A HEALTH ORIENTED CHARACTERIZATION OF BIG BANG, ELECTROMAGNETIC FIELDS AND MATTER[1]

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Ориентированная на здоровье человека интерпретация «Большого взрыва», электромагнитных полей и материи

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The proposal of the «Extended view» of a human person as a bio-psycho-social being and its interactions with his/her different environments for the comprehensive understanding of health, illness, recreation and wellbeing is based on a special application of the technique for theories of principles. This technique was developed by A. Einstein to link indispensable but actually incompatible theories Basics and the relevance of paradigms are presented as indispensable fundament of any scientific activity. The technique had to be modified for the health-oriented use. The prerequisite for a theory of principle can be a jointly accepted term but with not fully identical contents. The acceptance of one evolutionary process is such a position for all health related scientific disciplines. But the principles «behind» evolution are different according to the different paradigms to make the evolutionary process plausible; Emotional, cognitive and intellectual effects — additional to physical and biochemical ones — are indispensable for the understanding of a human person but are not part of the phenomena of physical or chemical entities or of the evolutionary model e.g. of cosmology. The health-oriented model has to cover also physics: A broken leg has to be understood on the basis of mechanics and gravitation. Therefore the compatibility of our «Extended View» has to be given with the (health related) power of physics and cosmology. The technique of the theories of principles allows to invent the new principles for the needed jointly understanding of the related stay of knowledge. But all further conclusions must be based just on logic argumentation. So we have to offer the invention of a health oriented characterization e.g. of big bang, inflation, electromagnetic fields, matter etc. for an extended understanding of our health related real world with different materials, sunlight etc. These offers have to allow logic argumentations up to the emotional, cognitive and intellectual effects and their relevance for health. It is to demonstrate that the additional assumptions are not in conflict with the power of physics and cosmology to explain health related phenomena. The paradigmatic positions of the extended view and physics and cosmology are compared. There are reproducible phenomena and related scientific positions, which are indispensable for the standard models in physics and cosmology but cannot be explained causally on the basis of their paradigms. The extended view allows proposals also for their causal understanding.

Key words: theory of «extended view», human health, A. Einstein's «theory of principles», cosmology, logic

Положения теории «Расширенного взгляда» на человека как на био-психо-социальное существо и его взаимодействия с окружающей средой для всестороннего понимания здоровья, болезней и благополучия основано на специальном применении техники «теории принципов». Этот метод был разработан А. Эйнштейном, чтобы связать незаменимые, но фактически несовместимые теории. Основы и актуальность парадигм представлены как неотъемлемая основа любой научной деятельности. Однако эта техника должна быть адаптирована для понимания феноменов, связанных со здоровьем человека. Предпосылкой для «теории принципов» может быть совместно принятый термин, но с не полностью идентичным содержанием. Принятие одного эволюционного процесса — такая позиция для всех научных дисциплин, связанных со здоровьем. Но принципы и понятия «вне» эволюции различны относительно различных парадигм, чтобы сделать эволюционный процесс правдоподобным; эмоциональные, когнитивные и интеллектуальные феномены — в дополнение к физическим и биохимическим процессам — необходимы для понимания человеческой личности, но не являются частью явлений физических или химических объектов или эволюционной модели, например, космологии. Ориентированная на здоровье модель должна охватывать также физические законы: сломанную ногу следует понимать на основе механики и гравитации. Следовательно, совместимость постулатов «Расширенного взгляда» должна быть связана со здоровье-ориентированными «возможностями» физики и космологии. Техника теорий принципов позволяет придумывать новые междисциплинарные подходы анализа и интерпретации знаний разных научных дисциплин. Но все выводы должны основываться только на логической аргументации. Таким образом, мы предлагаем ориентированную на здоровье интерпретацию феноменов, например «Большого взрыва», инфляции, электромагнитных полей, материи и т. д. для углубленного понимания реального мира, связанного со здоровьем человека, с использованием различных материалов, солнечного света и т. д.

[1] For Prof. Stanislav Glazachev to his 80th birthday.

Эти предложения дают логические аргументы понимания разных процессов вплоть до эмоциональных, когнитивных и интеллектуальных эффектов и их значимости для здоровья. Новый подход должен продемонстрировать, что дополнительные предположения не противоречат законам физики и космологии для объяснения связанных со здоровьем явлений. В работе сравниваются парадигмы теории «расширенного взгляда», физики и космологии. Существуют воспроизводимые явления и связанные с ними научные положения, которые необходимы для стандартных моделей в физике и космологии, но их причины до сих пор не раскрыты. «Расширенный взгляд» дает предложения также для их причинного понимания.

Ключевые слова: теория «расширенного взгляда», здоровье человека, «теория принципов» А.Эйнштейна, космология, логика

Introduction

Each health oriented paradigm should allow to deal with physiological adaptation, but also with the acceptance e.g. of health oriented recommendations and the wish of a patient to recover from a disease so that he will be able again to contribute to his emotional and social activities. Society has changed and with this the options and challenges for the individual person and its families since the foundation of classic physiology in the 19th century. Longer lifespan, other live balances, extended offers of curative medicine, the influence of social media are just examples for the tremendous shifts. They need additional scientific tools [1, 4] and applied offers, e.g. to be better prepared for the longer life [8, 12]. Or to improve health thanks to sport even in high altitudes [13]. Therefore the model must allow integrating the basic consequences of Big Bang and further on also up to social physiology [11].

The daily life of our patients and clients are depending on legal and ecological responsibility [2, 3] and the fact that the individual world of a newborn or a child does not cover such aspects. So not all can be explains with neither with «life» nor with «mind». Therefore all pan psychistic or vitalistic offers have to be excluded as candidate for a model, which covers all aspects of health. We need such an Extended View, which allows also integrating the dynamic of the individuality within different cultures, ages, religions, but over many thousand years ago. And we need a model, which makes plausible the different relationships to our environments. An underestimated option is that e.g. observation of nature can be a source for individual health and happiness [3, 5]. The experience causes such a feeling to have been able to extend your personal competence. So Archimedes was running directly out of the bathtub and crying for happiness: «I got it, I got it!» when he has catched the idea of the specific weight. In principle similar the situation when you have learned to distinct e.g. different ducks swimming in front of you. This can cause the feeling of increasing of self-esteem — without the urgent need to feed the ducks.

