
Darwinian Diffusion Theory on Cosmological Expansion or How Quantum Volatilization Moves All Things

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An Approach to Natural Development

The forthcoming journey through the most primal contexts opens up an undogmatic view of our universe by not adopting a deterministically motivated stance. Although it considers and uses constructs and findings of the sciences, it is not primarily calculations and formulas that lead to my results, but the analysis of these physical milestones with regard to the possible existence of a fundamentally and consistently ***selection-driven development*** of interactions. To do this, two assumptions would have to be valid:

- ❖ ***All principles of ordered processes - including the laws of nature - are the result of Darwinian evolution.***
*Immutable or constant are only **idealized** states and not real ones.*

My concept can be the beginning of a fundamental investigation for the possible emergence of a new interdisciplinary field – the universe as a naturally evolving system. It goes back to the beginnings of our interpretations of its cosmological components, shedding new light on their origins and concretizing the evolutionary challenges that it cannot withstand without adaptations. The universe is more than a construct of mathematical relationships, as these could themselves be idealized results of its development.

Reality can only approximate mathematical rules. My view of evolution implies that it cannot be possible, mathematically or otherwise, to predict with certainty the occurrence and dominance of concrete anomalies in the nature of things. Uncertainty principles, as they are known at the quantum level, already provide an important indication for the existence of a ***fundamental unpredictability***. It is not far-fetched that higher complexities of certain cosmological anomalies may have prevailed in evolutionary processes and on this basis have risen to new rules for interactions. All laws of nature may once have been anomalies, the individual superiority of which established them as regularities in the first place.

The consideration of the origin of the universe from a purely physical point of view cannot be expedient for our science, since the corset of physics is limited exclusively to the sequences of movements between ***already existing reference frames within space and time***. According to this work, both have so far been wrongly

defined only as physical dimensions that supposedly have no common family tree or relationship with matter and energy. The physical universe should not have been the beginning of all things, any more than its chemical or biological nature should have been. To believe such a thing would be another case of dogmatic short-sightedness. All three forms represent ***evolutionary sets of rules that build on each other***. Physics, too, must have been preceded by more fundamental interactions, which were not limited to relative motions in space, but formed the ***spacetime structure*** itself. In this work, space and time are incorporated into the universal construct of physical substances and their modes of action and are therefore ***precursors or parents of physical reality***. My concept illustrates in detail how the expansion of the universe is not a pointless inflation, but a ***growth of spacetime based on its substance***. I also see our cosmos energetically as an ***open construct*** of constantly evolving reference systems. This "porosity" makes it vulnerable to isotropic self-dissolution due to constant energy losses and at the same time susceptible to "external" energy sources and influences:

- ❖ *There is no such thing as a distant "outside of the universe" – every single position in space behaves like an open and thus interactive boundary.*

In contrast, the universe of the current standard cosmological model is a closed, idealized machine that consistently unfolds according to strictly prescribed principles and is condemned to an immutable volume of energy. One day, this view should seem as abstruse as the disc-shaped earth or the geocentric view of the world. As far as such all-encompassing ambitions of the sciences are concerned, I am fundamentally of the opinion that philosophy currently plays far too little role in cosmology. As long as one is still working with very little knowledge and certainties – and this is definitely to be assumed in cosmology – philosophical approaches should question a stubborn empirical search for desired evidence much more often. The basic understanding of cosmologists is still simply too religious – this refers to the procedure of prematurely taking things (fields, natural laws, energy) ***for granted***. The following brief references to today's scientific fields are intended to prepare you for how Darwinian our universe could actually be.

Physics and the Before

Without reference frames that existed from the beginning, the origin of our universe could not have been based on physical laws. Even the standard cosmological model assumes that matter was formed from energy only some time after a Big Bang – so there would have been a short time after it, when no reference frames existed. **What** is physical about a world that does not yet offer a substance? To this day, cosmology has not been able to get rid of this weakness and it suppresses clear indications that:

A new science is needed to investigate ***energetic laws*** that describe isotropic expansion or propagation principles of a ***solitary spacetime*** in the early universe. From our perspective, the whole thing would be a purely relativistic process and we could only test it by looking for relativistic effects on our physical reality. What approach could help here?

Cosmic formation and expansion may have involved a form of ***replication*** as a result of ***systematic excitation***¹ that sought to restore the ground or previous state. We have been shown to observe such behaviour in atomic processes or in the generation and emission of photons, beta radiation, etc. There can hardly be a stronger indication of the validity of my assumption. Elementary fields seem to make it ***possible to replicate*** structures in principle - this ability may also have applied to the ***precosmic state*** and therefore my theory starts there:

- ❖ *The isotropic motion to which we owe the expansion of the universe could be a special kind of self-diffusion² – the sequence of replication (clock of time) and volatilization (space).*

This process would owe its origin to the anomalies in the precosmic state. Of which, if applicable, ***immeasurable variety of states*** initially had no quantifiable compatibilities. Neither physical nor ***diffusiononic*** interactions were therefore possible. In the midst of this diversity, each quantum state remained on its own, which symbolically characterizes the etymological chaos - nothingness. Only anomalies led out of this loneliness by means of replications of similar patterns and thus to the first diffusiononic interfaces for interactions - spacetime. On this basis, the birth of the universe could be illustrated in the following way:

Before life arose on Earth, the chemical elements had a more limited spectrum or repertoire of interactions. There was an absence or nothingness in terms of biological interaction, because there was no biological compatibility. An analogous circumstance that could have characterized even the most primordial quanta in chaos. The birth of a new interaction interface organized and multiplied new patterns of movement for both scenarios; ergo, new forms of existence - life and, long before that, spacetime.

- ❖ *The universe came into being with the advent of a quantum ability to systematically reproduce and distribute similar states and events.*

A scientific field of ***diffusionics*** could become the precursor of physics in the future - the initial laws of our universe must have been exclusively relativistic in nature, since any movements only affected the spacetime construct itself. At this point, I would like to anticipate the following assertion:

- ❖ ***Elementary space*** is the ***interaction field of a spacetime quantum*** - probably our primary energy carrier, the photon.

According to the current state of science, electric, magnetic or gravitational fields only represent ***space with special properties***. Isn't it ***reasonable*** to assume that it ***itself*** could represent ***an underlying primeval field?*** As such, it would not be a container or medium for photons, but ***their property*** – a fundamental difference

¹ Any state whose energy is greater than that of the ground state

² Transport of particles within the same substance

from the current understanding of physics. As a result, all other fields would represent its evolutionarily developed manifestations. The construct of time, always depending on the direction, would be subject to the replicative rhythm of the progressive increase of photonic individual fields into a coherent that forms the universe. This primeval network, which was quite homogeneous at first, must have undergone a development that eventually led to the emergence of physical nature. According to $v = c$, photons exist in a time-free environment. A meaningless coincidence? No - ***because they themselves possibly form our spacetime framework.***

Every form of purely physical interaction only describes laws of motion or propagation relative to each other – and thus always in relation to the already existing spacetime. However, this possibility only arose after the formation of compatible reference frames – the simplest or most primitive ***spacetime clusters***, which may have evolved from ***local anisotropies*** within the initially relatively homogeneous spacetime extension. Rules of physics were thus successively added as new special properties ***to the already existing*** and initially purely diffusionic set of rules.

Chemistry

The deviating spacetime clusters could be the precursors of our matter and thus also the basis for the imminent birth of chemical processes. A detection of building blocks of suspected dark matter³ may not work if one is mainly looking for microscopic structures. The primary, purely relativistically condensed spacetime clusters could have been much larger structures with very low energy density and could not differ from space itself on a microscopic level any more than electromagnetic or gravitational fields. The (chemical) diversification of this homogeneous basic substance, which may initially have been only slightly denser than the primary spacetime, occurred much later - as a result of new anomalies in the form of new anisotropic motion sequences within the spacetime structure of respective clusters. At some point, the first clouds of initially uniform primary mass emerged from them, which were able to condense into primeval stars. Science has no solid explanation for the origin of interstellar gas clouds and assumes that they will eventually be used up. However, evolution and replication can be the key to their emergence as well as to ensuring that this fuel does not run dry.

Biology

Last but not least, the infiltration of chemical substances into new, biological patterns of movement has established the emergence of life - a spread of anomalies over the construct of the chemical world, which have clamped it into a superordinate regulatory corset in order to possibly escape a ***substantial threat*** unknown to us. In the search for the ***generative principle of life***, this is strangely neglected. In order to be able to evolve

³ Scientifically postulated substance interacting only by gravity

the **complexity and diversity** we observe today, the universe should also be many times older than previous assumptions.

Origin and Development

It seems quite plausible that other anomalies could have occurred as "precursors" of spacetime, based on even more elementary patterns of a more fundamental reality to which we lack access. How far back does that go? In the original and thus complete chaos, **any form of interaction** must have been lacking. The first anomaly produced the first regular contact and only then made the claim to existence – the **actual** birth of the universe.

The occurrence of anomalies in microscopic and macroscopic motion sequences could be formative for the shape of our natural laws – the fundamental principles of interaction. This evolutionary drive increases the diversity of interaction potential, thereby expanding the range of possibilities for cause-and-effect scenarios in the universe. We can't necessarily expect to find known particles on our doorstep that exhibit deviant properties to prove their evolution. Such deviations will depend mainly on places in the universe where special rules have been formed at certain evolutionary stages, in which an adaptation has taken place in the interaction of different building blocks. It is likely that certain structures that come to us from other galaxies actually have different or extended properties. However, as long as **no suitable interfaces or set of rules** can interact with these abilities in our Milky Way, these peculiarities will remain ineffective and undetected – a boat does not float without water.

According to their mode of action, quantum fields can combine with each other to form a coherent field and thus create a new **sphere of action** with pronounced, possibly even direction-neutral uniformity. From within, therefore, we no longer recognize a field character, but only its laws, which are perceived, for example, as laws of nature. Within uniformity, the laws of the respective quantum fields as well as those of their precursor building blocks apply – the universe is successively expanding its range of instruments accordingly. Each new structure of fields of action can be seen as a new "layer" that increases the overall complexity. This will also be susceptible to new perturbations and in the course of this will lead to new, again more complex fields that can develop within its own specific uniformity.

- ❖ *For me, processes of nesting in the form of decreasing entropy characterize the basic construction principle of evolution – and thus, according to my theory, of the entire universe. Entropy must first have decreased and not increased as in a Big Bang in order for it to occur.*

In the end, our sciences, which build on each other, merely describe the evolutionarily emerging forms of an increasing complexity of the nesting of spacetime diffusion – and thus a process that can be understood as evolutionary resistance to volatilization (dissolution) in the form of temporal slowdown. Evolution cannot predict resources or cosmic events - it only **adapts movement patterns** relatively sluggishly to circumstances.

In order to be able to react more quickly to unforeseen events, the anomaly of the intellect has also prevailed at some point – very flexible interaction principles that are able to absorb the inertia of evolution in many situations and therefore perform this role in parallel, albeit much more determined.

Determinism or Not

The inspiration and motivation for my own point of view developed in me on the basis of some contradictions as well as unnecessary manifestations within the existing cosmological standard model. One of them is the deterministic approach, which runs like a red thread through all previous theories of explaining the world - although there is still no scientific reason for this procedure. Both building blocks and their interactions arise deterministically on the basis of a specification alone. Possibilities and probabilities, such as those offered by quantum physics, atrophy into marginal phenomena in cosmology.

► **Why has humanity clung to a predetermined universe for thousands of years?**

Is the universe really a precise clockwork – albeit with quantum mechanical fluctuations? Man has always wanted to believe this in order to give his own existence a destiny or a purpose – or to preserve the chance of being allowed to see through it completely at some point. However, the role of chaos in its original meaning as an absence or nothingness is much greater - it represents the **gaps in every set of rules** for the creation of evolution. Scientists repeatedly argue that statistically there are simply too many possibilities for substantial connections for a higher form of order to be formed purely by chance. The German professor of astrophysics, Dr. Harald Lesch, gives an example of this in his show⁴:

The emergence of a virus with a total of 1000 DNA pieces in the right composition would have to be based on an unpredetermined starting point from approx. 10^{600} random combinations of the four DNA bases. The time since the Big Bang would not have been enough for this – and yet there are even much more complex life forms than viruses on Earth. The nature of things must necessarily obey laws in order for realistic probabilities to arise which have made possible the formation of any substance within the assumed time periods. I will not disagree with Prof. Dr. Lesch – he is absolutely right in this assessment. His argumentation, however, separates substances and laws (blueprints) from each other and elevates any laws of nature to the rank of independent, superordinate phenomena. To this day, leading science has not taken the step of thinking that the two **belong together** and develop **together** – and thus elegantly gets rid of the evolution of things. However, both laws of nature and principles of lesser universality are **inseparable** from a substance – there is neither gravity nor its mode of action without something to produce it. Prof. Dr. Lesch's example is a delusion, since DNA bases have a completely **new, evolutionarily formed set of rules**, which is able to create **new** specifications in order to "assemble" life forms much faster than if, for example, this had to be done on a purely atomic basis. I don't

⁴ Supercodes (1/2): Blueprint of the Earth (ZDF)

want to know the number of random interactions of elementary particles that would be necessary for a Bible to suddenly be on the table in front of me – it is clear to each of us that there are laws that accelerate certain developments. However, how these rules came about and are coming about – **that** is crucial.

The current view of science tells us that it can only reconstruct the universe roughly, but already up to about a millionth of a millionth of a second after the Big Bang. An attitude that, considering that we are only just entering space, suggests an astonishingly good knowledge of it. Instead, a contradiction in this regard is revealed - in what other science could someone credibly claim to be able to infer the existence of about 95% "darkness" (dark matter and energy) from supposedly about 5% known something (classical matter)? Squeezing the inexplicable into the meticulous corset of the Standard Model creates the illusion of an incomprehensibly accurate conception of everything, which, as so often in the past, takes on religious traits.

- ❖ *The discrepancy in the prevailing view of the origin of the universe is the simultaneous need for an enormous amount of energy that must have been available to a Big Bang with the enormous amount of dark energy⁵ needed to bring about the accelerated cosmic expansion. Expansion based on cosmological diffusion, on the other hand, requires only one energy source.*

In principle, the postulate preached in science of always valid conservation of energy automatically leads to these inconsistencies – the volume of energy available to us today must therefore have always existed **within the framework of our universe**. Determinism has given rise to the point of view in this form in the first place. If such an approach is chosen as a prerequisite for our worldview, it seems and unjustifiably assumes that our world exists under laboratory conditions. The need for a Big Bang is a self-fulfilling prophecy, the condensation of which has been anchored in the law of conservation of energy. But an adult human being, for example, was not condensed in an embryo, but **grew** out of it. At the same time, science needs a stable density of dark energy based on the apparently increasing cosmic expansion rate. This is a clear contradiction to the conservation of energy, since the universe would gain energy in total.

- **What observation led to the assumption that any energy in the universe that was supposedly concentrated in a microscopic area could suddenly cause a massive expansion (Big Bang)?**

Negative energy in a reversal of gravity is the hypothetical emergency construct of science for the purpose of this explanation. The assumption is still unfounded and knows no analogy, except in the case of the equally hypothetical white holes. In order for this process to be possible at all, gravity and thus a collapsing pre-state would first be required, whereby the whole thing degenerates into an endless loop. How and with what does it all start – are the restart conditions always the same? As soon as a perpetual reality becomes necessary to preserve our worldview, alarm bells should always ring.

⁵ Hypothetical form of expansive energy

- ❖ **Not all correlations and processes in the nature of observable things can necessarily be expected, assumed or even predicted.**

This statement conveys my deepest conviction that there cannot be exclusively ordering factors that shape the state of our universe. The uncertainty principle at the quantum level is an important indication of this. The universe only **strives** for a high degree of certainty, but does not get rid of the inexhaustible potentials that can result from indefinite changes. My assertions about the existing state of reality are therefore made in a simplified form on the basis of the following context statements:

1. *The universe is made up of more or less ordered states - fields. Interactions of these fields require the existence of a difference in concentration - energy. The effort to compensate for this difference is expressed in the form of forces whose effect-specific time frame is predetermined by the difference in concentration itself as well as by the possibilities and limitations of developed interfaces.*
2. *Every process of balancing concentration and thus of the flow of energy involves an evaporation of order.*
3. *By building up complexity, evolution can nest this compensatory effort and thus decisively slow it down. Such steering takes place by forming and using the vectors of acting forces for one's own preservation.*
4. *Orders are in principle at a disadvantage compared to chaos as soon as volatilization occurs, since they have a finite form, but chaos does not. This imbalance always means basic potential for evolutionary processes.*

► **On what scientific basis does cosmology assume in its predictions that natural constants within our universe would last from the beginning and even to the end of all things? Couldn't new formative laws arise at any time?**

A timeless validity of natural constants is inevitably implied by our science as soon as it tries to approach a Big Bang on the basis of previously known laws or to work out forecasts for the distant future. At the same time, the search is underway for complementary, universally valid dark structures that are absolutely necessary for the functioning of the model - whether in terms of matter, energy or forces. How does that fit together? Isn't it rather the **supposed constancy** or alleged lack of flexibility of certain physical variables that makes additional constructs necessary?

