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David Gross – je čas skutečný ?
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David J. Gross - What's Real About Time?

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Has over the centuries and our views of time have changed and i suspect they will change even more.* That is the right suspicion. Because I believe and suggest 20 years to examine the "pace of time" from the very beginning after the big Bang. Today, in the stop-time of 13.7 billion years since the Bang, we are watching a certain pace of time pass here on Earth. And we know (see Kulhánek) that time is slower everywhere outside the Earth, see STR. Why? That is why we "have to" say that time is slower everywhere else. (and the slowest on the horizon of the universe ... as Hubble claims). The same will be claimed by every other observer in the universe, meaning that time on Earth runs slower towards him. (and an observer from a quasar will claim that time is almost standing on Earth, not passing). The STR effect is related to the rotation of the basic observer and test body systems. And then there will be a new question, whether: when the space-time global is crooked everywhere, how crooked it is in a different time "stop-state", in a different age since the Bang (?). No one has examined whether time has a different pace of flow at different ages of the Universe. The pace of time may not be the same in every historical time of the universe, because the global curvature of the universe is different in every historical time. This is related to another new objection to the question of the expansion of the universe. Hubble's law is poorly traced, his law is not a linear expansion. The universe does not expand linearly, but expands (!) Its curvature, which was very high at the beginning "in the foam of curved dimensions", ie in "boiling plasma" and that curvature expands to this day, unpacking changes nonlinearly, this changes nonlinearly the rate of passage of time since the Bang. uh there are issues such as the arrow of time time seems to be flowing.. * It is a similar phenomenon as "expansion" resp. expanding space také, also appears to us as “stretching” the length dimension, not shrinking. This time: this is the expansion = expanding the time dimension. And even better: material objects move through the universe "in space-time dimensions" and thus in time. Spacetime 3 + 3D is a network-grid "as" a standing raster and we - the earth (material objects) move over time, thus cutting time intervals. We don't run out of time, but we run for him. The time arrow means "expanding" the time dimension. At the moment when time "collapses", ie the curvature increases, at that moment we can talk about time with the opposite arrow and… and this happens on the Planck scales: there in the foam and chaos of a boiling vacuum (boiling dimensions of 3D time and 3D lengths) there are born wave packages "in which" time "twists" in the opposite direction "against the arrow of time" of the global one. In a complex topological-geometric shape of a wave package, there may be several "arrows" where the time arrow runs "forward" and the piece "back" again, perhaps several times in one wave package.

(and from "their point of view" is also called "the passage of time") in a given direction to some extent we understand that as a as we learned (at a certain pace) about thermodynamics and about statistical mechanics about the second law of thermodynamics which defines an arrow the motion of time towards more disorder * from arrangement to disorder… which can be in the abstract view that "wrapped states of matter = more complex" expand into less curved states and this manifests itself in the sense of "smaller arrangement" - higher order is "chaos-intertwining-interconnectedness of dimensions", lower orderliness is less curvature of chaos-intertwining. I have not thought of exactly the entropy here. I'll come back to that sometimes. from order to disorder then there's cosmological time the universe is expanding * (universe expanding = expands) as time evolves forward and those two arrows cosmological timing and the arrow of time * I think that all the arrows of time have in common the "unfolding curvatures of that dimension", whether I look at it from the position of a "standing observer" or an "observer running" along a standing time dimension… the thermodynamic era of time disorder order to disorder coincide and we have some understanding of that as well why those arrows are the same why as the universe expands things get more disordered * disorder in this sense of physicists means smaller and smaller curvatures of the dimensions of "" intermaterial "" "space-time. Inside the mass, the curvature is still higher, high… even when we fragment or massively complex the complex mass in spacetime ... then there's the fact that you can only move one direction in time unlike space where you could go next door and come back * Here it is very important to realize that the "unit" size of the length dimension and the "unit" size of the time dimension **are 8 orders of magnitude different** "to man". (!) c = $10^8/10^0$! ! Man "" understands-perceives "" more sensitively the longitudinal dimension than the temporal dimension. For the length dimension, it does not seem strange to us that we can "measure-perceive" it "forward" as well as "backward"…, over time this perception is more difficult and much more difficult. Why ? I will explain gradually or later. If (!) We establish that the "length dimension" (ie spaceon) and the "time dimension" (timeon) expand = expand "" "at the same rate" "", then if we-mass body we are measured with intervals on the expanding longitudinal dimension, to move along the longitudinal dimension in the direction of the expansion of space from Bang "forwards" or against the expansion "backwards", so we "know" it "better" better than in the area of three dimensions of time, when on one of three dimensions (which we measure) time runs slower by 10^{-8} seconds, ie measure = perceive interval 45. 10^{-8} seconds ahead and interval 41. 10^{-8} seconds backwards = against the flow of time is simply imperceptible…. And this also in view of the fact that one of the observers would have to be fixed with the flow of time forward and the other with the flow of time dilated, ie "against" the flow of forward time. - It's very difficult for me to explain. Over time, I will improve the wording of the description of "why" we perceive the measurement of the line forwards and backwards much more clearly than "the time interval not dilated compared to the time interval dilated. cancel time only one direction which if violated would leave give rise to all sorts of causality paradoxes go back and you kill your grandmother * When we measure the length interval, we will not perceive at all whether we measure it in terms of the expansion of the universe or against the expansion of the universe, but čas but we will perceive the time interval that we measure "in the sense of aging or against the sense of aging" 8 orders of magnitude more sensitively. This is the difference of the eight orders in which the position of our Earth in the Universe is located from a kind of imaginary axis of expansion where c = 1/1; in our extremities we perceive v = $10^8/10^0$ as comparable intermittent lengths to time intervals. http://www.hypothesis-of-universe.com/docs/c/c_017.jpg that's not so good for you then there is uh actually the fact that time plays a very special role in the way we think about physics the way we think about the world we say that the world evolves in time the business of physics is to predict the future given the past it's all about time and then there's another strange thing about time i mean

