



# Frequency of Harmony and the Unified Theory of Everything. Across the Universe towards Human Body and Mind with Discovery of Neuroarchitecture Vinci Power Nap® Pendulum as the Biotechnology of the Future

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## Abstract

Science and geometry have always developed parallel and interpenetrated. The orbits of the planets around the Sun can be represented by ellipses as a result of the law of gravity. Simple geometric shapes are associated with simple dynamics because this kind of mathematical representation implies an interwoven relationship between the form of an object and the forces acting on it. The author's pioneering empirical observations and research on the biotechnology patented Vinci Power Nap® neuroarchitecture system, led to the a very important notion that this unique combination of a horizontal pendulum motion with a vertical harmonic oscillator, with a man lying inside as a pendulum lens - all together create harmony in the observed resonant frequency and period by presenting two values of the number Phi. If everything in the universe is made of energy, then maybe that energy can be defined in terms of 0,618Hz frequency, which was found in the Vinci Power Nap® pendulum, as a pattern of incessant space fractal transformation, inner fundamental force of nature and the matrix of creation. Feynman's fine structure constant can relate this golden ratio to quantum physics, leading to quantum biology, quantum gravity, the general theory of unification and even further to the M-Theory, unified field theory, theory of everything (TOE).

**Keywords:** Neuroarchitecture; Biotechnology; Biomedicine; Vinci Power Nap; Phi golden ratio; Pendulum; Frequency of harmony; Quantum biology; Cosmology; Unification; M-theory; Unified Field Theory; Theory of Everything (TOE)

## 1. Introduction

### "Real knowledge is knowing the causes" Aristotle

Johannes Kepler compared two key mathematical concepts - the Pythagorean theorem and the golden ratio as „a gold and as a precious gem" [1, 2] respectively. The author of the article notes that starting from the golden ratio occurring in Fibonacci spirals, Platonic solids, the works of Leonardo da Vinci, golden triangles, elliptical orbits and the laws of motion of Kepler's planets, spinning black holes, through the analysis of simple harmonic motion animation [3], drawings of SHM oscillations (free, damped, forced), Helmholtz resonance, shock and generated waves [4] since examples of a harmonic oscillator as a mathematical, physical, torsion pendulum and a weight suspended on a spring [5], can be seen that there are huge areas of mathematics, physics and biology that are delegated to model everything as simple harmonic oscillators. Planets and a pendulum whose forward and backward motion as harmonic oscillator is represented by a sinusoidal

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wave, vibrates, which can be observed from the movement of stars and pulsars in galaxies [6], in neuromechanics and biomechanics of walking or running animals [7, 8], through the interaction between atoms in the crystal to the current flowing in the circuits and the neurons. "Actually, all the molecules that make up the string vibrate like little harmonic oscillators at the same frequency. We could teach for hours about all kinds of systems, which basically boil down to this one equation, one way or another: the motions of atoms and the motions of the stars." [9].

The universe is made up of an infinite number of frequencies and vibrations, all of them in innumerable phase relationships with each other, some added together, and some canceled out. Each of the particles that make up the selected phenomenon is characterized by a unique frequency of vibration of the electron (understood as the vibration of the super strings that make up its physical image). The combined different frequencies of electromagnetic waves create everything that exists around us: light and its colors, sounds of the voice, melodies in music, various smells, flavors, the touch of silk or grass under the feet, and finally feeling the position of the own body in space. This is possible thanks to the senses that are able to perceive these particular waves and the perception can interpret them and make them tangible and specific. "Natural or externally induced vibrations, such as acoustic, seismic or electromagnetic signals, surround us on all sides, becoming an integral part of the external environment" [10] also affect the body internally, because it is constructed like a tuning fork. "From the biological point of view, vibrations are physical stimuli transferred directly from the vibrating medium to individual tissues of the human body or to the entire body" [11]. Each of the senses reacts to a specific frequency range of electromagnetic waves and vibrations within their range of geometric molecular structure [12, 13]. There is also the evidence for a human geomagnetic sense, as scientists from Caltech developed a robust experiment that shows human brain waves respond to changes in Earth-strength magnetic fields [14]. The senses constitute a kind of bridge between the invisible world of vibrations and what is visible and felt, translating this into thermodynamic thermal, chemical, physical or biological reactions in the body, based on changes involving ions, phase, nuclear and electrical transformations, etc., bringing closer the understanding of quantum biology and phenomena in larger scale.

The question is, how does this micro-world connect to a higher-level macro-world?

The author's proposed solution suggests that it may be a common resonance.

## 2. A physical and biological properties of the Vinci Power Nap® pendulum, gravity and gravitational waves

**"All our knowledge begins in our senses" - Leonardo da Vinci**

The neuroarchitecture of the interior of the Vinci Power Nap® (VPN) system - is created to calm overloaded senses, reduce stress, feel bliss, safety, regenerate the body and mind in the fastest way. It is based on the author's design of the synergy of the best elements created by nature (forest glade, or sea, mountains) in combination with physical dependencies on Earth, together with the resultant of the pendulum motion forces - through their interaction. The VPN system is intended for the wellbeing of a person who sways in the zero gravity position (ZGP) inside the flexible material that constitutes the pendulum arm (pendulum is a harmonic oscillator) being in another frame of reference, in an interior that soothes all the senses at once. It happens, among others, by calming down and soothing senses tired of receiving the multitude of sensory vibrations on a daily basis - by reducing amount of these sensory vibrations in a special designed environment, also thanks to the zero gravity position (in a weightless state in space) the tensions of muscles are reducing, the rocking process as the pendulum movement in the proper direction and pulsatile micro-massage of the material is giving the physiological feeling "as in the mother's womb". All of these relaxing factors together are leading the human inside the VPN to creative 20min power naps and to the restoration of mental and physical balance. The Vinci Power Nap® system is the innovative biotechnology giving fast natural regeneration of body and brain (Figure 1).

Laying down in ZGP in a moving pendulum VPN is felt on the physical and mental levels as an immediate experience of bliss, security, love - as if the „primordial sound" or vibration within a human being tuned by induction to the frequency given by the pendulum motion and its frame of reference in which it is located, up to a harmonious sense of unity with the whole universe (probably in synchronization with the frequency of a wave with a characteristic value). During observations and research on the VPN pendulum,



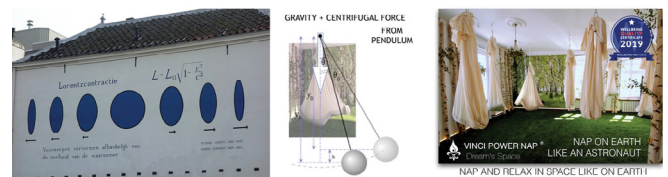
**Figure 1:** Take a nap and relax in space with frequency like on Earth, and take a nap on Earth like an astronaut in ZGP, with microgravity and hyper-gravity, first created with a VPN on Earth [135].