We observe birth, transience and diversity in all spheres of existence – galaxies, stars, elements, elementary particles – and, of course, living organisms. However, when it comes to physical properties and laws, science stops and uses them as load-bearing, eternal and unchanging pillars within our universe. Our senses are limited to the mere observation of effects: We fragment the perceptible matter further and further into the smallest

components and meticulously describe and predict their properties. On the other hand, in the case of elemental forces, we are simply satisfied with their classification as "magical" phenomena, which can only be documented as properties and measurable in their effect.

► ***But what is the origin behind the fundamental interactions – why do their fields consist only of space?***

Unfortunately, physics has never set itself the task of questioning properties, but only of documenting them and using them for forecasts and retrospectives. It simply assumes the principles of interaction that are essential for understanding the universe as given and even constant. In my conceptual treatise, laws of nature also follow a scenario of origin and development that conditioned the continued existence of the ***initially very fragile*** universe. What we observe is not constant at all times and therefore not necessarily determined. There can be local and temporary laws - and those that cause cyclical changes in natural constants known and unknown to us. Physical forces are conceivable that intensify and weaken, appear in a controlled manner and also disappear again. Can we simply rule out such mechanisms on the basis of a postulated cosmological principle⁶ – and only for this reason can we claim that we know pretty much exactly what has happened since the Big Bang until today? Isotropy and homogeneity on large scales say nothing about evolution itself – this tunnel vision idealizes unnecessarily, neglects properties, and yet does not necessarily lead to a Big Bang. Life or biomass may also be fairly evenly distributed across our planet, ***but neither its origin nor development can be deduced from this alone.***

So soon after Galileo and Newton, constant doubts about the scientific status quo should be the norm in a researcher's mindset. Substance-based measurements within a single solar system are far too manageable a scale for universal forecasts – and yet they already reveal a breathtaking variety. The universe must not be seen as a puzzle state that can only be properly assembled and then continued, but as an evolving organism that undergoes (local) adjustments again and again. Anyone who has only been able to explore deserts or bodies of water for a very short period of time will not presume to come up with an almost complete theory about life and its diversity on the entire earth - all the more plausible it is to expect an incredible variety of micro- and macrostructures for the entire cosmos. On the other hand, many things - and I do not rule out the laws of physics - will fall by the wayside. The constituent parts of the universe should be changeable, both locally and fundamentally, in such a variety of ways that it is not possible ***to draw exact*** conclusions about how something came about or how and what will come about in the future. As soon as something encounters new challenges in the universe, adaptation or extinction ensues, and myriad paths lead to each outcome.

According to the current view of science, it is the mass that produces relativistic curvature of space. ***This*** order of cause and effect implies that mass itself can be formed without the curvature of space, and we would be looking for something that makes this possible. If the order is reversed, there is no longer any need for this –

⁶ Two basic assumptions of scientific cosmology

a certain amount of space curvature could be realized by mass-free substance (photons) so that mass could form in the first place.

The abandonment of the deterministic way of thinking holds considerable potential for humanity. This would not only focus on the use of existing resources – but also on new particles, tailor-made forces and expanded properties for matter and space. The creative advantage of this world over that of the Big Bang model is immense – even if one had to say goodbye to the completeness of a universal knowledge of the nature of things. Creation as a challenge and not just as an immutable fixed point in the past - this is the outlook from which a person who thinks deterministically today clearly prematurely bids farewell.

The Cosmological Corset

Definitions of terms guide our thinking and have a decisive influence on our scientific results. In the following course of cosmologically relevant interpretations of terms, I will occasionally anticipate certain facts in order to establish reciprocal references, which will only be explained in more detail in the further course. The beginning is made by the metaphysical order - although, chronologically, it cannot be at the beginning. However, it is the most familiar to us, and it is only through a deep understanding of its interactive nature that its origin can be derived.

According to Immanuel Kant, order is The Connection of the Many According to a Rule. But the many **itself** is a **result**, because it can always be created as a **continuation process of individual building blocks** according to the rule.

a) Order

Philosophical, abstract interpretation:

\triangleq **Cyclic process**

In a cycle, something repeats itself in a certain way. In the basic principle of the recurring, order depicts everything in the universe that represents mutual dependencies that can be expressed in the form of abstractions (patterns and formulas). Alternatively, you could say:

Mechanical interpretation (wave / particle):

\triangleq **Stable interaction**

Or:

Statistical interpretation:

\triangleq **Any probability of a state greater than zero**

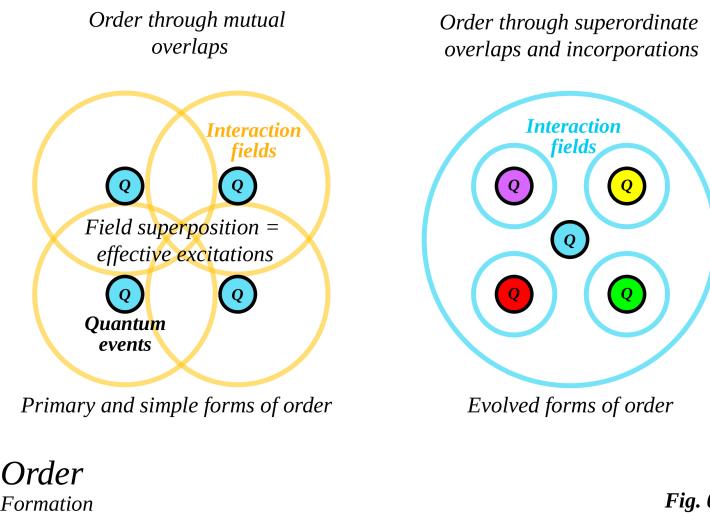
A probability or frequency also means that something will occur again and again in a context. Frequencies can characterize both waves and particles. Particles represent the probability of the occurrence of **individual** excitation states in probability space at certain points in time. Wavefronts can be used to illustrate patterns of **equal** probabilities for the occurrence of an excitation state at respective points in time within the probability space. Particles, waves or possibilities - often it will only be possible for us to guess the essence of reality by comparing these three points of view with each other. We only work with idealized mental constructs that

underlie subjective perception and allow us to see patterns. It is not possible to determine what objective form an order has – perhaps it is actually a superimposition of several points of view. A **wave-particle-limbo-trialism?** Certainly, it is closely linked to its respective interface for our perceptual apparatus and therefore cannot completely elude us in the form of abstractions (the core competence of humans).

If there were particles between which there was no possibility of interaction, they would **not** be components of the same universe:

- ❖ A **universe arises and consists of at least one order**. It represents the **totality of all reference systems that are capable of reciprocal interaction**.

In order to establish an order in the first place, a relational ability must first be initiated:



The two ways of doing this are illustrated in *Figure 01*. An effective **overlap (superposition)** of interaction fields is necessary to create order. Using far-reaching, compound fields, evolved orders can form incorporations with fields that previously had no or only limited overlaps with each other. Field strengths often gradually decrease depending on the direction and in the course of this also the ability to interact – but where the boundary area of the respective order is has **neither trivial, unambiguous nor immutable character**.

Fig. 01

- ❖ **Quanta thus stand for the construct of a field of action and its manifestation principle.**

This principle characterizes the specific **origin of their occurrence (event)** or the **cycle of corresponding excitation states (regularity)** and **always** results from an interaction:

- ❖ The **evolutionary step towards a new, adapted order form** has taken place as soon as the special **property** (interface or field) of a **previously unquantified excitation (anomaly)** **has enabled or favored** the constant change of the previous cyclic process.

b) Chaos

Philosophical, abstract interpretation:

\triangleq **Absence of any operations**

Mechanical interpretation (wave / particle):

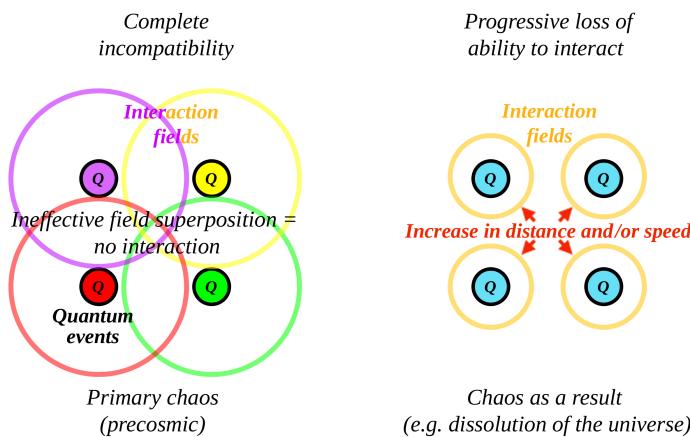
\triangleq **Non-reciprocal excitation states**

Statistical interpretation:

\triangleq **Any state outside of existing probability spaces**

What is the many without the rule? An event in itself is not a process - complete chaos can be a sum of countless **individual events or stimuli** that **do not** interact with each other in any way and consequently cannot establish order.

- ❖ Such an **image of 100% individuality does not represent a universe** (Figure 02).



If no interaction is possible, there is either a lack of **compatible interfaces** or the absence of **effective superposition** between interaction fields. The latter, in the form of volatilization, is also the way back to chaos – a process that evolution counteracts. The basic prerequisite for classifying something as existing and thus belonging to our universe is the necessary existence of **responsiveness to its developed set of rules**.

On the basis of this analysis, I consider primary, full-scale chaos to be the **pre-cosmic primordial state** that preceded the emerging cosmological unfolding. The

(complete) loss of the ability to interact due to a divergence of previously correlating structures, on the other hand, is the state from which the universe has been trying to escape evolutionarily since it existed. Chaos can also continue within existing order, since no principle can achieve idealized quality:

- ❖ What's new or **acquired chaos** represents the **absence of quantifiability within existing complexity**.

From a statistical point of view, these would be ***individual unsystematic states*** within the ***otherwise*** regulated specifications of an already existing field of interaction. Newly formed order also increases the possible overall spectrum of ***anomalies***. For example, there is no possibility of finding an ordered or random thought if there is no neural network (field) that can produce it.

- ❖ ***Anomaly means that the probability of the occurrence of a recurrent event or excitation state has changed undeterminedly. In this way, it is the link between stable or cyclical processes (order) and the absence of operations (chaos) under excited states.***

The more complex an existing order is, the more fields of interaction it will be shaped and the more anomalies it will be able to produce. For this very reason, living organisms are the fastest-evolving matter – and at the same time the most susceptible to damage to their order. It is precisely the complex orders that go hand in hand with the most indeterminacy. Our knowledge in this regard is complicated by the following circumstance:

Every anomaly that has prevailed evolutionarily has advanced to a new order. If one observes the properties that anomalies have brought with them over a long period of time only post-evolutionarily, ***one recognizes nothing more than order***. The observer can no longer verify the origin with regard to an earlier indeterminacy. This is the most important reason for the fallacy of the existence of determinism.

In terms of purpose, chaos means a ***flexible*** and thus ***expandable infrastructure*** in order to ***enable gradients*** between different orders to unfold. For example, we owe the loss of interaction between galaxies in the universe to the resulting effort to move everything apart in order to compensate for the difference in concentration that evolution has built up and continues to expand:

- ❖ ***Energy is bound volatilization potential to dissolve order again.***

It is therefore an ***originally destructive*** and therefore ***primary driver for the evolution*** of our universe. It was only through evolutionary taming that it became the fundamental basis of all ordered processes. In a wide variety of forms, their manifestations show the challenges that primeval orders have encountered and the potentials they have been able to exploit. All states such as mass, inertia or gravity, as well as any forms of matter and their interactions, are the result of ***induced, energetic anisotropies*** or directed processes. They have been able to hold their own against the primary, all-dissolving energy flow in the universe and keep on with this tug-of-war continuously.

- ❖ ***Isotropy is direction-independent and therefore unavoidably wave-like - anisotropy, on the other hand, produces focal points. Together, the two establishes the discord or the fuzziness of wave-particle duality.***

c) *Property*

Philosophical, abstract interpretation:

\triangleq **Interface area for operations**

Mechanical interpretation (wave / particle):

\triangleq **Field of interaction**

Statistical interpretation:

\triangleq **Probability space**

Properties of an order characterize its interface area via the developed set of rules that they possess for structuring interactions. Every flow or exchange of energy as well as any force effect between the respective orders takes place according to properties:

- ❖ Within these **fields**, excitations take place, the result of which **can be higher energy states**, mutual **connection** (accumulation) or forms of **repulsion** (replication, release, volatilization).

In this way, they offer the **evolutionary scope** for natural development. At the same time, properties pose a risk to the integrity of the order, because their resolution is given precisely at these open interfaces on the basis of the possible energy losses.

- ❖ Each new **evolutionary stage** is based on **anomalies in the characteristics** of its previous stage.

Properties respectively interfaces are evolutionarily based on each other. In the following, I list a compilation of important categories that have developed up to the present day. The first two are hypothetical and will be discussed in the context of this paper:

Order Modules

1. Elemental space:
2. Elemental mass:
3. Elementary building blocks:
4. Atomic building blocks:
5. Chemical building blocks:
6. Biological building blocks:
7. Neural building blocks:
8. Building blocks of thought:
9. Social building blocks:

Property Categories

- | |
|---|
| Isotropic quantum diffusion field (primary radiation field) |
| Anisotropic quantum diffusion field (gravitational field) |
| Quantum fields for weak and strong interaction |
| Electromagnetic field |
| Valence field; temperature field |
| Metabolic field |
| Receptive field |
| Brainwave field |
| Field of communication |

What distinguishes a field so that it can be classified as such?

