

What is life?

Let's start directly with our **new definition of life**. According to the Universal Philosophy: *life is a process of accumulation of the energy of matter-spirit quanta, from the initial universal level of membranes to higher and higher levels of these quanta, within organisms isolated by their membranes from an environment dominated by "non-living" quanta of energy.*

The relative spectrum of matter-spirit quanta

Material class	Const. Φ_f, P, B, E	$\sim\mu^1$ r, c^{-1}, U, H	$\sim\mu^2$ t, W, i, D	$\sim\mu^3$ p, a^{-1}, Φ_H, C	$\sim\mu^4$ $m, J, q, \tilde{\mu}$	Electro-magnetic radiation in vacuum
Superbrain quanta	- 1	-10 ⁸	-10 ¹⁶	-10 ²⁴	-10 ³²	Extra-long waves
	- 1	-10 ⁷	-10 ¹⁴	-10 ²¹	-10 ²⁸	
	- 1	-10 ⁶	-10 ¹²	-10 ¹⁸	-10 ²⁴	
Brain quanta	- 1	-10 ⁵	-10 ¹⁰	-10 ¹⁵	-10 ²⁰	Radio waves
	- 1	-10 ⁴	-10 ⁸	-10 ¹²	-10 ¹⁶	
Nerve cells	- 1	-10 ³	-10 ⁶	-10 ⁹	-10 ¹²	Micro-waves
	- 1	-10 ²	-10 ⁴	-10 ⁶	-10 ⁸	
Tissue cells	- 1	-10 ¹	-10 ²	-10 ³	-10 ⁴	Far-Infrared
Membranes	- 1	- 1	- 1	- 1	- 1	Infrared
Molecules	- 1	-10 ⁻¹	-10 ⁻²	-10 ⁻³	-10 ⁻⁴	Visible
	- 1	-10 ⁻²	-10 ⁻⁴	-10 ⁻⁶	-10 ⁻⁸	Ultraviolet
Atoms	- 1	-10 ⁻³	-10 ⁻⁶	-10 ⁻⁹	-10 ⁻¹²	X-rays
	- 1	-10 ⁻⁴	-10 ⁻⁸	-10 ⁻¹²	-10 ⁻¹⁶	
Atomic nuclei	- 1	-10 ⁻⁵	-10 ⁻¹⁰	-10 ⁻¹⁵	-10 ⁻²⁰	γ -rays
	- 1	-10 ⁻⁶	-10 ⁻¹²	-10 ⁻¹⁸	-10 ⁻²⁴	
Quarks	- 1	-10 ⁻⁷	-10 ⁻¹⁴	-10 ⁻²¹	-10 ⁻²⁸	Cosmic rays
	- 1	-10 ⁻⁸	-10 ⁻¹⁶	-10 ⁻²⁴	-10 ⁻³²	

To create a single quantum of tissue, the energy of several thousands of universal quanta is required. To create an energetically functioning nervous system requires the energy of at least tens of thousands of quanta of living tissue. In order to generate a functioning brain quantum, its energy supply from hundreds of thousands of nerve quanta is required.

A tissue membrane is no longer sufficient to isolate the brain quanta from the "inanimate" environment. This requires the skull and its internal barriers, which separate the brain from the "dead" environment. Therefore, a matter-spirit brain quantum, an energetic entity between one and 10 millimetres in size¹, does not need its own membrane. On the other hand, such a quantum can only exist in a living brain. After brain death, we therefore have nothing more to look for it in such a structure².

The highest level of matter-spirit quanta is the level of the super brain, which can only be supplied with energy by the level of brain quanta. This level is the source and the receiver of our feelings. However, as we can see in the table, the super brain quanta are on average too large for our modern skulls. This is why people today have certain difficulties in generating and transmitting feelings. The only part of our organism today that is isolated from the "inanimate" environment and can absorb the energy of the super brain quanta is our intestines. This is why today we speak of feelings that come "from the gut" (and often confuse them with "feelings" from the heart).

