This is particularly reflected in the ratio of their masses to each other, what is termed the mass quotient: It is also a fundamental constant of nature and amounts to 1836.152701.

Isn't it amazing that here once again the previously mentioned factor $2/3 \times 10^n$ (whereby $n=1$), now multiplied by my key figure for the "limit of feasibility Ω ", i.e., multiplied by 273..., arrives approximately at the same result?

In fact: $2/3 \times 10^1 \times 273... = 1820.9$.

The deviation is only about 0.84% from the calculated value.

5) Another important natural constant is the elementary charge. It should certainly be of an *optimal quantity*.

As I have shown, the mathematical blueprint of our world, which I have repeatedly postulated, provides the "Golden Section Φ " with the number sequence 618..., i.e. defining the ratio of the so-called "continuous division" of 1.618 to 1.

The actually measured value for the elementary charge is $1.60217733 \times 10^{-19}$ (C).

The deviation is only 0.99%.

6) Finally, a few words about the so-called fine-structure constant α , which, at the atomic level, determines the *minimum distances on an atomic level* – and thus again limits – between *two* smallest material components.

If it had a value other than $1 : 137.0359895...$ (\pm something!), then atoms could not connect in the usual way to form molecules. Instead of, for example, water, metals, stones, or sand, we would only see a pulp of atoms.

Therefore, it should also have something to do with the number sequence for the "limit of feasibility Ω ," i.e. the sequence 273...

Once again, we are dealing here with an *effect between two bodies* so that we should, analogous to the other constants, logically apply the factor 2 : 273 again (yet again a reciprocal value).

If we reduce this fraction we arrive at the value 1 : 136.5, which is only a deviation of 0.39% from the actual measured value ($1 : 137.0359895...$).

7) While not "classical" natural constants in the accepted sense, the infinite number sequences $\Phi = \underline{618}...$ and $\Omega = \underline{273}...$ are nonetheless all too often overlooked constants for "everything optimal" and - which I refer to - as the "limit of feasibility."

Modern science up till now only credits physical (sensory) perception with a real existence.

However, if one considers the world within a framework based on elementary mathematical logic, then we notice that a multitude of observations show that the number sequence $\Omega = \underline{273}...$ consistently marks limits, while the sequence $\Phi = \underline{618}...$ repeatedly proves to be a measure of the optimum in the world and thus also of perfection.

Concluding Remarks:

At this point, I'd like to briefly return to a very beautiful analogy.

In various earlier books, starting in 1999, I was the first to develop it and repeatedly emphasized its relevance to reality—even back in the last century:

It first explains metaphorically the emergence of "spirit" and (subsequently and from this) of "matter" from the divine, which is presumably the underlying principle of everything and entirely indescribable to us.

We already know that the imaginary (or complex) number "i" must definitely exist in reality. Nevertheless, it cannot be calculated – or mathematically derived – as the square root of "-1", although the square-root of "+1" can be calculated.

Squaring "i" first yields "-1". Then squaring it again yields "+1", and once more finally yields $(+1)^2$.

That should also be able to be done backward.

But it can't: The square root of "-1" cannot be calculated at all, and even the square root of "+1" give you two options, "+1" and "-1".

This simple analogy metaphorically provides the framework for everything that exists and arises in this world:

From an analogous "divine unity" (~ "i") arises the "informational" or the due to increasing complexity "spiritual" (~ "-1") and from it the "physical" or "material" (~ "+1").

Everything material in the world is subject to physical processes, such as regular *cyclical* growth and decay.

These processes are also described by a constant, the so-called Euler's number "e" and $e = 2.72\dots$

In mathematics, it is the base of the natural logarithm.

It also describes the decrease in prime numbers with increasing ordinal number (the "distance from 1").

Elementary mathematical ratios appear, once again, to be the clearly determining factors for important physical relationships.

It seems that not physics, but mathematics, especially geometry, is the foundation for so much in our universe – or, as I will call it, "the divine speech". Calculation systems and rules (arithmetic), on the other hand, are man-made. They are effective when they are based on and built upon geometric principles.

There are apparently two limits to material existence: a "*lower*" limit derived from the infinite sequence $e = 2.72\dots$ and an "*upper*" limit derived from $\Omega = 2.73\dots$

The "limit of feasibility $\Omega = 2.73\dots$ ", as I have shown, originates from the geometric ratio of a new square to its original circle ($= 1.273\dots$).

This also gave rise to the "golden section $\Phi = 1.618\dots$ "

It determines what forms in the world and how it *optimally* forms.

Since everything in our world is dynamic, the sequence for the optimum Φ must also be squared, resulting in 2.62...

The sequence $\Omega = 2.73\dots$, which I call the "Limit of Feasibility Ω ", can be determined solely from the first four ordinal numbers: We have $1 + 2 + 3 + 4 = 10$ and $12 \times 34 = 81$.

From this, we get: $(10 + 81) \times 3 = 273$.

I explained in detail and elaborated on why this makes sense and is not mere number-playing (or even number-crazy?) in my book "Greater Than The Entire Universe" (2022).

We therefore have four infinite number sequences that underlie our world, three of which differ by a

factor of "1":

The Golden Section " Φ " represents everything optimal, while Euler's Number "e" represents all important physical processes such as construction and decay.

Omega (Ω), as the "limit of feasibility," is self-explanatory.

Since the limit of feasibility " Ω ", results from the geometric ratio of the new perfection (square) to the initial perfection (circle), it also contains the fourth infinite number sequence, the constant π (Pi):

It is true that: 4 divided by 1.273... equals 3.141... = π .

All references see on my book website www.vanLaack-Buch.de