- ❖ **Fields represent the occurrence of local disturbances (excitations) within a previously often uniformly developed environment and thus establish a sphere of increased complexity.**

Within the quantum and thus state diversity of the original chaos, a form of excitation unknown to us - scientifically possibly described as the process of vacuum fluctuation⁷ - must have ensured that **recurring states** were initiated and expanded:

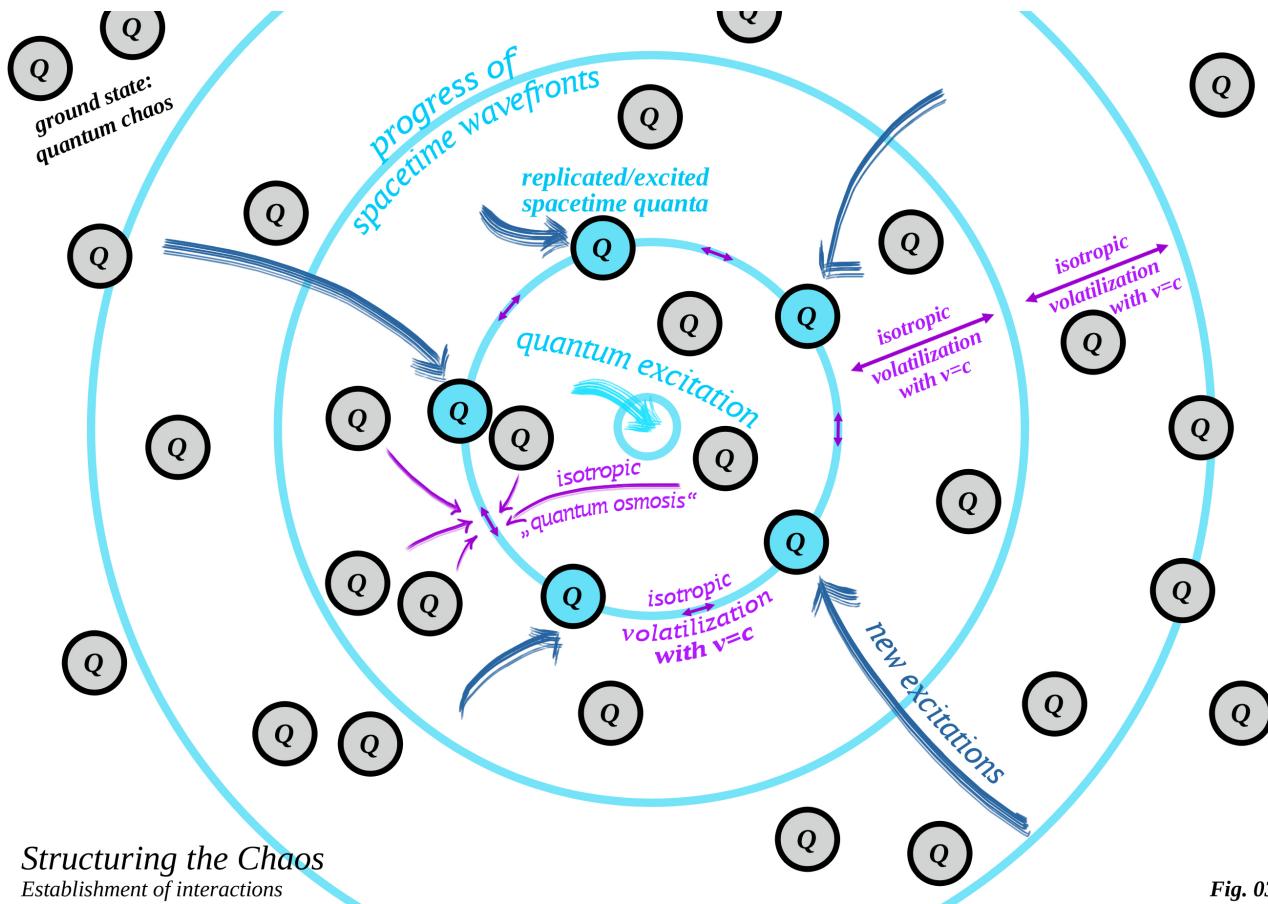


Fig. 03

⁷ Virtual pairs of particles (energy quanta) that appear out of "nowhere" and disappear immediately

- ❖ **Isotropically excited quantum states evaporate in the form of rays or waves and expand our interactive space in the form of this de-excitation process.** It represents a lively quantity framework of such quantum diffusion fields and combines structuring excitation and de-excitation processes within the chaos.

During their evaporation, other elementary wave origins are regularly excited and thus replicated between the quantum wavefronts, which continuously maintain the process:

- ❖ **Each new excitation is always the origin of a new elemental spacetime wave.** Each such replication origin unfolds 299792458 m of space **every second in any direction.** In this way, the speed of light creates the basis for all future movements in the universe.

The wave progression takes place by the previously unrelated quantum states of chaos of each new wavefront serving as an elementary propagation medium:

- ❖ All wavefronts **drift apart from each other** and develop **not** as a continuation, but as an **isotropic-expansive subdivision.**

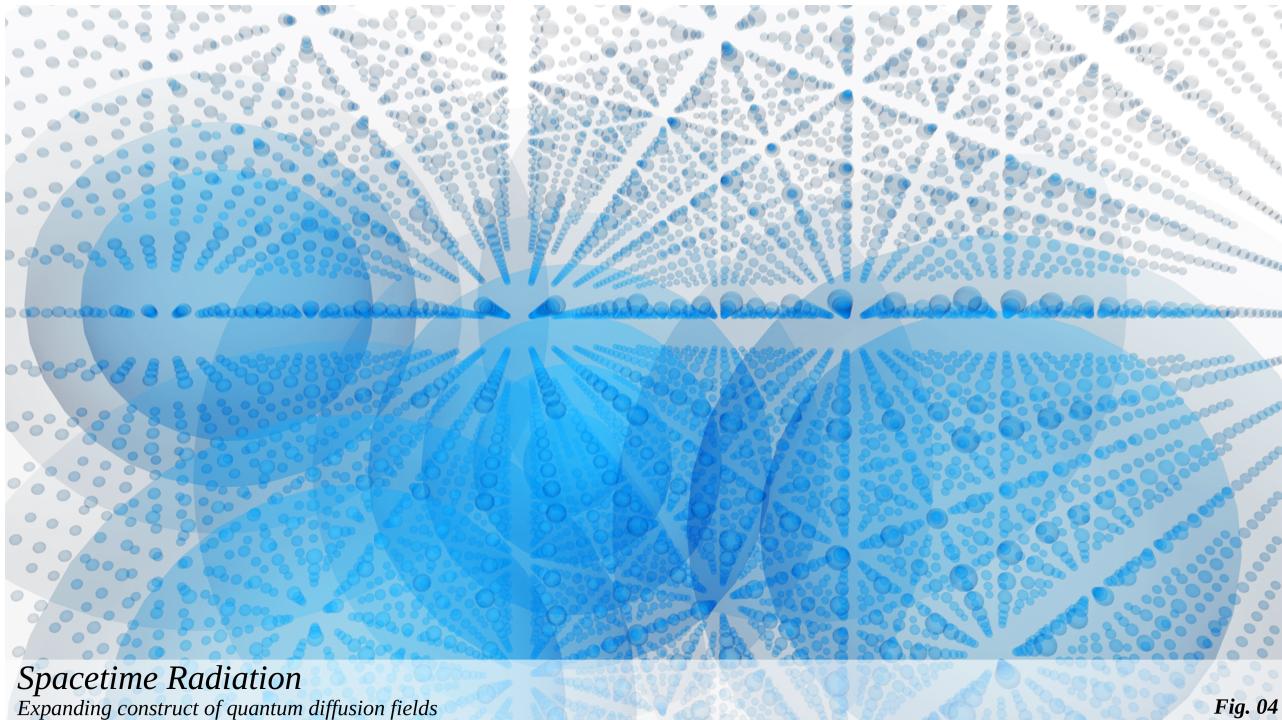
Analogous to the classical diffusion process, in which components of one substance drive apart those of a second substance during independent mixing, primeval **quantum chaos penetrates** isotropically into our spacetime **like an osmotic solvent.** As a result, it causes them to resolve at the speed of light and, together with the continuous replication processes, establishes the expansion scenario:

- ❖ **Volatilization and replication constitute the primary form of a self-diffusion,** which **expands our universe and at the same time holds it together.** It does **not** mean aimless expansion as an energetic result of a Big Bang, but **evolutionarily determined, coherent growth.**

The Dirac sea⁸ is a nearly 100-year-old idea that illustrates that cosmological diffusion already had a distant conceptual precursor. At that time, scientists temporarily developed a concept with which negative quantum energy states could be explained on the basis of a substantial character of the vacuum. The idea was quickly discarded and the model is considered obsolete. If, however, instead of the vacuum, one considers **space itself** as a – albeit expanding – particle "water", this environment could be interpreted as the cradle of our cosmological origin.

Figure 04 gives an idea of such a simplified particle construct of quantum diffusion fields on the one hand, and the isotropy of cosmological expansion on the other:

⁸ Theoretical model describing vacuum as an infinite sea of particles with negative energy



As anticipated at the beginning of this work, I assume that these are the **first photons** - those of the **cosmic background radiation**⁹. After all, the persistence of this radiation is **the only** thing we **actually** observe – there is no evidence to support cosmology's claims that it used to be warmer and has been cooling ever since (redshift). The **high stability** of this microwave background **as well as** that of the presumed dark energy are also a justified indication for me that the two could be related:

❖ **Isotropic spacetime radiation represents cosmological diffusion.**

To do this, the universe would have to function like an **excited cavity resonator**. If it is indeed an open system, such a **spacetime resonator** should not deviate from the properties of a blackbody, which are a mandatory necessity for the observed and measured radiation spectrum of the microwave background. This would require two conditions:

⁹ A radiation in the microwave range that fills the whole universe, which is considered evidence of the Big Bang

1. Constant replication of the radiation emitted by the blackbody,¹⁰ symbolizing its temperature.

In order for the universe to be able to replicate a stable radiation spectrum, it would have to be constantly subject to an excitation frequency, which would be supplied to it in the form of energy from the incoming quantum chaos. A cosmic natural frequency f_n would emerge as a forced oscillation. The resulting resonance curve¹¹ should thus follow the principles of damped oscillations. As is well known, the formula for attenuated natural frequencies f_d , taking into account a damping factor ζ , is:

$$f_d = f_n \cdot \sqrt{1 - \zeta^2} \quad (1)$$

How much space would be *replicated per second by each isotropic origin*? If the **natural frequency of photonic spacetime propagation** is the value of the speed of light c , **then any other** velocity v that is feasible within spacetime would have to be a damped form of it. According to the theory of relativity, the following applies to the Lorentz factor γ or its reciprocal value α :

$$\gamma = 1/\alpha = \frac{1}{\sqrt{1 - v^2/c^2}} \quad (2)$$

If you adjust the formula, you get:

$$v = c \cdot \sqrt{1 - \alpha^2} \quad (3)$$

When comparing the formulas (1) and (3), the clear analogy becomes apparent - unattainable states for f_d and v , system-predetermining limit values as well as special attenuation ratios. In the case of spacetime, α would be a **Lorentz attenuation**. It must be more than a coincidence that the relativistic principles of spacetime can be compared with resonance curves as well as with the spectral curve of blackbody radiation on the basis of the unique attenuation characteristics.

2. Complete absorption of spacetime by the blackbody.

It can be assumed that the photons of the background radiation or spacetime evaporate **into nothingness** as long as there is no guiding obstacle - which is equivalent to complete absorption at the event horizon¹².

¹⁰ Idealized thermal radiation source that absorbs all radiation

¹¹ Vibration amplitude as a function of excitation frequency

¹² Boundary surface in spacetime

The analysed correlations show that a concept of cosmological diffusion has its justification and that the microwave background must serve as the main suspect for the existence of a cosmic quantum resonator, since it is the only one that can be measured as a primordial photon or energy source. In principle, this would no longer rule out the possibility that every later substance is based on spacetime, the intensity and complexity of which has increased evolutionarily in a variety of ways.

- ❖ **Temperature** characterizes evolutionarily acquired **resistance** to higher excitation or energy states, which can resist to a certain extent the stronger volatilization efforts based on **complex structural bonds**. The **emission or replication of photons by matter** is also a survival tool to regulate or cool higher energy states.

From now on, I will refer to primordial photons of spacetime, whose energy source could not have been cosmic in nature, as **diffutrons**. Each consists of a quantum diffusion field, which offers possibilities for manifesting interactions (replications when excited) and forms an overall construct of individual fields into a steadily growing (expanding) unit in the form of space.

Since the models of science have largely reduced space to a purely mathematical structure, the possibility of considering it as a **source of substance** has also been abandoned. For many open questions, such as the origin of time and gravity, it could therefore no longer be consulted. The elegance of mathematics doesn't require substance, but our world probably does.

Diffutrons are the Big Bang as the spatiotemporal beginning of the universe – arising from a variety of quanta that are unrelated, at least in terms of spacetime. There will not have been a real “bang” – the energy in the universe could only be extracted from chaos in the course of evolution and condensed to such an extent that it allowed explosive processes. The diffutron had a crucial secret to its success – a regular and constructive way of replicating to counteract its volatilization. In the course of that, it multiplies again and again and thus turns the disadvantage into an advantage – because the volatilizing "osmosis" helps it to propagate its spread in waves and thus constantly expand the **space capable of interaction**. Diffutrons thus use the cosmological volatilization, which is supposed to put them out of interaction range, for the growth of their formations.

The regularity of the replications was indicative of the degree of isotropy. In this way, an orderly environment could be generated and the previous absence of interplay could be "**portioned**" **into fields** capable of interaction – a circumstance that perhaps represented the first evolutionary control of indeterminacy as the basis for the emergence of the universe. Life probably also began with a first cell, which initially only absorbed gases and liquids from its immediate environment to grow and divide – here, quite analogously, a history of origin was repeated.

Rain (excitation) over a previously smooth water surface creates wave fields when each individual water droplet hits the ground. These fields are replicated only as long as the rain continues. If we visualize the

replication of diffutrons in chaos as the result of an extracosmic rain, this process could serve as a disturbance of the previous uniformity:

- ❖ **Perturbation (anomaly) or particle** - both can be understood as incipient local **curvatures in the middle of grown field formations**, consisting of an **excitation event** and its flattening **wave field**. Diffutrons create a **convex curvature of space** due to their radial divergence.

After replication, diffutrons immediately drift apart at the speed of light – the starting and at the same time threshold speed for any possibility of interactions. They are **not able to move more slowly relative to each other** - slower movements were reserved for evolutionary achievements of future, more complex interactions in order to stop the cosmological volatilization more intensively.

- ❖ In my theory, an **inflationary phase**¹³ according to the standard cosmological model is the **normal state of space**, takes place **continuously at the speed of light** and does not only mark a period of time from early cosmic evolution.

The **inability** of later matter to reach the speed of light is **not a random limitation**, but a kind of **attenuation protection to preserve the integrity of the universe**:

- ❖ An **event horizon** represents the **chaos threshold of the universe**. Only within the **Hubble radius**¹⁴ is spatiotemporal **interaction** possible. It is also significant that it **defines the boundaries of the universe** differently for each observer according to his **position and state of motion**. In the universe of the early **Diffutron Age**, everything initially expanded only **light-like** and not yet **time-like**.¹⁵

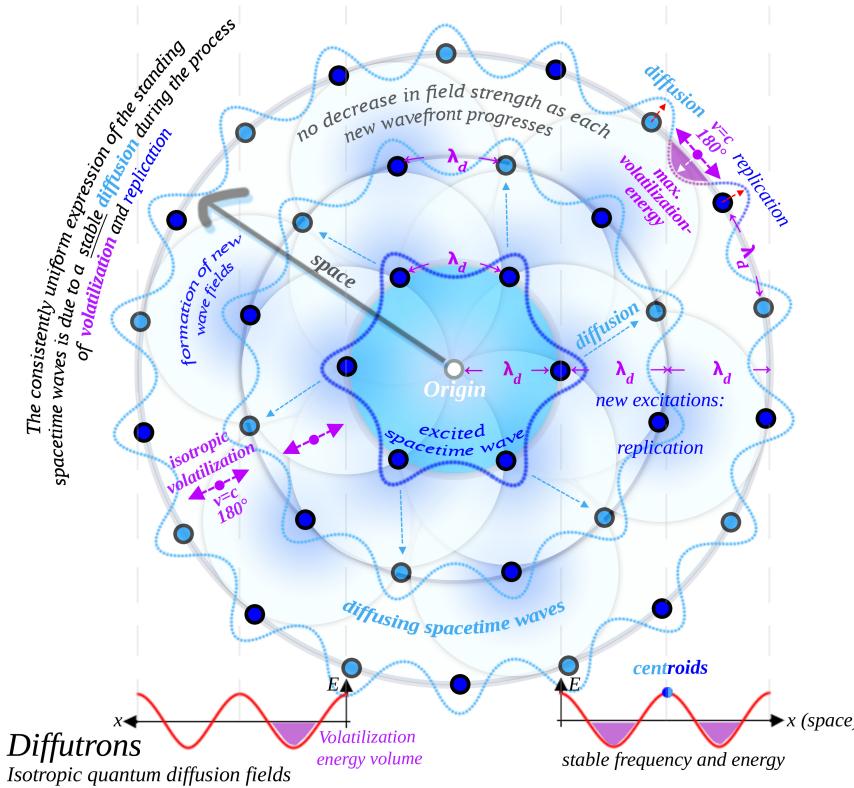
As soon as a mass accelerates, the frequency of diffutron wavefronts lying in the direction of motion increases relative to this. The speed of light cannot be reached with such wavelength contraction, because all the diffutrons in the direction of motion condense **into a horizon**. Thus, it is **not** a relativistically increasing mass of accelerating bodies that demands more and more energy from them in order to become even faster - it is **the generated resistance of the diffutrons**, which relativistically increase not the mass, but the **inertia of the accelerating bodies with respect to space**. The universe functions like a cage, protecting its contents from dissolution.

Figure 05 illustrates a principled two-dimensional view of a diffutron as the **primary quantum diffusion field** for replicative interactions:

¹³ Extremely rapid expansion of the universe

¹⁴ Distance at which a galaxy passes away from us at the speed of light due to the expansion of the universe

¹⁵ In time-like states, events can be related to each other at the speed of sublight



To better illustrate the diffusion process, particles are symbolically represented in the area of the maxima.