whose elastic material pulsating symmetrically in three axes and behaves like a quantum oscillator [15], creating the experimental visualization of the Lorentz transformation [animation: 16] leading to coherent state [17] which can be found in biological systems [18]. Also the coherence [19], a natural harmonization of internal human frequencies (breathing, heartbeat, brain waves) was noticed with the specific external frequency induced by pulsing and natural swing of the pendulum, read by a measuring device (Figure 3) as 0,618Hz and a period of 1,618s (Phi numbers). The author notes that the frequency of 0,618 Hz itself occurs during the coherence of the heart, calm breathing as well as within the range of neural oscillations of the Delta waves of range 0,5Hz - 2Hz in the brain, constituting the waves of night sleep in the NREM phase, in which natural regeneration takes place, repairing the cells of body and brain of a sleeping person, similar to the creative power nap [20]. Moreover, the 1,618 frequency is experienced by the embryo in the womb through pulsating flows caused by the correct difference between systolic and diastolic blood pressure values of the mother [135]. A pendulum is a mass suspended from a pivot point that swings freely. When a pendulum is moved sideways from its resting equilibrium point, gravity acts as a restoring force, accelerating the pendulum towards its equilibrium position.” [21-23]. It is similar to the movement of walking mother while the embryo is in the fatal waters in womb moving in this rhythm [24, 25]. The author, in research, additionally observed that the mass of the subjects did not play a role in the value of the period and frequency of the pendulum motion, as Galileo had predicted. According to relativity, mass tells space how to curve and space tells mass how to move, but gravity also tells space how to expand or compensate [26]. "The study on body swinging in VPN, in the context of gravitation, has shown the creation of simulated hyper-gravity of 1,49G and 0,7G microgravity on Earth! (from  $F=ma$ )" [135]. This is confirmed by the micro- and hyper-gravity observed in the experience with VPN's pendulums, occurring during swinging, which had an impact on the expansion or contraction of the material around the mass inside it, and thus also on the pulsating pressure on the mass as well on the dynamics of fluids (liquid flows, gas swirls, etc) and they, in turn, affect the material and its shape. „This distortion or curve following motion is what we perceive as gravity. Einstein also predicted the occurrence of gravitational waves, compressing space in one direction and stretching in another, sending waves through space-time” [27]. Similar like waves propagating over the surface of the water after a stone is thrown or waves in an oscillating source, and they affect both us, our environment and the planet. Gravitational waves which are propagating through the universe „could manifested in local compression and expansion of the universe's constituent parts, in which space and time are intertwined and dynamic, capable of stretching, shrinking and jumping as a result of changing the direction

of elementary particles or changes in the movement of giant objects like black holes” [28]. Moreover "a consequence of the special theory of relativity and space contraction for moving charges (Lorentz contraction) creates a difference between moving and resting charges, leading to the flow of current and the creation of a magnetic field" [29] (Figure 2). It is noticeable that there is a mutual interaction of various forces, including gravitational ones, where their resultant is read as the frequency of the pendulum motion of 0,618 Hz, which moves symmetrically in three axes and in the time. Through this could the VPN pendulum be an experimental visualization of quantum field theory in curved spacetime? Space-time geometry? Following among others: Einstein, Minkowski, Lorentz and Riemann (Figure 4). Could this VPN pendulum frequency create or represent "gravitational waves" of this given frequency that can act as a matrix for the growth and development of living beings on Earth? [30, 31].

### 3. Kepler, da Vinci, golden ratio and fractals

Without referring to Fibonacci, the German astronomer, astrologer, philosopher of nature and mathematician Johannes Kepler (1571–1630), a key figure in the 17th-century scientific revolution, author of many astronomical works, including: "Mysterium Cosmographicum" (The

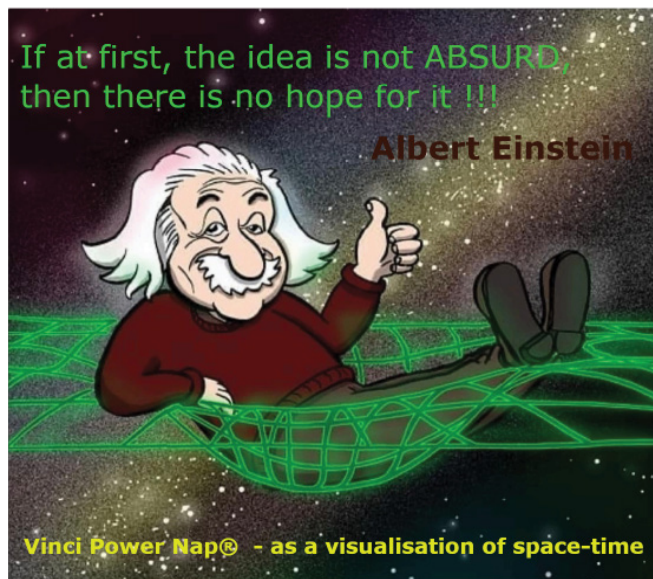


**Figure 2:** First: Formula of Lorentz contraction on a wall in Leiden, NL. Lorentz was chair of theoretical physics at the University of Leiden 1877-1910 [64], Second: VPN as moving pendulum, Third: Vinci Power Nap® interior.



**Figure 3:** The Vinci Power Nap® room, during experiment - measurement of micro- and hyper- gravity. The kN measurements during the swinging of the human body in VPN: multi-range dynamometer FC 00 5k. 5000N accuracy 1N No. fab 128, on loan from Wagi Wielkopolska Sp. z o.o. MOGA company. [135].





**Figure 4:** Is that a space hammock as part of Vinci Power Nap® cocoon or curved spacetime of the 4th dimension? Pic source: internet

