

Consciousness, Theatre,
Literature and the Arts 2009

Edited by

Daniel Meyer-Dinkgräfe

Proceedings of the Third International Conference on
Consciousness, Theatre, Literature and the Arts (CTLA)
University of Lincoln UK, May 16-18, 2009

**CAMBRIDGE
SCHOLARS**

P U B L I S H I N G

ISBN (10): 1-4438-1649-3, ISBN (13): 978-1-4438-1649-6

Email address of Dr. Klaus Volkamer: dr.volkamer@t-online.de

CHAPTER ONE

KLAUS VOLKAMER

SUBTLE MATTER FIELDS AND RADIATIONS AS BASIS FOR AN EXTENDED PHYSICS

Abstract

The basis of this contribution is the experimental proof of existence and the theoretical description of an invisible and field-like form of subtle matter with real mass content which is so-far unknown to modern science. As a consequence the possibility follows to describe the universal space-time-geometry, elementary particles of normal matter as well as forces as resulting from quanta of field-like matter, in tune with special theory of relativity (STR), general theory of relativity (GTR), quantum mechanics (QM), quantum field theories (QFT) and/or homoeopathy. The existing scientific paradigm thus results as a limited borderline case of a new, extended scientific understanding, completely based on the new form of subtle matter. In this extension the approach is extremely low energetic. It is complementary to the high energy approach of modern physics.

It turns out that in addition to the above mentioned areas, and especially in living beings, in social communities, and also in theatre performance, effects of subtle matter play a key role. There are many aspects to theatre. One special aspect is that theatre can work as an amplifier by which the ideas of an individual can reach or transform a society, see Fig 1. Let's see how this works as seen from a level of subtle-matter research.

Method of Experimentation to detect Subtle Matter

Before we can discuss interrelations between theatre performance and subtle matter we must introduce major aspects of the proof of existence and the characterization of properties of subtle matter.

The proof of existence of field-like matter can be done by the usage of a two-pan balance as shown in Fig. 2. Such a balance (M 25 D-V, Sartorius AG, Göttingen) has a reproducibility of $\pm 1 \mu\text{g}$ and a total load of 25 g per pan. The data display and the computer on-line data registration in time intervals of a few seconds are not depicted in Fig. 2. The balance is fixed on a frame to the wall and is protected within a wooden chamber so that, for example, external movements of air do not disturb the measurements. Within the wooden chamber also atmospheric data such as air pressure, temperature and relative humidity are also measured and recorded per data point. Shown in Fig. 2 are two spherical glass flasks with a content of about 50 ml each, suspended to the arms of the balance, respectively. Both glass flasks are closed gas-tight by using glass grounded stoppers and application of high vacuum grease when used in a test and are identical in volume by about 0.5 %. Thus, buoyancy effects by varying atmospheric pressure, for example, are eliminated when performing a test. After running a test by comparison of the masses of a “test flask” (see below) and a “reference flask”, the obtained results can be studied after being depicted by means of computer graphic programs.

Instead of using the two-pan balance as shown in Fig. 2 also a type of balance as depicted in Fig. 3a and Fig. 3b (Comparator C 1000, Sartorius) can be used for the proof of existence and for property characterization of field-like matter. Here the reproducibility was $\pm 2 \mu\text{g}$ with total load of up to 1 kg (i.e. with a maximum sensitivity of about 10^{-9}) and masses of the samples, closed gas-tight, below 100 g, respectively. Also in this case automatic operation with on-line computer data and atmospheric data (within the wooden chamber) registration was given. This balance is also mounted at a metal frame which is fixed to a wall and is protected by an external wooden chamber, even though the balance itself has an own weighing house.

Such automatically working balances with the described reproducibility and computer software for data registration and graphic data display are available only within the past decades. In earlier times only manually operated balances with a reduced reproducibility were available. Already from 1890 until 1905 similar tests as described below were done by Hans H. Landolt at the former Friedrich-Wilhelms-Universität in Berlin when studying the constancy of mass in chemical reactions (Landolt 1906, 1910) and by other researchers (see for further details Volkamer 2008, 37-41). The manually performed tests at this time showed anomalies of the constancy of mass of internally silver-plated test samples (Landolt 1906) in the order of magnitude of the results reported below. However, no systematic proof of existence of field-like matter was

given as described below and in his final report of 1910 L andolt eliminated the anomalies, reported, for example, in 1906. The usage of internally silver-plated flasks as detectors of subtle matter occurred independently on the reports in scientific literature.

In principle the balances used indicate forces $K_T = g \cdot m_T$ and $K_R = g \cdot m_R$ for the test and reference samples, respectively. The comparison in the data evaluation at the balance leads to $\Delta K = K_T - K_R$. Because Earth's acceleration is identical per measurement this yields $\Delta K = K_T - K_R = g \cdot (m_T - m_R) = g \cdot \Delta m$. Thus, differences of the forces K_T and K_R per data point indicate mass changes Δm of the two flasks. If the initial mass change $\Delta m_{i=0}$ after reaching thermal equilibrium is subtracted from the following mass changes $\Delta m_{i>0}$, all obtained under isothermal, equilibrated conditions in the i^{th} measurement, the experimental results in the course of time are obtained as depicted in the following Figures.

Experimental Results and Characterization of Subtle Matter

If so-far unused test and reference flasks contain only a little bit of water or of other “inert” materiel such as sand, respectively, the operation of the balances under isothermal and equilibrated conditions (reached after about 4 to 5 hours after installation of the samples and start of a test after closing of the external protective wood chamber) leads over days to a perfect baseline, with variations between the individual data points within the margin of reproducibility, see Fig. 4. This demonstrates that the balance works properly.

However, after internally silver-plating the test flask prior to a test, as shown at the right hand side of Fig. 2, the mass content of the test flask systematically increases over time in comparison with the reference flask, thus, deviating from the baseline highly significantly, see again Fig. 4.

Similar tests with a Comparator, see Fig. 3a and Fig. 3b, where two or three tests can be run in parallel at the same time, revealed results as given in Fig. 5a and Fig. 5b. Again, the Comparator generated perfect baselines under isothermal conditions, see Fig. 5a, as well as test results deviating highly significantly from the baseline, and thus from the law of conservation of mass under non-relativistic conditions if the mass of an internally silver-plated flask was compared with non-silver-plated references, both closed gas-tight, and operated under isothermal equilibrium conditions, see Fig. 5b, as observed in several hundred tests.

Not only by internal silver-plating of glass flasks the proof of existence of subtle matter can be achieved, also by applying purely physical or biological (see Fig. 6) “detectors”, as well as combinations of such systems, similar anomalies of the conservation of mass can be obtained. In principle, newly generated internal or external phase borders must be studied to detect and to characterize subtle matter including concentrated aqueous salt solutions. Synergistic effects between test samples (including minerals and metals) which both had absorbed subtle matter and which were stored at distances of some centimetres indicate, that subtle matter exhibits a spatially extended “field-like” structure, ranging over distances in the order of magnitude of centimetres, with low density ($\rho < 10^{-3} \text{ kg/m}^3$, for comparison $\rho_{\text{air},25^\circ} = 1.18 \text{ kg/m}^3$), opposite to the normal point-like elementary particles with show very small spatial extensions and very high densities. The electron, for example, has a classical radius of $r_e = 2.818 \cdot 10^{-15} \text{ m}$ and a classical density of $\rho_e = 9.72 \cdot 10^{12} \text{ kg/m}^3$. Some properties of field-like matter are complementary to the properties of normal elementary particles, revealing opposing qualities such as, for example, “invisible/visible”, “field-like/point-like”, “low density/high density”, “space-like/time-like”, “high mass/low mass”.

Fig. 7 shows a baseline test with so-far unused glass flasks (experiments a and b) and repeated re-usage (experiments c through f) of the same glass flask in further tests after removal of the internal silver-plating with concentrated nitric acid, flushing with water and drying, respectively. As can be seen from Fig. 7, the glass flask shows in the baseline tests (i.e. prior to any internal silver-plating) an increasing memory effect after previous contact with subtle matter.

This is also revealed in Fig 8 where the mass differences of two reference flasks at positions P_2 and N (see Fig. 3b) which contained only some water are depicted. At position P_2 a pre-used glass flask was installed. While a perfect baseline between the two flasks at positions P_1 and N was obtained, see $(P_1 - N)$ in Fig. 8, the mass differences of $(P_2 - N)$ exhibited a series of jump-wise mass changes as already observed in Fig. 7. The difference between the levels in periods B (except the outlier at position x) and D yielded jumps according to $-21.52 \mu\text{g}$, $\pm 1.32 \mu\text{g}$ (95% confidence interval). Within the margin of accuracy this value is identical with the so-called Planck mass $m_p = \pm(h \cdot c / (2 \cdot \pi \cdot G))^{0.5} = \pm 21.77 \mu\text{g}$, where $h = 6.62618 \cdot 10^{-34} \text{ J} \cdot \text{s}$ is Planck’s quantum of action, $c = 299792458 \text{ m/s}$ is the velocity of light in vacuum, and $G = 6.672 \cdot 10^{-11} \text{ N} \cdot \text{m}^2/\text{kg}^2$ is Newton’s constant of gravity.

This implies that quanta of field-like subtle matter with Planck mass and negative physical sign exist while the linear mass increases from Fig.

5b, for example, may be a hint for the existence of quanta of field-like matter with masses below 1 μg . Also in other experiments mass deviations by absorption of field-like matter with negative sign were observed, thus yielding anti-gravitational effects. Planck mass particles have been discussed in cosmology as so-called “primordial black holes”. This implies the unproven assumption that Planck mass is squeezed into a volume of a sphere with radius of the Planck length $l_p = (\hbar \cdot G / (2 \cdot \pi \cdot c^3))^{0.5} = 1.6 \cdot 10^{-35}$ m. It is expected that such primordial black holes may have been generated in the big bang. They are expected to be instable and should explode within a short period of time due to the spontaneous emission of Hawking radiation. The experimental results indicate that this is not the case. While a particle of subtle matter must be considered as having an internal singularity with diameter of the Planck length its mass content forms, according to experimental observation, a spatially far extended and stable external matter-field with low density, see above.

The peaks in Fig. 8 marked with y and z indicate that also quanta of field-like matter with positive sign exist. Furthermore, from the jump sizes of these peaks it can be concluded that quanta of field-like matter can associate to form clusters (in a similar way as elementary particles can generate atoms or atoms can form structured molecules), and the degree of association within such a cluster can change in a state of absorption by re-arrangement of the clustered quanta prior to an emission step.

In addition it results, that after absorption of field-like matter by a detector of normal matter, introduction of mechanical vibrations stimulates emission of quanta of field-like matter, as also observed in other tests. Such mechanical vibrations result in Comparator experiments from the mechanical displacement of the samples in the Comparator, see Fig 3b.

At least four interactions of field-like matter could be detected: a gravitational one, due to its real and macroscopic mass content, a “form-specific” or “topological” interaction at the shape of phase boundaries of normal matter, and a third interaction between quanta of subtle matter to generate clusters. In addition, quanta of field-like subtle matter exhibit a very weak electromagnetic interaction. Because of this very weak electromagnetic interaction and its field-like structure with low density subtle matter and its quanta can penetrate normal matter and is invisible.

Thus, by penetration of the wall of the above mentioned glass flasks, for example, subtle matter can enter such a detector-system of normal matter and can be absorbed by means of the form-specific interaction at the newly generated phase boundaries of the internal metal film. And because of its real macroscopic mass content the absorbed subtle matter can be attracted in the gravitational field of the Earth so that via such gravitational

and mass anomalies in comparison with a reference flask its proof of existence and its characterization is possible. This implies, in general, that the definition of “thermodynamically closed systems” is no longer given if subtle matter effects can come into play.

