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What are the Strings in String Theory?

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(black font google-translator, red font my opinions)

Thank you 23andme for supporting PBS Digital Studios. You may have heard the usual pop sci-fi description of string theory. There are these tiny vibrating strings, and that's where all the particles of force come from, including gravity throughout the universe. This raises more questions than it answers. Like why strings? What are they made of? (Here http://www.hypothesis-of-universe.com/docs/i/i_001.pdf the great scientist L. Motl made fun of this question I asked him in 2001.) And what is it? for nonsense of strange proportions? In physics, we would like to reduce our description of the mechanics of reality to the simplest possible form. We expect that the most basic machinery will have as few moving parts or free parameters as possible. Therefore, the standard model of particle physics is considered incomplete. His equations predict many things with astonishing accuracy. First, however, they require us to fine-tune many mathematical buttons and numbers, using physical measurements to correct 19 free parameters, such as the number of particles, and then there is gravity that does not fit the standard model so there is certainly a deeper set of teeth and wheels. A theory that brings all observable phenomena into the same mechanical framework would be a theory of everything, and string theory is a great hope for it. In the following episodes, we will explore the bloody details of string theory, but today it is 10 + 1 string theory. Where does this crazy idea come from? I mean, why do we "need" small vibrating strings? Versus literally any other little vibrant anything? So the vibrant "Nothing"? Or that in the end it would really vibrate "something" that really exists, or the quantity "length", or a vibrating "time"? What exactly are the strings (strings = wavy lines, balls of dimensions) of string theory as primary? (When the title scientist asks in this way, it's a legitimate question. When a layman asks in this way, it's stupid pataphysical nonsense, so in HDV it's phantasmagoria that destroys people's awareness of the right knowledge about the Universe - is it.right, Mr. Kulhánek?)

Let's make a quick introduction to the beginnings of string theory. The idea began in the 1960s with an effort to understand the behavior of hadron collections of glucose-bound quarks of strong nuclear force, which includes protons and neutrons as well as mesons, which are a combination of a quark and an antiquark. Peculiarities of interactions between pairs of mesons, as well as the odd relationship between their angular momentum and masses. She suggested that the quarks in the mesons are connected, you guessed it, by strings. In this case, the strings of the stretched tube are strong nuclear force. Vibrating elastic bands made of gluons. (It's still just an abstract vision, the same values as the abstract vision of my HDV that those quarks, gluons, etc. are made by "packing-balling" 3 + 3-dimensions of space-time.)

Much work has gone into exploring the quantum theory of strong interaction based on string physics. Many theoretical mathematical works… This theory had some success, but got stuck a bit and was eventually replaced by quantum chromodynamics. She is excellent.

One of the reasons why this powerful force version of string theory is stuck is that it predicted the existence of unexpected and undesirable vibrational regimes in the gluon field of these chains. (they strings, I present strings as "packets-geons" from dimensions). Mathematics failed ?? What is the vibrational mode in a quantum field? It's a particle.
That is a completely bold vision. If string physicists told her for the first time in the Czech Basin in front of Kulhánek, Brož and similar physicists, *she would be labeled as phantasmagoric would-be theories from unrecognized geniuses who have an unlimited ability to generate nonsense ... or these words: fellow citizens.* http://www.hypothesis-of-universe.com/docs/x/x_031.pdf ; http://www.hypothesis-of-universe.com/docs/y/y_004.pdf) And one of these modes appears as an intangible spin-2 particle. He has matter, but he has no weight . However, the only hypothetical intangible spin-2 particle is graviton, a putative quantum particle of the gravitational field. If the gravitational field is created from quantum particles, which could actually be I don't know. Mass-weight is a "property" of an elementary particle. But if so, then the gravitational quantum (loop quantum) should bear a special resemblance to the type of particles produced by this small investigation of hadron chains, except that nothing like graviton should appear in such a chain. This realization came in the early 70's. A bold new design of forgotten mesons has appeared. What if the mathematics of this theory could be used in the theory of quantum gravity?