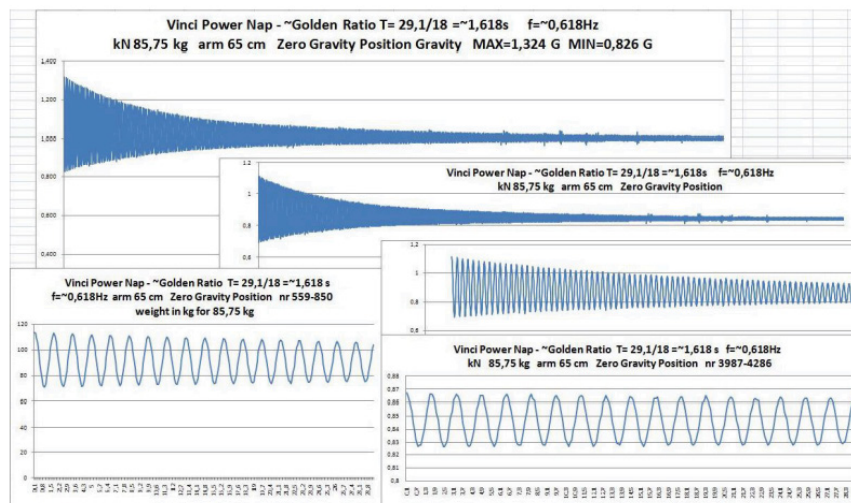
Sacred Mystery of the Cosmos 1596 and 1621), "Astronomia Nova" (New Astronomy 1609), also studied the Phi number and the number sequence 1, 2, 3, 5, 8, 13, 21 ..., as a golden ratio, albeit in a completely different context. In his work "Harmonices Mundi" 1619 (Harmony of the Worlds) where „harmony” referring to Greek mythology depicts: „order and harmony, balance of oscillation, vibration”, Kepler writes about the relationship of the music of the spheres and the proportion of tone intervals - as the golden ratio: "proportio divina" [32]. The golden ratio can be represented as follows: that small is compared to large, as well as large to the whole. This special ratio has been noticed by every culture on the planet, it can be found in patterns and structures from the tiniest particles of plants and animals, the spiral of hurricanes occurring in nature, to works in art, music, architecture, the great Giza pyramid, in the mathematical Fibonacci sequence, or in Leonardo da Vinci's "Vitruvian Man", showing the golden proportion in the dimensions of the human body - which, according to the master, inevitably follow geometric archetypes. The Vitruvian Man is an illustration to the 3 book of treatise "Ten Books on Architecture" by Vitruvius, in which he showed the human body as a proportion model for artists and architects to use it in works. Leonardo da Vinci (1452-1519) Italian Renaissance artist and scholar: painter, sculptor, architect, engineer, as well as discoverer, mathematician, anatomist, inventor, geologist, philosopher, musician, writer, he studied the surrounding nature all his life in search of "divine proportion". He is one of the most famous artists who used the golden ratio in his works, he also illustrated with his drawings "Divina Proportione" Luca Pacioli [33] and stated that "the wisest and noblest teacher is nature itself, which never breaks its own rights." Comprehensive information about the discovery of the golden ratio in the works of master

Leonardo da Vinci, among others, are provided at the Science Museum in Boston [10, 34-37]. Johannes Kepler finds in the golden ratio "the beautiful idea of continuing procreation" because he notes that if the greater part of the line divided by the golden ratio is added to the total, the sum for that line still remains in proportion to the golden ratio, resembling a self-like object or fractal in today's sense, which symbolize the basic metaphysical principle of the unbreakable connection of parts with the whole [38-42]. An example of a three-dimensional fractal, based on the proportion of the golden ratio, which "buds" to infinity, could be the alternately pulsating "oscillating" skeleton of a dodecahedron and an icosahedron "consisting of alternating beams of the edges of both polyhedra (...) and in which, with the increase of radii, surface and volumes are governed exponentially by the rhythm of the golden cut - which can be seen as the ideal archetype of dynamic growth" [43], related to our bodies and health [44, 45], "which marks the paths for an ideal (fractal) and non-destructive energy flow" [46]. It also has been observed that "when the field is applied at right angles to the aligned spin, the magnetic chain has transformed into a new state called a critical quantum with a Phi value, which can be treated as a quantum version of a fractal pattern" [47].

This pulsation (oscillation) based on the golden ratio can describe the phenomenon of non-destructive (constructive) wave compression and acceleration, which Einstein said is the source of gravity [48-50] and "in this case, it has led scientists to believe that finding a quantum solution to gravity is a key — perhaps the key — to understanding the universe on the most fundamental level" [51]. Because gravity, following Einstein's concept, "is not a force, but the result of a distortion of space-time. This stretching, caused by mass and energy, distorts space-time and alters the motion of objects, causing them to curve along with a space-time distortion that is nothing but normal compression and stretching" [52]. The golden division occurring in the Platonic solids of the dodecahedron and icosahedron also appears in the three-dimensional geometric model of the Kepler cosmos (relating to the orbits of Copernicus), which shows the search for fundamental geometric harmony [53, 54].

#### 4. Kepler's laws, Galileo's pendulum and the harmonic oscillator

Kepler's laws concerning the motion of the planets [55] (the line connecting the planet and the sun sweeps through equal areas at regular intervals) and the observations of the Galileo pendulum are consequences of the force of Newtonian gravity. "The graphical representation of Kepler's law appears to be visually so similar to the behavior of a pendulum (which is a harmonic oscillator) that it can be said that the intuitive cue „hangs” in the air, because there is something very similar in the swing of the pendulum and the movement of the planet in an elliptical orbit: acceleration and



**Table 1:** Visualization of the wave function of kgN change and the constant frequency during VPN sessions in ZGP [135].

deceleration, when cyclically the kinetic energy is converted into potential energy and this again into kinetic energy, and both movements generate a period of oscillation and an orbit sweep area, which is invariable resulting from this exchange” [56]. Kepler's laws, which are based on the inverse square law, are deduced and are derived from the laws of the harmonic oscillator [57]. Oscillations are also found on a micro-scale in the experimental works of Faraday and the theoretical works of Maxwell, as well as in many other scientists, whose research has shown that "there are electromagnetic fields (e.g. in a vacuum) and they transmit electromagnetic oscillations [58], also "visible light is these electromagnetic oscillations themselves in a certain range of oscillation frequencies” [59], at the same time it should be noted that according to quantum mechanics, light can also be treated as a stream of particles (photons), which is presented as the wave-particle duality of light [60]. The concept of a quantum oscillator also appears and relates to the beginnings of quantum physics. "Max Planck assumed that particles of matter emitting and absorbing radiation behave like oscillators, the energy of which has strictly defined values, what mean it is quantized. A proper description of motion requires the use of quantum mechanics, which boils down to finding solutions to the Schrödinger equation (non-relativistic), and even to relativistic Dirac equation” [61, 62], who "described quantization of the electromagnetic field as a connection of harmonic oscillators with the concept of creation and annihilation of particles” [63]. "Quantum fields describing electromagnetic interactions in quantum field theory are also a description of the physical world in quantum mechanics (quantum electrodynamics is the simplest and historically the first complete theory of fundamental physical interactions.)” [64]. Examples of the theory of quantum fields are, among others: theories of great unification, supersymmetry or quantum theory of the field in curved spacetime [65], which can help in the formulation of a more fundamental theory,

coherently describing all known interactions, including gravitational or quantum gravity.” [66]. „One could describe this special VPN pendulum in motion, while suspended on an elastic rope, as the concept of quantum harmonic oscillator.” [135]. The macro-scale correlation between the equations of elliptical orbits and pendulums [67] brings to mind the Kepler orbits and the harmonic oscillator [68] where there is talk of a simple harmonic motion [69] or a quantum harmonic oscillator that strives to balance. Moreover, by using a simple solution of an isotropic harmonic oscillator, it is possible to obtain a detailed orbit equation for the Kepler problem [70].