Additional experiments involving subtle field-like matter indicate that this form of matter exhibits “bioactivity”. Seeds, for example, which sprout in fields of high intensity of subtle matter yield longer shoots in comparison to seeds which sprout under normal conditions.

Furthermore, other tests reveal that quanta of subtle matter with positive sign act “entropically”, implying that they disturb or reduce the order within a system of normal matter or prevent its formation. This entropic action of subtle matter with positive sign can be seen as the basis of the second law of thermodynamics, according to which any spontaneous process in systems being composed of normal matter must lead to an increase of entropy in the universe. In living systems, for example (see below), such entropic actions of field-like matter with positive sign induce health damaging effects and/or aging processes.

On the other hand, as additional quantitative tests reveal, quanta of subtle matter with negative sign act “negentropically”. This implies that they stabilize the order within a system of normal matter, or support its formation as well as its evolutionary progress. This negentropic (syntropic) action of subtle matter with negative sign can be seen as the basis of a so-far unknown fourth law of “negentropy” (“syntropy”) of thermodynamics. According to this law, in spontaneous processes in systems being composed of normal matter subsystems which are in structure and function highly ordered must emerge in the universe under the decrease of entropy.

In living systems, for example (see below), such negentropic actions of field-like matter with negative sign induce health supporting, regenerative effects and/or anti-aging processes, and more, see below. Besides other aspects the detection of negentropy-fields of subtle matter yields consequences for the abiotic and biotic universal and global evolution. For Darwin’s theory of evolution on the basis of random mutations and selection to generate new species this implies that steps of stochastic mutations may be considered as supplemented (or substituted) by negentropically induced fluctuations (not only in the DNA-genome but also in the so-called epigenome) which can highly increase the speed of evolution and guide its direction, even though large periods of time were still necessary (see the comments of the following Fig. 20).

Finally, if we draw our attention to a rather short historical review, we find that we have received reports both, from the Vedic Scientist

Maharishi Mahesh Yogi as well as from the Greek philosopher Demokrit, that a second class of matter exists besides normal visible matter, which is invisible to the naked eye. In both cases this category of matter is described as generating any form of consciousness in the universe independent on structures of normal matter. This implies, as additional experimental findings reveal, that the described quanta of invisible, field-like matter can be understood as representing elementary forms of consciousness, i.e. elementary living beings. According to his understanding, life and consciousness of man, for example, does not emerge from electromagnetic dynamic neuronal network activities in the brain as modern neurologists proclaim (Singer 2006). Demokrit, for example, reports that undividable quanta of subtle matter exist besides quanta of normal matter and that such quanta can be understood as “soul-atoms”. In Vedic Science they are termed “Soma” emerging from “Veda”. Maharishi Mahesh Yogi reports that Soma has a form of invisible fluid-like structure and is composing universal space-time-geometry as well as human consciousness, for example. These reports fit well to the described form of field-like subtle matter and its quanta, and as mentioned, additional experimental findings support this interpretation. From Fig. 6, for example, it can be seen that when life emerges in a sprouting seed mass changes due to the absorption of subtle matter come into play. And, after a few days at the end of life of the sprouting seeds into the air- and water-tightly closed glass ampoules, the former mass deviations tend to go back to zero, implying the emission of the absorbed subtle matter at the point of death, see below, and Fig. 14.

The detected form of subtle matter and especially its actions have obviously been described qualitatively in various cultures from ancient to modern times. Knowledge about this form of matter has come to us from India (as Veda and its expressions as Soma, Prana and Ojas), China (Chi, PSI), Greece (soul-atoms, entelechy, etc.), Europe (vis vitalis, monades, orgon, od, etc.), Russia (bioplasma), USA (radiations, eloptic energy), etc.

Even in modern science anomalies from astrophysical observations have been found which can be correlated to subtle matter, because the quanta of subtle matter with positive sign can be interpreted as “dark matter”, and quanta of subtle matter with negative sign can be understood as the origin of “dark energy”. It is known today from the observed accelerated expansion of the universe and cosmological studies that normal matter contributes only about 4% to the total matter-content of the universe, dark matter about 23%, and dark energy about 73%. Yet, the “laboratory proof” of existence is searched for in high energy accelerators and is so-far not “officially” achieved.

That normal and subtle matter belong to two different categories has profound consequences for a theoretical description of subtle matter. Because this implies that subtle matter cannot be described properly by the present-day quantum-field-theoretical “standard model” of elementary particles which is successfully used for the theoretical description of the properties of the elementary particles of normal matter detected and studied in high and highest energy accelerators. On the other hand it may become difficult to use predictions of the standard model to develop detectors at the level of high energy physics which can be used to find candidates for dark matter and dark energy, because, as outlined above, they (may) belong to another, complementary category of matter.

Consequences for the present Scientific Paradigm

On the left hand side of Fig. 9 is given a sketch of the generally accepted scientific paradigm of the world. The ordinate reflects the structuring of the universe, starting in a unified singularity at the bottom line (virtual ground state, level 1) from which in the big bang in sequential steps of symmetry breaking various virtual vacuum states and the four known forces have emerged at level 2. Vacuum states are considered to be the quantum-field-theoretical basis of the known elementary particles of normal matter in the visible universe (level 3). Within the unified singularities of black holes, such as in the centres of galaxies, for example, a re-unification of forces and particles can take place as depicted as level 4. As indicated in this sketch normal elementary particles at level 3 are permanently annihilated to and are again re-emerging from their underlying vacuum states at level 2 in quantum mechanical processes called “zitterbewegung” (z_1/z_2), due to Heisenberg’s uncertainty relation.

At the right hand side of Fig. 9 is shown a model for the subtle-matter-extension of the modern paradigm by introducing at level II, and thus as basis of the visible world (space-time, gross particles, forces, effects of life), the polar level of subtle matter. Level II thus substitutes the virtual vacuum states postulated in present day physics as the only basis of forces and particles. Underlying level II of field-like matter exists, according to this understanding, again a unified vacuum ground state at level I. Again, as on the left hand side, gross matter and forces can be unified in singularities of black holes, indicated as level IV.

For a quantitative theoretical description of the extended model, besides the four-dimensional space-time of our universe (level III) two superimposed real, yet invisible four-dimensional universes have to be

introduced which both constitute level II, and which are superimposed in parallel and orthogonal to our universe at level III. Both universes in parallel are constituted, respectively, with a three-dimensional space and an own time. Due to missing electromagnetic interactions in the same strength as known from our universe, both universes in parallel are invisible, and only very weak interactions by gravity and/or form-specific interactions, for example, remain between the universes. However, this implies that we live finally in a real 12-dimensional space-time from which our sensory perception, due to the electromagnetic functioning of our senses, conceives only the reduced set of events in “our” three-dimensional space and time.

The 12-dimensionale hyper-space-time can be formulated by a regular universal association of space-like, i.e. field-like $-m_p/+m_p$ -particles of subtle matter in a face-centred cubic network as a 12-dimensional “ether”, see Fig. 10. Here $-m_p$ -particles span the first, invisible universe in parallel to our visible universe, while the set of $+m_p$ -particles span the second invisible universe in parallel to our universe.

In this understanding our visible world emerges from the set of face-centred particles of subtle matter in Fig. 10 being, as a subset, imbedded in the 8-dimensional space-time of the two orthogonal universes in parallel.

Gross elementary particles emerge as visible point-like four-dimensional “iceberg-tips” from invisible, yet real, underlying 8-dimensional geometrical basis-structures of field-like matter of every individual gross particle which together form a 12-dimensional androgynous “gross particle”/“subtle basis”-entity, see Fig. 10 and Fig. 11. All particle-components (i.e. the “iceberg-tips”, today exclusively understood as “particles”) perform permanent zI/zII -oscillations (i.e. “zitterbewegung”, leading to the Compton wave) and the field-like quanta of their wave-components again oscillate in $zIII/zIV$ -processes (generating a particle’s quantum mechanical de Broglie wave, respectively).

From this two-layer structure of every “particle” the behaviour of gross matter according to special theory of relativity (STR) as well as of quantum mechanics (QM) can be quantitatively deduced and the present day “quantum-paradoxa” find a rather simple explanation. Thus, for example, the wave-particle dualism for every gross “particle” is a necessary consequence of the model: the 4-dimensional gross component of the 12-dimensional entity forming a “particle” (i.e. an “iceberg-tip”) expresses the particle’s “($v < c$)-particle-behaviour” while the underlying 8-dimensional structure of subtle matter generates, according to $zIII/zIV$, the particle’s “($v > c$)-wave-nature”, see Fig. 11. At the subtle background level II of Fig. 9, all “particles” are correlated in superluminal $zIII/zIV$ -

expansion/contraction processes, generating an entangled undivided, yet internally highly structured wholeness, while, as seen from an observer in our universe at the visible gross level all particles appear to be as in space and time separated bodies.

The known rest masses of gross elementary particles can be predicted from their underlying geometrical field-like structures over 7 orders of magnitude with an accuracy of about ± 1 to $\pm 3\%$, and more details can be deduced, such as, for example, about the origin of quarks, see Figs. 11 and 12.

Quantum orbitals which today are understood as useful mathematical constructs result as real standing waves (pilot waves) of the subtle matter basis of the 12-dimensional particles in which the visible “iceberg-tips” of the point-like components perform random displacements in the process of emergence and dissolution. Orbitals of soft matter are able to store information which again can be re-expressed at a gross level. This gives an explanation for homeopathy and also for the observation of Fig. 7 that the SiO_2 -glass walls of the test containers which were used in experiments to study subtle matter showed memory effects after contact with this form of matter. Because the quanta of subtle matter which constitute the basis of every gross particle are elementary living beings all forms of gross matter as well as space-time emerge from a conscious origin.

The introduced 12-dimensional ether-structure of space-time allows a plausible and quantitative explanation of “curvature” of space-time, according to general theory of relativity (GTR), and leads to an extended quantitative explanation of the mechanism of gravity. In addition the present-day uncertainty in the determination of Newton’s constant of gravity G can be explained by subtle matter-effects which are at present unknown to physics.

Effects of “electrosmog” result in this understanding as emissions of entropic dark matter radiations with positive sign which are always occurring in parallel to the emission of electromagnetic forms of radiation at the nuclear, atomic or molecular level of normal matter. This explains why in the direct neighbourhood of nuclear power stations an increased risk for leukaemia for children could be detected. While no enhanced rate of radioactivity could be measured outside nuclear power plants as cause of this increased sickness rate the described form of radiation of subtle matter emitted from the radioactive materials within the nuclear power plant can easily penetrate the protective walls which successfully suppress the emission of normal radioactive decay products.

The performed experiments reveal that effects of subtle matter violate the generally assumed “homogeneity of time” (i.e. the conservation of

energy), the “homogeneity of space” (i.e. the conservation of momentum) and the “isotropy of space” (i.e. the conservation of angular momentum), thus challenging the principle of reductionism, generally accepted in modern science as universally valid and applicable. For more details to the experimental finding and statements regarding an extension of the modern paradigm summed up above, see Volkamer (1994, 2003, 2007, and 2008).

Subtle Matter Fields of individual living Beings

After this necessary excursion into the physical research of subtle matter and resulting consequences for the modern scientific paradigm, we will turn to biological systems as further preparation for effects of subtle matter in theatre performance.

All living systems are, due to their cellular structures, excellent detectors for subtle matter (see Fig. 6) because their cell membranes act as phase boundaries where subtle matter can be form-specifically absorbed.