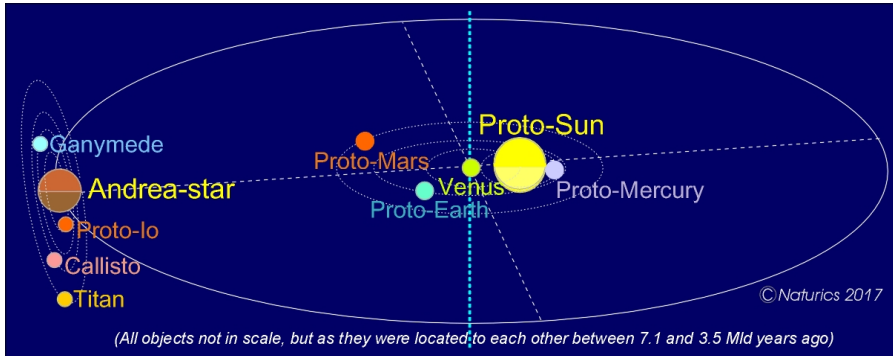
1 compare the quantum spectrum with the table below.

2 similarly, we cannot find any meridians in a dead body.

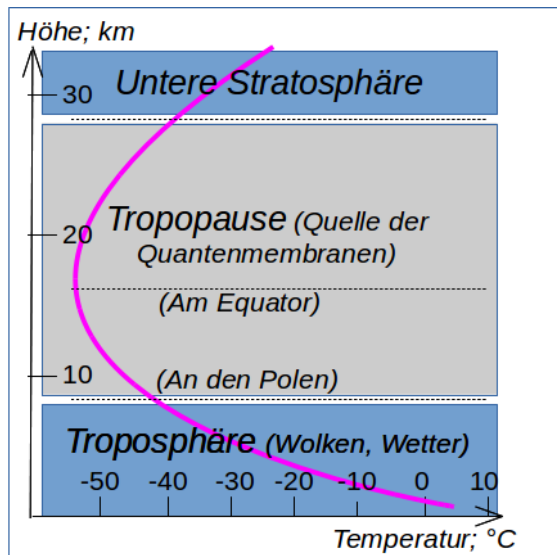
**Typical values for all possible levels (E)
of matter-spirit quanta**

E	Quanta of	Size	Frequency	Temperature	Speed	Voltage
4	superbrain	0.5 m	~2/hour	2.4 μ K	0.26 mm/s	2 MV
3	brain	5 mm	5 Hz	240 μ K	2.6 cm/s	20 kV
2	nerves	50 μ m	50 kHz	24 mK	2.6 m/s	200 V
1	tissue	0.5 μ m	500 MHz	2.4 K	260 m/s	2 V
0	membranes	5 nm	5 THz	244 K	26 km/s	20 mV
-1	molecules	50 pm	50 PHz	24 kK	2.6 Mm/s	200 μ V
-2	atoms	0.5 pm	500 EHz	2.4 MK	260 Mm/s	2 μ V
-3	atomic nuclei	5 fm	5×10^{24} Hz	240 MK	26 Gm/s	20 nV
-4	quarks	50 am	5×10^{28} Hz	24 GK	2.6 Tm/s	200 pV

A living organism grows and develops mentally as long as the supply of energy to its tissues, from the tissues to the nerves and from the nerves to the brain exceeds the current consumption of this energy. The moment this balance becomes negative, the organism begins to die. If this process of energy supply fails, we die. Our body falls back to the level of universal quanta with a size of about 5 nm. This is also the level of dust, generally speaking - the cosmic dust from which, for example, the precursor of our solar system was formed around 7.1 billion years ago, with the primordial Earth as one of the four primordial planets of the primordial Sun at that time.