## 5. Kepler's law for a pendulum orbit, Lorenz transformation

The astronomical observation of Kepler's law for a pendulum orbit is presented in the form of animations here: [71] and here: [72], where we can look at the considerations: „The Kepler problem concerns a particle moving under the influence of gravity, like a planet moving around the Sun. Newton showed the orbit of such a particle is an ellipse, assuming it doesn't fly off to infinity. There are many ways to prove this, but the most illuminating is think of the orbit as a circle in 4 dimensions. When the circle is projected down to 3-dimensional space, it becomes an ellipse. The animation, created by Greg Egan, shows how this works. The plane represents 2 of the 3 spatial dimensions we live in. The vertical direction represents a fourth dimension. A point moves around in a circle in R4. But projecting this circle down to R3, we obtain an ellipse: the actual orbit of the planet. What is the fourth dimension? It's related to time—but it's not exactly time. It's the difference between ordinary time and a reparametrized version of time that flows at a rate inversely proportional to the distance between the planet and the Sun. The animation uses this other sort of time. Relative to this other time, the planet is moving at constant speed around a circle in 4 dimensions. But in ordinary time, its projection

to 3 dimensions moves faster when it's closer to the Sun, as a planet must. Physicists have known about this viewpoint at least since 1980, thanks to a paper by the mathematical physicist Jürgen Moser. Some parts of the story are much older. Many papers have been written about it, but this one is particularly elegant: „Jesper Göransson, Symmetries of the Kepler problem", 8 March 2015. The best thing about Göransson's 4-dimensional description of planetary motion is that it gives a clean explanation of an amazing fact. You can take any elliptical orbit, apply a rotation of 4-dimensional space, and get another valid orbit!" [72].

The transformation of coordinates from one inertial frame of reference to another inertial frame of reference is determined by the equations called the Lorentz transformation, which correspond geometrically to a rotation in four-dimensional space-time - which can be graphically illustrated using symmetrical Minkowski diagrams [73, 74]. "According to current knowledge, space-time has the metric structure of Minkowski space. Minkowski's space-time is a set of elementary events with a structure resulting from the special theory of relativity. The four dimensions of this space correspond to time and place in classical physics (three dimensions of physical space). An elementary event in space-time is a physical process that occupies a point in that space, that is, an infinitely short process that takes place in an infinitely small area. Each elementary event can be assigned four numbers (t, x, y, z), which uniquely define this event. These numbers, or coordinates, refer to a certain coordinate system. Einstein's special theory of relativity determines how to use a clock (pendulum) and a device to send and receive light to determine the coordinates of an event (that is, time and location). The coordinates of the event are related to the indications of the measuring instruments used, which are located in a certain coordinate system, which we call the reference system (e.g. a system related to a person standing on a platform (platform), a system related to a person riding in a train (wagon)). In general relativity, space-time defined in this way is curved by the gravitational field and is a special case of the so-called Pseudo-Riemannian space-time manifold. [75-78]. Symmetrical multidimensional space-time is probably the original shape of our pre-big bang universe. According to this theory, the currently observed four-dimensional form was created by breaking this original symmetry and tightly folding the other dimensions. However, while these folded dimensions are intended to be much smaller than the size of the atom and thus normally imperceptible, their existence has serious ramifications. They make it possible to express physical laws with the help of the laws of geometry, that is, to reduce physics to pure mathematics" [79]. Maybe the VPN is the evidence for the experimental visualization of the transformation of the relationship between the coordinates and time of the same event in two frames of reference according to the special theory of relativity, which was started by Galileo and supplemented by Lorentz? [80-82].

Together with the Lorentz contraction - the phenomenon showing that the length of the body (distance of points) in the frame of reference in which the body rests is different from the measurement of the length of the same body in the frame of reference moving in the direction of measurement and with velocity in relation to this frame, the length of this body is shorter than its measurement in the object's own rest frame [83, 84] (Figure 2).

The consequence of shortening the space for moving charges (Lorentz contraction), resulting in the difference between moving and resting charges, is the formation of a magnetic field as a result of current flow (charge movement) [85][86]. Electromagnetic forces hold clues about the fundamental interplay between space, time, and velocity. The only transformation that works called the Lorentz transformation. It is the only one satisfies all of these pretty fundamental statements about the relativity, symmetry and consistency of our universe. It must describe reality." [87, 88]. Maybe VPN is the answer how to unravel this connection encoded in the transformation...? Can VPN be the experimental verification of Lorentz transformation?

"The elastic curved fabric of VPN's cocoon, simultaneously: during harmonic swinging back - and - forward with the matter (human body) inside, periodically expands and shrinks both sideways perpendicular to the direction of cocoon's move also simulates the effects of microgravity and hyper-gravity on the body moving up and down with the time. One could describe this special VPN pendulum in motion, while suspended on an elastic rope, as the concept of quantum harmonic oscillator [74A][75A]. The VPN fabric is moves in oscillation, in 3 axis at once with symmetry, together with the flow of time, and is very similar to animation of Lorentz transformation [76A][77A] transformation of Minkowski spaces [78A] and spacetime structure by Schrodinger [79A]. „Einstein's 1915 General Theory of relativity was built on the notion that gravity and acceleration are not just easily confused, but are one and the same. This equivalence, "the happiest thought" of Einstein's life, was his starting point for redefining gravity, he argued that gravity isn't a force at all, described it as a curvature of time and space caused by mass and energy." [80A].

One of the force acting on the body in VPN is also the centripetal force, which curves the path of the body, (because of elastic rope forcing it to rotate in an ellipse), and the centrifugal force which is the force of inertia. Together with Copernicus Revolution, Kepler's laws of planetary motion, Newton, Galileo Galilei and Einstein's theories, we can think here about elliptical movement and orbital eccentricity." [135].

## 6. Time and pendulum - Galileo's clock - isochronism and resonance in neuroscience, biology and physics

We all dream that our ideas and works "come into



resonance with the others". Galileo Galilei (1564-1642) - Italian astronomer, astrologer, mathematician, experimental physicist, inventor-engineer, philosopher, pioneer of modern physics and astronomy, he studied mainly classical mechanics, of which he was a co-creator, as well as elements of thermodynamics and optics. In 1602 he discovered the independence of the pendulum's vibration period from the amplitude and mass at its end, he was the first to apply this property, called the vibration isochronism, and to use the pendulum to measure time [89]. This method was the most accurate measurement method until the 1930s. Galileo conducted research on the isochronism of pendulums, the relativity of motion and developed prototypes of the first law of dynamics, the principles of relativity, transformation and the weak principle of equivalence - proving that movements under the influence of gravity, such as free fall, pendulum motion, etc., do not depend on the mass of the moved body [90]. He was the first to describe resonance, drawing conclusions from his research on compressed pendulums and strings of musical instruments [91] and, in addition, by being a doctor's friend, he developed a device for measuring patients' pulse using the length of the pendulum called Pulsilogium [92]. In the modern world, without resonance, there would be no radio, television, music or swings on playgrounds that give a lot of fun, but it should be remembered that it can also cause a bridge to collapse or a helicopter to fall apart [93]. Similar types of resonance patterns can be observed in living and inanimate structures, for example: the resonance of the solar system as the interaction of the forces of gravity and magnetism about which Johannes Kepler wrote in his treatise "Nova Astronomia" (Pattern Recognition in Physics The Hum: log-normal distribution and planetary-Solar resonance) [94], in the "resonant nature of functional spectra, in photosynthesis of plants, as mechanical resonance, as the production of sound by musical instruments or human speech apparatus, resonance of machine elements, driving and regulating the speed of a mechanical clock by the capture, balance and pendulum system, resonance of large tides and seiche, electrical resonance as vibration excitation in LC circuits (where there is a resonance of currents (in parallel) or voltages (in series) and their use in radio broadcasting, television, optical resonance in lasers, as well as optical-chemical, electrical-mechanical, resonant resonance the nature of light emission and absorption by atoms and molecules, nuclear magnetic resonance, Mossbauer effect, electron spin resonance, etc" [95].

