Physics of Numbers as Model of Telepathic Entanglement

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The physics of transcendental numbers leads to a fractal scalar field that causes numeric entanglements affecting any type of interaction. In this paper, we apply this our approach to the analysis of telepathic communication in both aspects, the theoretical and experimental.

Introduction

The history of science is replete with confident proclamations about all sorts of impossible things like flying machines heavier than air, and most of those proclamations have proven to be hilariously or poignantly wrong. So the current paradigm declares also telepathy to be impossible [1].

The term 'telepathy' comes from the Greek 'tele' meaning 'distant' and 'pathos' meaning 'feeling, perception, experience' and can be defined [2] as the transmission of information from one person to another without using any known human sensory channel or physical interaction.

Introduced by the British scholar Frederic W. H. Myers in 1882, 'telepathy' substituted the earlier term 'thought transference' in psychology. The concept of telepathy was originally more an attempt to objectify and detach the concept of thought transference from its connection with spiritism, media and belief in ghosts.

Telepathy challenges the scientific understanding of experience, that David Chalmers [3] has termed the 'hard problem' of consciousness. Indeed, centuries of philosophical disputes did not explain the nature of consciousness. Aside from recognizing that consciousness differs from matter in many ways, there is no scientific consensus.

However, the dominant view in recent time is more materialistic than ever before: consciousness is thought to emerge from highly complex biological processes, which in turn are based ultimately on interactions between subatomic particles.

Roger Penrose and Stuart Hameroff [4] hypothesize that consciousness originates from quantum processing in neuron dendritic spine microtubules.

Shan Gao [5] analyzes the role of consciousness during quantum measurement process and supposes quantum nonlocality as model of telepathic communication. Huping Hu and Maoxin Wu [6, 7] hypothesize that consciousness is intrinsically connected to quantum spin in the sense that nuclear and electron spin is the 'mind-pixel' and the unity of mind is presumably achieved by entanglement of these mind-pixels. They assume [8] that spin is the primordial process in non-spatial and non-temporal pre-spacetime being the manifestation of quantum entanglement, implying instantaneous interconnectedness of all matters in the universe through gravity and consciousness. As well, George Williams [9] supposes the existence of a non-local proto-conscious field that underlies both matter and consciousness. Within the Global Consciousness Project of the Princeton Engineering Anomalies Research Laboratory at the Princeton University, the Rodger Nelson group [10] demonstrated that human consciousness interacts with physical random event generators [11], causing them to produce nonrandom patterns associated with special states of group consciousness.

In our research we focus on the physics of numbers as approach to study the physical consequences of arithmetic properties of numbers being ratios of measured quantities. In [12] we have shown that this approach leads to a fractal scalar field that causes numeric entanglements affecting any type of interaction including gravitation [13]. In this paper, we apply our approach to the analysis of telepathic communication in both aspects, the theoretical and experimental.

Theoretical Approach

Measurement is the source of scientific data that allow for developing and proofing theoretical models of the reality. The result of a measurement is the ratio of two quantities where one of them is the reference quantity called unit of measurement. All that can be measured – space, time, energy, mass – is quantity. Numbers are symbols of quantity. Despite their non-materiality, numbers represent a reality that has unlimited power and produces physical effects. These effects are a subject of study in the physics of numbers.

On the one hand, numbers appear as created by intellect, on the other, our intellect cannot manipulate them, for example, avoid the appearance of primes when counting, or design a cube and a sphere both of the same volume. Indeed, measuring, counting and calculating are inherent abilities of all things. Even atoms have to configure the number of electrons on each energy level. Thus, the universality of the numbers suggests that they are not anthropogenic, but cosmogenic.

Distances, durations, angles, velocities – when measured, first they are real numbers, and only when applied to models they can become vectors. Real numbers are scalars, and scaling is the process that creates them. Indeed, when we observe something from a far scale, we cannot distinguish

details. Different objects appear as identical and we cannot anymore individuate them. The abundance of properties of the objects reduces to their number that follows the laws of arithmetic or the laws of statistics.

Extreme scaling is the process that creates numbers and can possibly even release objects from their materiality. The scale of electrons is in the range of picometer. Protons and electrons appear to be elementary just because the difference between the observer's macroscale and the subatomic scale is huge. This is why they behave like numbers and their properties appear quantized following the laws of quantum statistics.