In fact, what if all the force-bearing particles result from oscillations in small chains? → Legitimate visions that do not deserve insult and ridicule… As HDV deserves in the Czech Basin as a phantasmagoria of unrecognized geniuses, with whom we have to deal with their silence. All we needed was to cut the strings. What to reduce? length ?, tube diameter? Like 20 orders of magnitude smaller reduction from proton size on Planck scale. This is already unobservable and easily approaches the "boiling vacuum", which is the "foam of 3 + 3 dimensions of the" Time "and" Length "phenomena. → http://www.hypothesis-of-universe.com/docs/c/c_384.jpg . Roughly a measure of the difference between the Milky Way galaxy and your living room. Oh, and we needed to add 22 dimensions to the known 4. But such a result "breeds" mathematical constructions that "require" "something." No biggie. This was the so-called bosonic string theory. (In my HDV I need 3 length dimensions and 11/3 time dimensions for quarks. See http://www.hypothesis-of-universe.com/docs/ea/ea_006.pdf and for assemblies of all baryons I need **9** length dimensions and **7** time dimensions, see page 14 at http://www.hypothesis-of-universe.com/docs/ea/ea_006.pdf For all mesons, **5** length dimensions and **6** time dimensions are required, see http://www.hypothesis-ofuniverse.com/docs/ea/ea_013.pdf page 3.
If it worked, it would be a candidate for a great unified theory combining all known forces. But why stay with it? If the twisting strings Here at this point, string theory literally copies my vision of HDV, with the difference that the "stringers" twist the strings "out of nowhere, I twist the space-time dimensions into packets-geons can they explain force-bearing bosons, why not fermions that contain matter? In my HDV, leptons need **2** dimensions of length and **2** dimensions of time. http://www.hypothesis-of-universe.com/docs/ea/ea_002.pdf During the 1970s and 1980s, several proposals introduced the idea of supersymmetry and thus bring fermions and bosons into the same theoretical framework. → 24 particles of the Standard Model.

The resulting superstring theory sought (I also tried…) to become an all-encompassing mechanism explaining the basic functioning of our entire reality. Theory of everything. As an added bonus, this ambition has shaved many dimensions. After adding fermions, only ten were needed. Probably 9 + 1, nine in length and one in time. I need 9 length and 10 time dimensions for everything. Then, in 1995, Ed Witten combined many forms of superstring

theory into a single framework of M. I theory into the framework of HDV. All for a low price adding only one more spatial dimension to the eleven-dimensional theory. That is, they are 10 + 1, why ten? Well, history lessons are enough. Let's talk. So twisted strings could explain the whole universe. The twisted dimensions of the quantities space-time could explain the whole universe. Here is the slight difference between HDV and Teorie Sstrings…; only in that the strings are "out of nowhere" and my wave packs-geons are from the dimensions of space-time. **So why the 20-year madness against me ?, against my HDV ??,** why the hatred ??? I dare say that no hypothesis in the world has undergone such a mad persecution as. I did with HDV, and yet none of the renowned scientists have made any major counter-arguments at all to sink it and send it to the dump - only the insults, humiliation and unbelievable suffering I have suffered. He gathered 40 years of hard work (Of course, not a job for a salary in some Fermilab or CERN as **All** (!) Physicists in the world who work in physics get). That's a damn requirement. !! To understand quantum chains, we must first look at ordinary chains that are colder than you think. The key is that the strings can carry waves, and if the string has ends or is tied in a loop, then the wave ends up overlapping itself. I have been interpreting this vision and idea for 20 years on the Internet that: all sorts of topological loops, meaning that if the "outer arrow of time" is still in the future, the particle "inside" the package can twist "in the opposite direction of the time arrow" for a small super-short period of time. Antiparticles do this opposite twist of the time dimension. (?) that "time inside" runs in the opposite direction, ie in them time seems to run with the opposite arrow of time. → It is necessary to think again.

In this case, you get a standing wave. Roughly speaking, when these moving waves overlap, they can either fold or interfere with constructive or destructive interference. See virtual pairs of particles in a vacuum. Constructive interference occurs only if the wavelength of the wave fits neatly several times along the length of the chain. Then the phases of the overlapping wave coincide correctly and this wavelength / frequency of the wave increases. All other frequencies tend to die out. As a result, only certain frequencies are possible for a given string. Corresponding to certain energies. These resonant frequencies depend on the length of the chain. It is also the voltage that defines the wavelength and so the frequency is related to the wavelength. This leads, for example, to specific vibration frequencies on the guitar string. But this kind of behavior, where only specific modes of discrete energy are allowed, sounds very quantum. Chain theorists were not the first to notice, Niels Bohr came up with the first quantum model for electron orbits by considering them as a ring as standing waves around a hydrogen atom, but quantum chains are much more ambitious than boring electron orbits. Tuned correctly, these discrete vibration modes can be made to match the properties of known particles. All 24 particles of the Standard Model therefore have **"their" shape** of the package packing and this is related to the "**properties**" of the particles, ie the forces. Mass is a property, spin, charge, and all quantum numbers are **properties** of that topological-geometric design of particles. The particle mass is just based on the length of the chain (see here that the vision of TS does not contradict the view of HDV.) And it is a voltage, the voltage is, after all, just energy per unit length. The length of the chain defines the weight. In my vision, mass defines the "shape" of the twisting of dimensions… and not only mass but also other properties of matter. But it also defines which complex vibration modes are possible, and these modes in turn define the properties of the particles, and the agreement between String Theory and HDV is confirmed here as electric charge and spin, so this is a great promise of string theory. So, Mr. Kulhanek et al. : from the very beginning for the creation of HDV, I follow the same logic of thinking about the "parameters of -quant numbers" elem. particles, ie the same phantasmagoria as string theorists. I don't know math ... I don't know where the stringers have problems, but I know it wouldn't hurt to think about my vision that a "string"