Cymatics as a science about the shapes of acoustic waves and their influence on physical substances also explores the resonance. It assumes that a specific vibration gives shape to all forms. By resonating liquids, colloids or solids with sand scattered on the surface, patterns are obtained, the shapes of which depend on the frequency of sound and the shape of the surface to be resonated. The same sound tone always creates

the same shape created by the „standing waves", which take both static geometric shapes and dynamic forms. The creator of the theory of cymatics is Ernst Chladni, who also determined the speed of longitudinal waves propagation in numerous metals and wood, and the speed of sound in a series of gases. Experiments and research with sound were also conducted by the Swiss Hans Jenny and the Japanese scientist Masaru Emoto, who during 12 years of scientific work proved in his experiments that water can store information, feelings and states of consciousness, and that it reacts to our thoughts and words that then manages to reflect. Depending on what words (sounds / vibrations) were sent during the experiments towards the drop of water, its crystals when frozen, formed into completely different crystalline forms and "snowflake" patterns. In 1611 Kepler wrote the essay "The Six Cornered Snow Flake - A New Year's Gift" in which he wondered why snowflakes always had a perfect sixfold symmetry, the puzzle was solved after three centuries and today it is obvious, however, Kepler, in trying to find the answer, he asked some fascinating questions about geometry, physics, mathematics and biology, finding an analogy in the world of nature, in the structure of beehives, pods, pomegranates, five-petal flowers, the spiral shape of snail shells and the shaping power of nature itself, alluding to "Sacred Geometry" or the golden ratio [96]. Until the appearance of clocks and artificial light, throughout the millennia human's constant way of measuring time was done by observing the cycle of day and night. It also sets the rhythm of the life of plants and animals - in nature the circadian cycles are ubiquitous. Those cycles are necessary for life and probably played a key role in its creation on Earth, because oscillations are necessary to put a mechanism into motion [97]. „Living organisms are full of various kinds of clocks - molecular, neuronal, chemical, hormonal, each of which is more or less aligned with the others" [98]. There are chemical mechanisms that maintain the 24-hour rhythm even at the level of single cell biochemistry - what was presented in Nobel Prize 2017 for Discoveries of Molecular Mechanisms Controlling the Circadian Rhythm [99-102].

Synchronization, harmonization, vibrations or simply resonance in the most general sense, the mechanism of which enables the generation of vibrations and waves of a given frequency and the influence of the electromagnetic field on a living organism, seems to be integral to consciousness itself, taking into account the resonance structures in the field of neuroscience, biology and physics. "There is a "resonance theory of consciousness" which suggests that resonance - another word for synchronized vibrations - is at the heart of not only human consciousness but physical reality more generally" [103,104].

## 7. Pendulum and synchronization, analysis of orbital movements, precession

"The universe exists solely of waves of motion... There exists nothing other than vibration." Walter Russell

“Synchronization - understood as two or more events occurring at the same time - is one of the most common phenomena in nature. Ranging from unconscious beings to human beings, it can even be found in Olympic sports in the form of synchronized swimming or diving. Ballet dancers move harmoniously to the beat of the music. Violinists of the orchestra playing in perfect unison. A shoal of fish gracefully swimming together in the sea. Synchronization is also essential to life. For example, pacemaker cells must release electrical discharges synchronously to ensure the heart beats properly” [105]. Christiaan Huygens observed in 1665 that the pendulums of two timing clocks gradually but inevitably became synchronized with each other after a while, and after some time began to work synchronously, the problem remained unresolved for 350 years [106,107]. Research from 2015 showed that in this case mechanical vibrations, and specifically the ticking generated by the escapement, may be responsible for the synchronization, where the sounds of the working mechanism are transferred via the rail from one pendulum to the other, synchronizing their movements over time [108]. Although in the era of electronic clocks, the solution of the puzzle from the 17th century regarding pendulum clocks may seem unnecessary, the analysis of oscillator operation may be of fundamental importance, for example, to understand the processes taking place in ordinary electronic systems or the construction of synchronized electronic neurons to control a mobile robot (International Journal of Bifurcation and Chaos 26 1650196) [105, 109] as well as contribute to the development of neurology [110] as its examples are not limited to only mechanical oscillations. “Synchronization also happens for many different biological networks. A phenomenon occurs in the brain, for example, when nerve impulses synchronize. This synchronization of brain waves in certain areas appears to be important for the functioning of our thinking organ” [111]. Researchers, for the discovery of the basic equations describing the electrical voltages inside neurons, received the Nobel Prize in Physiology or Medicine in 1963, in the same field in 2021 scientists were awarded the Nobel Prize for “ground-breaking discoveries of the TRPV1, TRPM8 and Piezo channels, which made it possible to understand how heat, cold, pressure and mechanical force can trigger electrical signals in the nervous system and initiate nerve impulses, allowing us to perceive and adapt to the world around us. These channels also contribute to many other physiological functions that depend on the sensation of temperature or mechanical stimuli” [112, 113].

“VPN cocoon acts like a pressure wave — in pulsation pushes on the tissue, creating vibrations that influences cell membranes, that, in turn, could affect nerve-cell firing, because certain ion channels are mechanically sensitive and thus respond to membranes' stretches and strains, it also creates positive or negative pressure that causes individual

cells to compress or expand [99A]. „The rotationally simulated microgravity allowed some accelerated nerve growth” [100A], from Thomas J. Goodwin NASA research [101A]. “Harmonic oscillations appear very frequently in nature: sound waves, the motion of a pendulum, and vibrations of every sort” [102A]. „Operation of creation and annihilation operators on the oscillator's own states”. [74]. “Creation is but a swing of the cosmic pendulum from inertia, through energy, and back again to inertia (...) It is but a series of opposing pulsations of action and reaction, integration and disintegration, gravitation and radiation, inhalation-exhalation” [103A].” [135]

“Studying Huygens' synchronized pendulum clocks can help us better understand the phenomena of synchronization in the physical and biological world, and shed light on the many similar effects of synchronization in living organisms, where there are many different types of oscillating rhythms - including respiration, heartbeat, neuronal activity and blood perfusion - and when these get in sync with each other, the whole system uses very little energy” [114]. The phenomenon of “self-organizing synchronization” is common in nature and engineering, and was discovered in quantum systems, which, according to Marc Timme's team from the Institute of Dynamics and Self-organization of Max Planck, they can synchronize themselves through self-organization without any external control. “This synchronization manifests itself in the strangest property of the quantum world - entanglement” [111, 115]. Until now, attempts to combine quantum mechanics and the theory of gravity have failed due to various contradictions, and testing the quantum nature of gravity seemed to be far beyond the reach of measurement, but now perhaps the pendulums could be of help to solve it [116-120]. In 1666, the English scientist Robert Hooke studied a conical pendulum that could swing freely in two dimensions and with a weight rotating in a circle or ellipse, and he noticed that the pendulum could be used to measure the force of gravity [121]. He used the motion of this device as a model to analyze the orbital movements of the planets [122, 123], and in 1679 he suggested to Isaac Newton that orbital motion consisted of inertial motion along the tangent to the trajectory and the motion pulling the planet in a radial direction, which played a significant role in Newton's formulation of the universal law of gravity [124,125]. Another interesting application is the Foucault Pendulum, which demonstrates the rotation of the Earth. In 1848, French physicist Jean Foucault discovered that when a large pendulum swings for a long time, it appears to change direction throughout the day. What really happens is that the pendulum is moving in the same direction, but the Earth has turned under the pendulum [126]. The same scientist in 1852 discovered a gyroscope, a device for measuring or maintaining spatial orientation, operating on the principle of conservation of angular momentum [127].