- „Interstices“ grow osmotically and are „filled up“ again when new excitations occur

- every such expansion creates new space

- the typical wavelength λ_d remains very stable

- volatile centroids are formed by the quantum states according to excitation probabilities in the wave course

- A center of mass is not formed because there is an isotropic equilibrium between replication and volatilization = isotropic spacetime radiation

- exemplary illustration-

Fig. 05

Each quantum diffusion field has an origin (excitation event) and represents a wave-like matrix from which **new** wave fields or diffutrons can emerge again and again with further excitations.

❖ **Minima (max. volatilization energy) and maxima (max. excitation probability) unveil the character of energy and mass – the concentric waves¹⁶ are a reflection of the diffusion process.**

We owe the isotropy of the space as well as its homogeneous field strength to the uniformity of the replication. Radiant and thus also spatial curvatures, which threatened the isotropy, did not play a role as long as there were no anomalies (further perturbations).

¹⁶ The circumference of the circle is an integer or harmonic multiple of the wavelength

The flowing grid of excited diffutrons is **the** reference frame for everything deviant that will take place within its sphere of action. The respective wavelengths between the replications are (almost) identical - therefore the energy density (dark energy) remains stable in the vacuum, despite volatilization. The **(time) axis for deviating processes** arises and runs perpendicular to the plane of the depicted diffusion process, which will be discussed in more detail in the following chapters. This kind of **universal reference medium** does not contradict the theory of relativity and **does not** represent a new form of aether¹⁷.

In the vicinity of heavy celestial bodies, space is much more inhomogeneous – observable by the intensified curvatures there. As is well known, these depend on how much mass occurs within a spatially defined area. However, evolutionary properties, such as gravity, could only develop gradually. Thus, it first required an evolutionary trick in order to be able to produce **directed** curvatures in radiation and **thus also in space** in the first place. Gravity is therefore **not** an indispensable property of every substance, but **only** of mass and **not** of radiation.

- ❖ **Mass has a center of gravity and thus symbolizes a bundling. If, on the other hand, there is a complete divergence, no dominant centres of gravity are formed, but wave-like gravity fronts as radiation. Radiation and mass are thus both processes and physically opposed.**

Just like light, spacetime radiation is subject to the gravity of future matter, but not in relation to a center of mass, which ultimately does not exist, but to its isotropically diffusing gravity fronts. For **this** very reason, the effect of gravity is limited to its frequency. Thus, the masslessness of photons **does not mean their weightlessness** - which will be decisive for the later consideration of inertia, to which, in contrast to gravity, science has not yet ascribed a relativistic being. Although light waves cannot experience changes in velocity, they can experience steering in the form of the aforementioned frequency adjustments and thus also the generation of space or radiation curvatures. Isn't it indicative of **a common origin** that apparently **only** electromagnetic radiation and gravity propagate at the speed of light?

- ❖ **If the excited replication of quantum diffusion fields were to stop abruptly, gravity would also disappear immediately and all time would have expired in one fell swoop. If, on the other hand, the replication standstill were to occur gradually, the universe would slowly evaporate into chaos – similar to a glass of milk fed into the ocean, which first diffuses and then dissolves in it.**

¹⁷ Hypothetical substance as a medium for the propagation of light

d) Time

Philosophical, abstract interpretation:

△ Sum of all changes from a baseline state to the result

Mechanical interpretation (wave / particle):

△ One-dimensional quantity structure of changing excitation states

Statistical interpretation:

△ Totality of probabilities occurring along a path

Time remains one of the great mysteries of science to this day - there is much speculation about whether it is a real physical phenomenon or just an illusion. Time or date indicates how many cycles of a periodic process that you have chosen as a reference have passed since a measurement began. Is this just a guide or is there more to it? If cosmological diffusion is to determine our reality, time must be an essential quantity, because both a corresponding field and a rhythm are needed for interactions to occur. Processes that take place must require something more than pure degrees of freedom¹⁸. **Time means change** - many before me have already recognized that. But how does this become physically tangible?

In the form of a fourth dimension, time is part of Minkowski space¹⁹ and, on the basis of this model, completes the mathematical structure of spacetime, which is used by the theory of relativity. As with most coordinate systems, the axes themselves are static in Minkowski diagrams. Both space and time define main axes, which **themselves** are not subject to development and can therefore also depict the future, for example. If we look at the universe in the role of a real, diffusing coordinate system, this cannot be possible:

None of the axes - neither spatial nor time-related - is actually "finished" at any position, there is no objective view of them. They do not contain **all** coordinates, but only those that have **already** been replicated or excited. What falls by the wayside in the Minkowski model, because it is only a purpose-built tool and not reality, is also the **origin** of the changes that are taking place. The **ct axis**²⁰ in Minkowski diagrams was only chosen in a geometrically advantageous way – but the real possibility that **our spacetime could actually be in motion itself in the form of light was overlooked.**

The basic rhythm of cosmological diffusion follows the rhythm of replication – it establishes both a space-generating wavelength and a predefined, but not immutable, time spectrum. From a **four-dimensional** point of

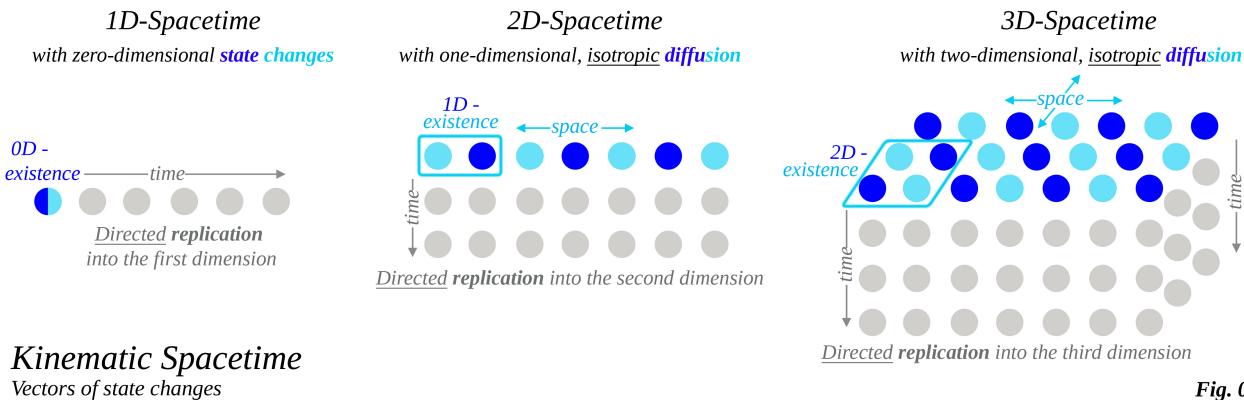
¹⁸ Number of parameters of a system that may vary independently

¹⁹ Four-dimensional space, named after the mathematician and physicist Hermann Minkowski

²⁰ Axis in spacetime diagrams, https://en.wikipedia.org/wiki/Spacetime_diagram

view, this particular oscillation duration would also **be classified as a wavelength**. Linear successive replications **define the flow of time**, between them field degradation occurs in the form of volatilization, **thereby expanding the space**. All processes in our four-dimensional reality could be based on this rhythm. Time, as a rigid coordinate axis, does not itself lead to any development - it merely documents and forecasts. However, once we begin to think of spatial axes as **kinematically capable of evolution**, we will be able to grasp **both** a fourth dimension **and** the isotropic expansion of the universe:

An imaginary one-dimensional world could be represented as **a linear continuous replication of a point**. Any **change in state of the point** can be seen as **the result of an excitation** that drives the replication of a new state **one-dimensionally**. This **flow** of point states creates a path that it does not perceive as such – because the point is limited to its 0D existence. The path is only time from a point perspective and passes slower or faster according to the progress of the state changes that the point is experiencing. In order to take a **1D point of view** or that of a **stretch**, it would have to be able to interact with the other states, which would correspond to the **construction of relative simultaneity** (field superposition) on the basis of wave-like probability distribution. Stretches could be seen as interacting point states that formed **a new entity** through evolutionary processes. All points of the linear world, as they change state, would replicate paths that together create a surface. For the evolved stretches, the 1D existences in linear living space, only this second dimension would have a temporal character. However, **unlike the dots**, the stretches **will notice that their 1D world is expanding**. This is because **only they** will perceive the point-states as **simultaneously** existing points, each of which **are also** subject to expansive multiplication – and this is **isotropic and not just linear** – since from a 1D point of view, **every** point on the line is in principle capable of changing its state:



Stretches will **perceive both linear-isotropic expansion and temporal progress, the latter referring only to their own, more complex state changes**. Surface beings (2D existences) would describe the time flow of the stretches as a second spatial dimension and the following connection could be established in principle:

- ❖ The **time experienced** always results from the **next higher dimension** compared to those to which the observer belongs. An **increasing formation of temporally shifted, two-dimensional quantum states** forms our **three-dimensional space or its substances – independent of our experienced time**.

If we continue the whole thing in our minds, we arrive at our three-dimensional space, which, miraculously, **seems to expand isotropically at every position**, leading our science to assume a Big Bang. However, we now know better, we can anticipate the significance of this expansion on the basis of *Figure 06* and interpret four-dimensional **spacetime** by analogy.

- ❖ **Essential for the understanding of space and time and their kinematic significance for our world is to internalize a spatially diffuse and temporally directed flow character of states.**

Such flowing quantum states of spacetime will also form gravity in the course of their evolution. Relative simultaneity is a key state to make this possible in the first place. If force acts on a body, this **not only means** a corresponding counterforce for the perpetrator:

- ❖ **Interactions first require the fact of field superpositions, which in result represents the establishment of mutual simultaneity. The fundamental principle "Action equals Reaction" only works on the basis of the generation of objectively simultaneous states.**

We can only move in **a certain direction in one piece**, because quantum states of our body undergo changes **together and at the same time**. But why would they do that? Science already knows the **origin of all common states** without having understood it so far. Restricted to individual elementary particles, it was already described by Albert Einstein as a "spooky action at a distance". It is the quantum **entanglement**²¹ that acquires deep meaning through cosmological diffusion and is only possible because time is directed:

- ❖ Quantum states of each new spatiotemporal wavefront are always in **simultaneity** with each other, due to **replication**. Each new front represents an **entangled overall system** with replicatively **identical timestamps - the basic prerequisite for the formation of substance**.

What would be the possible manifestations of time in terms of fundamental cosmological processes?

²¹ Correlating states that cannot be characterized independently

1. *Standstill or no interactions - no time passes.*

If time is omitted, what remains is a lack of reference – at most, there would be quantum events without active interfaces. Sound familiar? Chaos. Time was essential for that to change.

2. *Operations in pure loops with continuously recurring states - time here is just a recursive concatenation of events.*

A constant return to the past would be typical, because each cycle would be identical to the previous one. With a certain degree of fuzziness, we are constantly traveling into the past of certain frames of reference. Every change of day, year, and even shift is a time loop in itself. It goes even further - any cyclical interaction, if undisturbed, would be a time loop. The **local time of a system** is always trapped **in the space of its operations**. If one considers a complex process in our world only in an idealized way, it would be composed of a large number of elementary cyclical interactions. As a result, the complexity of the process itself would represent a cycle or lead to a standstill. But why don't we observe **a single perfect cycle** in the cosmos? This is where fuzziness or evolution comes into play in order to **undermine the time-limiting** determinism.

3. *Operations based on losses and anomalies - continuous temporal progress.*

Time progress is made possible by the fact that something new and unpredictable is taking place - an unprecedented configuration of interactions that alters or interrupts a previous cycle. In this process, previous interactions can be lost completely unsystematically through mutual cancellation or energy losses (volatilization) or develop into new forms of interaction in interplay. Otherwise, sooner or later, events in our world would be subject to pure repetition and thus to regular time reset. Or is the cycle so long that the loop would only start again with a new Big Bang? This fruitless variant turns the universe into nothing more than a music box. Darwinism must have been the factor in the fact that our universe can show a past of many billions of years and thus lasting change, and that it did not fall prey to dissolution or temporal loop existence. Anomalies happen all the time – there is no process that is not constantly contaminated by them. Similar states, such as the time of day or the seasons, therefore never give us the feeling that time has been turned back. The uncertainty of quantum states attests to every physically ordered cycle a **stamp of uniqueness**, to which we owe the fundamental temporal progress in the universe.

A backward movement of time as a back-diffusion of a totality of quantum states becomes irrelevant - **indeterminacy does not regress in a regulated manner**. Backward timelines would end evolution – they are a mistake of deterministic thinking. We are also denied journeys into the past, because there are no perfect loops in the interaction clockwork of the universe that could lead us there. Any order creates spirals and not loops and thus recurring (secured) states that **never quite** coincide. Even if one were to transfer individual reference frames to earlier states, they would at most be very similar to them - probably also in the case of quantum

switches²² - and therefore ***still something new***. Consequently, no building block in the universe has 100% individuality ***and yet*** each one is unparalleled:

- ❖ Any (quantum) states cannot interact with each other multiple times because they are ***unique***. The past of one frame of reference exists only as a ***relative, one-time effect*** on any other frame of reference. ***Each change creates a new state and continues the timeline.***

In a 4D reality, however, our time would be ***the spatial manifestation of what we think of as cyclical interaction or describe as a change***. The parallel existence of temporal states would thus be ***the fascinating evolutionary result*** for the emergence of interaction, analogous to *Figure 06*:

- ❖ Some states evolve into ***worlds of relative simultaneity – a new coordinate axis or dimension for new interactions***. The remainder, unrelated states would be their ***chaos***. The ***precosmic state*** was thus ***initially a dimension of time***, the temporal states of which built on each other in a linear manner, but ***initially did not establish any relation in the sense of simultaneity***.

What happens if there are local ***variations*** in replication?

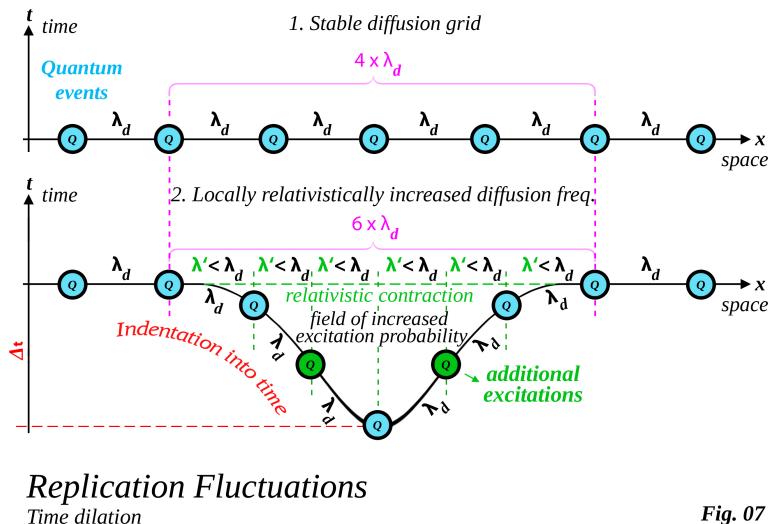


Figure 07, which is very important for the further course of events, shows in principle how this is accompanied by time dilation. Finally, for ***each isotropic origin***, the sum of replicated wavelengths per second must not exceed the value of the speed of light. Time courses follow the replicative ***distribution*** of excited states and are therefore relative. Without local deviations, ***any*** progress of quantum events would ***remain only*** on the ***x-axis*** – isotropy ***is therefore the reason for time-free existence with regard to more complex processes***. A higher order did not yet exist - in the photonic primordial state of the universe, there was ***only*** diffusing 3D space.

Fig. 07

²² "Rewind button" for quantum systems, <https://opg.optica.org/optica/fulltext.cfm?uri=optica-10-2-200&id=525567>

In this initial situation, time dilation **no longer** takes place on the basis of the relative velocity of each reference frame in relation to each other, but on the basis of their individual states of motion **in relation to the isotropically expanding space**. Due to the isotropy of the universe, every observer is **always at the center** of the overall cosmic wave field:

When the observer moves, only the **frequency of the wave field** changes from his perspective, but not his relative position. The resulting relativistic wavelength contraction causes time to pass more slowly in the reference frame of the respective observers, because at higher frequency or lower wavelength, less time is available for each diffusion process. This contradicts the previous interpretation of the theory of relativity that uniform motions are supposed to cause an opposing and therefore cancelling out time dilation due to their relativity, provided that no changes of direction occur. The conceptual crutch of science in the form of the requirement for such movement sequences already intuitively makes no physical sense:

- **Why should the universe endow symmetry breaks with peculiarities? What if a traveler did not turn back, but returned to Earth based on a hypothetical curvature of the universe?**

In principle, a twin paradox²³ does not exist if cosmological diffusion is valid:

If a spacecraft flies at high speed from Earth to other stars, the farther away a star is, the younger the crew will be when passing by the respective stars compared to Earth's inhabitants. **No change** of inertial frames is required for this temporal delta, since the spacecraft, unlike humans on Earth, is **continuously** in an expanding space with a relativistically reduced wavelength.