Numbers are omnipresent and therefore, non-local. This non-locality of the numbers might be the true cause of the quantum physical entanglement that Albert Einstein called 'spooky action at a distance'. In this context, all electrons and protons are identical because there is probably only one electron and only one proton that can materialize everywhere. In the same meaning there is only one number e=2.71828... and only one number π=3.14159... that can materialize anytime and anywhere.

Max Planck's discovery that the energy $E=\hbar\omega$ of a photon depends only on a *number* that is its frequency ω, is a key event in the history of physics. From this discovery, quantum physics was born. As the energy of a quantum oscillator increases with its frequency, every additional increase of the frequency requires more and more energy. Probably, this process leads to the emergence of a resistance that appears as inertia. Indeed, the frequency $7.8 \cdot 10^{20}$ Hz defines the threshold where electrons can form. Surpassing the threshold of $1.4 \cdot 10^{24}$ Hz, protons can form. In [14] we introduced scaling as mechanism of particle mass generation, alternative to the Higgs model. In [15] we have demonstrated that it is the transcendence of Euler's number that stabilizes the thresholds of materialization including the proton-to-electron ratio.

In the framework of the physics of numbers, all structures and processes in the universe are materializations of numeric relationships. Within this our approach, we significantly extend the meaning of quantum entanglement in the sense of an instantaneous connectivity that originates from the divisibility of numbers. The meaning of this connectivity is that, for example, the n^{th} cycle of a given process has something in common with the n^{th} cycle of any other process, independently of its nature, duration or location.

This kind of 'numeric entanglement' is a consequence of the divisibility of the number n being the index of the n^{th} cycle of a periodical process. It has nothing to do with resonance or simultaneity, but with scaling; it is a connectivity that does not depend on temporal coincidences or spatial distances.

Let us imagine two periodic processes, one occurs on Earth and another occurs on Kepler 452b that is 1400 light years away in the Cygnus constellation of the Milky Way. Because of the huge spatial and temporal distance, they cannot be synchronized by the speed of light. By the way, that's exactly why probably nobody in the Galaxy uses radio signals or other forms of light for interstellar communication. Nevertheless, both periodic processes are numerically connected, and this circumstance allows for communication.

In [12] we have demonstrated that the physics of transcendental numbers leads to a fractal scalar field that affects any type of physical interaction including gravitation. In this paper, we hypothesize that this field causes numeric entanglements making possible connectivity associated with telepathy or other forms of extrasensory perception. But first, now we are going to derive this fractal scalar field from the physics of transcendental numbers.

In physics of numbers [16], the difference between rational, irrational algebraic and transcendental numbers is not only a mathematical task, but it is also an essential aspect of stability in complex dynamic systems. While integer frequency ratios provide parametric resonance interaction that can destabilize a system [17, 18], it is transcendental numbers that define the preferred ratios of quantities which avoid destabilizing resonance interaction [15]. In this way, transcendental ratios of quantities can sustain the stability of periodic processes in complex dynamic systems.

Among all transcendental numbers, Euler's number e = 2.71828... is unique, because its real power function e^x coincides with its own derivatives. In the consequence, Euler's number allows inhibiting resonance interaction regarding any interacting periodic processes and their derivatives.

Alexandr Khinchin [19] demonstrated that any real number has a biunique representation as a continued fraction. Applying this to the real argument x of the natural exponential function e^x, we get:

$$x = \langle n_0; n_1, n_2, \ldots, n_k \rangle. \tag{1}$$

We use angle brackets for continued fractions. All denominators $n_1, n_2, \ldots, n_k$ including the free link n_0 are integer. The numerators equal 1. The length of the continued fraction is given by the number k of layers.

The canonical form (all numerators equal 1) does not limit our conclusions, because every continued fraction with partial numerators different from 1 can be transformed into a canonical continued fraction using the Euler equivalent transformation [20]. With the help of the Lagrange [21] transformation, every continued fraction with integer denominators can be represented as a continued fraction with natural denominators that is always convergent [22].