"Precession is the movement of the body's own rotation axis, occurring around a fixed, stationary axis. If a rigid body with rotational symmetry, rotating around the axis of symmetry (top, gyroscope), is fixed in the center of gravity, and the resultant moment of forces (acting on the body) with respect to the point of the clamping point is equal to 0, then the solid performs a regular precession, in which the axis of symmetry of the solid moves around the angular momentum direction with a constant angular velocity. The precession of the same body, but fixed at a point that is not the center of gravity, is an irregular precession and takes place around the direction of the force of gravity; irregular precession is always accompanied by nutational vibrations (nutation). In quantum physics, the Larmor precession is equivalent to the gravitational field precession" [128], describes "the precession motion of a single particle (eg. an electron) or a system of particles (eg. an atomic nucleus) that has its own magnetic moment in a magnetic field. The axis along which the magnetic moment of a particle or particle system is directed makes a cone around the direction of the magnetic field that is used for diagnostics (MR). A spin that is not in the direction of the external magnetic field performs a rotation around the magnetic field lines. Such a spin is in a state of superposition of eigenstates. The superpositions of these states are non-stationary, therefore the spin rotates around the magnetic field axis, taking into account the Planck constant" [129, 130].

In astronomy - "the precession of the Earth's axis is caused by the gravitational interaction of the Moon and the Sun (Lunisolar Precession) and the planets (Planetary Precession) on the non-spherical body of the Earth causing the world poles to shift around the poles of the ecliptic. This phenomenon is accompanied by the shift of the spring equinox along the ecliptic in the opposite direction than the Sun is about 50"26 a year. The full precession cone marks the axis of the earth in about 25,700 years" [128]. This period was called the Platonic year. „The forces that cause the Earth's axis to precess due to the change in the location of the Sun and Moon in relation to the Earth are constantly changing, therefore, as the Earth's rotation axis moves on the cone, small oscillations form on the cone are called nutation. Under the influence of precession and nutation, the world pole describes a complex wave curve among the stars." [131, 132].

## 8. The Gravity as the sculptor and cosmology

"Gravity as the sculptor of the living world is leading to the gravitational biology. Throughout its evolution, life on Earth has experienced an environment with a mass of only 1G. The influence of this ubiquitous force is not well understood, except that there is a clear biological response to gravity in the structure and functioning of living organisms. Gravity biology aims to understand the molecular mechanisms by which a cell detects gravity and converts that signal into a

neuronal, ionic, hormonal, or functional response." [133]. Space-time tells matter how to move. And matter tells space-time how to curve" - John Wheeler. (...) Periodic variations in the torques from the sun, the moon and other planets, creates the wavy "nutation", these effects combine to vary the inclination of the Moon's orbit to the equator over the 18,6 year period. There is also the perihelion movement, often called perihelion precession" [85A, 86A]. (...) Maybe nutation has a frequency of 0,618Hz or period of 1,618s? An example of precession and nutation is the variation over time of the orientation of the axis of rotation of the Earth. The most commonly used frame of reference for measurement of the positions of astronomical objects is the Earth's equator coordinate system. The author wanted to know what could be the length of the wave which occur in the VPN pendulum experiment with its special frequency (0,618Hz) regarding the speed of light.

From the equation  $\lambda=c/f \Rightarrow 299\,792\,458\text{ m/s} / 0,618\text{Hz} = 485101065\text{m}$  dividing it by the length of the equator: 40075000m, author has got the number: 12,1. The number „12" is approximately the number of: full lunations of the moon in a year; years for a full cycle of Jupiter; signs of the zodiac; hours in astronomical's day and night; it is central to many systems of timekeeping, calendar and units of time of day (Ch. Huygens' pendulum clock); it was originally used by ancient civilizations and frequently appears in the world's major religions [87A, 129A], and is in the Hz range of alpha brain waves. The main source of tidal forces (shifting sea levels) is the Sun and Moon, which constantly change their relative positions, causing the Earth's axis to nutation. In botany, nutation is a circular motion [134] of the shoot tips [88A]. „The golden ratio that characterizes the fractal structure of nature also appears in the geodesic structure of black holes, in particular in the movements of null particles independently of the value and sign of the cosmological constant" [89A, 90A]. (...) In modern quantum theory, in which definite trajectories of motion do not even exist, rather, the particle is represented by a wave function spread out in space and in time, showing the „Planck–Einstein relation" which connect the particular photon energy  $E$  with its associated wave frequency „ $f$ "  $E=hf$ , where Planck's constant is „ $h$ ", and  $f=1/T$  and „ $T$ " is time. Since the frequency „ $f$ ", wavelength „ $\lambda$ ", and speed of light „ $c$ " are related by equation  $f=c/\lambda$ , the relation for electromagnetic waves (photon energy) can also be expressed:

$$E=hc/\lambda[94A] \quad hf=Emc^2 \Rightarrow f=mc^2/h$$

The every clock is built on this principle" ks.M.Heller [95A]; also pendulum clock. Does design of the VPN pendulum show such subtle and difficult to analyze astronomical phenomena as precession and nutation? If yes, does it mean that the microcosm and the macrocosm are connected with special code frequency of „gravity wave"? [96A, 97A] [135].

## 9. Frequency and period of VPN pendulum movement - research

The entire description of the materials, methods and results with tables of the experiments of measurement the micro- and hyper-gravity are described in author's research paper: [135][136], excerpts are quoted below.

"The frequency that resulted from this oscillating motion was  $\sim 0,618$  Hz with a period of  $\sim 1,618$ s. These results completely surprised the author as they reflect a beautiful property of a quantum system, a hidden symmetry in the golden ratio numbers, which is a mathematical combination of two aspects of an object [107A][108A]. The golden ratio "phi" and the inverse golden ratio  $\phi \pm = (1 \pm \sqrt{5}) / 2$  have a set of symmetries that preserve and connect them. Both are preserved by fractional linear transformations:

$$x, 1 / (1 - x), (x - 1) / x,$$

This fact corresponds to the identity and definition of a quadratic equation in which the mathematics of  $\phi$  and the Fibonacci sequence are closely related, where

$$(1,618 \times 0,618 = 1)$$

[109A], and Feynman's fine structure constant could link the golden ratio with quantum physics" [110A]. (....)" [135] (Figure3, Table 1).