So the needed model must allow integrating causations and intentions of many different levels of processes. But common frames of the related sectoral disciplines are not able to bridge these gaps e.g. between natural sciences based and non-natural sciences based disciplines on a causal level. This demonstrates our starting problem, which is often not relevant for other disciplines.

How to link incompatible but indispensable theories?

Einstein could solve the related problem with his technique to create so called Theories of Principles [24]. Therefore the Extended View was developed on the basis of a modification of this proposal of Einstein. His technique is based on the following assumptions:

a) Any (especially scientific) term is a free invention of humans only to be able to communicate about e.g. aspects of the real world. Therefore terms are from another nature than that for what they are staying. Therefore natural laws etc. are also just inventions about processes in nature. But the empirical enforcement of the helpfulness of these inventions is so strong, that they are accepted in a social agreement between the scientists as stay of knowledge.

b) Especially scientific terms should skip away all what is not relevant for the given (scientific) problem. Therefore terms, natural laws etc. «make long stories short». An aspect, which is irrelevant for a special branch of science and had to be skipped away can be indispensable for other branch. Therefore such correct scientific ongoings can cause artificially based incompatibilities between different disciplines.

c) If scientists skip away an aspect, which is part of reality, then they create a special view (paradigm) from the world. The paradigm is in the center of any scientific discipline: It expresses the limit for the need of further explanation. So Newton and Maxwell had different and incompatible paradigms about e.g. physical movement, Ptolemais a different than Galilei and we now have a different view then Einstein.

d) Therefore no scientific activity is possible without a paradigm as its — consciously or unconsciously used — basis. The paradigm defines what you can observe (Einstein) [6], what you cannot observe but you will oversee (Heisenberg) [25] and in which way you have to interpret the phenomena [30].

e) Paradigms are free inventions of scientists. But they have to be proved on its power to deal with the phenomena. Therefore the phenomena have to be accepted as fix — the paradigms can be and should be adjusted according to the applied needs: As simple as possible but not simpler (Einstein).

These prerequisites can be used to invent problem oriented paradigmatic principles, which allow to link former incompatible positions thanks to the fact that the new position allows to cover the incompatible positions as special case of the new and therefore more fundamental position. Then e.g. the given formulas have not to be modified.

The modification of paradigms can also be used in the case of incompatible indispensable formulas: e.g. the incompatibility of the indispensable theories of mechanics and of electromagnetism could be handled with the Relativity Theory (RT).

Both aspects of the improvements thanks to the invention of the RT are relevant for health:

- First as an example how to link former incompatible but indispensable theories with and without the need to modify formulas: The classic challenge for medicine would be the need to offer a solution for the body — mind — dualism.
- Second to deal with a human person insofar as we can handle her or him adequately as a physical entity. The example would be the broken leg — to explain thanks to gravitation and mechanics.

Einstein proposed to create a principle which is «jointly behind» the actually used shortened and discipline oriented specialized» paradigms: In his case to invent a «jointly» principle for movement in the physics of Newton and Maxwell. He created a «precursor-hypothesis» for a situation without electromagnetic fields and without solid bodies: An universe just of energetical fields: Doing this than you can see the specifications of electromagnetism and of mechanics as special applications of the «energetic field — nature» which is typical for («behind of») all physical entities. The additional options of the energetical fields, which are characteristic for electromagnetic fields, are skipped in the case of mechanics; the additional options for mechanics are skipped in the case of electromagnetic fields. So «energetic field» can be neglected for the understanding of electromagnetic field and of solid matter — according to the principle «as simple as possible». So the invention of the «energetical field» can be compared with the idea to use an auxiliary construction of a falsework if you will construct a building: The former helpful falsework can be brought away after finishing the house and is never relevant for reality.

a. Therefore Einstein did not postulate «energetical field» as a new particle additional to the electron (the only particle which was known 1915) or the quanta of Planck. It was a free assumption for the more adequate understanding of the given stay of knowledge. Therefore the famous experimental proving of RT 1919 did not deal with the confirmation or falsification of energetical fields but of the predictions of the new formulas for the movement of light passing the sun [17].

b. This is relevant for any theory of principles: The first step is to invent principles: These inventions should make plausible the basics for the related scientific discipline in a more comprehensive understanding. They are not proposals to extend the given stay of knowledge but discus the option to modify the paradigmatic positions. The inventions should make only plausible that the entities with characteristics according to the stay of knowledge can be seen also in such an extended view.

But the following steps have to be logically conclusive and compatible with the phenomena, which can be explained according to the given stay of knowledge. No more inventions! In some cases you need only the modified paradigm — in others also a modification of the formulas.

o It is remarkable: Relativity Theory does not falsify «Newton» or «Maxwell». The RT is to use just in the cases, which cannot be handled adequately with mechanics or electromagnetism. Einstein enforced to use further on «Newton» and «Maxwell» in any classic case and not RT: The additional power can be neglected in relation to the increase on workload if you would use RT. This is relevant for any «theory of principles»: The progress deals primarily just with the compatibility of the extended paradigm with other former incompatible sectoral paradigms. The «classic» cases should be handled further on with the given stay of knowledge. This is relevant for the special case of our Extended View: It is an additional offer for the understanding of health relevant aspects. Any «classic» case can be and should be handled successfully now and further on with the actually given tools of the specialized disciplines within medicine. But the extended position allows bridging the gap to health processes, which are handled usually by other disciplines. So the competence of the specialized expert will be enlarged.