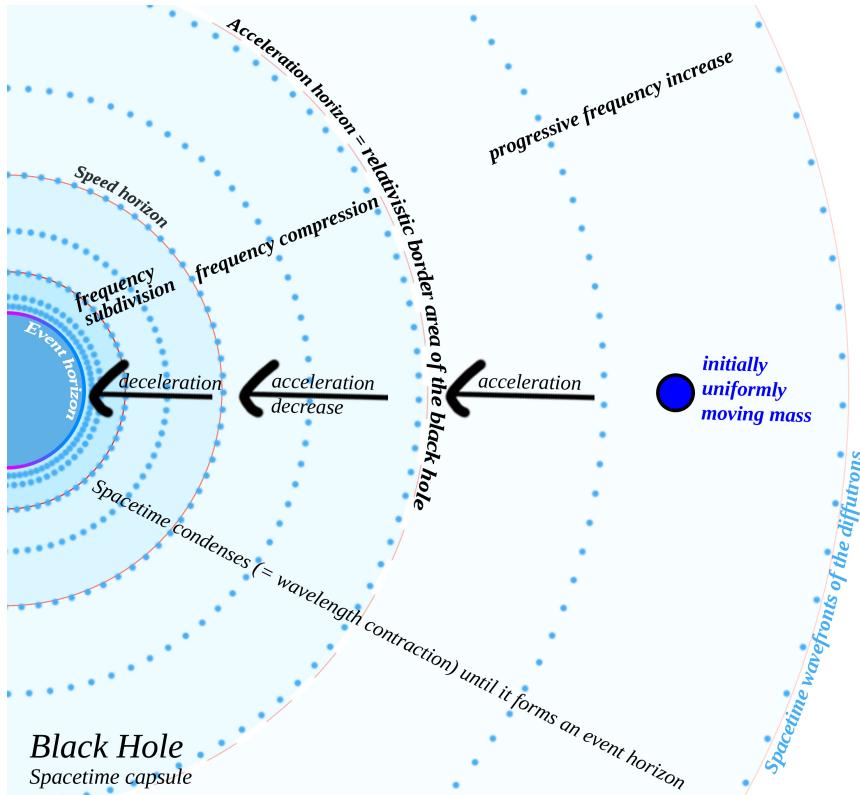
- ❖ **Higher diffusion frequencies compared to the spatiotemporal envelope would reduce distances between wavefronts and relativistically mean that volatilization and thus time within the deviant reference frame would proceed more slowly.**

Back to the topic of time travel:

As spatial 3D beings, we only have the possibility of establishing contact or interaction with **a relativistically preserved past**. We can travel to places in the universe that are behind the cosmological state of evaporation of other places. Such a lag is to be expected, for example, in extreme form near the event horizon of black holes, where time passes extremely slowly. In their environment, one could theoretically study an early state of matter and use this knowledge to reconstruct its evolutionary development up to the forms we know. From a relativistic point of view, space in the vicinity of heavy celestial bodies expands more slowly, as wavefronts of spacetime condense within corresponding gravitational force fields in relation to frequency. As a result, time

²³ A Famous Thought Experiment on Special Relativity

also expires more slowly in the vicinity of masses. Just *like any other radiation*, diffutron spacetime cannot generate gravity **due to isotropy**, but it is at its mercy.



States of an initially uniformly moving mass from the point of view of an observer who does not belong to the reference frame

Up to the acceleration horizon:

- the movement takes place as part of a progressive decrease in the available time per unit of distance
- △ acceleration

Up to the speed horizon:

- the movement takes place within the framework of an incipient temporal compression
- △ Acceleration decreases, speed continues to increase

Up to the event horizon:

- the movement takes place within the framework of a temporal subdivision
- △ deceleration

Fig. 08

In the case of black holes, diffutrons form an extremely condensed spacetime capsule that corresponds to the event horizon. Near-zero distances between excitations form **concentric relativistic** length contractions, which decimate the extent of local cosmological volatilization progress based on **local time volume**.

e) Evolution

Philosophical, abstract interpretation:

△ Increase in complexity under selection pressure

Mechanical interpretation (wave / particle):

△ Sustainable field modulation

Statistical interpretation:

△ Development of probabilities with a decrease in entropy

If we study the evolution of an order, some form of nesting must have arisen in the course of previous interactions. This means that each new cycle modulated over an existing complexity has increased the overall complexity of the initial order.

► **Why should the "survival of the fittest", which is usually the more adapted, have begun only with the transition from dead to living matter?**

If science already assumes maximum complexity at the beginning of our universe, it should be discoverable. How is this perfection supposed to have come about right at the beginning? After all, a brick does not contain a blueprint for a building, let alone for any building - the same seems to be true for elementary building blocks. Since no blueprint has been found for them so far, science invokes the supposed existence of physical evolution, which does not grant less complex systems an internally stored development program, but instead a superordinate predetermination, which is attributed to extraordinarily precise initial conditions. Real coincidence in our universe is said to have existed only at the Big Bang, which is tantamount to the act of denial with the concession of a special exception. This divine spark became necessary because no satisfactory, non-Darwinian answers could be given to the following questions:

- Where is the information for the development of substantial complexity in elementary structures?
- Does it perhaps require so little space that it cannot (yet) be tracked down?
- Why does the more complex order that shapes life always have the corresponding blueprint for replication (DNA) with it – but the simplest quanta, **which still have the biggest construction sites ahead** of them, do not need one for the formation of atoms and molecules?

If you allow it, it is obvious – information or predetermination do not exist for the creation of the cosmological edifice, nor for the pretense of Darwinism. The validity of physical evolution would in principle be the nail in the coffin hoped for by many for natural selection, which simply does not fit into the regulated picture. Why,

after all, should it only become effective at the time when life entered the cosmological stage? Why not earlier? How and where would predetermination have dissolved in this process? It becomes clear that only one of the two concepts can be true – they cannot exist in parallel. However, the circumstantial evidence for the validity of Darwinism is overwhelming based on the observation of biological processes. Physical evolution, on the other hand, only wraps the predetermined development in a concept with a deceptive freedom, which exists only because we ourselves do not know the future. **True** evolution can only be that which can **react** again and again – and this is **only necessary** if the result is **not predetermined**:

❖ **Basic complexity is a constructive result of Darwinian evolution.**

Any emergence of complexity requires either evolution or already available information (blueprint). The latter is not to be assumed to be given for the long path of cosmic development, as long as no one can prove it. Rather, only those entities in today's universe that were able to develop fields to provide resilient structures have attained significance. This **resilience** is also seen by me as a decisive trigger for the unfounded scientific classification of certain principles as constants of nature. Their resulting permanence and stability give us the impression of universality, without revealing their origin and development so far. However, the constancy of any law is only given until it is exposed to a permanent state of endangerment or advantage. It will then either adapt, degenerate into a marginal phenomenon or evaporate. The presumed accelerated expansion of the universe could lead to the fact that only those galaxies that develop **more complex gravitational rules** will survive and continue to maintain contact (interactions) with each other. According to new studies²⁴, uneven mass distribution in the universe is an attempt to explain the fluctuations in the expansion rate, which goes very well with the locality of Darwinism.

❖ **The high stability and nevertheless existing variability of the cosmic expansion rate speak more for possible processes of evolutionary adaptation and rather not for additional "dark energy".**

Laws of very early evolutionary stages seem much more constant to us than much more recent principles, such as neuronal interaction patterns. After millions of years, however, the intellect could spread in the form of a growing network in such a way that these patterns shape and organize our galaxy like laws of nature – observers from other galaxies could quite rightly interpret the occurring astronomical peculiarities in this way.

► **How do evolutionarily acquired advantages manifest themselves in dead matter? What selection pressure was and is there?**

In scientific circles, the hypothesis of the existence of Quantum Darwinism²⁵ is discussed. It describes the idea that, on the basis of Darwinian selection, ambiguous states from the quantum world have transitioned into

²⁴ A simultaneous solution to the Hubble tension... (oxford academic Volume 527, Issue 3, January 2024)

²⁵ Quantum Darwinism (Wojciech Hubert Zurek), <https://arxiv.org/abs/0903.5082>

increasingly unambiguous or safe states of the "classical" world as we know it. Thus, a very plausible fundamental principle of how the actual process of evolution could take place at the quantum level is already up for discussion. Unfortunately, without finding a concrete selection pressure, this hypothesis remains only a marginal phenomenon so far. Nevertheless, measurements have already been made in this context²⁶ that suggest such Darwinian behavior in electrons and their energy values. However, the laws of nature themselves are not subject to this hypothesis, but, contrary to my concept, merely form an interplay.

When starting with the search for selection pressure in the universe, one should first consider both the microphysical and macrophysical results of our world from this point of view. Depending on the scenario, having the ability to form a wide variety of elements improves the integrity or interaction ability of dead matter under a wide variety of conditions - e.g. at certain states of aggregation and temperature. Precious metals resist corrosion better, oxygen is very reactive – the chemical building block could be a masterpiece of evolution. However, the greatest selection pressure – and thus also the greatest influence on development – was exerted by the ubiquitous **strive to volatilize** and the subsequent **implosion effort**:

- ❖ **The stability of large celestial bodies**, which has lasted for billions of years, is only given because, according to Darwinian principles, the simplest matter has found a constructive way to organize itself **into stable and light structures that can resist not only evaporation but also short-term implosion**.

After all, atomic constituents are much smaller than their distances from each other – this means a low density that can stop gravitational collapse to a certain extent. This advantage is an outstanding result of evolutionary adaptation of primary building blocks, the principle of which has prevailed up to the formations of celestial bodies. Perhaps certain elementary structures from prehistoric times, which are completely unknown to us, could not form sufficiently stable structures. They fell victim to cosmic volatilization very early on or to gravitational collapse at very low masses. The elementary building blocks known today may have been part of a much larger spectrum of different but also similar structures in the past. In the end, for example, only those electrons that were able to form a variety of stable atomic evolutionary stages together with corresponding protons and neutrons prevailed – all others have long since evaporated or remain in the nuclei of celestial bodies. As a further example, water molecules maintain a bond angle of about 105° between the hydrogen atoms – small deviations could offer considerable structural disadvantages. Evolution constantly puts directional vectors in the way of isotropic volatilization:

- ❖ **Interaction fields grow by joining together with each other - and in doing so create more or less uniformity that is susceptible to new perturbations. In the course of the interactions, new fields (anomalies) are formed again and again within the respective uniformity of previous mergers.**

²⁶ Quantum Darwinism in action? (Physical Review Letter), <https://pubmed.ncbi.nlm.nih.gov/18764183/>

These processes of nesting characterize the ***basic construction principle*** of evolution. Each individual evolutionary stage has its own set of field rules, ***without*** completely predetermining the subsequent ones.

The physical conditions we know are either "survivors", fragments or completely new components of a much larger spectrum of properties and interactions that must have existed. A natural constant that is effective today could either still have its original validity, have already undergone a change itself, or follow a cycle that has not yet been discovered. A spectrum of regularities that is no longer available does not necessarily have to be completely "extinct" – its absence or presence could merely mean local peculiarities.

In any galaxy, or perhaps even much smaller formations, structures and their properties could be similar, extended, or completely new. Mixing (e.g. in the collision of galaxies) may also lead to a completely new basic physical order. A great diversity in this sense is much more plausible in the universe (analogous to the diversity of life on Earth) than universal fundamental principles that can be counted on two hands across the entire universe. The most stable set of rules would have to be that of mass-free spacetime, since it is the oldest form of existence that we seem capable of perceiving. It determines the formation and adaptation of all recent principles analogous to how fish adapted to water and flying species to air. Just because we use telescopes to determine that motion patterns of celestial bodies in other galaxies seem to follow our calculations does ***not*** necessarily mean that the same mixture of natural laws creates this equilibrium. I therefore propose the following idealized hypothesis on the evolution of things:

- ❖ ***Replications*** (repulsion process), ***accumulations*** (bundling process) and ***neutralizations*** (orbitals, orbits) are the ***elementary interactions*** that underlie ***all*** mechanisms in the universe.

The building blocks of the universe, which are primarily divergent, have only acquired the ability to bundle together over time. As a result of the two opposing processes, potential for orbitals arose, which could generate equilibrium as well as more or less stable distances and therefore also interact with building blocks of different kinds. ***It was only in this way*** that ***states of relative calm*** were made possible. The principle also applies to the macro world - although the components of a galaxy are all in motion, they together create a cohesive and fairly stable shape. Increasingly complex ***sets of rules*** must have gone through the three states again and again before they were able to form today's structures. Atomic components and molecular constructs are a good example of this development – as are celestial bodies and their formations. Even human nomadism (distribution), sedentary development (accumulation) and subsequent demarcation (neutral zones) exhibit such sequential behaviour, which is always based on individual guidelines.

- ***Why should the well-known and common principle of diffusion, which is observed in electrons in semiconductors, neutrons in nuclear reactors, plasmas, gases, liquids and solids – and thus apparently has a certain general validity – stop at even smaller structures (quanta) and even larger structures (galaxies)?***

With this question, I postulate a central thesis:

- ❖ ***Evolution creates potential for interaction, and volatilization strives to cancel it out. This is the primary antithesis in the nature of things in the universe.***

The process of any substantial contact build-up always entails diffusion potential. As long as forms of energy **keep** the respective components of substances **mobile**, diffusion efforts are inevitable. The primary form of substantial existence in the early universe had to have a diffusion-determined character, since **no more constructive binding principles had yet** been developed between the building blocks of that time. The energy that drives this evaporation can only arise from the primary opposite of the cosmic pre-state.

- ❖ ***Every exchange of energy is basically a diffusion process, which is more or less restricted, directed and thus anisotropically aligned in its classical unfolding by an evolutionarily acquired corset of forces of matter.***

Isotropic self-diffusion is the original form of motion that takes place in our universe. All other forms of motion (explosive, directional, oscillating) represent ordered diffusion movements, which are structured by evolutionarily shaped forces on the basis of the substantial properties. Whether explosions, electric current flow, chemical reactions or jogging in the forest – these are always forms of diffusion in which restrictive circumstances have caused the higher intensity and generate a more or less directed (\triangleq ordered) energy flow for the respective processes. In this way, more complex order has, due to evolution, harnessed diffusion for its own purposes. If there were no corresponding restrictions at the interfaces, only classical forms of diffusion or their quantum forms up to volatilization and dissolution would always take place.

- ❖ ***Diffusion takes place at all evolutionary stages of an order and presents itself in various manifestations, which we observe daily as processes of energy exchange.***

On this basis, the concept of energy can be viewed from a new perspective:

The mass-energy equivalence formulated by Albert Einstein describes nothing more than the evolutionary result of a change in state – diffusing waves form centers of gravity and vice versa. Therefore, in order to extract the maximum energy from a mass, it requires a maximum volatilization of matter, which we would call its extinction.

- ❖ ***A complete extinction represents the maximum loss of complexity at all evolutionary stages up to the state of quantum states dissolving directly into chaos.***

As soon as matter can no longer escape complete evaporation, **it disintegrates into elementary spacetime** and therefore unleashes the bound volatilizing energy in the form of pure light. This energy is only available to the structures in the universe as long as there is a possibility of interaction – the law of conservation of energy **only** applies for that long.

f) Energy

Philosophical, abstract interpretation:

△ Concentration gradient

Mechanical interpretation (wave / particle):

△ Volatilization potential of excited states

Statistical interpretation:

△ Interdependence potential of different probability spaces

New complexity opens up new ways to achieve a concentration difference that has never existed in this form before – this leads to new excitation probabilities that build up new energy states and thus field strengths compared to the previous state.