## 10. Striving for inner harmony - quantum biology

The human heart generates electrical potentials, the measurement of which on the skin surface is a commonly used diagnostic method (ECG). The measurement of the variable currents flowing in nerve cells in the brain, in turn, is the basis of Electroencephalography (EEG) [116A]. "HRV changes according to changes in brain functional connectivity; the heart and brain are connected bi-directionally. HRV may serve as a proxy for 'vertical integration' of the brain system in which DMN plays an important role in adaption to microgravity in space." [117A]. NASA has also interest in Schumann resonance [118A]. (...). During the VPN sessions there was an impressive increase of slow waves - Delta (0.5–4.5Hz), also Alpha and Theta waves. Beta waves remain the same or increase a little. The results are not exactly correct due to artifacts in the data. The adaptive response was stronger during the VPN session compared to before/after VPN sessions. (...). From neurobiology: activation of the vagus nerve by swinging and the pulsating touch on the skin of the VPN cocoon (stimulates neurotransmitters, endorphins, Ruffini and Pacinian receptors, which are activating: oxytocin, serotonin, melatonin [125A]) reduces: stress, tension, high heart rate and blood pressure what is related to the decrease in systemic vascular resistance and reduction of sympathetic nervous system activity during VPN sessions, which is key to bringing calmness and relaxation to both mind and body.

us well-being" [126A]. When considering the frequency of pressure on human skin in a VPN cocoon with embryonic life in the fetal waters, a comparison to the pulsating pressure on the skin can be found in the pulsating rhythm of the mother's blood pressure. According to standards, the correct pressure is in the range of 120-129mmHg /80-84mmHg (if we divide  $129/80 \approx 1,618$ ), the period of VPN's pendulum movement is 1,618s and its frequency is the reverse number 0,618Hz. Can there be some connection here? - further research is needed. All those changes in hormones, together with stress reduction and relaxation may be helpful also for procreation [127A][128A]. Knowing that the frequency of swinging body was 0,618Hz, there is a probability that induced activity generally could affect on the activity of numerous neurons: amplitude changes in oscillatory are thought to arise from the synchronization of neurons [35A]. In neurology, isochronic tones are regular beats of a single tone used for brainwave entrainment [130A] occurred resonance [131A]. Stanford University President Marc Tessier-Lavigne has been awarded the 2020 Gruber Neuroscience Prize „winding projection on a nerve cell, or neuron, that directs electrical impulses away from the body of the cell to wire up the nervous system during embryonic development." [132A]. Nobel Prize 1963 in physiology or medicine for mathematical model which approximates the electrical characteristics of a neuron, in particular generation and propagation of action potentials [133A].

Induced brain activity is elicited by sensory stimuli or motor responses [134A]. „Neural oscillations are also thought to be involved in the sense of time [135A] (pendulum) and in somatosensory perception" [136A]. „Oscillatory synchronization has an important functional role in different odor perception, as it leads to different subsets of neurons firing on different sets of oscillatory cycles" [137A][35A], what was observed by a participant (M) who, after the first VPN session, noticed extensive activation of the sense of smell, as well as the sense of taste. Knowing that the subject (M) has PTSD and many flash back of memories from traumatic events, changing oscillation movement of the body in VPN sessions probably could help reduce frequency of sad occurrences because „coupling between neural oscillations: theta and gamma activity, is thought, to be vital for episodic memory." [138A][139A]. (....)" [135]. Also the changes in the physical environment surrounding the cells, in vivo or in vitro, may indirectly lead to changes in the cell. Little was known about whether and how individual cells sense mechanical signals such as gravity, or how they convert these signals into a biochemical response, but the 2021 Nobel Prize in Medicine and Physiology provided many answers on this topic. A cellular mechanical sensing system can initiate changes in multiple signaling pathways. Spaceflight offers a unique opportunity to reveal the presence of such a system,

as well as to understand this mechanism - the innovative technology of the Vinci Power Nap® / Space Power Nap® system can be helpful. All of this is bringing closer the understanding of the quantum biology [137][138].

## 11. Best benefits to mankind from Vinci Power Nap® biotechnology system

(...) „After this pilot study the conclusion is that VPN system and its Delta Slow Wave frequency swing of (0,618 Hz) - could be helpful to reduce symptoms of disorders frequently associated with disrupted delta-wave activity, like: ailments of the sleep disorders which are linked to Alzheimer's and Parkinson's disease, as said Philippe Mourrain Stanford Bio-X and the Wu Tsai Neurosciences [145A], schizophrenia [146A], diabetes and insulin resistance (glucose metabolism in the brain increases as a result of tasks that demand mental activity [147A]), cardiovascular system, immune system, cells malignancy [148A], fibromyalgia, alcoholism, parasomnias, narcolepsy, anxiety, depression, trauma, PTSD, obsessive-compulsive disorder, attention deficit hyperactivity disorder (ADHD) and its three subtypes [149A], etc. An integrated neuroscience research project could be implemented to identify the relationship between vestibular adaptation during spaceflight and sleep cycles, hormonal and immune changes, cardiovascular and pulmonary changes, muscle physiology alterations, etc. (...)” [135]. "Due to the increasing possibilities and needs of staying living beings in outer space, gravitational biology and gravitational medicine are currently one of the most dynamically developing fields of science. The works devoted to the study of the functioning of living organisms in microgravity conditions show that gravitational effects are revealed at all levels of the organization of a living being: molecular, cellular and organism.” [133]. Fractals of the golden ratio are connected also to human bodies and its health [44, 45], because of that the technology of Vinci Power Nap® system could be very helpful for people on Earth and in the Space as a space medicine and a biomedicine.

## 12. The golden ratio in radiating energy and vibrations

"Everything is connected with everything" - Leonardo da Vinci. 400 years ago, Galileo, Kepler, and da Vinci tried to answer questions that are as old as humanity itself. What are we made of? What are the basic building blocks of the universe that make up man, the stars, and everything else? Over the centuries, thousands of theories and experiments have delved into smaller and smaller distances, focusing on one image of the structure of matter [139]. According to Kepler, both men and women can learn the secrets of the world, including the causes of the movements of the wandering stars in the sky [140]. Although the "divine measure of beauty" or „the golden ratio” has always existed in geometry, mathematics

and the physical world, it is not known exactly when it was discovered and applied by mankind [141], but the Phi number that represents it and its absolute value (golden ratio coupling) played an amazing role in our history and in the entire universe. It appears as a constant repeating value of the proportion of elements whose continuation of division according to the golden ratio represents the fractal and its unique phenomenon of unlimited complexity of each of its smallest elements, where fractal multiplicities having an extremely complex structure, at the same time retain astonishing harmony and symmetry, recently discovered also in quantum version of a fractal pattern. „Each smaller element of the structure is similar to the larger one” [142]. This principle of fractal interconnection, inseparability and unity provides us with constant reminders of the pattern and our relationship with the whole. Could this suggest that time is a spiral or fractal repeated at a given frequency Phi? [143, 144]. Or if thinking about holograms - can it be somehow its base code?