isn't out of "nothing" and then they manipulate that "fluid", but it's space-time dimensions that are the real real fact for the solution. This is where the New Physics will go. By defining a single parameter, the chain tension or equivalently the chain length scale of all possible particles should be automatically defined. TS only manipulates the length of the scale at the strings to solve the mass, energy, and other properties of the elementary particles…, that is quite shallow; The wavy lines of dimensions are a breathtaking spectacle, don't you think? → http://www.hypothesis-of-universe.com/index.php?nav=ea Compare this parameter with the other 19 free parameters of the standard model. Here I will quote WIKIPEDIA : *Although experimental evidence confirms the assumptions of the standard model, many physicists consider this model to be insufficient because it contains a number of indeterminate parameters, a number of fundamental particles, and other more theoretical considerations as a hierarchical problem. There are several speculative theories outside the standard model that attempt to address these shortcomings**. It certainly sounds closer to the basic theory. Well, let's recap, we have these one-dimensional Planck scale structures, which can be in loops in packages like HDV or extended, have vibrational modes that define the properties of the particles. Literally as if the author was copying from my HDV. By the way, these vibrations are standing waves. You are not some abstract inner wave, strings (packed of "x" and "t") are real physical springs and waves are twisting in real space, the author describes HDV ! but what are physical springs? common answers include pure mass energy of basic irreducible existence. Topological irregularities in the structure of reality. I marvel at ..or the most common answer.

It's a nonsensical question. They are essential, so they are not made of anything, what? .. I stare (!!) or in other words from a material known as closing and counting onia. Astonishment, I hear for the first time in 40 years that a physicist string theorist would abandon the "unwavering" vision that those strings are from Nothing. I read this for the first time in 40 years. And also: what are they onia ? I don't understand. Most string theorists are more interested in what strings don't do, what they're made of. ?? That amazes me. That I have not yet read new visions of "what are the strings of" if not from Nothing ..?! So, what are they doing? : They vibrate well, obviously they can hold energy. (To vibrate, it must be supplied with energy, or vice versa: by vibrating, it produces energy? So who "vibrates?") They can expand, they can also merge and separate from each other. **Basic** ball-wave packs can no longer be divided, only conglomerates. These latter properties are important because it gives a mechanism for the interaction of string theory particles and their decay into other particles. Does ST mean that the strings are torn to other particles? that is, that the "general string" are "all particles, which when we fragment, we get the" basic particles "Standard particle model ??? jóó… This picture of string connection and division is a huge power of theory. HDV has such "strength of theory" too. It solves one of the main problems with gravity quantization. At the moment, I would omit quantum gravity from the interpretation and comments. It is a non-linear problem. See → http://www.hypothesis-of-universe.com/docs/eng/eng_030.jpg You may remember from our episode on quantum gravity, if you try to describe gravitational interactions on smaller scales, the energy needed to interact at this scale. produce black holes. There is no way to even think about the shape of the gravitational field on the Planck scale. There is a "linear world of interactions" in the microworld. Gravity prevails in the macroworld and it is the "curvature of dimensions space-time" in a nonlinear form. It is necessary to think about this question → It does not create a hopeless theory of conflicting chains it corrects, because graviton is a loop, not a point particle, its interactions are blurred around this chain and they easily avoid the explosion of mathematical infinities. You get below Planck's length. It all sounds great and by the way it doesn't work for any other geometric structure than for a 1D string. It doesn't fit here, there is

a difference of vision. TS manufactures all element. particles only from a string that is one-dimensional. HDV is produced by elem. particles from 3 + 3D and also from extra-dimensions. So vibrant guitar strings, yes. Drum skin, no. Unfortunately, it will not be so easy. I guess the difficulty is in the mathematical construction of the idea of a "one-dimensional string" that it must "immerse" (or multiply ??) into 10 + 1 dimensions… Yeah, the strings themselves are 1D, but we even want to produce the properties of known particles. They need to vibrate in more than just three dimensions of space. In fact, the theory only works in exactly nine spatial dimensions plus one for time. Plus one for M theory, to which we will return briefly without exactly this number of dimensions. You will not get gravitons or other intangible particles. Let's look at why this is embarrassing, to say the least, in future episodes of the theory. It is a theory that works in a universe that is clearly not our own with its poor three dimensions of the universe. HDV encourages the vision that "higher states of dimensions", ie the more curved reality of čp, "float" in less curved states of čp. thus other more crooked "states" of dimensions. That's the idea. (It is even similar to the ether that was right from the "Nothing." floats "in the basic grid 3 + 3. But this kind of things does not discourage string theorists. 50-60 years. They are not at the finish line. Why ??