Fig. 13 shows, for example, the non-linear spatially extended subtle matter field of a human being. In the same way as a microscopic quantum mechanical pilot-wave guides the gross component of a visible particle, the macroscopic body-field of a person guides the morphical (i.e. shape determining), the metabolic as well as the mental processes in the gross body of a human being (Nader 2000), an animal or a plant. But also minerals, metals, aqueous solutions of minerals or celestial bodies carry such fields, either absorbed at their internal phase borders form-specifically or bound by gravitational interaction.

The body-field of a living being must be regarded as the primordial life-field (i.e. as a field of consciousness) and also as its long term memory storage capacity. Because the body-field is a non-linear field it exhibits fractal properties, similar as, for example, the mathematical Mandelbrot-set (see Fig. 13), where the shape of the total structure can be found repeatedly in a self-referral way at various sublevels at its phase border. This implies, for example, that the complete state of health or also individual habits of a person are expressed not only in the gross body as a whole but also, for example, at the level of various subsystems of the gross body, such as at the iris, the cheeks, the nose, the tongue, the teeth, the palms, the soles of the feet or the hole surface of the body, where the various subfields of the internal organs when extending above the visible gross body generate special lines and structures, i.e. the meridians of acupuncture, which are at a subtle level still connected with the inner organs of the body. However, this implies in addition that by the

transplantation of organs not only the gross organ is transplanted but also the subtle matter field of the organ, respectively, were again the state of health and experience of the donor is stored. In this way also mental habits of the donor are transplanted and the person who receives the organ will start to express such new habits to some extent. Furthermore, phantom limb pains may occur after loss of a gross limb because of internal disarrangements in the still available subtle limb of the still complete body-field because the feeling of pain as well as of emotions are also connected to the body-field of a living being. DNA in every cell acts and is guided in this understanding in resonance with processes of the body-field.

The body-field of a living being (including human beings), being composed of an association of $-m_p/+m_p$ -quanta of subtle matter, has a real energy content, see Fig. 14 and Fig. 15a. It exhibits also a real, weighable mass content because the number of $(-m_p)$ quanta and of $(+m_p)$ quanta which form the field-body is in general not identical. If the system is in a healthy state it is in total $(-m_p)$ -negentropically dominated, even though entropic effects of $(+m_p)$ quanta must be incorporated, for example, in the digestive system or in processes of apoptosis. On the other hand when the body-field as a whole is $(+m_p)$ -entropically dominated death is unavoidable. Any disease results in this understanding from a local $(+m_p)$ -dominance in a subsystem of the body-field.

When taking in food a living being prefers nutrition not only with proper contents of sugar, fat, proteins, vitamins, minerals and/or trace compounds, for example, but also with as high as much a concentration of negentropical $(-m_p)$ -fields being absorbed to the food. This holds only for "fresh food". In gene-manipulated food the $(+m_p)/(-m_p)$ -ratio in the food's field-body may increase. Placebo-effects or even spontaneous healing processes may occur in medical treatment if, due to the believe of a person, more or less intense negentropical $(-m_p)$ -resonances to the global $(-m_p)$ -field (see the following Figs. 18, 19, and 20) are initiated in which is stored (again in a fractal way) the correct information of metabolic functioning of all forms of living beings, also of man. Due to such $(-m_p)$ -resonances babies, even of rather old parents, again start with a young body in their life. On the other hand, the aging process may be due to lifelong unavoidable $(+m_p)$ -influences of subtle matter fields, especially from collective consciousness (see next paragraph) but also from improper food or lack of sufficient and efficient regeneration (and thus missing $(-m_p)$ -resonances) after $(+m_p)$ /stressful daily activities, for example.

In the process of death an irreversible separation between the visible gross body and the invisible subtle body-field takes place, see Fig. 15a and

Fig. 15b. While the gross body dissolves after death the subtle field-body survives death, not only “without problems”, but with the stored information a human being has experienced in his or her total life span and in fully functioning as during normal life. Because laboratory experiments reveal that information which has been stored in fields of subtle matter can be re-expressed at the gross level (see Fig. 7, and confer, for example, the observations of Emoto and others, see Volkamer 2007, 2008) a body-field which exists in invisible form in one of the parallel universes can manage to re-express its information content in a process of being reborn, see Fig. 15b, at the gross level of the visible universe. In life and death we are, so to say, travellers between different worlds. However, in the process of being reborn we forget the detailed information of former life-times, even though tendencies of special skills remain.

This understanding also explains near-death or out-of-body experiences where only a rather short and reversible separation of the gross and subtle bodies takes place. From reports of both experiences it is also known that the sensory functioning as well as the functioning of the mind or memory is fully conserved in the state of separation of a person’s field-body from his or her gross body, confirming our above deduced understanding.

The scientific community today regards biology as a special branch of physics. However from the understanding presented here, physics, as well as chemistry, geology or, for example, even astrophysics and cosmology will become a part of an extended “universal biology”. This is because all matter as well as space-time has a conscious subtle-matter background, ranging from the submicroscopic and microscopic background structures of space-time and elementary particles to the macroscopic and cosmic subtle matter fields of living beings, minerals, planets and moons, stars or galaxies, etc. For more details, see Volkamer (1994, 2003, 2007, and 2008).

Subtle Matter Fields of collective Consciousness and Fields of Subtle Matter at celestial Bodies

Fig. 16 shows the macroscopic quantum mechanical superposition of the body-fields of two individuals in a harmonious way leading to the formation of a collective field of consciousness. Under disharmonious conditions between the individuals the resulting collective field will exhibit nodal planes in states of energetic excitement, quite similar to the microscopic quantum mechanical superposition of atomic orbitals yielding the formation of electronically de-excited or excited molecules.

This implies that in any society or grouping of persons within a society (including theatre performances, see below), and also world wide, collective fields of consciousness exist. They accumulate and store psychosomatic information of processes which are contributed to the fields, for example, by the psychosomatic, emotional and mental activities of the individuals which generate and uphold the fields. This average psychosomatic information content is “transported and distributed”, so to say, among the total community (see the following Fig. 20) and influences the individual well being, creativity, tolerance (or opposite qualities!), etc. of every member of a society to some extent. Such collective influences can be negentropically or entropically dominated.

In the same way as individuals can reduce their unwanted (while unhealthy) individual “entropical ($+m_p$)-load” by individual application of effective meditation techniques, such as Transcendental Meditation (TM) and its advanced programs which allow systematically to achieve states of deep rest and regeneration (and more), heavy “entropical loads” in collective consciousness of a society which lead, for example, to social, economical, financial, environmental imbalances or, for example, increasing crime rates, can be reduced and harmonized by large groups of meditators applying these technologies of consciousness in a regular way together, see Fig. 17 (Wallace 1990). As early as in the 1960th this effect has been predicted by Maharishi Mahesh Yogi and he also has proposed means to establish it. Thus, social effects as depicted in Fig. 17 and as achieved by group-meditation have been termed “Maharishi-Effect”.

In addition to fields of collective consciousness further global fields of subtle matter exist around Earth, see Figs. 18 through 20. A short summary of levels of subtle matter and implications at various gross levels is depicted in Fig. 21. As can be seen from Fig. 21 the universal level of gross matter is completely imbedded in actions and effects generated and guided by subtle matter, a basic understanding of Vedic Science, i.e. the knowledge about “Veda”, i.e. subtle matter. From the perspective of human existence the free will of a human being to take individual decisions is a most important factor of freedom in this network of subtle actions. On the other hand, the effects of this decision making curve back as individual and collective destiny of every person and society, according to future karmic reactions due to the underlying wholeness of creation at level II of Fig. 9 where, so to say, a law of “mental action equals reaction” is installed. For more details, see Volkamer (1994, 2003, 2007, and 2008).

Sensory Perception and Effects of Subtle Matter

Fig. 22 shows the measuring effects with a detector of subtle matter suspended at the two pan balance (in comparison with a reference sample) on which a person with special healing properties focussed his view and pointed his hands (from about 50 cm outside of the protective wooden chamber of the balance) for 90 seconds. Only focussing the view leads to similar effects, yet reduced in intensity. The obtained results indicate that the human eyes and hands of the healer emitted in this experiment in the process actively (+m_p)-forms of subtle matter radiation which were absorbed by the detector causing changes of its mass. Persons without healing properties also can induce such mass changes, also by focussing the view alone, but by a factor of about 10 less in magnitude compared with the results obtained in Fig. 22.

The microbiological structure of the visual organ of humans or animals allows with high likelihood to locate the interface between gross and subtle matter as a cellular complex from where the soft matter radiation is emitted in the eye, see Fig. 23: an arrangement of nine pairs of microscopic pipes which are coaxially orientated on a circle around another central pair of such pipes forming a “cilia” within every visual cell. The whole system is lined up parallel to the direction of the in-falling beam of light and its function is unknown today. Such collected “pipe-systems” are excellent absorbers and emitters of radiations of subtle matter which follows similar refraction and neuronal transformation processes in the eye as normal electromagnetic light.

Only if the fraction of the subtle matter radiation being actively emitted from the eye is reflected from an object and is again collected, together with the object’s electromagnetic emission in the eye of the observer the information content of the object can be consciously become aware for the observer. Thus, not either the “emission theory” (of subtle matter radiation) or the “intromission theory” (of electromagnetic radiation) of vision is correct: both function in superposition. If one of the two beams is missing we are blind.

This becomes obvious in a visual form of sickness called “visual agnosia”. A person with this sickness raises spontaneously his or her hand to protect the face if one tries to throw a ball into his or her face. This is because the involuntarily working reflex-processing of the electromagnetic radiation via the brain stem still functions. But because the area in the brain where the neuronal information processing of the beam of subtle

matter is damaged the person does not become aware why he or she had raised the hand for protection. When being asked why he or she raised the hand the answer is “I do not know”.

To come back to the experiment with the healer: after the healer had seen in the above described experiment that he could produce objective effects by means of a purely subjective mental process he sat down in a neighbouring room at a distance of about 4 m from the still running balance. As he reported later, after another about 60 seconds he started to focus his attention from the chair where he was sitting at the detector of the balance with the intention to reduce the mass of the detector. The objective result of this subjective effort is depicted in Fig. 24. Period B_1 until E_1 in Fig. 24 shows the same results as in Fig. 22. During period B_2 until E_2 the mentally intended mass reduction worked, and within 505 seconds the mass had dropped down by more than 35 μg ! This indicates that the healer had mentally sent a $(-m_p)$ -beam of subtle matter by means of focussing his attention at the detector being suspended at the still running balance which was absorbed by the detector.

Again, the microbiological neuronal interface in the brain between gross and subtle matter can be located: Fig. 25 shows a sketch of a brain cell. Many of the long connections (axons) to other neuronal cells of the brain are wrapped round with membranes in spiral form (myelin sheaths), again excellent absorbers and emitters of subtle matter. Absorbed quanta of subtle matter at these myelin sheaths can thus, by their biological activity and the re-expression of stored information in such quanta, influence the transportation processes of neurotransmitters within the axons from the body of a neuronal cell (termed ‘soma’) to the gaps (synaptic clefts) at other cells where further processing of information takes place. This implies that the human thinking process is connected to, as the visual process, and is guided by interactions with quanta of subtle matter. For more details of effects of subtle matter in biology, see Volkamer (1994, 2003, 2007, and 2008).

Consequences of Subtle Matter in Theatre Performance and further Conclusions

Now we have presented enough information about subtle matter research to connect the findings with subtle matter effects in theatre performance.