“It has been shown that the golden ratio plays a significant role in the dimensions of all objects that show fivefold symmetry. It has also been shown that among irrational numbers, the golden ratio is the most irrational and, as a result, has unique applications in number theory, search algorithms, function minimization, network theory, the stock market, the atomic structure of some materials, and the growth of biological organisms” [145-148]. „Fibonacci numbers are also used to determine the wavelengths of pulses. When wave 3 lengthens in a pulse, waves 1 and 5 tend to be generally equal or remain in a ratio of 0,618. In fact, relations determined by the Fibonacci coefficients, like: 1; 1,618 or 2,618, often occur between all the impulse waves. It is common for wave 3 to be 2,618 wavelength 1. So if wave 3 is strong and dynamic, it can end at wavelength 2,618 of the 1” [149]. „The ELFRAD Extremely Low Frequency Research And Development, a self-funded research organization tracked radiation on Earth through an array of antennas and has found an extremely low frequency signal at phi, or 1,618033 Hertz, cycles per second” [10]. Phi is synchronized with nature on the planet Earth, the galaxy, it is visible in atomic, quasi-crystalline and other chemical structures, and according to prof. Steven Strogatz (researcher of synchronization in dynamical systems, applied mathematics, including mathematical biology and complex network theory), synchrony is a new science at the border of which mathematicians and physicists try to determine how spontaneous order emerges from chaos.

„The golden ratio was also discovered in the quantum world: the hidden symmetry of E8 was first observed in solid matter. They measured symmetry signatures showing the same attributes as the golden ratio. Where the tension comes from the interaction between the spins causing them magnetic resonance [31, 47, 150]. Then it may turn out that even the



structure of the human body and its physiology are based on the same principles that function at all levels of creation for all animals, plants, planets, solar systems and galaxies with their golden spiral rhythm underlying the growth process attuned to the harmony of the vibrations of the universe.

### 13. Conclusion

According to the author - the value of Phi 0,618 found in the pendulum of the VPN system, measured in Hz, can be this special frequency of the heartbeat of the universe, the insistent rhythm, according to which thousands of fireflies gather and flash in harmony, the moon in its orbit rotates in resonance around the Earth, plants grow, our brains enter the Delta state, in which the body rebuilding processes take place, stimulating more intense secretion of hormones responsible for growth, inhibiting aging processes, and mind regeneration, where the structure of the DNA code is based on the same principles (on a regular dodecahedron, based on the golden ratio and the Phi number), and humans hearts are beating in coherence with it, etc. [151, 152]. Magdalena Filcek has developed a system and method for fast stress reduction, to feel calm, blissful, relax, for regenerate the body and mind, harmonize the body's internal vibrations by using natural Vinci Power Nap® rocking frequency, thanks to which one can find himself in resonance together with his interior and the surrounding environment, in synchronization of the microcosm with the macrocosm, create a harmonious rhythm with it, restoring the "factory settings", and through the simultaneous synchronization of respiration, heartbeat, neuron activity and blood circulations - leading to homeostasis, energy savings and balance [108, 153]. Today we charge our phones and cars with energy, let's not forget to recharge Vinci Power Nap® - the best benefit for mankind, this technology can change your life, maybe even save it ... The observed impact of the above mentioned factors of the neuroarchitecture VPN system on human psychophysiological well-being is extremely interesting for the author's research - bringing closer the issue of neurology, physics and quantum biology - and at the same time leading to a surprising discovery: until now the Phi number was considered as mathematical number, it was not taken into account and presented as the value of vibration. Given this particular value of the wave frequency, could it represent the sought relationship between quantum and Newtonian physics? ... can it be the pulse of the universe, which is the basis for the emanation of all energy in nature? And thus the construction of the universe? [10, 139, 154, 155]. „Quantum physics has shown that everything in the universe vibrates and resonates with a unique frequency [150A, 151A]. One could argue that VPN can be an experimental visualization of quantum harmonic oscillator or quantum field theory in curved spacetime? Spacetime geometry? The M- theory? Theory of everything that would describe all known interactions including gravitational? Quantum cosmology? [84A]. Can

this VPN pendulum frequency creating waves and act as a matrix for the growth and development of existences living on Earth? [152A, 108A].” [135]. Can this pendulum movement by changing kinetic energy for potential energy - make „the virtual proces of annihilation and creation of bosons, which „borrows” the energy and then giving it back during annihilation? (...) The theory of everything is supposed to be the primary theory underlying the theory of specific physics ” [156]. „A fundamental theory of the universe does not have to include a time variable, but it does tell us how what we see in the world changes with respect to itself - what relationships may exist between variables.” [157]. Basic equations of quantum gravity do not have a time variable and describe the world by indicating possible relationships between variable quantities [158]. „It is important to not confuse the temporal structures belonging to the world "seen from the outside" with the aspects of the world observed by us and dependent on the fact that we are a part of it, we are embedded in it.” [159]. In order to understand and feel how we experience space, it is not enough to think about Newtonian space, it is important to remember that we see it from the inside, that we ourselves are located and immersed there, therefore, to understand time, it is not enough to think about it from the outside, the helpful is understanding that in every moment of live we are grounded and co-created in time, in fact it can be said that we observe the universe from the inside, interacting with a tiny part of countless vibrations and variables of the entire cosmos. [Figure 4]. "The brain is part of this reality, which consequently depends on the interaction between the outside world and the structures through which the mind works.” [97]. In all eras, from Pythagoras, Euclid, Galileo, Kepler, Leonardo da Vinci, to modern scientists, some of the greatest minds of mankind have spent endless hours analyzing the golden ratio and its properties. Obedience to the golden ratio has been found in flower petals, fruits, shells, hurricanes, and even in DNA strands or quasi-crystals, and the attraction of the most amazing number - the Phi number - inspires thinkers of many disciplines: biotechnology, biomedicine, neuroscience, chemistry, physic, quantum physics, cosmology, mathematic, art, music, architecture, also: neuropsychology, behavioral neuroscience, psychology, psychiatry, cerebral palsy, damage-related factors, aging prevention, cognitive science, etc [160-164]. The Phi number continues to open new doors in our understanding of life and the universe also appearing in the 1970s in Roger Penrose of Oxford discovery of the fivefold symmetry surface, in the 1980s in the newly discovered geometric form of quasi-crystals and now found in the pendulum of the Vinci Power Nap® as a frequency to harmonize with the inner "sound of the universe”, probably describes the unified theory as proposal for a united quantum theory of the fundamental constituents and forces of nature, containing the superstring theories and supergravity, M-Theory [165] and brings

us closer to the theory of quantum gravity and quantum biology, contributing to the further development of modern science, neuroscience, biomedicine and technologies of the future [135][166]. "If you want to discover the secrets of the universe, think in terms of energy, frequency and vibration." Nikola Tesla (1942).

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