Naturally, the rational eigenvalues of the finite continued fractions (1) have a fractal distribution. The first layer is given by the truncated after n_1 continued fraction:

$$x = \langle n_0; n_1 \rangle = n_0 + \frac{1}{n_1}.$$

The denominator n_1 follows the sequence of integer numbers ±1, ±2, ±3 etc. The second layer is given by the truncated

after n_2 continued fraction:

$$x = \langle n_0; n_1, n_2 \rangle = n_0 + \cfrac{1}{n_1 + \cfrac{1}{n_2}}.$$

Figure 1 shows the first and the second layer in comparison. As we can see, reciprocal integers $\pm 1/2, \pm 1/3, \pm 1/4, \ldots$ are the attractor points of the distribution. In these attractors, the distribution density always reaches a local maximum. Integers $0, \pm 1, \ldots$ are the main attractors of the distribution.

Now let's remember that we are observing the fractal distribution of rational values $x = \langle n_0; n_1, n_2, \ldots, n_k \rangle$ of the real argument x of the natural exponential function e^x. What we see is the fractal distribution of transcendental numbers of the type $\exp(\langle n_0; n_1, n_2, \ldots, n_k \rangle)$ on the natural logarithmic scale. Near integer exponents, the distribution density of these transcendental numbers is maximum. Consequently, for integer and rational exponents x, the natural exponential function e^x defines attractor points of transcendental numbers and create islands of stability.

Figure 1 shows that these islands are not points, but ranges of stability. Integer exponents $0, \pm 1, \pm 2, \pm 3, \ldots$ are attractors which form the widest ranges of stability. Half exponents $\pm 1/2$ form smaller islands, one third exponents $\pm 1/3$ form the next smaller islands and one fourth exponents $\pm 1/4$ form even smaller islands of stability etc.

For rational exponents, the natural exponential function is always transcendental [23]. Increasing the length k of the continued fraction (1), the density of the distribution of transcendental numbers of the type $\exp(\langle n_0; n_1, n_2, \ldots, n_k \rangle)$ is increasing as well. Nevertheless, their distribution is not homogeneous, but fractal. Applying continued fractions and truncating them, we can represent the real exponents x of the natural exponential function e^x as rational numbers and make visible their fractal distribution.

The application of continued fractions doesn't limit the universality of our conclusions, because continued fractions deliver biunique representations of all real numbers including transcendental. Therefore, the fractal distribution of transcendental eigenvalues of the natural exponential function e^x of the real argument x, represented as continued fraction, is an inherent characteristic of the number continuum. This characteristic we call the *Fundamental Fractal* [24].

In physical applications, the natural exponential function e^x of the real argument x is the ratio of two physical quantities where one of them is the reference quantity called unit of measurement. Therefore, we can rewrite the equation (1):

$$\ln(\mathrm{X}/\mathrm{Y}) = \langle n_0; n_1, n_2, \ldots, n_k \rangle \tag{2}$$

where X is the measured physical quantity and Y the unit of measurement. In this way, the natural exponential function e^x of the rational argument $x = \langle n_0; n_1, n_2, \ldots, n_k \rangle$ generates the set of preferred ratios X/Y of quantities which avoid destabilizing resonance and provide the lasting stability of real systems regardless of their complexity.

Therefore, we expect that periodic processes in real systems prefer frequency ratios close to Euler's number and its rational powers. Consequently, the logarithms of their frequency ratios should be close to integer $0, \pm 1, \pm 2, \ldots$ or rational values $\pm 1/2, \pm 1/3, \pm 1/4, \ldots$

In [12] we verified the model claims on the gravitational constants and the periods of orbital and rotational motion of the planets, planetoids and large moons of the solar system as well as the orbital periods of exoplanets and the gravitational constants of their stars.

Naturally, the Fundamental Fractal (2) of transcendental stability attractors does not materialize in the scale of planetary systems only. At subatomic scale, it stabilizes the proton-to-electron ratio and in this way, allows the formation of stable atoms and complex matter.

