Top 3 Unanswered Questions in Physics

Being Explained

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1. ***Are all the (measurable) dimensionless parameters that characterize the physical universe calculable in principle or are some merely determined by historical or quantum mechanical accident and uncalculable?*** Einstein put it more crisply: did God have a choice in creating the universe? Imagine the Old One sitting at his control console, preparing to set off the Big Bang. "How fast should I set the speed of light?" "How much charge should I give this little speck called an electron?" "What value should I give to Planck's constant, the parameter that determines the size of the tiny packets -- the quanta -- in which energy shall be parceled?" Was he randomly dashing off numbers to meet a deadline? Or do the values have to be what they are because of a deep, hidden logic? These kinds of questions come to a point with a conundrum involving a mysterious number called alpha. If you square the charge of the electron and then divide it by the speed of light times Planck's constant, all the dimensions (mass, time and distance) cancel out, yielding a so-called "pure number" -- alpha, which is just slightly over 1/137. But why is it not precisely 1/137 or some other value entirely? Physicists and even mystics have tried in vain to explain why.

Answer: All matter can't create itself. That must also mean that someone must have been there to create matter and have existed before matter existed, this means that the creationism theory must be correct in terms of logical reasoning and laws of nature itself. Now the physical universe can't be solely determined by a Quantum number. It requires an understanding beyond the exception of knowledge we have ourselves. The conundrum is that there are probably thousands of sub atomic particles we don't know about and many dimensions we can't prove. However, the sense of the scale and size of the universe reveals that there must be something out there and it is likely that this is it. Now the speed of light itself exists but it is not set off by something else rather then was created in early times of our universe because even light it can contain matter. Now, necessarily this wouldn't cancel out other variables of our understanding of the universe, but provide insightful views of how we can look at our universe.

Q: How can quantum gravity help explain the origin of the universe?

A: Most scientists may believe in the Big Bang but it doesn't provide the greatest explanation on the origins of our universe, or even a verified explanation on that sense and level of understanding. According to the Big Bang the universe was a more uniform pile of heated energy and as the universe started cooling subatomic particles such as quarks were made, and then elements such as helium arises after millions of years, and slowly over a long period of time of up to billions of years the stars and planets began to form. Some of the forces believed to have existed in the Big Bang such as EM forces, and forces of highly pressurized subatomic particles, but however this doesn't explain the perfect balance and scales of how everything was created. This doesn't explain build up of cells and the dynamic force of what makes us human. Also the Big Bang theory goes against the idea that matter can't create itself. However, the creationism theory states that someone or something that existed even before the existence of matter had to create matter, energy, and the world itself. This is more unified in the beliefs to theoretical physics. Also there may be Quantum Theories related such as M theory, and Superstring Theory, however none have proved to exist as much as theories of atomism. Atomism theories also can correspond with the creationism theory but also the Big Bang, however the theory of Creationism is proven thousands of times more likely than a seemingly never ending flame creating the universe. The Big Bang in itself has no whatsoever scientific explanation on its existence. If every time you lit a candle would that cause a seemingly long explosion and combustion of energy? NO. The same law applies to the Big Bang just at a different scale. The theory of creationism itself does provide a unified theory on the almost or seemingly perfect scale of the Universe, the Big Bang does not. However the theory of creationism can go in harmony with the theory of Quantum Gravity as long as it corresponds with the theory of atomism, so Quantum gravitational theory does provide some insight on the particles and compositions of atoms created in early times of our universe, but doesn't theorize how we are created, so Quantum Gravity can't provide a fully accurate summary of the origin of our universe but it does help explain it. The final answer to this conundrum is yes.

Q: What is the lifetime of the proton, and how do we understand it?

A: According to the Grand Unified Theory in Physics, protons are unstable. This means that it is nearly impossible to calculate the lifetime of a proton. It can last any time from 1 second to a trillion years. No matter how you wait and wait it is nearly impossible to catch the lifetime of a proton. Also, my theory is that since all protons are unstable and they differ in amount on what point of object and element they are located, then they are almost all different in lifespan also, making it inaccurate to calculate or even guess the age of a single proton, and if you did it would still be impossible to get a fully scientific analysis of the average lifetime of a proton.