The Positions of Physics and Cosmology, Which Have to Be Taken in Consideration for the Invention of the Helping Construct and Constructions

We have to accept the stay of knowledge of confirmed phenomena. We — medical doctors- can only modify the attributed paradigms for their understanding. This is covered with the option of theories of principles to use the given formulas further on but for an extended view of the related aspect of our real world. This subtype of a theory of principles was proposed by Einstein in 1909. He discussed the option to substitute just the paradigmatic positions so that the enforced formulas can be used further on [18]. The creation of general paradigmatic positions is not a specific responsibility of a sectoral scientific discipline. Just the transfer into the formulas needs the related specific scientific education. So the creation of a paradigmatic position with a focus on health has to be restricted just in these options which do not need the special education as expert in others then health care disciplines.

Requests in consequence of the standard model of cosmology

Therefore we have to accept the phenomena of the big bang, the following period of inflation and then a period in which electromagnetic fields are present. It is

stay of knowledge that the total energy of the universe consists now from dark energy (moving with the speed of the light but not influenced by gravitation) with about 75%, dark matter (moving depending on the relations to masses and depend therefore on gravitation) with 20%, light matter — this is all what we (and our tools) can observe thanks to the emission and absorption of photons with about 4 %. The rest are electromagnetic radiations. The so called «cyclic universe» is acceptable within the standard model of cosmology. «Cyclic Universe» means that after a period of extension the entities within will move again to the ideal point with the highest density of energy in the cycle. The diameter of the total energy is estimated roughly as a ball with a diameter of about only 1 m in the situation of Big Bang. Before this and immediately after the Big Bang the space-efficiency is extreme high. The «physical entity» would pass within 1 second about 2 billion times from here back to the point of big bang and retour[2]. The universe is expanding since about 13,6 billion years. Therefore the speed of the light (300.000 km/sec) is nearly negligible in relation to the efficiency of the inflation. Many questions remain: What is the causation for the slowing down, then again to increase to this incredible speed, and maybe again and again with each cycle? What is with the conservation of the impulse? What can be invented to make plausible the guided movement of all entities first and later on again to the place of the big bang and then to cause the expansion? How can this all be compatible with the emergence of atoms, a cell, a multicellular, a living being with emotion to another individual, the step from such an individual to the human person as a social healthy or ill being. The position of the cosmologist can be seen as follows: «This is not relevant for us. We are focused on the sufficient calculation of the processes not on the causation behind. We are able to describe the follow up of the evolutionary steps.» The position for the «Extended View» is in principle different: We have to make plausible the causation of the processes in such a way, that the related principles can be used for the following evolutionary process with respect to health. Therefore we need a modification of the paradigm.

Requests in consequence of the standard model of particles and other fundamentals of physics

The inventions for the principles of the invented precursor how caused the emergent phenomena of Big Bang, inflation, the reduction to the speed of the light and enabled the emergence of the physical precursors of atoms, which are the precursors for the cell etc. up to the recent persons have not only to give respect to the demands of the cosmological phenomena and the phenomena of the recent persons. The invention of the principles of the precursors and their therefore possible «transformation» to entities which are matter of research in physics have to give respect to the phenomena on the basis of the standard model of particles, but other fundamentals of physics too.

The most fundamental principle of physics including cosmology is the principle of conservation, e.g. of the energy and therefore of the impulse. Energy cannot be won, cannot go lost but can be modified.

Physical entities can be characterized thanks to their energy. Energy enables movement, but does not definite the direction of the movement. But there is no movement without a direction. Therefore the characterization of physical entities does not include the principle to explain the direction. The position of Einstein is based on active and self-guided movement of any physical entity including electromagnetic fields, particles and solid bodies. His friend Bertrand Russell demonstrated this aspect of the paradigm of Einstein with impressive examples [32]: As the ocean is not the reason that any trop of water has to run into it, is the sun not the reason that the planets are moving so around it. They guide themselves the — from the technical point of view — most comfortable way with respect to the given energetical surroundings. And no particle has clashed with another. They move away to avoid the direct contact before such an event.

Heisenberg proposed to attribute to any individual particle Aristotelian «Potentia» [25]: This would enable them not only to energetical effects but also e.g. to the decision for individual guidance of movement but within frames which can be expressed with his formulas of uncertainty relationship. Einstein was fighting against such a «free decision» but not with scientific arguments. He accepted «the new conception as perfectly complete and consistent and not in contradiction to any fact»[30]. But he countered extremely emotional against such an idea. «I find the idea quite intolerable that an electron exposed to radiation should choose of its own free will, not only the moment to jump off, but also its direction. In that case, I would rather be a cobbler, or even an employer in a gaming-house, than a physicist.»[19].

What a contradiction: To attribute observation, decision-making and guiding according to self-oriented directions but no freedom in such doings? Maybe understandable if you respect the religious position of Einstein and the attribution to his own freedom: He characterized himself as determined and outed himself as believer of the religious positions of Baruch Spinosa. This Jewish religious philosopher of the Middle Age deduced from the ideality of God that even God is determined to create only ideal creations. Therefore all in our world must be ideal but we — and all his other creations including particles, waves etc. — are only able to deal with special aspects of the unlimited aspects which are created by God. Therefore the natural laws of physics and of thinking, logic, mathematics and especially geometry are expres-

[2] There are different proposals for the diameter: From a point up to about hundred meter. But this is not relevant: The space efficiency at inflation is unbelievable greater then speed of the light. 1 billion times is in direction to big Bang and one back expresses this unimaginable dimension.

sions and restrictions of the eternal and divine will of God and of him. The causation for any use of potential / energy is coming from «outside». We have only the impression to have a free will. It would be senseless to attribute to the most fundamental entities according to the stay of knowledge at 1915 (quanta, waves, electron and solid bodies) an «Aristotelean Potentia».

The most common actual position is based on the Copenhagen Convention. Heisenberg and N. Bohr are the main authors of this agreement. It covers as well the position of Heisenberg as the — later — position of N. Bohr: Maybe particles and waves have such a potentia maybe not. The output of both positions can be observed in similar way: a) The process of an individual particle is uncertain. Processes with a high number of particles can be predicted. b) There is complementarity between observable phenomena in quantum physics. The selection of the scientific observer decides which aspect e.g. of an electromagnetic field can be observed: Either its wave nature or its quasi-particle nature. c) We have to use the terminology of the classical physics as long as it is possible.