The emission of a stream of quanta of subtle matter from the eyes of a person (see Fig. 22) or in a thinking process (see Fig. 24) and its reflection

from the macroscopically bound subtle matter field of objects or from another person (see Fig. 13) leads to the formation of so-called “psi-tracks”, i.e. standing waves of subtle matter radiation between individuals and objects or between individuals and individuals. Such psi-tracks can be understood as non-electromagnetic “mental LASERs”, i.e. as standing waves of beams of subtle matter radiations with increased intensity. Along such psi-tracks information as well as psychosomatic and emotional impressions are (usually subconsciously) transported and exchanged between an observer and an object (which can, of course, also be a person or other living being, see again Fig. 13).

Effects of such non-electromagnetic psi-tracks were mirror neurons may play an important role have been experienced from many persons who spontaneously turned their head while, for example, walking along a street or sitting in a restaurant, and after turning the head were looking for a fraction of a second into the eyes of another person who had watched them with interest and focussed mind from behind.

In theatre performance, for example (and this holds also for other events, assemblies or meetings, etc.), this implies that the actors at the scene are repeatedly or even permanently connected by such psi-tracks to more or less all persons of the audience. This implies that the actors send, at a real, yet subtle basis, psychosomatic and emotional information contents (besides the audible and visible electromagnetically transmitted intellectual content of their performance) into the audience via “psi-track-technology”. And they get similar answers from the audience. If $(-m_p)$ -quanta exchange dominates in this process the actors become during their performance more or less “mentally elevated”, and similar uplifting effects may be experienced by individuals in the audience. This may be an important reason why people visit theatre performances to escape, at least for a short while, the $(+m_p)$ -loads of their daily life and want to experience the special “atmosphere” or “presence” in theatre.

As seen from the perspective of the actors of a theatre performance the process of psi-track-connections to the audience can lead them to a touch of experience of higher states of consciousness as described in detail in Vedic Science. This is because the actor can under such conditions become, due to the focus of intense $(-m_p)$ -emissions from the audience, a “witness” of his own performance. In this state his or her more or less perfect play starts to go, so to say, from alone, without effort and with increasing efficiency and joy and, as mentioned, similar smoothing effects in individuals in the audience are not excluded.

The question may arise “who” is “witnessing” “what” in such a state of $(-m_p)$ -elevation? An explanation comes from Fig. 9. This is because the

three levels I, II and III of Fig. 9 do not only penetrate in superposition our external objective environment but also our internal subjective structure of existence. In the normal state of waking consciousness an internal part of our field-body which structures our individual ego at level II is more or less completely associated with our visible gross body. Thus we are, so to say, confined in “Plato’s cave”, i.e. the visible universe, excluding any sensory perception of the parallel universes. This gives us lifelong the impression that “we” have sensory perception and “we” are performing actions with our gross body in a gross environment and in an ‘enlightened’ society (in German expression “in einer ‘aufgeklärten’ Gesellschaft”). In such a form of an enlightened society (and also in science) effects of subtle matter are expected to be excluded, levels II and I as sketched in Fig. 9 are regarded as non-existent, and only uncontrollable ‘subconscious’ process in psychology remain. This implies a moulding and fixation of the human brain during education from generation to generation so that it loses its inherent ability to consciously becoming aware of levels I and II and being able to live consciously in tune with the subtle matter processes of nature, the basis of life. We thus reduce life and live life (more or less) only at the visible gross level (i.e. Plato’s cave), very often under “violation” of the processes of natural law at subtle levels, leading to a sequence of painful consequences as unwanted side-effects at the gross level. And if we try to eliminate such painful consequences, for example in the health system or in processes of energy generation only by application of materialistic means of level III we can run into escalating problems, see, for example, the world wide increase in immunological sicknesses or the problems of the world’s climate.

Under $(-m_p)$ -elevated conditions our ego-structure at level II may recognize that it is but an excited fraction of the underlying unified cosmic level I, the undivided universal field of consciousness. If “we” start to consciously associate our existence with this level I we start to experience (thus, by escaping “Plato’s cave”) that this level is an uninterrupted observer of all what is happening in the universe, a basic knowledge of Vedic Science. For an actor in the above described state of elevated consciousness this leads to the experience that he or she – being associated for a short while (as long as the $(-m_p)$ -elevation holds in this state of inspiration) with the universal observer at level I – observes as a calm and joyful witness the interaction of his or her own subtle field-body at level II in interaction with his or her gross body and its actions at the scene, both at level III. Usually it is a more or less painful experience if this $(-m_p)$ -elevation breaks down at the end of the play. Only in stable states of higher forms of consciousness such experience can be lived permanently

and joyfully in daily life. Such effects may start to work with special intensity if the intellectual content of the play which is presented in a theatre performance deals in addition with spiritual processes which touch levels I or II of Fig. 9. And the original contribution of theatre performance to society may be if a play writer works, when writing his or her play, from experiences of level I, when the actor's performance includes the experience of level I during the play, and the audience is thus guided via psi-track-mechanisms to also start to experience level I when watching the play, and thus becoming aware of and enlivening the final origin of the universe which always works negentropically.

While such mutual exchanges of $(-m_p)$ -radiation in psi-tracks enliven wellbeing and joy of the actors as well as of the audience, exchange of $(+m_p)$ -quanta from level II may of course induce opposite effects. Whether $(-m_p)$ - or $(+m_p)$ -effects start to dominate during a theatre performance may depend widely on the author of the piece and the subject it is dealing with as well as with the additional side conditions under which the performance takes place. In this sense, all visible arrangements in a theatre scene are (or could be) means to adjust the mental frequency and to improve thus the resonance and the $(-m_p)$ -intensity of the resonance between the ideas of the play writer, the performance of the actors and the audience so that the "mental wireless lan-system" of psi-tracks properly works in a mutually uplifting way. Furthermore, such $(-m_p)$ - or $(+m_p)$ -effects can also be induced from persons who invisibly act during a theatre performance from behind the scene because mental psi-tracks can easily penetrate curtains (Meyer-Dinkgräfe 2005, page 143).

On the other hand the audience forms an own collective field of consciousness (see Fig. 16) which starts to interact with the collective field generated by the actors at the scene. Here a "collective psi-track" of higher order is or can be involved which superimposes and enhances the above described individual influences. And because the collective field of the audience is part of the collective field of the whole society, we can imagine a line of connection from the author of the theatre play via the actor's field of collective consciousness and the collective field of consciousness of the audience to the surrounding society, see Fig. 1. This implies a transfer of individual ideas and/or ideals of an author via theatre performance to society as a whole, a process which can be enhanced (or suppressed) by reports about the theatre play in the media.

Certainly such effects have socially stabilized societies, since theatre performances in ancient Greece or earlier times have been done. Thus, the establishment and the passing on of tradition of cultures can be seen as closely connected to individual and collective mental $(-m_p)$ -contributions

of theatre performances via mental ($-m_p$)-networking of shared common ideas and ideals which are supportive, both for the health and creative success of individuals and for the stability and success of a society as a whole.

In conclusion, we can say that theatre performance ever has worked with macroscopic (as well as with so-far not mentioned cosmic, see Fig. 21, and Volkamer 1994, 2003, 2007, and 2008, pages 41-56) effects of an extended understanding of nature which modern science has tried to explain to some extent with entanglement processes of microscopic quantum-field effects. Such effects may also contribute to some extent to the above described subtle-matter-networking. However, we have seen that life springs in general from effects of a separate category of macroscopic or even cosmic life-carrying subtle matter fields which are superimposed to gross matter bodies, see Fig. 13, in addition to the microscopic quantum mechanical orbital-fields of subtle matter which act as pilot-waves of elementary particles. Gross “dead” matter is, so to say, sandwiched between two levels of subtle forms of life, a microscopic one and a macroscopic one. And in the same way as microscopic nuclear, atomic or molecular systems can be described by quantum mechanics also effects of macroscopic or even cosmic subtle matter fields can be predicted by applying quantum mechanical considerations.

In this understanding the human brain (as DNA) is only a resonance instrument (Sheldrake 1981), a complex interface for the back and forth interrelation between gross electromagnetic metabolic processes in the visible body and the internal dynamics of the invisible body-field of every living individual (Nader 2000). This understanding is supported from anatomic findings of persons from whom, after their death, only 0.5 to 0.0% (!) of the cells of the cerebral cortex could be detected, even though the persons in some cases had shown an IQ during lifetime of more than 120, and no anomalies in behaviour during life could be observed (Lorber 1981)! This implies that more important than the size and networking of the gross processes in the brain may be the structure and internal dynamics of the corresponding “subtle nervous structure” in a person’s body-field.

Even if no brain exists at all, such as in bodies of so-called “dead matter”, for example in a stone or in a rock (in a mountain, or river, a lake, or the ocean, etc., or in associations of quanta of subtle matter among each other, without any direct association to gross matter-structures, see Volkamer 2008, pages 157-158), consciousness-carrying subtle-matter fields are in function and are actively working at their invisible level intervening with structures of gross matter mainly via form-specific or gravitational interactions.

The reported research findings of subtle matter can also explain other anomalies such as paranormal effects. If someone is able to mentally focus (consciously controlled or subconsciously uncontrolled) a beam of ($-m_p$)-radiation in high intensity (see Fig. 23), for example, on a piece of iron, this can lead, according to the above understanding, to psychokinetic effects of displacement or anti-gravitational elevation of the piece of iron. Clairvoyant or telepathic abilities result, on the other hand, if a person can increase his or her own mental sensitivity to such an extent that he or she can start to directly experience in a conscious way his or her own mental and sensory subconscious processes of subtle matter at level II of Fig. 9, completely independent on electromagnetic processes at level III.

Because the qualities and effects of fate, which will reach us in future, are, so to say, “prepared” at the invisible level II of subtle matter (as consequences of our own earlier actions at level III) someone who is able to directly cognize the structures and processes of individual or collective fields of subtle matter in the present may be able to start to predict events which may (and will, if no further mental corrections will take place, may be by suitable meditations) occur in future. This skill of precognition is another parapsychological ability. Any “mysteries” (if free of hoax) work and become understandable at the level of subtle matter.

Such parapsychological abilities point again in the direction of the development of altered “higher states of consciousness” as described systematically in Vedic Science (Meyer-Dinkgräfe 2005, pages 39-43, Wallace 1990, Nader 2000). In principle, Vedic Yogic F lying, the major technology for harmonizing collective consciousness in a society (see Fig. 17), established by Maharishi Mahesh Yogi, uses, in the understanding outlined above, mental processes to accumulate in high intensity ($-m_p$)-quanta in an individual’s body to produce at least short steps of reduced body weight or even levitation (Wallace 1990). Because such quanta stimulate regenerative negentropic ($-m_p$)-effects in the mind and body of the person who applies such technologies as well as in the surrounding field of collective consciousness of a society, not only (scientifically well documented) individual health improvements are a result (Wallace 1990) but also harmonizing and stabilizing social effects in collective consciousness follow, see again Fig. 17, such as for example, a reduction of crime rate, reduction of accidents or reduction of other entropic ($+m_p$)-effects in society (Wallace 1990). In a similar way ($-m_p$)-networking processes in theatre performances can contribute to some extent to the wellbeing of society, as outlined above.