Scale relations in particle physics [14] obey the same Fundamental Fractal (2), without any additional or particular settings. The proton-to-electron frequency ratio approximates the Fundamental Fractal at the first layer that could explain their exceptional stability [25]:

$$\ln\left(\frac{\omega_p}{\omega_e}\right) = \ln\left(\frac{1.42549 \cdot 10^{24}\,\mathrm{Hz}}{7.76344 \cdot 10^{20}\,\mathrm{Hz}}\right) \simeq 7 + \frac{1}{2} = \langle 7; 2 \rangle.$$

ω_p and ω_e are the proton and electron angular frequencies. In the consequence of the ratio $\exp(7 + 1/2)$, the scaling factor $\sqrt{e} = 1.64872\ldots$ connects attractors of proton stability with similar attractors of electron stability in alternating sequence. Figure 2 demonstrates this situation on the first layer of the Fundamental Fractal (1), and one can see clearly that among the integer or half, only the attractors $\pm 1/3$, $\pm 1/4$ and $\pm 1/6$ are common. In these attractors, proton stability is supported by electron stability and vice versa, so we expect that they are preferred in real systems. As we have shown in our paper [12], planetary systems make extensive use of these common attractors.

Fig. 1: The Fundamental Fractal – the fractal distribution of transcendental numbers of the type e^x with $x = \langle n_0; n_1, n_2, \ldots, n_k \rangle$ on the natural logarithmic scale for $k = 1$ (first layer above) and for $k = 2$ (second layer below) in the range $-1 \leqslant x \leqslant 1$.

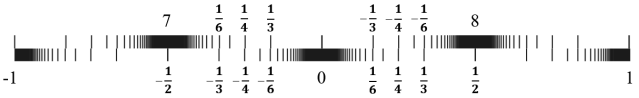

Fig. 2: The distribution of the attractors of proton (bottom) stability in the range $-1 < x < 1$ of the attractors of electron (top) stability. Natural logarithmic representation.

Property	Electron	Proton
$E = mc^2$	0.5109989461(31) MeV	938.2720813(58) MeV
$\omega = E/\hbar$	$7.76344 \cdot 10^{20}$ Hz	$1.42549 \cdot 10^{24}$ Hz
$\tau = 1/\omega$	$1.28809 \cdot 10^{-21}$ s	$7.01515 \cdot 10^{-25}$ s
$\lambda = c/\omega$	$3.86159 \cdot 10^{-13}$ m	$2.10309 \cdot 10^{-16}$ m

Table 1: The basic set of the physical properties of the electron and proton. Data from Particle Data Group [29]. Frequencies, oscillation periods and wavelengths are calculated.

The spatio-temporal projection of the Fundamental Fractal (2) is a fractal scalar field of transcendental attractors, the *Fundamental Field* [26]. The connection between the spatial and temporal projections of the Fundamental Fractal is given by the speed of light $c = 299792458$ m/s. The constancy of c makes both projections isomorphic, so that there is no arithmetic or geometric difference. Only the units of measurement are different. In [27] we have shown that the constancy of the speed of light is a consequence of the stabilizing function of Euler's number.

The exceptional stability of the electron and proton predestinate their physical characteristics as fundamental units. Table 1 shows the basic set of electron and proton units that we consider as a fundamental metrology (c is the speed of light in a vacuum, $\hbar$ is the Planck constant). In [24] was shown that the fundamental metrology (tab. 1) is completely compatible with Planck units [28].

The Fundamental Field is topologically 3-dimensional, it is a fractal set of embedded spherical equipotential surfaces. Figure 3 shows the linear 2D-projection $\exp(1/n_1)$ of the first layer of the Fundamental Field with both proton and electron attractors of stability. Figure 2 shows the same interval in the logarithmic representation.

In [30] we have shown that the frequency boundaries of the brain activity ranges Delta, Theta, Alpha, Beta and Gamma do not appear as to be accidental, but correspond with attractors of proton and electron stability of the Fundamental Fractal (2). In this way, Euler's number determines temporal scales of stability of the central nervous system. Indeed, mammals including human have electrical brain activity [31] of the Theta type in the frequency range between 3 and 7 Hz, of Alpha type between 8 and 13 Hz and Beta type between 14 and 37 Hz. Below 3 Hz the brain activity is of the Delta type, and above 37 Hz the brain activity changes to Gamma. The frequencies 3.0 Hz, 8.2 Hz, 13.5 Hz and 36.7 Hz define the boundaries. The logarithms of their ratios are close to integer and half values:

$$\ln\left(\frac{8.2}{3.0}\right) = 1.00; \qquad \ln\left(\frac{13.5}{8.2}\right) = 0.50; \qquad \ln\left(\frac{36.7}{13.5}\right) = 1.00.$$