The wave-particle dualism is a consequence of the Copenhagen convention. There is no paradigm, which allows to make a decision between: Is e.g. light a wave or a photon — a so called «quasi-particle»?. The photon is the version of quanta for the / of an electromagnetic field. The photons including the related waves e.g. of a beam of light are directed like an arrow or other moving solid matter. They are focused on «locality». There is no physical paradigmatic proposal to explain why information can be transferred speeder then the light and no one over which distances we should expect this nonlocality.

But quanta are not only the energetical fundament of electromagnetic waves. They are needed also for the understanding of acoustic effects and effects of «solid state physics. These quanta are called Phonons. Their energy is following the Planck-model. But the question of locality is in principle different. The phonons within a crystal are everywhere in the whole area of the crystal at the same time. There is no proposal to explain the causation of these incompatible phenomena.

The standard model of particles allows to understand the processes within the atom and between other atoms so good, that many applied predictions can be made. So the physicists and chemists have the hope to unify both disciplines in the coming future. All the predictions are based on logic applications of confirmed correlations and other positions which are accepted as stay of knowledge, e.g. wave — particle-dualism, the conservation principle for energy on the basis of Planck quanta, the conservation of the spin, of the impulse etc. Relevant are also natural constants like the Planck constant and the speed of the light. We know a lot of to characterize the different types of particles and the fact, that the universe would collapse if the empirically confirmed characteristic e.g. of the masses of the different particles would be different or would modify. These extremely well adjusted relationships between them are like a «world riddle» for the quantum physicists.

Actually the gravitation /field of gravitation is accepted as the most ancient one — similar as the position of Einstein has been. But this position is not easy to combine with the phenomena of cosmology, which caused the postulation of the dark energy and the re-integration of lambda. Lambda was a constant, which Einstein introduced into his model of a static universe on the basis of the General RT. The universe would not be stable without lambda. Friedman reported that the formulas of RT allow more correct solutions. Lemaitre could confirm a dynamically expending universe which could be finally empirically confirmed thank to the work of Hubble. Therefor Einstein skipped out lambda and announced lambda as it most stupid idea of his life. But the cosmological phenomena of the dynamic stability of the form of the universe needs now again lambda to express the effect of the dark energy. But dark energy is not influenced by gravitation. Not ease to insist in the position that gravitation is the most fundamental one and all what exists mast have the nature of quanta: Quanta is linked with gravitational effects. Dark energy exists according to the stay of knowledge of cosmology.

The General Relativity theory had the goal to integrate the two versions of mass more adequate. Einstein introduced for that e.g. the principle of equivalence. He announced the following as his most lucky and clever idea, which brought him to a better understanding of gravitation: If you fall from the roof your speed is increasing according to the gravitation constant. But you have not the feeling to fall in relation to all other, which is falling with you also in a free fall. If you would open your hand so that e.g. a pencil or an orange would never fitted, then the relationship between you and the pencil and orange would not change. Einstein has formulated this in that way that in such a situation no gravitational field exists for you in your close neighborhood. But gravitational field persists in direction to the earth: The world record (Baumgartner Felix, 27.5.2017) of the speed of a human person in free fall is 1357,6 km/h! Therefore just a living being with different sensory organs like you could not decide if you stay, fall down or go up if you could not see the falling because you are in the closed box of an elevator which is in free falling.

You remember: Einstein/Russell attribute to any particle to be able to observe all masses around and guide their movement according to the geodetic — without limitations thanks to sensory organs. What observations should we attribute to the fall objects under such conditions? The gravitational field should not disappear for them, but maybe the relevance of the moved masses of the entities in their close neighborhood could be neglected.

The gravitational field exists further on and the speed of falling increased according to the formula of Newton. Only the subjective feeling of falling is modified. So the luckiest idea of Einstein has also another side of the

mirror: The linkage to deal with information. But this aspect was not integrated by Einstein into the consequences of the free fall.

There is a statement of Einstein which encourages us to focus on the health oriented needs if we invent principles even to deal with topics which are so far away from daily work of a medical doctor as electromagnetic waves and their nature: «50 years of consequent ponder did not bring me closer to the answer of the question: «What are light quanta?». Today any lump believes to know it. But he are way off!» [20]. And we see this encouragement in connection with Einstein's criteria for powerful theories: e.g. to enable us to unify theories thanks to as few distinct postulates as possible, to focus on causality, to intend an universal range for the power of a theory and to avoid unexplainable discontinuities. Such criteria support our proposal.

The Transfer of the Demands to the Assumptions of Principles for the Entitites Which Make Plausible the Process from Big Bang to Big Mac and Again to Big Bang

1) We attribute all prerequisites for the processes «within» the auxiliary construct, which we call «Most basic actors (MBA)». The proposal was logical and empirically proved and honored with the Th. Kuhn hope for the future of a sustainable world award [28]. We cannot see any surplus to restrict the attribution of potential to be effective on energy only.

a. But there are a lot of questions which are linked with such a selective ongoing, e.g.:

i. Where is the causer to guide the movement, to attribute meaning to structure or to constellations of electromagnetic waves in the brain (the «Outsider»)? What kind of characteristics we have to attribute to it? Are there options for the empirical proving of its characteristics? This is a different question as the question for the possibility of the empirical proving of the effects of the causation, which can be expressed e.g. in a formula.

ii. Is the «Outsider» in principle different as the physical entity? Then we would have the same problem as Descartes had with the two in principle different substances res extensa and res cogitans.

b. All this can be forgotten if you accept to integrate all prerequisites for all processes «within» the Most Basic Actors — and therefore «within» of all descendants of them.

i. This is close to the position of Heisenberg: Just one Potentia enables to energetical and information related processes. This excludes vitalistic positions: The only one Potentia enables to different types of abilities. This can be understood as a substance monistic model.

ii. Humans do not consist of a body and a mind according to this position. Each individual human person has physical, chemical, biological, psychic, music oriented, social etc. properties but it is just one person.

c. The model is based on emergent improvement thanks to the interaction of energetical and information related applications of the MBAs and their descendants as actors. But they are not ideal. So they can be understood as Restricted Autonomous Actors (RAA).

d. Emergent steps cause new qualities of the modified preconditions. There is a need to give them a distinct term. Therefore we name one «quantum-constellation» electron, another «quantum — constellation» alga, and a third Anton M?ller. The same with emergent improvements of information related aspects: Therefore neither electrons nor crystals, genes or alga are able to create activities we are used to link with the term «mind». Therefore this model excludes pan-psychic positions.

e. We assume that MBA are not ideal. All objects of nature are based on MBAs. Therefore «nature» cannot be another name for God.