Is there a way to add more spatial dimensions. Where do string physicists add the other extra dimensions, where? that's their problem. They destroy our basic space-time to some n-dimensional state. That's not good. Much more elegant is that the "more curved states of the dimensions" float "(are nested) into less curved space-time… which are still in harmony with our perceived 3D universe, and the point is that the stringers destroy the basic essence of the universe = 3 + 3 space-time. 3 + 3D is a geometric čp and… and extra-dimensions are a "mathematical superstructure" of pseudodimensions that are built into matter to get our heads around this. Imagine that we lived in a 2D universe. We know that… but take my variant IMAGINATION; why should I imagine a world in 2D when I can imagine another world, a world of "curved" dimensions tangled in balls - and then you are matter.. Why can't you "imagine" it too? We perceive only giant x and y directions. But what if the plane is not really flat? What if the direction from? It has a small width. This is the pac-man dimension. Go through the small width of this dimension and you will find yourself where you started. Very small objects, such as quantum strings, could explore the extra dimension and oscillate importantly in it. Certainly, flat 2D ants consider the third dimension to be the extra dimension. We 3 + 3D people imagine extra dimensions how? Me in HDV as I describe. And what about you ? But we giant lumber Flatlanders would have no idea it existed. Okay, now increase it by three large dimensions of space and six small dimensions of Pac-Man, which only strings experience. Well, you see abstractions, you go too. Voila string theory is stored Modern m-theory suggests (I also suggest, everyone suggests ..) Another large spatial dimension of our universe is 3D space and 1D time, is like a flatland on this 5D object called a 5-gate M-theory combining different versions of the theory strings, as it demonstrates some philosophically fascinating dualities between different ways of thinking about dimensions. I understand… but you do not understand HDV, mainly because you did not read it, you refused to read it because it was invented by a nerd, a masquerade, which all Czech physicists think only because at the beginning (approx. 2004-2006) it was a couple of villains who had their unwashed mouth (+ huge hatred) and started slander, insults and a witch chase. Ultimately, it also leads to ultimate duality. This is the holographic principle of Patience, locusts. We'll get there. The exact behavior of chains depends on the shape of their compact dimensions. In fact, one free parameter in string theory becomes a configuration of other dimensions. In other words, in the words HDV: the behavior of mass elements from dimensions into precise shapes-shapes-geons-wave packages, i.e. the design shows the reality of the properties of particles-matter and the mutual behavior of matter-interaction. In fact, one

free parameter in string theory becomes a configuration of other dimensions. These are just multi-colored verbal descriptions of the same reality in HDV and TS. Find the right location in this chain landscape and describe the universe perfectly, the only problem is that there are an estimated 10 to the power of 500 possible options and almost no way to find out which one is ours. **?** Now the string theory seems to be in a dead end. Why? about mathematical notation. Option b) → HDV. This did not yield any confirmed predictions. Some would say that no predictions were feasible. Tuning the string landscape to fit our universe is daunting and perhaps impossible. I don't understand why the world neglects to read HDV when I send my visions from time to time to various physicists around the world of physics. That's many thousands of email letters in 20 years. (I have them in the archive). In the coming episodes, we will take a deeper look at the successes, failures and deep strangeness of string theory, 60 years of research ovky hundreds to thousands of scientists are working on it (in equipped laboratories and institutes with mutual consultation) and the result .. ?? .. "something to zero" … I have also been working on HDV for 40 years… result zero (ie only a few) but I am alone against everyone, against an extremely strongly hated gang in the Czech Basin. then you can decide for yourself whether to accept the basic string nature of space-time. Thanks to 23andme for supporting PBS Digital Studios and 23andme Space, a personal genetic society is created to help (no one helped me though I begged) people to understand what their DNA says about them, October is a month of family history, which is a great time to explore and learn more about your own family and ancestors a discovery that can lead to new connections with others . Learn more at 23andme.com/spacetime. Last week we talked about the basic computational limits of our universe and, by the way, what would be needed to calculate the simulation of the universe on the horizon of black hole events. Let's see what you had to say Roman R asks if a calculation on the event horizon would experience a massive dilation of time in relation to an external observer So how do we see the results of the calculation? Yeah, that's a problem. Really? You can practically never read the results of the event horizon calculation. I will forgive more comments ..

Out of desperation (that my candle is already burning) and that I don't have money for a consultant and translator, I translate my texts into English myself using google

JN, 03.08.2021