

## Can the laws of nature be outsmarted?

Serious Concerns by Dr. Manfred Pohl

I'm still haunted by the question of why scientists continually try to outsmart the laws of nature with flimsy speculations.

Contrary to all established knowledge, however, this seems to be intentional. If one wants to pursue the stated goal of preserving the Standard Model of cosmology, one cannot acknowledge that there is no "beginning" of the universe, because the Standard Model consistently assumes the "origin" of matter, which is the basis for the beginning of the universe. However, if one assumes the eternity of matter's existence, there is no beginning. See also:

<http://hauptplatz.unipohl.de/Wissenschaft/FocusOnlineUrknallWiderlegt.pdf>.

Therefore, one must cling to the "origin" of matter at all costs. At this point, the question already arises as to how it is supposed to have originated. From nothing? It's a trivial insight: In nature, there is no process of genesis of existing entities from nothing. All becoming and passing away is always the cyclical analysis and synthesis of existing things. Therefore, there is no creation of matter from nothing. This is generally accepted philosophically; even the reliably proven conservation laws of mass and energy refute the notion that matter can arise. Thus, arguments far removed from science are used to cast doubt on the conservation laws. They are said to be inapplicable to the universe "as a whole." But because of its infinity, there is no such thing as a "whole" universe, for there is no such thing as "whole infinity." The term itself is meaningless. Moreover, the conservation laws are laws of nature, and there are no natural laws that only apply sometimes. They apply independently of time in all inertial frames of reference, thus also in the universe.

Another law of nature that is constantly being circumvented is the relationship between mass and its equivalent energy. There are constantly repeated postulates claiming that energy is not matter; one speaks of "matter and energy," as if energy were something other than matter. It is also claimed that mass can be converted into energy and vice versa, a process whose impossibility can be proven by elementary means. It is also sometimes said that mass is a kind of "congealed" energy. All of these postulates deny the mass-energy equivalence, according to which the ratio of energy to mass is constant:

$$E/m = c^2 = \text{const.}$$

Mass is the measure of the energy content of a body (Einstein). Therefore, the often-invoked "pure" energy, that is, energy that has no mass, does not exist. From this, it can be deduced that a finite mass cannot be accelerated indefinitely, because it can only have a finite amount of energy. However, an unlimited acceleration would result in infinite energy. There is a natural limit, which consists in the fact that the energy of a finite mass, which is an equivalent measure of energy, cannot increase indefinitely, because otherwise its mass would also have to increase indefinitely. This limit is fixed by the relationship  $E=m \cdot c^2$ , and it can be determined mathematically. The proportionality factor  $c$  is proven to be a natural constant that cannot be subject to change due to a state of motion. It applies in all inertial systems. The total energy of a mass cannot exceed the product  $m \cdot c^2$ .

Despite such established findings, people continue to talk about the "origin" of matter from a so-called primordial atom, a singularity from which all the matter in the universe is said to have emerged. This process, called the Big Bang, is said to have been followed, beginning at  $10^{-37}$  s, by a so-called inflationary phase of the universe, during

which cosmic matter is said to have expanded at many times the speed of light. However, this is not possible due to the constancy of the speed of light in a vacuum. To circumvent this fact, an easily deceived trick is attempted. They say that space "expanded" and "took matter with it." The constancy of the speed of light applies to the movement of matter in space, but not to the expansion of space itself. This, however, is unscientific nonsense. Space cannot expand because it is not a material object. Only matter can move in space. Even if one were to assume that space could expand, for matter to be "pulled along," a force would have to exist between it and space, a kind of coupling of matter to space. But such a thing does not exist. Any force can only act between material objects. No force can act on space.

Space is not a body, an object, device, or apparatus subject to a state of motion. Space cannot move, rotate, compress, stretch, bend, expand, or undergo other motion processes. The concept of movement is not applicable to space. The curvature of space caused by gravity, described in general relativity, is a mathematical abstraction that facilitates or enables calculations. It has no counterpart in reality (see <http://hauptplatz.unipohl.de/Wissenschaft/Raumkruemmung.pdf>). Such abstractions cannot be materialized. Space cannot exist autonomously. The concept of space can only be seen in connection with matter, that is, mass and energy. Without matter, the concept of space does not exist; without matter, it has no meaning. Thus, space cannot have a "speed" that allows one to talk about the speed of light. The argument that the natural constant of the speed of light applies only to matter and not to space is without physical meaning. Space has no structure, no construction, no dimension, no shape that could explain it as existing independently of matter. Only a material object has dimension and movement. Multiple objects have distances. This requires space. Space is therefore a condition for the existence of matter, not an "existing" object. It does not exist autonomously; it is a means of explaining the processes and states inherent in matter. Space itself is nothing. Spatial coordinates are imaginary elements for geometric and computational orientation in space. They are not components of space. This conception, which results from the dialectical-materialist concept of matter, leads to the universally recognized statement that there is no space without matter on the one hand, and no matter without space on the other. If space were an object, a real existing body, it would have to be viewed as a container, a place for matter. Logically, it would also be possible to remove matter from space, to empty space. But then there would be space without matter (it would have been removed), and there would also be matter without space (which would have been removed from space). Neither of these things exists.

Recently, Peter Novak even writes about Einstein in the Forum Quantum physics: "But his approach concealed a fatal flaw: the assumption that the speed of light squared ( $c^2$ ) is the ultimate maximum of nature." He relies on Harvy's completely useless ANOS (Advanced New Operating System) theory, which propagates a more general form of the mass-energy equivalence  $E=m \cdot c^2$  in the form  $E_{Harvy}=m \cdot gH^2$  with  $gH^2 \geq c^2$ , which denies the speed of light in vacuum as a constant of nature.

The assumption that Einstein established the speed of light as a constant is a misinterpretation of his work. To correct this, it must be stated:

The constancy of the speed of light in a vacuum is not an "assumption" of Einstein. Einstein did not establish the speed of light  $c$  as a constant of nature; rather, it was established and confirmed by experiments. The proof of the constancy of the speed of light is based, among other things, on the Michelson-Morley experiment, which found no changes in the speed of light due to the Earth's motion and thus refuted the existence of an ether. The constancy of the speed of light is also experimentally

confirmed by observations of binary stars, where the light signals from both stars arrive on Earth simultaneously despite their different motions. Einstein's theory of relativity was the logical consequence of the establishment of the constancy of the speed of light, because it cannot explain time as an absolute quantity and must be understood as relative to the motion of matter. This is Einstein's brilliant achievement.

Denying the constancy of the speed of light, that is, claiming that it is not a constant of nature, is yet another attempt to circumvent the laws of nature with speculative methods in order to maintain the Standard Model of cosmology.

Therefore, all efforts to circumvent the laws of nature with speculative arguments, to declare them "not applicable" or "applicable only under certain conditions," or "invalid," must be rejected as unscientific intellectual escapades. All theories frequently proposed in the recent past that are based on such arguments lack the basis for being recognized as scientific method. Referring to such misrepresentations in physics is pure charlatanism. Instead, one should develop a clear position on the nature of matter, which physics has lost in recent decades. It can solve most currently unresolved problems. See also <http://hauptplatz.unipohl.de/Wissenschaft/EssenceMatter.pdf>.