This model is not focused on and not able to exclude God. We do not have a method to answer the question of his existence or not existence on the level of health oriented sciences.

• But we have to be open for the option of a God: We cannot explain were MBA are coming from. There is no need to make a proposal for their origin: Any science can define its starting point. We start with the auxiliary construct of MBA..

• There is another very relevant argument not insist dogmatically in an atheistic position within a health-oriented model: Medicine is primarily a service institution for others. There are significant results that e.g. praying is helpful for health — if the person knows that you pray for his health. Active members in monotheistic religions have significant higher risk for longer life etc. [27]. You can explain this with the complex consequence of the subjective evaluation e.g. like placebo. But you can explain this also as the effect of God. Risk is not causality! A theory, which would be based on atheism would exclude such positive aspects for health for our clients. The first goal of medicine is not to harm. This prerequisite can be linked without any problem with the position: Science and religion are two different views to understand or world.

Now back to the characteristics of MBAs:

f. The MBA are able to recognize other MBA, to guide itself to self-selected positions, to anticipate possible consequence thanks to the respects of the past and can modify its direction — according to the position of Einstein of the active movement of the physical entities and guidance to the «most comfortable way».

g. MBA use permanently 100% of their potential. This is indispensable to postulate that aspects can be matter of research.

h. The conservational principle: This is the consequence of the physical principle that energy cannot be won, cannot go lost but can be modified. The principle has to be extended from the energetical basis to the information related one thanks to point 1)a.

i. The principle of inhibition/enforcement. This principle was discovered by Sechenov and Pavlov for physiological processes. But this principle is indispensable for all processes. The conservational principle and the principle of inhibition/enforcement are depending from each another in a world of not ideal actors. Not ideal actors have to select between different options and the application of their resources/potential. The decision for one must be the decision not to use others. Therefore one option is enforced, others are inhibited. The application of an amount of potential to focus on one must have the consequence to restrict the available potential for others. This is the consequence of the conservational principle.

2) We propose the principle of Comprehensive Simplicity: All what can be observed or thought as different must be communicable as distinct. A new term has to be created if such a term is not available. But the creation of the term is not sufficient alone. It must be characterized in such a way, that it can be proved empirically or logically for what the term is staying in the assumed real world.

3) These prepositions allow an understanding of an evolutionary process, which is based just on the previous given entities and effects, which are caused by the previous actors according to their intentions.

a. The metaphor «Chess» is helpful for the understanding. Creative individuals had the idea to use wood in a traditional way: To carve figures from it. But they selected different characteristic types of figures and attributed to them names: farmer, horse, tower, king etc. So everybody could distinct the different figures as chess figures. Then they invented a playing field. With 8 to 8 squares in black and white. Why not 13 to 38? Why only two colors? Why only 8 farmers? There is no logic argument, which is based on the nature of wood, stone or colors. But the selection is fully in agreement with the nature of the material precursors: pieces of wood or rocks with many possible applications beside their use as chess-figures. The emergent new is only the consent between all chess-players about the meaning of the structure and the agreement to exclude all other theoretically possible figures as figures of chess. This is a free decision and restricts the options of the individuals. Why they neglect parts of their freedom? Because of the next restriction: Consents about the process rules how to move the figures. Also the process consents are not logically to deduce from the nature of the used material. But every chess player can predict the correct moves thanks to the structure consents and the process consents. But nobody can know in which way the individual player will use the won new type of freedom for creative and individual playing. This opens a new quality of win: The pleasure to play chess. And an «old quality»: To have the chance to be the winner.

b. This explains also the fact why there is an uncertainty of the individual movement but predictability in the generalized aspects of movement: Heisenberg was right!

c. This makes plausible that creative actors are able to initiate a process we call «evolution». But this is only possible if the creators are willing to share the knowledge: You need another person to play. Therefore the prerequisite of evolution is WIN-WIN.

d. d. The knowledge of chess survived the lifetime of the creators because of WINWIN and of sharing this knowledge also to non-family members. This explains why such an emergent step can spread out like an epidemic. This idea was given to others because the self-oriented goal to have stimulating co-players and to have the chance to be winner.

e. The WINWIN concept seems to be in contradiction to the principle of the synthetic theory: Genetically based emergent progress of highly developed living beings needs very long periods of selection. The difference is easily to explain: The use of the new must respect the demands of the follow up of all the integrated precursor. Only such modifications can persist. So a mutation, which is helpful for an emergent effect for very basic life will occur in relatively short time. We see this in virus. But a mutation is extremely seldom, which is compatible with all the steps from the single cell up to the adult fertile individual. Therefore we should not be surprised about the obviously impressive differences in the time span to spread new ideals — sharing on the actually given level between with individuals of that level — and mutation based emergences in highly developed living beings.

f. The WINWIN concept is in agreement with the position of Darwin about the evolutionary principles of the human person as a social being: He pointed out that the principle of natural selection thanks to the fight for survival is indispensable to understand the evolution of animals including primates. But Darwin expressed the need of an additional principle for the further development to the recent persons as social beings. He pointed out: «No tribe could hold together if murder, robbery, treachery etc. were common; consequently, such crimes within the limits of the same tribe are branded with everlasting infamy». He proposed an additional evolutionary principle: The «sympathy»

distinct and additional to «love»: «A human who possessed no trace of such instincts would be an unnatural monster» [14]. Sympathy and WINWIN are not based primarily on that what we call altruism. They represent a more developed level of the intention to increase individual surplus only.