Artists and play writers of all times and traditions have since long times known intuitively (or directly from own subjective experience) that

there is more than the naked eye can see. The detection and characterization of subtle matter as described in short above, opens a door of understanding and for further scientific objective studies which was so far closed in science even though in ancient traditions of knowledge one would only smile about this possibility and would recommend to focus more on the extension and spiritual development of the individual abilities of one's own consciousness. Already Plato recommended "know thyself". To achieve this in spiritual states of 'enlightenment' (in German 'Erleuchtung'), where an individual is consciously knowing the existence of levels I and II and is permanently appreciating and experiencing its identity with level I as sketched in Fig. 9, and is eventually also realizing consciously the processes at level II, is regarded as the goal of life in Vedic Science since thousands of years, up to today (Nader 2000). Maybe, the reported findings allow the (+m_p)/stress-loaded people of our time and also the scientific community to understand the reality of our own ancient traditions better, and to start possibly personal programmes for the spiritual education of one's own consciousness. Theatre performances and theatre science have always aimed, not only to entertain or criticize, but also to educate people and to stabilize and evolve social communities, a potential of high responsibility, and will (or should) point, also today, more and more in this direction.

Bibliography

- Hauschka, Rudolf. 1981. *Substanzlehre, Zum Verständnis der Physik, der Chemie und therapeutischer Wirkungen der Stoffe*, Frankfurt: Vittorio Klostermann.
- Landolt, Hans H. 1906. Untersuchungen über die fraglichen Änderungen des Gesamtgewichtes chemisch sich umsetzender Körper. *Zeitschrift für Physikalische Chemie* 55: 589-621.
- Landolt, Hans H. 1910. Über die Erhaltung der Masse bei chemischen Umsetzungen. *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften, Physikalisch-Mathematische Klasse* Abh. I: 1-158.
- Lorber, John. 1981. Geht es auch ohne Gehirn? *Naturwissenschaftliche Rundschau* 34, 3: 126. See also: John Lorber. 1980. *World Med.* 15, 15: 21.
- Meyer-Dinkgräfe, Daniel. 2005. *Theatre and Consciousness: Explanatory Scope and Future Potential*. Bristol: Intellect.
- Nader, Tony. 2000. *Human Physiology, Expression of Veda and Vedic Literature*. Vlodrop: Maharishi Vedic University.

- Sheldrake, Rupert. 1981. *A New Science of Life: The Hypothesis of Formative Causation*. London: Blond & Briggs.
- Singer, Wolf. 2006. *Vom Gehirn zum Bewusstsein*. Frankfurt: Suhrkamp.
- Volkamer, Klaus, et al., 1994. Experimental Re-Examination of the Law of Conservation of Mass in Chemical Reactions. *Journal of Scientific Exploration* 8.2: 217-250.
- Volkamer, Klaus. 2003. Detection of Dark-Matter-Radiation of Stars During Visible Sun Eclipses. *Nuclear Physics B (Proc. Suppl.)* 124: 117-127.
- Volkamer, Klaus. 2007. *Feinstoffliche Erweiterung der Naturwissenschaften*, Berlin: Weissensee Verlag.
- Volkamer, Klaus. 2008. *Feinstoffliche Erweiterung unseres Weltbildes*, Berlin: Weissensee Verlag.
- Wallace, Keith R. 1990. *Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi-Program, Volumes 1 through 5*, Fairfield: Maharishi International University Press.

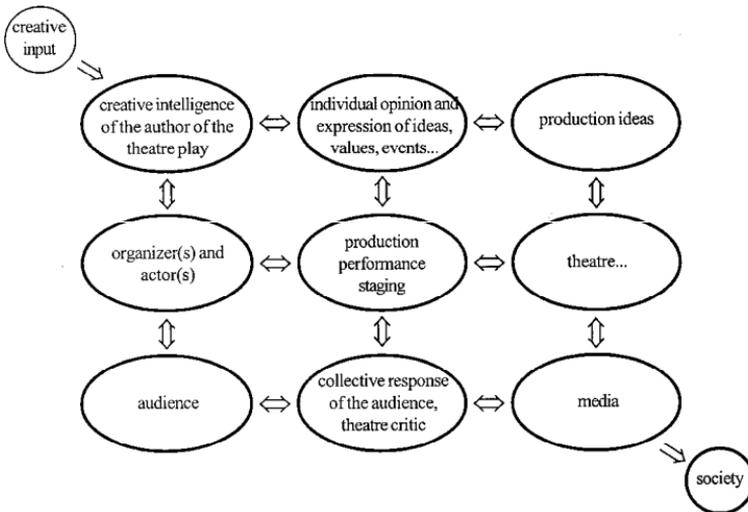


Fig. 1: Theatre performance includes in a complex way the transport of ideas and ideals of individual play writers via direction, production and actors as well as the theatre audience to society as a whole and also can act as a unifying and educative factor in society.



Fig. 2: Automatically working two pan micro-balance (M 25 D-V, Sartorius) with maximum load of 25 g per pan, and a reproducibility of $\pm 1 \mu\text{g}$ for the proof of existence and the characterization of properties of subtle matter. For further details, see text (Volkamer 2007 and 2008).



Fig. 3a: Automatically working Comparator (C 1000, Sartorius) with maximum load of 1 kg, and a reproducibility of $\pm 2 \mu\text{g}$ for the proof of existence and characterization of properties of subtle matter. For further details, see text (Volkamer 2007 and 2008).

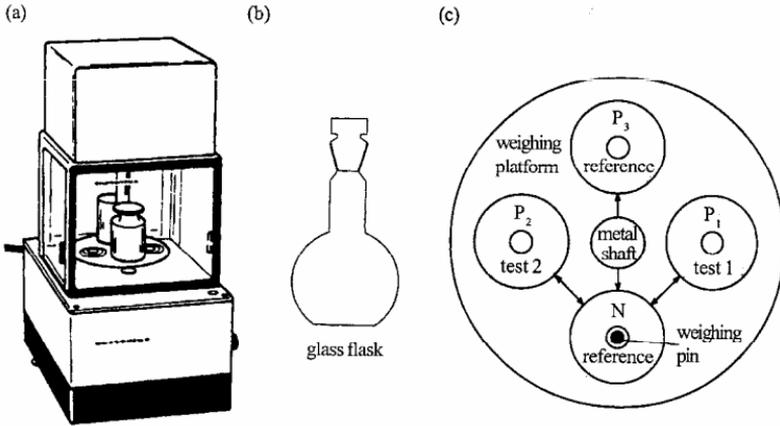


Fig. 3b: This sketch of the Comparator shows, besides a cross section of a glass flask used in the tests, the internal circular platform of the balance on which four such glass flasks can be mounted. At position N a reference glass flask is positioned. Via a vertical metal shaft the platform is connected to mechanically working electronically controlled gears by which the platform with the four flasks is elevated, rotated and subsided, so that every flask is placed in a regular weighing cycle of about 20 minutes on the weighing pin, yielding a measuring point. For further details, see text (Volkamer 2007 and 2008).

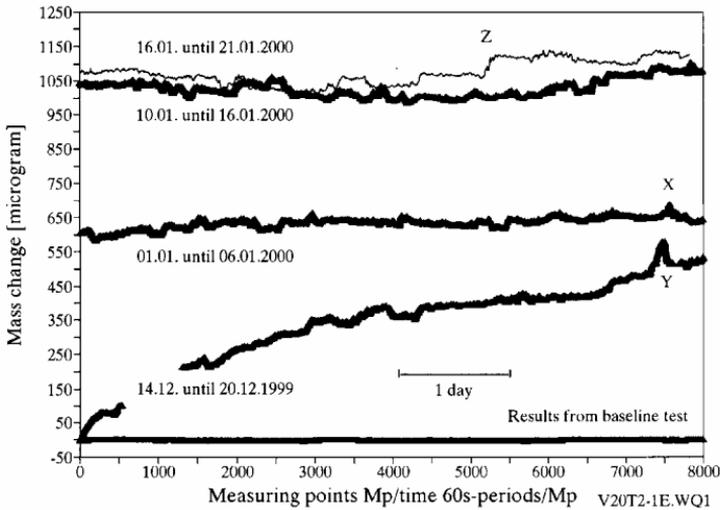


Fig. 4: Results obtained in a baseline test and with an internally silver-plated test flask in comparison with a reference flask. The two-pan balance was used. For further details, see text (Volkamer 1994, 2003, 2007, and 2008).

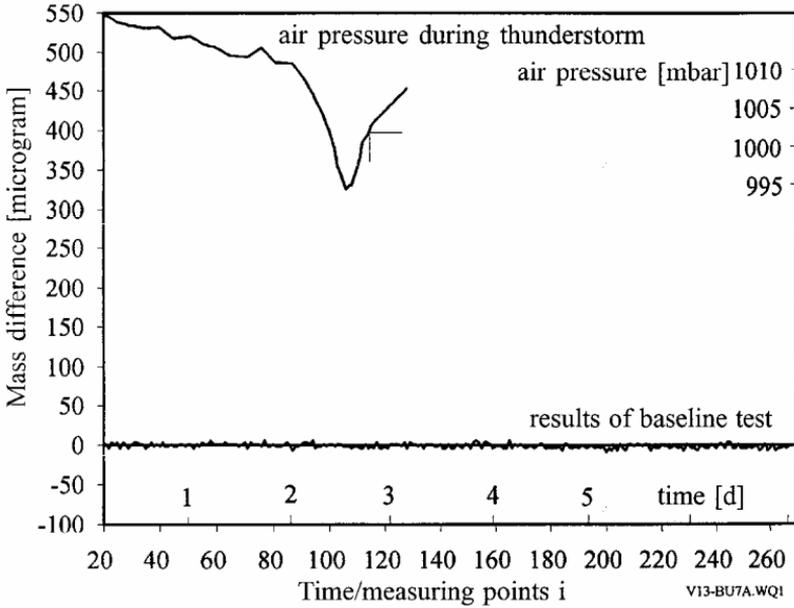


Fig. 5a: A perfect baseline was obtained over several days when applying two glass flasks in a Comparator-test which contained only water. Even under the conditions of a thunderstorm, the course of which is depicted in the Fig. by the variations of the registered atmospheric pressure, the baseline was not disturbed (Volkamer 1994, 2003, 2007, and 2008).

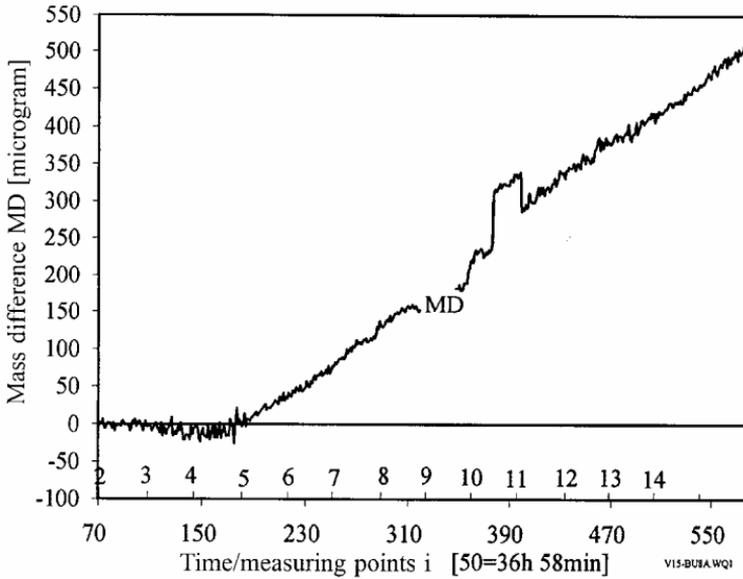


Fig. 5b: After obtaining a perfect baseline over a period of three days the mass of the internally silver-plated test flask started to increase systematically during this Comparator-test with an internally silver-plated glass flask, under violation of the law of constancy of mass in thermodynamically closed systems. Besides a linear increase of the mass of the test flask also stepwise positive as well as negative mass jumps were observed. Start of the test was 09.03.1992, 1:40 CET. For further details, see text (Volkamer 1994, 2003, 2007, and 2008)