there's only one time we've learned there are three different directions you can move in in space and now we've learned that there might even be more * Here is a repetition of a new vision: It is nowhere explored whether time also has three dimensions. Then my vision of a 3 + 3D dimensional space-time would apply, and in it the extra dimensions (both temporal and longitudinal) would be built into matter, because the basic dimensions would be "curved-wrapped" over 360^0 into a ball. Thus, physicists have "learned" to perceive only 3 length dimensions and one time dimension there might be nine directions (dimension) that we can move in in space but only one in time we can easily imagine mathematical structures in which there were two times we would not know ??!! how to make sense of those physically but why is there only * !! Special relativity shows us that time dilates only and only "in the direction of motion" of the body, but it does not dilate perpendicular to the motion of the body, so no one has ever examined whether time dilates in only one dimension and why. Because no one has ever examined whether time has dimensions. http://www.hypothesis-of-universe.com/docs/f/f_020.pdf ; http://www.hypothesis-of-universe.com/docs/g/g_026.pdf one time and then at the bottom of it all there is einstein's view of time and space being unified into what we call space time and his admonition that we should think about space time as a whole einstein once wrote to a a wife of a friend of his who had died suddenly uh trying to console her telling her that time the present is an illusion you shouldn't be too unhappy that he's died because the present is just an illusion the thing that physics tells us to think about is not the present which is moving forward but the whole space-time manifold that in fact is the object of cosmology the whole thing the past the beginning the big bang the end the whole time history of the universe a whole space time does this mean though that time is a physical property * No, no, that's a bad look at "Time." Time is not a "property". If absolutely "everything" is a property of the Universe, then two artifacts are not: Time and Length ", ie 3 + 3 dimensional space-time is the" skeleton "of the universe standing on the phenomena of the Being. that needs to be explained like gravity or electromagnetic radiation or is it something like causality and logic that is there that you have to deal with well there are many different aspects of that time some extent is a label we use to mark events that occur in this sequence uh there is a distance between events a time distance a second an hour we measure that by measuring the frequency of objects and we use clocks that is a physical object that metric difference that time difference looks different to different observers that einstein told us that's why the twinner goes off on the rocket ship and comes back as younger * http://www.hypothesis-of-universe.com/docs/eng/eng_014.pdf ; http://www.hypothesis-of-universe.com/docs/eng/eng_013.pdf ; http://www.hypothesis-of-universe.com/docs/eng/eng_007.pdf and he actually is and we can see analogous twins with particles that live whose lifetime depends on how fast they're moving with respect to us that would seem to suggest that time is like gravity and electromagnetic radiation not something built into the absolute fabric of reality like logic and causation yes time is dynamical and the phenomena are dynamical and they're labeled by what we call time (*) I do not agree with the interpretation given in this way. I have another one. It is described elsewhere…