g. The application of the WINWIN concept on the occurrence of different particles within an evolutionary process would predict that the descents have to accept the prerequisites of their precursors. Just such consents could be accepted. But the consents for structure and processes have been free within this frame. So natural constants, e.g. the mass of particles can be understood as such logically not predictable but empirically to confirm agreements: They are just single options to use the variety of the options of their precursors correctly but with an agreement between the members within this subunit constituting consents.

h. Therefore natural laws can be understood similar as human laws: Our laws are consents within our members of the parliament. The decision maker of the natural laws can be seen in the actors at the recent time, when the agreements were made. The power of these «laws» is based on the same follow up of restrictions which have to be respected as we have seen as reason for the long period before a genetic process occurs in highly developed living beings.

i. There is no empirically based method to distinct: Is the powerful formula based on an agreement about consents or by a «natural law behind»? The Extended View is using all the formulas etc. of the integrated sectoral scientific disciplines — insofar they are relevant for health-oriented positions. The model offers just an alternative paradigmatic basis.

Formulas, natural laws etc. are understood as — more or less successful — reinventions of the inventions which were done by the ancient actors which were able to motivate others to accept the inventions as consents which open new individual surplus. We are not interested on the individual surplus of MBA etc. But we are interested on their predictable prerequisites: We use the predictability of the consents for a better understanding of our world.

An Auxilary Construction of the Evolutionary Process to the Big Bang and to Atoms

The technique of Theories of Principle starts with phase 1: An invention of an auxiliary construct to make plausible the occurrence of these entities (and their processes) which are stay of knowledge for the related discipline. Our related discipline is health science, especially the scientific basis for medicine. The entities which are to accept as starting points for the logic conclusions without additional inventions are the world in which we and our patients are living: Cosmologists characterize them as light matter and radiation according to the comic model of evolution. Quantum theory describes the precursors of atoms. In step one we have to go «behind» the given understanding of the phenomena which are stay of knowledge of cosmology and quantum theory. We understand «behind» as «evolutionary before». Therefore phase 1 has to be split into two parts: 1a) has to go «behind» the model of cosmology.. Part 1b) deals with the period of the occurrence of the speed of the light up to the emergence of atoms.

Phase 1a: The causation of the Big Bang and the process up to the speed of the light

All MBAs intent to reach the identical assumed ideal single point (self- orientation). They are able to perceive the others (environment orientation). They avoid to crash (priority not to lose uniqueness). So they came closer and closer. Therefore they have to guide themselves as strait ahead as possible. Any deviation would cause the risk of collision. They have to use their potential fully. Therefore their efficiency to pass distances is in this period the highest which is possible. This corresponds to the speed of inflation.

Then MBAs anticipated that further going forward would cause a crash. Now each MBA has to balance between the self-intention and the persistence of uniqueness. Therefor each decided to turn around and to try to reach the ideal goal on the next turn. We name the related phenomenon «Big Bang». Maybe others have destroyed themselves thanks to a collision, turned around earlier or later. So an endless number of universes are possible theoretically. But Einstein recommends: Focus on that theoretically correct solution which is realized and therefore to observe. There is just one evolutionary process. Many MBA made the same decision.

Even experiences and intentions cannot go lost but can be modified. Therefore the intention to reach the ideal goal cannot go lost. Therefore our model predicts a cyclic universe. Also the experience cannot go lost to persist even in extreme closeness to another MBA with highest speed. This is relevant for the understanding of quantum.

In the moment of Big Bang each MBA selects its direction individually. This would cause an expansion like an extending ball. Each MBA recognizes that there are others on the way to the same goal shortly after this situation. This experience cannot go lost and has to be integrated also (consent orientation). Now the form of the universe is modified according to the needs of the actually observable form and the expansion is guided in one direction.

The distance between the MBAs is too small for individual modifications even immediately after the Big Bang. Therefore all MBAs are moving with the speed of inflation and expand the needed volume of the inflationary universe for the MBA. So the distance between the MBA increase more and more up to a situation in which individual modifications would be possible without the risk of a crash. Individual modification of movement

would need energetical potential. Therefore an agreement is needed which offers all MBAs further on the same chance to «win the run» and to open the options for free guided movement. It is only possible to observe the phenomena and to deduce from them the content of the consent: This is the reduction to the speed of the light. It can be predicted, that this consent will persist as long as the MBAs have space enough for individual modifications. It is also to predict that after that period the shift to the inflationary speed will take place up to the next Big Bang (cyclic universe).

According to the «comprehensive simplicity» we have to attribute a new name to the MBA, which are moving to the assumed ideal point with maximal speed of the light. We propose the name «Mechanoeiton». This term is loaned from the ancient Greek language: «Mechaneio» covers with one word to observe, valuate, decide and realize the consequence. This covers very well the attributes of «Mechanoeiton». [3]

Phase 1b: The causation of the self-creation of waves and particles up to the atom

As presented above: The speed of the light (300.000 km/sec) is quasi nothing in relation to the positions of cosmologists about the space-efficiency during inflation. (about 2 billion times to the starting point of Big Bang and back). Mechanoeitons have therefore the quasi-identical potential for self-oriented movement and guidance (difficult to guide with inflationary speed without crash!) according to the conservational principle. They are assumed to be free in its use. We cannot know the intentions of Mechanoeitons. We have only the chance to attribute that what can be observed later on as the expression of the intention. But we can only observe the correct use of the structure consents and process consents — not the individual intentions behind. But the individual intentions of Mechanoeitons are not of our interest. Therefore we restrict our interest on the observables and call this «symbol-intention». Electromagnetic fields can be characterized with the complex movements of two jointly acting Mechanoeitons. So we attribute to the Mechanoeitons the symbol-intention to have a surplus if they can create more complex modifications of self-guided movement.