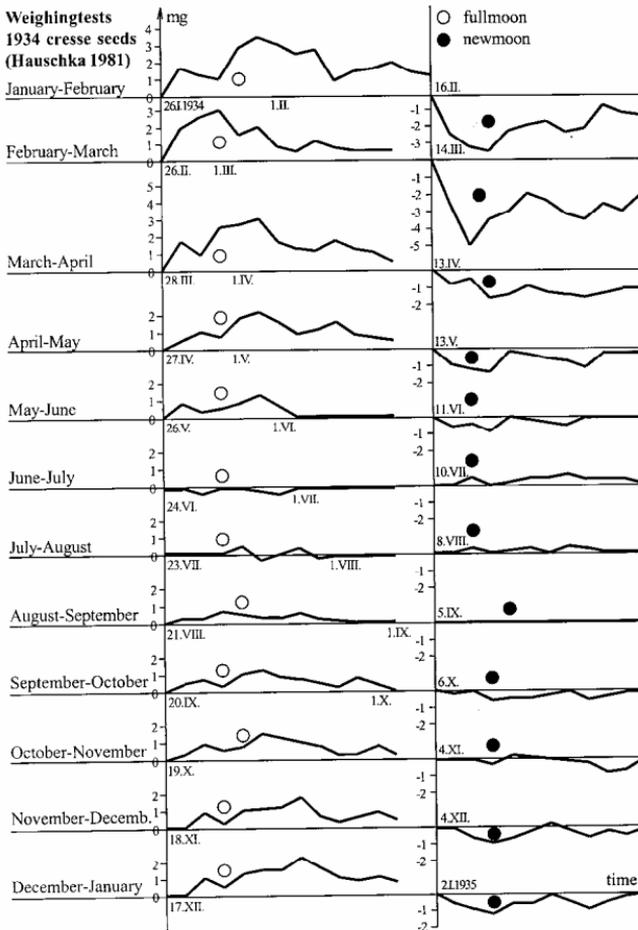


Fig. 6: Mass deviations observed by Rudolf Hauschka with sprouting cress seeds confined with a little bit of water within glass ampoules, closed gas-tight, in comparison to a reference system, respectively. A manually operated balance was used. The results show influences of the position of the Moon and another superimposed rhythm. Hauschka's interpretation of his findings as "generation and dissolution of normal matter" cannot be accepted (Hauschka 1981) and is replaced by the understanding of absorption and emission processes of a so-far unknown form of subtle matter. For further details, see text (Volkamer 2007 and 2008).

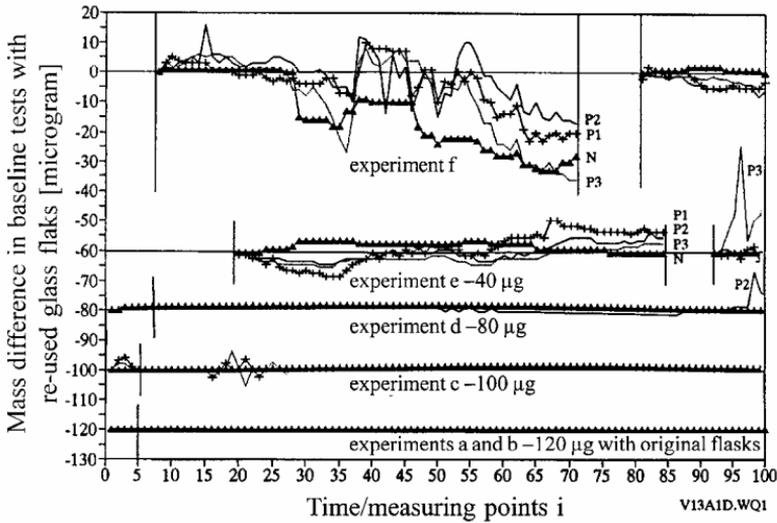


Fig. 7: Repeatedly used glass flasks in baseline tests with a Comparator after removal of internal silver-plating, respectively, exhibiting “memory-effects” of the glass flasks. For further details, see text (Volkamer 1994, 2003, 2007, and 2008).

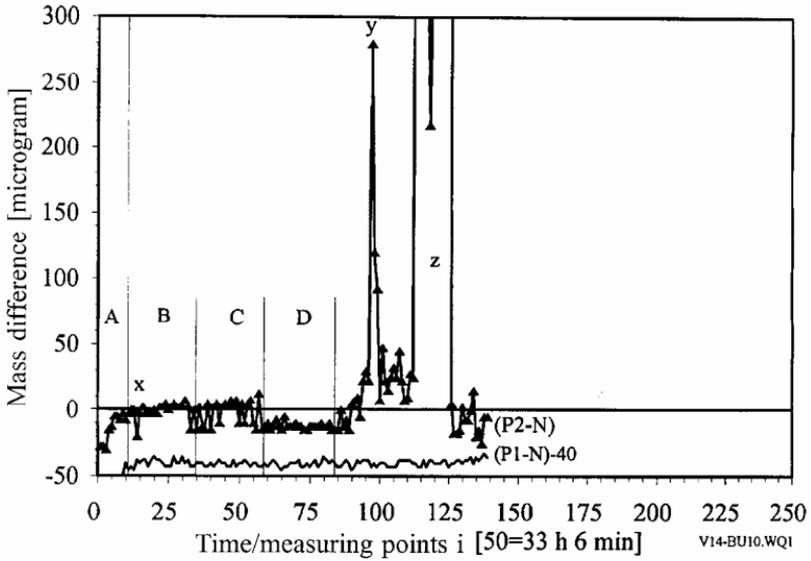


Fig. 8: Results obtained with a pre-used glass flask containing only a little bit of water in a Comparator-test. Start of the test was 05.02.1992, 0:30 CET. For further details, see text (Volkamer 1994, 2003, 2007, and 2008).

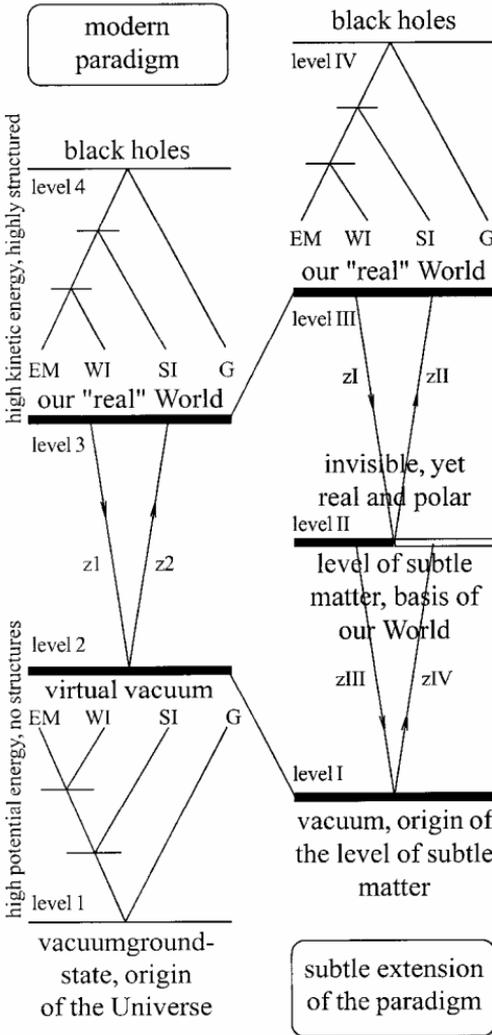


Fig. 9: Comparison of a sketch of the present modern paradigm (left hand side) in comparison with a proposal for an extended scientific paradigm (right hand side) based on the findings of subtle matter. Modern unified field theories allow a characterization of the qualities of levels 1 or I (N ader 2000). For further details, see text (Volkamer 2007, and 2008).

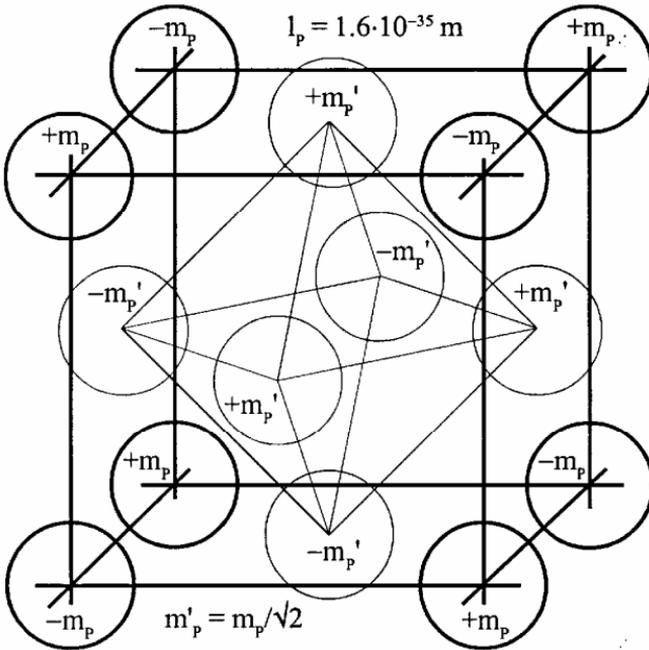


Fig. 10: Cubic face centred elementary cell of a 12-dimensional model of space-time geometry (primordially, with “flat”, i.e. un-curved geometry) spanned by an association of quanta of field-like matter. The subtle-matter background structures of normal gross particles result from Platonic bodies located at face centred positions in the cubic frame. Original spins, electric charges and (+/-)-signs of the quanta are not indicated and sum up in hyperspace to zero, respectively. For further details, see text (Volkamer 2007, and 2008).

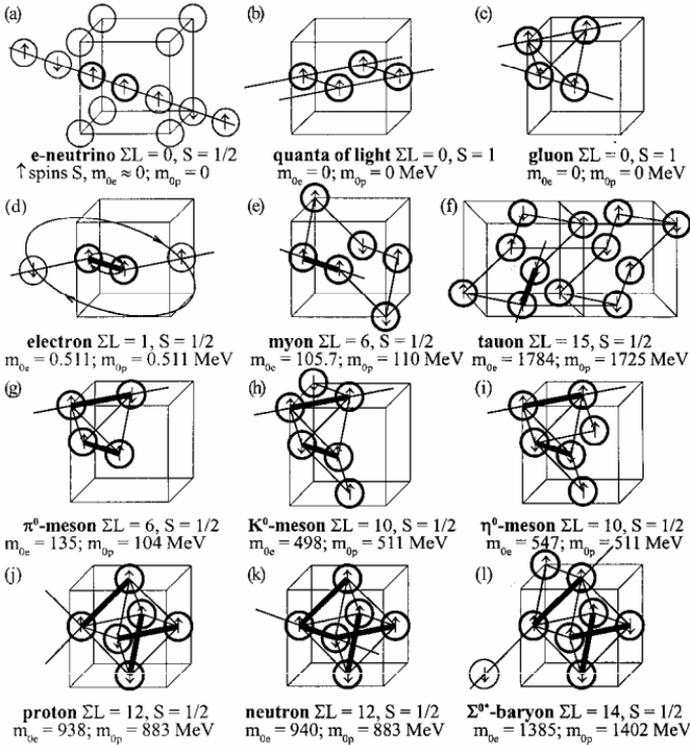


Fig. 11: From coherent oscillations (zIII/zIV) of the geometrical wave-like subtle-matter background structures with superluminal ($v > c$)-entanglements gross elementary particles emerge in zitterbewegung (zI/zII) as point-like ($v < c$)-“iceberg-tips”. The sum of bonding lines ΣL which form these bodies, if containing at least one vortex of two rotating quanta of subtle matter (the bonding line of which is printed above in bold, respectively), allow the estimation of the rest masses m_{0p} of elementary particles, according to $m_{0p} = 0.511 \cdot (\Sigma L)^3 \text{ MeV}$, see Fig. 12. In energy areas where no such geometrical structures can be achieved, no gross elementary particles could be detected, see again Fig. 12. Rotating vertices of pairs of field-like quanta in such structures are the basis of the quarks. In neutrinos no vortex exists. Leptons are structured with one vortex, mesons with two vortices, and baryons with three or more vortices. For further details, see text (Volkamer 2007, and 2008).