- ❖ In the **formation of any new order, energy is withdrawn from the strive to evaporate and bound**. This happens both in the **primary development** out of chaos - possibly with the zero-point energy²⁷ as the source for the cosmic microwave background - and in each **foundation of new complexity**.

Contrary to the claims of science, when leaving the Earth's gravitational field, the potential energy of a spaceship **can** be lost, because a law of conservation of energy is **only** valid under the cosmic laboratory conditions that arise from determinism. It is possible, after all, that it will eventually be **outside the Hubble sphere**. As soon as something is out of the range of interaction and even no light can reach us from it, does it still have a potential, kinetic or other energy state **with respect to its origin**? That wouldn't make any sense physically. There is **no** basic conservation of energy - both a loss of energy and an energy gain are perfectly permissible for the universe and are in the nature of things:

- ❖ **Without a reference to interaction, there is nothing, not even energy** – analogous to the **precosmic primordial state**. It is only through **existing interfaces** that energy is tapped.

Conservation of energy in the form of transitions from one form of it to another only occurs if evolutionarily formed mechanisms exist for this purpose. If the interface to expanding space is open (e.g. in the gravitational field), energy can be lost or increased.

- ❖ Evolution builds energy, diffusion distributes it and breaks it down again in this way - **conservation of energy is not a natural constant and the universe is not a self-contained system**.

²⁷ Ground state energy or vacuum energy

Energy today has many forms and **only decreasing entropy can have led to this**:

- ❖ *The primary form of energy is that which initiated the evaporation of all emerging orders even before the birth of the universe. Initially isolated states of primary field strengths established the first interactions by tapping into this volatilization energy isotropically.*

In the universe, it is incorporated out of chaos, which stimulates **spacetime radiation**. The growth of the universe means that, due to the steadily increasing quantity of diffutrons, its total energy balance increases over time – but can be lost again at event horizons. In the primary form, energy also remains in a very low density. The ability to concentrate energy locally only came about through evolutionary achievement in the form of mass.

Where does energy come from that can sustain gravity? According to current scientific understanding, the kinetic energy built up the potential energy after the Big Bang. According to this view, a hypothetical object appearing out of nowhere would not experience and generate gravity in our universe. This is not the case with cosmological diffusion – here the gravitational energy carrier is a consistent, directional flow:

- ❖ *The secondary form of energy (evolutionarily based on the primary) can be defined as that which takes place between mass and spacetime radiation - a directionally condensing part of the primary, which we call potential energy. If you look at the process from the perspective of the mass, it appears to evaporate.*

As a result, energy is more concentrated, available in stored form for a longer period of time, and **thereby increases the overall energy balance within event horizons**. It was only in this way that processes of energy exchange were made possible at all. All other forms of energy represent increasingly complex field strengths under respective orders.

- ❖ *Properties of matter always represent interfaces for energy flow and thus, in addition to their evolutionary advantages, always offer a target that threatens their integrity.*

Energy as something completely independent with a reversible property is **not** plausible. It is always the **result of a compatible opposition**, which only the orders on which it is concretely based are able to maintain within their field strengths. What contrast is there supposed to have been before a Big Bang that reversed its polarity only to unleash negative energy afterwards? Negative energy, which transforms gravity into a repulsive force at the Big Bang, is an emergency construct of physical science, in which it was not recognized that the "negative" form is **the only state of energy**:

- ❖ *Stable volatilization energy, which is constantly rebuilt on the basis of replications, is the driving force behind the expansion of the universe due to the cosmic background radiation.*

g) Force

Philosophical, abstract interpretation:

△ Striving to balance concentration

Mechanical interpretation (wave / particle):

△ Interaction

Statistical interpretation:

△ Influence between different probability spaces

Energy leads to diffusion-driving effects that we call forces. Force, **unless** it is an anomaly in the specific case, is **literally** order - because it is what we understand by an interaction. Every process that sets in can only happen because there is a force that enables interplay – it orders and **reduces** chaos according to its individual specificity.

All forces in our universe are evolutionary modifications of the original isotropic interaction, which drives cosmic expansion based on volatilizing energy. Each new evolutionary stage is subject to a driving force for the purpose of energetic concentration compensation, since with the emergence of a new order characteristic, an opposition automatically arises – regardless of whether this order is physical, chemical, political or economic in nature. The emergence of a new order always opens up a new interface in the form of a field that enables a concentration balance with the previous state. Gravity is thus also an attempt to balance substance concentrations compared to cosmological evaporation.

- ❖ **Each field represents the area of interaction or the interface for interactions at the evolutionary level of the corresponding order, which is available for the force effect.**

The result of evolution is that the isotropically repulsive force of volatilization is directed into various forms and thus instrumentalized for order. Forces only act anisotropically as long as their evolutionary, form-giving corset (the substantial matrix) is not destroyed - as in an explosion, for example. But even the primary isotropic diffusion force is not subject to a constant and does not last forever – but **only as long** as an order opposes it.

The stability of each force depends on the permanence of the interacting field strengths as well as the expression of the field strength superposition. Natural constants can therefore also have an expiration date. In our eyes, gravity is only based on a gravitational constant because the corresponding interaction parameters of matter **currently** seem to be constant – at least within our solar system. Whether, for example, there were or are deviations and higher complexity for larger structures or in other star systems and galaxies, even if these

are only marginal, we cannot simply rule out. After all, individual cells also lead to effects in their immediate environment, which on their own do not provide any information about the characteristics and forms of the respective mechanism in a larger network of vessels and organs. The gravitational force, as will soon become apparent, is the result of an evolutionary trick that outwits isotropic diffusion by means of spatial curvature. This local formation of intersections during expansion leads to constant mass accumulation. Thus, gravity actually inflicts a defeat on the evaporation – only temporarily for a large part of stellar mass, since despite gravity, the transition to red giants and supernovae eventually prevails. In the run-up to this, however, gravity favored the increase in the ability to interact on the basis of bundled mass over a long period of time, and I assume that it was only in this way that the chemical construction kit became what we know today. It gave order **a lot of simultaneity** for evolution, and it would be strange if unknown forms of matter were not formed in hundreds of billions of stars. Gravity must be more elementary than the other three fundamental forces of physics, since it is generated **by any mass**.

The explosion of a star and thus the distribution of the material formed would also have an evolutionary character – the propagation and multiplication of chemical achievements. How often this happens, or which cycle these explosions follow, was determined on the basis of the balance of forces that must have offered the greatest evolutionary advantage in early stars.

It can be assumed that matter with the coupling constants in its current form has prevailed over other matter. Weaker constants have led to volatilization more quickly. Stronger ones lead to accelerated fusion processes at relatively low masses - and as a result to many black holes, whose possibilities for interactions are probably not particularly diverse. Prehistoric galaxies of black holes would thus be conceivable.

► **What force holds galaxies together?**

According to today's physics, their predicted mass and gravitational force are not sufficient to prevent them from bursting apart - it therefore offers dark matter as a possible solution to this problem. But how can we know exactly how complex gravity actually is? Who can rule out the possibility that black holes or galactic mass formations exhibit extended gravitational interactions?

Theoretically, every galaxy could harbor evolutionarily optimized laws and keep both **its** and the **shared** space with other galaxies **more compact or airy** according to this individuality – in addition to the effect of dark matter, which may only create the basis for this.

h) Mass

Philosophical, abstract interpretation:

△ Structures with center of gravity

Mechanical interpretation (wave / particle):

△ Field strength gradients in spacetime

Statistical interpretation:

△ Gradients between different probabilities

As a precursor to the formation of known matter, space initially curved at most within the microwave spectrum of the cosmic background radiation as shown in *Figure 07*. Slightly warmer regions in the diffusing universe interfered with slightly cooler ones. "Warmer" in this context means that the spatiotemporal replication rate was slightly increased locally. Some variability in spatiotemporal excitations produced such anomalies and led to these marginally different states in the early universe, which contaminated its fundamental convexity.

However, the higher frequency is accompanied by more energy:

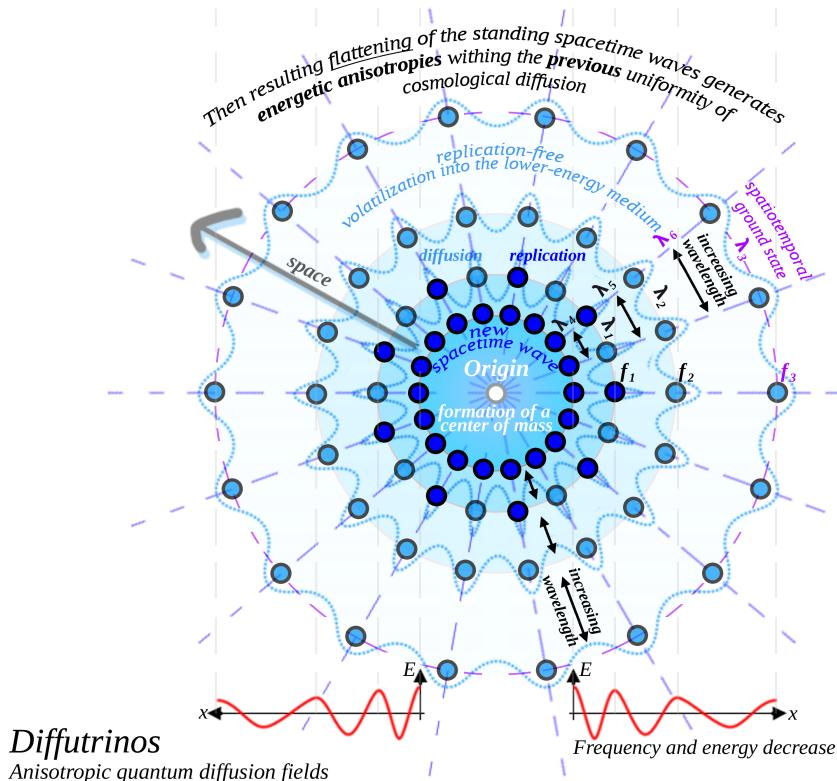
❖ **Inevitably, analogous to a cooling process, this would evaporate gradient-like into the lower-energy medium.**

The process can be interpreted as a cosmological redshift²⁸ at the local level. The new and warmer spacetime would be more high-frequency from the perspective of the previous spacetime framework and would therefore be correspondingly blueshifted:

❖ **Since a spatiotemporal blueshift is associated with relativistically decreasing wavelengths, warmer states of spacetime mean the formation of regions in which time passes more slowly.**

The probability of excited replication **relativistically increases** in the vicinity of an origin and decreases outwardly, which is equivalent to the **formation of a center of gravity**. Such anomalies, which at some point brought about sufficient stability to continue as an order, heralded the decisive change – the evolutionarily induced **expression of spacetime as a mass** in the form of the first **diffutrinos**:

²⁸ Position change of the radiation spectrum due to longer wavelengths as space expands



- the **anisotropy** (centroid) is the **result** of persistent volatilization into the **lower-frequency** diffutron spacetime

→ this new kind of uneven spacetime distribution meant **mass** = a relativistic state of aggregation

$$\lambda_1 < \lambda_2 < \lambda_3 < \lambda_4 < \lambda_5 < \lambda_6$$

$$\lambda_1 = \lambda_4 \quad \lambda_2 = \lambda_5 \quad \lambda_3 = \lambda_6 = \lambda_d$$

- the **wavelength** of each wavefront increases **relativistically** until it reaches the **diffutron value** λ_d

→ outside a zone with **sufficient field strength**, **pure volatilization** takes place

- exemplary illustration -

Fig. 09

Figure 09 illustrates the gradient-like quantum evaporation process – the wavelengths are **relativistically stretched** with increasing distance from the source, analogous to Figure 07.

- ❖ The **decrease of the diffusion frequency** continues until the ground state of the **diffutron excitations** is reached. The quantum diffusion in diffutrinos is **no longer homogeneous**, but behaves like a **decreasing field strength** emanating from a **diffusion centroid**.

Consequently, we observe the **second stage** of cosmological diffusion, which occurred with the evolution of the diffutron. It itself evaporates directly into chaos, while a diffutrino evaporates into **its** spacetime. My previously formulated construction principle of evolution can be expressed even more precisely on the basis of this insight:

- ❖ **Order, property and chaos together create a constructive trialism.** All substances represent an order as an organization of building blocks, a property as interaction fields, and a form of chaos as occurring anomalies. The resulting possible nesting is both the construction kit and the chronicle of our universe.

At an elementary level, everything that makes up our matter consists of a selection of types of diffutrinos, which have different replication frequencies with each other. As a result, in the course of evolution, different combinations (basic forces) became possible, which led to different, larger structures that are known today. Scientists believe that there are three types of neutrinos²⁹ whose possible contribution to dark matter is being debated – they could be diffutrinos.

If spacetime exhibits regions with an increased replication frequency, these are countered by increased resistance to the intensified volatilization effort in the form of the previously derived Lorentz attenuation. This creates concave-intrinsic bulges that give it **a new temporal dimension**. Concave illustrates the formation of spatiotemporal dents with a center of gravity – convex illustrates a wave field typical of radiation. Gravitational fields consist of waves of cosmological diffusion that condense towards a (relative) origin – analogous to the wavefronts in *Figure 09*.

- ❖ A successive, concentric condensation of diffusing wavefronts is nothing other than the true nature of relativistic curvatures.

A simplified (4D → 3D) sketch illustrates this effect on spacetime:

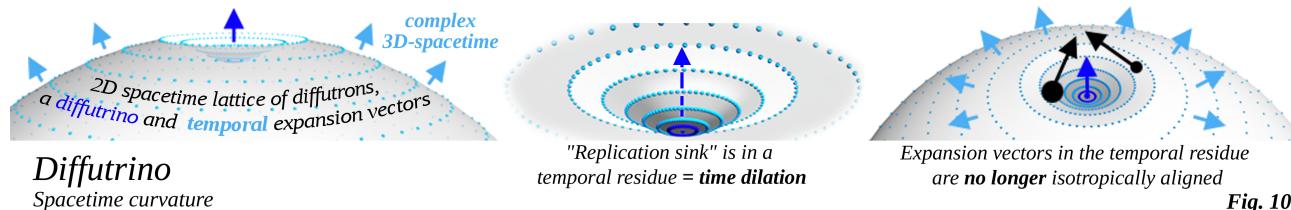


Fig. 10

Relativistic principles can be felt on a daily basis through gravity. Cosmological diffusion establishes the mechanism of action for Einstein's curvature of space and time dilation – for this purpose, segmentation into compressed wavelengths is crucial. The purely mathematical curvatures of space in the theory of relativity cannot really explain what **actually triggers** gravitational acceleration – **because they are static**. Although the static universe was abandoned some time ago, the expanded significance of this insight was decisively underestimated. In order to produce an acceleration, there **must** be a quantity (excitation) that transmits an impulse.