We have to take in consideration the consent-orientation. Therefore the freedom of the Mechanoeitons should be restricted not only thanks to the speed of the light in direction to the ideal point and to avoid to crash, but also to take care on partnership. But there should be freedom in the selection of the number of partners. Again: we cannot know the decisions. We have to conclude on them on the basis of the phenomena. Cosmologists have phenomena, which allow conclusions about that.

One option was the cooperation of two Mechanoeitons.

a) The energetical expression of that is the electromagnetic field: One Mechanoeiton plays the role of the electric field, the other of the magnetic fields. The potential, which is needed to pass the distance within time, is far away from the «inflationary efficiency». The rest is used for creative stimulation movements of the partner. We can compare the agreement with the example of two persons dancing as a pair. The correct use of follow up of steps is only the prerequisite. The fun is based on the creative and stimulating movements of the partners. Therefore you should select the adequate partner with respect to the type of music[4]. Then you have individual pleasure and the chance to the winner the dancing competition. Therefore we attribute the open inflationary potential for creative individual movements in correspondence to the coupled partner. Both are able to move within this freely interrelationship nearly unlimited often through the whole universe and react nearly without time lost to the creative offer of the partner. The information about the individual stimulations is exchanged «nonlocal».
   The direction of the electromagnetic wave can be characterized with the crossing points of the electric and the magnetic field (quantum).

b) This situation is the only period when no individual modifications are possible: Both Mechanoeitons have in this phase the speed of the inflation. Therefore the total potential of both Mechanoeitons are located in the area of the crossing only. Physicists name this localization «Quantum». Therefore the energy of electromagnetic waves (and of all their descendants) can be only a whole-number multiple of the Planck unit. A quantum has to occur and disappear and occur and disappear etc. because of the wave nature of its electromagnetic field — according to this model. There is no need to postulate distinct from the wave nature a photon or a phonon. Now «photon» and «phonon» are just the names for the location of the quanta in an electromagnetic field or e.g. a crystal.

c) The basic natural constant would be the potential of one Mechanoeiton. Its energetical expression would be the half of the Planck quantum.

   a. There is a need to attribute different names to the «quantum» in consequence of the comprehensive simplicity: The classic term «quantum» is defined by physicists. It covers just the energetical

[3] Interesting is the «evolution» of the content of this term: In Greek it is the root for the Aristotelean «Nus» — just «mind» without realization. In Latin it is the root for the term «machina» — machine — realization without any decision making.

[4] We will use this example a second time: To make plausible the most fundamental progress in the evolutionary process: The creation of an emotional linkage to a partner who was former just an object but shifted thanks to the individual attribution to an individual. Then you should select the music not to win the competition but to win the partner — to motive the partner to the same relationality.

aspect of the potential of the two Mechanoeitons of an electromagnetic field. Therefore there would be the need to introduce a term for the information related potential of these Mechanoeitons. We propose «qwantum». And we propose «kwantum» to express the whole potential and «quantum» to express the energetical aspect only and therefore to express the restricted content of the physicists.

b. There is not often the need to make these distinctions: The communication should be as understandable as possible. Therefore we make the proposal to use the «classic» term «quantum» in any case with the understanding, which is obvious from the text. The same type of such a — finally inadequate — simplification is used also in other context — just to give priority to the easier understanding. So we use terms like «body» further on if the content of the sentence is clear enough that we are not willing to express that there is a body distinct from mind, but there are only bodily effects, properties etc. according to the used model.

d) The conservational principle reminds as also that both Mechanoeitons have to move jointly to the assumed ideal point (or any other point in agreement). The only localization, which can be used to observe the joint guidance, is the crossing situation. Therefore the joint effect of this process is linked with the locality of the quantum. The effect is named «gravitation».

e) An extended agreement between more «dancing couples» (for radiation) would have to act also with respect to the given prerequisites. Therefore they have also the need to move jointly to other points. Therefore they need again a reference point: The localization of these radiations is again the quantum. The needed space for their crossing is extremely small: The total energy of the universe needs not more than e.g. a ball with about one meter. Therefore the «space» of this localization would not increase even if extremely many couples («hard radiation») would cooperate in their movements. This fits to the position that only the frequency (multiplied with the same constant of Planck) has to be taken in consideration for the prediction of the energy of electromagnetic waves.

f) The dimension of the actual volume of our universe is extremely small in relation to the distances, which a MBA could be passed with the speed of inflation. Creative movement needs space. Therefore it is not a surprise that the energy carrier (stars, galaxies...) are nearly homogenous distributed within the universe. The difference in the position within the universe would not be relevant in the situation of the shift to inflationary speed.

g) Electromagnetic fields are only quasi-ideal. Therefore modifications are to expect over the long time. Which one cannot be predicted but should be to observe. The shift of the «background-radiation» from red to blue can be understood as such an expression.

The other option is the Dark Energy. We do not know how many Mechanoeitons are cooperating for a «joint activity». We know only: more than two. This we know from the fact that paired Mechanoeitons show gravitational effect but Dark Energy not.

a) The only effect, which has to be attributed to Dark Energy, is the influence of the dynamic stability of the outside form of the universe. This form is the consequence of the symbol intention of all entities, which are moving maximal with the speed of the light in direction to the next Big Bang. The proposal of cosmologists is to attribute to the dark energy about 75 % of the total energy of the universe.

b) We can only deal with our instruments with these characteristics, which are shared in the evolutionary process up to the light matter. Therefore we cannot know anything more about the applied versions of partnerships within the dark energy then its effect on the form of the universe — if you use our model.

c) But we can conclude from the fact of the phenomena which are explained by cosmologists with dark energy and of electromagnetic waves that electromagnetic waves cannot have been the most fundamental physical entity. There is no need to attribute to gravitational effects to be the most fundamental effect — again: if you use our model.

d) Electromagnetic waves (including its status as quanta) can be understood as the result of an evolutionary process. They must have been a precursor. This fits to the auxiliary construct of Einstein: Then «energetical field» can be understood not as an auxiliary construct but as the name for the energetical aspect of the «assumed» real entity «Mechanoeiton»- as the precursor as well of electromagnetic fields and therefore also for solid bodies as for the dark energy.

a. Therefore Einstein's invention of the auxiliary construct of «energetic fields» as a «pre-cursor status» is seen as the characterization of a real period in the evolution of the cosmos, which opened the door for the understanding of the Dark Energy as well as for the electromagnetic waves. There is no more reason to skip it away like a scaffold — as Einstein has done it in respect to the stay of knowledge of 1905 and 1915. And «energetic field» would be the name of the energetical aspect of Mechanoeiton.