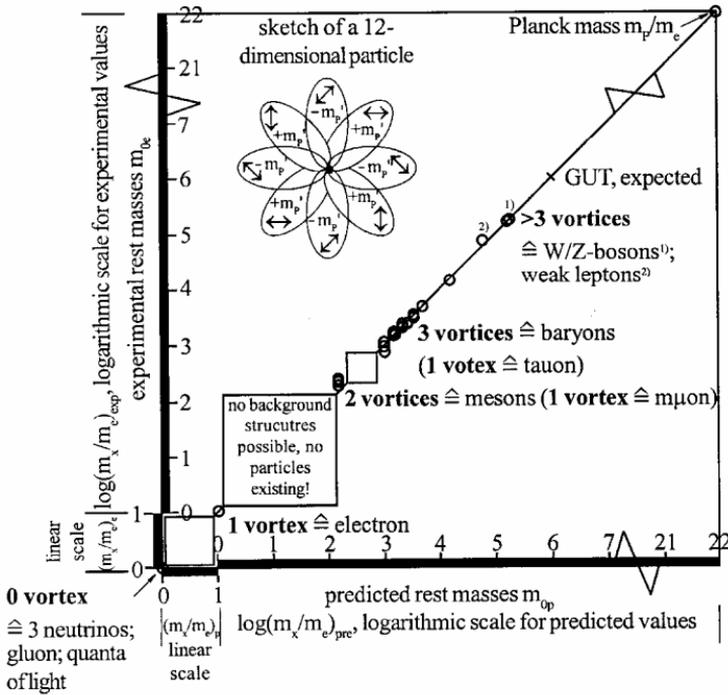


Fig. 12: Predicted (i.e. m_{op}) and experimentally detected (i.e. m_{oe}) rest masses of gross elementary particles agree rather well over about 7 orders of magnitude. For structures with low bonding angles, such as, for example, the π -meson, additional terms of correction have to be added in $m_{op} = 0.511 \cdot (\Sigma L)^3$, due to internal torsion in the underlying tetrahedron, see Fig. 11. The inserted sketch indicates the 12-dimensional structure of a “particle”: the central point t-like singularity (i.e. the “iceberg-tip”, today exclusively understood as a “particle”) emerges in oscillations in the 4-dimensional universal substructure of the 12-dimensional space-time from its field-like 8-dimensional subtle matter wave-like background. For further details, see text (Volkamer 2007, and 2008).

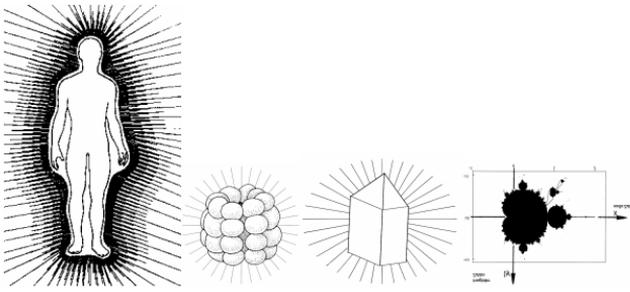


Fig. 13: Sketch of higher dimensional field-bodies of subtle matter of men, animals, plants or minerals, for example. The non-linear body-fields possess fractal properties as sketched in the presented Mandelbrot-set. For further details, see text (Volkamer 2007, and 2008).

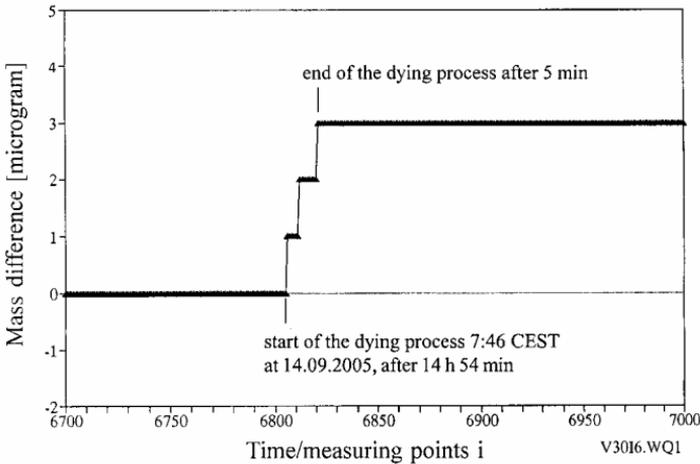


Fig. 14: Mass loss of a dying leaf of lilac. For further details, see text (Volkamer 2007, and 2008)

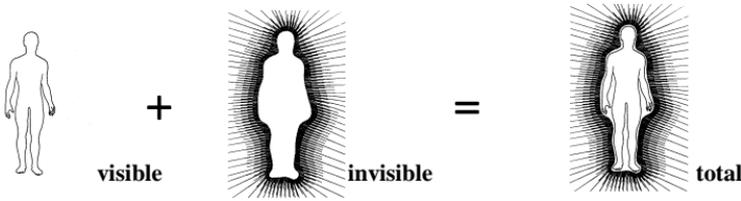


Fig. 15a: The total, holistic existence of a human being comprises the visible 4-dimensional gross body of normal matter in superposition with the 8-dimensional field-body of subtle matter. Similar structures hold for animals, plants, minerals, or even every elementary particle. For further details, see text (Volkamer 2007, and 2008).

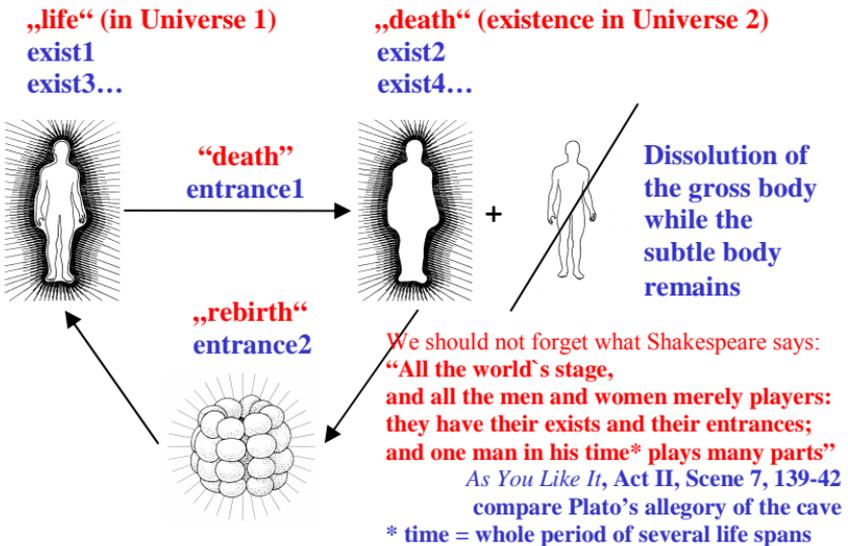


Fig. 15b: Sketch of the processes at death and rebirth of a human being. Similar “pathways” result for animals and plants. For further details, see text (Volkamer 2007, and 2008).

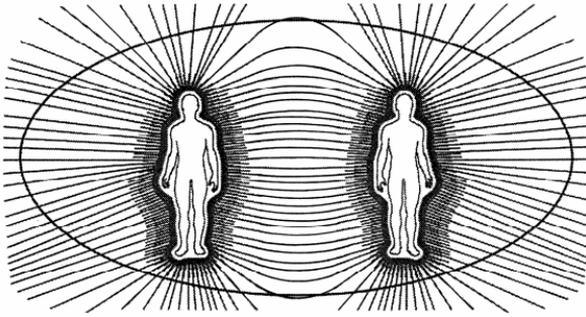


Fig. 16: Formation of a harmonious collective field of two persons by macroscopic quantum mechanical superposition of the two individual body-fields. The ellipse schematically indicates a line of constant intensity of the collective field. For further details, see text (Volkamer 2007, and 2008).

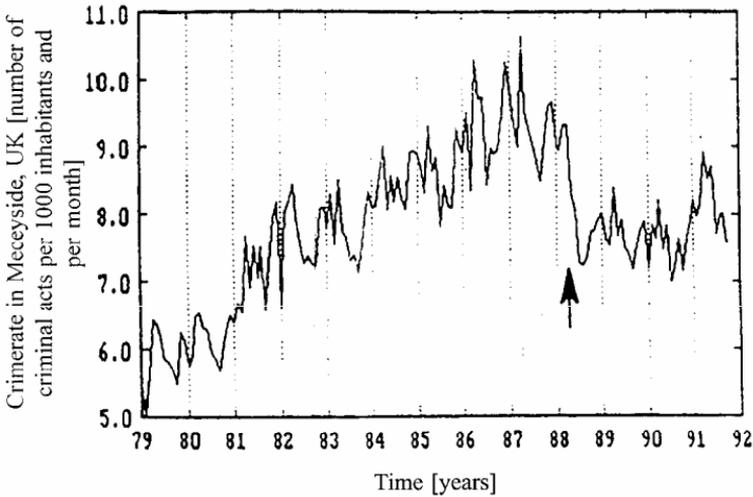


Fig. 17: Reduction of crime rate in Merseyside, England, in 1988 (marked by the arrow), due to an extended Maharishi-Effect, after establishing a group of practitioners of the Vedic Meditation Technologies (TM, and extended TM-Sidhi-Programs including Yogic Flying). Such social harmonizing effects occur when the group size of meditators surpasses a threshold, according to the formula “square-root of 1%” of the surrounding population. In more than 40 studies this effect has been verified (Wallace 1990). For further details, see text (Volkamer 2007, and 2008).

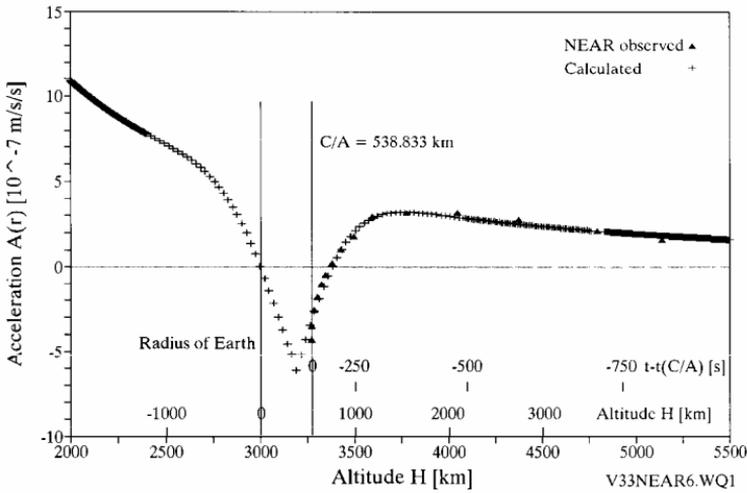


Fig. 18: In a global fly-by manoeuvre of the NASA spacecraft NEAR-Shoemaker accelerations by Earth were observed, as indicated in the diagram by the triangles. Why these accelerations deviate from the expected zero-line, is unknown. By introducing a spherical, gravitationally bound field of subtle matter with positive sign and another shell-like one with negative sign bound by topological interaction to the outer layers of the Earth the anomalous accelerations could quantitatively be explained, see the indicated plus signs. The superposition of the two global fields can be seen as basis of the global Hartmann grid (see Fig. 19), of Sheldrake's morphogenetic fields (see Fig. 20) or of Nelson's Global Consciousness Project (GCP). Also the structures of Planetary nebulae can be explained by gravitational actions of exploding stars. NASA Pioneer 10 and 11 spacecraft show similar acceleration anomalies which can be explained by gravitational effects of subtle matter fields bound gravitationally to the Sun. For further details, see text (Volkamer 2007, and 2008).