The correspondence of the boundary frequency ratios with

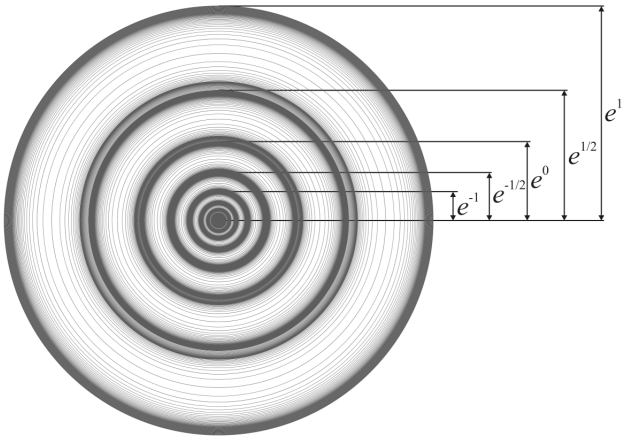

Fig. 3: The Fundamental Field with equipotential surfaces of both proton and electron attractors of stability in the linear 2D-projection for $k = 1$ in the range $-1 < x < 1$.

integer and half powers of Euler's number evidences that the stability of the frequency boundaries is essential for brain activity. In fact, Theta-Alpha or Alpha-Beta violence can cause speech and comprehension difficulties, depression and anxiety disorders. Figure 6 shows how precisely the frequency boundaries of all subranges of brain activity correspond with main attractors of proton and electron stability.

Furthermore, similar boundary frequencies we find in the Earth's electromagnetic field spectrum, for example the fundamental Schumann mode 7.8 Hz. Solar X-ray bursts can cause variations of the Schumann resonances [32]. In this case, the fundamental increases up to 8.2 Hz reaching exactly the stable Theta-Alpha boundary. The second Schumann mode 13.5 Hz coincides precisely with the Alpha-Beta boundary. It is remarkable that solar activity affects this mode much less or does not affect it at all because of its Euler stability. The third Schumann mode 20.3 Hz must increase up to 22.2 Hz for reaching the next island of electron stability. By the way, such an increase is observed recently. Schumann resonances occur up to 60 Hz in order to reach the subsequent island of electron stability.

The coincidence of the boundary frequencies of brain activity with Schumann resonances demonstrates how precisely the electrical activity of biological systems is embedded in the electromagnetic activity of the Earth. Important to know that Euler's number and its roots make possible this embedding, because they are attractors of transcendental numbers and form islands of stability. They allow for exchanging information between systems of very different scales – the biophysical and the geophysical.

Here and in the following we use the letter E for attractors of electron stability, and the letter P for attractors of proton stability. For instance, the attractor $E\langle -48\rangle$ dominates the Delta activity range while $E\langle -45\rangle$ dominates the Beta activity

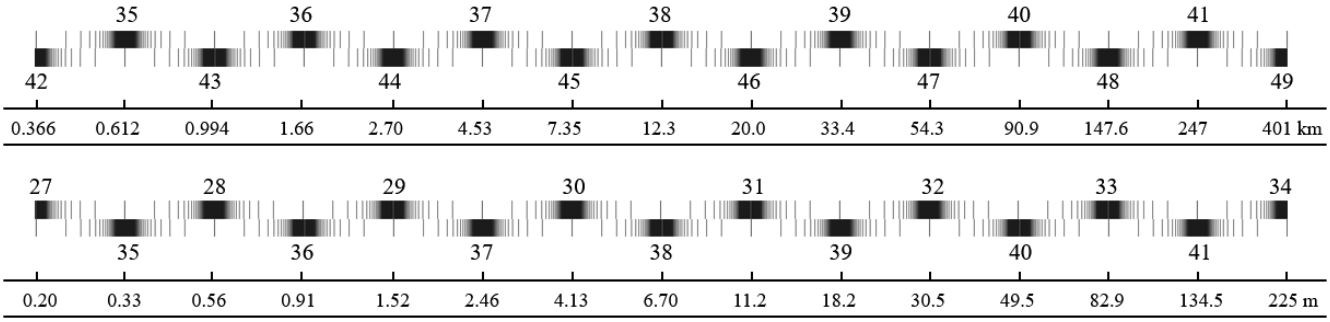

Fig. 4: Radii of equipotential surfaces of the Fundamental Field (Fig. 3) and the corresponding attractors of electron and proton stability in the natural logarithmic representation.