²⁹ Electrically neutral elemental phenomena with very low mass

- **What process is a curvature of space capable of initiating or how does it generate an impulse? How are purely geometrical degrees of freedom supposed to set movements in motion without excitation?**

Since gravity is no longer regarded as a force but as a curvature in spacetime, a crucial connection is missing. However, the expansion vectors shown in *Figure 10* make it clearer how steered volatilization can create the illusion of an attractive force. Think of space curvatures as a **flow of spacetime, diverted from its original course, previously isotropically radiating**, whose realignment **sweeps away everything that stands in its way** at collision-oriented speeds:

- ❖ **Gravity is the result of refracted spacetime radiation. It embodies the first physical steering of excitations of cosmological diffusion in the direction of an intersection and thus a center of gravity.**

If we observe or accompany an imaginary traveller on his way towards a centroid of cosmological diffusion, we will notice the following:

- ❖ **Decreasing wavelengths mean relativistically shorter and shorter time intervals for overcoming identical spatial dimensions. This is the reason why gravity or acceleration increases as he approaches a mass.**

Mass as a gradient of spatiotemporal field strength can also be explained evolutionarily:

- ❖ **It is relativistically condensed spacetime - an aggregate to allow for more frequent interactions. By means of gravitational striving together, the simultaneity is intensified. The stronger the gravity, the more fundamentally evolution can act on building blocks. As a consequence, matter characterizes the diversity and complexity of the spatiotemporal mass aggregate, which has been evolutionarily formed.**

Thus, two basic forms of spacetime are already crystallizing – that of the diffutrons and that of the diffutrinos. With this knowledge, let's look at two individual masses with their respective gravitational fields:

- ❖ **To an outside observer, both masses form a common reference frame in the form of a gravitational field, in which both have inertia-appropriate distances to a common centroid of diffusion (Figure 11). In the absence of real attraction, we observe an analogous effect between the masses.**

The hitherto isotropic expansion becomes relativistically a steered expansion for the masses involved, resulting in vectors with a **temporal "focal length"** up to an intersection for their trajectories, which **also becomes shorter and shorter** the closer the masses get to each other. They will meet at this intersection and each will travel a path and experience an acceleration that is appropriate to their individual inertia. What is not within a certain region of the gravitational field continues to move in the opposite direction and volatilizes isotropically:

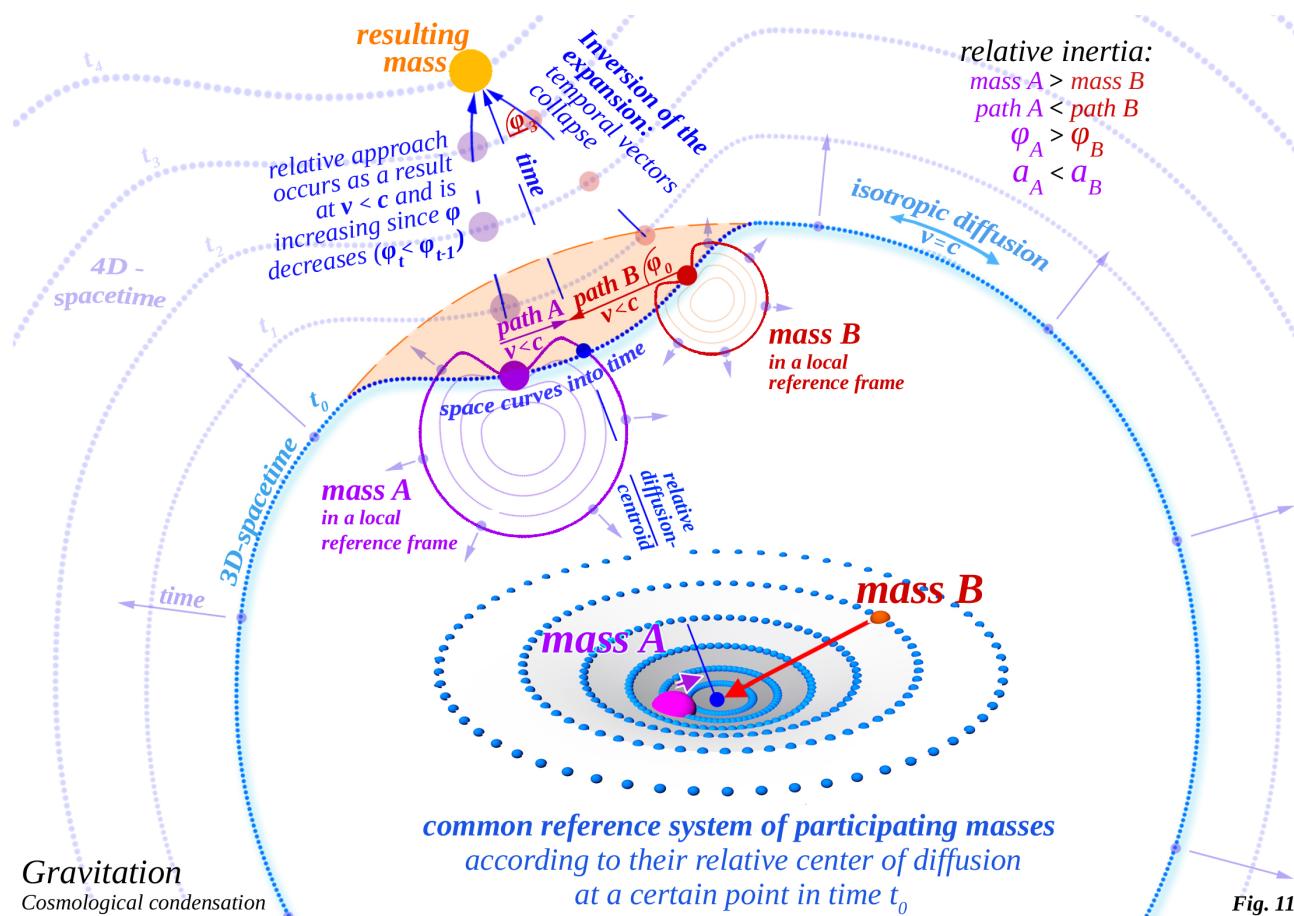


Fig. 11

- ❖ Gravity is only intense enough at sufficiently small distances between diffutrinos to initiate the bundling into larger masses, the formation of which was an evolutionary process.

Their probably only marginal deviation from the replication clock of the diffutrons means a relative movement with respect to each other at almost the speed of light. It is only as a component of building blocks that are gradually becoming more complex that diffutrinos must have been "captured" and integrated in considerable numbers and densities in the future in order to eventually even enable the formation of celestial bodies. At the same time, care had to be taken to prevent too much density – the "scaffolding" had to be sufficiently "airy" and stable at the same time. Natural evolutionary monitoring made it possible to delay the formation of gravitational event horizons.

Inertia gains decisively in comprehensibility on the basis of substantial spacetime:

- ❖ It is the **relativistic contraction resistance** offered by the **waves of quantum diffusion** as soon as respective masses generate **acceleration vectors**. Larger masses experience greater resistance. The basic quantum framework creates a kind of **volatilization cage** that **makes it difficult to lose time-like reference**. As a result, inertia acquires a relativistic character, which it has lacked so far.

If, for example, two objects of different masses repel each other, the resulting force effect will accelerate both masses differently according to $\mathbf{F} = \mathbf{m} \cdot \mathbf{a}$. Here's why:

Based on the acting force, both masses will **relativistically displace the adjacent diffutrons**, which corresponds to the structure of length contractions. The **adjacent space** is thus **curved** by **both** masses during this process and thus determines their resulting acceleration values.

For a better understanding of the facts described, an analogous, simplified portrait can be used:

If we consider two differently sized body volumes of the same mass and shape, which repel each other within a viscous liquid, their mass plays a subordinate role. The larger volume will have a harder time accelerating through the liquid because it will experience greater resistance due to its larger surface area. The smaller volume, on the other hand, will accelerate more. **The nature (viscosity) of the fluid** determines **how widely** it is **locally displaced** or **curved** and thus both the extent of both **acceleration values** and their **ratio**.

One of the most burning questions of modern cosmology is:

- **Why might we currently be observing the increase of the expansion rate among galaxies on the basis of contradictory measurements?**

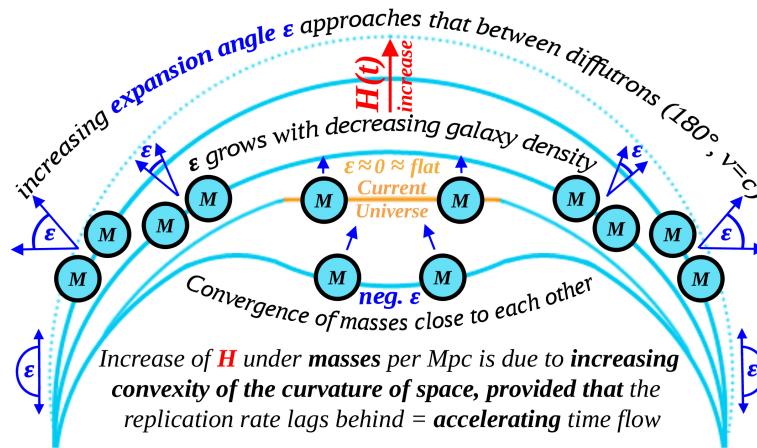
According to the current state of science, the expansion of the universe, which has probably been accelerating for about 6 billion years, is the result of dark energy. To accelerate, the energy density would have to remain at least the same despite expansion. However, this circumstance would destroy the concept of conservation of energy, because the universe could grow energetically in total, if the acceleration were indeed incessant. Science can escape this problem by assuming that dark energy would only have to unfold temporarily in this form and would thus be limited in its volume as an independent phenomenon. Vacuum energy only as a temporary "addition" without any fundamental influence? As in this case, it is sometimes very obvious whether science uses crutches or not.

The energetically open universe in cosmological diffusion **does not** have such problems:

- ❖ The initial state of primordial spacetime expansion should have a diffusionic expansion rate at the speed of light relative to a diffutron wavelength: $H_c = \frac{c}{\lambda_d}$

λ_d represents the typical "mesh size" of spacetime. The fundamental isotropy of volatilization among galaxies arises because in the common reference frame of their masses there is no concave (bundling), but a flat-convex curvature of space:

- ❖ In the case of decreasing galaxy density, this curvature becomes steeper and steeper, and it is precisely for this reason that the rate of expansion continues to increase in the form of an effort to approach the ground rate H_c :



Expansion rate
Gradations

Fig. 12

Thus, **the less mass** remains within the Hubble sphere, **the faster** the cosmological redshift occurs, which shrinks the sphere and exacerbates the problem of mass loss even more. It is quite irrelevant whether the current Hubble constant is $68 \frac{\text{km/s}}{\text{Mpc}}$ or $74 \frac{\text{km/s}}{\text{Mpc}}$ – compared to the expansion rate of mass-free space, both are vanishingly small. Science's assumption that our universe must be flat is a very accurate reflection of this particular circumstance - for the current rate of expansion to be so low, the convexity within our Hubble sphere must be minimal. Due to the ongoing replication of diffutrinos, the rate of expansion may never come close to being H_c again. The very stable Hubble constant is **the** reflection of evolutionarily induced cosmological equilibrium as well as **determining** the spatial volume of time-like fields of interaction - **the size of our universe fluctuates** together with H .

The interplay between diffutrons and diffutrinos determines not only the spatial mobility, flexibility and expansion of our reality, but also the temporal reservoir that is available to us to develop interactively. A relativistic relationship between **diffutron** and **diffutrino spacetime** should be detectable, since we can observe and measure spatiotemporal effects. The fundamental gravitational constant G is a mass-specific feature that could be used for a spatiotemporal reference. After Albert Einstein had already made the connection $E = mc^2$, the numerically very round product of $c \cdot G \approx 0.02000$ suggests a further connection between light and mass - but this could still be a coincidence. With only nine fundamental constants, however, it would be quite a coincidence that two of them - possibly the most fundamental ones - would appear to be such **harmonic** multiples of each other. Considering the fact that our unit of length - the meter - was calibrated on the basis of c , the presumed coincidence seems all the greater.

Figure 07 suggests the possibility of real evidence of cosmological diffusion – it could be possible to determine whether the **minimum curvatures or contractions** described are **actually** caused in diffutron spacetime. The flat spatiotemporal dents, which emerged in the form of the first relativistic curvatures, may have resulted in cosmic primeval times from a structurally conditioned and very **concrete scope** for curvatures, which the nature of spacetime offered. Its diffusonic characteristics was therefore intended **to set the limits for physics** - both for maximum and minimum manifestations. The strongest form of relativistic curvature or contraction – the event horizon of black holes – is already considered to be empirically proven. From an idealized point of view, this extreme form is also called the Schwarzschild radius³⁰ r_s :

$$r_s = \frac{2GM}{c^2} = \frac{2gr^2}{c^2} \quad (4)$$

The acceleration capacity g and the spatial characteristics r are able to describe the **maximum degree** of a contraction **L on their own**, so that an event horizon is created. Of the complete celestial body, only its **maximum possible length contraction** remains:

$$r_s = L_{max} \quad (5)$$

The Schwarzschild radius is directly proportional to the mass of black holes. Is this just a random peculiarity for the extreme case, or shouldn't planets, stars, galaxies and interstellar gas clouds – in principle any mass – always produce a certain amount of space curvature that would **also be directly proportional** to their mass? After all, every mass causes a spectrum of time dilation and thus also of relativistic curvature of space. We can derive a formula that can determine the individual contraction for **an ideal mass of uniform density**:

³⁰ Event Horizon in the Schwarzschild Metric

On the way from the surface to the center of mass, the gravitational time dilation continues to increase. To calculate it at the surface, the reciprocal Lorentz factor α as a function of the escape velocity v_e expressed by the mean radius r and the surface acceleration g can typically be used:

$$\alpha = \sqrt{1 - \frac{v_e^2}{c^2}} = \sqrt{1 - \frac{2gr}{c^2}} \quad (6)$$

If time t passes for an observer outside the Earth's gravitational field, for an inhabitant of the earth only time αt passes – an effect well known from the general theory of relativity. However, for time dilation states *below the surface of an ideally uniformly dense mass*, the Lorentz factor would have to be adjusted according to the course of the gravitational potential in order to provide correct values. At the respective radial positions r_x , therefore

$$\alpha(r_x) = \sqrt{1 - \frac{g(3r^2 - r_x^2)}{rc^2}} \quad (7)$$

is the distance-dependent factor in relation to the center of mass. This optimized, ***mass-specific Lorentz function*** can be used to obtain the curvature of space of any uniform mass in the form of a radial contraction. To do this, you need to integrate $1 - \alpha(r_x)$ from 0 to r :

$$L = \int_0^r (1 - \alpha(r_x)) dr_x = \int_0^r \left(1 - \sqrt{1 - \frac{g(3r^2 - r_x^2)}{rc^2}} \right) dr_x \quad (8)$$

The radius of a uniform mass is evaluated using this formula over its complete distance at each position according to the Lorentz contraction valid there, and all local contraction deltas are added together. For our earth, it is a little more than 5,907 mm. Its Schwarzschild radius is about 8,858 mm and is (almost) exactly 1,5 times larger.

But what if we should only consider those masses whose radius and surface acceleration tend towards zero and the relativistic progression becomes negligible? We would use it to simulate states of the ***Lorentz function in quantum gravity***:

$$\alpha(r_x) = \lim_{(g,r) \rightarrow (0,0)} \sqrt{1 - \frac{g(3r^2 - r_x^2)}{rc^2}} = 1 - \frac{g(3r^2 - r_x^2)}{2rc^2} \quad (9)$$

$$L_{min} = \int_0^r \frac{g(3r^2 - r_x^2)}{2rc^2} dr_x = \frac{4gr^2}{3c^2} = \frac{2}{3}r_s \quad (10)$$

A given mass can occupy different volumes depending on its substantial matrix and the forces acting on it. Regardless of this, it has now been proven to produce **at least** its mass-specific curvature value L_{min} . For our Earth, this is about 5,907 mm - it will not be able to fall below this value until its integrity is not lost due to a (partial) loss of its mass. L can therefore be formulated in the form of a **spatiotemporal spectrum of effects** for any mass states in our universe:

$$\frac{2}{3}r_s \leq L \leq r_s \quad (11)$$

Its course correlates with that of the gravitational potential within the mass, thus providing a strong indication of its spatiotemporal nature. A diffutino field, or simplest clusters of such fields, should only be able to produce spatiotemporal curvatures with amounts of L_{min} :

- ❖ *L_{min} describes the **mass horizon** of spacetime for its **transition** into elemental **mass**. Its distribution in the diffutron-spacetime was initially so **fleeting** that it **hardly differed from it**. Thus, spacetime has an **expansive event horizon** according to the Hubble radius, a **horizon for the onset of mass states**, and a **compressive event horizon** as the Schwarzschild radius.*

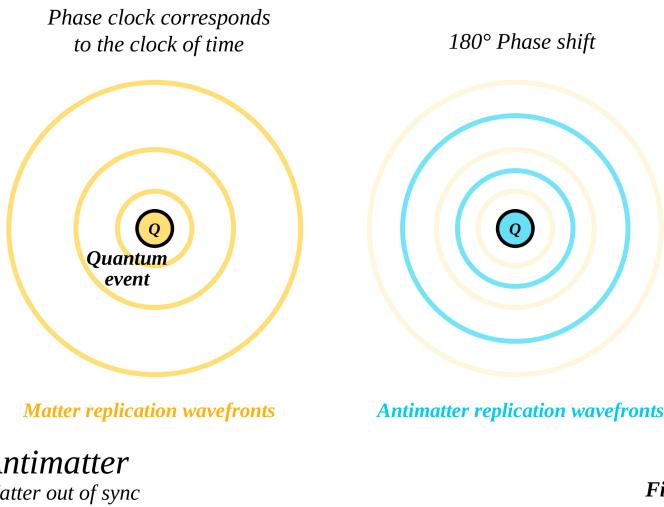
If mass and spacetime were two structures that are alien to each other, why doesn't the event horizon L_{max} occur **much earlier or not at all**? If both were indeed alien to species, compressive event horizons could have formed even under planetary conditions. What, then, is it that has so well-matched substance and dimension? Are random initial conditions in the universe really supposed to explain this? It should now be much more plausible that mass embodies a condensate of curved spacetime, that gravity establishes the transition or gradient to its original form, and that there is only a **mutual** interaction **on the basis of this** relationship:

- ❖ *According to Albert Einstein, mass decays into energy - and this consists of photons, which form spacetime.*

How does antimatter fit into the bigger picture?