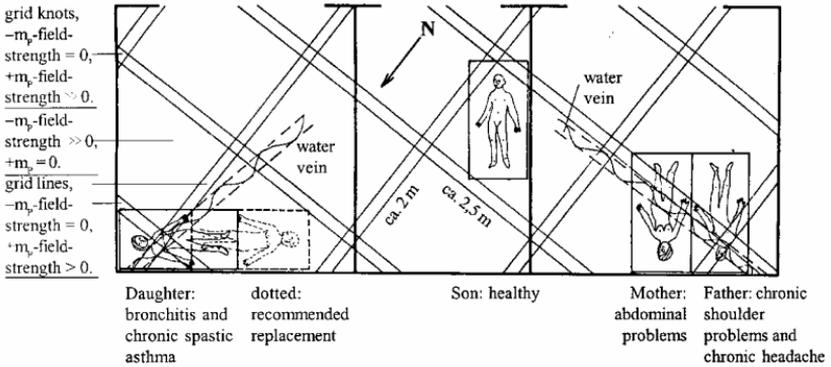


Fig. 19: The global Hartmann grid, detected by “muting”, shows a narrow orthogonal orientation, aligned in North/South- and East/West-direction with variable line widths. It can be explained by the two globally bound subtle matter fields (see Fig. 18) with $(+m_p)$ -entropic and $(-m_p)$ -negentropic properties. When persons remain during sleep or at the working place for longer periods of time per day at the entropically acting lines of the $(+m_p)$ -field sickness (most commonly cancer) results. In the branch of Sthapatyaveda of Vedic Science information is provided how, by proper construction, $(+m_p)$ -effects can be eliminated in the construction of buildings or even cities. For further details, see text (Volkamer 2007, and 2008).

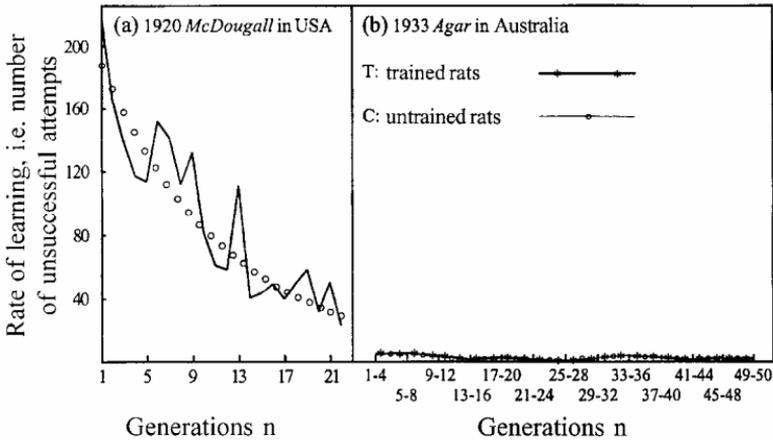


Fig. 20: The graphic shows at the left hand side the rate of learning of rats to escape from a test apparatus in the USA over 22 generations. Shown are the average numbers per tests in a generation to achieve the training effect, respectively. From generation to generation a systematic progress in the rate of learning can be seen. At the right hand side are depicted the results of the repetition of the same test more than 10 years later in Australia. The highly increased effectiveness of learning of the rats in this later test was explained by Rupert Sheldrake (Sheldrake 1981) as effects due to a globally existing morphogenetic field (without energy content) in which the learned information is transported around the world from one population of rats to another one. This can be explained by the global fields of subtle matter as depicted in Figs. 18 and 19, under rejection of Sheldrake's postulate that morphogenetic fields exhibit no energy content. The memory effects of the stored information in global fields of subtle matter as well as the possibility of its re-expression can thus explain Sheldrake's actions of morphogenetic fields. The fact that in learning processes achieved abilities can be transferred at a global scale from one population of rats to another one indicates that besides the established "evolutionary DNA-route" of Darwinism a second "evolutionary subtle-field-route" according to Lamarck/Sheldrake exists. For further details, see text (Volkamer 2007, and 2008).

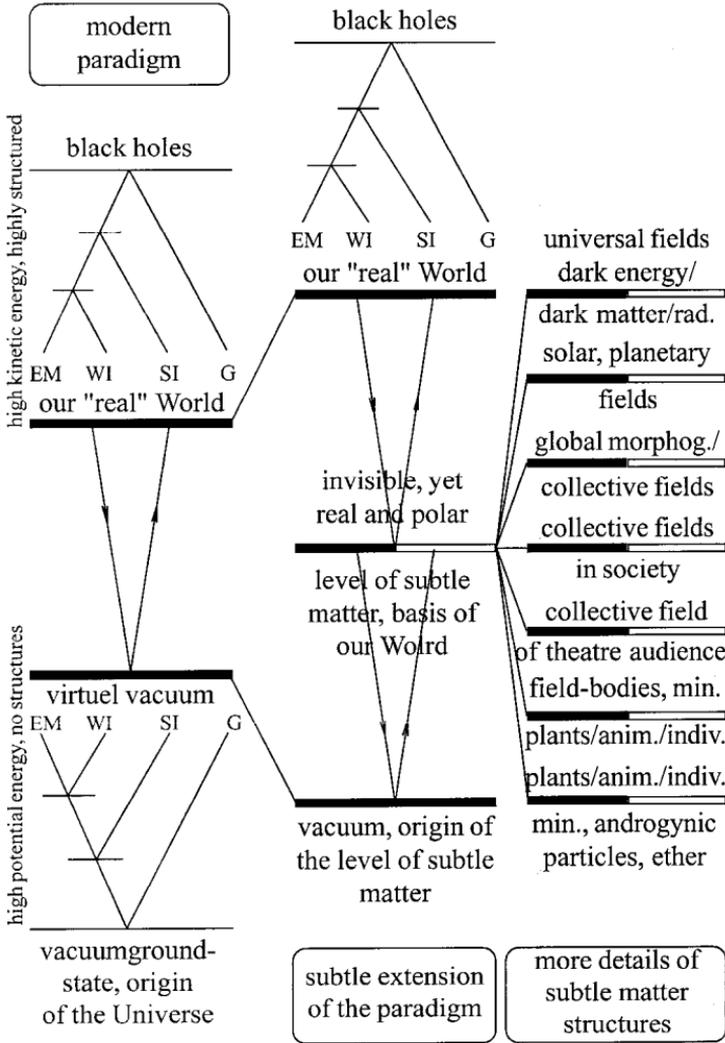


Fig. 21: A hierarchy of levels of subtle matter is shown ranging from the submicroscopic structure of space-time, the microscopic background structure of elementary particles, the macroscopic body-fields of living beings, to global and solar fields of Earth, the Sun and celestial bodies, and even cosmic (i.e. as trological and bioactive) influences of a universal background radiation of subtle matter. For more details, see text (Volkamer 2008).

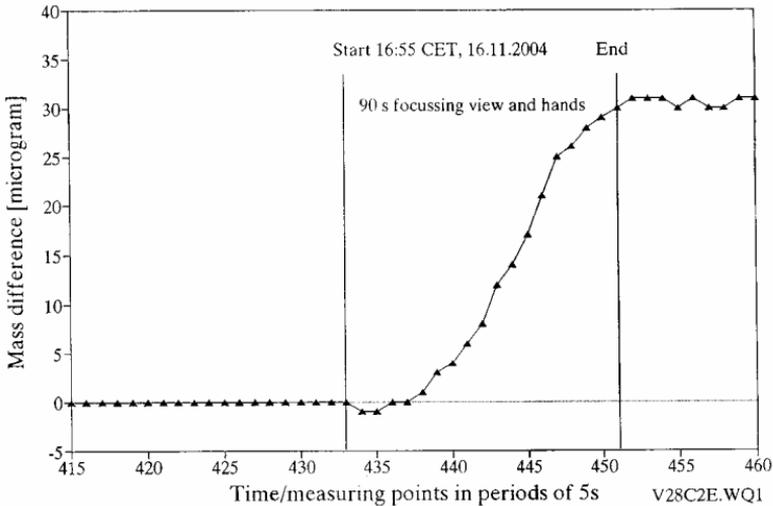


Fig. 22: Mass changes when a healer focussed his view and pointed his hands at a special detector suspended to the two pan balance. Being able to have conscious sensory perception at the level of subtle matter, without experience of level I in Fig. 9, does not imply spiritual enlightenment. For more details, see text (Volkamer 2007, and 2008).



Fig. 23: Sketch of a visual cell showing the location and the cross section of the structure termed “cilia”. For further details, see text (Volkamer 2007, and 2008).

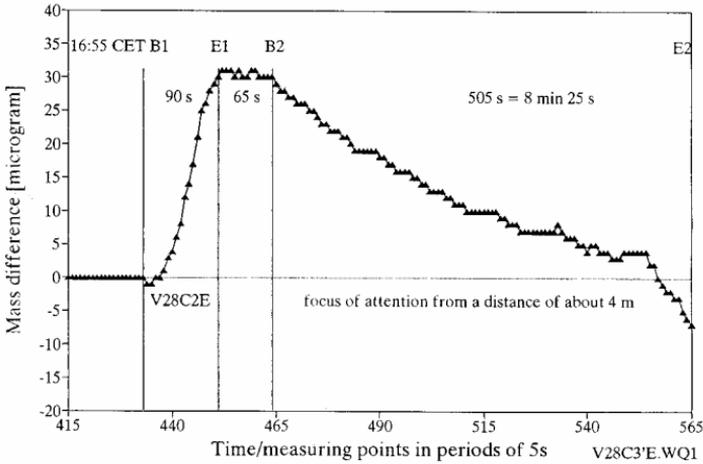
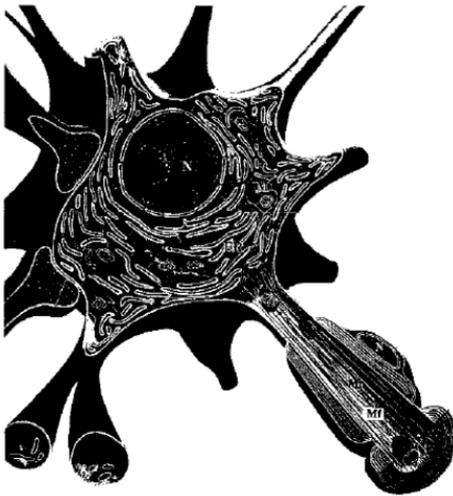


Fig. 24: Mass changes when the healer focussed his mind at the same special detector as in Fig. 22. The period B_1 until E_1 is identical to the results of Fig. 22. For more details, see text (Volkamer 2007, and 2008).



axon with myelin sheaths

Fig. 25: Sketch of a nerve cell. Axons which connect nerve cells and which can be as long as one meter are wrapped round with cell membranes (myelin sheaths), ideal detectors of quanta of subtle matter. For more details, see text (Volkamer 2007, and 2008).