

## New-Paradigm definition of energy

(Energy is the most important physical quantity. The traditional physics has not delivered any independent definition of energy. Below is the corresponding excerpt from the newest book by Peter Jakubowski "[Unified Physics; which Einstein & co. dreamed of and is finally realised now](#)".)

$R \setminus S$	-2	0	2	4
-2		$-4 \overset{\circ}{f} 2$ frequency square	$-2 \overset{=}{S}$ radiation intensity	$0 \overset{\circ}{P}$ power
-1		$-2 \overset{=}{f}$ frequency	$0 \overset{\circ}{\Phi} f$ flux of frequency	$2 \overset{=}{W}$ energy
0	$-2 \overset{=}{\Delta}$ Laplace operator	$0 \overset{\circ}{1}$ universal unity	$2 \overset{=}{A}$ area	$4 \overset{\circ}{J}$ action
1	$0 \overset{\circ}{\sigma}$ electric conductivity	$2 \overset{=}{t}$ time	$4 \overset{\circ}{m}$ mass	
2	$2 \overset{=}{\epsilon}$ dielectric factor	$4 \overset{\circ}{\Phi} \epsilon$ optical area		

Figure 18. Compact form of the Unified Family of all physical quantities.

After we have realised this fundamental overestimation of the Old-Paradigm physics, we can truly abandon all vector quantities from the basis of the Unified Physics.<sup>1</sup> The Unified Family "purified" from all vectors simplifies to its compact form presented in the diagram above

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<sup>1</sup> This possibility is very advantageous when we are going (in Chapter 6) to formulate a new definition of consciousness, the probably most fundamental concept of our knowledge.

(Figure 18). Note that we are using now one of the equivalent physical quantities, the radiation intensity  $S$ , for the hitherto traditionally preferred quantum speed square  $c^2$ . We immediately realise that all physical quantities traditionally considered as being important and used in definitions of different fields and forces (interactions), are no longer present in our "purified" Unified Family.

This means that gravity, electromagnetic force, nuclear weak and strong forces, are all just an illusion produced through our superfluous traditional definitions. All traditional concepts based on electric charges are an illusion too. They should have no influence on our scientific definitions of such fundamental concepts like matter, spirit, body, mind, soul, consciousness, and life itself. The single physically usable idea of an interaction in our Universe is that one based on the quantum energy transfer, which can be mathematically expressed with the simple equation resulting directly from the diagram above:

$$\Delta W = \Phi_f.$$

This is **the Quantization Rule of our Universe**, the single, long dreamed of equation describing how the entire Universe is organized.

How can we read this fantastic rule out of the diagram in Figure 18? The white color of the Universal-Unity field means its independence of a material state. We see that the same is true for the quantum flux of frequency  $\Phi_f$  (or quantum of circulation), the quantum of power  $P$ , and the quantum electric conductivity  $\sigma$ . All those scalar quantities belong to the material class 0 (noted in red). At the beginning of this section (in Figure 8) we have learned that a relation of each quantity to the right of itself means a multiplication with area  $A$ , and to the left of itself - with Laplacian  $\Delta$ , where  $\Delta = 1/A$ . Analogously, a relation to below of itself means a multiplication with time  $t$ , and to above - a multiplication with

frequency  $f$ , where  $f = 1/t$ . The previous relation,  $\Delta = 1/A$ , can be interpreted as a distribution of the Universal Unity over the quantum area  $A$ ,  $\Delta 1 = 1/A = d1/dA$ . Analogously, the relation  $f = 1/t$  can be interpreted as a distribution of the Universal Unity over the circulation period  $t$ ,  $f1 = 1/t = d1/dt$ . Using this interpretation, the above Quantization Rule means that an arbitrary distribution of energy,  $\Delta W$ , always equals the universal quantum of circulation  $\Phi_f$ , whether it is an atom, a neuron, or a galaxy. This universal, material independent process of energy transfer tends to compensate all inequalities in energy distribution in the Universe. For example, we can only stay alive as long as we are able to accumulate energy in our body. If we stop this accumulation, the remaining natural tendency will "disintegrate" our body onto dusty nanoparticles. Which a wonderful (and tricky) property of Nature does prevent the entire Universe from a similar disintegration will be discussed in Chapter 5. Here we conclude some further relations concerning the universal energy transfer, maintaining the Universe and our life in it in a continuous activity.

We have already learned two fundamental relations of the Unified Physics, one defining the quantum circulation,  $\Phi_f = f * A$ , and second defining the quantum mass,  $m = t * A$ . Both are directly visible in Figure 18. But there are also some new relations included in this diagram. Firstly, we see once more that quantum power  $P$  is also a material independent constant of our Unified Physics<sup>1</sup>. Its relation to the quantum radiation intensity  $S$ ,  $S = \Delta P$ , defines this important physical quantity as a planar distribution of the quantum power  $P$ . That means, the more quanta on a given plane the higher the radiation intensity from that plane. Secondly, because of the obvious relation  $f^2 = df/dt$ , we read from the diagram the next sensational rule describing how the World works:

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1 In Figure 16 we read that this value is 17.15 nano-Watt, whether an atom or a galaxy.

$$\Delta S = df/dt.$$

If the previous Quantization Rule explains, how our Universe is organized, the new rule explains how this organization is reached in practice. We can read it in its shortest form as follows:

Radiation becomes active when its frequency changes.

In a more extended version we read this rule as follows.

The single mutual interaction in Nature, the energy transfer (*or radiation*), is only possible (*becomes energetically active*), when the medium (*the environment through which the energy quanta propagate*) forces (*causes*) the radiation to change its frequency. Otherwise, the energy will propagate without any loss (*nothing else will change*).

This simple rule describes all activities in our Universe, including also all processes of conscious life, like thinking, feeling, or dreaming. In that way, we have reached the ultimate unification of our physical description of Nature.