Why I'm Not Joking About Time

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Time- The Worst Avenger There is

During one of those many meetings this author has to attend, something funny came up having to do with the fact that there is one parameter in this universe, obviously not being very forgiving. I'm talking – of course – about time. When being reprimanded about the fact that – as the mathematician in the meeting – I should have something smart to say about time instead of keeping my mouth shut and more or less stupidly smiling, I answered that:

"…I'm principally avoiding to joke about time, because time has a nasty way of responding. De facto, time is the worst avenger, there can be…"

In this short paper, I want to explain what I meant by that… and in order to keep my explanation as general and illustrative as possible, I will try to avoid any math… serious math, I mean.

What is Time and Why is it so Unforgiving

Let us assume that we have a true Theory of Everything and would not need the usual tautology and circular definition when trying to explain what is time [1]. Meaning, we would not end up in a circle of expressions, in essence saying nothing, respectively nothing with respect to the main topic of interest, but still using many words to beat about the bushes, thereby achieving nothing but an intrinsic logic.

In order to avoid this "nothingness", we start with a fundamental assumption not containing time, but producing it in the end under certain conditions. These conditions should be the ones we should find in our universe, because in this very universe we obviously have and experience the effect of time.

Let our basic assumption be that the universe, we are existing in, avoids curvature on an integral level, meaning, there can be some curvature, but summing everything up, the total curvature should disappear. Interestingly, the disappearance of the total curvature is one of the key boundary conditions to allow for the existence of a universe in which we can live in. Let us also assume that the number of degrees of freedom, attributes, properties and so on of the universe is arbitrary. At least, we, as rather simple-minded creatures, should not have the audacity to dare and tell the universe in how many dimensions (nothing else are all these degrees of freedom, attributes, properties and so on) it is allowed to live in (even though many "experts" in the established science do exactly that [1]). When now investigating all options for a dynamic[1] universe to exist under the condition of global/integral "curvatural freedom", one finds that there needs to be at least one attribute being of imaginary character, which is to say, at least one attribute is like borrowed area. The reader having difficulties in understanding the concept of "borrowed area" should just think about borrowed money, which he usually describes by using negative numbers. When a bank account is in the negative this is just "borrowed money". Now let's imaging one wants to borrow a piece of area and in

[1] We need to emphasize that the dynamic character we demand here, is essential, because – after all - we want to describe a universe being capable of allowing our existence. Of course, something like a Minkowski universe does solve the standard field equations (e.g. [2, 3]) and fulfills the zero-total-curvature condition, but it also allows for absolutely no dynamic and thus, absolutely no life.

order to do so, one takes a square and gives it the side length a and the negative area -A. We know, of course, that, in order to obtain a^2=-A (with A being a real number), requires us to introduce imaginary (*i**a with $i = \sqrt{-1}$) or complex numbers (i*a+b, with a and b being real numbers). Introducing this imaginary character into our zero-integral curvature approach and giving at least one of the dimensions the necessary "borrowed area" property by making it imaginary, results in time.

So, there is no universe, in which we could live in, which does not need to have at least one dimension (on a global scale) sporting imaginary character. As this automatically means that this gives this very dimension the property of borrowed area and as such just manifests the characteristics of time, we see that there can be no reality for us, without the omnipresence of time.

Our universe is integrally free of curvature, thereby allowing us to live in, and freedom of curvature can only be achieved via imaginary dimensions or borrowed area. A dimension with this property, however, is just time. It has to be omnipresent and, hence, is "always" unyieldingly unforgiving.

Consequences for the Clever Entrepreneur

It should explicitly be pointed out that the fundamental and non-tautological explanation of the phenomenon of time is the cornerstone for a variety of things being strongly entangled with so-called good business strategies. Neither the underlaying technologies of the three fundamental towers of everything [4], nor the higher order chemistry [5] or its many applications, nor our generalized and fundamentally based socio-economic concept ("Quantum Gravity Economics" and the corresponding "Mathematical Psychology" [6]) does work without the non-circular and non-tautological but a fundamental (extremal-principle based) explanation of time. Most interestingly, this especially holds for what is been called Artificial Intelligence where the current linear concepts do not allow for a truly dynamic and self-evolving "universe of the mind".

References

[1] just see all standard text books in almost all modern science

[2] D. Hilbert, Die Grundlagen der Physik, Teil 1, Göttinger Nachrichten, 395-407 (1915)

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[4] W. Wismann, D. Martin, N. Schwarzer, "Creation, Separation and the Mind…", 2024, RASA strategy book, ISBN 979-8-218-44483-9

[5] W. Wismann, N. Schwarzer, "A Higher Order Chemistry", 2025, a RASA®-Institute booklet

[6] N. Schwarzer, "Mathematical Psychology – The World of Thoughts as a Quantum Space-Time with a Gravitational Core", Jenny Stanford Publishing, ISBN: 9789815129274