range. The Theta and Gamma activity ranges are dominated by the attractors P⟨−54⟩ and P⟨−51⟩ of proton stability. These logarithms are multiples of 3. Low Delta, High Delta, Alpha and Low Gamma are transition ranges, which boundaries are defined by both, attractors of electron and proton stability. For instance, dividing the Theta – Alpha boundary frequency 8.2 Hz by the electron angular frequency, we can see how precisely it matches with the attractor E⟨−46⟩ of electron stability:

$$\ln\left(\frac{8.2\,\mathrm{Hz}}{7.76344\cdot 10^{20}\,\mathrm{Hz}}\right) = -46.00.$$

The correspondence of the boundary frequencies with attractors of proton and electron stability evidences that *quantum* physical stability of the frequency boundaries is essential for brain activity. Perhaps, this could also indicate that brain-to-brain entanglements are possible. Probably, the attractor frequencies are the key. To verify this hypothesis, we designed an experimental setup that we describe in the following.

Experimental Setup

The experiments of telepathic communication described in this paper were performed continuously over a period of four years. The participants have decades of experience in meditation, and are married couples respective good friends. They took turns in their roles as sender and receiver. During the first year, a sender usually tried to transmit the information about an arbitrarily chosen object – an apple, stone, ring or painting – that the receiver had to identify and describe in written form and draw.

For reduction of the interference of electrical brain activity by low frequency external electromagnetic fields, a part of the receivers and/or senders applied hypo-electromagnetic constructions made of 1/16 aluminum sheet, similar to the described in [13] polyhedrons, as helmets. Larger constructions of the same material were used to stay inside a hypo-electro-magnetic space where modulated red light was applied as well. For LED modulation, the frequencies 3, 5, 13, 23, 37, 61 or 101 Hz (fig. 6) of electron and proton stability were chosen. The dimensions of the structures coincide

Fig. 5: The electric skin potential of the sender (black curve) and the receiver (grey curve) measured with transient recorders of two DSOs. The resolution is 100 measurements per second. The time-window of each graphic is one second.

with the radii P⟨35⟩=0.33 m, E⟨28⟩=0.56 m, P⟨36⟩=0.91 m, E⟨29⟩=1.52 m and P⟨37⟩=2.46 m of equipotential surfaces of the Fundamental Field.

The distance between sender and receiver partly was chosen in accordance with radii of main equipotential surfaces of the Fundamental Field. Fig. 4 shows the complete spectrum of sizes and distances that was applied in the experiments.

The durations of the transmission setup stages were chosen in accordance with main temporal attractors of the Fundamental Fractal (fig. 7). In the first generation of the experiments, the long version of the transmission setup stages was chosen taking 15 minutes. Then, in the next generations of

experiments, the short version that takes 5 minutes only was established.

The protocols of these experiments contain information not only about the very object, its origin, meaning and background, but also about the physical and mental state of the sender, colors of dress and other details of the environment, and of course, time and geographic location. Particular attention was paid to the perception of time. During the experiments, the participants usually were at home in Milan, Malnate, Ferrara, Ravenna, Arezzo, Spigno Saturnia, Castel di Fiori or Citta della Pieve, so that the telepathic communication did occur over large distances up to 420 km beeline.

In experiments over short distances up to 7 meters, the electric skin potential of the participants was measured. Two digital storage oscilloscopes were used. During the experiment, the participants were contacting the measurement electrodes of the DSO with a finger.