Life on Earth therefore did not originate in an indeterminate past in an indeterminate way from an indeterminate form of inanimate matter, but it originated and continues to originate in the tropopause, i.e. in that area of the Earth's atmosphere in which the temperature remains permanently around the universal temperature of -30°C ($\sim 244\text{ K}$).



Universal Philosophy has also solved the riddle of our individual and global (collective) consciousness. Without going into the details of this discovery, we now select only the fragments that change our traditional views on matter and mind in general and on our body and mind in particular. In our unified description of the Universal Philosophy, the origin of everything in our Universe lies in Quantum Creativity. This is, simply put, the potential to create everything else. The individual counterpart of Quantum Creativity (in the case of the individual human being) is what we call the soul. Matter is (globally speaking) the spatial product of Quantum Creativity, while spirit encompasses all temporal changes and interactions of these spatial creations of matter. For the individual aspect, this means that it is not some supernatural force, miracle or coincidence, but that it is precisely the human soul (this individual part - the single quantum of Quantum Creativity) that produces (creates) the human material body and the human spirit (the individual mind) as all possible temporal changes, interactions and sensations of this material body. Just as in the physical sense of space-time the spatial aspects of natural phenomena are inseparable from their temporal aspects, so also in the sense of the creation of the Unified Universe the spatial material aspects are inseparable from the temporally changing mental aspects of each individual matter-spirit quantum³.

According to Universal Philosophy, there is a global field of Quantum Creativity in which we locate our global, collective consciousness. By "our" here I mean the consciousness of all humans living now and ever before, but also of all other creatures, living organisms, to which we want to (or should) attribute consciousness.

3 It was this inseparability of matter and spirit that forced me from the beginning of my unified description of Nature to adopt the collective name of the quanta of our Universe as matter-spirit quanta.

This Quantum Creativity created at some point ("before the beginning of time and space") the first gigantic matter-spirit quantum of our Universe. Since then, its quantum interior is the space of our Universe, and its quantum period is the past, present and future existence of our Universe. In its interior and during its duration, all other cosmic objects were created, such as the Cosmic Hierarchy of our Solar System. All quantum processes, including life processes, are always related to the accumulation and transfer of the energy of the individual quanta that sustain this life. Our sensations, feelings and consciousness also consume (transfer) energy.



After the emergence of higher evolved life on Earth, the accumulation of energy on Earth began, mainly as the energy of our brain quanta, and especially the most energetic super-brain quanta, in the form of our individual consciousnesses, which together created and continue to create waves of global consciousness energy that are visible even in the telescopes of astrophysicists (see the diagram above).

We can identify the individual quanta of this global Quantum Creativity with what some older philosophical (and also religious) systems regard as souls (of humans, animals and even plants). When such a soul finds a new place in the existing reality⁴, it performs the "act of launching into life" of a new individual organism. The accumulation of cosmic energy in the form of matter-spirit quanta begins first at the universal level of membranes, and, after crossing due to the evolution the next levels of the quantum spectrum, also through the larger quanta.

And here we come to the heart of the matter. Where and when does human life come from? How and when does it end, if at all? A consistent application of the insights of Universal Philosophy suggests the following approach to these questions.

It is not true, or rather, we are not compelled to continue our state of ignorance, when we assume that human life (by natural means) comes into existence only after some later time (legally determined by human courts) after coitus between a woman and a man. At what point after this coitus does the physical life of the new human being begin? And when does its mental (spiritual) life begin? And

4 which we restrict to the Solar System alone (because I think, no intelligent life being probable elsewhere at all).

when and in what way or under what conditions does this new human being receive his soul? What was he before, if not a human being? These are all questions to which we need to know the answers developed interactively by all available different experts before we can discuss, for example, the rights and duties of parents and society in the case of abortion.

Our Unified Science will not be able to answer all questions about life (and death). But it does provide us with concrete answers to some of these important questions, which can help us to establish new criteria, new rights and new responsibilities, which in turn will enable us to make further progress in transforming our world community towards an evolutionarily stable democracy.