Our model attributes the intentionality even to the electromagnetic waves to increase their options for creative movement thanks to modification of the reached evolutionary level. Electromagnetic waves show two different observable characteristics: One is the guided movement of

the «dancing couples» through the space. The other one is the crossing point. Therefore we should expect modifications on the basis of both constituting consents for the subset of Mechanoeitons with paired couples. Both characteristics cannot go lost but can be modified. So the further emergent evolutionary steps can — according to the principle of inhibition and enforcement — enforce one and restrict the other aspect.

a) Electromagnetic radiations of different intensities are the descendants of the most basic electromagnetic wave. The energetical potential is expressed with the quantum. The density on its locality can be extremely high but could not be expressed in the space, which is needed. This is different to (many) particles: Their potential can be expressed with the mass as a term, which is easier to link with the need of space. So the relevance of the «energetical potential» of radiation can be expressed «as they would have the mass h multiplied with ny».

b) The other option deals with the modification of the crossing point. Mechanoeitons and MBA are able to modify their self-guided direction. There are no prerequisites to predict in which way such modifications have to go. We can only make statements what kind of agreements have to be respected, e.g. to deal with one point in modified way with respect to the conservational principles and the principle of inhibition and enforcement. But all other options within these frames are matter of free decisions. We can only conclude about the free decisions just from observations. And this is done be quantum physicists: They have integrated their results in the standard model of particles, which are to observe on the basis of the technical instruments which can be produced on the basis of light matter. There is no reason, why the freedom of electromagnetic fields should be restricted to invent creative options and to win partner to accept the rules thanks to an — for us irrelevant — individual surplus just to these type of descendants which are relevant for the light matter.

Again the phenomena of cosmologist confirm our speculation: They predict descendants on the basis of paired Mechaneitons/electromagnetic fields, which show gravitational effects but are not part of the standard model of particles. They are therefore just partly to research with tools of light matter. But the standard model of cosmology covers not only dark energy, light matter and radiation but also dark matter with an amount of about 20% of the total energy of the universe. Dark matter is influenced and is influencing thanks to gravitation. Such effects of the «dark matter» are indispensable to explain the observed speed of the movements of the galaxies.

The standard model of particles describes different types of particles, e.g. different types of quarks, neutrons, protons with exchange particles etc. All these are just the names of special constellations of high, but characteristic numbers of individual Mechanoeitons within descendants of electromagnetic fields according to our model. These constellations can be compared with a polonaise which offers an impressive picture for the outside observer but consist just of individual persons. So it is not a surprise why it was impossible up to now to observe distinct quarks, if you use this model: Compare this with artists or sportsmen: Then individuals playing special roles within a play. They have to build the related constellation with adequate dress just for the play. So you will not meet an American football player with his dress e.g. in a supermarket or the opera. The comparison with players in connection with the quarks is not our idea. Even quantum physicists are comparing the situation of the processes within quarks with playing: to play tennis.

The conservational principle allows the prediction that the characteristic of the consents of the wave nature has to be respected in any case of particles. The similar idea was proposed by de Broglie.

The atom — convergent evolution to the first complex entity

The situation changed fundamentally with the cooperation of descendants of Mechanoeitons/ energetical fields to the atom. Now there is the need to attribute to these physical entities to be complex entities. The integrated precursors are just «components» of the new entity. Their autonomy is used within the newly created eigenspace. Therefore the most relevant potential of all integrated entities is used for the dynamic games within the own space — a small world like a nutshell. Only a small part remains open — according to the conservational principles: One option is the emission and absorption of photons. The other one is the interaction of electrons in form of ions. The atom links the characteristics of entities, which remain in the situation of particles and waves. The electron can be understood as balanced carrier of both types. Therefore the step to the atom can be understood as a convergent evolutionary process: To link options of different types of evolutionary branches which are just modifications of the same principle. So the atom is — as the Mechanoeiton — a new type of a fundamental basis actor — as later the cell, the individual and the person.

Conclusion

Atoms, light and other radiations, but also gravitation are fundamentals for the understanding of health according to the stay of knowledge in medicine: Light e.g. for the understanding of the production of vitamin D, mechanic effects on atoms e.g. in the case of a broken leg thanks to a — gravitational based — fall from the roof. We could go «behind- and evolutionary before» the occurrence of these fundamentals of medicine with our inventions. They are not in contradictions to the phenomena which can be handled adequately with the related sectoral disciplines. Therefore the first step according to the prerequisites of a theory of principles for health sciences

and especially medicine could be realized. This was the goal of this paper.

There are partly different positions presented on the basis of our model compared with the positions of physicists and cosmologists. But the differences are only based on the paradigmatic positions, which are used, not in the power to deal with the phenomena — insofar as we can see this with our restricted view on health oriented aspects. We did not modify any formula of cosmology, quantum theory or classical physics. But paradigms need not to cover all aspects. Any scientist is competent to create alternative paradigms as long as this does not need a change of formulas. Such changes would need the competence of the related specialization. There was no need for such a modification. It was sufficient just to modify the paradigmatic positions adequate to the demands of medicine and other health sciences. And the problems of medicine are different from the problems of cosmology and physics. Therefore it is correct and indispensable to create a theory of principles for health with a connection to cosmology and physics but with priority to the demands of human persons. Nevertheless human persons are at the same time to characterize as primates but also as solid physicochemical bodies and entities of an evolutionary process, which started — according to the stay of knowledge — with the Big Bang. We hope we are now able to give sufficient respect to all these aspects insofar they are of health relevance.

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