Figure 5 shows the signals of the sender (black curve) and the receiver (grey curve) measured with the transient recorder of the DSO. The resolution of the transient recorder is 100 measurements per second. The graphic at the top shows one second of the alignment during the second minute after the start of the experiment. The middle graphic shows one second of the initial phase of the entanglement during the third minute, and the graphic at the buttom shows one second of the entanglement during the fourth minute.

The unexpected success and the frequent cases of very detailed description of the objects and even the sender's environment inspired to continue the experiments under more controlled conditions.

Therefore, in the 2^{nd} generation of experiments, the arbitrarily chosen object was substituted by a simple geometric form. The sender chooses one of four easily distinguishable forms – cross, triangle, square or circle – for transmission, and the receiver must identify it.

Furthermore, for controlling the dependence of transmission success on the number of participants, the experiments were carried out with two and more receivers. In the 3^{d} generation, the geometric forms were substituted by six domino number configurations (fig. 8).

In the 4^{th} generation of experiments, the geometric forms were substituted by Chladni patterns. Fine sand particles accumulate in nodal patterns on the surface of vibrating metal plates, as described by Galileo Galilei (1630), Robert Hook (1680) and Ernst Chladni (1787). The emerging patterns depend only on the geometry of the plate and the vibration frequency of the particles, and do not depend on their mass or chemical composition. This characteristic remembers gravity – as the acceleration of free fall does not depend on the mass of the test body or its chemical composition.

For the experiments, Chladni patterns (fig. 9) emerging on square plates vibrating with the frequencies of 150, 175, 179, 400 and 525 Hz were used. On the Fundamental Fractal, these frequencies are distributed around the main nodes $E\langle -43\rangle$ and $E\langle -42\rangle$ of electron stability, as fig. 10 shows.

The 5^{th} generation of experiments dealt with 5 kingdoms of nature – human, animal, vegetal, mineral and celestial bodies. The transmission time extended throughout the day without specific mental focus. The sender shall transmit the idea of a concrete representative of one of these 5 kingdoms that the receiver has to identify as detailed as possible. If the kingdom of the transmitted representative was identified correctly (for example, animal), the coefficient of success was counted as 1/5, and if the representative was identified (for example, lion), the transmission was double rated. In the 6^{th} generation of experiments, the sender tried to transmit one of five 'states of soul'. The first set of such states included courage, patience, joy, beauty and kindness, and the second set included enthusiasm, calm, trust, gratitude and benevolence. The qualities have been modified to avoid falling into monotony due to the fact that after about a month the participants felt that the exact perceptions decrease.

Results

A total of 242 experiments were carried out from September 2016 to November 2020, and the unexpected high rate of success let the participants believe in the reality of telepathy. With growing up experience, the receiver felt to be capable observing the world through the eyes of the sender. Obviously, every kind of information can be transmitted and is not limited by emotions or feelings, but can include detailed descriptions of real objects as well as numbers, regular forms and even sophisticated patterns or paintings.

The chance probability that the receiver is able to correctly guess one of five possibilities is 1/5 = 20%. However, the combined hit rates in our 114 experiments of that type was 72%. Statistically, this excess would never occur by chance; it corresponds to odds against chance of billions to one. This fact indicates that sender and receiver had shared indeed the same information. Such a high rate of success is not typical for the branch. As reported in [1, 33], good hit rates typically exceed the statistical expectation by 3 – 12%. Therefore, a possible significance of special conditions is obvious. Friendship and love are powerful connectors, and our research would not be necessary for a confirmation. Although these factors of success were always present in our research, they alone cannot explain the exceptionally high hit rates.

Initially, the hit rates did correlate with the distance between sender and receiver depending on the vicinity to a main equipotential surface of the Fundamental Field, but with increasing experience, this factor did lose its significance. As well, hypo-electromagnetic conditions initially did support the occurrence of telepathic entanglements significantly. Also modulated light initially did it, if the modulation frequency did correspond with an attractor of electron or proton stability. Despite this development, the statistics of the experiments evidence the permanent significance of the temporal and spa-