and including the time difference between events the what we call the metric of space-time is a dynamical and indeed quantum mechanical fluctuating object but we tend to ***think of time as evolving*** one of the strangest notions is this notion * I repeat: Time does not pass to I-people-objects of matter. But we-people-objects flow = we move along the time dimension on which we cut time intervals. We perceive these time intervals, which we cut smoothly, as a flow-flow of time. Even from a different point of view, in No. 3 + 3D, the dimensions each expand differently, because each is differently curved (see gravity). This means that from big-bang, 3 + 3D space-time expands differently, eg in gravity, the length dimension and the time dimension expand differently. That is: the author says that "time is evolving" - these are just the "feelings" of physicists who did not reach the final essence of space-time, the origin of

matter and the genesis of changes in the genesis of matter and behavior together with space-time this feeling we have of of the present moving as if the somehow reality consisted of the universe at a given time * the stop-state of the Universe is there for all positions of curvatures of space and all positions of curvatures of "timeon", ie the diversity of positions-positions of Observers in the Universe observer dependent as that might be according to einstein moving forward but that i think is an illusion created by in a way which we do not yet understand * Both author D. Gross and Einstein seem to realize that "time is the forward movement of the Observer"…; how is my more accurate vision that the universe straightens its dimensions by the curvature of all 6 dimensions… since we understand so little of how the human brain functions so what would be an alternative reality alternative reality is the whole thing the space-time manifold that is what we're told to study that is with the object of physics this fourth dimensional the future of the world that every the fat that every point is a point in space-time so it's located at a specific three-dimensional space and a moment in time and they're all equivalent all co-existing in some sense it is and in that it is or it might be it is and it uh ? and we are processes in that yes and among the rest those processes of complex collection a collection of you know billions billions of billions of billions of atoms somehow collectively construct at that around that point set of events at a given time a picture of reality which is conscious comes to a consciousness of that present but that's a construction of that process that's taking place and there's nothing in physics that that indicates that any particular time in that process is any more fundamental than any other point in the space time so if you would roll that back cosmologically what are the implications to that first moment or as some people say i have no idea what happened no matter where* genesis of the development of changes in matter (curvature of dimensions) and curvature of the global and microcosm, all according to the laws… and especially according to the rule of alternating symmetries with asymmetries and further in "nascent" laws for positions and behavior hmoty (matter versus spacetime).

It is very sad in this narration that long ago the HDV vision (in the state of Cinderella) could have been improved, embellished to perfection if physicists understood it, especially if they at least read it. i'm going you have no idea doesn't matter what that question no because i actually think our all those notions even the notions i'm talking about now which are based on to some extent although i uh you know don't understand in total detail how this collection of atoms manages to construct for itself an illusion * here the text is quite confusing (I don't know if the translator or the author did it) of a present that's moving in time um that i think those classical * **yeah, yeah .., and why are they weird? It is time for physicists to finally stop being afraid of three-dimensional time and start studying it and researching it experimentally.** notions of time weird as they are in many respects i think are going to get much weirder when we try to describe processes occurring at very short distances very short times we have indications from string theory and indeed from quantum gravity originally that uh space for sure our notions of space are are very our emergent concepts they're not adequate to describe phenomena at very short distances they break down our notions of points in space is simply an approximation to something else which in some cases we we know what replaces space and if indeed space and time are unity then it has to apply to time as well indeed and there we have much less understanding * ! ! Yes, you have little understanding there… more “understanding and mindfulness” you have for “carnivals-unrecognized geniuses = ie for humiliating lay people… and not not very many examples that we can try to understand uh theoretically * !!! Here's the buried dog! To this day, you do not pay attention to the "TIME" phenomenon - for the vast majority of physicists, it is a kind of omnidirectional scalar… and uh and it's much harder because time is so essential as i said originally to the goal of physics physics is about physics is somehow about correlating these events in the past with events in the future making predictions http://www.hypothesis-of-universe.com/docs/g/g_041.pdf

explaining how things evolve that is sort of the traditional goal of physics and then einstein tells us well you have to explain the whole thing and we go back to the beginning * Einstein's general relativity does not explain everything. The universe evolves "in mantineles and according to the rules-laws" which are also born - created - recruited - as "clones" of relationships. (the interpretation would need to be expanded in dialogue… but with whom? there are no people) these notions break down uh so eventually when we're we're now living in a period where we can see some of our basic notions of space and time breaking down so i'm beginning to see how to modify them but just beginning certainly the lesson of history is that if you some of your basic concepts are being threatened they're probably going to be replaced by something even weirder .

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