At the boundary of the Hubble sphere, there is a loss of mass - the universe is abandoned there as if on an assembly line by departing galaxies. As soon as they exceed the event horizon, **enough replicative supplies** for new galaxies must always be generated to keep the energy density stable - but the universe can also overdo itself in the process. An equilibrium between isotropic diffusion and gravity is essential for its continued existence - otherwise there is a risk of either the implosion of all masses or their dissolution:

- ❖ It can only defend itself **against implosion** when there is already too much replicated mass if **antimatter** is generated, which **initiates the complete decay of material accumulations into evaporating diffutrons** (radiation), which are correspondingly **no longer** available for gravity.



This gives antimatter an evolutionary **raison d'être** - it corrects too much excitation or replication by means of provoked volatilization. The spatial curvatures of both masses cancel each other out by directly causing the decay into spacetime radiation, which then evaporates at the speed of light. Displaced wave fronts within corresponding fields could cause this phase extinction of the masses (Figure 13).

Fig. 13

- ❖ **Antimatter maps phase-shifted excitations** compared to our typical spacetime.

The offset in antimatter replication should only be able to occur if, in relation to matter, it gets **out of sync** for certain reasons. In order for this to happen, a temporal offset would have to ensure that the corresponding building blocks are **not entangled, but antagonistic**. Quantum entanglement would thus also have an opponent:

- ❖ **A pair formation of particles and antiparticles** creates **two replication starting points** for the resulting building blocks, one of which is **not synchronized with our spacetime** and thus **clocked in antitime**.

The possible states of our universe can now be summarized in a graphically plausible way:

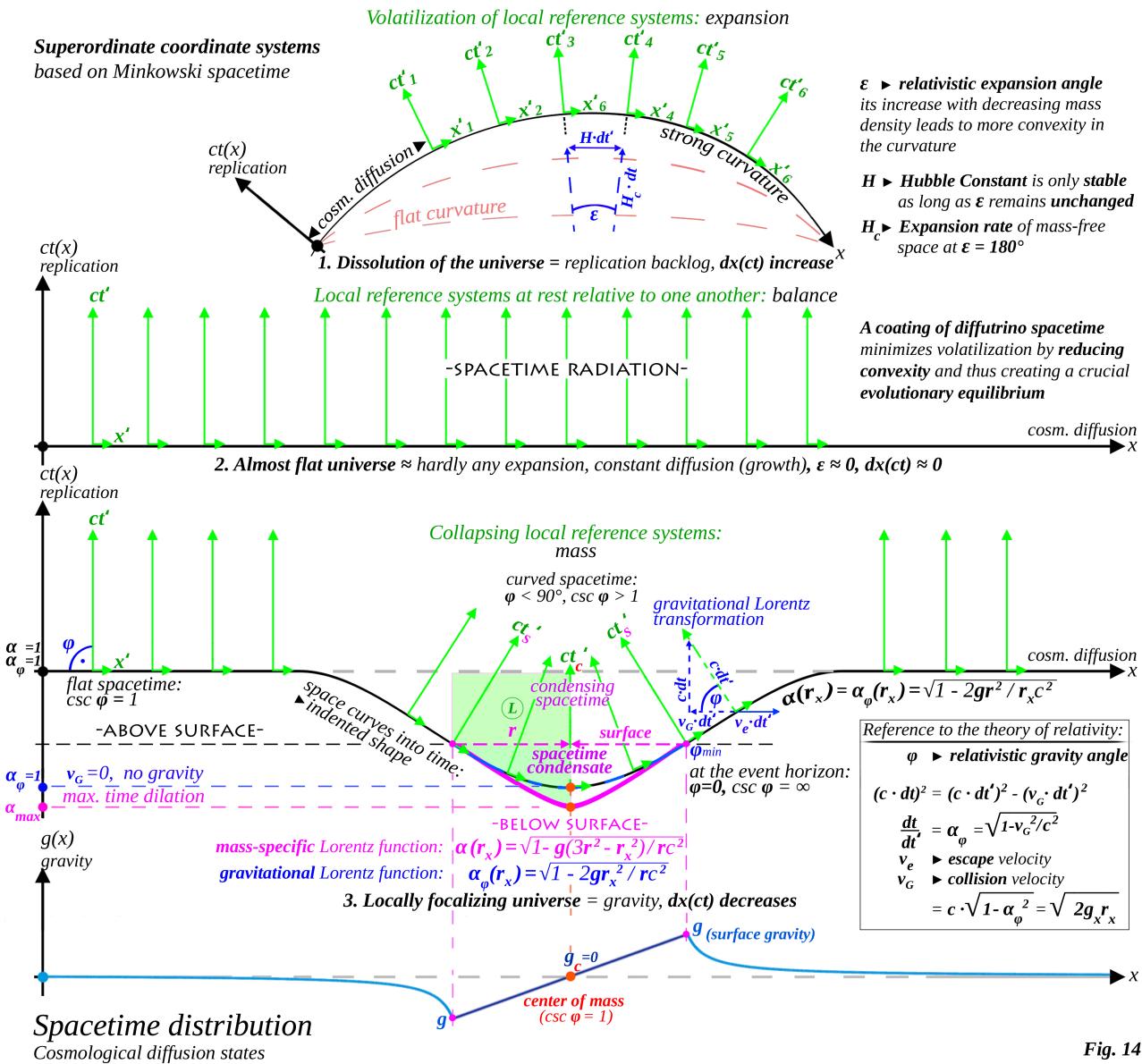


Fig. 14

In order to exclude a fixed origin according to the isotropy of the universe, *Figure 14* uses the distance r_x ($= \Delta x$) to the center of mass for the equations. The spacetime of the universe can be ideally illustrated in the form of the superordinate coordinate systems depicted – whether expanding, flat or collapsing. The coordinate axes **themselves** are intrinsically curved according to their respective states for this purpose.

I had already explained the isotropically expanding state shown in the upper area using *Figure 12*. **Antigravity exists**, existed in the form of the observed **expansion** of the universe even **before** gravity, and has always been visible to us. Let's briefly take the perspective of current science again:

The cosmologists' models assume that masses could form after an inflationary phase. In what way could this have been possible, given that space **diverged isotropically extremely quickly**, preventing any **convergences** and thus **increasing entropy particularly rapidly**? What had caused the expansion to decline as **sharply and precisely** as the Standard Model **requires**? At the same time, it did not stop completely, but **developed** a fairly stable consistency, which is also **almost negligible on small scales**. Pure coincidence on the basis of very concrete initial conditions is the cosmologists' only explanation for this - and **only** in a multiverse of probabilities could it occur exactly **for our universe** at all. Arbitrary and yet precise initial conditions, which offered **no discernible advantage for the occurrence of the Big Bang itself**, but were partly destined for processes that took place millions of years later, are actually supposed to represent a plausible view of the world?

According to what I have said so far, it becomes clear how much the current model lacks **transition scenarios** and how **adaptive** they must have been in order to create a milieu that enabled the development of today's substance and interaction. Paradoxically, the Darwinian approach is much more constructive for the **achievement of enormous cosmological precision** than determinism, which is based on random, non-advantageous initial conditions. Unless, of course, one evaluates it with religious motives.

❖ **Sustainable equilibrium can only be achieved through adaptation.**

The almost uniformly flat version of our universe as shown in the middle section of *Figure 14* could represent a state that occurred after diffutrinos "contaminated" spacetime over the entire area, but **before** larger masses could form. The universe as we know it today, **on the other hand**, consists of this very flat spacetime **as well as** of many small and large "dents" (local convergences), which are also able to maintain the **diffusionic equilibrium** very well due to their complex gravitational interaction:

❖ **The second cosmic velocity, which is also known as escape velocity v_e , reveals its personal antagonist – a causal collision velocity v_G .**

This is the velocity that would be achieved with the initial acceleration remaining the same during an imaginary free fall from the surface of a mass towards the center of gravity, in the event of a collision with it. At exactly this speed, one would have to flee from the surface in order to leave the gravitational field of the mass. We are witnessing two quantities that create a ***kinematic equilibrium***. Only using v_G was I able to derive a ***gravitational Lorentz factor*** dependent on the ***distance to the center of gravity***, as was already done in the classical Lorentz transformations at the time. The resulting ***collision vectors*** of respective reference frames along the radius bundle exactly as assumed in Figures 10 and 11. A ***gravitational Lorentz function*** α_φ dictates the course of these vectors. Compared to the mass-specific $\alpha(r_x)$, α_φ differs in that the outer shells of a mass are not taken into account - starting from respective reference positions along the radius - because they do not contribute to local gravity. The bundling of previously divergent vectors, as well as the reason why they are now bundling, becomes obvious:

- ❖ ***The progress of time alone inevitably leads to geometrical collisions.*** Each approach to the center of gravity results in a sharper angle of gravity φ . This process is the true nature of acceleration and only works because, according to Figure 06, temporal progress embodies real and not illusory physical changes (excitations).

It was only with gravity ***that time began*** in the ***fourth dimension*** – ***our time***. Gravity meant that interactions could take place outside the diffusing coordinate axis - the previous sphere of action - and only then did a ***new*** axis or dimension emerge that initiated ***physical*** (time-like) development.

More intense forms of gravity develop into implosion processes - they represent a dissolution of the higher, more "airy" evolutionary stages, which previously acted as scaffolds. Black holes form the most extreme form of an imploded condensate and should be consisting of a ***diffusionic quantum plasma of unbound diffutrinos***.

A considerable number of diffutrinos are likely to be distributed in their pure form in the universe, constantly replicating and accumulating according to a wide variety of rules, and in interaction with the diffutrons generating observable patterns in the cosmic background radiation. These filaments of dark matter can be interpreted in such a way that diffutrinos have taken advantage of the diffutron spacetime and adhere to it like a gravitational coating that co-determines the Hubble constant. This coating is also subject to replication and evolution as well as the constant transition into larger structures (possibly gas clouds), which provide the fuel for (new) galaxies. In the early universe, gravity was thus a kind of "sticking ground", which initially slowed down spacetime further and further and only after reaching an extremely flat convexity of fundamental curvature did evolutionarily "pause" in order to create the necessary conditions for true local convergences.

- ❖ ***Such dark matter could serve as a primary and persistent source or birthplace of known building blocks and thus also their interactions.*** In addition to these, it should also be able to produce new ones at any time that could fundamentally influence or change our universe.

More complex and larger structures are expected to reduce the possibility of interactions among their diffutrino building blocks and thus also their replication rate:

- ❖ As soon as **parent fields restrict the superposition of diffutrino fields**, they reduce their **probability of new excitations or replication**.

This evolutionary control of diffutrino reproduction would be essential to ensure the **stable survival of evolved, larger building blocks of matter**. The very limited possibility of establishing interactions with dark matter, which is assumed by science, could be due to this. Constant particle radiation from any more complex matter would otherwise - analogous to radioactive decay - change, impair or destroy the substantial matrix.

Cosmological field evolution is and remains a tireless struggle for survival:

- ❖ **The scope for any adaptation and interaction takes place between striving apart and merging.**

► **What happened after the establishment of elementary states of mass?**

If we look at the evolutionary process so far, excitation and volatilization are the primary opposite poles in the universe and generate spacetime radiation (cosmological diffusion) when interacting, which at some point became the counterpart to the emerging gravity (cosmological condensation). Each ground state is subjected to local stimuli, the quantitative increase of which later forms an evolutionarily new ground state. This **step-like principle** suggests that interactions between spacetime radiation and gravity, which manifested themselves in the form of **non-specific** mass, should in turn have produced **the next antagonist**. An analysis of the other fundamental forces of physics in this direction could shed light on which of them embodies this opposite pole and **diversified** the previously uniform mass for the first time – or whether the search for a previously unknown force that may be "hiding" exclusively in other galaxies will be necessary. The same applies to future forms of interactions – the pace of evolution may be different in each galaxy, and in some of them interactions may already occur that **could** only occur in the distant future in our Milky Way.

Final Words

My basic concept comes to an end here for the time being – but the theory is not finished, because it can never be, due to evolutionary reasons. The visualized mechanisms are of a principled nature and do not claim to convey an exact science – this path has yet to be taken. Nevertheless, they already enable a scientific-philosophical view of the possibilities that we have so far overlooked, coupled with the realization that the previous milestones of the sciences would also fit into a Darwinian worldview. There is now a hypothesis of cosmological coupling³¹, according to which all masses in the universe could increase together with its progressive expansion, and black holes would be most intensely affected by this increase. Such an increase is emblematic of growth and thus also of replication. Assuming that diffutrinos interact most intensively in black holes, the resulting increased replication rate would be an even stronger indication of the validity of my approach.

Has the Standard Model of Cosmology already passed its half-life? Cosmological diffusion provides clarity on a variety of topics that a Big Bang cannot explain and places Albert Einstein's theory of relativity in an evolutionary context that makes his work seem all the more important. The Darwinian approach leads to a universe that begins energetically very reduced and only bundles higher and higher energy states in the course of its development. According to my paper, evolution, relativity and quantum field theories receive useful suggestions and interfaces - each of them thus gains significantly in plausibility. Many assertions and connections in my work remain in line with previous views and have become possible in the first place because of them.

The revealed spectrum of effects L describes the **scope for concave curvatures of space and thus for centers of gravity** in the universe. Most of them are in the narrow spectral range of L_{min} , which in the midst of implosion and volatilization represents a kind of **moderate zone for interactions**. It impressively shows us how much evolution tries to avoid extreme states. I have described concrete calculations for this separately in a preprint³². In the course of constant Darwinian evolution, mass has nevertheless also been able to develop structures that, in the form of neutron stars, offer stability and resistance to implosion almost to the highest possible degree of curvature. Perhaps there are even more robust forms of matter that still have an intact structure at even higher densities and even when there is a risk of falling victim to event horizons? If not, there is certainly enough time to develop suitable solutions in the course of natural selection.

³¹ <https://www.space.com/black-holes-expanding-with-universe>

³² Mass Based on its Spatiotemporal Curvature, <https://www.vixra.org/abs/2303.0022>

At the end of the treatise, I still feel the need to direct an evolutionary perspective to man's pure capacity for abstraction with regard to mathematics – because it is crucial for our conclusions about the nature of things:

The physical **contrast between centroids and divergences** must have been the prerequisite for the development of an understanding of numbers. What does a 1 stand for? Its meaning connects both the beginning of a sequence and the **grouping of** certain characteristics **into a unit**. The 1 therefore **always** symbolically stands for a focal point or centroid. It says **nothing** about how it itself is composed – it is precisely at this point that both **our gift for abstraction** and **our susceptibility to error** begin. We set Ones as priorities everywhere based on perception, assumptions and generalizations. However, each of these Ones is made up of individual principles, and you can't create the same number frameworks among them all. A formula only works for a concrete quantity structure of centroids, and we should constantly sharpen our view of this. An irrational number like π only comes about because we have decomposed a 1 in a way that was not intended. As soon as we start **to unravel individual centroids according to the same blueprint** that already makes them interact with each other, we get distorted or even **physically meaningless** results, as are the irrational numbers.

► **Why should we make improvements here – after all, we can still work with them?**

Quite simply - the distorted view through a bad telescope eyepiece should never be our claim! Masses of celestial bodies, elementary particles and quanta of spacetime **cannot simply** be reduced to a common denominator by getting smaller and smaller Ones. Although a circle can also be divided into linear stripes, it is only its angular segments that allow us to recognize and formulate its special mathematical characteristics. It is probable that in order to be able to describe each elemental phenomenon, our mathematics would have to be adapted in advance in order to enable us to recognize or locate the particular principles of **each of these anisotropies**.

But **how** should we anticipate the way in which the adaptation of our mathematical instruments should take place? Unfortunately, there is no mechanism for this - Darwinism will also have to synchronize our instruments with reality. On the basis of the intellect that we already possess, we can and should consciously support him in this in order to be able to evolve more quickly, if at all desired.