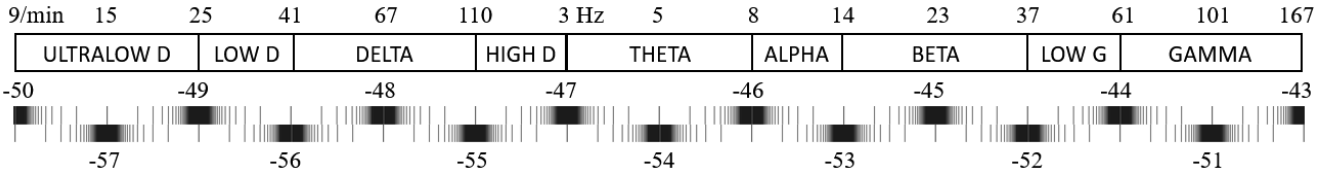

Fig. 6: The frequency boundaries of the brain activity ranges and the corresponding attractors of proton (below) and electron (above) stability of the Fundamental Fractal (2) in the natural logarithmic representation.

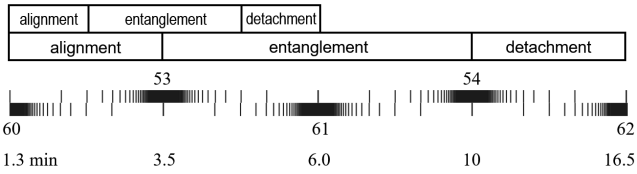

Fig. 7: The duration of transmission setup stages in minutes (below) and the corresponding attractors of proton and electron stability.

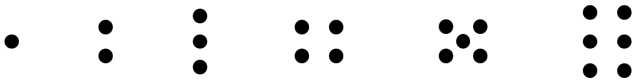

Fig. 8: Domino number configurations applied in the 3^{th} generation.

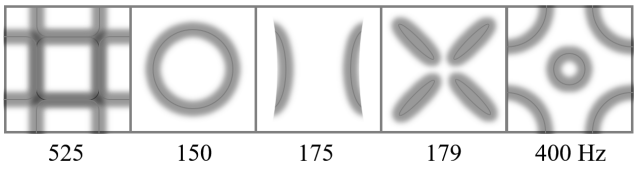

Fig. 9: Chladni patterns emerging on a vibrating square metal plate driven with the frequencies 150, 175, 179, 400 and 525 Hz.

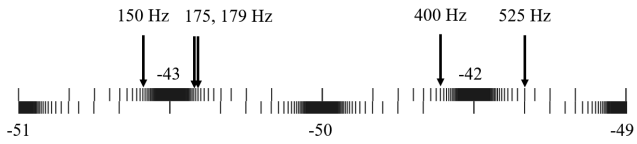

Fig. 10: The applied frequencies 150, 175, 179, 400 and 525 Hz and the corresponding attractors of proton (below) and electron (above) stability of the Fundamental Fractal (2) in the natural logarithmic representation.

tial attractors for the dynamics of the telepathic entanglement. Closer to the end of the four years' experience, indeed, the durations of the transmission setup stages automatically obeyed the Fundamental Fractal in a very natural way.

Starting with the 2^{nd} generation, the experiments were carried out with two and more receivers. This fact in particular enables a more precise model selection and clearly shows that telepathy is not limited by individual entanglement.

Conclusion

Finally, our experiments helped to discard some conventional hypotheses provided to explain telepathy. Considering the empirical fact that electromagnetic isolation supports telepathic entanglement, today we discard the idea that telepathy is based on electromagnetic waves. It would also be a joke to think that gravitational waves could be responsible for telepathy. We suppose that telepathy has nothing to do with signal transmission. In some cases indeed, the receiver got the information *before* the sender decided to share it.

We hypothesize that besides of electromagnetic and gravitational fields, there is another long-range phenomenon – the Fundamental Field – that is of pure numeric origin and non-material, like consciousness. This Fundamental Field could turn out to be a primordial field from which consciousness originates. Being not limited by any physical process, the Fundamental Field causes numeric entanglements affecting any type of interaction.

Within our approach, telepathy is an access to a common quantum physical pool of information. Thanks to the non-locality of this pool, every telepathist can get the required information. Any process, any event updates the quantum physical information pool automatically. No sender is needed. Accessing the pool, the participant A seeks for information that is related to the participant B.

Obviously, special conditions can facilitate this access. In our experiments, those conditions were always related to the Fundamental Field. Therefore, we propose numeric entanglement as model of telepathic sharing of information.

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